

Annual Report 2009–2010

Investing in Sugarcane Industry Innovation



Australian Government
Sugar Research and Development Corporation

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30 September 2010

Senator the Hon Joe Ludwig
Minister for Agriculture, Fisheries and Forestry
Senator for Queensland
PO Box 6022
Parliament House
CANBERRA ACT 2600

Dear Minister,

In accordance with the requirements of the *Primary Industries
and Energy Research and Development Act 1989* (the PIERD
Act), I submit the Annual Report of the Sugar Research and
Development Corporation (SRDC) for 2009–2010.

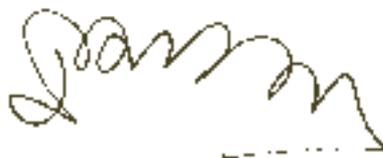
The activities of the Corporation are reported against the
objectives, strategies, outputs and outcomes of the SRDC
Research and Development Plan (R&D Plan) 2007–2012 and are
consistent with the 2009–2010 Annual Operational Plan and
Portfolio Budget Statement.

The report of operations included in the Annual Report has been
made in accordance with a resolution of the Directors of SRDC on
26 August 2010. SRDC Directors are responsible under Section 9
of the *Commonwealth Authorities and Companies Act 1997* for the
preparation and content of the report of operations in accordance
with the Finance Minister's Orders.

SRDC is confident that its performance in 2009–2010 contributed
to achieving the Corporation's vision for a profitable and
internationally competitive Australian sugar industry providing
economic, environmental and social benefits for rural and
regional communities.

I commend this report to you.

Yours faithfully,



Ian RG Knop AM
Chairman
Sugar Research and Development Corporation

Annual Report 2009–2010

Investing in Sugarcane Industry Innovation



Australian Government

Sugar Research and Development Corporation

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SECTION 1

Report from Chairman and Executive Director

Industry Profile

Industry Facts and Statistics

SECTION 1

Report from Chairman and Executive Director

Welcome to the 2009–10 Sugar Research and Development Corporation Annual Report.

It was a busy, but exciting year for the SRDC Board and team, researchers and industry members. Beginning with extraordinarily high sugarcane prices, which renewed interest and confidence in the industry, it ended with lower prices, but a promise of continuing good returns on investment for growers and strong support for research in the coming season and beyond.

More about the factors and trends that influenced the sugarcane industry throughout the past 12 months can be found in the Industry Profile (Section 1) of this report. Typically, while the overarching drivers remained constant, emphasis on climate change, biosecurity (particularly in relation to sugarcane smut), technology development, environmental sustainability (including new farming systems) and capacity building (skilling the research and industry workforce) have gained impetus as key areas for attention and investment.

There were also several climatic, political, operational and regional events that had some effect on our operations, particularly the resignation of our Executive Director, Dr Frikkie Botha in late 2009 and the announcement of the Productivity Commission enquiry into Research and Development Corporations in November 2009.

We are proud to showcase many of our projects as we report on our outcomes and performance against the Annual Operational Plan, where strong alignment to the national, rural and industry specific research priorities is evident. In 2009–10 there was an increase in capacity building projects to improve extension and people skills and a new scholarship program was established in association with the Queensland University of Technology and Sugar Research Limited to support five mill-oriented post graduate research scholarships.

Financially, SRDC is in good shape. The Corporation maintained its strong financial position in 2010, with an investment of \$8.90 million in research projects and related targeted investments. At 30 June 2010, SRDC supported 137 projects including 70 research projects, 31 grower group innovation projects, 15 scholarships, 12 Capacity Building Projects and 9 collaborative projects.

We did not proceed with an investment in a new project management system, but upgraded specific areas of the existing project management system at a lower cost and with less overall disruption. With the addition of large projects, such as the response to the Productivity Commission's enquiry into Research and Development Corporations; the annual review of SRDC investments; and new investment partnerships, we have utilised more external contracting services than normal, however the results have been pleasing.

This year our work with other Research and Development Corporations, stakeholder groups and the Australian government has been particularly productive and informative as we form partnerships and collaborate to address common priorities. SRDC works closely with other Research and Development Corporations to address cross-sectoral research needs and issues needing urgent attention.

Included in these activities are our investments in the National Program for Sustainable Irrigation, the newly re-energised National Climate Change Research Strategy for Primary Industries, and the Farming and Fishing Health and Safety initiative, The Managing Climate Variability Research and Development Program, and the Training Rural Australians in Leadership Program.

SRDC has joined with others in the sugarcane industry to address reef management, irrigation, soil management, gene technology, research prioritisation and people development issues, with positive results that are reflected in projects within our 2009–10 investment portfolio.

Project performance and value of investment in research projects is evaluated annually. In 2009–10 Price Waterhouse Coopers completed an evaluation of randomly selected research projects, which was presented to the SRDC Board in August 2009 and to a Representative Bodies meeting in December 2009. Recommendations were also considered during the Board Strategy Workshop in March 2010.

A second review of randomly selected projects, completed by Rural Research and Development Corporations, was undertaken by ACIL Tasman and completed in December 2009. Results indicated that, for every one dollar invested in research and development, there was a return on investment benefit of around \$10.50 over 25 years. As the industry continues to explore and develop areas such as bioenergy, genetically modified cane varieties and improved farming and milling systems, it is reassuring to know its investment will return ten-fold for the next generation.

Our staff continued to demonstrate their professionalism, innovative ideas and dedication throughout the year, while the Board focused on strategy, governance and industry understanding – maintaining their schedule of regional visits and talks with industry stakeholders to assess program directions and opportunities.

We thank everyone for their commitment and support as we reflect on the achievements of 2009–10 in this report and look toward the challenges of the coming year.



A handwritten signature in black ink, appearing to read 'Ian Knop'.

Ian RG Knop AM
SRDC Chairman



A handwritten signature in black ink, appearing to read 'Annette Sugden'.

Annette Sugden
Executive Director

SECTION 1

Industry Profile

Factors

Factors, trends and events that influenced SRDC's performance in 2009–10 or that may influence its performance in the future.

The key industry drivers for the Australian sugarcane industry include:

- globalisation
- competition
- climate change
- environmental sustainability
- social sustainability
- biosecurity
- process and product health and safety
- enhancement of human capital
- availability of new science and technology.

Trends

Social sustainability and workforce retention is a continuing challenge. The mining sector has been a substantial drain on the workforce from rural industries, including the sugarcane industry. Although the situation eased in 2009–10, SRDC has responded to the need to enhance human capital through: training; awards for outstanding innovators; analysis of industry research capacity; and the provision of research scholarships, and travel support.

Sugar price increases in 2008–09 set the scene for a buoyant attitude in industry, which was maintained despite a price reduction this year. Industry marketing arrangements enable growers to forward sell around 50 percent of their crops averaging across a three to five year cycle.

Markets have been highly variable and impacted by adverse weather conditions worldwide. Brazil, India, Thailand, and China account for 53 percent of 2010–11 forecast world production; and Brazil, Guatemala, Thailand, and Australia account for 73 percent of 2010–11 forecast world exports. Research

will be a key to maintaining Australia's dominance in the export sector through support for research into supply chain operation, agronomy, technology and milling.

Farm characteristics Farm numbers have contracted by more than 40 percent from around 6200 to 3800 cane farming businesses in the past decade; the area under cane has declined by 20 percent; and the average farm production has grown. The decline in grower numbers slowed in 2009–10 due to the increase and stability of price. The challenge for SRDC is to continue to support research that will increase productivity from farms and mills to ensure the industry remains sustainable and competitive.

On-farm diversification continues to grow as the cost of inputs increase. Statistics reveal that 20 percent of cane growers are actively pursuing farm income diversification. Growers will be relying on research to provide information on farming systems and to acquire new skills.

Diversification and amalgamation are emerging trends to increase the economic efficiency of sugar mills in Australia. Production of furfural from bagasse, power generation, biofuel, biocommodities and low GI food-grade sugar are the beginnings of what could be specialised sugar mills and refineries of the future. Amalgamated mill ownership could potentially result in a larger uptake of new research through pooled resources.

Events

Resignation of Executive Director

The Executive Director of SRDC, Dr Frikkie Botha resigned on 30 November 2009 to join BSES Limited and oversee the QCanes research program. On 1 December 2009 SRDC Senior Investment Manager, Annette Sugden, was appointed Acting Executive Director until she was permanently appointed to the position on 28 May 2010.

Commercialisation alliance

In November 2009, DuPont and BSES Limited announced a research, development and commercialisation alliance to improve productivity and use of sugarcane varieties. This sets the scene for future industry/private sector alliances in key research areas and future research into genetically modified sugarcane varieties.

Government Legislation and Regulation

Research and development is increasingly important to help growers adapt to and comply with recent changes to legislation promoting environmental sustainability, particularly relating to reef water quality management.

Productivity Commission Inquiry

Former Federal Minister for Agriculture, Fisheries and Forestry, Hon. Tony Burke MP, announced in November 2009 that the Productivity Commission would conduct an inquiry into the governance and rationale for government investment in Research and Development Corporations focused on improving efficiencies. The SRDC submission is available from the PC website at www.pc.gov.au and final results of this inquiry are expected to be announced in February 2011.

Climate Variability

Widespread severe flooding and the impact of Cyclone Ului in March 2010 adversely affected production in the Far North, Central, NSW and Northern regions.

Biosecurity

Smut entered the last unaffected sugarcane growing area in 2009–10. Smut resistant varieties have been planted in most areas with good results. SRDC-supported research has been a critical factor in the successful management of this disease.

CRC SIIB Closure

After seven years of successful sugarcane biotechnology research, the Cooperative Research Centre for Sugar Industry Innovation through Biotechnology finalised its activities on 30 June 2010. The CRC investment has resulted in several new innovative research projects and marketable products and technologies based on sugarcane and its by-products.

