Total Research Investment

Sugar Research Australia aims to invest in projects that will deliver real benefits on key issues for its investors.

PROJECT TITLE	PROJECT NUMBER	PRINCIPAL R&D PROVIDER	CHIEF INVESTIGATOR	END DATE
Key Focus Area 1 (Optimally-adapted varieties, plant breeding and release)				
Improving the accuracy of selection in sugarcane breeding trials through accounting for site variability	2012/351	SRA	Xianming Wei	02/06/2018
Applying the genome sequence for variety improvement: validation and implementation	2013/030	CSIRO	Karen Aitken	01/08/2018
Sugarcane root systems for increased productivity; development and application of a root health assay	2015/002	CSIRO	Anne Rae	01/07/2018
Impact of stool architecture on ratooning ability	2015/004	CSIRO	Anne Rae	01/08/2018
Leaf sucrose: the link to diseases such as YCS and enhancement of sugarcane productivity	2015/016	SRA	Gerard Scalia	30/06/2019
Generation of a high throughput SNP marker chip for introgression of resistance genes from wild germplasm into sugarcane, targeting smut, pachymetra and nematodes, to generate more resistant varieties faster	2015/025	CSIRO	Karen Aitken	01/08/2018
Selecting high value chromosomes from wild introgression material to deliver more resistant varieties faster	2015/026	CSIRO	Karen Aitken	01/08/2018
Improving early stage selection of SRA breeding program by indirect selection of plant vigour	2016/028	SRA	Jaya Basnayake	01/07/2019
Optimising productivity, variety recommendations and mill operations through analysis of mill data	2016/032	SRA	Jo Stringer	01/02/2021
New approaches to identify and integrate Pachymetra resistance genes from Erianthus into the SRA breeding program	2016/039	SRA	Nathalie Piperidis	31/12/2019
Licence to Farm: Nitrogen use efficient varieties to meet the future environmental targets	2016/044	SRA	Prakash Lakshmanan	01/07/2019
Reviewing and extending knowledge of fibre quality assessment and effects of cane varieties	2017/001	QUT	Geoff Kent	01/09/2018
Implementing and validating genomic selection in SRA breeding programs to accelerate improvements in yield, commercial cane sugar, and other key traits	2017/002	UQ	Ben Hayes	01/07/2022
Genetic control and genomic selection for important traits in sugarcane (funding through: Australia-India Strategic Research Fund)	2016803	SRA, Sugarcane Breeding Institute, Coimbatore	Prakash Lakshmanan	01/05/2019

