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APPENDIX 2

GRDC project list

Project expenditure, 2005–06

Project no.	Project title	Expenditure \$
	GENE DISCOVERY	
ACP00001	Australian Centre for Plant Functional Genomics	2,000,000
AGP00006	AWCMMP—Component: Wheat marker implementation/validation for Australian grain technologies	257,000
CAS00001	ACAS—Australian Crop Accreditation System Ltd	550,313
CIM00007	CIMMYT Alliance	30,000
CMB00005	AWCMMP component project: Genetic analysis and marker-trait linkages—South and West	412,000
CMB00012	AWCMMP curation of wheat and barley maps	50,000
CMB00013	AWCMMP—Wheat Genome Sequencing Consortium	147,972
CSE193	Grain Protection Genes	2,000,000
CSP00017	Australian Cereal Rust Control Program—Molecular Discovery	556,318
CSP00061	Analysis of the regulation of plant defence/stress gene expression	131,465
CSP00063	AWCCMP Phase 2 project: Towards the application of perfect markers for broad spectrum disease resistance in wheat	140,000
CSP00078	Genetic Basis of Sponge and Dough Breadmaking	305,682
CSPS10	Project Review 2005—Grain Protection Genes	15,432
CWQ00010	Triticarte	150,000
CWQ00013	AWCMMP component project:—Phenotyping complex quality traits for marker identification and validation: Phase 2	96,641
DAN00072	AWCCMP—Component: Implementation/Validation of Molecular Markers in EGA	357,995
DAN00073	National Statistics Project (KP1)—Statistical support for crop improvement and National Variety Trials	393,893
DAN00074	National Statistics Project (KP2)—Strategic statistical research for crop improvement	325,581
DAQ00076	Integrating crop improvement technologies for rapid genetic advance	455,815
DAQ00077	AWCMMP component: Pedigree-based genome mapping for marker assisted selection and recurrent parent recovery in wheat and barley; Phase II	180,000
DAQ00078	Molecular biology support for barley improvement—North	101,000
DAR00001	Strategic investment in the development of Diversity Arrays Technology	407,448
DAR00002	AWCMMP component project—Adding value to Diversity Arrays Technology	75,000
DAV00058	Australian participation in the multinational Brassica Genome Project	250,010
DAV479	Canola Molecular Marker Proposal	394,900
DAW00102	Development and implementation of molecular markers for lupin breeding	161,968
DAW00113	AWCMMP—Component: Validation/Implementation—Barley, Western Region	139,000
DAW00118	AWCMMP—Component: Implementation/Validation of Molecular Marker DAFWA	156,000
GBA00003	Development of salt-tolerant wheat for commercial production	400,000
ICA1	Technologies for the targeted exploitation of the N I Vavilov Institute of Plant Industry (VIR), ICARDA and Australian bread wheat landrace germplasm for the benefit of the wheat-breeding programs of the partners	154,500
PBS00002	Hybrid Cereal Technologies—Consultancy	21,000
UA00007	Transformation in Functional Genomics and Cereal Improvement Programs	382,454
UA00063	Breeding for frost tolerance in barley	128,052
UA00070	Advancement of new genes for stem and leaf rust resistance from uncultivated relatives of wheat	159,451

Project no.	Project title	Expenditure \$
UA00072	AWCMMP component project—Multiplex PCR technologies to accelerate the use of CCRs in cereal breeding and genetic research	135,661
UA00073	Genetic variation for improved frost tolerance in wheat	206,000
UA00078	AWCMMP—Component: Malting Barley Quality Improvement Program implementation and validation	257,000
UA00080	AWCMMP component—Association Mapping	267,038
UA00083	Cereal Functional Genomics Centre	1,200,104
UA00086	Whole genome selection in wheat and barley—The practical application of whole genome analysis	180,000
ULA00006	A novel male sterility system for canola and wheat	138,300
UMU00019	AWCMMP component project—Rice–wheat–barley comparative genomics for key agronomic traits	103,000
US00030	AWCMMP Phase 2 Component project—Markers for rust resistance in cereals	100,260
USQ00007	AWCMMP—Component: Molecular markers for high priority traits in winter cereals for the northern region	432,000
VR24	National Variety Trials	4,433,112
VR52	Commercialisation Costs	49,819
VR55	National Genetic Resource Centre Interim Executive Coordinator	(80,000)
WCI27	Curation and management of genetic resources for the Australian grains industry	1,206
	Total gene discovery	18,910,390
	GERMPLASM ENHANCEMENT	
AGS00002	CIMMYT Suite of Projects—Germplasm Evaluation project	37,900
AWB00005	Australian Wheat Quality Improvement Program—Product and Market Knowledge	70,000
BBM00001	Pilot brewing evaluation for malting barley lines destined for export	54,600
BRI00006	National Wheat Quality Evaluation Program	218,000
BRI00028	Australian Wheat Quality Improvement Program—Wheat Quality Laboratory Network	225,900
BRI102	Grain Industries Centre for NIR: coordination and support activities	80,000
CIM00008	CIMMYT Alliance—Component 1 Protecting the Australian wheat industry from Karnal bunt through the development and implementation of molecular markers	150,000
CIM00009	CIMMYT Alliance—Component 2 Enhancement of stress tolerance in wheat through the expanded development and use of synthetic wheat and other alien introgressions	150,000
CIM00010	CIMMYT Alliance—Component 3 Improving the stress tolerance of wheat genotypes of relevance to the Australian production environment	302,000
CIM00011	CIMMYT Alliance—Component 4 Root diseases	100,000
CIM00012	Enhancing Germplasm and Information Flow between CIMMYT and Australian Wheat Breeders	87,628
CIM13	Australian Cereal Rust Control Program—Adult plant resistance and introgression of new and novel genes	366,000
CMB00003	Variation in barley scald and effective resistance gene deployment	132,000
CMB00006	MPBCRC: Improved disease resistance in cereals	153,613
CMB00007	MPBCRC: Association mapping	80,134
CMB00008	MPBCRC: New markers, genetic mapping and QTL analysis	130,744
CMB00009	MPBCRC: Disease genetics—Pathogen variation and host interactions	102,078
CMB00010	MPBCRC: Germplasm wheat quality—genetic ideotype for pre-harvest sprouting tolerance	115,713
CMB00011	MPBCRC: Education and training program	169,704

Project no.	Project title	Expenditure \$
CSP00012	New disease protection for wheat—a block of genes for resistance to barley yellow dwarf virus, root lesion nematode and rusts plus potential yield boost	40,649
CSP00018	Wheat Germplasm with Improved Yield Performance under Drought for Australian Breeding Programs	214,020
CSP00053	Wheat traits, genes and germplasm for adaptation to water-limited environments in the northern region	839,110
CSP00057	Vigorous roots for hostile soils	89,530
CSP00058	Development and delivery of salt tolerance and water use efficiency traits for durum with diversified genetic background	250,962
CSP00059	Improved wheat and barley germplasm for saline and sodic soils: a collaborative project from CSIRO and Department of Primary Industries Horsham	119,000
CSP00068	International Adaptation Trial: Investigating adaptation of Australian and CIMMYT wheat germplasm	44,378
CSP00071	New resources for breeding for heading date and improved frost tolerance	92,664
CSP00076	International Adaptation Trial: Investigating adaptation of Australian and CIMMYT wheat germplasm	28,034
CSP00077	CSIRO—Pre-breeding Gateway: Germplasm development and validation of novel traits for Australian wheat breeding	42,613
CSP00080	Novel strategies for manipulating dormancy in wheat	301,478
CSP00081	Better wheats for Australia by capturing novel traits and associated markers for breeding programs	62,094
CSP00083	New approaches and technologies for management of wheat grain protein content	125,000
CWQ00014	Late Maturity Alpha-amylase Screening Services	50,000
DAN00061	Durum Industry Development—Fast tracking genetic solutions to crown rot	159,994
DAN00064	Durum Industry Development—Collaboration with ICARDA to accelerate cultivar improvement for adaptation across all production regions	60,000
DAN00084	Consultancy Agreement—Costing of breeding programs	9,488
DAN00085	National Statistics Project (KP3)—Molecular markers and statistical genetics	201,736
DAQ00002	Novel Approaches to In-head Frost Tolerance	55,240
DAQ00045	SIP04 Defect Elimination in Wheat	125,603
DAQ00094	National Screening for Barley Grains Defects including Black Point, Staining and Pre-harvest Sprouting	133,464
DAQ00104	Sponge and dough bread quality of Australian wheat germplasm	241,145
DAQ566	Genetic approaches to resistance to <i>Fusarium</i> and <i>Bipolaris</i> in wheat and barley	136,981
DAS00031	Incorporating new sources of stem and leaf rust resistance from wild oat species into cultivated oat varieties	99,818
DAS00039	Improved oat varieties for milling, feed and hay/feed end use in the southern region Oat Breeding Program	690,636
DAS00048	Control of cereal fungal diseases	200,000
DAS00052	Plant Genetic Resources: Enhancing Germplasm Conservation for Australian Agriculture	1,144,000
DAV00076	Synthetic Evaluation Project	309,613
DAV436	Development of pre-harvest sprouting resistant breadwheats using resistances from <i>Triticum tauchii</i>	35,000
DAW00085	Addressing rust resistance and other key traits in wheat breeding for the western region	763,733
DAW00126	Enhancing resistance to <i>Stagonospora nodorum</i> in Australian wheat germplasm	190,265
GRD151	Value Added Wheat CRC	750,000
JHC00001	Study in the area of crop plant improvement by induced mutagenesis	15,000

Project no.	Project title	Expenditure \$
PBS00004	Consultancy Agreement—Chair the Steering Committee of the Australian Genetic Resources Centres	20,000
UA00003	Identification of resistance mechanisms to barley black point and effects of black point on malting quality	38,500
UA00014	Improving stability of xanthophyll pigments and noodle colour via reduction in wheat grain lipoxygenase activity	40,000
UA00034	SIP04 Defect Elimination in Wheat	120,576
UA00039	SIP04 Defect Elimination in Wheat	10,936
UA00061	Development and evaluation of weed competitive wheat cultivars	247,500
UA00074	Germplasm development for durum improvement in southern Australia	216,414
UA00076	Improving adaptation of wheat to hostile soils: quantifying the importance of traits and targeted germplasm development	103,000
UA00077	Characterisation and recombination of wheat grain components that determine colour and colour stability in Asian noodles	108,147
UA00085	SIP04 Defect elimination in wheat—Late maturity alpha-amylase	188,348
UA00090	Physiological based screening for identifying novel salt-tolerant germplasm in wheat and barley	92,231
UA538	Relocation of wheat biochemistry research program currently at the Plant Breeding Institute, Narrabri, to the University of Adelaide	146,115
UM00021	Monitoring populations of the blackleg fungus to develop strategies for deployment of resistance genes in oilseed brassicas	105,300
UQ127	Assessment of the extent of collateral damage in genetically-engineered wheat and barley	(18,975)
UQ157	Enhanced evaluation of CIMMYT germplasm for Australia (Continuation)—Australian component	75,000
US00026	The cell biology of cold-induced male sterility in wheat	108,388
US315	Australian Cereal Rust Control Program	1,017,508
USQ00002	Evaluation of Transgenic Wheats for Frost Tolerance	114,070
USQ00008	Durum Industry Development—Molecular marker assisted selection for crown rot resistance	60,000
UT8	Australia–China collaboration on barley genetic resources	109,023
UWA00038	Genetic Dissection of Fungal Disease Resistance in Legumes using <i>Medicago truncatula</i>	478,871
UWA398	Development of a salt-tolerant cereal using 'wide crosses' of wheat with 'wild' <i>Hordeum</i> species—CRC Salinity	161,903
VR03-1	Australian Wheat Quality Improvement Program	21,452
VR05	Wheat quality for Asian markets	3,046
VR05-1	Wheat quality for Asian markets	1,922
VR08	Importation and evaluation of CIMMYT germplasm	5,175
VR26	BIOS Initiative	672
VR55-1	National Genetic Resources Centre Interim Executive Coordinator	3,103
WCI52	AWCMMP Communications Project	101,652
	Total germplasm enhancement	14,027,138
	WHEAT AND BARLEY BREEDING	
AAC00002	Agriculture Australia Conference 2006—50% bronze sponsorship	1,818
AGL00004	Consultancy Agreement—Best Practices for Breeding	55,183
AGP00004	Fast-tracking of rust-resistant Stylet replacements for growers in Southern Australia	242,967
AGP00005	National Triticale Improvement Program	409,050