Reef Rescue Showcase

In early June, SRDC representatives attended a Reef Rescue Showcase in Cairns, which was a joint initiative of Queensland Regional NRM Groups and the Queensland Farmers Federation to enable regional bodies and industry groups to share positive on-farm management change stories from across reef catchments. During the showcase two sugarcane growers presented results from new farm management techniques designed to reduce environmental impacts on the reef. Reef Rescue is a \$200 million five-year initiative, funded by the Australian Government's Caring for Our Country Program that aims to improve the quality of water flowing into the Great Barrier Reef lagoon.

CSR Sugar becomes Sucrogen

Sucrogen became the new corporate identity for CSR Sugar in March 2010. Sucrogen is the largest raw sugar producer in Australia and the eighth largest producer globally and also generates electricity from cogeneration at its mills. Sucrogen is also Australia's largest producer of sugar based ethanol.

SRDC Board field trip

SRDC Board and staff travelled to the Northern region in June 2010 where they met with industry representatives from Mossman, Tablelands, Mulgrave and Innisfail.

Interest in bio-fuel and energy facilities grow

Planning commenced for North Queensland Bio-Energy Corporation Limited to build a \$400 million sugar, ethanol and power generation facility in the Herbert River Region.



*Mackay biofuel plant
(photo taken by QUT researcher Ian O'Hara).*



*Meringa sugarcane fields and BSES research station
(photo taken by BSES entomologist Nader Sallam).*

SECTION 1

Industry Facts and Statistics

| | |
|--|--|
| Total value of sugarcane production | \$2.5 billion |
| Cane | 32 million tonnes |
| Raw sugar | 4.5 million tonnes |
| Growers | 3800 farm businesses |
| Sugarcane grown | Queensland, Northern NSW |
| Average yield of cane crop | 98.9 t/ha |
| Sugar mills in Australia | 25 |
| Bulk sugar storage ports | 6 |
| Average annual production (tonnes) | 5 million in raw sugar, 1 million in molasses and 10 million in bagasse |
| Exports | Up to 80 percent of raw sugar is exported and 20 percent sold on domestic market |
| Export value of crop | \$1.5 billion annually |

Sugarcane regions

Cane growing and sugar production underpins the economic stability of many coastal communities.

Most of Australia's sugarcane is grown in high-rainfall areas along the coastal plains and river valleys on 2100 km of the eastern coastline between Mossman in Far North Queensland and Grafton in NSW. Cane growing and sugar production is one of the most important agricultural industries in the State of Queensland and accounts for about 95 percent of Australia's raw sugar production and around 5 percent is produced in Northern New South Wales.

Production estimates by region

| | |
|----------------------|--------------------|
| Northern region | 6 million tonnes |
| Herbert and Burdekin | 12 million tonnes |
| Central region | 10 million tonnes |
| Southern Region | 3 million tonnes |
| NSW region | 2.5 million tonnes |



(Map and statistics courtesy of Canegrowers and ASMC)

Figure 1.1 Area Harvested for Milling (Hectares)

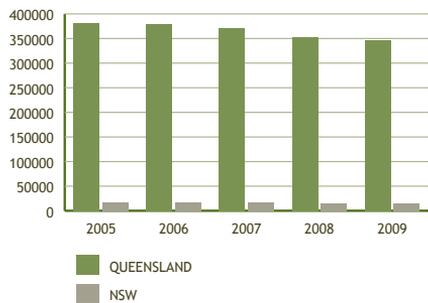


Figure 1.4 Tonnes of Cane per Hectare Harvested

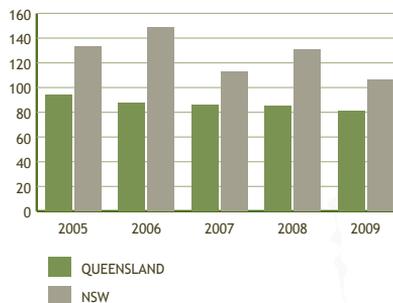


Figure 1.2 Cane Crushed (Tonnes)

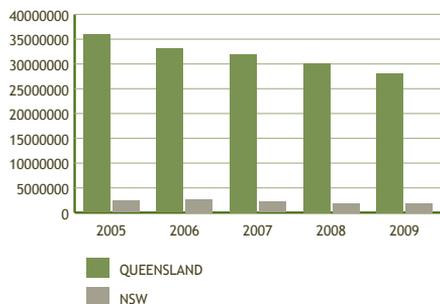


Figure 1.5 Tonnes Cane per Tonne IPS Sugar

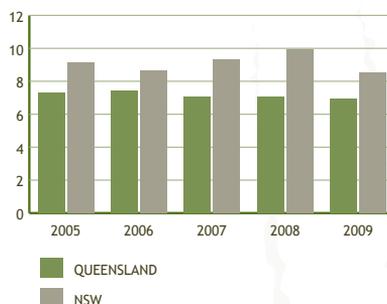


Figure 1.3 Sugar Produced (Tonnes IPS)

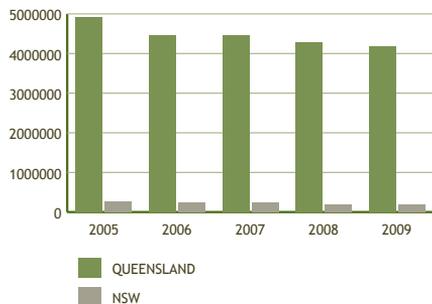
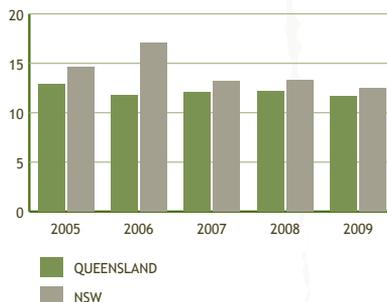


Figure 1.6 Tonnes IPS Sugar per Hectare Harvested



Source: Australian Sugar Year Book 2010

SECTION 2

Introducing SRDC

SRDC Collaboration

SRDC People

SRDC Governance

SRDC Business

SRDC Budget

SECTION 2

Introducing SRDC

The Sugar Research and Development Corporation (SRDC) invests in research and development (R&D) to find new and improved ways of doing things, rather than investing in ongoing core services that are the responsibility of others or basic research to generate new knowledge for its own sake. It also invests in a range of foresight activities that guide its setting of investment targets.

SRDC invests in R&D conducted by others and does not carry out research in its own right. It enters into cooperative partnerships with sugarcane industry participants across its sectors, R&D agencies, universities, other Rural R&D Corporations, and the general community. It regards its partners as co-investors in the quest for a profitable, internationally competitive and sustainable Australian sugarcane industry. Through these investments, SRDC shares the risks associated with R&D funding.

SRDC strives to deliver high rates of return on its R&D investment by managing technical and market risk and by applying significant resources to translate research outputs into practical outcomes.

Corporate Outcome

SRDC's Corporate Outcome is to support a profitable and internationally competitive and sustainable Australian sugarcane industry providing economic, environmental and social benefits for rural and regional communities through targeted investment in research and development.

Mission

SRDC's mission is to foster an innovative and sustainable Australian sugarcane industry through targeted investment in research and development.

Vision

The Corporation is committed to setting the right targets for R&D investments; to making sound investment decisions that address those targets using rigorous transparent processes; to managing investments so that they succeed; and to ensuring that R&D delivers outcomes for its stakeholders and builds capacity for change, learning and innovation across the industry.

Accountability to stakeholders

SRDC is accountable to both the Australian Government and industry representative organisations. The PIERD Act defines these representative organisations as:

- Australian Cane Growers Council Limited (ACGC) represented by Queensland Cane Growers Organisation Ltd
- Australian Cane Farmers Association Limited (ACFA)
- Australian Sugar Milling Council Proprietary Limited (ASMC).

As required by the PIERD Act, the Executive Director, representing the Corporation, held formal consultations with the Representative Bodies on three occasions in 2009–10. No payments were made to the Representative Bodies for these or any other consultations in 2009–10.

The major issues discussed at the meetings with the Representative Bodies included SRDC's strategic direction and research priorities and investments, the Annual Operational Plan 2010–2011 and the National Sugar Industry Research, Development and Extension Strategy. Directors interacted frequently with the industry Representative Bodies during industry events in 2009–10.

Responsible Minister

SRDC is responsible to the Federal Parliament through the Minister for Agriculture, Fisheries and Forestry who, during the period this annual report covers, was the Honourable Tony Burke, MP.

The Minister:

- Approves the five-year R&D Plan.
- Approves the Annual Operational Plan.
- Appoints Directors, other than the Chair and Executive Director, on the recommendation of the SRDC Selection Committee.
- Appoints the Chairperson of SRDC.

Enabling legislation

SRDC was established under the *Primary Industries and Energy Research and Development Act 1989* (PIERD Act) on 1 October 1990. As an Australian Government Statutory Authority, it is also subject to the *Commonwealth Authorities and Companies Act 1997* (the CAC Act).

The objects of the PIERD Act are to make provision for the funding and administration of research and development relating to primary industries with a view to:

- a) Increasing the economic, environmental or social benefits to members of primary industries and to the community in general by improving the production, processing, storage, transport or marketing of the products of primary industries.
- b) Achieving the sustainable use and sustainable management of natural resources.
- c) Making more effective use of the resources and skills available in the community in general, and in the scientific community in particular.
- d) Improving accountability for expenditure upon research and development activities in relation to primary industries.

