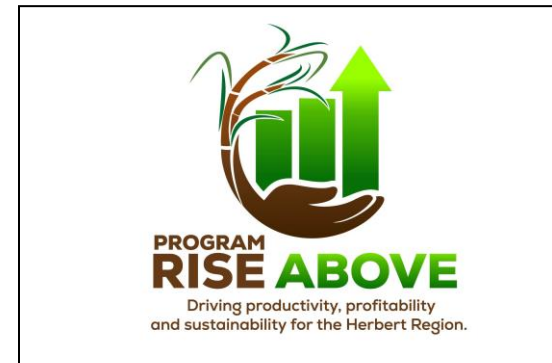




HCPSL STRATEGIC PLAN- WORK PLAN DOCUMENT 2022- 2024



1. Key Target Areas identified

Industry stakeholder feedback has been used to develop the 5 Key Target Areas (KTA) that will provide the framework and structure for **Program Rise Above** to deliver upon over the next 3 years. HCPSL would sincerely like to thank those involved in the industry stakeholder sessions for their constructive and positive feedback.

Key Target Areas (KTA).	Enabling strategies under KTA.
KTA1: Clean seed and variety development	<ol style="list-style-type: none"> 1. Variety selection and development 2. Approved (clean) seed provision
KTA2: Agronomic and industry services	<ol style="list-style-type: none"> 1. Crop agronomy 2. Crop harvesting systems and advice 3. Crop pest and disease advice 4. Crop nutrition advice 5. Farm drainage design 6. Farming systems advice and adoption 7. Irrigation advice 8. Precision Agricultural Services (ie. GPS basestation network, drone imagery, soil and yield mapping) 9. Fallow crop management and advice 10. Specific soil health advice
KTA3: Sustainability and environmental stewardship	<ol style="list-style-type: none"> 1. Development of industry best practice techniques relevant to the Herbert and Australian sugarcane industry 2. Support and/or deliver activities associated with Environmental Stewardship programs 3. Support environmental monitoring specific to cane production in the Herbert 4. Industry promotion and education activities 5. Biosecurity
KTA4: Industry capacity building, knowledge and technology transfer, extension and adoption	<ol style="list-style-type: none"> 1. Knowledge and technology transfer, extension and adoption to the Herbert and Australian cane industry: <ol style="list-style-type: none"> (a) Crop agronomy (b) Crop harvesting systems (c) Crop pest and disease management (d) Crop nutrition (e) Pesticide management (f) Soil health (g) Irrigation (h) Fallow cropping 2. Support activities associated with women involved in the industry 3. Supporting new graduates 4. Youth engagement
KTA5: Strategic Alliances	<p>Industry groups:</p> <ul style="list-style-type: none"> • Other Productivity Services Groups • Sugar Research Australia (SRA) • Wilmar • CANEGROWERS • Australian Cane Farmers Association (ACFA) • AgForce • HCQR Collective Group <p>Government agencies:</p> <ul style="list-style-type: none"> • Australian government agencies • Queensland government agencies • CSIRO

NRM groups:

- Terrain NRM
- NQ Dry Tropics (NQDT)

Co-operative Research Centres (CRC's):

- CRC for High Performing Soils (HPS)

Universities:

- Charles Sturt University (CSU)*
- Federation University Australia (FUA)
- James Cook University (JCU)
- Griffith University (GU)*
- University of Newcastle*
- University of Queensland (UQ)
- University of South Queensland (USQ)*
- University of Tasmania (UTas)*
- Southern Cross University*

Universities involved through the CRC for High Performing Soils indicated by a *

Private companies:

- Agro-chemical companies
- Fertiliser companies

Others:

- Great Barrier Reef Foundation
- Catchment Solutions
- Project Catalyst
- Regenerative Agriculture Farming Groups
- Hinchinbrook Shire Council
- Hinchinbrook Chamber of Commerce
- Herbert River Catchment Landcare Group
- Hinchinbrook Community Feral Pig Management Program (HCFPMP)

