

INVESTMENT TITLE	RESEARCH PARTNER	AMOUNT IN 2019-20
OBJECTIVE 1		
Focused improvement of ICARDA/Australian durum germplasm for abiotic tolerance	International Centre for Agriculture Research in Dry Areas (ICARDA)	\$11,116.00
Australian Research Council (ARC) Industrial Transformation Research Hubs: genetic diversity and molecular breeding for wheat in a hot and dry climate	University of Adelaide	-\$37,500.00
Introgression of heat-tolerant genes to broaden genetic variation in current wheat breeding populations	University of Sydney	\$660,567.75
Screening of frost tolerance in cereals	University of Adelaide	\$492,711.00
Benchmarking and field validation of transgenic frost tolerance wheat lines	University of Adelaide	\$86,933.41
Identification of wheat frost tolerance loci using a combination of genetics, biochemistry and molecular approaches	CSIRO	\$287,888.25
Frost risk management	Department of Primary Industries and Regional Development	\$51,647.00
Grains Industry Research Scholarship: frost temperature dynamics and rapid post event identification of damage to broadacre cereals	University of Western Australia	\$6,190.00
Frost risk management field trials	Foundation for Arable Research (FAR)	\$8,307.75
Frost risk management field trials	Advancing Agriculture Pty Ltd T/As Consultag	\$23,185.23
Frost risk management field trials	Birchip Cropping Group	\$29,517.91
Frost risk management field trials	Living Farm Pty Ltd	\$31,639.00
Frost risk management field trials	Facey Group Inc.	\$15,104.37
Improving frost and heat stress management for South Australian durum growers	University of Adelaide	\$55,057.00
Photosynthesis traits for raising wheat yield potential	CSIRO	\$112,500.00
Maintaining wheat grain number under reproductive-stage drought conditions	CSIRO	\$171,652.50
Sorghum core pre-breeding program	University of Queensland	\$600,000.00
Grains Industry Research Scholarship: exploring sugar metabolism in bread wheat for improving drought tolerance	Murdoch University	\$4,841.00
Manipulating barley phenology to maximise yield potential	Murdoch University	\$100,000.00
Improved adaption of barley to acid soils	Murdoch University	\$529,218.75
Novel approaches against LMA: knockout	CSIRO	\$98,194.50
Validation trials for dwarfing genes, vigour x management interactions, and preliminary assessment of rate of grain-filling	CSIRO	\$206,794.50
Molecular markers for root hair traits and enhanced phosphorus use efficiency (PUE) in wheat	CSIRO	\$543,387.98
Using next generation approaches to exploit phenotypic variation in photosynthetic efficiency to increase wheat yield	Australian National University	\$47,884.75
AVP1, PSTOL1 and NAS: three high-value genes for higher wheat yield - International Wheat Yield Partnership	University of Adelaide	\$51,577.25
Maintenance of grain plumpness and transfer of heat tolerance into Australian barley germplasm	Murdoch University	\$550,000.00
Development of crop management packages for early sown, slow developing wheats in the southern region	La Trobe University	\$466,875.11
Australian Pastures Genebank	SA Research and Development Institute	\$188,820.00
A genetic diversity toolkit to maximise harvest index by controlling the duration of developmental phase	CSIRO	\$63,908.00
Australian Grains Genebank 2017-2022	Department of Jobs, Precincts and Regions	\$1,488,795.00
Future durum breeding	Department of Regional NSW	\$1,250,000.00
Better sorghum: larger grain with more protein	University of Queensland	\$271,210.00
Improving grower profits through longer season wheat crops	Central West Farming Systems	\$30,000.00
Australian Grains Gene Banks: infrastructure	Department of Jobs, Precincts and Regions	\$700,000.00
Rooty: A root ideotype toolbox to support improved wheat yields	University of Queensland	\$59,700.00
Research and development	Barley Australia	\$96,584.00
Optimising canola production in diverse Australian growing environments	CSIRO	\$821,323.00
Capturing global diversity and international genetic gains of wheat and barley	University of Sydney	\$617,417.00
Next generation plant breeding: integrating genomic selection and high throughput phenotyping to enhance genetic gain in sorghum and mungbeans	University of Queensland	\$96,333.00
Post-doctoral fellowship: enhancing genomic prediction for sorghum to deal with genotype-by-environment interactions for yield	University of Queensland	\$25,000.00
Improving canola heat tolerance - a coordinated multidisciplinary approach	University of Western Australia	\$600,000.00
External independant review of the Australian Grains Gene bank	M C Mackay	\$16,298.72
Utilising novel genetic diversity to increase barley yields nationally	University of Adelaide	\$113,636.00
Applying machine learning to improve genetic gain delivered from genomic selection in plant breeding	Australian Grain Technologies Pty Ltd	\$150,030.00
INVITA - A technology and analytics platform for improving variety selection	University of Queensland	\$1,406,000.00
Managing on-farm biosecurity risk through pre-emptive breeding: the case of rust	Curtin University	\$112,500.00
Assessing collections of wild chickpea relatives for resistance to root-lesion nematodes	University of Southern Queensland	\$131,250.00

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Genetics of wild germplasm, gene-pool expansion and integrated ASSD approach	Curtin University	\$262,500.00
Pulse Breeding Australia: faba bean breeding	University of Adelaide	\$1,223,150.00
ARC Research Hub for Legumes for Sustainable Agriculture	University of Sydney	\$1,000,000.00
An integrated platform for rapid genetic gain in pulse crops	University of Western Australia	\$549,475.00
Pulse Breeding Australia: chickpea breeding	Department of Regional NSW	\$2,045,772.00
Pulse Breeding Australia: field pea breeding	Department of Jobs, Precincts and Regions	\$1,462,692.00
Pulse Breeding Australia: lentil breeding	Department of Jobs, Precincts and Regions	\$1,370,943.00
National mung bean improvement program	Queensland Department of Agriculture and Fisheries	\$470,000.00
PulseBio Project 3: Stable grain yield in pulses through improved stress tolerance	Department of Jobs, Precincts and Regions	\$550,502.00
New tools and germplasm for Australian pulse and oil seeds breeding programs to respond to changing virus threats	Department of Regional NSW	\$447,999.80
Understanding the implications of new traits on adaptation, crop physiology and management of pulses in the southern region	Department of Jobs, Precincts and Regions	\$2,022,562.00
National soybean breeding program 2017 - 2021	CSIRO	\$500,000.00
Improving chickpea adoption to environmental challenges in Australia and India	University of Adelaide	\$50,000.00
Australian national vetch breeding program	SA Research and Development Institute	\$558,740.00
Increasing profit from N, P and K fertiliser inputs into the evolving cropping sequences in the western region	University of Western Australia	\$1,224,672.00
Nutrient re-distribution and availability in ameliorated and cultivated soils in the western region	Department of Primary Industries and Regional Development	\$501,431.50
Lupin breeders toolbox - a resource for lupin genetic improvement	CSIRO	\$399,225.00
Development, characterisation and incorporation of novel herbicide tolerance traits in pulse crops	University of Adelaide	\$579,784.00
Pulse Check- local extension and communication for profitable pulse production in North West NSW	Crop Consultants Australia Incorporated	\$97,435.00
Pulse Check - local extension and communication for profitable pulse production in coast and tablelands	Soy Australia Ltd	\$97,280.00
Pulse Check – local extension and communication for profitable pulse production in Western Downs Queensland	PulseAg Consulting	\$100,000.00
Pulse Check - local extension and communication for profitable pulse production in North East NSW	Crop Consultants Australia Incorporated	\$97,435.00
Pulse Check – local extension and communication for profitable pulse production in Central QLD	Crop Consultants Australia Incorporated	\$97,435.00
Pulse Check – local extension and communication for profitable pulse production in Eastern Downs QLD	PulseAg Consulting	\$100,000.00
Pulse Check – local extension and communication for profitable pulse production in Liverpool Plains	FarmLink Research Limited	\$99,936.00
Pulse Check – local extension and communication for profitable pulse production in South West NSW	FarmLink Research Limited	\$99,268.00
Pulse Check – local extension and communication for profitable pulse production in Central West NSW	FarmLink Research Limited	\$99,110.00
Pulse Check – local extension and communication for profitable pulse production in Central East NSW	FarmLink Research Limited	\$99,560.00
Pulse Check – local extension and communication for profitable pulse production in South East NSW	FarmLink Research Limited	\$99,560.00
The adaption of pulses (chickpea and lentil) across the northern region	CSIRO	\$1,006,848.00
Multi-species DNA chip platform: a resource for pulse genetic improvement	Department of Jobs, Precincts and Regions	\$1,800,000.00
Transitioning to the chickpea breeding program 2020-2025	Department of Regional NSW	\$660,084.00
Manganese (Mn) solutions to understand and manage the incidence of split seed in high yielding lupin varieties	Crop Circle Consulting	\$69,045.00
Demonstrating the effects of reduced lupin seed integrity on crop establishment	The Liebe Group Incorporated	\$64,260.00
Preparing EOI for review of the Australian national vetch breeding program	Betzner Consulting Pty Ltd	\$6,483.00
Regional soil testing guidelines for the northern region	University of Queensland	\$300,000.00
National paddock survey initiative	Birchip Cropping Group	\$90,000.00
Integrating research solutions for profitable outcomes	CSIRO	\$428,000.00
Integrating research solutions for profitable outcomes	Queensland Department of Agriculture and Fisheries	\$817,494.00
CSP00187-DAN - Optimised canola profitability understanding the relationship between physiology and tactical agronomy management	Department of Regional NSW	\$272,553.00
Tactical wheat agronomy for the western region	Department of Primary Industries and Regional Development	\$276,000.00
Australian peanut breeding program	Peanut Company of Australia	\$380,000.00
Integrated farming systems in the Medium Rainfall Zone	University of Adelaide	\$294,801.00
National Variety Trials Program 2015/16-2018/19	Kalyx Australia Pty Ltd	\$880,309.87
National Variety Trials Program 2015/16-2018-19	Eurofins Agrosience Services	\$397,628.84
National Variety Trials Program 2015/16 - 2018/19	Southern Farming Systems (SFS)	\$150,241.30
National Variety Trials Program 2015/16 - 2018/19	Birchip Cropping Group	\$169,092.67
National Variety Trials Program 2015/16- 2018/19	University of Tasmania	\$11,120.00
Services agreement	Department of Regional NSW	\$447,525.31
Services agreement	SA Research and Development Institute	\$601,277.94
Services agreement	Living Farm Pty Ltd	\$578,098.47