Project no.	Project title	Expenditure \$
AGP00007	Consultancy Agreement—Coordinator(s)—Barley Breeding Australia and National Pulse Breeding Program	21,413
AGP2	Australian Grain Technologies—Independent Directors	113,420
ANU00007	Managing and identifying resistance against barley scald	109,966
ANU00008	Genetic controls of root impedance and drought signalling in wheat	252,341
BBE00003	Consultancy Agreement—End Point Royalty Collection Models	21,961
CSP00019	Wheat Breeding for the HRZs of Australia	339,591
CSPS11	Project Review 2005—Wheat Breeding for the HRZs of Australia	3,083
CSPS8	Project Review 2005—Wheat Quality Improvement	22,149
CWQ00011	Dual-purpose Triticale Improvement Program—US	82,214
CWQ00015	CIMMYT Communication Project	63,000
CWQ00016	Exploiting <i>Septoria</i> resistance in wheat	164,996
DAN00055	Barley improvement and quality program for south-eastern Australia	160,000
DAN00060	Australian Durum Industry Development Officer	119,065
DAN00089	Quarantine CIMMYT Bread Wheat Germplasm	94,875
DAQ00032	SIP01 Barley improvement and industry development	20,000
DAQ00038	SIP01 Barley improvement and industry development	984,000
DAV00025	SIP01 Barley improvement and industry development	607,694
DAW00119	Barley Breeding in the West	1,356,838
DAW00145	Wheat Breeding Business Plan	12,500
EGA00001	Enterprise Grains Australia	3,819,895
EGC00002	Investment in Export Grains Centre Second Five-year Term	2,000,000
ICA00002	Travel Award—to visit Australia	6,000
MPC00001	Project Review 2005—Wheat Quality Improvement	8,000
MPC00002	Coordinator for Barley Breeding Australia	45,500
PBS00001	Consultancy Agreement—Best practices for breeding	509
RWF00004	National Approach to Wheat Quality Research for Variety Development	50,000
RWF00005	Report on the key terms and activities required for a wheat-breeding alliance between EGAll and Longreach Plant Breeders	14,351
SPS2	SunPrime Pty Ltd—Independent Directors	7,247
TMP164	Wheat Breeding—National	15,473
UA00032	SIP01 Barley improvement and industry development	1,309,964
UQ00040	Support for ICIS (International Crop Information System) for Australian grain breeding and CIMMYT germplasm introduction programs	46,111
UWA00096	Barley Improvement through germplasm introduction, evaluation and enhancement	145,729
VR01	Barley Breeding	6,896
VR01-1	Barley Breeding	14,141
VR01-2	Barley Breeding	30,000
	Total wheat and barley breeding	12,777,941
	PULSE AND OILSEED BREEDING	
ACA5	Contribution to ACIAR project—CS1/1999/072 Oilseed Brassica Improvement in China, India and Australia	175,000
AOF00003	Taskforce of Adventitious Presence of GM Canola	20,000
AOF00005	Canola Quality Objectives Group	15,000
CI29	Lupin (narrow-leaved lupin) breeding—capital component	65,000

Project no.	Project title	Expenditure \$
COL00001	Assessing the direction and potential of the soybean industry in Australia— Consultancy Agreement	10,176
CSP338	National soybean improvement	1,054,372
DAN00034	Northern Faba Bean Improvement Program	358,092
DAN00052	Development of chickpea genotypes and improved agronomic practices for chickpea, faba bean and mungbean in northern New South Wales	119,917
DAN00053	Canola and mustard in northern New South Wales	137,927
DAN00062	Albus Lupin Breeding	284,864
DAN00063	National Brassica Improvement Program—Component 2, Stage 3: New South Wales Agriculture	270,000
DAN00065	Northern Desi Chickpea breeding program	248,456
DAN00090	A pilot project on control of Bean leafroll virus on faba bean in the northern region	25,000
DAN00094	Australian Chickpea Breeding Program	557,688
DAN00096	Canola and mustard in northern New South Wales (II)	123,630
DAQ00015	Crop Improvement of Grain Sorghum in Australia—Core Breeding	562,061
DAQ00060	National Mungbean Improvement Program	228,938
DAQ00062	Cloning of an Insect Resistance Gene from Sorghum	117,346
DAQ00070	Australian Peanut Improvement Program	460,000
DAQ00073	Implementing technologies and strategies to maintain resistance to sunflower rust	182,450
DAQ00085	Identifying Candidate Genes for Stay-green in Sorghum	148,090
DAQ00092	Maize germplasm enhancement and productivity improvement for tropical Australia	139,755
DAS00047	National Brassica Improvement Project—South Australia Component	59,300
DAS00050	Lupin evaluation—South Australia—Victoria node	90,026
DAS00059	Improved vetch varieties for Australian farmers and end-users	193,995
DAV00060	National Brassica Improvement Program—Department of Primary Industries Victoria and Lead Agency	354,915
DAS00066	Pulse Germplasm Enhancement—Vegetative and reproductive frost tolerance in pulse crops	38,179
DAS00067	Pulse Germplasm Enhancement—Bacterial blight in field pea, pod drop in lentil, and heat stress tolerance in field pea and faba bean	54,805
DAV00071	Australian Field Pea Breeding Program	365,166
DAV00072	Australian Lentil Breeding Program	221,229
DAV00073	Pulse Germplasm Enhancement—Boron and salt tolerance in temperate pulses and durable ascochyta blight resistance in chickpea	24,500
DAV451	Coordinated improvement of chickpea in Australia—south-east region	194,017
DAW00101	Evaluation and selection of high-quality brassica breeding lines for short-season environments of Western Australia	149,804
DAW00104	Yellow lupin improvement	319,138
DAW00105	Western Lupin Technology (Narrow-leafed lupin breeding for southern Australia)	737,206
DAW706	Breeding of chickpea for the western region	15,000
DAW707	Breeding field peas for the western region	81,367
GBE00001	Consultancy Agreement—National Pulse Breeding Program	83,000
SGA00001	Business Plan for the Australian Canola Industry	6,247
UA00079	Faba Bean Breeding—Southern and Western Regions	465,050
UT00004	Grain Legume and Oilseed Evaluation in Tasmania	146,400
UWA00009	Improved lupin grain quality and yield through genetic manipulation of key physiological traits	74,794

Project no.	Project title	Expenditure \$
UWA00036	An international collaboration to develop interspecific hybrids between chickpea and its wild annual relatives	5,000
UWA00091	An international collaboration to develop interspecific hybrids between chickpea and its wild relatives	61,565
UWA00092	Lupin germplasm characterisation	220,000
UWA00093	Pearl Lupin—development of the first Australian cultivar for commercial evaluation	49,488
UWA00094	Interspecific hybridisation of lupins	71,780
	Total pulse and oilseed breeding	9,385,733
	TOTAL VARIETIES	55,101,201
	AGRONOMY AND SOILS	
AAD00001	Precision Agriculture Manual CD consultancy agreement	41,500
AGL00003	Project Review 2005—Lucerne projects	24,630
AGO00002	AGO contribution to DAW00103: Measurement of paddock-based greenhouse gas emissions from wheat production to improve lifecycle assessment of wheat products	(92,975)
AWR00002	Contribution towards Pastures Australia	150,000
AWR00003	Contribution towards National Annual Pasture Legume Improvement Program	248,477
BAT00001	Consultancy Agreement—Enhancing profitability—a collaborative, diagnostic approach to cropping systems research	4,125
BWD00008	Flexible farming systems to meet the challenges of farming the southern Mallee and northern Wimmera	136,000
CAG00002	On-farm Evaluation of Frost Minimisation Techniques and Risk Management Strategies	50,000
CCC00001	High-yielding irrigated grains in cotton systems—Phase 1—A review and scoping study	48,000
CCC00002	Quantifying effects of maize rotation on soil quality and nutrient availability on cotton growth and yield	6,000
CDS00001	CRC for Plant-based Management of Dryland Salinity	10,000
CFG2	Using precision agriculture and soil inoculants to improve crop performance and grower returns	50,000
CFI00008	Precision Agriculture Initiative—Farming Systems Research Group (Northern Region)	51,000
CSA00007	Province, paddock or patch? Giving farmers tools to optimise the scale at which fertiliser decisions are made	112,000
CSA00010	Collation and analysis of data in the economics of precision agriculture—Precision Agriculture Manual	25,000
CSE00036	Scoping study to review current research on microbe–plant interactions in the rhizosphere and identify priorities for future investment	50,000
CSO00004	Objective measures for managing the risk of deep drainage	53,046
CSO00007	Addressing the soil supply factor to improve prediction of plant nutrient requirements	127,225
CSO00016	Integrated management of <i>Pythium</i> root disease complexes to improve sustainability and productivity of crop rotations (GRD145)	9,850
CSO00017	SIP09 Precision Agriculture Initiative	260,835
CSO00028	Management of soil microbial function for improved productivity in intensive cropping systems	212,720
CSO00029	Residue management, soil organic carbon and crop performance	200,896
CSO00030	Developing improved capacity to predict nitrogen supply to crops	450,308
CSO00031	Innovative solutions to subsoil constraints for a profitable and environmentally sustainable grains industry in Western Australia	108,030
CSO00032	Investigation of cause and extent of lodging and yield loss associated with stubble retention in irrigated maize	110,061