2. Activities proposed under each KTA

KTA1: Approved (clean seed) and variety development

Priority under KTA	RD&E activities	Key Outcomes	Strategic alliances to achieve outcomes	KPIs
1. Approved (clean) seed provision	<ul style="list-style-type: none"> (a) Provision of Approved (clean) seed cane to growers through the Approved Seed plots. (b) Provision of tissue culture plants to growers. (c) Provision of a long hot water (LHWT) cane treatment facilities to treat grower cane. (d) Inspection of grower cane for planting. (e) Assist SRA with the development of the new RSD lamp test to be assessed in the mills. 	<ul style="list-style-type: none"> 1. Increase the area planted to recently approved varieties (within 2 years) to be obtained from Approved (clean) seed plots or tissue culture. 2. Increase productivity due to the adoption of Approved (clean seed). 3. Decrease the area impacted by Ratoon Stunting Disease (RSD) and Chloric Streak Disease (CSD) 	SRA	<p>Sale of 3,000t of Approved Seed annually.</p> <p>Plant a least 5 Approved (clean) seed plots annually.</p> <p>LHWT 50-100t of cane annually.</p> <p>Aim to supply up to 50,000 tissue culture plants annually, as ordered by industry.</p> <p>Move from 0.5% of mill area planted with clean seed to 1%.</p> <p>Aim for 2% of RSD infection from seed inspections undertaken for growers</p>
2. Cane variety development and management advice	<ul style="list-style-type: none"> (a) Support SRA and Wilmar plant breeding efforts in the Herbert. (b) Invest in and manage the Herbert Ratoon Variety Trial (RVT) program. 	<ul style="list-style-type: none"> 1. Increase the area planted to new and high yielding cane varieties 2. Improvement in genetic gain through the SRA and Wilmar plant breeding efforts. 	SRA, Wilmar	<p>50% of growers adopt and plant new varieties on their farm within 2 years of commercial release.</p> <p>Assess 3 FAT or RVT trials annually to identify early CCS varieties.</p>

	<ul style="list-style-type: none"> (c) Support the SRA and Wilmar Introgression plant breeding programs to identify new genetic material through the provision of land and resources within the Herbert region. (d) Provide growers specific variety recommendations. (e) Analyse productivity data for variety performance across the Herbert region. (f) Undertake crop ripening, herbicide and nutrient trials to determine improved variety management. (g) Undertake early CCS testing of varieties in the HCPSL RVTs to identify potential new early CCS varieties. (h) Undertake early CCS testing of growers' cane for harvesting (on an as needs basis). 	<ul style="list-style-type: none"> 3. Assess and identify ratooning characteristics of varieties before commercial release and production. 4. Provide sound agronomic advice to growers concerning crop husbandry and management of cane varieties grown commercially. 		<p>Plant 1 RVT, annually on a difficult soil.</p> <p>Harvest 3-4 FAT 3 ratoon trials, annually.</p>
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KTA2: Agronomic and industry services

Priority under KTA	RD&E activities	Key Outcomes	Strategic alliances to achieve outcomes	KPIs
(1) Crop agronomy	Provide specific crop agronomy advice	Increase cane productivity in a sustainable manner	Private companies, SRA	Outreach to growers
(2) Crop harvesting systems and advice	<p>(a) Harvester sugar loss testing (to be undertaken by SRA)</p> <p>(b) Analysis of HCPSL and Industry data</p>	<p>1. Recover the maximum amount of cane and sugar from the field</p> <p>2. Maximise profits through effective growing, harvesting, transport and milling systems.</p>	SRA	Analyse data when requested
(3) Crop pest and disease advice	<p>(a) Deliver a feral pig management program</p> <p>(b) Provide chemical application and use training</p> <p>(c) Coordinate aerial rat baiting activities as required</p> <p>(d) Provide general pest and disease advice</p>	<p>1. Provide sound pest and disease advice to industry</p> <p>2. Develop and deliver cost effective pest management programs to industry</p>	<p>HCFPMP</p> <p>ChemSafe</p>	<p>Restrict the cane yield losses incurred by feral pigs to be <\$300,000 annually.</p> <p>Train no less than 50 growers annually through ChemSafe training.</p> <p>Reduce the impact of rats on the crop through strategic aerial baiting.</p>