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Services agreement	Queensland Department of Agriculture and Fisheries	\$102,577.04
A national approach to improving heat tolerance in wheat through more efficient carbon allocation	University of Sydney	\$199,780.50
Developing farming systems for the Low Rainfall Zone of Western Australia	CSIRO	\$649,340.00
A long-term study to increase water use efficiency, grain yield and grower profitability in the western region in a no-till system	University of Western Australia	\$25,000.00
Winter agronomy	Department of Regional NSW	\$2,165,610.00
Bilateral agreement	SA Research and Development Institute	-\$890,452.00
Improving farming system efficiency in southern NSW	CSIRO	\$645,000.00
Optimised canola profitability: understanding the relationship between physiology and tactical agronomy management	CSIRO	\$135,940.00
Winter pathology	Department of Regional NSW	\$2,446,567.00
Infrastructure	Department of Regional NSW	\$346,623.00
Post-doctoral fellowship: optimising whole-farm water use efficiency and risk using whole farm bioeconomics	CSIRO	\$35,793.00
Bagging grain profits: technical assessment of the use of silo bags in the WA supply chain	SEPWA	\$7,000.00
NVT Online website support and maintenance	Kobe Creations	\$82,458.00
Incorporating lime to depth in duplex wheatbelt soils	Facey Group Inc.	\$25,500.00
Tactics for improving rooting depth and crop yield on sodic soils	Mingenew-Irwin Group Inc	\$10,000.00
Benefits of foliar micronutrients on cereals in a low rainfall environment	The Liebe Group Incorporated	\$15,238.00
Improving crop emergence through the better use of seeding technologies	West Midlands Group	\$10,000.00
Seeding systems to improve cereal crop establishment on heavy textured soils	Corrigan Farm Improvement Group	\$22,540.00
Crop Diseases Mobile application: licence and support	Arq Group Enterprises Pty Ltd	\$90,000.00
Halving the \$90m of canola harvest losses in Western Australia	Planfarm Pty Ltd	\$10,000.00
Return on investment for using drones to monitor growth patterns in broadacre cropping in Western Australia	Farmanco Management Consultants Pty Ltd	\$9,000.00
Optimising plant establishment, density and spacings to maximise crop yield and profit in the southern and western regions	University of Adelaide	\$451,947.00
National phenology initiative	La Trobe University	\$719,119.50
Optimising mungbean yield in the northern region: mungbean agronomy	Queensland Department of Agriculture and Fisheries	\$228,000.00
Scoping study: summer cropping in the northern region	CSIRO	\$40,616.00
NVT-SAGI services agreement	University of Wollongong	\$240,000.00
Services agreement	Eurofins Agrosience Services	\$190,195.00
Optimising sorghum yield through agronomic management	University of Queensland	\$775,500.00
Optimising mungbean yield in the northern region: mungbean physiology	University of Queensland	\$143,133.00
National oat breeding program	SA Research and Development Institute	\$698,016.00
Services agreement	Kalyx Australia Pty Ltd	\$80,488.00
Services agreement	Department of Regional NSW	\$36,895.66
Herbicide behaviour workshops for the Australian grains industry	Independent Consultants Australia Network P/L (ICAN P/L)	\$227,121.00
Expanding the sowing window for canola and lupins: what works in WA?	Department of Primary Industries and Regional Development	\$533,112.00
Planning and facilitation of workshops and assistance in the development of KIT 1.5 investment strategy	Colere Group	-\$1,625.07
Optimising profitability of high rainfall zone farming systems-survey, farmer-scale demonstration trials and field days	Stirlings to Coast Farmers	\$75,000.00
NVT research platform development and support	Storyboard Multimedia Australia Pty Ltd	\$353,778.72
Research and extension program at South Australian Crop Technology Centre	Foundation for Arable Research (FAR)	\$140,000.00
High Rainfall Zone workshops	Foundation for Arable Research (FAR)	\$25,000.00
Services agreement	Trialco Pty Ltd	\$33,540.74
Optimising the profitability of high rainfall zone farming systems - survey, farmer-scale demonstration trials and field days	SEPWA	\$75,000.00
Pathology services agreement	Department of Jobs, Precincts and Regions	\$314,025.00
Pathology services agreement	Marcroft Grains Pathology Pty Ltd	\$209,440.00
Pathology services agreement	Queensland Department of Agriculture and Fisheries	\$52,500.00
Pathology services agreement	SA Research and Development Institute	\$893,099.46
Pathology services agreement	Department of Primary Industries and Regional Development	\$474,663.60
Optimising high rainfall zone cropping for profit in the western and southern regions	Department of Primary Industries and Regional Development	\$280,958.00
NVT- Research Support 2018-19	Reconstruct Consulting	\$5,480.04
WA-focused linseed agronomy	Southern Dirt	\$61,510.00
Using long season wheats for increases in profits and grazing opportunities	Southern Dirt	\$120,000.00
Common seed bulk-up	Kalyx Australia Pty Ltd	\$165,397.08
Improving production of grower retained open pollinated canola seed using agronomic management to increase establishment in the MRZ and LRZ of the northern region	Department of Regional NSW	\$200,000.00
NVT protocol development	Reconstruct Consulting	\$12,818.93

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Pathology services agreement	Department of Regional NSW	\$311,982.60
Pathology services agreement	University of Southern Queensland	\$492,579.77
Increasing return on investment from canola seed through improved establishment	CSIRO	\$400,000.00
Validating key assumptions and options for durum breeding	Betzner Consulting Pty Ltd	\$10,368.00
Scoping study: companion, intercropping and relay cropping	CSIRO	\$24,816.00
NVT trial site audits	Michael Lamond and Associates	\$29,063.68
Future durum breeding consultations	Betzner Consulting Pty Ltd	\$5,811.00
Victorian Grains Innovation partnership	Department of Jobs, Precincts and Regions	\$5,200,000.00
Eyre Peninsular harvest report	SE Knights Consulting	\$15,000.00
NVT Sowing Guides	Coretext	\$128,138.00
Variety Sowing Guide: 2020 Western Australia	Department of Primary Industries and Regional Development	\$114,000.00
Winter Crop Sowing Guides: 2020, 2021 and 2020 Queensland	Albatross Rural Consulting	\$25,000.00
High yielding red wheat	Bunge Agribusiness Australia Pty Ltd	\$30,000.00
Facilitating adoption of integrated weed management strategies for Feathertop Rhodes grass in the northern region	Queensland Department of Agriculture and Fisheries	\$15,000.00
Facilitated discussion groups: managing drought conditions and planning for post drought recovery in South Australia	AgCommunicators Pty Ltd	\$59,345.00
Dry Sowing Guide for the HRZ of the southern region	Coretext	\$50,000.00
Maximising the uptake of phosphorus by crops to optimise profit in central and southern NSW, Victoria and South Australia	Department of Regional NSW	\$960,000.00
2019 National Variety Trial harvest reports	SE Knights Consulting	\$47,718.75
2019 National Variety Trials zone harvest reports	Coretext	\$78,450.00
How does behaviour impact the technical choices that are made to grow better quality wheat?	Farmanco Management Consultants Pty Ltd	\$89,500.00
Scoping study: detection of sorghum lodging using satellite imagery	Data Farming Pty Ltd	\$9,300.00
Machine learning to extract maximum value from soil and crop variability	University of Adelaide	\$371,538.00
Services agreement	SA Research and Development Institute	\$22,485.00
Oat genomic resources for breeders and pre-breeders	Murdoch University	\$300,000.00
Increasing the profitability of the double break rotation in the medium rainfall zone of Western Australian wheatbelt through incorporation of an early sown high value pulse	West Midlands Group	\$85,000.00
GRDC graphics materials	Anvil Media Pty Ltd	\$15,883.38
Services agreement	EPAG Research Trust	\$34,718.00
Services agreement	Kalyx Australia Pty Ltd	\$537,659.00
Services agreement	AgXtra	\$69,010.20
Services agreement	Northern Australia Crop Research Alliance Pty Ltd	\$7,914.00
Services agreement	Birchip Cropping Group	\$152,658.50
Services agreement	Queensland Department of Agriculture and Fisheries	\$57,766.50
Services agreement	Department of Regional NSW	\$214,051.00
Services agreement	Southern Farming Systems (SFS)	\$61,603.75
Services agreement	Living Farm Pty Ltd	\$396,075.00
Hyper yielding crops	Foundation for Arable Research (FAR)	\$347,232.00
Maintaining profitable farming systems with retained stubble	Western Australian No-Tillage Farmers Association (WANTFA)	\$10,000.00
Services agreement	SA Research and Development Institute	\$228,964.00
Northern Grower Alliance	ST Strategic Services Pty Ltd	\$4,500.00
Regional harvester set-up workshops for the economic optimisation of harvest losses, efficiency and grain quality	Primary Sales Australia Pty Ltd	\$161,385.00
More profitable crops on highly calcareous soils by improving early vigour and overcoming soil constraints	CRC for High Performance Soils	\$250,000.00
Agronomic management of weeds, crop nutrition and farming practices in central west NSW to maximise crop profitability	Grain Orana Alliance Inc	\$165,145.00
Deep placement of nutrients	University of Queensland	\$76,956.75
Increasing production on sandy soils in low and medium rainfall areas of the southern region	CSIRO	\$1,403,743.00
Quantifying the effectiveness of cover crops as a means of increased water infiltration and reduced evaporation in the northern region	Queensland Department of Agriculture and Fisheries	\$250,000.00
Positioning the soil wetting agent technology for commercial success	Swinburne University of Technology	\$25,000.00
Ripper gauge demonstration sites Albany port zone	Stirlings to Coast Farmers	\$28,000.00
Ripper gauge demonstration sites - Esperance Port Zone	SEPWA	\$20,000.00
Demonstrating the benefits of soil amelioration and controlled traffic practices across a broad range of soil types in Western Australia	West Midlands Group	\$63,724.00
Warm and cool season mixed cover cropping for sustainable farming systems in south eastern Australia	Ag Excellence Alliance Inc	\$50,000.00
Increasing knowledge and profitability of cropping on Ironstone gravel soils	University of Western Australia	\$250,000.00
Ripper gauge: demonstrating the impact of deep ripping timing	Ravensthorpe Agricultural Initiative Network Inc	\$75,000.00
Construction of a subsoiler machine, trailer and integrated seeder kit to help deliver validation/demonstration trials on sandy soils	University of South Australia	\$115,200.00
New agronomy levers for crop management: a concept study	University of Adelaide	\$347,923.00
Delivering value from soil moisture probes on Eyre Peninsula	University of Adelaide	\$100,000.00
Optimal nutrition packages for renovated cemented lateritic gravels to increase farm profitability	Croppportunity Pty Ltd ATF The Window of Opportunity Trust	\$75,000.00