The PIERD Act establishes the functions of SRDC:

- To investigate and evaluate the requirements of the sugar industry for R&D, and on the basis of that investigation and evaluation, to prepare an R&D Plan, and to review and revise the Plan.
- To prepare an Annual Operational Plan for each financial year.
- To coordinate or fund the carrying out of R&D activities that are consistent with the Annual Operational Plan prepared by the Corporation and in force at the time.
- To monitor, evaluate and report to the Parliament, the Minister and its representative organisations on R&D activities that are coordinated or funded, wholly or partly, by the Corporation.
- To facilitate the dissemination, adoption and commercialisation of the results of research and development for the sugar industry.
- Such other functions as are conferred on the Corporation by this Act or any other Act.

General policies of the Government

Under Section 28 of the CAC Act, the Minister may notify the SRDC Board of any general Australian Government policies that apply to the SRDC. SRDC received no new notifications during 2009–2010.

Rural Research and Development Corporation Model

SRDC is part of a larger network of 15 Rural R&D Corporations (RDCs) that operate under the RDC model.

The features of the RDC model are:

- The RDCs take a leading national role to plan, investigate and manage R&D for their respective industries.
- RDCs are not research ‘grant’ agencies. Their enabling legislation requires them to treat R&D as an investment in economic, environmental and social benefits to their industries and to the people of Australia.



Minister Tony Burke visiting Richard Hesp's sugarcane farm during Reef Rescue Natural Resource Management tour.

- RDCs strive to deliver high rates of return on R&D investment by influencing the full range of interactions along the innovation chain, rather than focussing mainly on generating new knowledge for its own sake.
- Striving for high returns on investment also leads RDCs to apply significant resources to translating research outputs into practical outcomes.
- RDCs are required to conduct their activities in accordance with strategic R&D Plans and Annual Operational Plans that take account of the R&D needs of end-users and other stakeholders. The plans are approved at ministerial level.
- Although RDCs fund basic research, a high proportion of activity is applied R&D—both short-term and long-term.
- RDCs are fully accountable to their major stakeholders and to the wider community.

Rural Research and Development Corporations

Australia's productivity growth puts the nation in a strong position to meet the growing global demand for primary industry products. This growth is driven by investment supporting innovation in Research, Development and

Extension and generated by the Rural Research and Development Corporations (RDCs).

There are 15 RDCs represented by the Council of Rural Research and Development Corporations (CRRDC) that prioritise, coordinate and integrate the demands of industry and government with the capabilities of research providers.

The RDCs currently invest around \$500 million per year in RD&E (including marketing) to improve the profitability and sustainability of rural industries and communities.

They promote effective research, development, innovation and extension of research findings in priority areas such as climate change and natural resource management. The ability to tackle projects jointly increases efficiency and results in more effective communication and uptake of the outcomes contributing directly to the growth in productivity in Australian agriculture.

The RDCs embrace the Australian Government's National and Rural R&D Priorities in their investment, evaluation and reporting frameworks. Alignment with these priorities is a key consideration when setting strategic directions and making key investment decisions.

SECTION 2

SRDC Collaboration

Working together with SRDC

This year our work with other Research and Development Corporations (RDC) stakeholder groups and the Australian government has been particularly productive and informative as we form partnerships and collaborate to address common priorities.

SRDC's mandate "Working together" is the cornerstone of our investment portfolio. The Corporation is committed to encouraging collaboration in all parts of the project life cycle. Our focus on partnering to succeed, ensures sectors of industry are working together to achieve positive outcomes and results from greater collaboration between regions. Sharing knowledge and ideas benefits the entire industry through the improved adoption of research findings.

Working together with growers

SRDC's continued investment in Grower Group Innovation Projects has a dramatic impact on industry. This program enables groups of growers to work directly with researchers on the ground, to experiment, learn and adapt research findings to their local conditions. Researchers also benefit from the direct feedback they receive.

Working together with industry

SRDC has joined with our representative industry organisations to address significant sugarcane industry issues including reef management, irrigation, soil management, gene technology, and people development, with positive results that are reflected across all projects within our 2009–10 investment portfolio.

Working together with millers

SRDC takes a proactive approach to establish industry and research agency links. During the year the SRDC Executive Director made

presentations to the Boards or at annual meetings of the Australian Sugar Milling Council, NSW Sugar Milling Cooperative and Queensland Sugar Limited about SRDC's role, R&D partnerships between government and industry, and an update on research portfolios and project outcomes. Also throughout the year the SRDC Executive Director visited all mills, and some of the regional offices of Canegrowers. Substantial effort was given to extending relations with other research and development provider agencies.

Working together with alliances

The Australian Sugar Industry Alliance (ASA) was formed in late 2007 to provide a single voice on whole-of-industry research issues. It is led by the Australian Sugar Milling Council and Canegrowers with partnerships with other sugar industry entities. On two occasions SRDC was invited to attend and present at these meetings.

Working together with RDCs

SRDC works closely with other RDCs to address cross-sectoral research needs and issues needing urgent attention. Included in these activities are our investments in collaborative programs focussed on irrigation, climate change, sharing of research outcomes and farm health and safety.

A brief outline of key programs is outlined below.

National Program for Sustainable Irrigation

The National Program for Sustainable Irrigation NPSI program collaborates with government and primary producer bodies and has been responsible for improved irrigation scheduling and application techniques. After the closure of Land and Water Australia in 2009, the RDC coordination role of the NPSI program was taken over by the Cotton Research and Development Corporation. With continued funding from many RDC's the NPSI program has been extended until 2011 and will continue to collaborate with



Young growers, millers and researchers from sugarcane industry at Next Gen workshop held in Lucinda in 2009.

irrigation stakeholders to create a vision for the future direction for irrigation R&D. To date many irrigators state that techniques from the NPSI program have enabled them reduce up to 40 per cent of their water use without loss of production.

Australian Research Online

In late 2009 the RDC's decided not to continue investing in the Australian Agriculture and Natural Resources Online (AANRO) portal and began transferring existing research material to Australian Research Online. Coordinated through the National Library of Australia, this website is a gateway to research projects and publications and links to other relevant online resources. The online search engine simultaneously scans the contents of RDC websites, Australian university and government research repositories to select the latest research results available.

Climate Change Research Strategy for Primary Industries (CCRSPi)

Australia's primary industries and government have developed a national strategy to address climate change and emissions management. The newly re-energised strategy outlines six research priorities: Understanding future

climates, managing emissions, preparing industries, accessing information, facilitating change and linking decision makers.

Joint Research Venture for Farm Health and Safety is a collaborative RDC partnership that aims to enhance the wellbeing and productivity in rural industries through improved occupational health and safety and safe systems of work on farms. Last year the Farming and Fishing Health and Safety Plan 2009–2012 was released. During the development of this plan a wide range of concerned stakeholders were consulted to assist in selecting high priority R&D targets links to farm health and safety. In 2009 a new publication was released focussed on the physical and mental health of farm and fishing families.

Managing Climate Variability R&D Program

SRDC is one of several partners to the Managing Climate Variability R&D Program (MCVP), a program seeking to help take the guesswork out of climate-based decision making for Australian primary producers and natural resource managers.
www.managingclimate.gov.au

SECTION 2

SRDC People

SRDC Board

The SRDC Board is responsible for the stewardship of the Corporation and oversees corporate governance.

Its functions include: establishing goals, setting strategic direction, approving the annual budget, developing and approving a five-year R&D plan and ensuring that resources are allocated to address priority issues effectively.

The roles and responsibilities of members of the Board and their code of conduct are detailed in SRDC's Business Process Management System (BPMS). In 2009–10 SRDC Directors included:

- Chair-appointed in 2007 by the then Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry.
- Executive Director-appointed by the Board of the Corporation and the only full-time Director.
- Seven Nominated Directors-appointed by the Minister for Agriculture, Fisheries and Forestry on the recommendation of the Sugar Research and Development Corporation Selection Committee.

Directors, other than the Executive Director, serve on the Board for a term not exceeding three years and must have experience in one or more of the following fields of expertise: commodity production; commodity processing; commodity marketing; conservation of natural resources; management of natural resources; science; technology and technology transfer; environmental and ecological matters; economics; administration of research and development; finance; business management; sociology; or public administration.

New Board members go through a formal induction process. With the Chair's approval, Directors may obtain independent professional advice, at SRDC's expense, on matters arising in the course of their Board and Committee duties.

Board induction, activities and education

Board membership consolidated in 2009–10, with no new Board members inducted.

The Board held a strategy workshop in March 2010 alongside its scheduled Board meeting to discuss research priorities and investment gaps.

A formal review of the 2009–10 investment program was conducted in-house for the June 2010 meeting and areas for future investment in commissioned research identified. Of particular note was a lower than expected investment in the People Development Arena, which will be addressed in 2010–2011.

Board members took a keen interest in activities of the Corporation and participated in a number of seminars and workshops, including a forum to discuss development of a new National Research and Development Plan, a workshop to review the People Development Arena, several SRDC research seminars, the Australian Society for Sugar Cane Technologists Conference, ABARE Outlook, and selection panels for capacity building projects and scholarships.

SRDC Directors at 30 June 2010

Ian RG Knop AM BBus CPA

Chair (Non-executive)

Appointed 1 October 2007 until 30 September 2010

Ian Knop is Chairman of Profile Management Consultants/Odgers Berndtson, an Executive Search & Consulting Business with offices in Sydney and Canberra. Mr Knop is current Chair of the Sullivans Cove Waterfront Authority (Tasmanian Government). In addition Mr Knop has Chaired or been a senior representative on a wide range of Boards and Authorities including the Export Finance & Insurance Corporation, Aurora Energy, Austrade, Soccer Australia and Sydney Ports Corporation. Mr Knop was awarded a Member of the Order of Australia in 2007 for his services to industry and his contribution to Sport and Indigenous Affairs in Australia.