<p>(4) Crop nutrition advice</p>	<p>(a) Back Paddock soil test interpretations (block specific nutrient planning)</p> <p>(b) Project Catalyst- nutrient planning and trials</p> <p>(c) Project CaNE- nutrient planning and demo sites</p> <p>(d) Develop variable rate (VR) soil amendment or nutrient application maps for grower use on a fee for service arrangement</p> <p>(e) General crop nutrition advice</p>	<p>Deliver sound crop nutrition advice to industry</p>	<p>Back Paddock</p> <p>Project Catalyst and GBRF</p> <p>GBRF</p>	<p>Deliver an efficient and effective service to industry.</p> <p>Deliver NMP to all project growers</p> <p>Deliver VR maps to the end user</p> <p>Outreach to growers</p>
<p>(5) Farm drainage and irrigation advice</p>	<p>(a) Provide a laser levelling survey service to industry</p> <p>(b) Undertake dumpy levels as requested by industry</p> <p>(c) General irrigation and drainage advice</p>	<ol style="list-style-type: none"> 1. Reduce the impact of waterlogging on cane yields 2. Improve productivity through efficient and effective drainage and irrigation systems 3. Provide sound advice concerning drainage and irrigation 	<p>Growers and laser contractors</p>	<p>Develop and deliver laser levelling design maps for the end user</p> <p>Develop drainage designs for the end user</p>
<p>(6) Farming systems advice and adoption</p>	<p>(a) Provide specific advice to growers who are transitioning their farming systems to a Controlled Traffic System (CTF)</p>	<ol style="list-style-type: none"> 1. Improve grower profitability 2. Improve soil health and condition 	<p>SRA, CRC HPS, universities</p>	<p>Achieve 30% of the area farmed under CTF</p>

<p>(7) Precision Agricultural (PA) Services</p>	<p>(a) Provide a GPS basestation network across the Herbert cane area</p> <p>(b) Undertake soil mapping using the HCPSL Dualem system, on a user pays basis</p> <p>(c) Undertake aerial image acquisition using the HCPSL drone system, on a user pays basis</p>	<ol style="list-style-type: none"> 1. Develop cost effective PA systems for industry 2. Develop knowledge concerning PA development 3. Deliver sound advice in relation to PA technologies and use 4. Seek industry adoption of relevant PA technologies 	<p>GPS vendors</p> <p>User pay clients</p> <p>User pay clients</p>	<p>Provide 90% GPS coverage across the Herbert cane area, while offering a repeater service in black spot areas.</p> <p>Develop and deliver soil maps generated from EM data for all users</p> <p>Develop and deliver soil maps generated from EM data for all users</p>
<p>(8) Fallow crop management and advice</p>	<p>(a) Provide agronomic advice in relation to fallow crops within a sugarcane farming system.</p> <p>(b) Provision of fallow crop monitoring and advice on a user pays basis.</p>	<p>Effectively grow rotational crops with sugarcane</p>	<p>DAF, Commercial companies</p>	<p>Have >10% of the fallow area planted to a fallow crop annually.</p>
<p>(9) Specific soil health advice</p>	<p>Provide a soil pathogen service for nematodes and <i>Pachymetra</i> root rot testing service for local grower use</p>	<p>Provide a soil testing service to analyse for nematodes and <i>Pachymetra</i> root rot</p>	<p>SRA, SARDI, Metagen</p>	<p>Reduce the area planted to <i>Pachymetra</i> susceptible sugarcane varieties.</p>

KTA3: Sustainability and environmental stewardship

Priority under KTA	RD&E activities	Key Outcomes	Strategic alliances to achieve outcomes	KPIs
(1) Development of industry Best Practice techniques relevant to the Herbert and Australian sugarcane industry	Across KTA 1-4	A sustainable and viable sugarcane industry	All key partners	In accordance with industry best practice.
(2) Support and/ or deliver activities associated with Environmental Stewardship Programs.	Undertaken extension activities associated with contracted projects.	Assist growers achieve accreditation or compliance, where there is desire by the grower	GBRF, CANEGROWERS	Deliver the number of NMP's specified under GBRF and Catchment Solutions (Project Catalyst) contracts.
(3) Assist industry meet environmental regulation and compliance in relation to nutrient and pesticide management.	Assist growers develop nutrient and pesticide management plans specific to their farms through contracted projects	<ol style="list-style-type: none"> 1. Assist growers meet industry compliance in relation to environmental regulations, where there is desire by the grower. 2. Improve grower practices on farm 3. Ensure industry sustainability and productivity of industry 		