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Incorporation of organic soil ameliorants to boost productivity of sandy soils in the medium to high rainfall zones of the wheatbelt of Western Australia	CORRIGIN Farm Improvement Group	\$50,000.00
Barley agronomic strategies for the Geraldton port zone	Kalyx Australia Pty Ltd	\$172,000.00
Improving crop germination and establishment of all grains, especially canola, when dealing with non wetting soils, stubble loads and different stubble types	Trianco Pty Ltd	\$85,000.00
Review of biological (plant based) options to alleviate soil compaction	West Midlands Group	\$10,000.00
Improving wheat yields on sodic, magnesic, and dispersive soils	University of Adelaide	\$827,141.20
Economics of ameliorating soil constraints in the northern region: spatial soil constraint diagnoses	University of Queensland	\$197,000.00
Economics of ameliorating soil constrains in the northern region: program co-ordination – communication, extension and evaluation	University of Queensland	\$141,846.00
Economics of ameliorating soil constraints in the northern region: economics of adoption	University of Southern Queensland	\$135,981.00
Economics of ameliorating soil constraints in the northern region: soil constraint management and amelioration	University of Southern Queensland	\$765,505.00
Post-doctoral fellowship: improving root growth in dispersive soils	University of Adelaide	\$77,281.00
Tailoring an integrated solution to effectively address subsoil constraints by incorporation of chemically-balanced nano-amendments	Department of Regional NSW	\$190,000.00
Increasing farming system profitability and longevity of benefits following soil amelioration	Department of Primary Industries and Regional Development	\$1,386,340.00
Re-engineering soils to improve the access of crop root systems to water and nutrients stored in the subsoil.	Department of Primary Industries and Regional Development	\$1,601,224.00
Increased grower profitability on soils with sodicity and transient salinity in the eastern grain belt of the western region	Department of Primary Industries and Regional Development	\$349,712.00
Understanding soils to assess amelioration potential in the southern Wimmera	Field Systems Australia Pty Ltd	\$62,200.00
Extension of best practice principles for identifying and managing soil limitations in southern and central NSW	FarmLink Research Limited	\$86,966.00
Synchrotron Postdoctoral fellow: soil-root interactions using intact field soil cores	University of Queensland	\$110,000.00
Synchrotron Postdoctoral fellow: soil-nutrient availability mapping under field conditions using intact soil cores	University of South Australia	\$195,333.00
Synchrotron Postdoctoral fellow: Soil-organic matter fractionation using intact soil cores	University of Queensland	\$188,783.00
Synchrotron Postdoctoral fellow: novel foliar fertilisers and nutrition trait diversity of grains	Murdoch University	\$10,000.00
Assist in the development of KIT 2.3	Colere Group	\$8,589.98
Machine learning to map soil constraint variability and predict crop yield	University of Sydney	\$59,407.25
Rapid analysis of on-farm lime sources	GHD Pty Ltd	\$70,000.00
AgSOC Water Use in Agriculture Cross Sector Strategy	Dairy Australia	\$5,000.00
Innovative approaches to managing subsoil acidity in the southern region	Department of Regional NSW	\$326,488.50
Innovative approaches to managing subsoil acidity in the western region	Department of Primary Industries and Regional Development	\$326,007.00
Summer cropping demonstrations in the western region	Southern Dirt	\$5,000.00
Summer cropping demonstrations in the Esperance port zone	SEPWA	\$14,000.00
GRANT: A holistic approach to seep management for preventing land degradation in the landscape	Mallee Sustainable Farming Inc	\$100,000.00
Building the resilience and profitability of cropping and grazing farmers in the high rainfall zone of Southern Australia	Southern Farming Systems (SFS)	\$50,000.00
Facilitation of face-to-face workshops and assistance in the development and final review of KIT 1.9 strategy	Colere Group	\$1,296.80
Subtotal		\$75,527,979.24
OBJECTIVE 2		
Collection, phenotyping and exploitation of wild cicer genetic resources for chickpea improvement	CSIRO	\$30,000.00
Identifying low pH tolerance and effective rhizobia for wild cicer to improve adaptation to acid sandy soils	Murdoch University	-\$79,311.00
Expanding options for sorghum: food and distilling	Charles Sturt University	\$279,950.00
Building capacity, skills and knowledge for the pulse industry in the Southern Region: Supporting expansion of high value pulses into new areas and ensuring sustained profitability of all key pulse crops in existing areas	Birchip Cropping Group	\$492,744.67
Demonstrations of legume crops for reliable profitability in the Albany port zone	Stirlings to Coast Farmers	\$30,000.00
Demonstration of legume crops for profitability in the western region	The Liebe Group Incorporated	\$20,000.00
Legumes for profitability in the Esperance port zone	SEPWA	\$35,000.00
Adapted barley germplasm with waterlogging tolerance for the southern and western regions	University of Tasmania	\$188,294.00
High value pulses: raising awareness, optimising yield and expanding the area of lentil, chickpea and faba bean in Western Australia	Department of Primary Industries and Regional Development	\$315,000.00

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Development and validation of soil amelioration and agronomic practices to realise the genetic potential of grain crops grown under a high yield potential, irrigated environment in the northern and southern region	Foundation for Arable Research (FAR)	\$910,000.00
Facilitated action learning groups to support profitable irrigated farming systems in the northern and southern region	Irrigated Cropping Council Inc	\$325,000.00
Assessment of new opportunities to identify high-value or value-add crop products	Spiegare Pty Ltd	\$62,689.54
GRDC/ CRCNA Co-Funding Agreement	CRC For Developing Northern Australia Ltd	\$329,745.00
Northern Australia agronomy	Northern Australia Crop Research Alliance PTY LTD	\$250,000.00
Leveraging existing international germplasm to deliver improved acid soil tolerance chickpea for Australian growers	UC Davis	\$400,000.00
National workshop on pulse phenology	University of Tasmania	\$25,000.00
Improving the adaptation and profitability of high value pulses (chickpea and lentil) across Australian Agroecological Zones	University of Tasmania	\$1,000,000.00
Scoping study: pigeon pea	Colere Group	\$35,150.00
Smarter Irrigation for Profit	Cotton Research and Development Corporation	\$90,000.00
Chickpea breeding Australia 2020-2025	Department of Regional NSW	\$666,667.00
Grain Quality Market Insight - Asia	Australian Export Grains Innovation Centre	\$212,147.00
Strategic oversight and coordination of grain protection chemicals	McMullen Consulting PTY LTD	\$113,600.00
Plant Biosecurity Research Initiative collaboration and funding agreement	Horticulture Innovation Australia Limited	\$21,180.00
Australian wheat classification services	Wheat Quality Australia	\$400,000.00
Coordination of the LMA field risk projects	GroIQ	\$8,600.00
Investigating phenology diversity in germplasm to optimise profitability from April sown oats	Department of Primary Industries and Regional Development	\$414,000.00
Grains Industry Research Scholarship: the application of FTIR to predict dough making properties of wheat flour	University of Western Australia	\$35,697.00
Development of a biosecurity framework	Dr Rachel Melland	\$48,600.00
Grains Australia - Selection Committee Chair	Jeremy Burdon	\$12,800.00
Grains Australia - Director Selection Committee	Carnovale Recruitment Pty Ltd	\$50,000.00
Nematode diagnostics across industries through capability succession, enhancement of collections and protocol development	CSIRO	\$66,000.00
Boosting diagnostics for plant production industries	Northern Territory Department of Primary Industry and Resources	\$188,179.00
Boosting diagnostic capacity for plant production industries: using Xanthomonas as a model organism for increasing bacterial capacity	Department of Regional NSW	\$114,158.00
Boosting diagnostic capacity for plant production industries: using Xanthomonas as a model genus for increasing bacterial diagnostic capacity	The New Zealand Institute for Plant & Food Research Limited	\$240,000.00
Diagnostic development and surveillance for biosecurity threats to Australian grains, horticulture, cotton and forestry industries	Queensland Department of Agriculture and Fisheries	\$230,383.00
Building diagnostic and high throughput surveillance capabilities for high priority pests: developing pre- and post-entry high throughput surveillance and supporting insect and nematode diagnostic capabilities for national / high priority plant pests	SA Research and Development Institute	\$220,674.00
Advancing techniques for diagnosis of yellow canopy syndrome	Sugar Research Australia	\$114,000.00
Design of a research methodology to examine the efficacy of vacuum probes to deliver a representative sample at static sampling of grain deliveries	Patrick Wilson	\$5,000.00
Information gathering for Grains Australia	Ag Perspectives	\$31,150.00
Podcast for Fall armyworm management in northern farming systems	Cotton Research and Development Corporation	\$4,242.00
Genetic approaches to reduce the nitrogen dilution effect and increase nitrogen-use efficiency (NUE) in wheat	Murdoch University	-\$81,250.00
Updated nutrient response curves in the northern and southern regions	University of Queensland	\$1,024,950.00
IP sub-licence and materials supply agreement - LMA	SA Research and Development Institute	\$36,300.00
Assessment of N and water co-limitations by remote sensing as a tool to improve wheat and canola profitability and manage risk	University of Adelaide	\$388,611.00
Improving profit and reducing risk by managing nitrogen in wheat and extreme temperature in pulses	University of Adelaide	\$529,658.00
Optimising timing and rate of nitrogen application in waterlogging conditions in the Esperance port zone	SEPWA	\$5,000.00
Optimising timing and rate of nitrogen application in waterlogging conditions in the western region	Southern Dirt	\$16,652.00
Improving Australian malt barley flavour to address Chinese brewing requirements	University of Adelaide	\$297,686.00
LMA Project B: a novel high-throughput, low-cost test to determine cause of starch damage in wheat grain	Department of Jobs, Precincts and Regions	\$194,251.00
LMA Project A: improved phenotyping for Late Maturity Alpha-Amylase (LMA) susceptibility in wheat	Department of Jobs, Precincts and Regions	\$176,358.00
LMA Project C: an improved model of Late Maturity alpha-Amylase (LMA) field risk in Australian wheat	University of Queensland	\$292,562.00
Quantifying the value of pulse grains	Department of Jobs, Precincts and Regions	\$360,565.00
Coordinate and facilitate the management of market access issues	GIMAF Limited	\$300,000.00
Planning and facilitation of workshops and assistance in the development of KIT 2.4	Spiegare Pty Ltd	\$79,092.58

