Sugar Research Australia

SUGAR RESEARCH AUSTRALIA DISTRICT PRODUCTIVITY PLAN – CENTRAL 2024

Brief Introduction

This ***District Productivity Plan – Central 2024*** has been developed through consultation and engagement undertaken by SRA's Industry Services team with stakeholders across the sugarcane industry supply chain to drive investment at a local, applied level. It is reviewed and updated annually.

Different sources of data have been used as inputs including grower ideas and contributions from past strategic workshops held with SRA, the industry's ABARES survey, mill data, impact assessments where applicable and a range of targeted interviews and survey results.

The plan identifies constraints and proposes solutions and actions to address them. The key to success will be implementation which will require leadership, change, and focus. Reporting on progress will occur six monthly.

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SRA District Manager Central, Dylan Wedel

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1 Australian Sugar Industry productivity goal

The strategic intent for the Australian sugarcane industry is to: utilise the current area under cane to increase productivity by ten per cent which equates to a three million tonne increase in production across Queensland and New South Wales by 2026.

At a sugar price of $500 and 13.5 CCS each tonne of cane has a gross value of $70 per tonne (sugar and molasses). By achieving this productivity improvement goal, the industry will generate an additional $210 million in gross revenue.

2 Overview

Sugarcane is grown in the Central district on approximately 103,940 hectares. Sugarcane is crushed through Plane Creek and Proserpine Mills (Wilmar), and Racecourse, Marian and Farleigh Mills in the region (Mackay Sugar).

Recent years have seen weather conditions (total rainfall, effective rainfall and sunny days) that are on par with weather conditions which produced the high yields experienced in the late 1990s when Q124 was a dominant variety. The recent crop sizes, rainfall during the harvest season and below average mill reliability have resulted in harvesting continuing in December and even January. These late finishes to the crushing season place significant downward pressure on CCS for the season and subsequently on the profitability of the industry. Unfortunately, there has also been standover cane left which is prone to deterioration over the second wet season of growing, resulting in poorer cane quality. The late finish of recent seasons has also resulted in ratoons being treated with fertilisers, pesticides and herbicides immediately prior to the wet season which is less than ideal for profitability and the environment.

Mackay Sugar and Wilmar are both investing in the local mills to improve mill reliability and are communicating their progress with the grower community. Mill reliability is the current impediment to the industry's profitability, however, following investments to improve milling performance, a shortage of cane supply is anticipated. The millers are working to support new land being planted with cane. However, there is an even bigger opportunity to increase productivity on existing cane farms to assist in meeting the cane supply needs of the mills and ensure whole of industry profitability.

3 Productivity constraints

SRA conducted an intensive stakeholder engagement process in the Central district to gain an understanding of the key constraints that were limiting productivity and profitability. This process included reviewing the 2023 activities and updating the priorities for 2024 onwards.

Currently actions to address the key constraints and grasp the opportunities for the district are through:

1. Improving variety adoption
2. Improving irrigation utilisation
3. Training for productivity officers (specifically in Mackay)
4. Enhancing industry knowledge and adoption of good farm practice
5. Supporting the Sugar Plus Industry Roadmap.

The district has also taken a future focus by considering what the key priorities are to ensure the local industry is profitable for the next generation. These long-term priorities for the district will require larger scale research investment:

- Varieties
  - Collect further information on promising clones/varieties – e.g. with higher tonnes of sugar per hectare (TSH), early CCS, improved ratoonability, and improved planting methods
- Sugar Plus
  - Develop complementary revenue streams on farm – e.g. proteins and fibre alongside sugar
- Agronomy

- Identify methods for increasing carbon reserves and develop a sugarcane carbon credit method
- Develop a deeper understanding of sugarcane root systems
- Develop systems for reducing farm inputs while maintaining or improving yield
- Support the integration of increasing levels of automation
- Precision nutrient application - scientifically validate and quantify the economic benefit of variable rates

- Pest/disease control
  - Develop alternative grub control, including in wide row and dual row farming systems
  - Identify long term, controlled release grub control alternative, including in wide row and dual row farming systems
  - Conduct targeted monitoring of the yellow canopy syndrome (YCS) invertebrate
  - Progress technologies for detecting ratoon stunting disease (RSD) at the mill
  - Investigate activating Pachymetra with amino acids to stimulate reproduction during fallow and reduce spore counts
- Weed control
  - Develop green on green weed control – in particular grasses
  - Identify aerial control options for vines/broadleaf
  - Optimise drone water rates for ripener application and vine/broadleaf control
  - Investigate non-chemical weed control technology.

