



CRDC INVESTMENTS

2023-24



RD&E INVESTMENTS LIST 2023-24

2023-24 marks the first year under CRDC's new Strategic RD&E Plan: Clever Cotton. During this year, CRDC will invest \$20.98 million into RD&E projects across the Plan's three pillars (Paddock, People, Planet) and nine themes, in collaboration with around 100 research partners, and on behalf of Australia's cotton growers and the Australian Government. This table outlines the confirmed projects that CRDC will invest in during this year, along with the lead researcher, their research organisation, and the commencement and completion dates for the projects. As this is the first year of investment under a new Strategic Plan, additional projects are currently in development. For further information about Clever Cotton, the Plan's pillars and themes, or any of the projects listed, please visit the CRDC website.

Theme	Sub-theme	Project title	Project code	Researcher	Organisation	Commenced in:	To be completed in:
Pillar 1: Paddock							
1.1 Data-driven decisions	1.1.1 Data-driven decisions	Annual consultant qualitative and quantitative surveys 2022-24	CCA2202	Doug McCollum	CCA	Apr-22	Mar-25
		CRDC Cotton Grower Survey 2023-25	INTS10342	Michael Sparks	Intuitive Solutions	Jan-23	Nov-25
		PhD: Assessing yield and fibre quality variability in cotton systems through data science for improved management	US2104	Mikaela Tilse	USYD	Mar-21	Feb-24
		Rural Safety and Health Alliance collaboration 2021-24	RIRDC2201	Georgina Toose	AgriFutures	Jul-21	Jun-24
1.2 Adaptive systems	1.2.1 Solving farming systems constraints	Advanced field sensing for improved cotton management	USQ2303	Alison McCarthy	USQ	Jul-22	Jun-25
		Agricultural Innovation Australia - Agri-climate outlooks	AIA2301	Annabelle Van Klaveren	AIA	Jul-22	Dec-26
		Collaborative weeds research	GRDC		GRDC	Jul-22	Dec-25
		Economic assessment of Australian cotton systems: key drivers of profitability?	CSD10438	Michael Bange	CSD	Mar-23	Dec-23
		Limited water decision support	DAN2203	Sarah Dadd	NSW DPI	Jul-21	Jun-24
		Modern systems agronomy for resilient cotton production	CSP2001	Katie Broughton	CSIRO	Jan-20	Sep-23
		On-farm demonstrating and integrating irrigation technology for cotton	USQ2301	Joseph Foley	USQ	Jul-22	Jun-25
		Optimising irrigation performance in bankless channel cotton layouts to improve water management and nitrogen use efficiency	DU2301	Wendy Quayle	DU	Jul-22	Jun-25
		PhD: Classifying the suitability of Murrumbidgee Valley soils for cotton production	US2002	Jonathon Moore	USYD	Mar-20	Sep-23

Please note that this table is current as of 28 April 2023, and may be subject to change.