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Key Focus Area 2 (Soil health, nutrient management and environmental sustainability)				
Strategies to manage soil-borne fungi and mitigate sugarcane yield decline	2013/101	CSIRO	Paul Harvey	01/06/2018
Boosting N-use efficiency in sugarcane through temporal and spatial management options	2014/045	USQ	Bernard Schroeder	01/03/2018
Improving NUE for sugarcane crops with constrained yield potential	2015/065	SRA	Danielle Skocaj	30/06/2018
Decision support for informed nitrogen management: soil nitrogen mineralisation test and the assessment of soil crop N contribution to crop N requirements	2015/069	DSITI	Phillip Moody	30/06/2018
Improving management practices of legume crop residues to maximise economic and environmental benefits	2015/074	DSITI	Weijin Wang	30/06/2018
How much N will that crop need? Incorporating climate forecasting into nitrogen management in the Wet Tropics	2015/075	JCU	Yvette Everingham	30/06/2018
Waste to revenue: Novel Fertilisers and feeds (Rural R&D for Profit)	2015/905	APL	Janine Price	30/06/2018
More profit from nitrogen	2015/907	CRDC	Felice Driver	30/06/2020
Master classes in soil health and soil biology for the sugar industry	2016/025	SRA	Andrea Evers	30/07/2018
SIX EASY STEPS − continuing perspectives in time and space	2017/004	USQ	Bernard Schroeder	01/02/2022
Measuring soil health, setting benchmarks and driving practice change in the sugar industry	2017/005	SRA	Dave Olsen	01/09/2022
Unravelling the impact of climate and harvest time on nitrogen fertiliser requirements	2017/009	SRA	Danielle Skocaj	01/02/2022
Key Focus Area 3 (Pest, disease and weed management)				
Solving yellow canopy syndrome	2014/049	SRA	Dave Olsen	30/06/2019
Developing an alternative herbicide management strategy to replace PSII herbicides in the Wet Tropics area	2014/050	SRA	Emilie Fillols	01/01/2018
A Novel Polyphasic Framework to resolve yellow canopy syndrome Paradox	2014/082	UWS	Brajesh Singh	30/06/2018
Identifying new-generation insecticides for canegrub control as contingency for loss of amenity with the existing product	2016/003	SRA	Andrew Ward	01/01/2020
You can't manage what you can't identify – Managing threat from exotic moth borers through accurate identification	2016/041	SRA	Andrew Ward	01/07/2018
Molecular assay of major soil-borne pathogens for better exploitation of commercial varieties	2016/047	SRA	Rob Magarey	01/07/2018
Investigation of biotic causes of yellow canopy syndrome	2016/064	UQ	Andrew Geering	01/12/2019
Keeping chemicals in their place − in the field	2017/008	SRA	Emilie Fillols	01/07/2021
Delivering solutions for chlorotic streak disease	2017/010	SRA	Kathy Braithwaite	30/06/2020
Integrated disease management of sugarcane streak mosaic in Indonesia (ACIAR-funded project)	HORT/2012/083	SRA	Rob Magarey	31/12/2018
Field ready, optimised precision weed identification sensor system	2015/055	USQ	Steve Rees	1/4/2019
Delivery of remote sensing technology to combat cane grubs in Queensland cane fields	2015/038	SRA	Kevin Powell	01/07/2021

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Key Focus Area 4 (Farming systems and harvesting)				
A non-pneumatic cane cleaning system with no cane loss	2014/035	QUT	Floren Plaza	01/06/2019
Increased harvest recovery: reducing sugar loss and stool damage	2014/048	SRA	Joseph Bonassi	01/05/2019
Assessment of new management strategies for marginal soils	2015/007	SRA	Barry Salter	31/12/2019
Bio-prospecting for beneficial endophytes of sugarcane	2015/051	AgResearch	Stuart Card	01/02/2019
Opening the data highway: Access to remotely sensed spatial and temporal data for the Australia sugar industry to assist with yield forecasting and nitrogen management	2016/062	UNE	Andrew Robson	01/01/2020
Understanding interactions between basecutters and other forward – feed components with the cane stalk, and determining practical strategies to minimise damage as harvester speed increases (Rural R&D for Profit)	2016/952	Norris ECT	Chris Norris, Phil Hobson	01/04/2020
Commercial scale economic evaluation of post-harvest cane cleaning to maximise the returns to the supply chain (Rural R&D for Profit)	2016/953	QDAF	Stephen Ginns	30/06/2019
Southern Sugar Solutions	2017/012	DAFQ	Neil Halpin	31/12/2020
Seeing is believing: managing soil variability, improving crop yield and minimising off-site impacts in cane using digital soil mapping	2017/014	UNSW	John Triantafilis	30/06/2020
Cane Farmer Trials of Enhanced Efficiency Fertiliser in the Catchments of the Great Barrier Reef (**Funding provider:** Commonwealth Department of Environment and Energy and Queensland Government Great Barrier Reef Innovation Fund (Reef Trust 4))	2016/807	CANEGROWERS and SRA	Barry Salter	01/05/2021
Key Focus Area 5 (Milling efficiency and technology)				
Real time harvest and transport system	2014/037	QUT	Geoff Kent	01/07/2018
Improving mill efficiency through rapid analysis methodologies	2014/051	SRA	Steve Staunton	01/09/2017
Managing aspects of raw sugar quality in the Australian sugar industry	2014/052	SRA	Steve Staunton	01/08/2017
Investigation into modifying pan boiling techniques to improve sugar quality	2015/013	QUT	David Moller	30/05/2019
Increasing capacity to undertake cane preparation research through modelling and experimentation	2015/018	QUT	Geoff Kent	01/05/2018
Online analysis systems to measure the available nutrients in mill mud	2016/019	SRA	Steve Staunton	01/03/2020
Reducing boiler maintenance costs and deferring capital expenditure through improved technology	2016/020	QUT	Floren Plaza	01/07/2020
Evaporator liquor brix sensor	2017/003	Wilmar	Robert Stobie	31/12/2018
Managing aspects of raw sugar quality in the Australian sugar industry – Part II	2017/006	Griffith University	Chris Davis	30/06/2019
Investigations to mitigate the effects of sucrose degradation and acid formation in factory evaporators on sugar recovery and quality, corrosion and effluent loadings	2017/007	QUT	Darryn Rackemann	01/12/2020