Stephen Guazzo

Deputy Chair (Non-executive)

Re-appointed 8 May 2008 for a three year term

Appointed Deputy Chair 6 June 2008

Re-appointed Member of SRDC Audit Committee 6 June 2008

Stephen Guazzo is a third generation canegrower from the Herbert River region with more than 35 years experience in the industry. Stephen has a reputation for innovative sugarcane production and harvesting practices. He has served on the Herbert Regional Advisory Group and other industry bodies and is a Director of CANEGROWERS Herbert River, CANEGROWERS Queensland and Sugar Terminals Limited.

Ian Sampson

B Comm., LLB, GAICD, FAIM

Director (Non-executive)

Appointed 8 May 2008 for a three year term

Chair of SRDC Audit Committee

Ian Sampson is currently a Director of Lysaght Peopelcare Limited and Executive Consultant for Audrey Page and Associates. During his 35 year career, Ian has worked as an executive and strategic advisor in the steel, mining and sugar industries as well as consulting in the mining, manufacturing, aviation, petroleum and services industries in Australia, New Zealand, South Africa, Papua-New Guinea and Fiji.

Ian has been a director or senior representative of Refined Sugar Services Pty Ltd., CSR Sugar Pty Ltd, Koppern Machinery Pty Ltd., BHP Superannuation (NZ), the Auckland Employers' Federation and the South Australian Institute of Technology. His qualifications include a Bachelor of Commerce and Bachelor of Laws from the University of NSW. He is a Graduate Member of the Australian Institute of Company Directors and a Fellow of the Australian Institute of Management.



David Campbell *B.Agr.Sc. (Hons), M.Bus.Mktg, AFAIM, GAICD*

Director (Non-executive)

Appointed 8 May 2008 for a three year term

Member of SRDC Audit Committee

David Campbell has more than 25 years of experience in product and business development; commercialisation of technologies; marketing; logistics and general management. His experience spans the life sciences, biotechnology, agribusiness and chemical industries domestically and internationally. He has wide experience with the research sector and with government interaction.

David has held senior positions at Stem Cell Sciences PLC Monash Commercial Pty Ltd, Monsanto Australia Limited, Linfox Group, and Pivot Ltd (now Incitec Pivot Ltd). He has run a successful consultancy in strategy and policy development, and commercialisation for the life sciences and agribusiness industries, government and Rural R&D Corporations. He is currently Executive Director, Office of Knowledge Capital in Melbourne and a member of the Animal Health Australia Board.





Michael Braude BBus, ASCPA, SF Fin, MBus

Director (Non-executive)

Appointed 8 May 2008 for a three year term

Michael Braude has 25 years commercial experience in management, economics, finance and treasury across three major corporations. He has led risk management, insurance and corporate treasury functions, and has acted as a company appointed Alternate Director and Trustee.

Michael has also been actively involved with professional associations and tertiary educational bodies, as a lecturer, course convenor and presenter. He is a regular presenter on a wide range of finance and business related topics to a number of professional associations. Michael is a Senior Fellow of the Financial Services Institute of Australia and a Fellow of the Finance & Treasury Association. He holds a Masters of Business (Applied Finance) degree from the University Of Technology, Sydney (UTS), and ASCPA, FINSIA Diploma and Bachelor of Business qualifications.



Angela Williams B Agr. Sc.

Director (Non-executive)

Appointed 8 May 2008 for a three year term

Chair of Scholarship Committee

Angela Williams has spent the past 20 years growing and refining her skills in agricultural extension, community development and engagement processes across a range of rural industries and communities throughout Queensland. Angela runs a successful consultancy business specialising in training and facilitation support, and project managing short-term contracts, specifically those relating to organisational change management, strategic and business planning. She recently managed and delivered the Sugar Executive Officer contract as part of the Sugar Industry Reform Program in the Bundaberg-Isis sugar region. Angela is passionate about working with and supporting rural industries and associated rural communities through innovation and managing the challenges of constant change.

Caroline Coppo BSc, PgDip EnvEd, BEd, GAICD

Director (Non-executive)

Appointed 8 May 2008 for a three year term

Member of Scholarship Committee

Caroline Coppo has been involved in a sugarcane farming business in the Herbert region for ten years and has actively contributed to community development, sugar industry innovation and environmental issues in the region. She has a background as a marine biologist, teacher and catchment coordinator and has extensive knowledge of water quality, environmental and natural resource management issues.

Caroline was the Sugar Executive Officer in the Herbert sugar region as part of the Sugar Industry Reform Program. Caroline's qualifications include a Bachelor of Science and a Bachelor of Education from James Cook University. She is a Graduate Member of the Australian Institute of Company Directors.



Dr Anthony Pressland

PSM, B Agric Sci, MSc, PhD

Director (Non-executive)

Appointed 7 July 2008 for a three year term

Tony Pressland is a consultant with extensive experience in research and development and natural resource management, as a scientist and administrator. He has worked in the pastoral and agricultural lands of Queensland and has had responsibility for state government programs in weed and pest management, catchment management, and natural resource planning and management, including some that were community based. He has undertaken various reviews related to agriculture and has developed and delivered tertiary post graduate courses. He is a member of a faculty advisory committee on science and technology for a tertiary institution.





Annette Sugden

B App Sci (App Geo); Grad Dip App Sci (Res Man); M. Sust Man; ALIA

Executive Director

Appointed on 28 May 2010

Annette joined SRDC in 2008 as a Senior Investment Manager responsible for strategic R&D investment planning. She has a sound appreciation of issues facing Australia's rural industries through extensive experience working in primary industry agencies and completion of tertiary qualifications focused on natural resource management.

Her experience includes: management of the deer, pasture seed, fodder crop, and organics research and development programs within the Rural Industries Research and Development Corporation, and management of the AAA-Farm Innovation Program, the Rural Financial Counselling Service and the Southern NSW Regional Forest Agreement Social Assessment process.

Annette has provided secretariat services to three multi-state Ministerial Committees (SLWRMC, SCARM and ARMCANZ), and worked on the Commonwealth component of the Murray-Darling Basin Initiative, including the Commonwealth input to the Murray-Darling Basin Ministerial Council and Commission meetings. She was the Commonwealth representative at the Cape York Peninsula Land Use Strategy (CYPLUS), and was the Murray-Darling Basin program specialist on the Natural Heritage Trust's South Australian grants program.

Dr Frikkie Botha

BSc (Hons) MSc, PhD, GAICD

Executive Director (Executive)

11 October 2007–30 November 2009

With a career spanning 30 years in the plant research field, Dr Botha served as the director of the South African Sugarcane Research Institute and is well known and respected within the Australian and international sugarcane industry. He commenced with SRDC in January 2008 and remains a Professor of Plant Biotechnology at the University of Stellenbosch in South Africa.

From January 2008 until November 2009, Dr Botha was the Executive Director of Sugar Research and Development Corporation. Currently Dr Botha is the Manager of the QCanes program at BSES Limited in Brisbane and is responsible for the strategic and operational management of BSES activities in variety improvement, variety adoption, molecular breeding, biosecurity and experiment stations.



SECTION 2

SRDC Governance

Meetings of the Corporation

During the year ended 30 June 2010 the SRDC Board met five times. Attendance of Directors at Board meetings is listed in Table 2.0. Under Section 54 of the PIERD Act, a Director must disclose the nature of any pecuniary or conflict of interest in any matter being considered. Directorships held by Directors were also recorded in the Register of Declared Interest by Directors.

Table 2.0 Directors' attendance at Board meetings and meetings of the Audit and Scholarships Committees in 2009–10

| | Board meetings attended | Meetings held during membership | Out of Session – Teleconference Board meeting attended | Out of Session – Teleconference Board meeting held during membership | Audit committee meetings attended | Audit committee meetings held during membership | Scholarship committee meetings attended | Scholarship committee meetings held during membership |
|-----------------|-------------------------|---------------------------------|--|--|-----------------------------------|---|---|---|
| I Knop | 5 | 5 | 1 | 1 | - | - | - | - |
| A Sugden A/g ED | 1 | 1 | - | - | 1 | 1 | - | - |
| A Sugden ED** | 1 | 1 | - | - | - | - | - | - |
| F Botha ED** | 2 | 3 | 0 | 1 | 1 | 1 | - | - |
| M Braude | 4* | 5 | 1 | 1 | - | - | - | - |
| D Campbell | 4 | 5 | 1 | 1 | 2 | 2 | - | - |
| C Coppo | 5 | 5 | 1 | 1 | - | - | 2 | 2 |
| S Guazzo | 5 | 5 | 1 | 1 | 2 | 2 | - | - |
| A Pressland | 4 | 5 | 1 | 1 | - | - | - | - |
| I Sampson | 5 | 5 | 1 | 1 | 2 | 2 | - | - |
| A Williams | 4 | 5 | 1 | 1 | - | - | 2 | 2 |

** Executive Director Appointment terms

Dr Frikkie Botha: Executive Director (1 January 2008–30 November 2009)

Annette Sugden: Acting Executive Director (from 1 December 2009–27 May 2010)

Appointed Executive Director (28 May 2010)

* On occasions the Chairman grants permission for Directors to join a meeting via teleconference.

The Board's effectiveness is increased through the establishment of two Committees that operate under policies and procedures approved by the Board.

Audit Committee

The Audit Committee provides advice to the Board to assist it to fulfil its responsibilities relating to the accounting, reporting and compliance practices of the Corporation. The Committee: reviews audits by the Corporation's external auditors; maintains communication between the Board and the Corporation's accountants; reviews the financial information presented by management; and reviews the adequacy of the Corporation's administrative, operating and accounting controls.

It also oversees the management of risk including: the development of a risk profile for the Corporation; fraud control; corporate governance practice; and environmental issues. It is SRDC practice to exclude the Chair and Executive Director from membership of the Audit Committee.