		Post doctorate: Climate proofing Australia's cotton industry through improving crop water use and photosynthetic carbon assimilation (climate proof cotton)	UWS2201	Demi Sargent	WSU	Jul-21	Jun-24
		Post doctorate: Measuring evapotranspiration from canopy temperature	USQ2302	Simon Kelderman	USQ	Jul-22	Jun-25
		Seeking regionally specific guidelines for cover crops through farmer-led best practice and soil security	US2301	Alex McBratney	USYD	Feb-23	Jan-26
		Supporting Southern cotton production systems: Southern cotton agronomy and fibre quality	DAN2306	Beth Shakeshaft	NSW DPI	Jul-22	Jun-25
		Water productivity benchmarking in the Australian cotton industry	DAN2303	Malem McLeod	NSW DPI	Jul-22	Jun-25
		Whole-of-farm-management digital dashboard	CSD2302	Michael Bange & John Pattison	CSD & DiscoveryAg	Oct-22	Jun-25
	1.2.2 Disease	Characterisation and management of Alternaria leaf spot and black root rot pathogens of cotton in NSW	DAN2307	Duy Le	QLD DAF	Jul-22	Jun-24
		Disease management in cotton farming systems - a participatory action research approach to deliver solutions	CSD2303	Michael Bange	CSD	Oct-22	Sep-26
		Tactical management and surveillance of Verticillium, Fusarium and reoccurring wilts	DAQ2302	Linda Smith	QLD DAF	Jul-22	Jun-24
	1.2.3 Biosecurity	Australian Research Council (ARC) Research Hub for Sustainable Crop Protection	UQ2001	Neena Mitter	HIA/UQ	Jul-19	Aug-25
		Developing proactive approaches to Integrated Pest Management (IPM) in cotton production systems	CSP2203	Simone Heimoana	CSIRO	Sep-21	Aug-24
		Improved insecticide resistance monitoring for key pests to support sustainable insect management.	DAN2301	Lisa Bird	NSW DPI	Jul-22	Jun-25
		Improved insecticide resistance monitoring for Silverleaf Whitefly to support sustainable insect management	DAQ2301	Jamie Hopkinson	QLD DAF	Jul-22	Jun-25
		Regional demonstration of integrated weed tactics across farming systems	DAN2304	Eric Koetz	NSW DPI	Jul-22	Dec-24
		Review of the Biosecurity Plan for the cotton industry	PHA2201	Stuart Kearns	PHA	Jul-21	Jun-24
		SOS Group communication support - Spray drift and Weather and Networked Data (WAND)	IREC 10488	Iva Quarisa	IREC	Mar-23	Dec-23
		Spray drift hazard alert and warning systems - Weather and Networked Data (WAND)	DISA2201	Alicia Garden	Discovery Ag	Jan-22	Jun-28
		Validation and implementation of new molecular tools for Bt resistance monitoring	CSP2204	Sharon Downes	CSIRO	Sep-21	Aug-24
		What is the best fit for electric weed control in Australia?	DAWA10493	Catherine Borger	WAAA	Jul-22	Jun-24
		1.2.4 Northern Australia	Supporting a sustainable northern Australia cotton, grain & cattle system	CRCNA2301	Carla Keith	CRCNA	Jul-22
1.3 Connected market intelligence	1.3.1 Connected market intelligence	Australian Cotton Industry Strategic Roadmap	CA2301	Brooke Summers	CA	Jul-22	Sep-23
		Better Cotton Initiative membership 2022-23	CRDC2309	Vinay Kumar	BCI	Sep-22	Sep-23
		Community Trust in Cotton	REFL10444	Kieren Moffatt	Voconiq	Mar-23	Mar-24
		Community Trust in Rural Industries Phase 2	RIRDC10461	Georgina Toose	AgriFutures	Jul-22	Jun-25
		Membership of the Sustainable Agriculture Initiative (SAI) - Australian chapter 2022-24	CRDC2303	Selwyn Heilbron	SAI	Jul-22	Jun-24
		Support for the Sustainability Working Group, industry sustainability reporting and integration of research into myBMP	CRDC2113	Chris Cosgrove	Sustenance Asia	Apr-21	Jun-24
		Sustainable Apparel Coalition membership 2021-24	CRDC2205	Glenn Robinson	SAC	Jul-21	Jun-24