4 Productivity data

CENTRAL DISTRICT	2018	2019	2020	2021	2022
T cane harvested	7,376,813	7,747,262	7,921,554	8,258,828	8,894,000
Ha harvested	107,999	106,464	103,940	101,054	93,746
T cane/Ha	68.3	72.8	76.2	81.72	94.87
Average CCS	14.29	14.14	14.18	13.97	12.87
Average yield 2014-2021 T cane harvested	8,044,003				

PRODUCTIVITY SNAPSHOT	2022		
District – CENTRAL DISTRICT			
T cane harvested	8,894,000		
Ha harvested	93,746		
Rolling 5-year average t/ha	78.78		
Average CCS	13.89		
Varieties Top 5 Total Tonnes / %	**Plane Creek** Q183=28.5% Q208=25.3% Q240=15.9% Q253=7.4% Q138= 4.0%	**Mackay Sugar** Q208=28.6% Q240=20.6% SRA9=12.8% Q183=11.7% Q253=8.7%	**Proserpine** Q240=27.5% Q208=26.2% Q183=20.2% KQ228=6.5% Q232=3.6%
Varieties – additional information	The three varieties Q240, Q208 and Q183 make up 65.2% of the region		
# mills	Wilmar and Mackay Sugar		

5 Productivity goal

The Central district's contribution to the goal of lifting Australia's volume of cane to 34 million tonnes under current area by 2026, will require an increase from 72 t/ha to 80 t/ha on a rolling average by 2026.

The priorities for the Central district are to: increase district productivity through focusing on improved variety adoption, increased irrigation utilisation, enhanced industry knowledge and impact through adoption of good farm practice by addressing soil health/pest/disease constraints that include RSD, pests, weeds and YCS.

Enhancing industry knowledge is primarily driven through the training of productivity officers (specifically in Mackay) and heavily relies on these learnings being implemented on farms across the district that the productivity officers each represent.

Driving profitability in the industry is important for the ongoing sustainability of the Central district, to stem and reverse the current losses of cane land. There is strong support from across industry to increase returns with cane being the core crop.

The district is well suited for supporting the Sugar Plus industry roadmap, with a strong manufacturing and engineering centre at Paget and the Mackay port hosting one of the world's largest bulk sugar terminals servicing coastal and international shipping. The district hosts the QUT Mackay Renewable Biocommodities Pilot Plant at Racecourse Mill, where research is currently underway to add value to what the industry currently produces.

6 District priorities

The following constraints have been identified as productivity gaps/opportunities for improvement for the Central district that are not addressed within current programs:

PRIORITY	OBJECTIVES
1. Improved variety adoption	**Improve adoption through providing more information on varieties to industry** • A project has been submitted to the Tenth Anniversary Research Funding Call to support a program of work that will collect additional information about new/upcoming varieties and assess if the additional information results in increased adoption. • Support the adoption of tissue culture. • Encourage increased utilisation of crop ripeners to improve early CCS
2. Improve irrigation utilisation	**Improve irrigation utilisation in the district by improving efficiency and increasing knowledge of profitability benefits** • 22% increase in utilisation • Increased CaneCalcs benchmarking database scale • Increased uptake of Irrisat and soil moisture probes.
3. Training for productivity officers (specifically in Mackay)	**Improve farming practice adopted in the district including use/timing of crop inputs** • Increase industry knowledge through training of productivity officers (specifically in Mackay)
4. Enhance industry knowledge and adoption of good farm practice	**Improve farming practice adopted in the district, including use/timing of crop inputs** • Increased industry knowledge through events featuring SRA researchers • Increase planting of fallow crops for complementary revenue and soil health benefits