Project no.	Project title	Expenditure \$
CSO00033	Farming systems options and catchment salinity response	199,241
CSO00034	Improving farm to catchment nutrient management for a more profitable and environmentally sustainable grains industry	193,363
CSO00036	Scoping study to review current research on microbe–plant interactions in the rhizosphere and identify priorities for future investment	(50,000)
CSO00038	Feasibility for rapid soil measurement using core scanning	36,842
CSO231	Fluid fertilisers—the next step towards raising yield potentials	349,959
CSO232	Managing the fallow period for optimum water use and nitrogen availability	106,614
CSP00015	Improving wheat yields and quality in Western Australian sandplain farming systems	211,482
CSP00040	Can we forecast seasonal wheat grain yields and protein in Western Australia?	32,785
CSP00049	Evaluating the use of subsoil water by crops—is it the pipes or the pump?	155,106
CSP00064	Exploiting genetic variation in wheat roots to promote beneficial interactions with soil organisms and thereby increase yield	193,348
CSP00065	Delivering high yields of milling wheats in the HRZ of Western Australia	149,027
CSP318	Citrate-secreting break crops to unlock the fixed-P bank in rotations	71,059
CSP343	Identifying and evaluating 'primer crops' for hostile subsoils	66,055
CTF00002	SIP09 Precision Agriculture Initiative	182,500
CWF00005	Combating subsoil constraints	71,220
DAN00002	Permanent beds for sustainable farming on irrigated farms	40,389
DAN00028	SIP01 Barley improvement and industry development	231,000
DAN00054	SIP09 Precision Agriculture Initiative	111,498
DAN00059	Direct and indirect measurement of deep drainage in north-west New South Wales cracking clays: is there more drainage in cropping systems if lucerne is included?	153,470
DAN484	Breeding improved lucernes for cropping systems in eastern Australia—Phase II	244,738
DAQ00048	Identification of soil biotic constraints in contrasting farming systems on Vertosols of the northern grains region	282,332
DAQ00061	Agronomic Solutions for Queensland Pulse Growers	174,053
DAQ00067	SIP09 Precision Agriculture Initiative—Eye in the sky to revolutionise northern crop production	139,380
DAQ00084	Nutrient management in rainfed cropping systems of the northern grains region	283,113
DAS00017	Reducing the impact of climate variability (funding supplemented with NEGFS15)	115,959
DAS00035	Managing Diseases using Precision Agriculture	153,193
DAS00040	The seed increase and distribution of perennial legumes to support sustainable and productive farming systems	60,000
DAS347	Breeding lucerne for Southern Australian cropping districts	293,420
DAV00006	Tools to reduce the impact of climate variability in south-eastern Australia	195,060
DAV00022	Maintaining the Productivity of Soils Under Continuous Intensive Cropping	121,943
DAV00030	SIP09 Precision Agriculture Initiative	165,404
DAV00049	Improving the profitability of cropping on hostile subsoils	519,324
DAV00056	Understanding subsoil constraints in the HRZ	53,257
DAV00057	Pulse agronomic research for the development of variety-specific management packages in south-eastern Australia	170,029
DAV00059	Management of high-rainfall cropping to improve water quality and productivity	205,621
DAV00061	Genotype and management combinations for highly productive cropping systems in the HRZ	490,712
DAV00066	Delivering rapid soil tests to growers	150,380

Project no.	Project title	Expenditure \$
DAV417	Environmental impacts of raised-bed cropping systems in south-west Victoria	91,152
DAW00012	Variety-specific agronomy for wheat yield and quality in the western region	668,356
DAW00031	Evaluation and cultivar selection for herbicide tolerance in annual legume pastures	127,692
DAW00032	Improving weed management with biserrula in the pasture phase of Western Australian cropping systems	139,969
DAW00075	Interaction of nitrogen with other nutrient elements for production of canola grain and oil	72,500
DAW00084	Diagnostic support and training for precision agriculture	120,722
DAW00087	Better long-lead seasonal and crop forecasts for southern Australia	137,793
DAW00088	Climate change, wheat yield and cropping risks in Western Australia	126,284
DAW00093	Identifying soil constraints to crop production on the south coast sandplain	121,200
DAW00099	Lupin agronomic improvement in the western region—Enhancing the profitability of the lupin–wheat rotation	290,239
DAW00103	Measurement of paddock-based greenhouse gas emissions from wheat production to improve life cycle assessment of wheat products	103,922
DAW00107	Oat agronomy and industry development for the western region	123,600
DAW00130	Using precision agriculture tools to design and manage profitable mallee agroforestry systems: a preliminary assessment of the technology	10,000
DAW00138	The use and impact of deep drains on improving salt-affected soils used for grain cropping in the Western Australian wheat belt	80,000
DAW717	Soil and surface water management for profitable crops and pastures on waterlogged and saline land	140,000
DAW723	Coordinator for the National Annual Pasture Legume Improvement Program	4,350
DNR00004	SIP08 Combating subsoil constraints	361,613
DNR00006	Which northern dryland farming systems are at high risk of deep drainage and salinity?	154,516
GRD200	Agronomy Reference Group—Western Panel	6,510
LWR25	GRDC contribution towards Managing Climate Variability Program	698,518
MCP00002	Refinement of best management practices for chickpeas and mungbean in north-western farming systems	2,502
MLA00001	GRDC contribution to Pasture Soil Biology Program	100,000
NEGSFS2	SIP09 Precision Agriculture Initiative	5,000
NMS00002	Adoption of improved nutrient management practices	155,000
PR41-1	Delivering rapid soil tests to growers	2,807
PR96	Commercialisation costs	55,000
SFP23	National Rhizobium Program Review	500
SFP8	Precision Agriculture Initiative (SIP09)—Administrative Costs	5,393
SFP9	Precision Agriculture Supplement for <i>Ground Cover</i>	14,545
SFX00002	Support for SIP09 initiative and testing of stability zones and pseudo harvest index measures across core sites	67,000
SPA00003	Improvement of nutrient management through effective use of precision agriculture technologies in the southern Australian grains industry	79,500
UA00023	Improving farming systems for the management of transient salinity and risk assessment in relation to seasonal changes in southern Australia	167,193
UA00081	Determining the benefits of fluid fertilisers on neutral and acidic soils in eastern and western Australia	79,621
UCS00003	Sequencing crop rotations that best utilise lucerne biopores to control groundwater recharge and maintain dry catchments	18,074
UM00015	Epidemiology and control of botrytis grey mould in lentils	50,474

Project no.	Project title	Expenditure \$
UM00023	Synchronising nutrient supply and crop demand in modern cropping systems	323,010
UNE00009	Chair in Sustainable Grain and Grazing Farming Systems	82,530
UNS00002	Active Implements for Precision Seed and Fertiliser Placement	50,000
UQ00037	Improved performance of cereal roots in Australian farming systems—matching roots to cropping systems in the northern cropping region	137,000
UQ163	Pathology support for lucerne improvement including germplasm enhancement	218,606
US00017	SIP09 Precision Agriculture Initiative	189,644
US00033	Development of a multi-sensor platform for real-time collection of field soil data	75,000
UT00009	Delivering a world-class root model to Australian grains researchers	75,775
UWA00005	Improving the utilisation of pasture germplasm by the development of a core collection using ecogeographical and molecular techniques	45,000
UWA00031	Optimising potassium cycling in soils and crops for improved grain production in Western Australia	105,000
UWA00081	Combating subsoil constraints: Unlocking crop potential through innovative subsoil management	509,257
UWA00083	Lectureship in Pasture Science at UWA	40,012
UWA00084	Profitable and sustainable nutrient management in the Western Australian grain industry	255,000
UWA00089	Delivering rapid soil tests to growers	149,918
UWA00090	Root Systems for Australian Soils: Root traits for hardpan penetration and water extraction in wheat	118,080
UWA00104	Prospects for Perennial Wheat	50,000
UWA396	High water-use farming systems that integrate crops with perennial pastures—CRC Salinity	88,097
UWA397	National field evaluation and selection of new pasture plants from the salinity CRC to improve hydrologic stability of farming systems—CRC Salinity	500,000
UWA400	Capacity building in Crop Agronomy	143,301
UWS00007	Improved management of nutrient and soil water interactions in the northern grain zone	122,410
WWL00001	Bringing it all together for the grains industry—a whole-of-catchment approach to integrated water management	186,653
	Total agronomy and soils	16,615,442
	CROP PROTECTION	
ACR00002	Extending the outcome of ACR4	23,000
AGL00005	Project Review 2005—Australian Cereal Rust Control Program	35,000
AKC00001	Registration for minor use chemicals for the grains industry	123,000
ANU00002	Lectureship in Plant–Microbe Interactions	53,016
ANU00006	Exploring a model system to develop controls for plant parasitic nematodes	99,932
BWD00005	Improved techniques for managing herbicide-resistant ryegrass	188,750
CRW5	CRC for Weeds	750,000
CSE00027	Insecticide resistance and sustainable management of aphids	123,900
CSE00028	Natural enemy evaluation of the silverleaf whitefly and ecological processes affecting silverleaf whitefly dispersal	163,500
CSE00029	National Pest Initiative	424,934
CSE00037	Curation and development of invertebrate collections within the Australian National Insect Collection	83,800
CSE00038	The application of novel genetic approaches to pest land snails—a feasibility study	20,500
CSP00007	Molecular relationships in the rust fungi particularly the family Pucciniaceae	41,275

Project no.	Project title	Expenditure \$
CSP00079	Non-race specific (broad spectrum) adult plant rust resistance in wheat	260,332
CSV00002	Biological control of mice—Immunocontraception	351,284
DAN00066	More profitable chickpeas through disease management—northern region	100,000
DAN00067	Differential herbicide tolerance of winter crops in south-east Australia—Stage 2	142,800
DAN00068	Integrated disease management in field crops with emphasis on sclerotinia stem rot in canola	123,300
DAN00079	Risk assessment and preventative strategies for herbicide resistance in the northern region (Phase II)	200,000
DAN00086	Assessment of IPM strategies to control insects in rotational farming systems of the southern region	24,325
DAN00095	<i>Helicoverpa</i> spp. insecticide resistance—monitoring, mechanisms and management	93,085
DAN485	Management of <i>Fusarium</i> diseases and common root rot of cereals in the northern cropping zone	277,148
DAQ00027	Screening for differential herbicide tolerance in cultivars of winter cereals in the northern region	72,000
DAQ00056	Development of an area-wide decision support system for whitefly management in central Queensland cropping systems	(57,733)
DAQ00059	Minimising the impact of pulse diseases in Queensland	132,426
DAQ00064	Delivering applied solutions to weed issues in central Queensland	105,442
DAQ00065	Cropping option to limit root lesion nematodes	109,708
DAQ00074	Facilitating adoption of IPM in northern region broadacre farming systems	150,000
DAQ00079	Modelling for sustainable glyphosate use in the northern region	100,000
DAQ00083	Integration of biopesticides into IPM against sucking pests	128,175
DAQ00086	IPM for pulses in northern Australia—Sustainable production in a changing cropping environment	136,836
DAQ00096	Emerging foliar wheat disease issues in the northern region	150,000
DAQ00097	Determining the cause, extent, impact and potential control measures for an unidentified disorder in sunflower crops in central Queensland	79,018
DAS00032	Crown rot management in durum and bread wheats for the southern region	163,449
DAS00034	Diagnostic Support to Crown Rot Strategic Initiative	65,814
DAS00041	Pathology support for pulse crops in southern region—South Australian module	95,400
DAS00042	Pathology support for annual pasture legumes	86,663
DAS00054	Management of <i>Etiella</i> in lentils in southern Australia	70,000
DAV00048	Victorian pulse pathology and virology support program	116,600
DAV00062	Victorian cereal pathology support with emphasis on crown rot management	236,912
DAW00041	Improving the management of diamondback moth (<i>Plutella xylostella</i>) in canola in the western region	100,663
DAW00106	Managing disease constraints in western region farming systems	1,125,000
DAW00114	Applied weed management in Western Australia	245,000
DAW00123	A systems approach to enhance the adoption of IWM techniques in the Northern Agricultural Region of Western Australia	202,932
DAW00124	Rotations to reduce impact of nematodes in western cereal cropping systems	139,313
DAW00127	Crop pest management for farming systems in high-rainfall areas of southern Australia	149,439
DAW00131	Management of annual ryegrass using deleterious rhizobacteria	112,926
DAW00132	Improving the management of diamondback moth (<i>Plutella xylostella</i>) in canola in the western region: Phase 2	55,016
DAW00134	Evaluating herbicide tolerance with new crop varieties	168,625