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Key Focus Area 6 (Product diversification and value addition)				
Process for making bagasse paper pulp	2012/053	QUT	Thomas Rainey	01/05/2018
A profitable future for Australian agriculture: biorefineries for higher-value animal feeds, chemicals and fuels (Rural R&D for Profit)	2015/902	QUT	Ian O'Hara	01/03/2019
Key Focus Area 7 (Knowledge and technology transfer and adoption)				
Increasing farm business intelligence within the sugar industry	2014/001	AgProfit	Matthew Bryant	01/09/2017
Measuring the profitability and environmental implications when growers transition to Best Management Practice (as defined by the new Canegrowers Smartcane BMP)	2014/015	DAF	Mark Poggio	02/05/2018
Sugar industry productivity and data recording spatial data hub for research and extension	2015/045	Agtrix	Robert Crossley	28/02/2018
Stimulating private sector extension in Australian agriculture to increase returns from R&D (Rural R&D for Profit)	2015/906	Dairy Australia	Neil Webster	30/06/2019
Protecting our chemicals for the future through accelerated adoption of best management practice	2016/002	SRA	Belinda Billing	01/08/2019
Master classes in soil health/soil biology for the sugar industry	2016/025	SRA	Andrea Evers	30/06/2018
Development of an intelligent tool to allow real time evaluation of harvesting practices as part of a framework for improved harvester payment systems (Rural R&D for Profit)	2016/951	Norris ECT	Stuart Norris, Rob Crossley	30/06/2019
Adoption of practices to mitigate harvest losses (Rural R&D for Profit)	2016/955	SRA	Phil Patane	30/06/2019
Productivity improvements through energy innovation in the Australian sugar industry	2017/011	Ag Analytics	Jon Welsh	30/06/2020
Key Focus Area 8 (Collaboration and capability development)				
Enhancing sugarcane for decreased water content and increased sugar content at harvest	2011/072	QUT	Anthony Brinnin Mark Kinkema	01/05/2018
Production of furanics and chemicals from bagasse and molasses	2012/074	QUT	Joshua Howard William Doherty	01/06/2017
Effect of organic nutrients on sugarcane growth, microbial activity and greenhouse gas emissions	2013/078	UQ	Susanne Schmidt	01/06/2018
Sugarcane for water limited environments: characterization of a selected sugarcane germplasm for transpiration efficiency and high biomass production for the sugarcane growing regions in Australia	2014/102	UQ	Sijesh Natarajan Shu Fukai	30/06/2018
Investigation of genetic control of sugar accumulation within the sugarcane culm (stalk)	2014/107	UQ	Patrick Mason	01/06/2018
Soil nitrogen dynamics – a microdialysis approach to quantify nitrogen cycling in sugarcane soils	2014/108	UQ	Scott Buckley	01/06/2018
Statistical data mining algorithms for optimising analysis of spectroscopic data from on-line NIR mill systems: improving system calibrations for quality measures and variety discrimination	2014/109	JCU	Justin Sexton	01/02/2019
Delivering a novel DNA-based diagnostic for root health to the sugar industry	2015/402	CSIRO	Johann Pierre	01/12/2017
A boiler simulator for improved operator training	2016/001	QUT	Anthony Mann	01/07/2018
Integrated standardised competency based training for sugar milling operators	2017/013	QUT	David Moller	01/12/2019