Continued…	• Assess the impact of pH on nutrient availability to promote profitable amelioration **Improve the understanding of the impact and management of pests and diseases** • Improve skills in the use and timing of crop inputs and increased adoption of good farm practice • Reduce prevalence of RSD through improved farm hygiene • Improve knowledge of canegrub, solider fly and YCS by supporting research projects.
5. Supporting Sugar Plus industry roadmap	**Improve the profitability of the local industry by adding value to the current production.** • Assess opportunities for value adding and collaborating with local networks to establish, support and participate in projects in the district.

6.1 District stakeholder analysis

Here is a snapshot of the growers in the region based on t/ha and of the mills, grower organisations and productivity companies that SRA works with to improve productivity in the region:

Stakeholder type	Proserpine	Mackay	Plane Creek	Total Area
X Large growers – over 50,000 T cane				9 (10,573ha) **9%**
Large grower – over 20,000 T cane	15 (6,497 ha)	43 (13,156 ha)	5 (2,143 ha)	63 (21,796 ha) **20%**
Medium grower – between 8,000 T cane – 20,000 T cane	44 (8,407 ha)	181 (26,069 ha)	40 (8,800 ha)	265 (43,276 ha) **39%**
Other growers < 8,000 T	110 (8,447 ha)	398 (20,281 ha)	103 (6,844 ha)	611 (35,572 ha) **32%**
Milling companies	Wilmar	Mackay Sugar	Wilmar	**Total Area** 111,217 ha **Total Growers** 948 **Average Farm Size** 117 ha
Grower representative organisations	CANEGROWERS Proserpine (Majority) ACFA, AgForce, Independent (Minority)	CANEGROWERS Mackay/Plane Creek (Majority) ACFA, AgForce, Independent (Minority)	CANEGROWERS Mackay/Plane Creek (Majority) ACFA, AgForce, Independent (Minority)	
Productivity companies	Sugar Services Proserpine (SSP)	Mackay Area Productivity Service (MAPS)	Plane Creek Productivity Services Limited (PCPSL)	
Regional variety committees	Central district regional variety committee			

7 Scheduled events

Quarter 1	Target priority	Quarter 2	Target priority	Quarter 3	Target priority	Quarter 4	Target priority
2 February – SRA Webinar Series – Accelerating development of new varieties with genomics	3, 5	9 April – SRA Webinar Series – Engineering sugarcane to replace fossil carbon	3, 5	3-4 August – Sarina Ag Show	1	15 October – Residual Herbicide Workshop	3, 4
7 February – MW Extension forum	2, 3, 4	16-18 April – ASSCT Conference	3	17 September - Productivity Officer Training – Soil pit field walk	3	16 October - Productivity Officer Training – Hamil Grass ID and control	3, 4
18-20 February – Project Catalyst forum	3, 4	23 April – Productivity Officer Training - Soil pit field walk	3			12 November - Productivity Officer Training – Soil pit field walk	3
21 February – SRA Webinar Series – Sustainable aviation fuel opportunities	3, 5	24 April – Regional Variety Committee Meeting	1			19 November - Productivity Officer Training – Weed management	3, 4
22 February – Irrigation bus trip	2, 3	1 May – FEAT Training	2, 3, 4			19 November – Hamil grass control field walk	3, 4
27/28 February – Woodford Disease Course	3, 4	8 May - MAPS/SRA Field Day	1,2,3,4			20 November – Residual Herbicide Workshop	3, 4
15 March – BOM Workshop	3, 4	9 May – Residual Herbicide Workshop	3, 4				
15 March – Mackay Sugar Productivity Awards	4	10 May - Productivity Officer Training – Weed management	3, 4				
18 March – Milling Research Seminars	3	18 June - Productivity Officer Training – Outcomes of industry leaf and soil survey	3, 4				
27 March – SRA Webinar Series – Future foods and precision fermentation	3, 5	16 June – Pioneer Valley Ag Show	1, 2, 4				
		18-20 June – Mackay Ag Show	1, 2, 4				
		21 June – Proserpine Ag Show	1, 2, 4				
		TBC – Irrigation Scheduling workshops	2, 3			TBC – Irrigation Scheduling workshops	2, 3
Various - Productivity board shed meetings	1, 2, 3	TBC – Irrigation control field walks	2, 3			TBC – Irrigation control field walks	2, 3

8 Implementation strategy and actions

The tables below present activities and their corresponding strategic targets for the Central district.