Project no.	Project title	Expenditure \$
DAW00141	Developing a sensitive dry seed test to detect seed-borne viruses in bulk seed samples of wheat	85,782
DNR00007	Effective and safe rodent management in grain-cropping systems	90,636
GRD183	RDCs contribution to Cooperative Research Centre for Plant Biosecurity: Scoping study	(5,000)
IPM00002	Developing and demonstrating IPM in broadacre cropping	110,500
NPB00001	Evolution of Russian wheat aphid virulence and resistance sustainability	97,010
NPB00002	Enhancing the detection of <i>Tilletia indica</i> , the cause of Karnal bunt	89,607
NPB00003	Contingency plans for emergency plant pests of the grain industry	103,010
PR97	Project Review 2005—Western Australian Herbicide Resistance Initiative	22,000
PR98	Project Review 2005—Grain Protection Genes	15,568
SFS00015	Optimising cereal profitability in the HRZ through the integration of disease management and canopy management principles	416,855
UA00060	Developing management systems for brome grass, a serious threat to production systems on fragile sandy textured soils in southern Australia	158,986
UA00071	Control and eradication of a parasitic weed, field trials	201,973
UA00075	Managing the risks of trifluralin resistance in no-till cropping systems	118,328
UA00088	Understanding and management of weed resistance to glyphosate	119,640
UM00016	Fungal pathology developments for management of diseases of oilseed brassicas in Australia	130,835
UM00020	Strategies to ensure longevity of blackleg disease resistance genes in canola	196,400
UM00022	Emerging mite pests in southern Australia	122,080
UMU00021	<i>Medicago truncatula</i> —Australian Centre for Necrotrophic Fungal Pathogens—Disease Resistance	50,000
UMU00022	<i>Stagonospora nodorum</i> —Australian Centre for Necrotrophic Fungal Pathogens	426,575
UNE62	Field studies and management of crown rot in the northern region	98,348
UQ00029	Population Genetics of Heliothis Migration, Recruitment and Origins	132,538
UQ00032	Advanced application technology to manage spray drift and improve the efficacy of weed management practices	105,000
UQ00036	<i>Trichogramma</i> incidence in grains and cotton growing regions of Australia—consequences for <i>Helicoverpa</i> management	50,124
UWA00041	Biology of diamondback moth in Western Australia	17,500
UWA00073	Economic analysis of GRDC investment in herbicide use	54,979
UWA00097	Improved herbicide tolerance for pulses in the western region	147,232
UWA344	Determination of histological and biochemical resistance mechanisms for the identification of molecular markers for blackleg resistance in oilseed brassicas	42,500
UWA399	Western Australian Herbicide Resistance Initiative	602,702
	Total crop protection	11,744,213
	VALIDATION AND ADOPTION	
AGM00001	Western Australia Agribusiness Trial Extension Network	12,500
AGN00005	Southern Agribusiness Trial Extension Network—To develop, conduct and deliver key research trials and associated communication and extension activities	25,000
AGV00001	Southern Agribusiness Trial Extension Network	50,000
BBC00001	Project Review 2005—Eastern Farming Systems (Phase II), a partnership for participatory R&D extension in the north-eastern grain belt	10,000
BWD00006	The 'REAL' project—Relevant, Experienced, Applied Learning	222,925
BWD17	Southern Mallee and Northern Wimmera Farming Systems	85,000
CAA00003	Growing western canola technology	150,000

Project no.	Project title	Expenditure \$
CFI00009	Guiding growers to more profitable and sustainable cropping systems in the western districts of the northern grain belt	150,000
CSPS7	Project Review 2005—Eastern Farming Systems (Phase II) a partnership for participatory R&D extension in the north-eastern grain belt	171
CWF00007	Central West Farming Systems—Extension and Development	305,000
CWF00009	Low-rainfall Collaboration	200,000
DAQ00049	Sustainable farming systems for central Queensland	715,143
DAQ00050	Enhancing system water-use efficiency in the north-eastern grain belt through participatory R&D extension (Eastern Farming Systems Phase II)	546,347
DAQ00063	Viable and sustainable farming systems on Ferrosols	193,042
DAQ00091	Tool Kit for Best Management Practices in Peanuts—development extension for rapid adoption of decision support using commercial industry networks	122,030
DAQ00103	Validation and integration of new technology through grower groups in the south-west Queensland grain-growing zone—Western Farming System (Queensland)	252,200
DAS00003	Developing annual medics tolerant to residues of sulfonylurea herbicides	99,182
DAS00038	State Focus South Australia	99,170
DAT00003	Enhancing TOPCROP and GRDC extension in Tasmania	78,656
DAV00045	TOPCROP State Focus	105,100
DAV00053	Evaluation Research: An innovative approach to assessing impact and building evaluation capability in farming systems groups	173,184
DAV437	Novel farming systems to increase productivity and reduce risk in the Mallee	67,792
DAW00100	Pulse Industry Extension—Expanding pulse cropping by targeted extension of improved varieties and management packages	278,114
DEL00001	Agribusiness Trial Extension Network	12,500
FFC00001	Western Region's Agribusiness Trial Extension Network project	12,500
FGI00002	Western Australia Agribusiness Trial Extension Network	12,300
FLR00002	FarmLink: Supporting the establishment of a new Farming Systems Groups for southern New South Wales	272,076
HBS00001	Agribusiness Trial Extension Network	12,500
HFG00004	Straight to the Hart—Profitable farming for the future	100,000
HOR00003	Western Australia Agribusiness trial extension network	12,500
ICF00004	Lifting irrigated cropping profitability and water use efficiency (Victoria)	76,050
ICF00005	Lifting irrigated cropping profitability and water use efficiency (New South Wales)	166,000
IMA00001	Agribusiness Trial Extension Network	11,375
JSA00001	Agribusiness Trial Extension Network—Southern Region	26,950
JSR00001	Southern Regions Agribusiness Trial Extension Network Project	12,500
LIE00003	A sustainable dryland community achieved through proactive research on effective management of the soil resource	121,310
LRS00001	Consultancy Agreement—Southern Agribusiness Trial Extension Network	27,500
LWR23	GRDC contribution towards the Grain and Graze Program	813,000
MFM00002	Increasing crop yields on Kangaroo Island and in the south-east of South Australia	154,000
MGP00001	Consultancy Agreement—Conduct a review of current and past oilseed agronomy activities and technical reference materials	15,000
MSF00002	Mallee Sustainable Farming Project	488,462
NFG00001	Western regions Agribusiness Trial Extension Network project	12,500
NGA00001	Validation and integration of new technology through grower groups in north-west New South Wales and south-west Queensland grain-growing zones	206,750
PAL00007	Crop Support for the Northern and Southern Regions	337,910

Project no.	Project title	Expenditure \$
PLN00003	Western Australia Agribusiness Trial Extension Project	12,500
PSD17	Relationships with Agribusiness	30,385
PSD31	Topactive	25,000
RAI00001	Western Australia Agribusiness Trial Extension Network	9,000
RDP00003	Southern Agribusiness Trial Extension Network	24,960
RPI00003	Zonal Management in the Riverine Plains	10,750
RPI00006	Improving Winter Cropping Systems in the Riverine Plains	149,735
RSS00001	Farming Systems Improvement in the Upper North of South Australia	110,000
SAN00005	Improving sustainable grain production through increased adoption of no-till farming	74,500
SFP06.1	Grower Group Support	39,243
SFS00013	Coordination of GRDC HRZ investment	99,935
SFS00014	Investigating stubble management systems to reduce dependence on burning in the HRZ region of southern Australia	188,900
SFX00003	Western regions Agribusiness Trial Extension Network	12,500
SYN00001	Western Australian Agribusiness Trial Extension Network	12,500
SYP00005	Development of best practice farming systems for medium-rainfall alkaline soils	71,940
UA00087	Eyre Peninsula Farming Systems Project II	500,673
UFC0001	Continued identification of and overcoming constraints to canola production on growers' paddocks	32,160
WAN00008	Western Australian No-Tillage Farmers Association technology demonstration site	100,000
	Total validation and adoption	8,348,920
	TOTAL PRACTICES	36,708,576
	NEW FARM PRODUCTS AND SERVICES	
AGL00006	On-farm Instrumentation Scoping Study	106,950
AGL00007	Project Review 2005—Development of specific microbial and transgenic technology to control fungal pathogens: a commercialisation project based on patent application no. PP8394/99	5,000
ANU19	Development of specific microbial and transgenic technology to control fungal pathogens	161,916
AWR00004	Contribution towards the National Rhizobium Program	(319,265)
BRI00027	Objective grain quality testing	898,914
BRI00035	Scoping study to evaluate a new baking process for Australian wheat in Asia	96,700
CSE00041	Development of an integrated aeration–fumigation system	110,810
CSP00050	Quantifying the effect of hydrogen gas on soil biota and crop performance	245,086
DAS00027	Soil Biology R&D Initiative	105,788
DAS00036	TRINOC™: Tri-inoculation for enhanced wheat growth under disease-limiting conditions	126,457
FS00001	TRINOC™: Tri-inoculation for enhanced wheat growth under disease-limiting conditions	17,000
GRD174	Strategy for Commercialisation of Soil Biology Research Outcomes and Future Negotiations for Biological Inputs for Profitable Farming	3,375
NP01	Biological Inputs for Profitable Farming	67,660
NP14-1	New baking process for Australian wheat in Asia	1,747
NP15	Commercialisation Cost	39,003
PAL00009	Objective measurement of pulse qualities	175,000
PBA00001	Develop and market a range of inoculant products in Australia and the Asian regions designed to provide benefits to agricultural growers	473,401

Project no.	Project title	Expenditure \$
PBA00002	Development and testing of new soil inoculants for the Australian grains industry	500,000
RJH00001	National Output Development and Evaluation Project—Soil Biology Initiative	481,890
RO00001	Project Review 2005—Development of specific microbial and transgenic technology to control fungal pathogens: a commercialisation project based on patent application no. PP8394/99	5,000
UA00062	Biological cycling of phosphorus in farming systems—towards an improved capacity for managing phosphorus supply to grain crops	214,229
UF00002	Soil Biology R&D Initiative	31,000
UMU00003	National Rhizobium Program—developing and delivering high-quality rhizobial inoculants to the Australian grains and pasture industries	246,355
UWA00058	Biological indicators of soil quality	17,500
UWA395	Overcoming soil biological constraints to yield	30,595
VC19	Innovations in stored-grain technology for post-harvest value adding	10,000
	Total new farm products and services	3,852,112
	NEW GRAIN PRODUCTS	
BBE00002	Develop grains containing high levels of nutritionally important long-chain Omega-3 fatty acids, particularly EPS and DHA	101,500
BRI00033	Development of Optimal Noodle Specifications for a Major Asian Noodle Manufacturer	121,100
CGF00001	Grain Foods CRC Limited	750,000
CGF00002	Grain Foods CRC Ltd—Director Fees	25,000
CSE00030	Crop Biofactories Initiative	1,765,000
CSE00031	A workshop to identify priorities for the Phosphine Resistance Initiative	3,060
CSE00040	Registration and extension of the use of new ethyl formate formulations on stored grain and for structural treatment	183,464
CSE00042	A diagnostic method to determine phosphine resistance in insects	669,778
CSE122	Physical and biological strategies for grain storage and protection—Component 2—Harvest storage strategies for farmers	24,008
CSP00060	Making wheat starch more competitive with maize or potato starches by improving its viscosity	174,029
CSP00067	Coeliac Friendly Cereals: Developing Germplasm	150,000
CSP00084	Development of wheat with altered carbohydrate digestibility (starches) for food and industrial applications	536,000
CSU10	Understanding factors that affect grain quality for livestock production	301,800
DAN00075	Statistical analysis and data mining for the Premium Grains for Livestock Program	159,207
DAN00083	Resistance management of stored-grain insects in the southern region	146,150
DAN00097	National independent quality assurance and germplasm maintenance for <i>Rhizobium</i> inoculants	111,000
DAQ00005	Strong resistance to phosphine in Chinese rice weevil	17,372
DAQ00066	Managing Mycotoxin Contamination of Maize	105,026
DAQ00075	Optimising grain yield and quality: Integrating high-moisture harvesting and grain storage strategies	600,000
DAQ00090	Resistance Monitoring and Management—Northern Region	113,786
DAQ00098	Phosphine fumigation of cool grain	94,572
DAW00069	SIP10 New Grain Products	53,650
DAW00129	Resistance Monitoring and Management—Western Region	83,970
EHC00001	Consultancy Agreement—High-amylose Wheat Joint Venture	3,500

