

SUGAR RESEARCH AUSTRALIA DISTRICT PRODUCTIVITY PLAN – SOUTHERN 2024

Introduction

This District Productivity Plan – Southern 2024 has been developed through comprehensive consultation and active engagement by the SRA's Industry Services team with key stakeholders throughout the sugarcane industry supply chain. The aim is to foster local applied investment. This document is part of an ongoing commitment with annual updates to ensure relevance and efficacy.

In preparing this plan, a range of data sources were used, including innovative ideas from growers and insights from previous strategic workshops conducted with SRA. Additionally, the plan integrates findings from the industry's ABARES survey, mill data, relevant impact assessments, and a variety of targeted interviews and survey results.

The plan outlines current barriers while offering strategic solutions and actionable steps to overcome challenges. The cornerstone of this plan's success lies in effective implementation, requiring strong leadership, embracing change, and maintaining a sharp focus. Progress reports are delivered periodically to local productivity boards to ensure transparency and accountability.

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Contents

Introduction	1
1 Executive summary	3
2 Australian Sugar Industry productivity goal	3
3 Southern district overview	3
3.1 Rocky Point	3
4 Productivity constraints	4
5 Productivity data	5
6 Southern productivity goal	6
6.1 Recognised areas of value delivered by SRA	6
7 Southern district priorities	6
7.1 Bundaberg/Wide Bay priorities	6
7.2 Rocky Point priorities	8
7.3 Northern NSW priorities	9
8 District insights and stakeholder assessment	10
9 Events	11
10 Implementation Strategy and Actions	11
10.1 Bundaberg/Wide Bay	11
10.2 Rocky Point sub–district plan	14
10.2.1 Individual Productivity Plans:	14
10.2.2 Adoption of Improved Farming System (IFS)	15
10.2.3 Nutrient management	16
10.2.4 Varieties management	17
10.2.5 Pest and disease management	18
10.2.6 Harvesting management	18
10.3 New South Wales (NSW)	19
10.3.1 Improved adoption of new technologies or practices	20
10.4 Direct industry engagement	21
10.5 Increased clean seed distribution and variety adoption.	21
11 Ongoing review to measure impact	23

1 Executive summary

The 2023 focus for the southern district was on enhancing local engagement through a number of initiatives. This included hosting project presentations, specialised workshops featuring guest researchers, and maintaining active communication with local productivity boards to share updates and research findings. Notably, the district organised the second Bundaberg Field Day only half a year after the first. However, the Southern Local Expert Analysis (LEA) program was not implemented. Looking ahead to 2024, district plans will initiate new projects following successful tender submissions and continue with research and development (R&D) projects.

2 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 10 per cent, which equates to a three million tonne increase in production across Queensland (Qld) and New South Wales (NSW) 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). Each additional tonne of cane produced provides net revenue for growers, millers and harvesters and supports their local communities and the Qld/NSW economies.

3 Southern district overview

The southern region is split into three distinct geographies: Northern NSW (rainfed), Rocky Point (rainfed), and Bundaberg/Wide Bay regions (supplementary irrigation or rainfed). This region spans more than 800 kilometres from north to south.

This Southern Region District Plan covers sugarcane production for two mill areas in the Burnett Mary Region - Bundaberg in the north, Isis in the centre and Maryborough in the south.

The single greatest challenge for the southern region is to maintain individual farm and mill viability at the current raw sugar price, rising input costs and competition from other land use. In 2022/23 sugarcane commercial attractiveness compared with macadamias improved due to a higher raw sugar price and a fall in the selling price of macadamia nuts.

However, the industry recognises a continuing threat of a reduction in land under cane from tree crops - particularly macadamias and avocados. These are long-term crops (20 years+) and cannot be rotated with sugarcane, unlike vegetable crops. Industry stakeholders acknowledge this challenge needs to be addressed through a range of means based on a thorough review of all aspects of farm and mill operations. The priorities identified are adoption of improved practices in productive farming systems, water management, and reduction in harvest losses.

At the completion of the 2020 crushing season, one sugar mill closed in Bundaberg (Bingara Mill) and one in Maryborough. The sugarcane formerly supplying Bingara Mill must now be crushed at Millaquin Mill.

The Maryborough mill in the south of the region closed in 2020. The sugarcane grown in the Maryborough region is now processed at the Isis Central Sugar Mill. However, in the Maryborough region, approximately 2500 hectares of irrigated cane land (equivalent to 200,000 tonnes of cane production) is being converted to macadamia tree farms.

3.1 Rocky Point

Rocky Point is the most southern mill district and smallest in Queensland. Situated between the Gold Coast and Brisbane, on the eastern side of the M1 motorway, the area is a landlocked district with many other uses competing for land.

In 2022, the Mill's acquisition of the adjacent co-generation plant required the introduction of a significant maintenance program due to the plant's poor condition. This extended maintenance period delayed the start of the 2022 crush season until 29 October, ending on 7 February 2023, with only over 50 per cent of the crop processed. This delay adversely affected the crop cycle, impacting the 2023 harvest. The 2023 season

subsequently faced delays because of the cane processed from the previous year's harvest, compounded by dry to drought conditions. These operational challenges have placed financial strain on growers, affecting their income and ability to implement changes on their farms.

Leadership, change management, and a strong focus are essential for addressing these complex issues in the Rocky Point implementation process.