INVESTMENT TITLE	RESEARCH PARTNER	AMOUNT IN 2019-20
Communications package for the report: <i>Developing high-value grain crop and bioproduct opportunities for Australia</i>	Spiegare Pty Ltd	\$28,750.00
Subtotal		\$11,585,524.79
OBJECTIVE 3		
Genetically improving wheat's ability to outcompete weeds	CSIRO	\$179,826.00
Reduced herbicide usage through application technology	Edith Cowan University	\$80,995.25
WeedSmart - stage three	University of Western Australia	\$100,000.00
Emerging weeds (seed-bank biology of emerging weeds)	University of Adelaide	\$551,456.00
Mechanisms, evolution and inheritance of resistance	University of Adelaide	\$299,745.40
Australian Herbicide Resistance Initiative - phase 5	University of Western Australia	\$1,000,000.00
RDP00015 - Grain Weeds Advisory Committee	Rural Directions Trust	\$150,000.00
New uses for existing chemistry	University of Queensland	\$239,991.00
Surveillance of herbicide resistant weeds in Australian grain cropping	Charles Sturt University	\$301,602.00
Air inversion modelling to manage spray drift	Micrometeorological Research and Educational Services (MR&ES)	\$75,000.00
Locally Important Weeds	Department of Primary Industries and Regional Development	\$199,494.00
Rural R&D for Profit program: New biocontrol solutions for sustainable management of weed impacts to agricultural productivity	AgriFutures Australia (RIRDC)	\$125,000.00
Improving weed management in high break crop intensity farming systems	University of Adelaide	\$348,595.00
Innovative crop weed control for northern region cropping systems	University of Sydney	\$2,049,098.00
Cultural management for weed control and maintenance of crop yield	University of Adelaide	\$694,369.00
Grains Industry Research Scholarship: evolution and management of Group J resistance in annual ryegrass (<i>Lolium rigidum</i>)	University of Adelaide	\$35,545.00
Grains Industry Research Scholarship: extent, distribution and management of herbicide resistant common sowthistle and prickly lettuce in lentils	University of Adelaide	\$35,312.00
Grains Industry Research Scholarship: understanding invasiveness of wild oat in wheat production under drought and heat stress in conservation agriculture	University of Queensland	\$35,312.00
Practical and applied workshops and communications to promote key messages and resources to maximise the effectiveness of spray applications in the southern region	Birchip Cropping Group	\$18,006.00
Development of local strategies to enable the integrated and profitable management of annual ryegrass seed banks in high rainfall zone farming systems of the southern region	University of Adelaide	\$198,300.00
Herbicide Innovation Partnership	Bayer CropScience Pty Ltd	\$9,000,000.00
Wild oats tips and tactics	Seedbed Media Pty Ltd	-\$4,958.75
Stealth plow: mechanical control of hard to kill weeds with minimum soil disturbance	NDF Ag-Design	\$22,500.00
Managing Weeds in the northern region: development of technical content	Department of Regional NSW	\$48,212.00
Managing Weeds in the northern region: co-ordination of workshop material and establishment and monitoring of regional focus paddocks	Local Land Services	\$90,308.00
Spray drift inversion hazard system program coordination	Betzner Consulting Pty Ltd	\$69,295.06
Early and effective summer weed control: workshop series for the Western Australian grainbelt	AGRONOMO	\$35,000.00
Updating spray application resources	Bill Gordon Consulting Pty Ltd	-\$24,250.00
Updating spray application resources	Bill Campbell Consulting Pty Ltd	-\$1,110.00
Upskilling Tasmanian growers and advisors to manage annual ryegrass through exposure to external knowledge and peer-to-peer learning	Southern Farming Systems	\$32,000.00
Validation of spray droplet movement under different surface air inversion conditions	University of Queensland	\$100,000.00
Grains Industry Research Scholarship: development of herbicide cocktails with a novel mode of action for circumventing resistance mechanisms	La Trobe University	\$35,697.00
Demonstrating and validating the implementation of integrated weed management strategies to control barley grass in the low rainfall zone farming systems	University of Adelaide	\$377,674.00
Integrated weed management of herbicide resistant annual ryegrass at Lake Bolac	Southern Farming Systems	\$15,000.00
Herbicide options for the management of emerging summer grass weeds in winter cereals	Northern Grower Alliance Incorporated	\$74,200.00
Pilot workshops - why weeds grow where they do and how to control them	Planfarm Pty Ltd	\$38,000.00
Glyphosate use in barley, for pre-harvest desiccation and spray topping of weeds	Nufarm Limited	-\$32,365.00
Virtual fencing for better crop integrated weed management	CSIRO	\$92,159.00
Development of 'nowcasting' ability for hazardous and non-hazardous atmospheric conditions for agricultural spraying	Cambridge Environmental Research Consultants	\$108,473.41
Determination of Clethodim residues in linseed after a single foliar application	Eurofins Agrosience Services	\$80,618.40
Spray forum - for improved understanding of safe spray practices to ensure that any negative impacts of spray drift or chemical misuse are minimised on the Darling Downs	Independent Consultants Australia Network Pty Ltd	\$10,040.00

INVESTMENT TITLE	RESEARCH PARTNER	AMOUNT IN 2019-20
Understanding the value of Delta-T for ground spray application with VC, XC and UC	University of Queensland	\$55,000.00
Sprayer calibration / application workshops to increase spray efficiency and efficacy	Bill Campbell Consulting Pty Ltd	\$79,860.00
Summer weed survey of Western Australian cropping districts	AGRONOMO	\$98,000.00
Area Wide Management for cropping systems weeds: investigating the weed management, social and economic opportunity	CSIRO	\$968,641.00
Review of the Herbicide Innovation Program	Green Ways Consulting LLC	\$42,421.75
Facilitating adoption of integrated weed management strategies for feathertop Rhodes grass in the northern region (Southern NSW)	Department of Regional NSW	\$130,000.00
Facilitating adoption of integrated weed management strategies for Feathertop Rhodes grass in the northern region (Northern NSW and Qld)	INDEPENDENT CONSULTANTS AUSTRALIA NETWORK PTY. LIMITED(ICAN Pty Ltd)	\$25,500.00
Grains Industry Research Scholarship: assessing a sterol pathway component as a novel target for herbicides	University of Western Australia	\$12,023.00
Identifying a machine learning approach to weed recognition in Australian grain production systems	University of Sydney	\$165,900.00
Methods to predict plant available water capacity (PAWC)	CSIRO	\$150,000.00
A platform to interpret soil attributes to support profitable farming systems	University of Sydney	\$160,000.00
Future Farm Phase II workshop	Darrin Lee	\$4,454.89
Grains Industry Research Scholarship: hyperspectral data for estimating crop leaf biochemistry	University of Adelaide	\$6,627.00
Improved sampling methods to better predict nutrient availability and supply for soils in the western region	CSIRO	\$66,176.17
Using soil and plant testing data to better inform nutrient management and optimise fertiliser investments for grain growers in the southern region	Agronomy Solutions Pty Ltd	\$707,590.00
Making Better Fertiliser Decisions for cropping systems in Australia: phase 3	Department of Regional NSW	\$65,000.00
Optimising farm scale returns from irrigated grains: maximising dollar return per megalitre of water	University of Tasmania	\$226,277.00
Machine learning applied to high-throughput feature extraction from imagery to map spatial variability	University of Queensland	\$323,054.00
Machine Learning Technical Consultation Group participant	University of Queensland	\$18,220.00
CropPhen: remote mapping of grain crop type and phenology	University of Queensland	\$94,750.00
SoilWaterNow: soil water nowcasting for the grains industry	University of Sydney	\$600,592.00
Frost SENSE: an integrated modelling framework to rapidly map the extent of stem and reproductive frost damage in wheat and barley	CSIRO	\$162,925.00
Cultivar crown rot tolerance trials	Crown Analytical Services Pty Ltd	\$22,400.00
National Barley Foliar Pathogen Variety Improvement Program	Queensland Department of Agriculture and Fisheries	\$575,000.00
Centre for Crop and Disease Management	Curtin University	\$6,000,000.00
Development of yield response curves for cereal foliar and root and crown pathogens	Allan Mayfield Consulting	-\$173.71
Improved genetic solutions for management of yellow spot in wheat	Department of Primary Industries and Regional Development	\$276,934.75
Effective genetic control of Stagonospora nodorum blotch	Department of Primary Industries and Regional Development	\$396,899.00
Cereal and pulse cultivar resistance ratings for the southern region	Department of Jobs, Precincts and Regions	\$255,244.00
Development of gene deployment strategies: using evolutionary principles to optimise the development of genetic resistance in crops	CSIRO	\$262,500.00
Development of genetic tools for Australian barley crops against leaf rust	University of Sydney	\$449,712.46
Integrated genetic solutions to crown rot in wheat	University of Sydney	\$1,245,602.90
Genetic solution to crown rot in barley	CSIRO	\$264,264.00
PulseBio 4: biosecure pulse seeds	Department of Jobs, Precincts and Regions	\$138,897.00
Improved resistance to oat pathogens and abiotic stress management	University of Adelaide	\$241,312.50
Improving disease management through improved agronomic practices	University of Adelaide	\$307,120.00
Development of tools to accelerate nematode resistance gene deployment	University of Adelaide	\$206,250.00
Genetic control of nematode species affecting major crops - Germplasm enhancement for nematode control in cereals and pulses	University of Southern Queensland	\$417,567.75
Australian Cereal Rust Control Program: continued monitoring of cereal rust pathogens in Australia	University of Sydney	\$567,593.34
Australian Cereal Rust Control Program: Wheat and barley breeding support	University of Sydney	\$164,220.04
Australian Cereal Rust Control Program: Delivering genetic tools and knowledge required to breed wheat and barley with resistance to leaf rust, stripe rust and stem rust	CSIRO	\$1,922,665.00
Australian Cereal Rust Control Program: Delivering genetic tools and knowledge required to breed wheat and barley with resistance to leaf rust, stripe rust and stem rust	University of Sydney	\$1,354,405.74
Australian Cereal Rust Control Program: novel sources of stem rust resistance from uncultivated wild relatives of wheat	University of Adelaide	\$261,060.00
Grains Industry Research Scholarship: common rust of maize	University of Southern Queensland	\$35,312.00
Molecular Diagnostic Centre national disease surveillance	University of Adelaide	\$655,559.00