Members of the Committee in 2009–10 were:

- Ian Sampson, a non-executive Director of SRDC and member and Convenor of the Audit Committee from 6 June 2008.
- David Campbell, a non-executive Director of SRDC and member of the Audit Committee from 6 June 2008.
- Mr Steve Guazzo, a non-executive Director of SRDC and member of the Audit Committee from 22 March 2007.
- The Executive Director or SRDC Manager represents the organisation at these meetings.

The Committee met on three occasions during 2009–10. Attendance by members is listed in Table 2.0. The meetings were also attended by the Executive Director and the Corporation's Senior Investment Manager. The Corporation's external accountant and a representative of

the external auditor will attend the July 2010 meeting to comment on and respond to queries on the 2009–10 annual accounts.

Scholarships Committee

The Scholarships Committee oversees the SRDC scholarship scheme and at least half the membership must comprise SRDC Directors.

Members of the Committee in 2009–10 were:

- Angela Williams, a non-executive Director of SRDC and Chair of the Scholarships Committee from 6 June 2008.
- Caroline Coppo, a non-executive Director of SRDC and member of the Scholarships committee from 6 June 2008.
- An SRDC Manager represents the organisation at these meetings.

The Committee met on two occasions in 2009–10 on 15 July 2009 and 18 November 2009 to assess scholarship applications, and to interview and select successful candidates. Attendance by Director Members is listed in Table 2.0.

Intellectual Property (sub-committee)

A sub Committee was formed in 2009 to review SRDC's existing Intellectual Property policy and register. The outcome of the review established the existing policy and register aligned with acceptable practice and is accepted by SRDC stakeholders.

Members of the Committee in 2009–10 were:

- Tony Pressland, a non-executive Director of SRDC and member of the Scholarships Committee from 3 August 2009.
- David Campbell, a non-executive Director of SRDC and member of the Scholarships committee from 3 August 2009.
- An SRDC Manager represents the organisation at these meetings.

The Committee met on 3 August 2009 to review the current policy and register.

SRDC Staff

SRDC staff members are employed under Section 87 of the PIERD Act. At 30 June 2010 the Corporation employed four permanent full-time staff and two part-time permanent staff members in addition to the Executive Director.

Responsibilities for each staff member are indicated in SRDC's Corporate Structure (Figure 2.0).

Staff are located at the SRDC office in the T&G Building, Level 16, 141 Queen Street, Brisbane, Queensland Australia.

With the resignation of Executive Director Dr Frikkie Botha on 1 December 2009, SRDC's Senior Investment Manager Annette Sugden was appointed Acting Executive Director, until her appointment became permanent on 28 May 2010.

During this time, Dr Diana Saunders, Bianca Cairns, Dr Robert Troedson and Carolyn Martin shared aspects of the responsibilities of the Senior Investment Manager.

Permanent staff during 2009–2010

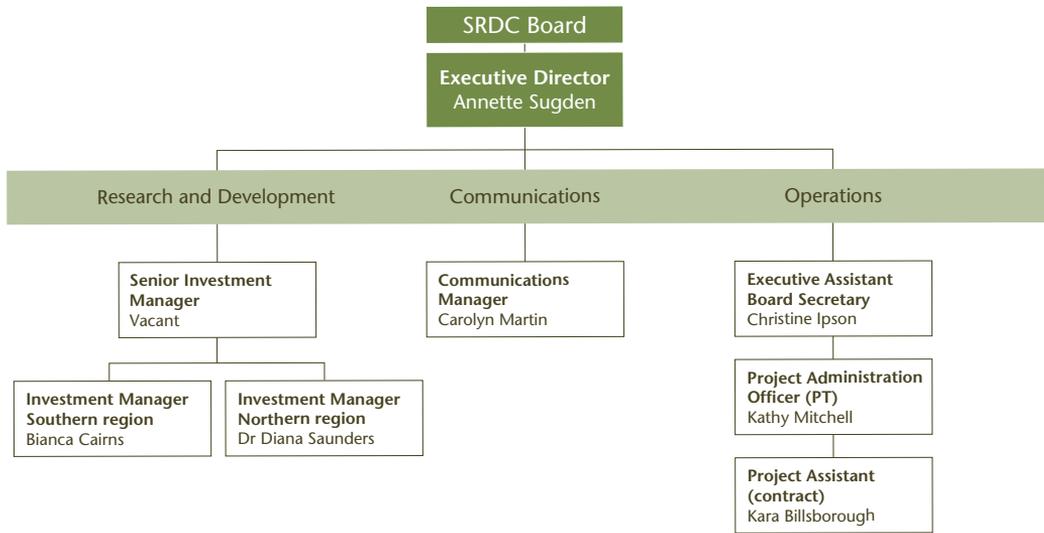
| | |
|--|--|
| Executive Director | Annette Sugden (appointed on 28 May 2010) |
| Acting Executive Director | Annette Sugden (appointed 1 December 2009 to 27 May 2010) |
| Executive Director | Dr Frikkie Botha (appointed 1 January 2008, resigned 30 November 2009) |
| Senior Investment Manager | Vacant from 1 December 2009 |
| Investment Manager | Bianca Cairns |
| Investment Manager | Dr Diana Saunders |
| Communications Manager | Carolyn Martin |
| Executive Assistant/Board Secretary | Christine Ipson |
| Project Administration Officer (part-time) | Kathy Mitchell |

Contract staff appointed on a temporary basis during 2009–2010

| | |
|---------------------------------------|---|
| Project Assistant | Filled by three contractors Ainsley Uebergang, Michelle Jankalns and Kara Billsborough. |
| Investment Manager | Dr Alex Whan |
| Senior Investment Manager (part-time) | Dr Robert Troedson |

Staff profiles can be viewed at www.srdc.gov.au

Figure 2.0 SRDC Corporate Structure as at 30 June 2010



SRDC team (left to right) Carolyn Martin, Kara Billsborough, Bianca Cairns, Diana Saunders, Annette Sugden and new Investment Manager, Ben Baldwin, who commenced in September 2010 (absent Kathy Mitchell and Christine Ipson).

SECTION 2

SRDC Business

Research Priorities

SRDC uses its five year Research and Development Plan as the guide to its program investments. The current five year Research and Development Plan 2007–12 was developed following an extended period of consultation with industry, government and stakeholders and is evaluated annually as part of the production of the Annual Operational Plan which prioritises that years investments as part of a five year investment cycle.

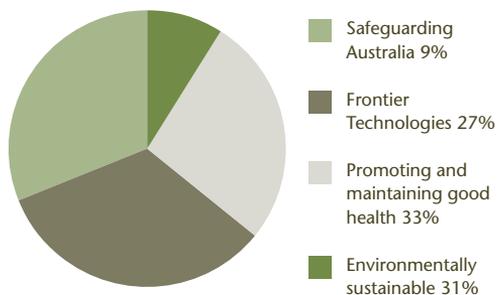
SRDC investments address the National Research Priorities and the Rural R&D Priorities of the Australian Government. These Priorities are:

National Research Priorities

- An environmentally sustainable Australia
- Promoting and maintaining good health
- Frontier technologies for building and transforming Australian industries
- Safeguarding Australia.

Figure 2.1 Allocation of SRDC funds by National Research Priority

The Proportion of SRDC investment against each National Research Priorities attributed to each Program 2009–10 (\$'000) can be viewed in appendix A.



SRDC scholarship winner, Dr Bennett MacDonald, investigates how to measure gas emissions from sugarcane soils

Rural Research and Development Priorities

Framed within the National Research Priorities, these focus on issues relevant to rural industries:

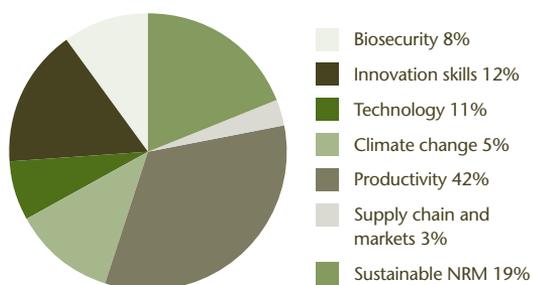
- **Productivity and adding value**
Improve the productivity and profitability of existing industries and support the development of viable new industries.
- **Supply chain and markets**
Better understand and respond to domestic and international market and consumer requirements and improve the flow of such information through the supply chain, including to consumers.
- **Natural resource management**
Support effective management of Australia's natural resources to ensure primary industries are both economically and environmentally sustainable.
- **Climate variability and climate change**
Build resilience to climate variability and adapt to and mitigate the effects of climate change.
- **Biosecurity**
Protect Australia's community, primary industries and environment from biosecurity threats.

Supporting priorities include:

- **Innovation skills**
Improve the skills to undertake research and apply its findings.
- **Technology**
Promote the development of new and existing technologies.

Figure 2.2 Allocation of SRDC funds by Rural R&D Priority

Composition of Rural Research and Development Priorities attributed to each Program (\$'000 and % values) 2009–10 can be viewed in Appendix B.



Industry Priorities and direction from the Minister for Agriculture, Fisheries and Forestry

SRDC is guided by industry and government priorities. Throughout 2009–10, SRDC consulted with industry through regular meetings with its Representative Bodies, as well as industry-wide workshops. The SRDC also received advice from the Minister for Agriculture, Fisheries and Forestry defining annual research priorities for the Australian government.

Priority was given to projects which contribute to step changes in sustainable productivity in sugarcane, growing, harvesting and/or milling as agreed by industry Representative Bodies:

- Innovation in energy, biomass utilisation and product diversification.
- Reduction in production costs and/or improving the utilisation of capital.
- New and improved sugarcane varieties.
- Improvement in the uptake of new technologies and decision-making tools by industry participants.
- Reduction in exotic biosecurity threats, and improvements in managing endemic pests and weeds, including risks enhanced by climate change.
- Sustainable improvement in productivity in the face of climate variability.