Growing sector structure and productivity

- Of 38 farming entities, six produce more than 10,000t/year and up to 60 per cent of the total supply; of the 40 per cent producing less than 10,000t/ year, 20 are producing less than 3,000t/year (entities are consistent – farming entities have merged which has reduced the previous record of numbers).
- Rocky Point Mill produced approximately 20 per cent of the total tonnes produced and are excluded from these figures.
- 57 per cent of growers are using controlled traffic (22 farming entities out of 38). This has increased from 35 per cent of growers over the past three years.
- A significant proportion of young proactive growers are very keen to keep farming in Rocky Point.
- There is a significant adoption of recommended practices in the area compared with the rest of industry.

4 Productivity constraints

SRA conducted an intensive stakeholder engagement process in the southern region in the latter part of 2021 and 2022. The key challenges identified included:

- Overcoming environmental constraints:
 - Impact of pest and diseases (i.e. soldier fly and ratoon stunting disease (RSD))
 - Soil health management and support for district to improve yield and fallow crop
 - Other farming management (weeds, irrigation, fallow management)
- Increasing uptake of clean seed distribution and variety adoption:¹
 - Variety development and adoption (including adoption of clean seed material)
- Increasing and maintaining active industry and grower engagement
- Obtaining added support for economic analysis (cost of production, irrigation, and pest impact).

In collaboration with industry representatives, SRA has now put together targeted campaigns (as part of this District Plan) to address these constraints and to work collaboratively with industry stakeholders.

The following diagram (Figure 1) illustrates the productivity and profitability drivers and constraints across the spheres of sustainability and highlights the priorities within the environmental, economic and social context.

¹ Noting NSW is an industry leader (pro rata) for annual Clean Seed sales

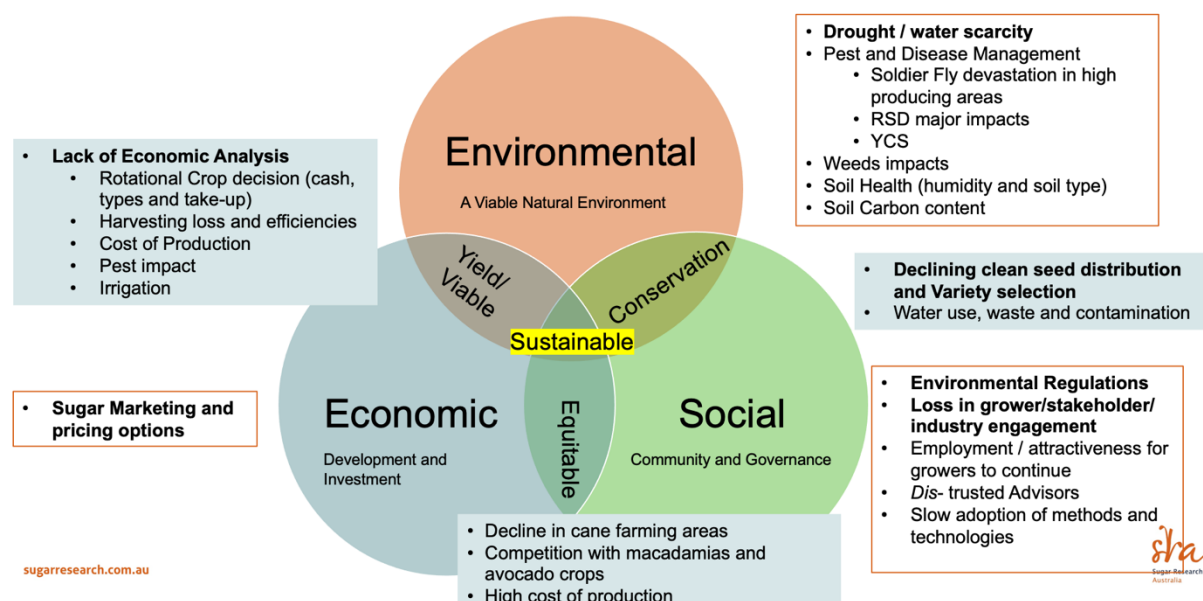


Figure 1: Productivity and Profitability Drivers and Constraints (Three Spheres of Sustainability)

5 Productivity data

The following data is for the 2022 season².

Table 1: Southern Productivity Data

PRODUCTIVITY SNAPSHOT	BUNDABERG	ISIS	MARYBOROUGH	ROCKY POINT	NSW
T Cane harvested (Thousand Tonnes)	1,085	860	566	195	1,32
Ha harvested (Thousand Ha)	11.6	9.7	7.2	2.2	12.6
Average Tonnes cane/ha	93.2	88.6	78	87	104
Average CCS	13.15	12.75	12.8	13.2	12
Varieties Top 3 total tonnes	Q240 (38%) KQ228 (24%) Q208 (15%)	Q240 (46%) KQ228 (14%) Q208 (13%)	Q240 (38%) Q208 (19%) Q232 (11%)	Q232 (35%) Q240 (18%) Q208/228 (10%)	Q208 (33%) Q240 (16%) Q232 (12%)
Varieties Ha (top 3 average sugar yield) tonnes sugar/ha TSH	Mill Avg 11.2 Q240 11.98 KQ228 11.8 Q208 9.8	Mill Avg 10.9 Q240 11.3 KQ228 11.0 Q208 10.6	Mill Avg 8.7 Q240 Q208 Q232	Q240 – 14.24 Q252 – 14.12 Q208 – 13.59	Q208 Q240 Q232
# mills	2	1	1	1	3

² Data source;

6 Southern productivity goal

The southern region sugar industry faces a number of challenges which affect the overall viability of the sugarcane growing and milling industry and also profitability and sustainability at an individual farm level. The single greatest challenge for the southern region is to maintain individual farm and mill viability with variable sugar prices, rising input costs and competition from other land uses.