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Pillar 2: People							
2.1 Design and innovation	2.1.1 Design and innovation	Agriculture Innovation Australia membership	AIA2101	Sam Brown	AIA	Jul-20	Jun-24
2.2 Leadership and capacity	2.2.1 Leadership	Australian Future Cotton Leaders Program 2022 and 2024	CA2201	Paul Sloman	CA	Oct-21	Oct-24
		Delivering best practice to manage future workforce skills	CQU2201	Nicole McDonald	CQU	Oct-21	Sep-24
		Exploring a cotton and grains agricultural traineeship model	CQU2303	Amy Cosby	CQU	Jul-22	Sep-23
		How to attract and retain young people on cotton farms	CQU2301	Amy Cosby	CQU	Oct-22	Sep-24
		Nuffield Australia Farming Scholarship 2023 - Tim Houston	CRDC2301	Jodie Redcliffe	Nuffield Australia	Oct-22	Oct-24
		Nuffield Australia Farming Scholarships 2024	NUFA10483	Jodie Redcliffe	Nuffield Australia	Oct-23	Jan-25
	2.2.2 Capacity	2023 Australian Cotton Industry Awards Sponsorship: CRDC Chris Lehmann Young Cotton Achiever of the Year award	CA10491	Adam Kay	CA	Mar-23	Dec-23
		AACS 2023 Australian Cotton Research Conference sponsorshop	AACS10490	Paul Grundy	AACS	May-23	Oct-23
		Australian Rural Leadership Program (ARLP) Course 29, 30 & 31 and TRAIL 2022, 2023 & 2024	RIR2201	Tristan Richmond	ARLF	Jul-21	Dec-25
		Horizon Scholarship 2022: Ayla Christophers	RIRDC2203	Abbey O'Callaghan	AgriFutures	Apr-22	Jan-24
		Horizon scholarship 2023: Georgie Oldham	RIRDC10499	Abbey O'Callaghan	AgriFutures	Mar-23	Jan-24
		Horizon scholarship 2023: Niamh Mason	RIRDC10500	Abbey O'Callaghan	AgriFutures	Mar-23	Jan-24
		PhD: Drought resilient cotton: Combining synthetic biology solutions to improve cotton productivity under future water limited and heatwave conditions	UWS2202	Garima Dubey	WSU	Mar-22	Mar-25
		PhD: Integrating deep learning AI software with hardware for next generation acoustic biodiversity monitoring	QUT2301		QUT	Jul-22	Nov-25
Science and innovation awards for young people in Agriculture, Fisheries and Forestry: 2023 TBA & 2024 TBA	ABA2301	Maree Finnegan	ABARES	Jul-22	Jun-24		
2.3 Adoption and impact	2.3.1 Adoption	Climate and energy for future cotton farming businesses (CottonInfo Climate and Energy Technical Lead and myBMP module lead)	AE10070	Jon Welsh	AgEcon	Jul-23	Jun-26
		CottonInfo Fibre Quality Technical Lead (including myBMP module lead)	VANM10023	Rene van der Sluijs	TTS	Jul-23	Jun-26
		CottonInfo field demonstration trial: Optimisation of application in tailwater backup system	CSD10485	Andrew McKay	CSD	Oct-22	Jul-23
		CottonInfo Irrigation Technical Lead (including myBMP module lead)	GVIA2301	Lou Gall	GVIA	Jul-22	Jun-25
		CottonInfo multimedia content development	DAQ2202	Tonia Grundy	QLD DAF	Jul-21	Jun-24
		CottonInfo Natural Resource Management (NRM) Technical Lead (including myBMP module lead)	CRDC10071	Stacey Vogel	Stacey Vogel Consulting	Jul-23	Jun-26
		CottonInfo Nutrition Technical Lead (including myBMP module lead)	DAN2202	Jon Baird	NSW DPI	Jul-21	Jun-24
		Professor of Soil Biology (CottonInfo Soil Health Technical Lead and myBMP module lead)	UNE2001	Oliver Knox	UNE	Jul-19	Jun-24
		Scientific and CottonInfo Weed Technical Lead (including myBMP module lead)	DAN2302	Graham Charles & Eric Koetz	NSW DPI	Jul-22	Jun-25
		Supporting farming system adaptation to climate and biological threats (including CottonInfo Technical Leads and myBMP module leads Paul Grundy and Sharna Holman)	DAQ2201	Paul Grundy	QLD DAF	Jul-21	Jun-24
	2.3.2 Impact	Commercialisation management	CRDC2203	Jarrod Ward	Ahurei Pty Ltd	Jul-21	Jun-24
		Farm performance – rate of return data for cotton sustainability reporting	CRDC2208	Simon Fritsch	Agripath	Nov-21	Mar-24
		Regional Australia Institute (RAI) assessment of CRDC RD&E investment on the socio-economic resilience of rural and regional communities	RAI10501	Katherine Bassett	RAI & GRDC	Apr-23	Jun-24