All activities address the following priority areas:

- Improved variety adoption
- Improved irrigation utilisation
- Training for Productivity Officers
- Enhanced industry knowledge and adoption of good farm practice
- Supporting Sugar Plus industry roadmap

SRA will update this document to reflect current activity delivered through SRA, including in collaboration with other delivery partners, which will deliver impactful research and contribute towards achieving the district productivity goal.

Table 1 Actions, outcomes and measures for the priority 'Improved Variety Adoption'

INVESTMENT RATIONALE	ACTIVITY/ PROJECT	OUTPUT/ SOLUTION	SHORT-TERM OUTCOMES	MEDIUM-TERM OUTCOMES	LONG-TERM OUTCOMES	ACHIEVEMENT IN PAST 12 MONTHS
Adoption of improved varieties will combine disease resistance with improved productivity.	Project proposed for 10th Anniversary Funding Call: Collect further information on promising clones/varieties – e.g. TSH, early CCS, ratoonability, planting methods.	Assess if providing this additional information leads to increased adoption. Database of additional information on varieties. Additional data in the Variety guides to show observations in the district.	If successful, commence project, implement commercial scale trial sites. Early maturity testing to observe for any notable characteristics of new varieties – early CCS, impact of soil moisture on CCS.	Collect information from project trial sites. Provide growers with additional data on new varieties to increase confidence.	Increased knowledge of drivers of variety adoption – assess the impact of providing additional information. Increased clean seed sales. Increased awareness of varieties and understanding of benefits. Reduced disease prevalence/impact with increased clean seed distributed.	Estimated CCS and soil moisture data for current and upcoming varieties was collected during the early half of the 2023 harvest, primarily from SRA Variety Development plots. This work will be continued in 2024 – subject to accessibility to plots.
	Provide crop ripener suitability assessments on farm to improve early CCS.	Assess crop moisture and provide growers with assistance with trialling crop ripeners to improve early CCS.	Assess current recommendations for crop ripeners through local demonstrations.	Increase awareness of economic benefits of early crop ripening and familiarity with assessment.	Improve early CCS through use of ripeners. Develop rapid infield assessment system for crop ripeners usage.	Crop ripener trials demonstrated an increase of 0.8 CCS following application of crop ripeners to crops with >70% stalk moisture. A number of growers tried crop ripeners for the first time in 2023 and there is growing interest for 2024.

INVESTMENT RATIONALE	ACTIVITY/ PROJECT	OUTPUT/ SOLUTION	SHORT-TERM OUTCOMES	MEDIUM-TERM OUTCOMES	LONG-TERM OUTCOMES	ACHIEVEMENT IN PAST 12 MONTHS
Continued…	Establish tissue culture adoption promotion/ demonstration.	Demonstration of growing tissue culture for clean seed production.	Present example of best practice tissue culture growing with simple recipe for success.	Increase awareness of the value in tissue culture for clean seed.	Increased awareness of growing tissue culture for clean seed. Reduced disease impact with increased clean seed distributed.	Proserpine has led the district in the sales of tissue culture and one-eyed setts for clean seed. Plane Creek is interested in promoting tissue culture as well. We will work with Proserpine and Plane Creek Productivity Boards to further promote the uptake of tissue culture for clean seed.