In recent times sugar cane production has reduced significantly with the loss of irrigated cane land to other crops. These crops are either annual crops such as sweet potato or permanent tree crops such as avocados and macadamias. The loss of area under cane saw two sugar mills close at the end of the 2020 season. The loss of cane land for other crops is not directly addressed in this plan.

The secondary risk is year on year variable cane yield productivity. The largest impact in the southern region is application of irrigation. The southern region is a supplementary irrigation region and relies on access to and application of irrigation water. This is a priority in this region.

In the past 12 months, SRA has actively re-engaged the district through a number of translation research events showcasing what research SRA has under development to help mitigate these productivity issues.

6.1 Recognised areas of value delivered by SRA

During stakeholder consultation it was noted and reconfirmed that the following areas are positively valued by industry:

- Near infra-red spectroscopy (NIR) work, research, and projects from the SRA chemistry laboratory. This work supports confidence in the cane payments and analysis system.
- Variety development program: seen as a core part of SRA activities.

Both these capabilities are included in the Research Missions (see the SRA Strategic Plan). A new portfolio of research is currently in development and updates will be periodically shared with stakeholders as they are announced.

7 Southern district priorities

After further stakeholder consultation in each geographic location, the following priorities were documented:

7.1 Bundaberg/Wide Bay priorities

A major farming regulation change for the region has been the expansion of Great Barrier Reef protection to include the Bundaberg and Wide Bay regions. This change came into effect on 1 December 2022 for the Burnett, Mary and Fitzroy river regions. Growers are now required to develop and implement a farm nitrogen and phosphorus (N&P) nutrient plan which meets set environmental standards. Communication, education, and training on nutrient management planning and how to do a nitrogen and phosphorus budget is a new district priority for the Bundaberg/Wide Bay region.

The Queensland Department of Environment and Science has now approved that growers who successfully complete the SRA **Six Easy Steps Online Sugarcane Nutrient Management Program** (launched in March 2023) are also recognised as an *appropriate person* to develop and verify their own farm's N&P Budget. Access to this online program is available on the SRA website.

The following priorities for the Bundaberg/Wide Bay regions based on the constraints to productivity have been identified by the local productivity services organisations program:

Table 2: Bundaberg/Wide Bay priorities

PRIORITY	OBJECTIVES
<p>Environmental constraint identification</p> <p><i>Constraint: variable environmental constraints impact different growers at different locations under different pressures.</i></p>	<ol style="list-style-type: none"> Pest and disease management: <ol style="list-style-type: none"> 1.1. Regularly disseminate up-to-date research findings and advancements in the monitoring, management, and mitigation of key diseases and pests, specifically focusing on soldier fly, Ratoon Stunting Disease (RSD), and cane grubs. Soil health and water quality management <ol style="list-style-type: none"> 2.1. Provide tailored and intensive one-on-one agronomic services to growers, aimed at improving yield and productivity. This includes strategies to reduce the loss of key nutrients, particularly nitrogen and phosphorus, contributing to the broader goal of reducing end-of-catchment Dissolved Inorganic Nitrogen (DIN) loads in the Burnett Mary region. 2.2. Support the development or review of personalised nutrient management plans for growers, focusing on soil health improvement, efficient nutrient utilisation, and environmental sustainability. 2.3. Encourage the use of the Six Easy Steps® nutrient management program and the SIX EASY STEPS toolbox to calculate nutrient management plan application rates. Farming management enhancement <ol style="list-style-type: none"> 3.1. Initiate and explore collaborative research projects with other industry groups, rural research and development corporations (RDCs), and government agencies, focusing on the benefits and best practices of multi-cropping and fallow system management, with an emphasis on crops such as soybeans. 3.2. Aim to identify synergistic relationships between different crop species and how they can be effectively integrated into the existing sugar cane production system to enhance soil health, pest management, and overall farm productivity. Advocacy and participation in local research surveys and trials <ol style="list-style-type: none"> 4.1. Promote and support the initiation of local research surveys and trials of emerging technologies to assess the effectiveness of new pest and disease management, soil health, hybrid fertilisers or other farming management enhancement strategies under local conditions.
<p>Enhance efficiency and technology adoption in irrigation</p>	<ol style="list-style-type: none"> 1. Facilitate an industry review of the technology practices from the Burdekin Irrigation project (BIP) to improve water and energy management, emphasising data-driven decision-making. 2. Showcase and demonstrate innovative irrigation technologies, setting up collaborative pilot projects for practical observation by Bundaberg/Wide Bay growers. 3. Organise workshops or field days to educate growers on the efficient use of irrigation resources and the adoption of new technologies, ensuring they are well-equipped to optimise their irrigation practices.
<p>Increased clean seed distribution and variety adoption and selection.</p> <p><i>Constraint: declining or stagnant clean seed distribution and variety selection.</i></p>	<p>Boost development, selection, and adoption of improved varieties</p> <ol style="list-style-type: none"> Variety development and field trips <ol style="list-style-type: none"> 1.1. Conduct SRA bus trips to observation plots, showcasing varieties suitable for Bundaberg/Wide Bay's varied soil types. 1.2. Focus on promoting varieties that thrive in local conditions, enhancing resilience and yield.