INVESTMENT TITLE	RESEARCH PARTNER	AMOUNT IN 2019-20
Improved disease management in South Australian field crops through surveillance, diagnostics and epidemiology knowledge	University of Adelaide	\$367,182.00
Managing eyespot in intensive cereal, stubble retention farming systems in South Australia	University of Adelaide	\$197,180.00
Disease epidemiology and management tools for Australian grain growers	Department of Primary Industries and Regional Development	\$1,281,329.00
Analysis of NVT pathology investments	Agalign Ag Pty Ltd	-\$1,000.00
Grais Industry Research Scholarip: extracellular vesicles from Zymoseptoria tritici: investigating the non-classical secretion of pathogenicity factors by a fungal wheat pathogen	Australian National University	\$35,697.00
Extent of RLN throughout the grain growing regions of Western Australia and options to address	Farmanco Management Consultants Pty Ltd	\$10,000.00
Durum crown rot benchmarking for improved grower access to durum varieties with greater crown rot resistance	University of Southern Queensland	\$449,971.00
Towards effective control of blackleg of canola: phenotyping for adult plant resistance (Quantitative Resistance) in canola	CSIRO	\$395,000.00
Towards effective control of blackleg of canola: disease epidemiology and management	University of Melbourne	\$400,000.00
Towards effective control of blackleg of canola: coordinating international blackleg research and development	University of Melbourne	\$170,000.00
Towards effective control of blackleg of canola: identification of novel sources of blackleg resistance genes	University of Western Australia	\$400,000.00
Managing botrytis diseases in intensive pulse cropping systems	University of Adelaide	\$213,478.00
Australian Fungicide Resistance Extension Network (AFREN): fungicide resistance management targeted at regional level	Curtin University	\$317,570.00
Increasing regional capacity in identification of crown root infection of Rhizoctonia in the low rainfall zone of the Southern Region	SA Research and Development Institute	\$27,000.00
Towards effective control of blackleg of canola: canola infrastructure and FFS	Department of Jobs, Precincts and Regions	\$1,000,000.00
Validation and demonstration of decision-making tools for managing blackleg in canola in the western region	Farmanco Management Consultants Pty Ltd	\$11,200.00
Integrated disease management strategies for southern region cereal and pulse growers	Department of Jobs, Precincts and Regions	\$547,000.00
New capability to survey pulse and cereal crops for root pathogens	University of Adelaide	\$240,600.00
Integrated disease management tools to manage summer crop diseases in the northern region	University of Southern Queensland	\$616,152.00
Surveys and associated diagnostics of the incidence and severity of diseases of cereals and pulses within the southern region	Department of Jobs, Precincts and Regions	\$155,013.00
Surveys and associated diagnostics of the incidence and severity of diseases of cereals and pulses within the northern region	Queensland Department of Agriculture and Fisheries	\$135,805.80
Soilborne diseases interaction in Australian farming systems	Department of Jobs, Precincts and Regions	\$1,103,642.54
Integrated disease management in western region grain crops	Department of Primary Industries and Regional Development	\$638,074.00
Surveys and associated diagnostics of the incidence and severity of diseases of cereals, pulses and oilseeds in the western region	Department of Primary Industries and Regional Development	\$157,798.00
Distribution of ramularia across the Australian grain belt	Department of Primary Industries and Regional Development	\$370,000.00
Manipulation of stomata to increase yield potential in wheat (IWYP collaboration)	University of Adelaide	\$445,000.00
Soilborne pathogens of winter cereals: extension of identification and management strategies	FarmLink Research Limited	\$68,000.00
Grains Industry Research Scholarship: the interaction between arbuscular mycorrhizal fungi, rhizobia and root-lesion nematodes in mungbean	University of Southern Queensland	\$15,029.00
Population structure and virulence of barley spot form of net blotch isolates in Western Australia	Curtin University	\$15,363.00
Using machine learning to increase genetic gain in canola blackleg resistance breeding	University of Western Australia	\$77,381.00
Using machine learning to develop new methods for genetic gain in crops challenged by fungal diseases	Curtin University	\$182,388.00
Deep Learning for early detection and classification of crop disease and stress	University of Western Australia	\$81,647.50
Grains Industry Research Scholarship: determining the spatial distribution of P. quasitereoides/P. curvicauda in the WA wheatbelt, and understanding how these nematodes find host roots as means to developing new methods of control	Murdoch University	\$12,290.00
Minimising the impact of major barley foliar pathogens on yield and profit: development of international host differential sets	Department of Jobs, Precincts and Regions	\$80,000.00
Minimising the impact of major barley foliar pathogens on yield and profit: Screening of elite breeder material transitioning to a fee for service model	Queensland Department of Agriculture and Fisheries	\$150,000.00
Minimising the impact of major barley foliar pathogens on yield and profit: surveillance and monitoring of pathogen populations - SARDI	University of Adelaide	\$120,000.00
Wildfire impact on disease and pest populations and successional re-establishment in a grain crop fire scar	AgXtra	\$96,842.00

INVESTMENT TITLE	RESEARCH PARTNER	AMOUNT IN 2019-20
Screening of diverse barley germplasm for rapid discovery and utilisation of novel disease resistance in barley novel using R-HapSelect: a haplotype-based toolkit	University of Queensland	\$124,000.00
ARC Research Hub for Sustainable Crop Protection	University of Queensland	\$150,000.00
New knowledge to improve the timing of pest management decisions in grain crops	CSIRO	\$459,298.00
Aphid and insecticide resistance management in oilseed and pulse crops	cesar Pty. Ltd	\$100,000.00
Insecticide resistance management in RLEM and chemical sensitivities	University of Melbourne	\$493,981.00
Biosecurity preparedness for the grains industry: preparation and review of emergency permits for high priority pests	Plant Health Australia	\$77,740.00
Snail biocontrol revisited – Phase 2	CSIRO	\$45,000.00
Control of snails and slugs: new products for snail and slug control-biological control of slugs using ciliate protozoa	University of Melbourne	\$133,337.00
Endophytes for insect management in cereals	Grasslanz Technology Limited	\$490,000.00
Pathways to registration - minor use	AKC Consulting Pty Ltd	\$111,593.00
Grains Industry Research Scholarship: protecting the Australian pulse industries from diamondback moth infestations	University of Adelaide	\$35,312.00
Determining the effectiveness of zinc phosphide rodenticide bait in the presence of alternative food supply	CSIRO	\$88,705.00
GLP residue study: Trifluralin residues in oats	Kalyx Australia Pty Ltd	\$30,575.00
Supporting the sustainable use of insecticides and local on-farm implementation of integrated pest management strategies in the southern region	Birchip Cropping Group	\$25,000.00
Improving plant pest management through cross industry deployment of smart sensor, diagnostics and forecasting	Horticulture Innovation Australia Limited	\$375,000.00
Russian wheat aphid risk assessment and regional thresholds	University of Adelaide	\$318,922.00
Post-doctoral fellowship: what are earwigs pests and when are they beneficial?	CSIRO	\$91,390.00
Understanding mouse biology and ecology in zero- and no-till cropping systems to inform best practice crop production and mouse management practices	CSIRO	\$624,316.00
Improved surveillance and management options for mice in crops	CSIRO	\$247,964.32
Ensuring long-term, applied, field-based cereal entomology and capability for South Australia	University of Adelaide	\$194,399.00
Monitoring diamondback moth for forecasting and adaptive management of outbreak and insecticide resistance risk	University of Adelaide	\$161,049.00
Pulse Chemical Stewardship Program	Pulse Australia Limited	\$78,000.00
Managing early season canola establishment pests in New South Wales: development of technical content	cesar Pty. Ltd	\$52,163.00
Managing early season canola pests in New South Wales: establishment and coordination of grower/ advisor groups	FarmLink Research Limited	\$104,000.00
Grains Industry Research Scholarship: the bioactivity and functionality of the molecular and microbial components of snail mucus	University of the Sunshine Coast	\$35,697.00
New methods of snail control	University of Adelaide	\$480,122.00
Identification, surveillance and advisory platform for management of grains pests	cesar Pty. Ltd	\$235,714.00
Survey of vertebrate and invertebrate pests and beneficials harbouring in harvest weed-seed control systems	Department of Primary Industries and Regional Development	\$152,520.00
Survey of the summer/autumn brassica refuges for diamondback moth in the western region to predict early season risk of infestation	Department of Primary Industries and Regional Development	\$167,900.00
National resistance monitoring for insect pests of stored grain	Queensland Department of Agriculture and Fisheries	\$377,220.00
Investigating snail rollers to clean small conical snails out of barley and canola	Stirlings to Coast Farmers	\$42,700.00
Novel suppression and resistance management of invertebrate pests	University of Melbourne	\$1,529,997.00
Research and development	DAVREN Global Pty Ltd	\$1,205,000.00
Post-doctoral fellowship: understanding gene flow in mouse populations to improve management outcomes	CSIRO	\$83,441.00
Determination of Fipronil residues in soybean after an in-furrow treatment at planting	Eurofins Agrosience Services	\$34,997.40
Determination of Clothianidin residues in mungbeans and navy beans following the application of shield systemic insecticide	Eurofins Agrosience Services	\$52,653.00
Resistance surveillance for sustainable management of Helicoverpa in grains	Department of Regional NSW	\$72,578.00
Research and Development	Bio-Gene Technology Limited	\$80,000.00
Insecticide resistance in the green peach aphid: national surveillance, preparedness and implications for virus management	cesar Pty. Ltd	\$257,599.00
Grains Industry Research Scholarship: chemical cues used by natural enemies of the green peach aphid to find their prey in canola fields	Murdoch University	\$15,029.00
Pathways to registration - minor use (2019-2022)	AKC Consulting Pty Ltd	\$154,093.00
Prevention and preparedness for fall armyworm (Spodoptera frugiperda)	cesar Pty. Ltd	\$150,000.00
Post-doctoral fellowship: fertiliser form and soil interactions when applied in high concentration bands	University of Queensland	\$20,000.00
Hydrogen to ammonia research and development	CSIRO	\$200,000.00