Project no.	Project title	Expenditure \$
EMF00001	Consultancy Agreement—A research trip and report on biomass ethanol technologies in North America, and preliminary crop biomass mapping	24,925
GOG00001	Go Grains—Membership Subscription 2005–06	250,000
GOG00002	Go Grains—Communication Program 2005–06	200,000
JLB2	Premium Grains for Livestock Program 2: Component 1. Coordination	170,000
JPC00001	Crop Biofactories Initiative—International Reference Panel	16,888
KSS00001	Consultancy Agreement—Premium Grains for Livestock Program NIR Case Study	9,389
KSS00002	Ridley Case Study, Ingham, QAF and Grainsearch Case Studies, ABB Case Study	6,000
PBS00003	Consultancy Agreement—CSIRO—Limagrain High-amylose Wheat Project	4,482
PCL00001	CRC for an Internationally Competitive Pork Industry	30,000
SKC00001	Alternative oilseed crops as potential production platforms for high-value industrial oils in Australia—linked to CSE00030	8,000
SMC00001	Consultancy Agreement—Go Grains Health and Nutrition Ltd	20,000
TCC00001	Consultancy Agreement—Feed Grains	42,409
US312	Premium Grains for Livestock Program 2: Component 2. Production, storage and distribution of grain samples	272,250
UT00006	Understanding and market-targeting the fermentability of Australian malt	26,500
UWA00062	Development of value-added plant protein products for the aquaculture feeds sector	93,020
VC01	Market Intelligence: Existing	10,000
VC17	Contribution to the Premium Grains for Livestock program	(220,000)
VC22	Objective quality assessment to facilitate feedgrain trading	825
VC22-1	Objective quality assessment to facilitate feedgrain trading	3,767
WJM00003	Coordination of registration of grain storage chemicals	62,650
	Total new grain products	7,324,077
	TOTAL NEW PRODUCTS	11,176,189
	BUILDING RESEARCH CAPACITY	
AAC00001	Conference Sponsorship—Agriculture Australia 2006	8,000
AGH00001	Preparation of Precision Agriculture Manual	13,267
AIA00002	Conference Sponsorship—Rural Land Use—Farmers' Rights, Obligations and Futures	1,200
AIA00003	Conference Sponsorship—Future Directions for Australian Agriculture	1,200
ANU00004	Environmental Management Systems in Agriculture: A Comparative Analysis of Initiatives in the European Union and Australia	84,250
ANU18	Australian Centre for Intellectual Property in Agriculture	165,313
AOF00004	Oilseeds Industry Development Officer—Expansion of oilseed crops	(30,000)
APE00002	Conference Sponsorship—Australasia—Pacific Extension Network (APEN) 2006 International Conference	10,000
APP00002	Conference Sponsorship—Fourth Australasian Soilborne Diseases Symposium	5,000
ARL00005	Australian Rural Leadership Program	98,000
ASF00004	Conference Sponsorship—Fifteenth Australian Sunflower Conference	7,940
ATA41	Agricultural Training Award—to study at Australian Agricultural College Corporation, Dalby Campus	5,000
ATA42	Agricultural Training Award—to study at Australian Agricultural College Corporation, Dalby Campus	5,000
ATA43	Agricultural Training Award—to study at the Australian Agricultural College Corporation, Emerald Campus	5,000
ATA44	Agricultural Training Award—to study at CB Alexander Agricultural College Tocal	5,000

Project no.	Project title	Expenditure \$
ATA45	Agricultural Training Award—to study at CB Alexander Agricultural College Tocal	5,000
AWO00001	Conference Sponsorship—Women Unite: Working together for rural Australia	7,500
BAO0001	Travel Award—to investigate supply chain quality trademarking in the malting barley industry	3,800
BAE00012	Conference Sponsorship—Fiftieth Annual Conference and workshop of the Australian Agricultural and Resource Economics Society (AARES)	5,500
BRI00032	Research Horizons for Grain Leaders of the Future Course	200,600
BRS00009	Sponsorship of 2006 Science and Innovation Awards for Young People in Agriculture, Fisheries and Forestry	40,000
BWD00009	Travel Award—to attend the Canadian Wheat Board Conference	2,545
CAC00001	Travel Award—to visit five regions of Western Australia to inform farmers and their families of the Canadian experience with GM canola adoption	3,500
CAC00002	Industry Development Award—to participate in a canola GMO study tour in Canada	13,636
CFM00005	Conference Sponsorship—Water for Irrigated Agriculture and the Environment	5,000
CSE00039	Travel Award—to attend the Plant and Animal Genome Fourteenth Conference	2,000
CSP00069	Conference Sponsorship—Eighth International Congress of Plant Molecular Biology	50,000
CSP00070	Travel Award—to attend the CIMMYT Fusarium Head Blight Workshop	2,395
CSP00072	Travel Award—to attend the Gordon Conference on Salt and Water Stress in Plants	3,625
CSP00073	Travel Award—to attend the Thirteenth Australian Agronomy Conference	1,270
CSP00074	Travel Award—to attend Biohydrology 2006 and visit the Scottish Crop Research Institute and the University of Wales	3,155
CSP00075	Travel Award—to attend the Second Central Asian Cereal Conference	3,800
CSP00082	Conference Sponsorship—Fenner Conference on the Environment 2006—Integrating agricultural and environmental imperatives for a profitable and sustainable future	2,500
CWC00002	Travel Award—to attend the International Soil Tillage Organisation Seventeenth Triennial Conference	2,800
CWF00008	Conference Sponsorship—Central West Conservation Farming Association Annual Seminar and Field Day 2006	7,500
DAN00091	Travel Award—to attend and present at the World Grains Summit: Foods and Beverages and the 2006 Gluten Workshop	3,685
DAN00092	Travel Award—to attend and present at the World Grains Summit: Foods and Beverages and visit laboratories	2,500
DAN00093	Travel Award—to attend the First International Ascochyta Workshop on Grain Legumes	4,000
DAQ00102	Travel Award—to visit Tajikistan	5,000
DAS00060	Travel Award—to attend the Thirteenth Australasian Plant Breeding Conference	864
DAS00061	Travel Award—to attend the Thirteenth Australasian Plant Breeding Conference	1,345
DAS00062	Travel Award—to attend the Thirteenth Australasian Plant Breeding Conference	1,441
DAS00063	Travel Award—to attend the Haploids in Higher Plants III Conference	1,482
DAS00064	Travel Award—to attend the Seventh Plant Growth Promoting Rhizobacteria Workshop	3,364
DAS00068	Travel Award—to attend the World Grains Summit: Foods and Beverages and the 2006 Gluten Workshop	3,695
DAS00069	Travel Award—to attend the North American Alfalfa Improvement Conference	2,100
DAV00068	Conference Sponsorship—CTF06—Fourth Australian Controlled Traffic Farming Conference	10,000
DAV00074	Travel Award—to attend the Eighteenth World Congress of Soil Science	4,000
DAV00075	Travel Award—to attend the Eleventh International Association for Plant Tissue Culture and Biotechnology	5,000
DAW00135	Travel Award—to attend the Thirteenth Australasian Plant Breeding Conference	2,245

Project no.	Project title	Expenditure \$
DAW00136	Travel Award—to attend the Haploids in Higher Plants III Conference	3,455
DAW00137	Travel Award—to attend the Eighteenth World Congress of Soil Science	3,182
DAW00142	Travel Award—to attend the International Symposium of Balance Fertilization for Sustaining Crop Productivity	2,120
DAW00143	Travel Award—to attend the Fifteenth Australian Weeds Conference	1,200
DAW00144	Travel Award—to visit the University of Wyoming's Sustainable Agriculture Research and Extension Center on a technical exchange	2,000
FGI00003	Travel Award—to attend the Hart Field Day 2006	1,020
FGI00004	Travel Award—to attend the Hart Field Day 2006	1,020
GCA00009	Conference Sponsorship— <i>Grains Week 2006</i>	50,000
GIT00001	An audit of the grains industry capacity learning options coverage—GRDC southern region	46,000
GRD175	GRDC Industry Development Awards	4,000
GRD30-1	GRDC Grower Group Awards—State and National Winner	12,000
GRS100	Grains Industry Research Scholarship (CUR)—Wheat quality and product requirements for steamed breads and steamed buns made from soft and hard wheat	30,000
GRS101	Grains Industry Research Scholarship (UWA)—Metabolomic profiling in plants to understand the role of mitochondria in environmental stress tolerance	30,000
GRS102	Grains Industry Research Scholarship (UWS)—Managing competitive rhizobial populations of low effectiveness in New South Wales chickpea cropping soils	30,000
GRS103	Grains Industry Research Scholarship (UA)—The isolation and characterisation of meiosis-specific proteins in bread wheat	30,000
GRS104	Grains Industry Research Scholarship (UA)—An examination of the role of the thioredoxin h family in the stress response of cereals	30,000
GRS105	Grains Industry Research Scholarship (SWI)—Investigation of the gene family encoding aquaporins, the protein channels regulating water movement, in wheat	30,000
GRS106	Grains Industry Research Scholarship (UMU)—Regulation of nitrogen fixation in <i>Sinorhizobium melloti</i> on the annual pasture legume medicago	30,000
GRS107	Grains Industry Research Scholarship (UWA)—Wheat root architecture response to heterogenous spatial and temporal supply of potassium in sandy soils	30,000
GRS108	Grains Industry Research Scholarship (ANU)—Characterisation of aluminium tolerance genes in crop plants	30,000
GRS109	Grains Industry Research Scholarship (UWA)—Physiological and molecular basis of salt tolerance in <i>Lotus glaber</i> , a new perennial pasture legume for salt-affected land	30,000
GRS110	Grains Industry Research Scholarship (UWA and CSP)—Molecular and genetic analysis of plant resistance to spotted alfalfa and spotted clover aphids	10,000
GRS114	Grains Industry Research Scholarship (UQ)—Discovery of genes involved in transmitting the long-distance RNA silencing signal	13,750
GRS115	Grains Industry Research Scholarship (ULA)—Characterisation on the XERO2 system in <i>Arachis thaliana</i>	10,000
GRS116	Grains Industry Research Scholarship (UMU)—The role of secondary metabolites of the model legume, <i>Medicago truncatula</i> , in plant defence against fungal pathogens	8,750
GRS117	Grains Industry Research Scholarship (RMIT)—Ingredients, fortification and colour characteristics of instant noodles	13,750
GRS119	Grains Industry Research Scholarship (SWI)—Investigations of wheat genes encoding immunophilins involved in regulations of storage protein folding, chloroplast function and plant development	13,750
GRS120	Grains Industry Research Scholarship (UM)—Population genetics of the lucerne flea with applications for biocontrol	12,500
GRS121	Grains Industry Research Scholarship (UM)—Sustainable resistance of <i>Brassica napus</i> to <i>Leptosphaeria maculans</i>	8,750