Continued... <i>Reduce reliance on a small number of well-adapted varieties which increases the risk of a major impact on the industry in the event of a disease outbreak.</i>	2. Communication of committee outcomes 2.1. Share findings from the Southern Regional Variety Committee effectively with growers.
Enhance industry knowledge and adoption of good farming practice through an increase in stakeholder engagement with SRA research and development findings	Boost visibility, awareness, and practical application of SRA research 1. Facilitating collaborative learning events: arrange knowledge-sharing workshops, seminars, or bus tours that bring together experts, researchers and local growers for a collaborative learning experience of new research findings and their practical field applications in the district. 2. Researcher in Residence program: Integrate a 'Researcher in Residence' program within workshops, offering one-on-one sessions with subject matter experts for personalised advice and problem-solving on farms. 3. Active participation and knowledge exchange: ensure active participation by SRA managers in external industry workshops and events to spread knowledge and enhance learning opportunities.
Keep updated on NIR sugar analysis for quality control	Efficiently share NIR technique advancements in the sugar industry 1. Streamline the dissemination of the latest updates on research and developments in Near Infrared (NIR) technology, focusing on its application in disease detection (RSD), sugarcane payment processes, and fibre assessment at SRA.

7.2 Rocky Point priorities

Rock Point Canegrowers and SRA have agreed on the following priority goals and objectives as part of their productivity program in their district plan.

Table 3: Rocky Point priorities

PRIORITY GOAL	OBJECTIVES
Improved Farming System (IFS)	The objectives for this priority, considering the specific examples of farming systems, are to enhance the adoption of Improved Farming Systems (IFS) by 0.4 per cent per annum. This enhancement will be progressed by: <ol style="list-style-type: none"> Showcasing the advantages of IFS on farmer productivity via hands-on demonstrations and field trials. Developing/reviewing annual individual productivity plans that incorporate IFS strategies to guide growers in implementing more efficient and cost-effective farming practices.
Sound nutrient management and agronomy practises	The objectives of this priority aim to enhance sound nutrient management through a one per cent increase in the adoption of the SIX EASY STEPS program by: <ol style="list-style-type: none"> Further supporting the implementation of the District's SIX EASY STEPS guidelines. Providing demonstration and extension support for nutrient management practices on farms. Re-establishing SIX EASY STEPS trials that have previously failed.
Varieties Management	The objective of this priority is to increase appropriate variety selection by one per cent per year by <ol style="list-style-type: none"> Improving online support tools awareness and usage (through SRA) Investigating/trialing further climatic tolerance.

Continued... Pest and disease management	The objective of the priority is to improve pest and disease management through the following mitigation strategies: 1. Incidence of RSD is high. Various collaborative projects are in review to focus on reducing this. 2. Incidence of fire ants has increased. Although not affecting productivity, this does create biosecurity impediments.
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7.3 Northern NSW priorities

NSW AgServices is in the process of revising their Strategic Plan, with completion expected in April 2024. The outcomes of this review will subsequently shape the SRA District Plan, scheduled for June 2024. An update will be provided upon completion of these developments.

The year 2022 brought significant challenges for NSW Canegrowers, marked by two major floods and prolonged periods of rainfall that extensively harmed crops and machinery, inflicting millions of dollars of financial losses on the local industry. Additionally, the adverse weather impacted the three local mills, causing delays in both the commencement and conclusion of the crushing season. The industry is still in a phase of recovery, anticipating several years before full restoration is achieved.

NSW priorities in the current (to be updated) strategic plan are as follows:

Table 4: 2022-2023 NSW priorities

PRIORITY GOAL	OBJECTIVES
Improved adoption of new technologies or practises	<ul style="list-style-type: none"> Assess and promote the adoption of the cane loss monitoring system to maximise returns through decreased harvesting losses. Assess the economic benefits of the increase in the supply/harvesting of one year old cane versus two-year-old cane. Investigate trials and new technologies across the industry through farm visits and industry tours including SRA activities and projects which will improve growers' understanding of SRA's areas of research and development. Assess the Agtrix farm information management system. Increase the uptake of new varieties and clean seed. Assist growers in flood recovery – mainly in the Broadwater area.
Review soil carbon methods	Continue to explore research and development into soil carbon farming methods that will benefit the sugarcane industry.
NIR sugar analysis	Use NIR to assess the sugar content of flood-damaged cane in NSW.
Enhance industry knowledge of SRA's R&D	Increase visibility and awareness by our levy payers in the district and stakeholders in the wider public of SRA's activity and projects.

8 District insights and stakeholder assessment

The following table is a snapshot of the region's grower organisations, mills and productivity companies that SRA works with to improve productivity for the region.