INVESTMENT TITLE	RESEARCH PARTNER	AMOUNT IN 2019-20
Understanding the fertiliser innovation landscape: organisations and companies conducting fertiliser research, development and approaches to enhancing fertiliser technologies with potential to benefit Australian grain growers	Ploughshare	-\$3,000.00
Techno-economic review of distributed renewable ammonia production	ITP Thermal Pty Ltd	\$37,508.00
Development of Key Investment Target 3.5 strategies	Colere Group	\$10,296.53
Review of GRDC nitrogen investment strategy and methodology for future procurements	CSIRO	\$2,400.00
Understanding the amelioration processes of the subsoil application of amendments in the southern region	Department of Jobs, Precincts and Regions	\$919,350.00
Extension knowledge and resources to manage risk and exploit opportunities to improve whole farm profit through integration of cropping and livestock enterprises in the southern region	Ag Excellence Alliance Inc	\$60,038.00
Boosting profit and reducing risk on mixed farms in low and medium rainfall areas with newly discovered legume pastures enabled by innovative management methods – southern region	SA Research and Development Institute	\$1,308,902.00
Boosting profit and reducing risk on mixed farms in low and medium rainfall areas with newly discovered legume pastures enabled by innovative management methods – western region (dryland pasture legume systems)	Murdoch University	\$1,026,354.00
Increasing the effectiveness of nitrogen fixation in pulse crops through development of improved rhizobial strains, inoculation and crop management practices	University of Adelaide	\$542,361.00
More nitrogen from pulse crops for growers in the southern region	Mallee Sustainable Farming Inc	\$272,788.00
Preserving Australia's rhizobial collections to benefit the Australian grains industry	Murdoch University	\$355,498.28
Increasing the effectiveness of nitrogen fixation in pulses through improved rhizobial strains in the western region	Murdoch University	\$449,000.00
Increasing the effectiveness of nitrogen fixation in pulses through improved rhizobial strains in the northern region	Department of Regional NSW	\$350,000.00
Finalisation of GRDC Key Investment Target 1.6, 1.8 and 3.6 strategies	Colere Group	\$8,850.00
Development of KIT 3.6 strategy	Colere Group	\$7,493.27
Future Farm Phase 2: improving farmer confidence in targeted N management through automated sensing and decision support	CSIRO	\$1,216,634.00
Rural Safety and Health Alliance (RSHA)	AgriFutures Australia (RIRDC)	\$40,000.00
Development of the strategy for the Key Investment Target 3.7	B M White	\$22,410.00
Development of identification resources and enhancing diagnostics capacity for high priority plant pests	cesar Pty. Ltd	\$125,000.00
Nanopore diagnostics for plant pathology	Department of Primary Industries and Regional Development	\$164,600.00
Determining the geographical origin of priority insect pest detections: anthropogenic stable isotope signatures to improve resolution of high risk environments	Lincoln University	\$45,597.00
Boosting diagnostics for plant production industries	Department of Jobs, Precincts and Regions	\$315,894.00
Technical review of operating standards for autonomous systems in Australian broad-acre cropping systems	University of Southern Queensland	\$30,000.00
Developing and applying an Equilibrium Displacement Model (EDM)	University of Melbourne	\$15,036.00
Assessing the economic value of precision agricultural tools for grain farming businesses in the southern region	Rural Directions Trust	\$37,750.00
Improved data services to enable optimal investment decisions	Neil Clark & Associates Pty Ltd	\$60,252.74
Strategy development for Key Investment Target 3.8	Colere Group	\$12,410.71
Machinery investment options in the Australian cropping regions	Kondinin Information Services	\$185,000.00
Improved data services to enable optimal investment decisions	Kynetec Australia Pty Ltd	\$30,375.00
Subtotal		\$65,257,933.44
OBJECTIVE 4		
Scoping study: post farm gate transport and logistics	george stanley consulting	\$8,250.00
Joint RDC Community Trust Program	AgriFutures Australia (RIRDC)	\$35,000.00
Provision of grains industry data, data integration and mapping Services	Kynetec Australia Pty Ltd	\$118,800.00
Australian participation in the European Union Product Environmental Footprint Technical Advisory Board	Australian Wool Innovation	\$26,166.67
Situation analysis: market analysis of the Indian chickpea market	Pulse Australia Limited	\$49,966.00
Grains Sector GHG Baseline and Mitigation Project	CSIRO	\$100,000.00
Improving on-farm grain storage management practices through technical training	Primary Business	\$450,000.00
Strategy development for Key Investment Target 4.3	Colere Group	\$8,666.97
Subtotal		\$796,849.64
OBJECTIVE 5		
Using seasonal forecast information and tools to manage risk and increase profitability in the southern region - Agriculture Victoria expands the break	Department of Jobs, Precincts and Regions	\$142,740.00
Rural R&D for Profit: Forewarned is forearmed: managing the impacts of extreme climate events	Meat & Livestock Australia Limited	\$50,000.00
AgScore: An agricultural approach to assessing the skill of seasonal climate forecasting systems and their value for aiding on-farm decision making	CSIRO	\$312,550.00

INVESTMENT TITLE	RESEARCH PARTNER	AMOUNT IN 2019-20
National Agribusiness Reference Group	Rural Directions Trust	-\$254,700.00
Development of strategy for Key Investment Target 5.2	Michael Williams & Associates Pty Ltd	-\$6.69
2019 Grower Survey	Down to Earth Research	\$67,965.00
2020 Grower Survey	Down to Earth Research	\$101,947.00
Research Partners Survey 2020	Down to Earth Research	\$54,050.00
'Opportunity for Profit' workshops	Rural Directions Trust	\$90,000.00
Financial decision-making tools for Kwinana East growers	BJW Agribusiness	\$25,000.00
Farm Business Management workshops for the western region	Rural Edge Australia	\$22,500.00
Farm Business Update series	ORM Pty Ltd	\$637,324.00
Strategy development for Key Investment Target 5.3	Colere Group	\$7,858.18
Subtotal		\$1,257,227.49
GROWER COMMUNICATION AND EXTENSION FRAMEWORK		
GRDC Farm Business Updates: southern region	ORM Pty Ltd	\$1,335.00
Branding strategy implementation	Redhanded Creative Pty Ltd	-\$17,060.00
GRDC Grower Solutions: northern region	Grain Orana Alliance Inc	\$559,536.00
GRDC Grower Solutions:northern region (central Queensland)	Queensland Department of Agriculture and Fisheries	\$266,007.00
RCSN Facilitation and Coordination: western region	KJ Heenan and JR Hill	\$444,000.00
GRDC Grower Solutions: coastal/hinterland Queensland and NSW North Coast	Queensland Department of Agriculture and Fisheries	\$384,707.00
GRDC Grower Solutions: northern region	Northern Grower Alliance Incorporated	\$1,230,010.00
GRDC Online Farm Trials system – Phase 2	Federation University of Australia (formerly University of Ballarat)	\$200,000.00
Annual membership to SAI Platform Australia	SAI Platform Australia	\$8,000.00
Extension hub portal for grains industry Communities of Practice - participating organisation agreement	AgriFutures Australia (RIRDC)	-\$86,092.24
Coordination and facilitation Services to the Regional Cropping Solution Network (RCSN):Southern Region	J.A. Lillecrapp	\$282,165.50
Compaction mitigation options for growers in the Albany and Kwinana West port zones	AgVivo Pty Ltd	\$41,800.00
Validating recent research on break crop options in the low rainfall zone to determine the best options for the different climate, soil type and biotic stress situations	University of Adelaide	\$40,000.00
Regional Cropping Solutions Network: technical facilitator Southern NSW	Rural Management Strategies Pty Limited	\$155,000.00
Sorghum in the 21st century: food, feed and fuel for a rapidly changing world	Kansas State University	-\$4,000.00
Yardstick demonstrations for the Geraldton Port Zone, Western Australia	Mingenew-Irwin Group Inc	\$5,312.00
Yardstick demonstrations for the Albany and Esperance port zones	Kalyx Australia Pty Ltd	\$50,800.00
Australian Grains Industry Conference 2018, 2019 & 2020	Grain Trade Australia Ltd	\$11,250.00
Yardstick demonstrations for the Kwinana West and Kwinana East port zones	Living Farm Pty Ltd	\$71,260.00
Crawford Fund Annual Development Conference 2018, 2019, 2020	The Crawford Fund Ltd	\$2,500.00
GRDC branded publications	Coretext	\$199,740.00
Soil quality iBook	University of Western Australia	\$20,000.00
National, regional and local video and podcasts	Anvil Media Pty Ltd	\$619,927.09
Grower Group Alliance Annual forum (2018)	Grain Industry Association of Western Australia	\$1,500.00
GRDC Communities: crop nutrition	Department of Regional NSW	\$96,580.00
GRDC Strategic Plan: corporate videos	Anvil Media Pty Ltd	-\$877.50
GRDC Communities: field crop diseases	Department of Jobs, Precincts and Regions	\$116,580.00
Communication support: northern region	Jeffrey Rural Communications	-\$268.24
GRDC Communities: website support	Kobe Creations	\$11,998.40
GRDC GroundCover suite	Rural Press Pty Limited	\$382,789.22
Australian Summer Grains Conference - 2019	Australian Summer Grains Conference	\$12,500.00
Victorian Farmers' Federation grains conference	Victorian Farmers Federation	\$15,000.00
Australian Society of Plant Scientists Conference (ASPS)	La Trobe University	\$15,000.00
Groundcover – Fairfax Media news now training	Coretext	-\$2,760.00
GroundCover editorial content	Coretext	\$899,409.55
Communication support services for the southern region	AgCommunicators Pty Ltd	\$19,824.55
From paddock to port: supply chain opportunities for central Queensland with the Port of Townsville (POT), Port of Mackay (North Queensland Bulk Ports Corporation) (NQBPC) and Gladstone Port Corporation (GPC)	Central Highlands Development Corporation Ltd	\$2,500.00
GGA annual forum	Grower Group Alliance	\$5,000.00
Red meat updates	Macquarie Franklin Pty Ltd	\$7,500.00
SANTFA conference	South Australian No Till Farmers Association Inc	\$6,000.00
Non-wetting management options for growers in the Albany port zone	Southern Dirt	\$20,000.00
ABARES Outlook 2019, 2020 and 2021	Department of Agriculture, Water and the Environment	\$7,363.64
WAFarmers annual conference	Western Australian Farmers Federation (WA Farmers)	\$10,000.00
SEPWA Ladies Day	SEPWA	\$5,000.00
Facilitated discussion groups: managing drought conditions and planning for post drought recovery	Sefton & Associates	\$24,990.00
Case studies	Jeffrey Rural Communications	\$2,095.00
Communication support services for the Western region	AgCommunicators Pty Ltd	\$13,520.00
Discussion groups: managing drought conditions and planning for post drought recovery	AgCommunicators Pty Ltd	\$64,560.00