Project no.	Project title	Expenditure \$
GRS52	Grains Industry Research Scholarship (RMIT)—Discovering novel genes controlling the resistance response to ascochyta blight in chickpeas	15,000
GRS56	Grains Industry Research Scholarship (UWA)—Chromosomal regions controlling salt tolerance in wheat and wild relatives	17,500
GRS66	Grains Industry Research Scholarship (UWA)—Interactions between environmental factors and mechanisms involved in pre-harvest sprouting tolerance in wheat	45,000
GRS67	Grains Industry Research Scholarship (UA)—QTL determination under association mapping	28,750
GRS68	Grains Industry Research Scholarship (UMO)—The impact of organic amendments on phosphorus availability in acid cropping soils	30,000
GRS69	Grains Industry Research Scholarship (UNE)—Development and application of a decision framework for the introduction of plant-based solutions to salinity and relevant policy	30,000
GRS70	Grains Industry Research Scholarship (UQ)—Pathotypes, epidemiology and economic importance of sorghum rust (<i>Puccinia purpurea</i>) in Australia	30,000
GRS71	Grains Industry Research Scholarship (ULA)—Functional characterisation of myb genes involved in the control of anther and pollen development	30,000
GRS72	Grains Industry Research Scholarship (ANU)—Overcoming cereal root diseases that are induced at low temperatures	37,500
GRS73	Grains Industry Research Scholarship (US)—Environmental signalling in plants: the role of phospholipase and microtubules	36,250
GRS74	Grains Industry Research Scholarship (SWI)—Identification and evaluation of genetic factors determining grain texture in wheat	30,000
GRS76	Grains Industry Research Scholarship (USQ)—Genetic Engineering of Wheat for Cold Tolerance	30,000
GRS77	Grains Industry Research Scholarship (UM)—Factors affecting yield decline in canola	33,750
GRS80	Grains Industry Research Scholarship (UM)—How long can Australian agriculture neglect fortuitous biological control as a sustainable provider of pest control?	30,000
GRS81	Grains Industry Research Scholarship (US)—Genetic and pathogenic variation in field population of the crown rot fungus (<i>Fusarium pseudograminearum</i>)	30,000
GRS82	Grains Industry Research Scholarship (UMU)—Disease resistance to <i>Phytophthora</i> in <i>Medicago truncatula</i>	30,000
GRS83	Grains Industry Research Scholarship (ULA)—Pollen development in plants	30,000
GRS84	Grains Industry Research Scholarship (CSP and UQ)—Isolation and characterisation of transcription factors from wheat involved in drought adaptation	30,000
GRS85	Grains Industry Research Scholarship (UWA)—The biology and control of <i>Salsola tragus</i>	30,000
GRS86	Grains Industry Research Scholarship (UWA)—Host Plant Resistance in <i>Medicago truncatula</i> (Leguminosae) to <i>Acrythosiphonpisum</i> (Aphididae)	30,000
GRS87	Grains Industry Research Scholarship (RMIT)—Enhancing crop utilisation through chloroplast-targeted expression of cellulase genes in plants	30,000
GRS88	Grains Industry Research Scholarship (UM)—Biosynthesis and role of fungal toxins in blackleg disease of canola	30,000
GRS89	Grains Industry Research Scholarship (RMIT)—Molecular interactions during preparation of Asian noodles and manipulation of nutritional and organoleptic characteristics	30,000
GRS90	Grains Industry Research Scholarship (US)—Precision agriculture and whole-farm planning for sustainability	30,000
GRS91	Grains Industry Research Scholarship (CSIRO Molecular Science)—Lignin from various straws as a renewable source of monomer (and other feedstock chemicals)	30,000
GRS94	Grains Industry Research Scholarship (CSP and UQ)—Wheat with enhanced resistance to <i>Fusarium</i> diseases	30,000

Project no.	Project title	Expenditure \$
GRS99	Grains Industry Research Scholarship (UMU)—Metabolism and infection in the <i>Stagonospora nodorum</i> –wheat pathosystem	30,000
GS100001	Conference Sponsorship—The Western Australian State Natural Resource Management Conference: 'Sustainability Side by Side'	5,000
ICA00001	Travel Award—to present at <i>Grains Week 2006</i> and visit the Australian Winter Cereals Collection	4,400
IDA00005	Industry Development Award—to investigate the potential of Brazilian disc seeders	8,000
IDA00006	Industry Development Award—Beyond the Boundaries study tour	15,000
IDA00007	Industry Development Award—Western Australian farming systems tour	15,000
IDA00008	Industry Development Award—tour to South-east Asia: Raising growers awareness and knowledge of the supply chain management of the Australian grains industry	15,000
IDA00009	Industry Development Award—exchange tour to Victoria	14,750
IDA00010	Industry Development Award—precision spray application technology study tour	15,000
IDA00011	Industry Development Award—exchanging ideas with the Victorian Group	13,897
IDA00012	Industry Development Award—to attend the Esperance Downs Research Station South East Premium Wheat Growers Association Field Day	1,500
IDA00013	Industry Development Award—study tour to South Australia	13,800
IDA00014	Industry Development Award—to examine production systems to maximise water use efficiency in lateritic soils	15,000
IDA00015	Industry Development Award—capacity-building study tour to Western Australia	8,625
IPR00001	Vavilov-Frankel Fellowship	38,000
JLC00010	Travel Award—to attend three Grains Research Updates and the 2006 South Australian No-till Farmers Association conference	7,273
MAA00004	Conference Sponsorship—Maize Association of Australia Sixth Triennial Conference	16,500
NUF00007	Nuffield Farming Scholarships	135,000
NYS2	National Youth Science Forum 2004–2007	25,000
PAL00010	Travel Award—to attend the CICILS/IPTIC (International Pulse Trade and Industry Confederation) international pulse industry annual executive meetings and convention 2006	7,273
PAL00011	Conference Sponsorship—Focus 2006: Pulses in the feed industry (lupins, peas, beans)	6,000
PDF47	Post-doctoral Fellowship Award (UM) to study the sclerotinia stem rot of oilseed brassicas: molecular mechanisms involved in infection	47,795
PDF48	Post Doctoral Fellowship Award (UM) to study lowering of nutritionally undesirable saturates in <i>Brassica napus</i> and <i>Brassica juncea</i> oils using post-transcriptional gene silencing	67,508
PFG00001	Travel Award—to attend the Gordon Conference on Salt and Water Stress in Plants and laboratory visits	3,138
PRA00002	Travel Award—to attend the Thirteenth Australian Agronomy Conference	1,500
PSD25-1	Australian Agriculture and Natural Resources Online (AANRO) Database	32,151
OGR00003	Industry Development Award—to conduct a Brazilian study into ethanol as an alternative fuel source	4,545
RCI00003	Conference Sponsorship—Fifty-sixth Royal Australian Chemical Institute Cereal Chemistry Conference 2006	5,000
RMI00004	Travel Award—to attend the Thirteenth Australasian Plant Breeding Conference	1,364
SAN00012	Conference Sponsorship—Eighth Annual South Australian No-till Farmers Association Conference 2006	10,000
SFS00005	Developing Leadership Skills in Young Growers	41,000
SNP00001	Travel Award—to visit Syria, Armenia and Tajikistan to film part of a documentary about the work of Dr Ken Street from ICARDA	15,000

Project no.	Project title	Expenditure \$
SPA00006	Conference Sponsorship—Tenth Symposium on Precision Agriculture Research and Implementation in Australasia	10,000
UA00089	Travel Award—to attend the Eighteenth World Congress of Soil Science and Phosphorus Dynamics in the Soil–Plant Continuum	3,636
UF00006	Travel Award—to attend the 2006 Joint Meeting of the American Phytopathological Society, Canadian Phytopathological Society and Mycological Society of America (APS Annual Meeting)	6,000
UHS100	Undergraduate Honours Scholarship (UQ)—Investigating the genetics of resistance to phosphine in insect pests of stored grain	6,000
UHS101	Undergraduate Honours Scholarship (UQ)—Mechanisms of long-distance RNA silencing in plants	6,000
UHS102	Undergraduate Honours Scholarship (UT)—Wheat phenology and development under grazing conditions for dual-purpose production	6,000
UHS103	Undergraduate Honours Scholarship (UWA)—Seed dynamics, establishment and regeneration of salt-tolerant pasture legumes	6,000
UHS104	Undergraduate Honours Scholarship (UWA)—Processing chaff residue during the harvest operation as an alternative to chaff carts for preventing the return of weed seed to the soil seedbank	6,000
UHS105	Undergraduate Honours Scholarship (UWA)—Economies of scale in farming systems of the Western Australian wheat belt	6,000
UHS106	Undergraduate Honours Scholarship (UWA)—Investigation of barley grass resistant to the Group B herbicide Monza	6,000
UHS107	Undergraduate Honours Scholarship (UWA)—Evaluation of derivative and marketing risk matching grower risk profiles	6,000
UHS93	Undergraduate Honours Scholarship (UF)—Unravelling the communication in the beneficial plant: endophytic actinobacterial relationship	6,000
UHS94	Undergraduate Honours Scholarship (SWI)—Investigations of the structure and diversity of water channel proteins of the plasma membrane intrinsic protein (PIP) class involved in regulating water flow in wheat	6,000
UHS95	Undergraduate Honours Scholarship (UA)—Latent infection of lentils by botrytis species	6,000
UHS96	Undergraduate Honours Scholarship (UM)—Economic analysis of precision agriculture systems in whole farm systems	6,000
UHS97	Undergraduate Honours Scholarship (UM)—Characterisation of a mutant of the blackleg fungus, <i>Leptosphaeria maculans</i> , with reduced pathogenicity on canola	6,000
UHS99	Undergraduate Honours Scholarship (UM)—Distribution and pest status of cryptic blue oat mite species	6,000
UM00025	Travel Award—to attend the Thirteenth Australasian Plant Breeding Conference	1,455
UMI00001	Conference Sponsorship—'Bioscience and Biotechnology Policy' pre-conference workshop of the Twenty-sixth Conference on the International Association of Agricultural Economics (IAAE) plus post-conference workshop 'Future Directions for Agricultural Research'	20,000
UMU00023	Travel Award—to attend the Eighteenth World Congress of Soil Science	4,000
UMU00024	Conference Sponsorship—Seventh Australasian Plant Virology Workshop	8,000
UNE00007	Graduate Certificate in Sustainable Farm Production	185,048
UQ00034	Improving understanding and awareness of intellectual property amongst graingrowers in Australia	199,950
UQ00038	Conference Sponsorship—Third International Conference on Legume Genomics and Genetics	10,000
UQ00039	Travel Award—to combine migration data with climate change and crop phenology data to develop artificial neural network models for improved prediction of <i>Helicoverpa armigera</i> outbreaks in Australia	1,564