Table 5: Southern District stakeholders

STAKEHOLDER TYPE	BUNDABERG	ISIS	MARYBOROUGH	ROCKY POINT	NSW
Milling Companies	Bundaberg Sugar	Isis Central Mill	(Production has merged into Isis)	Rocky Point Mill	Sunshine Sugar (Harwood, Broadwater and Condong)
Grower representative organisations	Bundaberg Canegrowers	Isis Canegrowers	Maryborough Canegrowers	Rocky Point Canegrowers	NSW Canegrowers
Productivity companies	Bundaberg Sugar Services (BSSL)	Isis Productivity Services (IPL)	Maryborough Cane Productivity Services (MCPS)	Rocky Point Productivity Services - one person	Sunshine Sugar Agricultural Services (AgServices)
Regional variety committees	Southern Regional Variety Committee				

9 Events

The following events have been discussed with Canegrowers and the Productivity Boards as per the needs of the area (Table 6). Events in other districts (i.e. workshops and field days) are also cross-promoted to facilitate wider dissemination of knowledge-sharing. Other district events and meetings will be attended where possible. These can include harvest lunches, shed meetings, productivity awards, information sessions and board meetings.

Table 6: Southern District event list (as of Feb 2024)

EVENT	DATE	LOCATION	SUMMARY / DESCRIPTION
Woodford Pest and Disease Workshop	27-28 Feb 2024	Woodford	Biosecurity tour and instruction in pest and disease management
Harvesting contractor meeting – Bundaberg Sugar	28 Feb 2024	Bundaberg	Phil Patane – Harvest Best Practice
Soil data farm meetings and <i>Researcher in Residence</i>	10-11 Mar 2024	Maryborough/Bundaberg	Dr Barry Salter – Soil data reports (Agronomy)
Regional sugar milling research seminars	25,27 Mar 2024	Rocky Point and Bundaberg	Research highlights of QUT/SRA milling research
Rocky Point growers bus trip (two days)	16-17 April 2024	Rocky Point to NSW	Program: BOM Workshop, tour of Sunshine Sugar Refinery and NSW variety observation plots
Bureau of Meteorology Sugarcane Weather and Climate workshops, southern region	16 and 18th April 2024	Ballina, NSW and Childers, Qld	Demonstration of Bureau weather and climate products
Two Bundaberg/Wide Bay inter-district farm bus days.	8 and 21 May 2024	Bundaberg/Wide Bay	Program: DAF and Isis trials; SRA station visit, trial and variety observation plots
SIX EASY STEPS Online Nutrient Management Course (Hybrid) Workshops	June 2024	Rock Point and Childers	Soil Health (Agronomy)
RSD and harvesting information seminar	July 2024	Rocky Point	RSD management plans
Project update and <i>Researcher in Residence</i>	Dec 2024	Bundaberg	Dr Kevin Powell – (Entomology)

10 Implementation Strategy and Actions

10.1 Bundaberg/Wide Bay

The following table presents the key challenges for the region and the proposed activities to address these priorities:

- Environmental constraint identification
- Grower engagement with targeted events and workshops.
- Variety management and adoption

Reporting on progress will occur at regular intervals with key stakeholders via presentations to productivity board meetings and fortnightly meetings. SRA will regularly update this document to reflect current activity delivered through SRA and other delivery partners and work towards achieving the district productivity goal.

Activities will be delivered in collaboration with Bundaberg Sugar Services, Isis Productivity Ltd, Canegrowers, Bundaberg Sugar, Isis Sugar Mill, growers and the Department of Agriculture and Fisheries (DAF).

Table 7: Bundaberg/Wide Bay strategic actions

INVESTMENT RATIONALE	ACTIVITY/ PROJECT	OUTPUT/ SOLUTION	SHORT-TERM OUTCOMES	MEDIUM-TERM OUTCOMES	LONG-TERM OUTCOMES	ACHIEVEMENT IN 12 MONTHS
<p>There are significant environmental constraints identified that negatively influence the local sustainable sugarcane industry (Figure 1).</p> <p>The following activities propose to qualify, quantify, and develop strategic solutions for key environmental constraints.</p>	<p>The Burnett Mary Agronomy Project (BMAP)</p> <p>(two-year program)</p>	<p>Recruitment and support of a new local agronomist.</p> <p>Delivery of one-on-one extension activities and technical advice to 40 growers.</p> <p>Provision of individual farm reports detailing productivity constraints.</p> <p>Execution of targeted marketing and engagement campaigns.</p>	<p>Increased awareness among growers about sustainable practices and project benefits.</p> <p>Enhanced agronomist and grower relationships, building trust and community engagement.</p> <p>Initial identification and assessment of farm-specific productivity constraints.</p>	<p>Adoption of sustainable agricultural practices among participating growers.</p> <p>Development and implementation of tailored nutrient management plans.</p> <p>Improvements in farm productivity based on individualised recommendations.</p>	<p>Reduction in environmental impacts, particularly in Dissolved Inorganic Nitrogen (DIN) loads.</p> <p>Sustainable improvements in crop health, yield, and overall farm sustainability.</p> <p>Strengthened agricultural community with ongoing commitment to sustainable practices.</p>	<p>Successful recruitment and integration</p> <p>Baseline assessments completed</p> <p>Established grower engagement</p> <p>Active marketing and community involvement</p>
	<p>LAMP (Loop-mediated isothermal amplification) is a single tube technique for the amplification of DNA and a low-cost alternative to detect certain diseases. The RSD LAMP test will be translated from a research project to an industry tool. The southern district will</p>	<p>Information and resources for industry to diagnose and manage RSD.</p> <p>RSD LAMP test trial in the southern district.</p>	<p>Preliminary results of RSD LAMP test will be shared with Industry including the specificity of the test to localised geographic areas.</p> <p>Increase understanding of RSD incidences and the management</p>	<p>Growers and harvest contractors will actively employ RSD management protocols on farms.</p>	<p>Reduced RSD incidence in plant source inspections (seed cane)</p> <p>Reduced RSD incidence in commercial crops</p> <p>Reduce RSD incidence in seed cane sources to less</p>	<p>Demonstration of the RSD LAMP test in Bundaberg.</p> <p>A presentation delivered on the results of that demonstration.</p>