Table 2 Actions, outcomes and measures for the priority 'Improved Irrigation Utilisation'

INVESTMENT RATIONALE	ACTIVITY/ PROJECT	OUTPUT/ SOLUTION	SHORT-TERM OUTCOMES	MEDIUM-TERM OUTCOMES	LONG-TERM OUTCOMES	ACHIEVEMENT IN PAST 12 MONTHS
Increased utilisation of irrigation will improve productivity and, when paired with an efficient system and scheduling, profitability will improve.	Establish low-cost irrigation control/ automation demonstra-tion sites.	Increased industry awareness of tools available to make irrigation less labour intensive.	Demonstrate low-cost control tools to growers. Provide growers with assistance in adapting to suit their needs.	Increase adoption of low-cost tools to reduce labour inputs for irrigation. Increase irrigation utilisation.	Increased irrigation utilisation. Increased yields due to irrigation.	Two low-cost irrigation control/automation demonstration sites have been established. Field walks have been hosted at one of the sites with positive feedback from all attendees. Specifically, the attendees were appreciative of SRA's continued support of irrigation utilisation (in contrast with past experience where projects concluded and no further support was provided locally). Other local stakeholders have shown interest in supporting this work.
	Supporting growers to adopt low- cost irrigation scheduling tools and system efficiency tools.	Increased industry awareness of tools available to improve irrigation scheduling and system efficiency.	Demonstrate low- cost irrigation support tools. Provide growers with assistance in adapting to suit their needs.	Increase adoption of low-cost tools to improve irrigation scheduling and improve system efficiency. Increase irrigation utilisation.	Increased irrigation utilisation. Increased yields due to irrigation.	SRA commenced working with a group of growers to assist in improving their irrigation scheduling. This group of growers has also been supported in other aspects of irrigation: control technology, understanding costs, and assessing tariffs. The feedback from the group has been positive and has provided an opportunity to better understand the productivity constraints on their farms and provide updates of relevant research work. SRA also supported Mackay CANEGROWERS with their work in developing IrriSAT to be better suited for sugar cane.
	Collaborate with the Water in Agriculture working group to develop a proposal for a GW Irrigation Program.	Create collaborative project to address low levels of irrigation utilisation in the district.	Assess funding opportunities. Continue to build case studies as part of Stage 0.	Increased resources on the ground to provide extension advice to growers.	Increased irrigation utilisation.	SRA has collaborated with local stakeholders in the Water in Agriculture working group to develop a proposal for a Greater Whitsundays Irrigation Program. The proposed program would involve on-farm irrigation advice and rebates for irrigation improvements. Preliminary information and case studies are being developed to support a submission for funding.

Table 3 Actions, outcomes and measures for the priority 'Training for Productivity Officers (specifically in Mackay)'

INVESTMENT RATIONALE	ACTIVITY/ PROJECT	OUTPUT/ SOLUTION	SHORT-TERM OUTCOMES	MEDIUM-TERM OUTCOMES	LONG-TERM OUTCOMES	ACHIEVEMENT IN PAST 12 MONTHS
Improving productivity officers' knowledge of good farming practice, enables them to assist growers to adopt the advice and improve their productivity/ profitability.	Training of productivity officers (specifically in Mackay).	Increased industry knowledge on farming practice including use/timing of crop inputs. Improved ability to undertake self- paced professional development.	Increased industry knowledge of good farming practices. Establish baseline understanding and familiarity with reference materials. Familiarity with the existing support network within the team of SRA industry experts.	Learnings implemented on farms across the district that the productivity officers each represent. Professional development building on knowledge by attending research updates/webinars/events. Periodically referring to reference materials when dealing with different challenges.	Improved farming practice adopted in the district delivering improvements in productivity and profitability. Improved ability for self- paced professional development. Continued support to build baseline understanding of new inexperienced productivity officers.	A structured training program has been made available to productivity officers over the past 12-24months, including but not limited to: **Agronomy/nutrition:** • Online Nutrient Management Training • Fertcare/Agronomy in Practice • Numerous in-depth training sessions covering all aspects of nutrition, amelioration and weather • Periodic updates on recent advances in research from SRA researchers. • **Reference material**: Australian Sugarcane Nutrition Manual, SIX EASY STEPS (incl Toolbox) **Weed management** • Weed identification training. • Residual and knockdown herbicide workshops. • Adjuvant and spray nozzle selection training from NuFarm/Croplands. • Periodic updates on recent advances in research from SRA Weed Scientist. • **Reference material:** Plant Net app, Weed Management Manual, workshop manuals **Disease management** • Woodford farm pathology training program. • Local disease identification field walk. • Periodic updates on recent advances in research from SRA pathologists. • **Reference material:** Diseases of Australian Sugarcane, Variety Guides **Pest management** • Periodic updates on recent advances in research from SRA Entomologist. • **Reference material**: Greyback Canegrub Management Manual, fact sheets.