INVESTMENT TITLE	RESEARCH PARTNER	AMOUNT IN 2019-20
Grains: a global food resource	Australasian Grain Science Association Inc.	\$1,250.00
Translational photosynthesis conference 2019: innovations in agriculture for food security	Australian National University	\$2,500.00
Northern Territory agriculture - pathways to potential field days	Northern Territory Department of Primary Industry and Resources	\$2,500.00
Storage and distribution of GRDC hard copy publications	CanPrint Communications Pty Ltd	\$47,837.10
World Congress on Oils and Fats 2020	Australian Oilseeds Federation Inc	\$6,250.00
22nd Precision Agriculture Symposium	SPAA - Society of Precision Agriculture Australia	\$1,250.00
Australian Pulse Conference 2019	Arinex	\$13,000.00
8th Asian-Oceanian Symposium on plant lipids	CSIRO	\$5,000.00
CCA Cropping solutions seminar	Crop Consultants Australia Incorporated	\$1,500.00
2019 Tasmanian Agriculture Conference - Farming in Action	Tasmanian Farmers and Graziers Association	\$1,250.00
Growth Adoption Productivity and Profitability Young Farmer Conference	Birchip Cropping Group	\$1,250.00
Under cover downunder: getting fair dinkum about soil health	Victorian No Till Farmers Association	\$1,875.00
Australasian meeting of International Biometric Society	University of Adelaide	\$1,250.00
ASF Seed Business 2019 convention	Australian Seed Federation Limited	\$750.00
TECHSPO 2019	Southern Dirt	\$10,000.00
2019 Australasia-Pacific Extension Network Conference - extending horizons: extension's role in climate, rural industry, and community challenges	Australasia Pacific Extension Network Ltd	\$1,500.00
Wheat Breeding Assembly 2019	University of Adelaide	\$5,000.00
NSW Farmers Annual Conference 2019	NSW Farmers' Association	\$3,750.00
Growing SA Conference 2019	Grain Producers SA Limited	\$2,500.00
Surface and sub-surface runoff systems and their relevance to crop management decision-making in southern coastal areas of Western Australia	South Coast Natural Resource Management Inc.	\$48,418.76
Agronomic strategies for late breaking seasons	Mingenew-Irwin Group Inc	\$22,500.00
GRDC website improvements, support and hosting	Squiz Australia Pty Ltd	\$50,700.00
AgInstitute Australia Western Australian state conference	Ag Institute Australia	\$3,000.00
GRDC Research Update Series: northern region	Independent Consultants Australia Network Pty Ltd	\$682,215.00
GRDC Research Update Series: southern region	ORM Pty Ltd	\$541,563.00
GRDC Grains Research Updates: western region	Grain Industry Association of Western Australia	\$386,750.00
21st and 22nd Australasian Weeds Conference	Council of Australasian Weed Societies	\$15,000.00
TropAg 2019 conference	University of Queensland	\$5,000.00
Rural Focus interviews with GRDC	Southern Cross Austereo Pty Ltd	\$10,400.00
GRDC Emerging Leader award - Kathryn Fleay	Kathryn Fleay	\$7,500.00
GRDC image library	Coretext	\$29,500.00
Brightcove video marketing suite	webqem	\$34,272.73
AARES Conference 2019 and 2020	Australasian Agricultural and Resource Economics Society Ltd	\$10,000.00
evokeAg 2020	AgriFutures Australia (RIRDC)	\$30,000.00
Regional Cropping Solutions Network (RCSN) review	Ian Longson	\$51,000.00
Maintain the longevity of soils constraints investments and increase grower adoption through extension - western region	The Trustee for Pluske Family Trust	\$140,000.00
Ute Guide: Most common weeds of grain cropping	Coretext	\$60,977.00
Ute Guide: Most common weeds of grain cropping	Heuston Agronomy Services Pty Ltd	\$23,000.00
INSPIRE Summit 2020	Rural Edge Australia	\$7,500.00
Thriving Women 2020	WoTL Ltd, formerly Partners in Grain SA	\$10,000.00
Herbicide Discovery and Development 2020	University of Western Australia	\$4,000.00
INTERDROUGHT VI	University of Queensland	\$15,000.00
11th International Oat Conference - Oat2020	Grain Industry Association of Western Australia	\$11,250.00
International Conference on Quantitative Genetics	University of Queensland	\$3,750.00
7th International Symposium on Soil Organic Matter	Conference Design Pty Ltd	\$2,500.00
Dealing with the Dry forums	Sefton & Associates	\$44,000.00
Victorian crop sowing guides 2020-2022	Department of Jobs, Precincts and Regions	\$35,000.00
Primary Industries Education Foundation Australia (PIEFA) partnership	Primary Industries Education Foundation Australia	\$37,500.00
Barley Tech Symposium 2018-2022	Meeting Masters	\$18,750.00
Communication support: southern and western regions	AgCommunicators Pty Ltd	\$20,000.00
Northern Australia Food Futures Conference	Northern Territory Farmers Association Inc	\$15,000.00
Subtotal		\$8,708,260.56
BIOSECURITY FRAMEWORK		
Facilitation of Category 25 submissions in the Australian grain industry	Plant Health Australia	-\$83,493.00
Prevention and preparedness for fall armyworm (Spodoptera frugiperda) - Output 2	CSIRO	\$100,000.00
Boosting diagnostics for plant production industries	Biosecurity Tasmania, Department of Primary Industries, Parks Water and Environment	\$32,802.00
GRDC support for International Year of Plant Health 2019-20	Horticulture Innovation Australia Limited	\$42,500.00
Subtotal		\$91,809.00
CAPACITY AND ABILITY FRAMEWORK		
Cunderdin College Agricultural Training Awards	Western Australian College of Agriculture -Cunderdin	\$15,000.00
Nuffield Australia Farming Scholarships	Nuffield Australia Farming Scholars	\$108,000.00
Using next-generation genetics to accelerate variety improvement in bread wheat, durum and barley	Department of Jobs, Precincts and Regions	\$632,000.00
Grains Industry Research Scholarship: novel sources of disease resistance in brassica	University of Queensland	-\$9,681.00