Continued...	be updated on progress.		required to restrict the spread.		than five per cent by 2026.	
	Soldier fly diagnostics, distribution, and development of an artificial diet (new research project)	Project over three years in the Southern and Mackay regions.	Map impact of soldier fly species types affecting sugarcane varieties in the region.	Investigate the type of feed attributed to each species.	Investigate mechanisms to control impactful species.	Project updates will be communicated to productivity boards biannually.
Fallow System Improvement	Support QDAF/GRDC soybean extension project to be included as part of a total sugarcane farming system.	Economics associated with rotational cropping. i.e. legume decision support tool would be advantageous to growers and advisors to maximise financial returns to growers.	Uptake of support tool by growers	Uptake of support tool by growers	Improved profitability for growers Increased tonnes of soybean produced without impacting on area harvested to sugarcane.	DAF is providing training and support to increase the production of soybeans as part of the sugarcane farming system
Increase grower engagement with targeted events and workshops	Two district grower bus trips	Two targeted bus programs are being developed in the region to include topics across the priority areas.	Increase awareness and knowledge across other areas of the district. Enhanced networking Immediate feedback	Adoption of new practises Improved grower networks	Sustainable sugarcane productivity improvements Enhanced district reputation	Bus trips will be well delivered and positive feedback will be received. Survey of feedback.

10.2 Rocky Point sub-district plan

The following section is excerpted from the Rocky Point Sub-District Plan. These tables will be reviewed and updated quarterly in collaboration with the local productivity board. They address critical questions and challenges related to management practices, strategic targets, priority ranking, and action plans.

Last year, surveys were conducted in RSD and Pachymetra, and the results were presented to the industry together with proposed plans. Growers also participated in a field day at Woodford Pathology Station, to observe first hand the biosecurity efforts targeting pests and diseases.

10.2.1 Individual Productivity Plans:

An essential component of the Rocky Point annual district plan is ongoing engagement with growers through individual productivity plans. These plans are tailored to align with the unique priorities of each grower, ensuring that our efforts are directly relevant to their needs. To evaluate the effectiveness of these consultations and the overall impact on grower productivity, we will conduct an annual anonymous feedback survey. This survey will serve as a vital tool for us to gauge the value and benefits perceived by the growers, allowing us to continuously improve our support and strategies for their success.

Table 8: Rocky Point district priorities

10.2.2 Adoption of Improved Farming System (IFS)

The objectives for this priority are to increase the adoption of Improved Farming Systems by demonstrating the benefits and economics through more trials and demonstrations and annual individual productivity plans.

INVESTMENT RATIONALE	ACTIVITY/ PROJECT	OUTPUT/ SOLUTION	SHORT-TERM OUTCOMES	MEDIUM-TERM OUTCOMES	LONG-TERM OUTCOMES	ACHIEVEMENT IN 12 MONTHS
Scope to improve productivity and sugar yield in Rocky Point through a targeted increase of grower engagement of individual farms.	Continue individual productivity plans and general grower assistance.	An individual plan is discussed with each grower and reviewed annually. Success criteria: number of growers visited, and actions taken and how frequently they have met.	Increase industry engagement. Determine IFS adoption levels from the individual productivity plans and benchmark survey.	Increase adoption of improved farming systems.	Increase of productivity and profitability in Rocky Point in response to targeted activities.	All growers have an Individual plan. Grower Survey completed

10.2.3 Nutrient management

The objectives of this priority are to increase SIX EASY STOPS adoption by **one per cent by further** supporting the implementation of the District Six Easy Steps guidelines and demonstration and extension support for nutrient management on farms.

INVESTMENT RATIONALE	ACTIVITY/ PROJECT	OUTPUT/ SOLUTION	SHORT-TERM OUTCOMES	MEDIUM-TERM OUTCOMES	LONG-TERM OUTCOMES	ACHIEVEMENT IN 12 MONTHS
<p>On-farm nutrient management has a key role in farm and industry sustainability, and in ensuring minimal off-site impacts occur.</p> <p>The SIX EASY STEPS® nutrient management program is recognised as industry best practice.</p>	<p>Conduct SIX EASY STEPS demonstration trials for re-establishment.</p> <p>Promote the new SIX EASY STEPS Online Sugarcane Nutrient Management Program via the Learning Management System.</p> <p>Update grower survey to benchmark farms.</p>	<p>Re-establish SIX EASY STEPS trials.</p> <p>Attendance at a hybrid SIX EASY STEPS Workshop.</p> <p>District survey results.</p>	<p>Enhanced awareness among growers of the effectiveness of nutrient management leading to potential adjustments in nutrient application practices in subsequent cropping cycles.</p>	<p>Increased adoption of SIX EASY STEPS for nutrient management among growers, leading to improved soil health and nutrient utilisation efficiency over several planting seasons.</p>	<p>Full integration of SIX EASY STEPS into standard nutrient management practices as standard practice.</p>	<p>Initial data collection of trials.</p> <p>Increased record of attendance and engagement via registrations of the SIX EASY STEPS Online Nutrient Management program.</p> <p>Positive feedback of activities.</p>