Table 4 Actions, outcomes and measures for the priority 'Enhanced industry knowledge and adoption of good farm practice

INVESTMENT RATIONALE	ACTIVITY/ PROJECT	OUTPUT/ SOLUTION	SHORT-TERM OUTCOMES	MEDIUM-TERM OUTCOMES	LONG-TERM OUTCOMES	ACHIEVEMENT IN PAST 12 MONTHS
Increased industry knowledge and adoption of good farming practices will lead to increased productivity and profitability.	Training workshops and updates on recent advances in research from SRA researchers. Supporting research work within the district.	Increased industry knowledge on farming practice to increase yields/reduce pest/disease impact. Increased understanding of research outcomes from being kept up to speed throughout the project.	Increased awareness of current advances in research.	Faster adoption of research outcomes.	Increased productivity through faster adoption of research outcomes.	SRA Weed Scientist Emilie Fillols has run multiple weed management training workshops that have been well received. The primary feedback from attendees is that it is best to put your knowledge to work soon after the workshop to help reinforce the learnings. SRA Entomologist Dr Kevin Powell has visited the region on multiple occasions to talk to growers impacted by pests, and to also provide industry updates on his research into canegrubs, soldier fly and YCS. Leader Field Pathology Dr Seona Casonato has presented to multiple grower groups on pathology research. She has spoken predominantly about research into RSD detection at the mill which has gained a lot of interest. The interest is appreciated, but she has emphasised that this project is still the subject of further research work before it can be recommended for broader adoption. Multiple SRA researchers attended the MAPS/SRA field day in 2023, speaking to growers about their on-farm concerns while sharing learnings from current research work. Industry updates and visits to the district will continue over the next 12-24 months as research projects progress, providing additional information to share with industry. Numerous current and proposed research projects will involve input and support from this district, including: • Beyond Imidacloprid - a project looking at the chemical and biorational alternatives for managing canegrubs (and other larvae) • YCS – how are invertebrates involved? • Soldier fly diagnostics, their distribution and the development of an artificial diet as a precursor to screening control agents. • Robotic spot spraying – targeting grasses in cane

INVESTMENT RATIONALE	ACTIVITY/ PROJECT	OUTPUT/ SOLUTION	SHORT-TERM OUTCOMES	MEDIUM-TERM OUTCOMES	LONG-TERM OUTCOMES	ACHIEVEMENT IN PAST 12 MONTHS
Continued…						• Assessing control methods for itch grass, balsam pear and navua sedge • Assessing the impact and distribution of weeds on farms for research prioritisation.
	Assessing impact of pH and nutrient availability	Increased industry understanding of the impact that pH has on nutrient availability and economics associated with amelioration.	Establish a trial site to assess nutrient response to pH, to understand if it is economical to ameliorate above a pH of 5.5.	Communicate findings from the trial to increase understanding of pH and amelioration. Assess further if results are different to previous trial results.	Improved industry understanding of the economic limit to amelioration.	This activity is new and follows feedback from this District Plan review. Growers who are actively ameliorating their soils are experiencing reduced CCS levels and would benefit from increased understanding of how nutrient applications can be adjusted.
	Promote benefits of complimentary fallow crops.	Provide soybean planter for growers to try growing fallow crops.	Increased awareness of good farming practice.	Increased adoption of good farming practices.	Improved productivity through the adoption of best practice.	The SRA soybean planter has been returned to service and is available to any grower to trial complimentary fallow crops. Several growers have successfully utilised the planter with assistance provided to minimise risk of losses. With the MAPS soybean planter restricted to growers who are part of their Reef Water Quality projects, this has allowed growers outside of the project to still trial a soybean planter.
	Represent sugar industry on community committees to improve community perceptions	Increase industry engagement.	Continue to promote the continuous improvement efforts of the industry to the wider community.			We have actively contributed to and promoted the interests of the industry in the Mackay Regional Council Sustainability and Environment Advisory Committee and Healthy Rivers to Reef Partnership.