<p>(4) Support environmental monitoring specific to cane production in the Herbert.</p>	<p>Provide environmental monitoring in accordance with GBRF funded Project CaNE.</p>	<ol style="list-style-type: none"> 1. Gain and develop knowledge concerning the impact and practice change associated with cane production systems. 2. Implement practice change when issues have been identified. 	<p>TropWater JCU, DES, GBRF.</p>	<p>Annually collect, collate and report back to industry concerning findings from Project CaNE activities.</p>
<p>(5) Promotion of industry activities in relation to sustainable land and water management</p>	<ol style="list-style-type: none"> (a) Develop and deliver promotional and educational activities for industry and public use in relation to sustainable agricultural production (b) Support activities undertaken by the Herbert River Catchment Landcare Group specific to the local agricultural industries. 	<p>Promote the positive activities undertaken by the sugarcane industry to better manage land and water resources.</p>	<p>GBRF, Terrain NRM, Project Catalyst, SRA, Herbert River Catchment Landcare Group.</p> <p>Herbert River Catchment Landcare Group membership</p>	<p>Develop extension activities in accordance with GBRF funded Project CaNE and Project Catalyst activities.</p> <p>Undertake one specific activity relevant to the sugarcane industry.</p>
<p>(6) Biosecurity</p>	<ol style="list-style-type: none"> (a) Support industry and government lead activities associated with biosecurity and the cane industry (b) Undertake inspections of machinery moving across biosecurity zones 	<p>Protect the sugarcane industry in relation to the incursion of exotic and localized pest and diseases.</p>	<p>SRA, Qld govt.- Biosecurity Queensland, other Productivity Services Groups, industry groups, Hinchinbrook Shire Council</p> <p>SRA, Qld govt.- Biosecurity Queensland, other Productivity Services Groups</p>	<p>Undertake one specific activity relevant to the sugarcane industry (ie. shed meeting, field day or newsletter).</p> <p>Undertake inspection of machinery moving across biosecurity zones.</p>

KTA4: Industry capacity building, knowledge and technology transfer, extension and adoption

Priority under KTA	RD&E activities	Key Outcomes	Strategic alliances to achieve outcomes	KPIs
1. Crop agronomy	<ul style="list-style-type: none"> (a) Deliver Project Catalyst innovation trials (a) Support funded projects investigating Yellow Canopy Syndrome and Pasture Die Back (b) Analysis of HCPSL data 	Develop sound crop agronomy principles and knowledge.	<ul style="list-style-type: none"> Project Catalyst, Catchment Solutions SRA and DAF Wilmar and SRA 	<ul style="list-style-type: none"> Establish, maintain, harvest and report on trials annually. Provide technical oversight Analyse data when requested
1. Crop harvesting systems	<ul style="list-style-type: none"> (a) Support harvester research and adoption activities undertaken by SRA. (b) Analysis of HCPSL and Industry data 	<ul style="list-style-type: none"> 1. Recover the maximum amount of cane and sugar from the field 2. Maximise profits through effective growing, harvesting, transport and milling systems. 	SRA	<ul style="list-style-type: none"> KPIs set in SRA projects. Analyse data when requested

<p>3. Crop pest and disease</p>	<p>(a) Develop knowledge concerning feral pig management</p> <p>(b) Provide chemical application and use training</p> <p>(c) Develop new techniques to better manage RSD</p>	<p>1. Provide sound pest and disease advice to industry</p> <p>2. Develop and deliver cost effective pest management programs to industry</p> <p>3. Develop new technologies for industry in the area of pest and disease management</p>	<p>HCFPMP, DAF</p> <p>Auschem</p> <p>SRA,UQ, and Private contracts-commercial in confidence</p>	<p>Train growers to better manage feral pigs</p> <p>Train no less than 50 growers annually through the Auschem program.</p>
<p>(4) Crop nutrition-fertiliser product assessment, development and extension</p>	<p>(a) Undertaking nutrition development work</p>	<p>1. Deliver sound crop nutrition advice to industry</p> <p>2. Identify new products or technologies for industry use and adoption</p>	<p>Private contract-commercial in confidence</p>	<p>Provide a fee for service activity</p>
<p>(5) Pesticide management-product assessment and development</p>	<p>(a) Develop and screen new pesticides for industry use</p> <p>(b) Assessing weed management practices to better manage Nauva Sedge</p>	<p>Identify new products or technologies for industry use and adoption</p>	<p>Commercial companies or universities, CRC HPS</p> <p>Private contract-commercial in confidence</p>	<p>Provide a fee for service activity</p> <p>Support university / DAF/ commercial company to identify trial locations</p>