10.2.4 Varieties management

The objective of this priority is to increase appropriate variety selection by one per cent a year by:

1. Improving online support tools awareness and usage (through SRA)
2. Improving variety guide timeliness and regional relevance
3. Investigating/trialling further climatic tolerance/ commercial frost variety trials with other productivity boards.

INVESTMENT RATIONALE	ACTIVITY/ PROJECT	OUTPUT/ SOLUTION	SHORT-TERM OUTCOMES	MEDIUM-TERM OUTCOMES	LONG-TERM OUTCOMES	ACHIEVEMENT IN 12 MONTHS
Approved varieties distributed; clean seed uptake increased.	Improvement and facilitation of support tools, awareness, workshops, and usage through workshop/field day program.	Improved awareness and skills among growers in how to assess and select appropriate sugarcane varieties.	Building confidence to support the adoption of new varieties. Increased confidence in new variety performance.	Greater adoption of new varieties where appropriate. Initial evidence of improved sugarcane yields and quality attributed to better variety selection practices.	Long-term improvements in sugarcane yields, quality, and profitability due to better variety matching with local conditions and grower preferences.	Initial evidence of improved variety selection practices. Positive feedback from growers on the effectiveness of workshops and communication tools to aid in variety selection decisions.

10.2.5 Pest and disease management

INVESTMENT RATIONALE	ACTIVITY/ PROJECT	OUTPUT/ SOLUTION	SHORT-TERM OUTCOMES	MEDIUM-TERM OUTCOMES	LONG-TERM OUTCOMES	ACHIEVEMENT IN 12 MONTHS
Understand the real yield loss due to RSD in the district.	<ul style="list-style-type: none"> Continue to promote the SRA clean cane seed/plant inspections and RSD testing. Research levels of RSD in the district via sampling project Select certain varieties on individual farms to be tested for RSD 	<p>Finalise RSD survey report and deliver on recommendations.</p> <p>RSD project is to ascertain the incidence of RSD across the entire district, which will provide a far greater understanding of potential yield loss.</p>	<p>Increased industry knowledge of the disease.</p> <p>Solution deployment and outcomes from a list of proactive activities.</p>	<p>Action recommended management strategies.</p> <p>Further, extend and promote benefits of clean seed scheme and farm hygiene.</p>	Reduced impact of RSD on farm.	<ul style="list-style-type: none"> One RSD (diseases) workshop/ year/district (incorporated in Rocky Point Field Day) Create a custom Rocky Point RSD Management booklet <p>Increase clean seed purchase in RP by two per cent per year (one grower)</p>

10.2.6 Harvesting management

Harvesting management includes the take-up of SRA Harvest Best Practice and the continued practice of encouraging all harvest operators to use farm hygiene practices.

INVESTMENT RATIONALE	ACTIVITY/ PROJECT	OUTPUT/ SOLUTION	SHORT-TERM OUTCOMES	MEDIUM-TERM OUTCOMES	LONG-TERM OUTCOMES	ACHIEVEMENT IN 12 MONTHS
Improve productivity at harvesting through adoption of newly available technologies for harvesting contractors.	Promote the SRA harvesting decision support tool (Harvest Mate) to improve harvesting contractors' and growers' profitability.	Increase adoption and training.	Extend & communicate benefits of Harvest Mate with farmers and harvesting sector	Increase adoption by five per cent	Increase uptake of growers incentivising harvester contractors.	Attendance of workshop for growers and harvesting contractors.

10.3 New South Wales (NSW)

The update of the business plan is currently in review. NSW will inform SRA of their updated priority list in mid-2024.

SRA is supporting district-based activities aimed at improving productivity, profitability, and sustainability outcomes for NSW growing regions through their Ag Services team. The NSW Agricultural Services Strategic Plan was developed to support the Sunshine Sugar Strategic Business Plan– 2020/23. This plan focuses on the entire business process from growing, through milling, refining, and delivery to customers.

Table 9 lists the priority areas for the NSW sugar industry and outlines where SRA could support.

Table 9: Priority areas for the NSW sugar industry (2023)

NORTHERN NSW (AGSERVICES) PRIORITY LIST	CURRENT DIRECT SRA INVOLVEMENT
Develop and implement a targeted and resourced extension program.	
Increase the supply/harvesting of one year old cane.	
Increase adoption of the controlled traffic farming system.	Yes Project: Maximising returns through decreased harvesting losses
Improve nutrient management.	
Ensure growers have access to and grow the best varieties for their soils and conditions.	Yes
Ensure growers have access to adequate quantities of high-quality seedcane of new and existing varieties.	
Develop and implement an effective pest and disease control program.	
Effective weed control based on recommended practices	
Develop and implement a fallow management program	
Work with relevant stakeholders to ensure drainage is effective	
Identify research priorities and develop an appropriate R&D strategy.	Yes
Undertake relevant research.	Yes
Improve our environmental credentials particularly in relation to cane burning and water quality.	
Enhance our communication with the specific intention of increasing adoption	

Oversight of the plan and its delivery is managed by the Agricultural Advisory Committee. SRA and Ag Services collaborative project activities will be reviewed and updated quarterly. The current projects are listed in the table below. Additional projects are to be added, however the recent focus in the NSW sugar industry is industry and community recovery after the major floods of 2022.