Project no.	Project title	Expenditure \$
US00034	Travel Award—to attend the Eighteenth World Congress of Soil Science	4,000
US00035	Travel Award—to attend the International Plant Breeding Symposium	3,410
USA00003	Travel Award—to attend the International Soil Tillage Research Organisation 2006 and CIGR (International Commission of Agricultural Engineering) Agricultural World Congress 2006	4,230
USA00004	Travel Award—to attend the International Soil Tillage Research Organisation 2006 and CIGR (International Commission of Agricultural Engineering) Agricultural World Congress 2006	3,877
USQ00009	Conference Sponsorship—Workshop on Hyperspectral Remote Sensing and Field Spectroscopy of Agricultural Crops and Forest Vegetation	2,000
UT00010	Travel Award—to attend the Ninth Congress of the European Society for Agronomy	3,080
UT12	Building human capacity through schools into university and then primary industry	105,000
UWA00098	Travel Award—to attend the Plant Animal Genome XIV Conference	1,364
UWA00099	Travel Award—to visit research groups investigating control of <i>Salsola tragus</i>	3,153
UWA00100	Conference Sponsorship—Australian Society of Agronomy Conference	10,000
UWA00105	Travel Award—to attend the First International Ascochyta Workshop on Grain Legumes and several meetings	2,500
UWA00106	Travel Award—to attend the International Conference on Interdisciplinary Social Sciences	2,800
VAN00002	Conference Sponsorship—Fourth Annual Victorian No-till Farmers Association Conference	6,000
VF00002	Visiting Fellowship Award (DAQ)—Transfer of multiple Russian wheat aphids biotype resistance to Australian wheat backgrounds	5,000
VF00003	Visiting Fellowship Award (CMB)—International networking in wheat genomics and flour quality	5,000
VF00004	Visiting Fellowship Award (CMB)—Improving the estimation of QTL effects in winter cereal mapping experiments	10,000
VF00005	Visiting Fellowship Award (UMU)—International links for western region nutrient management research	15,000
VF67	Visiting Fellowship Award (CSA)—Improved physiological understanding of canopy development and tillering in cereals	13,500
VFF00005	Conference Sponsorship—Victorian Farmers Federation Annual Grains	7,000
VIC00005	Conference Sponsorship—GRDC Irrigation Update	3,500
WAF00004	Conference Sponsorship—Western Australian Farmers Annual Conference 2006	7,000
WAN00010	Conference Sponsorship— Western Australian No-Tillage Farmers Association Conference 2006	10,000
WAN00011	Industry Development Award—to conduct a study tour to investigate cover crops and full stubble retention no-till systems in Brazil	7,273
WMS00001	Conference Sponsorship—Fifteenth Australian Weeds Conference	10,500
	Total building research capacity	3,519,871
	CUSTOMER SERVICES	
AFL00001	Farm Productivity Growth in Australian Agriculture	10,000
AFQ00005	Research Advisory Committee Northern Region	70,000
BAE00008	Expert advice for the economic and strategic development of the Australian grains industry	643,000
CCS01-1	GRDC Customer Database (PSD35)	770
CSA00009	Available Water Content—for workshop delivery to growers	54,024
DAN00047	Cropcheck for Irrigated and Dryland Cropping	103,870

Project no.	Project title	Expenditure \$
DAQ00068	Networking Innovation in Grower Groups	100,171
DAV00044	Bestwool	90,000
DAW00078	Continuing the Crop Updates Partnership	115,447
GSP00001	Explore, develop and facilitate the areas of strategic improvement between the southern panel and consultants	39,000
ICF00006	Oilseeds Industry Development Officer—Expansion of oilseed crops (with a focus on canola and soybean) for the irrigation and dryland areas of southern New South Wales and Victoria	130,000
ICN00003	Northern Region Grains Research Updates	178,405
ICN00005	Integrated Weeds Management Workshop	30,450
JLC00008	Southern Region Grains Research Updates	303,200
LWR00002	Knowledge management in irrigated cotton and grains	105,000
MIG00008	The Grower Group Alliance—Innovation through grower groups	174,259
NCA00006	Consultancy Agreement—Database development/trend analysis	30,000
NCA00007	Product and services in relation to business objectives and strategies	50,000
NFA00004	Southern New South Wales Research Advisory Committee	25,000
RDC14	Joint Farm Health and Safety Program	60,000
RMP00001	Development of 2006 Grains Research Updates CD	39,505
SAF00003	South Australian Research Advisory Committee	25,000
UWA00082	Improving the adoption of technology by neighbourhood grower groups	180,102
VFF00004	Victorian Research Advisory Committee	25,000
	Total customer services	2,582,203
	CORPORATE COMMUNICATIONS	
AAA00004	GMOs—Guiding Meaningful Opinions	100,000
AFF00003	Corporate Governance for Women Sponsorship	11,306
BCA00002	Western Region Communicator 03–06	97,652
BER00003	Australian Grain Yearbook	50,400
BER00004	National Farm Groups Field Research	20,700
BER00005	International Research Review	28,900
CAC00003	Conference Sponsorship—'What GM Crops Have to Offer Western Australian Farmers'	10,000
CAN00001	Canprint—Warehouse and distribution of GRDC publications, periodicals and promotional material	68,710
CIC00002	Conduct media review and analysis and planning workshop to prepare a communication plan for the GRDC northern region	13,500
COR00003	<i>Ground Cover</i> newspaper	1,140,000
COR00005	Magazine supplements to the GRDC's <i>Ground Cover</i> in October 2005, December 2005, February 2006 and April 2006	150,000
COR00006	Root Map Concepts—DAFWA Spray Charts	3,665
DAQ00099	Sorghum Disorders: The Ute Guide	41,489
DAQ00100	Maize Disorders: The Ute Guide	30,843
DAQ00101	Sunflower Disorders: The Ute Guide	30,699
DER00008	Research Partner Survey	46,100
JLC34	National Branched Broomrape Communication Strategy	25,000
KDI00014	The Workboot Series— <i>Wheat, the story of wheat in Australia</i> and Resources Kit	27,500
MAA00005	The COB Magazine	10,000

Project no.	Project title	Expenditure \$
MCC00002	Project Review 2005—Research Horizons for Grains Leaders of the Future Course	22,800
MMO00001	Media analysis report on the GRDC's national and regional media products distributed	45,750
P&SD03-1	Program Audit	9,904
P&SD09	Customer Relationship Management Database	13,150
PIG00003	Partners in Grain: A national professional development network for graingrowers	190,000
PNS00001	Southern Region Communicator 2003–06	212,001
PSD01.1	Corporate Communications	33,809
PSD18	Continuation of current and new surveys	11,635
PSD21	Communication Campaigns and Information Packaging	33,628
PSD22	Farming Ahead Articles	55,140
REP00002	Northern Region Communicator 2003–06	74,320
TQA00003	Organisational and program performance indicators	167,376
UCS00007	National Partners in Grains	15,541
WDM00006	Paddock Diary 2005–06	39,090
	Total corporate communications	2,830,609
	TOTAL COMMUNICATION AND CUSTOMER SERVICES	8,932,683
	ENHANCED MANAGEMENT	
GCA00010	Contribution to Pathways to Industry Environmental Management System Project	20,500
GCA00011	AQIS Grains Industry Consultative Committee	8,640
GCA00012	Market Access Biosecurity Grains Industry Consultative Committee	10,700
GCA00013	AQIS—Pulse Australia Industry Working Group	3,200
GCA00014	National Agricultural Commodities Marketing Association Market Standards and Trade	1,280
GCA00015	Hong Kong Ministerial—World Trade Organisation	17,950
GCA00016	Geneva Ministerial—World Trade Organisation	10,300
GCA00017	Seed Industry Consultation and Seed Industry Reference Group	17,500
GRD172	Global Crop Diversity Trust	1,182,529
GRD199	Single Vision Grains Australia	1,107,241*
GRD201	Graingene III	(1,030,918)
VR53	Graingene III	2,061,835
	TOTAL ENHANCED MANAGEMENT	3,410,757
	GRAND TOTAL	115,329,405

*Cash payments for the year—\$925,290

ACIAR = Australian Centre for International Agricultural Research, ANU = Australian National University, AQIS = Australian Quarantine and Inspection Service, AWCMMMP = Australian Winter Cereals Molecular Marker Program, CIMMYT = International Maize and Wheat Improvement Center, CMB = Centre for Molecular Biotechnology, CRC = cooperative research centre, CSA = CSIRO Sustainable Ecosystems, CSIRO = Commonwealth Scientific and Industrial Research Organisation, CSP = CSIRO Plant Industry, CUR = Curtin University of Technology, DAQ = Department of Agriculture Queensland, DAFWA = Department of Agriculture and Food Western Australia, EGA = Enterprise Grains Australia, GM = genetically modified, GMO = genetically modified organism, HRZ = high-rainfall zone, ICARDA = International Centre for Agricultural Research in the Dry Areas, IPM = integrated pest management, IWM = integrated weed management, MPBCRC = Molecular Plant Breeding Cooperative Research Centre, NIR = near-infrared spectroscopy, RMIT = Royal Melbourne Institute of Technology, SWI = Swinburne University of Technology, QTL = quantitative trait loci, UA = University of Adelaide, UF = Flinders University, ULA = La Trobe University, UM = University of Melbourne, UMO = Monash University, UMU = Murdoch University, UNE = University of New England, UQ = University of Queensland, US = University of Sydney, USQ = University of Southern Queensland, UT = University of Tasmania, UWA = University of Western Australia, UWS = University of Western Sydney

APPENDIX 3

Joint R&D projects list

R&D Partners	Project	Project title	Start date	Finish date
ACIAR, GRDC	ACA4	Pulse project with ICARDA	01-Jul-01	30-Jun-07
ACIAR, GRDC	ACA5	Oilseed Brassica Improvement in China, India and Australia	30-Jun-02	30-Jun-07
AWI, GRDC, MLA, DA, RIRDC	AWR00002	Contribution towards Pastures Australia	30-Jun-06	30-Jun-07
AWI, GRDC	AWR00003	Contribution towards National Annual Pasture Legume Improvement Program	01-Jan-06	30-Jun-06
AWI, GRDC	AWR00004	Contribution towards the National Rhizobium Program	01-Jul-05	30-Jun-08
ACIAR, CSIRO, GRDC, RIRDC	DAN00002	Permanent beds for sustainable farming on irrigated lands	06-Jul-02	31-Dec-06
RIRDC, MLA, APL, GRDC, SARDI, University of Sydney, University of New England, CSIRO, DPI Victoria, New South Wales Agriculture	DAN00075	Statistical analysis and data mining for the Premium Grains for Livestock Program	01-Jan-05	30-Jun-08
RIRDC, MLA, APL, GRDC, SARDI, University of Sydney, University of New England, CSIRO, DPI Victoria, New South Wales Agriculture	JLB2	Premium Grains for Livestock Program 2: Component 1. Coordination	01-Jul-00	30-Jun-08
LWA, GRDC	LWR00002	Knowledge management in irrigated cotton and grains	22-Mar-05	30-Jun-07
LWA, GRDC, MLA	LWR23	Contribution towards Grain and Graze Program	01-Jul-03	30-Jun-08
LWR, GRDC, NHT, DAFF, RIRDC, SRDC, DA, MLA	LWR25	Contribution towards Managing Climate Variability Program	01-Jul-03	30-Jun-07
MLA, GRDC	MLA00001	Contribution towards Pasture Soil Biology Program	07-Jan-03	30-Jun-07
RIRDC, GRDC	RDC14	Joint Farm Health and Safety Program	01-Jul-02	30-Jun-07
RIRDC, MLA, APL, GRDC, SARDI, University of Sydney, University of New England, CSIRO, DPI Victoria, New South Wales Agriculture	US312	Premium Grains for Livestock Program 2: Component 2. Production, storage and distribution of grain samples	01-Jul-00	30-Jun-08
AWI, GRDC	UWA360	National Annual Pasture Legume Improvement Project—Western Australia	01-Jul-00	30-Jun-06
RIRDC, MLA, APL, GRDC, SARDI, University of Sydney, University of New England, CSIRO, DPI Victoria, New South Wales Agriculture	VC17	Premium Grains for Livestock Program	01-Jul-03	30-Jun-06

ACIAR = Australian Centre for International Agricultural Research, APL = Australian Pork Limited, AWI = Australian Wool Innovation, CSIRO = Commonwealth Scientific and Industrial Research Organisation, DA = Dairy Australia, DAFF = Department of Agriculture, Fisheries and Forestry, DPI = Department of Primary Industries, ICARDA = International Centre for Agricultural Research in the Dry Areas, LWA = Land and Water Australia, MLA = Meat and Livestock Australia, NHT = Natural Heritage Trust, RIRDC = Rural Industries R&D Corporation, SARDI = South Australian Research and Development Institute, SRDC = Sugar Research and Development Corporation

Portfolio monitoring and reviews

'Portfolio monitoring' is a broad term that covers a range of activities undertaken by the GRDC to ensure that individual projects achieve their objectives and scheduled milestones, and that the R&D portfolio as a whole continues to address industry and government stakeholder priorities. The portfolio in 2005–06 included around one thousand projects, at various stages of development, spread across four output groups.