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Pillar 3: Planet							
3.1 Natural capital	3.1.1 Biodiversity and soils	Cotton Landcare Tech Innovations: Contract with Landcare Australia to replant 6.5ha of trial site	NLP2301	Rob Porter	Landcare Aust	Oct-22	Jun-24
		Impacts and solutions: scoping study on the relative impacts of irrigation infrastructure on fish	DAQ10015	Michael Hutchison	QLD DAF	Aug-23	Jun-24
		Impacts of landscape connectivity on bat and bird activity in cotton and value of acoustic monitoring technology: benefits for natural pest suppression	USC10494	Stuart Parsons	USC	Jul-23	Jun-26
	3.1.2 Water	Evaluating the economic and environmental return on investment of modern fish screens	DAN2308	Craig Boys	NSW DPI	Jul-22	Jun-25
		Understanding the environmental co-benefits of irrigation water in the northern Murray-Darling Basin	GU2201	Rebekah Grieger	GU	Jul-21	Jun-24
3.2 Carbon	3.2.1 Carbon	Assessing the critical nitrogen (N) and phosphorus (P) values of cotton cultivars for improved yield and fertiliser efficiency	UQ2301	Tim McLaren	UQ	Jul-22	Jun-25
		Benchmarking soil carbon, soil properties and management between long term experimental sites and on-farm cotton industry sites	DAN2305	Guna Nachimuthu	NSW DPI	Jul-22	Jun-25
		Carbon and biodiversity benchmarking in native vegetation on cotton farms	UNE2301	Rhiannon Smith	UNE	Jan-23	Dec-25
		Greenhouse gas baseline and mitigation for cotton	CSP2102	Hizbullah Jamali	CSIRO	May-21	Jun-25
		PhD: Quantifying the temporary climate mitigation impacts of biogenic carbon	NCSU2301	Steven Pires	NCSU	Aug-22	Aug-24
		Timing of nitrogen (N) availability and forms of N supply to cotton from arbuscular mycorrhiza fungi	UNE10082	Getnet Dino Adem	UNE	Jul-23	Jun-26
		Understanding nitrogen (N) cycling in cotton soils, and the timing of N availability to plant roots	CSIRO10081	Timothy Weaver	CSIRO	Oct-23	Sep-26
3.3 Circular economy	3.3.1 Circular economy	An evaluation of cotton fibre waste processing and composting alternatives: Comparison of business models, greenhouse gas emissions and commercialisation opportunities	UTS10080	Christopher Bajada	UTS	Jul-23	Jun-26
		Closing the loop: textile waste composting for improved carbon footprint and sustainability	UON2301	Thava Palanisami	UON	Jul-22	Jun-25
		Developing a pathway for the composting and agricultural use of pure cotton textile waste	2223FRP037	Johannes Biala	UQ	Jul-23	Jun-26
		The economic benefits of composting textile waste: process mapping and optimal location	RMIT10072	Rajkishore Nayak	RMIT	Apr-23	Sep-23

Key			
AACS	Association of Australian Cotton Scientists	NSW DPI	NSW Department of Primary Industries
ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences	PHA	Plant Health Australia
AgriFutures	AgriFutures Australia	QLD DAF	Queensland Department of Agriculture and Fisheries
AIA	Agriculture Innovation Australia Ltd	QUT	Queensland University of Technology
ARLF	Australian Rural Leadership Foundation	RAI	Regional Australia Institute
BCI	Better Cotton Initiative	SAC	Sustainable Apparel Coalition
CA	Cotton Australia	SAI	Sustainable Agriculture Initiative
CCA	Crop Consultants Australia	TTS	Textile Technical Services
CQU	Central Queensland University	UC	University of Canberra
CRCNA	Cooperative Research Centre for Developing Northern Australia	UNE	University of New England
CSD	Cotton Seed Distributors	UON	University of Newcastle
CSIRO	Commonwealth Scientific and Industrial Research Organisation	UQ	University of Queensland
DU	Deakin University	USC	University of the Sunshine Coast
GRDC	Grains Research and Development Corporation	USQ	University of Southern Queensland
GU	Griffith University	USYD	University of Sydney
GVIA	Gwydir Valley Irrigators Association	UTS	University of Technology Sydney
HIA	Hort Innovation	WAAA	Western Australia Agriculture Authority
IREC	Irrigation Research and Extension Committee	WSU	Western Sydney University
NCSU	North Carolina State University		