10.3.1 Improved adoption of new technologies or practices

Improve farming practice adoptions by the revision, analyse and trial of technologies or farming practices adopted by other growers in other districts.

INVESTMENT RATIONALE	ACTIVITY/ PROJECT	OUTPUT/ SOLUTION	SHORT-TERM OUTCOMES	MEDIUM-TERM OUTCOMES	LONG-TERM OUTCOMES	ACHIEVEMENT IN 12 MONTHS
Harvesting efficiency and optimisation is a major focus area for SRA and the Industry.	Increase adoption of the cane loss monitoring system to maximise returns through decreased harvesting losses. (Ongoing)	Rental of monitors and access to telemetry services and data analysis for project stakeholders and growers to view harvesting performance.	Increased uptake on the cane loss monitors.	Practice change: the industry needs detailed information on what losses are occurring.	Adoption of the cane loss monitors with most harvesting contractors that cut the majority of green cane in NSW.	Rent two cane loss monitors with in-cab console, with basic telemetry hardware and services and make these available to all harvesting operators in NSW for trialling.
NSW generally harvests two-year-old cane due to climate and geographic differences to Queensland. The question is whether this is still the most economic solution for some areas.	Assess the economic benefits of the increase in the supply/harvesting of one-year-old cane versus two-year-old cane.	Contract an agricultural economist to undertake a local analysis of the scale and financial benefit of harvesting one-year-old cane versus two-year old cane.	A final report for review and discussion with key stakeholders.	Improved problem definition. Practice change in different NSW areas that would benefit from different harvesting times.	Increase in productivity due to the practice change.	A report and discussion.
Increase visibility and awareness by NSW levy payers of SRA activities and projects with the goal of facilitating discussion and improving understanding of SRA's areas of research and development.	Scoping out an NSW Field Day in collaboration with NSW Canegrowers.	Increased visibility and awareness of SRA activities and projects due to the number of NSW growers attending the field day to view the program.	Increased industry engagement	Extension activities and adoption between growers from different districts.	Continued industry engagement through practical local activities.	Successful NSW Field Day promoting the cane growing industry.

10.4 Direct industry engagement

All areas cited an investment in this priority. The overall District Plan will support the following communication objectives:

1. Increased visibility and awareness by NSW levy payers and stakeholders such as government, RDCs and private companies in the district of SRA activity and projects.
2. Improved public perception (reputation management) by our key stakeholders that SRA is responding to identified productivity and profitability gaps in the district.
3. Build industry authority: Educate and disseminate to industry the latest research and development undertaken with SRA and our partners to provide growers with the information needed to adopt new practices.
4. To celebrate the sugar cane industry and support the narrative that sugar cane is a valuable and resilient crop.

Direct industry engagement activities can include:

- Invitations to present SRA research and activity updates at stakeholder meetings (i.e. AGM, lunches, dinners)
- Strategic planning with stakeholders
- Industry network, trade show, conference events
- Site visits - when attending an event or conference, calling on stakeholders/decision makers within the same location/proximity should also be considered when planning and budgeting an itinerary

Industry engagement and direct stakeholder engagement are both continual activities that need to be planned out so there is enough lead time for appropriate resourcing. These activities also need to be considered with alignments to the district priorities and available resourcing and budget constraints.

10.5 Increased clean seed distribution and variety adoption.

Investments under this priority will reduce reliance on a small number of well-adapted varieties which increases the risk of a major impact on the industry in the event of a disease outbreak.

Activities will be delivered in collaboration with Bundaberg Sugar Services, Isis Productivity Ltd and the Southern Regional Variety Committee (RVC).

Table 10: Southern plan for new variety adoption

INVESTMENT RATIONALE	ACTIVITY/ PROJECT	OUTPUT/ SOLUTION	SHORT-TERM OUTCOMES	MEDIUM-TERM OUTCOMES	LONG-TERM OUTCOMES	ACHIEVEMENT IN 12 MONTHS
<p>The proportion of crop production from new varieties has fallen in the district.</p> <p>The Southern region has not had dedicated observation plots for grower engagement activity.</p>	<p>Bundaberg and Isis have been requesting a need to have local observation plots for growers to observe new varieties across different soil types in the region.</p> <p>(12 months)</p>	<p>Local information on variety management (local soils and drought) and performance.</p>	<p>Provide confidence to support the adoption of new varieties.</p>	<p>Increased grower confidence in new variety performance</p>	<p>Increased adoption of new varieties</p> <p>Improved on-farm variety selection</p>	<p>Annual report at Field Day from the Southern Regional Variety Committee.</p> <p>Observation plot annual walk.</p> <p>Variety interest group on WhatsApp for key variety management stakeholders.</p>

11 Ongoing review to measure impact

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



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