The portfolio monitoring system includes internal guidelines and/or procedures for:

- identifying and managing risks associated with individual projects during planning and implementation stages
- evaluating progress reports for project performance against objectives
- developing business cases, terms of reference and time frames for a limited number of formal reviews of targeted investment areas from across the entire portfolio.

At the project level, portfolio monitoring involves an annual assessment of each project, by way of an annual progress report that identifies progress against the aims and milestones of the project. Satisfactory progress reports must be submitted to the corporation before further payments are made to research providers.

Other GRDC portfolio monitoring activities in 2005–06 included:

- external visits to research providers' facilities, including research laboratories and sites where field trials are carried out
- internal monitoring procedures to assess the performance and efficiency of administrative activities associated with managing the large investment portfolio. This includes tracking the status of progress reports against internal performance targets and producing summary reports for management and staff. This contributed to a significant reduction in the number of progress reports remaining outstanding (unprocessed) at 30 June 2006.

Publications and products

The GRDC has a large number of publications and information products, in print, tape and electronic formats. Many hard copy products are provided for free (stocks of some free publications are limited), while others are sold to fully or partially recover the costs of publication. There are some publications which are available only in electronic format and can be found on the GRDC's website, GrainZone, at www.grdc.com.au.

GrainZone also provides a catalogue of GRDC publications and an online bookshop. On average, GrainZone's home page received between 6,500 and 8,000 page views per month in 2005–06. The bookshop received approximately 1,600 page views per month.

Most of the GRDC's 2005–06 reports and publications are publicly available. Key publications released in 2005–06 are listed below.

Publications available to the public free of charge	
<i>Back Pocket Guides</i> — Identification guides for graingrowers	<i>Slugs in Crops</i>
Corporate publications	GRDC Annual Report 2006–07 GRDC Annual Operational Plan 2005–06
<i>Farmer Advice Sheets</i> — Information for graingrowers	<i>Resistant varieties vital to rust management</i> <i>Managing Frost, Minimising Damage</i>
<i>Ground Cover</i> — The grains industry research newspaper	Six issues and supplements: 57—Grain Storage 58—Precision Agriculture 59—Nutrient Management 60—Farm Safety 61—Subsoil Constraints 62—Pastures
Reviews of research	<i>Northern Grain Production: A farming systems approach</i>
Tools for graingrowers	<i>Paddock Diary 2006</i>
<i>Update Newsletters</i> — Information for technical advisers	Issues 28, 29, 30 and 31, for the northern region Issues 38, 39 and 40, for the southern region
Publications available for sale to the public	
Booklets	<i>Adjuvants: Oils, surfactants and other additives for farm chemicals</i> <i>Cereal Growth Stages: The link to crop management</i> <i>Raised Bed Farming in Western Australia</i> <i>Managing Grey Clays to Maximise Production and Sustainability— Western Australia</i>
CDs	<i>Raised Bed Farming</i> <i>2006 National Farm Trials Manual (GRIST)</i> <i>Precision Agriculture Manual</i>
Educational resources for children	<i>The Wheat Book</i>
Reviews of research	<i>Australian Grain Yearbook 2006</i>
Software	<i>Lime and Nutrient Balance</i> , version 1.2 (including CD)
<i>Ute Guides</i> — Identification tools for graingrowers	<i>Maize Disorders</i> <i>Sorghum Disorders</i>

GRDC Selection Committee

The Hon Sussan Ley MP
Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry
Parliament House
CANBERRA ACT 2600

Dear Ms Ley

GRAINS RESEARCH AND DEVELOPMENT CORPORATION SELECTION COMMITTEE ANNUAL REPORT 2005-2006

The following report summarises the activities of the Grains Research and Development Corporation (GRDC) Selection Committee for the reporting period to 30 June 2006.

Establishment of the Selection Committee

On 19 April 2005, Senator Colbeck, the then Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry, reappointed Mr. Dennis Mutton as Presiding Member of the GRDC Board Selection Committee. Mr Mutton was appointed for a period until 30 April 2008, in accordance with subsection 122(1) of the PIERD Act 1989.

In accordance with section 124 of the PIERD Act, nominations were sought for members of the Selection Committee from the GRDC's representative industry organisation, the Grains Council of Australia, and the Parliamentary Secretary appointed the following people on 2 June 2005:

Members **Mr Murray Jones**
 Mr Douglas Clarke
 Mr Ian Hastings
 Mr Greg Schulz

Selection Process

In accordance with the above Act applications were called through placing advertisements in National, State and regional newspapers during the period 23-28 May 2005. The closing date for applications was 14 June 2005. In addition representative organisations were also contacted directly.

A total of 118 applications were received and the Selection Committee in establishing a short list for further consideration and interview, considered all applications. The Committee also was briefed on the future strategic directions of the Corporation.

Following detailed review of candidates 17 applications were scheduled for interview, which took place on 25 and 26 July 2005 in Melbourne. Referee checks were then conducted as required.

Board Appointments

Upon completion of the process in accordance with section 131 of the PIERD Act, the Selection Committee forwarded six nominations to the Parliamentary Secretary on 7 August 2005. The Parliamentary Secretary accepted the nominations and made the following appointments on 23 September 2005 for a three-year term commencing on 1 October 2005.

- **Ms. Nicole Birrell.** An independent consultant in governance and business management. Nicole also holds a number of directorships in not for profit and business enterprises. She brings to the GRDC significant capability in finance, compliance and economics with her experience gained in Australia and internationally. Her expertise also includes administration of research and development and direct involvement in the grains industry.

- **Mr. Steve Marshall.** An independent consultant in strategic review, global food assurance systems and organisational development with extensive international experience in food manufacturing directly related to the grains industry. Steve has qualifications in food science and technology. He brings expertise in administration of research and development, technology transfer and marketing. He is also a Director of the Rural Industries Research and Development Corporation.
- **Dr. Donald Plowman.** Appointed for a second term. An experienced research administrator with involvement in technology transfer, commercialisation of intellectual property and intergovernmental relations. His demonstrated capabilities also incorporate natural resource and environmental management and a comprehensive understanding of the primary industry sector.
- **Prof. Timothy Reeves.** A highly regarded scientist and science administrator both in Australia and internationally including as Director General of the International Maize and Wheat Improvement Centre, CIMMYT, in Mexico for seven years. His international grains research experience and knowledge provide strong input to research priority setting in all areas of interest to the grains industry. Tim also maintains a strong network throughout the farming community.
- **Mr. Ross Johns.** Appointed for a second term. A grain farmer and businessman with extensive experience in international grain marketing. He is also a Board Member of ABB Grain Ltd. He brings a perspective of regional Australia and the challenges and solutions in achieving viable rural industries. His demonstrated capabilities also include business management, grains production and processing and the management of natural resources.
- **Mr. Philip Young.** Qualified in agricultural science and economics with direct experience in grain production, processing and marketing, administration of research and development, and the management of natural resources. Philip consults internationally in agricultural related areas and was the inaugural Chair of Australian Grain Technology. He brings strong business and economic management expertise to the Board as well as extensive experience in technology transfer.

Summary of Expenditure

Expenditure by the Selection Committee to 30 June 2006 was:

Item	Expenditure \$
Advertising	10,211.85
Consultants	6,499.00
Presiding Member Sitting Fees	6,250.00
Expenses Associated with Selection Process (Including airfares of members and candidates)	28,960.69
Total	51,921.54

Yours sincerely

Dennis Mutton

Presiding Member

Grains Research and Development Corporation Selection Committee

30 July 2006

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Glossary

2005–06	The financial year 2005–06; that is, 1 July 2005 to 30 June 2006
ABARE	Australian Bureau of Agricultural and Resource Economics
abiotic stress	Stress caused to living organisms by non-living environmental factors, such as cold, heat or drought
ACPFPG	Australian Centre for Plant Functional Genomics
AFLOMAN	A web-based decision support tool to help peanut growers assess the best time to harvest to achieve maximal returns and minimal aflatoxin contamination
agroecological region	A region defined by a characteristic interrelationship between agronomy/farming systems and various environmental features, not just climate
AgSafe	An independent subsidiary of CropLife Australia (the national body for the plant science industry)
AEIFRS	Australian Equivalents to International Financial Reporting Standards
AOF	Australian Oilseeds Federation
ascochyta	The pathogen that causes ascochyta blight, a serious disease of peas in Victoria and South Australia
AWCMMP	Australian Winter Cereals Molecular Marker Program
BBA	Barley Breeding Australia
biodiesel crops	Crops (particularly oilseeds) used to manufacture biodiesel, a renewable alternative to fossil fuels
biofactories	The utilisation of living organisms such as plants as a platform for the production of industrial and/or pharmaceutical materials through the application of biotechnology
bio-physical	The biological and physical components of the environment
biotic stress	Stress caused to living organisms by other living organisms, such as viruses, bacteria, insects or fungi
CAC Act	The <i>Commonwealth Authorities and Companies Act 1997</i> , which is complemented by the Commonwealth Authorities and Companies (Report of Operations) Orders 2005—orders made by the Finance Minister concerning the report of operations component of annual reporting
cereal crops	Members of the grass family grown for their edible, starchy seeds—for example, wheat, barley, oats, rye and triticale
CIMMYT	International Maize and Wheat Improvement Center, Mexico
CRC	cooperative research centre
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	Australian Government Department of Agriculture, Fisheries and Forestry
DAFWA	Department of Agriculture and Food, Western Australia
DPI Victoria	Department of Primary Industries, Victoria
<i>Driving Innovation</i>	The GRDC Five Year Research and Development Plan 2002–07
dryland	Land which is not irrigated and depends on rainfall to support crops
EMS	environmental management system

EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPR	End Point Royalty
ESD	ecologically sustainable development
FOI Act	<i>Freedom of Information Act 1982</i>
GCA	Grains Council of Australia
Go Grains	Go Grains Health and Nutrition Ltd
GrainZone	The GRDC website at www.grdc.com.au
GRDC	Grains Research and Development Corporation
<i>Ground Cover</i>	A free newspaper produced by the GRDC, with six editions each year
<i>Harvest Radio</i>	The GRDC's web-based initiative that provides technical information for graingrowers, including updates on research, trials, new varieties and farmer activities, and case studies
heliolithis	A caterpillar pest of many grains and other crops
HOLL	high-oleic, low-linolenic
ICARDA	International Centre for Agricultural Research in the Dry Areas, Syria
IWM	integrated weed management
MLA	Meat and Livestock Australia
NAPLIP	National Annual Pasture Legume Improvement Program
NIR	near-infrared spectroscopy
NPBP	National Pulse Breeding Program
NVT	National Variety Trials
PDF	portable document format
phosphine	A colourless gas with a strong fishy smell, used as a pesticide
PIERD Act	<i>Primary Industries and Energy Research and Development Act 1989</i>
precision agriculture	The use of spatial information (such as yield maps) to better match crop agronomy techniques, such as fertiliser application, to paddock variations
pulses	The edible seeds of certain pod-bearing plants, such as peas and beans
R&D	research and development
RDC	research and development corporation
rhizobacteria	Bacteria found closely associated with plant roots
RIRDC	Rural Industries Research and Development Corporation
SARDI	South Australian Research and Development Institute
sclerotinia	Any fungus of the genus <i>Sclerotinia</i> ; some cause brown rot diseases in plants
SVGA	Single Vision Grains Australia
<i>The Way Forward</i>	The GRDC strategic business plan
triazine	A class of herbicides—for example, atrazine, propazine, and simazine

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