<p>(6) Industry data storage, analysis and interpretation specific to the industry</p>	<p>(a) Maintain a Herbert farm data layer</p> <p>(b) Provide and maintain the HCPSL website</p> <p>(c) Provide and maintain a HCPSL Facebook site</p> <p>(d) Analysis of HCPSL and industry data</p>	<ol style="list-style-type: none"> 1. Deliver and extend information to members 2. Add value to industry data collected 	<p>Growers, Wilmar, SRA, Hinchinbrook Shire Council, QLD govt, other Prod Service groups</p> <p>Facebook</p> <p>Wilmar</p>	<p>Achieve an 70% reply rate for growers providing Greensheet Data to HCPSL.</p> <p>Achieve greater than 10,000 hits on the website annually.</p> <p>Have 30 or more users</p> <p>Ensure that the Privacy Act is adhered to and data is secured safely.</p>
<p>(7) Precision Agricultural (PA) Services</p>	<p>Support research projects in the field of PA</p>	<ol style="list-style-type: none"> 1. Develop cost effective PA systems for industry 2. Develop knowledge concerning PA development 3. Deliver sound advice in relation to PA technologies and use 4. Seek industry adoption of relevant PA technologies 	<p>CRC HPS, USQ, SRA</p>	<p>Deliver on project outcomes</p>

<p>(8) Fallow crop management and advice</p>	<p>(a) Develop knowledge concerning the use and agronomy of fallow crops in a sugarcane system.</p> <p>(b) Deliver a monitoring and advisory service for fallow crops in a sugarcane system.</p>	<p>Develop knowledge concerning the agronomy of specific fallow crops in a sugarcane production system</p>	<p>DAF, Hinchinbrook Shire Council, CRC HPS, Universities, and private companies</p>	<p>Deliver on specific project outcomes or activities contracted under a fee for service arrangement.</p>
<p>(9) Specific soil health knowledge development</p>	<p>Deliver on externally funded projects concerning soil health.</p>	<p>Develop knowledge concerning soil health and soil constraints</p>	<p>CRC HPS, Project Catalyst</p>	<p>Deliver on specific project outcomes.</p>
<p>(10) Support activities associated with women involved in the industry</p>	<p>Support activities associated with the Women in Sugar Herbert (WISH) group</p>	<ol style="list-style-type: none"> 1. Provide technical and agronomic advice to the group 2. Build capacity and knowledge of women in the cane growing region and local community 	<p>WISH (CANEGROWERS Herbert River)</p>	<p>Attend 2 meetings annually</p>
<p>(11) Supporting new graduates</p>	<p>(a) Support externally funded new graduate programs.</p> <p>(b) HCPSL to host a new graduate; if the opportunity arises</p>	<p>Upskill, provide support and mentoring of new graduates in professional careers in agriculture / horticulture and NRM</p>	<p>Government agencies</p>	<p>Host new graduate for a defined period when the opportunity arises.</p>
<p>(12) Youth engagement</p>	<p>(a) HCPSL to sponsor and support the U18 section of the Ingham Show</p> <p>(b) HCPSL to host school and university placed students when the opportunity arises</p>	<p>Upskill, provide support and mentoring of new graduates in professional careers in agriculture / horticulture and NRM</p>	<p>Ingham Show Society</p> <p>Schools and universities</p>	<p>Provide annual sponsorship of the U18 section of the Ingham Show and technical support in crop production and agronomy.</p> <p>Host a student(s) when the opportunity arises.</p>

KTA5: Strategic alliances

Priority under KTA	RD&E activities	Key Outcomes	HCPSL Staff involved	Strategic alliances to achieve outcomes	KPIs
Strategic Alliances	All activities align with KTA1,2,3,4	Build sound and collaborative relationships between organizations to effectively deliver on the activities under Program Rise Above and specific Herbert regional issues.	All HCPSL staff involved	All groups highlighted in KTA 1-4 and new groups yet to be engaged.	Develop sound collaborative agreements with groups to work on activities under Program Rise Above and regional specific issues.