Investment Arenas and Resource Allocation

SRDC's research and development portfolio is based on three major Investment Arenas, namely:

- **Regional Futures** – Implementation of innovative farming, harvesting, transport, milling and marketing systems tailored to the needs and opportunities of each region.
- **Emerging Technologies** – Rapid translation of relevant emerging technologies that will enhance the industry's competitive edge in the global marketplace.
- **People Development** – Development of individuals and networks across the sugarcane industry that enhance the capacity for continuous improvement.

Table 2.1 illustrates the relationships between SRDC’s Corporate Outcome, Arena Outcomes, Outputs and Inputs.

Table 2.1 Outcomes, outputs and inputs

| | | | |
|---|---|---|---|
| CORPORATE OUTCOME | <i>A profitable and internationally competitive Australian sugar industry providing economic, environmental and social benefits for rural and regional communities.</i> | | |
| INVESTMENT ARENAS | REGIONAL FUTURES | EMERGING | PEOPLE DEVELOPMENT |
| ARENA OUTCOMES | <i>Implementation of innovative farming, harvesting, transport, milling and marketing systems tailored to the needs and opportunities of each region</i> | <i>Rapid translation of relevant emerging technologies that will enhance the industry’s competitive edge in the global marketplace</i> | <i>Development of individuals and networks across the sugarcane industry that enhance the capacity for continuous improvement</i> |
| OUTPUTS | <ul style="list-style-type: none"> ■ Value chain integration ■ Farming and harvesting systems ■ Transport, milling and marketing systems | <ul style="list-style-type: none"> ■ Genetics and breeding systems ■ Farming, harvesting, transport, milling, and marketing systems | <ul style="list-style-type: none"> ■ Individual capacity ■ Social capacity |
| INPUTS – proportion of resources | 59% | 29% | 12% |

Project investments

SRDC strives to create a competitive approach to R&D investments that ensures a high return on investment.

Each project proposal is assessed using an attractiveness and feasibility framework and scored from 0 to 5 on each criterion.

Emphasis is placed on partnerships between industry sectors and regions.

In 2009–10 there were four categories of projects:

- Research Projects
- Scholarships
- Capacity Building Projects
- Grower Group Innovation Projects.

SRDC also commissions some research and is part of a range of cross RDC investments.

Snapshot of project and reporting statistics

Table 2.2 Comparison of SRDC project statistics

| Project types | No. of Projects 2008–09 | No. of Projects 2009–10 |
|----------------------------------|----------------------------|----------------------------|
| Research Projects | 83 | 70 |
| Scholarships | 14 | 15 |
| Grower Group Innovation Projects | 29 | 31 |
| Capacity Building Projects | 28 | 12 |
| Other | 7 | 9 |
| TOTAL number of projects | 161 | 137 |

Table 2.3 Comparison of the number of project reports received 2009–10

| Report types | 2008–09 | 2009–10 |
|--------------------------------|------------|------------|
| Milestone Reports | 286 | 203 |
| Final Reports | 68 | 30 |
| TOTAL number of reports | 354 | 233 |

Figure 2.3 Distribution of project funding as at 30 June 2010

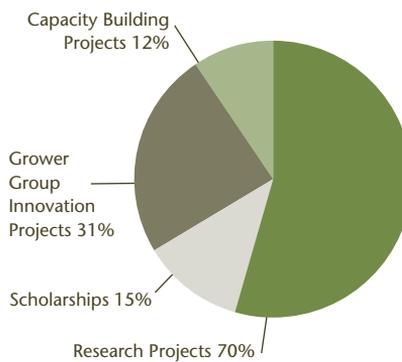


Table 2.4 Comparison of the distribution of project funding as at 30 June 2010

| Distribution of project funding by arena | 2008–09 actual | 2009–10 actual |
|--|------------------|------------------|
| Regional Futures | 60% | 59% |
| Emerging Technologies | 29% | 29% |
| People Development | 11% | 12% |
| TOTAL | \$8.292 m | \$7.764 m |

Investment portfolio management

Following the annual call for project proposals in July, all applications were sent to multiple technical assessors in Australia and overseas for comment. Proposals are scored using an attractiveness/feasibility framework as follows:

- **Attractiveness:** expected economic, environmental and social benefits through adoption of outputs; potential return on investment and other inputs; communication plans and industry and/or community participation.
- **Feasibility:** research risk (the likelihood, with high quality research, of reaching the project objectives and delivering the outputs and outcomes) and research quality (the objectives, research plan, and the skills and knowledge of the investigators).

Based on the averaged scores of assessors and SRDC members, highly ranked applicants are invited to present in person to a panel representing key stakeholders. Presentations and responses to questioning are scored by the panel using the attractiveness/feasibility framework and highly ranked projects are invited to prepare a final application addressing the feedback. This final application forms part of a contract with SRDC.

R&D Investment Managers are allocated a portfolio of project investments to manage to deliver outcomes consistent with SRDC objectives and key performance indicators.

Corporate governance practices

SRDC maintains a comprehensive Business Process Management System (BPMS) that clearly defines business and governance practices. This suite of policies includes topics relating to leadership; planning and reporting; accountability; management; financial control; risk management and monitoring. In 2009, SRDC management and Board reviewed and audited its policies relating to procurement,

asset management, staff management and BPMS system maintenance. There were also changes to SRDC's policy on term deposits. SRDC also reviewed the risk management, fraud control and business continuity plans, health & safety management arrangements and protective security policy. SRDC engaged consultants to provide advice on office occupational health and safety in 2009–10.

SRDC Monitoring and Reporting

Research and Development Plan 2007–2012

The five-year SRDC R&D Plan (2007–2012) outlines strategies and performance measures to provide a framework for monitoring activities and measuring corporate performance. Reviewed annually, it defines core business, indicates broad priorities for R&D and defines the corporate strategy to achieve its outputs and outcome.

Annual Operational Plan (AOP)

This Plan specifies the broad groupings of R&D activities that SRDC proposes to fund during the financial year together with an estimate of income and expenditure. The AOP must be submitted to the responsible Minister for approval and a copy forwarded to each of SRDC's Representative Bodies.

Portfolio Budget Statement

The Portfolio Budget Statement provides a summary of SRDC's outcomes, outputs, performance and financial position each year. Reports are consistent with the R&D Plan and the AOP and tabled in Parliament.

Annual Report

The Annual Report is the principal formal accountability mechanism of the Corporation to government. It reports on the achievement of the performance targets; details actual performance and forecasts future needs and expectations. It is also a key reference document and forms part of an historical record for the Corporation.

Evaluation and review of SRDC investments

Each year SRDC evaluates project performance and value of investment in research projects. In 2009–10 it commissioned Price Waterhouse Coopers to complete an evaluation of randomly selected research projects. Results were presented to a Representative Bodies Meeting in December 2009 and the SRDC Board in August 2009. Recommendations were also considered during the Board Strategy Workshop in early 2010.

The evaluation found that the top three benefits arising from SRDCs investment in research were improved decision making, reduced on farm costs and improved communication. The evaluation showed that while there was no evidence that larger projects produced larger benefits per dollar invested, these project generally had a clearer focus and produced those benefits across a smaller range of criteria but smaller projects (in terms of budget spend) were more efficient in producing benefits than larger projects. Most project benefits occurred in the longer term (greater than 15 years) or the medium term (5 to 10 Years). The analysis showed that there was some difference between anticipated and actual benefits achieved. The distribution of benefits between economic, environmental and social in the project proposals averaged 50% economic, 23% environmental and 27% social across the 20 projects assessed. The anticipated benefit spread was 39% economic, 21% environmental and 40% social.

The evaluation recommended:

- adoption of a standard set of assessment criteria;
- inclusion of more detail on proposed benefits in project proposals and the links between project activities and anticipated benefits;
- assessment of projects for key risks;
- changes to the milestone management system to ensure final reports include benefit and cost–benefit information, and a response to key indicators.

Measuring economic, environmental and social returns from R&D investment

Australia's 15 Rural Research and Development Corporations (RDCs) prioritise, coordinate and integrate the demands of industry and government with the capabilities of research providers. Together RDCs invest around \$540 million in R&D projects to improve the profitability and sustainability of rural industries and communities.

In December 2008, ACIL Tasman completed the first collective evaluation of 32 randomly selected and 36 highly successful projects funded by RDCs during 2007–2008. Results found benefits to Australian industries and communities generated \$10.5 billion from 36 highly successful projects, \$5.5 billion in industry benefits, \$5 billion in other benefits and significant social and environmental benefits for all of Australia.

The second stage of evaluation was completed in December 2009. The evaluation of 58 individual projects was independently undertaken covering a range of investments from all RDCs. This assessment included four SRDC projects focused on applied research, extension, capacity building, and information management.

Similar to the first stage of evaluation, results in the second stage showed for every dollar invested in R&D a return of \$1.50 in benefit/value is created within five years. In the longer term, after 25 years, results indicate greater benefits for Australia showing an \$11 return for every one dollar invested.

The evaluation was undertaken to provide robust and objective information on the overall economic, social and environmental returns produced by the RDC portfolio. This is the largest evaluation of Rural R&D ever undertaken so far in Australia. A third evaluation is planned for 2010–2011.



Mackay sugarcane mill (Photo taken by Jane Turner, Prose PR).

SECTION 2

SRDC Budget

Industry levy rates

Funding of SRDC is by levies from industry, with matching Australian Government contributions up to 0.5 % of the Gross Value of Production (GVP). Levies are imposed under Schedule 24 of the Primary Industries (Excise) Levies Act 1999 and collected under the *Primary Industries Levies and Charges Collection Act 1991*. In 2009–10 the levy was \$0.14 per tonne of sugarcane crushed, divided equally between growers and millers.