Table 5 Actions, outcomes and measures for the priority 'Supporting Sugar Plus industry roadmap'

INVESTMENT RATIONALE	ACTIVITY/ PROJECT	OUTPUT/ SOLUTION	SHORT-TERM OUTCOMES	MEDIUM-TERM OUTCOMES	LONG-TERM OUTCOMES	ACHIEVEMENT IN PAST 12 MONTHS
Driving profitability in the industry is important for the ongoing sustainability of the Central district, to stem and reverse the current losses of cane land. There is strong support from across industry to increase returns for sugarcane as the core crop.	Assessment of the opportunities for value adding and collaborating with local networks to establish, support and participate in projects in the district.	Improvement of the profitability of the local industry by adding value to the current production.	Identifying opportunities to access funding for or to be involved in value adding projects.	Participation in projects. Increased awareness of value adding possibilities.	Increased industry profitability through value adding.	Attending the Biofutures Forum in Mackay provided an insight about the potential avenues for value adding moving forward. This was promoted through SRA communications. Sugar Plus was collaboratively developed with industry and launched by SRA as an industry roadmap. SRA Research Mission 3: *Capitalise on changing consumer preferences, and the growing bio and green economies to develop product diversification opportunities* continues to assess funding opportunities and projects which explore value adding in the local industry.

9 Current SRA-funded research projects

Production Focus

- Moth borers - how are we going to manage them when they arrive? (01.06.25)
- Development of a resistance screening method for chlorotic streak (21.03.24)
- Delivery of a pest and disease diagnostic step change for the sugarcane industry (RSD - NIR) (01.12.25)
- Delivery of a pest and disease diagnostic step change for the sugarcane industry (RSD-LAMP) (01.05.26)
- Beyond imidacloprid – Chemical and biorational alternatives for managing canegrubs (31.01.24)
- Developing an integrated device for on-farm detection of sugarcane diseases (21.03.24)
- Environmental DNA Technologies and Predictive Modelling for Rapid Detection and Identification of Sugarcane Priority Pests and Diseases (01.06.24)
- Transformational crop protection – Innovative RNAi biopesticides for management of sugarcane root feeding pests (30.06.24)
- Updating the Sugarcane Industry Biosecurity Plan (01.06.27)
- Soldier fly diagnostics, distribution, and development of an artificial diet (01.05.25)
- Viruses to aid biological control of major root-feeding pests of sugarcane (01.08.27)
- Soil specific management for sugarcane production in the Wet Tropics (23.04.24)
- Industry-wide leaf and soil survey to detect hidden macro and micronutrient constraints (31.03.24)
- Assess weed impact/distribution for prioritisation (30.06.24)

Milling focus:

- Australian Sugar Industry – Development of factory training modules – Phase 3 (01.03.27)
- Use of machine learning to determine the extraneous matter and billet length in cane consignments (01.02.27)
- Bagasse fly ash system performance benchmarking (30.06.24)
- Billet Quality Assessment (30.06.24)
- Evaluating the suitability of measuring massecuite dry substance for control on Australian pan stages (01.07.24)

For further information on the above listed projects select the link https://sugarresearch.com.au/current-research-projects/

10 Review to measure impacts

This District Productivity Plan will be updated per annum with progress reports and reviewed every six months to determine the next plan, track progress and measure impacts.

Dylan Wedel | Central District Manager

M 0490 029 387

Address 26135 Peak Downs Highway, Te Kowai, QLD, Australia, 4741

sugarresearch.com.au