INVESTMENT TITLE	RESEARCH PARTNER	AMOUNT IN 2019-20
Grains Industry Research Scholarship: components of immunity to stagonospora nodorum in wheat	Australian National University	-\$3,630.50
Horizon scholarships	AgriFutures Australia (RIRDC)	\$5,000.00
Building research capacity in the northern grains region: Queensland	Queensland Department of Agriculture and Fisheries	\$82,778.50
Grains Industry Research Scholarship: a comparison of the growth patterns of three root pathogens in wheat	University of Southern Queensland	-\$3,673.25
Grains Industry Research Scholarship: epigenetic control of grain stress tolerance via short interfering RNA	Flinders University	\$5,510.00
People in agriculture	Dairy Australia	\$28,000.00
GRDC support for the Australian Rural Leadership Program	Australian Rural Leadership Foundation Ltd	\$50,000.00
Building crop protection and production agronomy R&D capacity in regional Western Australia	Department of Primary Industries and Regional Development	\$1,000,000.00
Improving sustainable productivity and profitability of Mallee farming systems with a focus on soil improvements	University of Adelaide	\$353,913.00
Horizon scholarships	AgriFutures Australia (RIRDC)	\$100,000.00
State-of-the-art plant growth facilities dedicated to grains research	University of Melbourne	\$54,127.00
State-of-the-art automated pipe through the bank irrigation layout	Irrigation Research Extension Committee	\$2,545.40
Southern metropolitan infrastructure hub	Murdoch University	\$675,000.00
Mentoring a new scientist to manage soilborne fungal diseases	University of Adelaide	\$234,971.00
Agricultural Training Awards: Longerenong Agricultural College	Longerenong College Victoria	\$3,000.00
Agricultural Training Awards: Tocal College	Department of Regional NSW	\$15,000.00
Capacity building to understand plant energy efficiency in harsh environments	University of Western Australia	-\$50,000.00
National annual investment area forums for collaboration and technical review	Independent Consultants Australia Network PTY LTD	\$241,320.00
GRDC Research Scholarship: Genome-wide identification of disease resistance genes in the Brassicaceae and characterisation of their DNA methylation status in Brassica napus	University of Western Australia	\$35,312.00
GRDC Research Scholarship: adaptation of fast winter wheat genotypes to the Mediterranean semi-arid cropping regions of southern Australia	La Trobe University	\$35,312.00
Ensuring long-term, applied, field-based cereal pathology and capability for South Australia	University of Adelaide	\$183,366.00
Australian Universities Crops Competition (AUCC) 2018, 2019 & 2020	GrainGrowers Limited	\$15,000.00
Innovation Generation	GrainGrowers Limited	\$6,250.00
GRDC Recognising and Rewarding Excellence 2018 Dr John Kirkegaard	CSIRO	\$6,250.00
Post-doctoral fellowship: interfacing crop improvement and agronomy/nutrition programs	University of Queensland	\$176,499.00
Post-doctoral fellowship: crop lower limit - root water extraction responses to soil properties as key to variability in PAWC	CSIRO	\$98,874.00
Post-doctoral fellowship: understanding mechanisms of subsoil amelioration	La Trobe University	\$111,973.00
Traineeship in applied grain research	University of Adelaide	\$39,903.00
Post-doctoral fellowship: more profit from lentils through enhanced tolerance of waterlogging and improved canopy management	University of Adelaide	\$138,479.00
Improved genetic gain through GRDC participation in barley pan-genome consortium	Murdoch University	\$1,224.00
Grains Industry Research Scholarship: optimising crop predicted and produced yield through an intuitive and cost effective decision support tool	University of Sydney	\$35,545.00
Post-doctoral fellowship: managing soil constraints with on-row seeding systems for the Low Rainfall Zone	CSIRO	\$134,682.00
Post-doctoral fellowship: an integrative approach towards sustainable management of sorghum stalk rot in the northern region	University of Southern Queensland	\$163,076.00
Post-doctoral fellowship: maximising crops and minimising weeds with smart phase farming	University of Western Australia	\$161,000.00
Study tour of western Victoria and Tasmania	Stirlings to Coast Farmers	\$3,725.00
Australasian Plant Pathology Society Conference	ICMS Australasia Pty Ltd	\$3,750.00
Hermitage Research Facility Schools Plant Science Competition	Queensland Department of Agriculture and Fisheries	\$5,000.00
Grains Industry Research Scholarship: hyperspectral remote sensing of wheat crops for rapid assessment of effective nutrient status and improved crop growth model performance	University of Melbourne	\$35,697.00
Grains Industry Research Scholarship: identification and characterisation of barley (1,3;1,4)- β -Glucan mutants	University of Adelaide	\$35,697.00
Grains Industry Research Scholarship: valorisation of sorghum biomass into sustainable, high-performance nanomaterials	University of Queensland	\$35,697.00
Grains Industry Research Scholarship: determining the genetic control of grain size and heat stress tolerance during flowering in barley	Murdoch University	\$35,697.00
Post-doctoral fellowship: unravelling the relationships between soil mixing uniformity by spading and crop response	University of South Australia	\$100,000.00
Post-doctoral fellowship: a model for predicting chickpea ascochyta blight risk	University of Southern Queensland	\$210,450.00
Post-doctoral fellowship: minimising the impact of high temperature at flowering on spikelet fertility	Murdoch University	\$87,936.00

INVESTMENT TITLE	RESEARCH PARTNER	AMOUNT IN 2019-20
Post-doctoral fellowship: designing roots to enhance durum wheat yield	University of Queensland	\$114,544.00
GRDC nominee director: Wheat Quality Australia - Kim Halbert	Kim Halbert	\$37,221.36
Post-doctoral fellowship: alternative phenotyping for reproductive stage frost tolerance using metabolite markers and identification of frost tolerance QTL in wheat	CSIRO	\$143,541.00
Post-doctoral fellowship: exploiting the potential of a novel fungal biofertiliser	University of Western Australia	\$98,398.50
Australian Grains Innovation Program: capturing innovation from growers and non-traditional sources	Farmers2Founders	\$285,000.00
Post-doctoral fellowship: photosynthetic acclimation to high temperature in wheat	University of Sydney	\$71,149.00
Post-doctoral fellowship: understanding P dynamics and bioavailability in alkaline clay soils	University of Queensland	\$162,145.00
Diversity in Agriculture Leadership Program	National Farmers' Federation	\$30,000.00
GRDC Recognising and Rewarding Excellence Award - southern region	AgriSci Pty Ltd	\$15,000.00
Post-doctoral fellowship: understanding sorghum root growth and function in cold soils	University of Queensland	\$129,095.00
Post-doctoral fellowship: understanding causes of physical constraints in sandy soils and implications for targeted deep tillage	CSIRO	\$54,675.00
Post-doctoral fellowship: integrating yield optimisation in mungbean	La Trobe University	\$72,339.00
Post-doctoral fellowship: predicting weed seed dynamics in farming systems	Department of Regional NSW	\$180,679.00
Post-doctoral fellowship: high-throughput quantitative analysis of flowering dynamics and canopy structure in canola germplasm using image analysis and deep learning methods	CSIRO	\$48,225.00
GRDC Emerging Leader Award - Kirsty Smith	Kirsty Smith	\$5,600.00
Assistance with grower extension activities in the northern region	Agricultural Development & Extension	\$15,313.56
Inaugural Graft Aus-India AgTech Challenge 2019	Beanstalk AgTech Pty Ltd	\$20,000.00
2019 Globalising Growers US Study Tour	Grains Research Foundation Ltd	\$5,000.00
Canada farm tour: increasing farming system diversity using intercrops, cover crops and novel crops	FarmLink Research Limited	\$13,500.00
Elders Bendigo and Albury grower herbicide resistance management study tour to Western Australia	Elders Rural Services Australia Ltd	\$12,000.00
Western Australia farming systems tour: farming with challenges – managing solutions	Ag Grow Agronomy Research PtyLtd	\$23,500.00
Study tour for 35 farmers to Wagga Wagga NSW	Sustainable nyngan agricultural group (SNAG)	\$8,712.50
International Grains Conference - key note address	Grain Producers SA Limited	\$4,500.00
Baker Ag Advantage - strip and disc study tour	Baker Ag Advantage Pty Ltd	\$8,000.00
Disrupt and destroy Southern NSW crop tour	GROUNDLED AGRONOMY PTY LTD	\$3,500.00
Boosting the capability and capacity of graduate agronomists – northern region	Seedbed Media Pty Ltd	\$83,333.00
Hands-on precision agriculture training for growers	SPAA - Society of Precision Agriculture Australia	\$180,000.00
Growers' tour to New Zealand	KJ Heenan and JR Hill	\$17,000.00
Accelerator program - SproutX	SproutX	\$90,000.00
Grains Industry Research Scholarship: developing an ecotoxicologically based index for fertiliser toxicity	University of Adelaide	\$12,023.00
GRDC sponsorship of the Horizon Scholarship Program	AgriFutures Australia (RIRDC)	\$40,000.00
Grains Industry Research Scholarship: identifying novel sources of disease resistance genes in wild brassicaceae for canola crop improvement	University of Western Australia	\$12,023.00
Developing infrastructure to make the Tosari farms 'research ready'	Queensland Cropping Research Ltd	\$500,000.00
GRDC Recognising and Rewarding Excellence award: Tony Swan	CSIRO	\$10,000.00
GRDC Emerging Leader award 2020: Rohan Brill	Brill Ag	\$10,000.00
Accelerator program - Farmers2Founders	Farmers2Founders	\$50,000.00
Subtotal		\$8,001,591.07
DATA MANAGEMENT AND ANALYTICS FRAMEWORK		
AEG00002#3 - Australian Export Grain Innovation Centre (AEGIC)	Australian Export Grains Innovation Centre	\$2,000,000.00
Statistics for the Australian Grains Industry (SAGI): Northern Node	Queensland Department of Agriculture and Fisheries	\$783,905.63
CUR00026 - Statistics for the Australian Grains Industry (SAGI): Western Node	Curtin University	\$750,111.00
Node agreement bioinformatics and biometrics for the Australian grains industry - SAGI 3	University of Wollongong	\$1,596,000.00
Southern regional node of Statistics for SAGI	University of Adelaide	\$1,445,129.50
SAGI: EssCargoT	University of Wollongong	\$123,524.50
SAGI South masters scholarship agreement	University of Adelaide	\$39,645.00
Research Partner Survey 2018	Down to Earth Research	-\$13,600.00
Identification and measure of drivers of agricultural land value change	Department of Agriculture, Water and the Environment	\$8,000.00
Modification of the CSIRO ADOPT tool	CSIRO	\$10,000.00
Examining the grain industry's importance in regional economies	Regional Australia Institute	\$25,000.00
SAGI North and National University of Rosario, Argentina scholarships	Queensland Department of Agriculture and Fisheries	\$31,350.00
Australian Agricultural and Grazing Industries Survey (AAGIS) 2019-20	Department of Agriculture, Water and the Environment	\$500,138.00
Grains R,D&E statistics and analytics review and landscape assessment	F H Winter Pty Ltd	\$37,621.00
Machine learning technical consultation group participant (Machine Learning for Agricultural Image and Data Analysis)	University of Saskatchewan	\$20,000.00

INVESTMENT TITLE	RESEARCH PARTNER	AMOUNT IN 2019-20
AgAsk: a machine learning generated question-answering conversational agent for data-driven growing decisions	University of Queensland	\$239,633.71
Common Seed Bulk-Up: 2020 - 2024 (Kalyx)	Kalyx Australia Pty Ltd	\$57,078.50
Grains R,D&E statistics and analytics review and landscape assessment	EY	\$90,000.00
Australian Agricultural and Grazing Industries Survey (AAGIS) and grains reports: 2020-21	Department of Agriculture, Water and the Environment	\$127,536.00
Online Farm Trials database and website services	Federation University of Australia (formerly University of Ballarat)	\$260,000.00
Subtotal		\$8,131,072.84
R&D Management costs		\$2,997,572.07
GRAND TOTAL		\$182,355,820.14