Table 2.5 SRDC levy rate since inception

| From | To | Levy rate (\$/tonne) |
|------------------|-------------------|----------------------|
| 1 August 1990 | 31 May 1992 | 0.06 |
| 1 June 1992 | 30 September 1992 | 0.10 |
| 1 October 1992 | 31 August 1995 | 0.14 |
| 1 September 1995 | 30 April 2001 | 0.15 |
| 1 May 2001 | 31 March 2002 | 0.12 |
| 1 April 2002 | Present | 0.14 |

Income and expenditure

SRDC's income and expenditure for 2009–10, compared with that forecast in the Annual Operational Plan 2009–10, is set out in Table 2.6.

Table 2.6 Forecast and actual income and Expenditure for 2009–10

| Income: | Forecast \$m | Actual \$m |
|---|---------------|---------------|
| Australian Government Contribution (PIERD Act Contribution) | 4.503 | 5.817 |
| Industry Contribution | 4.410 | 4.136 |
| Other | 0.420 | 0.491 |
| Total Income | 9.333 | 10.444 |
| Expenditure: | Forecast \$m | Actual \$m |
| R&D Projects | 8.035 | 7.764 |
| Operation of SRDC | 2.009 | 2.021 |
| Total Expenditure | 10.044 | 9.785 |

Income explanation

Income in 2009–10 was higher than forecast because of the contributions from the Australian Government equivalent to 0.5% of the Gross Value of Production (GVP) for the sugarcane industry, averaged over three years. The amount was higher due to the increase in cane price for tonnes of cane produced particularly in 2009–10. Australian canegrowers improved returns and the profitability of Australian sugar millers and refiners increased as a result of higher world sugar prices.

Expenditure in R&D projects was slightly lower than forecast due to delays in some milestones to 2010–11, and early conclusion of some projects.

Operational expenditure remained within in levels forecast. SRDC's cash reserve at 30 June 2010 it was \$9.990 million.

Table 2.7 summarises the actual income and expenditure over the past five years, showing a fairly stable budget.

Table 2.7 Five year budget at a glance (\$m)

| Budget | 2009–10 | 2008–09 | 2007–08 | 2006–07 | 2005–06 |
|-----------------------------|---------|---------|---------|---------|---------|
| Revenue | 10.444 | 11.093 | 12.158 | 11.134 | 11.125 |
| Expenditure | 9.785 | 10.252 | 11.093 | 10.724 | 10.160 |
| Operating Surplus/(deficit) | 0.659 | 0.841 | 1.065 | 0.411 | 0.966 |
| Total assets | 11.516 | 11.097 | 11.273 | 9.236 | 8.887 |
| Total equity | 11.108 | 10.449 | 9.608 | 8.557 | 8.146 |
| Industry contributions | 4.136 | 4.317 | 5.028 | 4.887 | 5.342 |
| Commonwealth contributions | 5.817 | 6.110 | 6.283 | 5.522 | 5.195 |
| R&D expenses | 7.764 | 8.292 | 9.139 | 9.025 | 8.458 |

Financial management and auditing

SRDC maintains accounts and records of transactions in accordance with accepted accounting principles. Financial statements are prepared in accordance with Schedule 1 of the CAC Act and Australian Equivalents to International Financial Reporting Standards.

Financial statements and cash flow forecasts are prepared monthly and discussed at each Board meeting. Following the annual external audit of the Corporation's financial accounts, the Executive Director presents a Management Representation Memorandum to the Board for final adoption of the annual financial statements. The Board approves annual financial statements at its August meeting.



SECTION 3

Spread of Research Investments across Investment Areas

Highlights of Research Portfolio

Research Project Summaries

Capacity Building Projects

Grower Group Innovation Projects

Scholarship Projects

Srdc Innovation Awards

SECTION 3

Spread of Research Investments across Investment Areas

Table 3.1 Outcomes, Arenas and Targets

| CORPORATE OUTCOME | <i>A profitable and internationally competitive Australian sugar industry providing economic, environmental and social benefits for rural and regional communities.</i> | | | |
|--------------------------------|---|------------------------------|---------------------------|-----------------|
| INVESTMENT ARENAS | REGIONAL FUTURES | EMERGING | PEOPLE DEVELOPMENT | |
| PROJECT TARGETS | <i>Identified in the SRDC Annual Operational Plan 2009–10 as proportion of resources</i> | | | |
| INVESTMENT ARENAS | REGIONAL FUTURES | EMERGING TECHNOLOGIES | PEOPLE DEVELOPMENT | Total |
| Target (AOP July 2009) | 59% | 18% | 23% | 100% (\$8.035m) |
| Actual (AR 2009–2010) | 59% | 29% | 12% | 100% (\$7.764m) |
| No. Continuing projects | | | | |
| Target (AOP July 2009) | 49 | 14 | 13 | 76 |
| Actual (AR 2009–2010) | 81 | 19 | 37 | 137 |
| No. New projects | | | | |
| Target (AOP July 2009) | 16 | 6 | 1 | 23 |
| Actual (AR 2009–2010) | 6 | 6 | 1 | 13 |
| No. New scholarships | | | | |
| Target (AOP July 2009) | - | - | 13 | 13 |
| Actual (AR 2009–2010) | - | - | 15 | 15 |
| Total projects by arena | | | | |
| Target (AOP July 2009) | 65 | 20 | 27 | 112 |
| Actual (AR June 2010) | 81 | 19 | 37 | 137 |

SECTION 3

Highlights of Research Portfolio

Industry overview – Southern Region

MAP002 (Mackay Alignment of Grower Services). This project helped to reconfigure the structures and organisations involved in industry service delivery in Mackay. As a result of the project, the local industry can now rely on the MAPS (Mackay Area Productivity Services) Board to plan the strategic direction for service delivery and engage service providers for R, D&E as needed. This structural reform has resulted in improved coordination and better communication among service providers.

BSS294 (Whole-farm planning for management of varieties to maximise productivity and reduce losses from diseases) led to the development of the QCANESelect™ tool; a free online system that provides growers, advisory staff and millers with a wide range of accurate and up-to-date information and advice on varieties sourced from the BSES-CSIRO Variety Improvement Program.

This project is indicative of a growing trend to provide decision support tools to assist growers with the many complex decisions they face when selecting the best variety for their situation.

The use of electronic-based information was also the basis for CHC002, (Development of a real time information system for Clarence harvesters). Using road transport to take cane to the mill means the harvester depends on the availability of truck bins for their workload. In the past there was no efficient way to know the availability or delivery details of the bins to the paddock. This project developed an online solution through the NSW Sugar Milling Cooperative website where harvester operators can access real-time information on bin consignment. This enables harvesters to control what they are doing in the field to match the availability of bins, ensuring a more efficient, cost effective and productive operation.

SRDC has funded a lot of work over the years in canegrub management. In 2009–10, project BSS266 (Optimum canegrub management within new sustainable cropping systems) came to a conclusion. This project demonstrated that canegrubs can be effectively managed in cane fields planted to new farming systems and the project has developed a booklet, 'Guideline for effective canegrub management' for industry use.

Project UNW003 (Development of a constructed wetland for improving water quality in sugarcane drainage, and ensuring its community acceptance and industry adoption) constructed a wetland of around 1.5 ha to assess its ability to ameliorate acidity in drainage water from a cane farm in Northern NSW. The wetland showed a clear ability to precipitate the important dissolved metals from the drain water and thereby removed nearly all of the acidity. Given that it occupied about two percent of the farm, but only treated about 10 percent of the drainage, the application of such a wetland as a standard management technique to treat all of the acidity discharge on a cane farm is currently impracticable. Nevertheless, the results might encourage farmers to use their existing drains as extended wetlands, rather than seeing any in-drain vegetation as a problem.

QUT028 (Semi-automated stockpile tarping system for improved safety and fuel quality) involved the design of a novel semi-automated technology for tarping bagasse stockpiles. An extensive desktop feasibility study indicated that the concept was technically feasible, but that the predicted costs were significantly greater than those associated with manual tarping. For reasons associated primarily with cost a decision was taken by the project partners not to proceed beyond the stop/go milestone to the building and testing of a prototype.

SRDC held Regional Expos in Mackay and Broadwater during May. Both expos were well attended by local industry people keen to hear the outcomes of SRDC projects being conducted in other areas. These workshops proved to be a great way to raise industry awareness of SRDC project outcomes and will be continued in 2010–2011.

Industry Overview – Northern Region

A project to benefit the whole sugar industry is gathering information to assess the instruction of GM (genetically modified) sugarcane, which has to undergo rigorous regulatory safety assessment for people and the environment before it can be grown commercially CRC005 (Understanding the reproductive biology and ecology of sugarcane to manage the safe release of genetically modified cultivars).

The researchers assessed how and where current sugarcane cultivars flower and produce viable seed and the likelihood of transfer of a modified trait to other commercial sugarcane or wild sugarcane. The impact of this project will become apparent as regulatory bodies use the information to make science-based decisions about the experimental and commercial release of GM sugarcane to ensure the minimisation of risk to the surrounding environment.

A successful project CSE014 (Increased CCS, cane yield and water use efficiency by exploiting interactions between genetics and management) was established in 2005 with a broad objective to better understand the physiological responses to interactions between genetics and management for sugar accumulation, and to identify means of enhancing cane and sugar yield.

Dr Inman-Bamber's work in this project has provided inspiration to a new generation of international scientists and it is hoped that Australian scientists will build on the platform he has established. This research has

fostered international collaboration among physiologists, agronomists and plant breeders resulting in the development of enhanced models of partitioning and growth. The project has also led to recommendations for improved water management to deliver improved sugar yield and reduced lodging.

Water quality is an increasingly demanding issue, particularly in light of the Queensland Government's recent Great Barrier Reef protection legislation.

Given the importance of water quality monitoring, a project in the Herbert CG013 (Growers working together to improve water quality in the Herbert Sugar Industry) had growers on eleven sites document their management practices and collect and monitor water samples. The result was certainly a raising of awareness of water quality issues in the region and an improvement in growers' skills and confidence to measure water quality. In addition, following a literature review, a *Field Guide for Water Quality Monitoring* in the Sugar Industry was published.

A few projects have provided information to assist in the development of the Lower Burdekin Groundwater Science Plan.

In the Upper Haughton area twenty shallow piezometers were installed and growers were trained to monitor groundwater height manually and via automatic loggers. There is an opportunity to build on the measuring capacity in this and other projects, which could lead to the development of a model that covers the entire Burdekin Region Irrigation Area (BRIA) to improve the understanding of groundwater behaviour BBF001 (Pilot area-wide natural resource management group-Building grower capacity to understand and better manage groundwater).

Canegrowers led another project (A review of institutional arrangements in the Burdekin Irrigation Area with a view to managing sustainable farming practices in the region) that provided an analysis of the BRIA groundwater system. A strategic working group was formed to implement a five-year regional Land and Water Management Plan to deal with irrigation efficiency; groundwater pumping; channel and weir losses; export of salt water; communication and monitoring.

A project in the Burdekin region (Adopting systems approaches to water and nutrient management for future cane production in the Burdekin) monitored water, nitrogen and herbicide losses and developed a range of management practices to deliver local sustainable sugarcane production systems.

Through extensive interactions with local industry and agencies responsible for natural resource management policy in the region, the project provided the foundation for 'management action targets' in the region's Water Quality Improvement Plan—an important step in meeting the needs of the joint State and Federal legislation and policy to protect the Great Barrier Reef.

BSES Ltd, in collaboration with growers in the Tablelands BSS318 (Measurement of in-field sucrose loss by mobile refractometry) developed simple crop measurement methods and irrigation guidelines to increase sucrose yields by indicating when to dry-off mature cane crops and when to irrigate due to delayed harvesting.

Growers that participated in this project have already begun to adopt the research findings by purchasing tools that give direct information to control crop development, improve crop yields and avoid detrimental practices.

All intensive agricultural industries face the challenge of maintaining productivity while

minimising any environmental impacts of nitrogen fertiliser use. This is particularly important for sugarcane production in Australia because of concern over the health of the Great Barrier Reef.

A project conducted across various regions CSE011 (Improved environmental outcomes and profitability through innovative management of nitrogen) demonstrated the possible adoption of new nitrogen management regimes to reduce the current practice of over-application. Nitrogen contributions from organic sources were measured and compared and shown to be practical alternatives to traditional fertiliser sources.

Climate and particularly the ability to predict weather patterns, has an effect across the whole industry. A project to defeat the autumn predictability barrier improves preparation for the season ahead by providing reliable forecasts for end of season rainfall early in the year. This project JCU027 (Defeating the Autumn Predictability Barrier) has raised awareness in the industry and throughout wider scientific audiences about the possibility of forecasting across the autumn period—representing a significant breakthrough for industry planning and decision making.

Keen growers in Mulgrave district concluded canegrub management project GGP029 (Mulgrave cane growers strategic grub management: implementing BSES decision-making tools) where they learned to draft a 'whole farm plan' to manage and apply pesticide on a 'plot-by-plot' basis. Predicting future grub dynamics and damage levels was made possible through models developed by Dr. Frank Drummond, Maine University, USA. As a result, the Mulgrave Canegrub Management Group have conducted an innovative program of monitoring, modelling and grub management practices in conjunction with industry, and have made commendable progress.

SECTION 3

Research Project Summaries

The section below summarises the projects completed and continuing in 2009–10. Fifty projects were completed in 2009–10.

*Projects that were discussed in the Annual Operational Plan 2009–10 are identified with a * symbol.*

REGIONAL FUTURES

| | |
|--------------------------------------|--|
| Key Performance Indicator (1) | Enhanced structure and functions of regional sugarcane industry value chains |
| Measure | Demonstration of improved integration of the industry value chain within regions delivering increased profitability and more efficient use of capital based on environmentally responsible and safe business practices |

*Bin supply and harvester information in real time (completed) **

Harvesters servicing the Harwood Mill in the NSW Clarence district can now log on to the internet to optimise their daily operations. Using road transport to take cane to the mill means the harvester depends on the availability of truck bins for their workload. Previously there was no efficient way to know the availability or delivery details of the bins to the paddock. This successful project developed an online solution through the NSW Sugar Milling Cooperative website where harvester operators login using mobile technology to see real-time information on bin consignment. This enables the harvesters to control what they are doing in the field to match the availability of bins ensuring a more efficient, cost effective and productive operation. (CHC002)

*Managing Genetically Modified risk (completed) **

Genetically Modified (GM) sugarcane has to undergo rigorous regulatory assessment for safety to people and the environment before it can be grown commercially. The researchers assessed how and where current sugarcane cultivars flower and produce viable seed. They also assessed the likelihood of transfer of a modified trait to other commercial sugarcane or wild sugarcane. The impact of this project will become apparent as regulatory bodies use the information to make science-based decisions about the experimental and commercial release of GM sugarcane and the conditions of its release to ensure it is managed to minimise risks to surrounding environments. (CRC005)

Defeating the Autumn Predictability Barrier (completed)

To help industry improve preparation for the season ahead, a forecasting system to provide reliable forecasts about end of season rainfall, early in the year was needed. This project has raised awareness in the Australian sugar industry and wider scientific audiences that it is possible to forecast across the autumn period representing a significant breakthrough for industry planning and decision making. (JCU027)

*Harvest planning management tools (ongoing) **

To date, SugarMax and web-based harvest tools have been customised for the Tully region and were tested with a pilot group. The growers were able to understand the value of harvesting planning scenarios. Planning for promotion and ongoing training and maintenance is underway. (CGT001)

Increasing in-mill NIR effectiveness (ongoing) *

This project has implemented a cane ash calibration that enables the mill to detect high mud rakes of cane and use the information as feedback to growers and their harvesters as well as enable the mill to adapt their processing parameters. It has also developed NIR calibration equations for several sugarcane nutrients. Considerable research remains to establish the link between NIR nutrient readings, crop yields and how this relates to farm management practices. (CSR038)

Cane grub management in new farming systems (completed) *

A long-running investment over six years, this project has explored the management of canegrubs in the new farming system. It demonstrated that cane grubs can be effectively managed in cane fields planted to new systems. Reports on insecticides were sent to insecticide companies to pursue formal registration with the APVMA. A new monitoring system for southern cane grub species has been accepted by growers, and a guideline for effective canegrub management booklet was published through BSES during the year. (BSS266)

REGIONAL FUTURES

| | |
|----------------------------------|--|
| Key Performance Indicator | Enhanced resource utilisation in the farming and harvesting areas. |
| Measure | Implementation of improved farming and harvesting systems that increase revenue and reduce input costs, and concurrently are environmentally and socially sustainable. |

Understanding and managing groundwater (completed) *

In 2006 the Upper Haughton farming community identified a need to monitor and evaluate the rising water table and to identify the influence of various contributors to the system so it could be managed better and not become a major issue. As a result, grower capacity was increased by using an adult learning approach to monitor groundwater depths and quality and awareness was raised of the seriousness and urgency of the issue within the local farming, industry and science community. This led to the development of the Lower Burdekin Groundwater Science Plan. (BBF001)

Improved sugarcane farming systems (completed) *

An extension of the 16-year strong Sugar Yield Decline Joint Venture, this project continued experiments on a series of trial sites fine tuning the new farming system principals of permanent beds, controlled traffic and legume breaks resulting in decreased production costs and improvements in soil health and run-off water quality. There was a need for more robust demonstration of the suitability of the new farming system across different environments and some of the components required further research. There is no doubt that this project also contributed to the increased adoption and understanding of new farming systems principles in all regions. (BSS286)

Six Easy Steps to nutrient management (ongoing)

Six years of research, which continues until 2012, has resulted in the Six Easy Steps nutrient management package that gives a tailored nutrient management system for each cane growing region from far north Queensland to northern NSW. The significance of this project was realized in 2009–10 when the

Queensland Department of Environment and Resource Management adopted Six Easy Steps as the benchmark best practice for nutrient management to improve the quality of water run-off from cane lands to the Great Barrier Reef following the introduction of new reef protection legislation under the Environment Protection Act, 1994. (BSS268)

*Variety selection simplified (completed) **

Growers faced with many complex decisions when selecting varieties such as, yield potential, suitability to soil type and resistance to disease now have an online tool to make selection easier. Developed as QCANESelect™, the free system provides growers, advisory staff and millers with a wide range of accurate and up-to-date information and advice on varieties sourced from the BSES-CSIRO Variety Improvement Program. In the first three months after it was launched more than 300 people registered to use the tool 190 of which were growers, and there were more than 700 visits to the website. (BSS294)

*Raising WaterSense awareness (completed) **

This project aimed to encourage more use of WaterSense, an online sugarcane irrigation scheduling and planning tool that enables the user to optimise irrigation inputs over multiple fields and enhance potential yields while limiting offsite impacts. User groups indicated that the number of individuals wanting to use WaterSense directly is limited, but all areas were keen to have district irrigation advice, produced from WaterSense, made available. The project established the barriers to its use, which will be used to inform how it is used and applied in the future. (BSS297)

*Sugarcane smut extension (ongoing) **

Various presentations have been made to industry in Mulgrave, Innisfail, Herbert, Burdekin and Mackay focusing on how the key replacement varieties have been responding to smut. All observations are suggesting these canes will have sufficient resistance to the disease to provide good commercial outcomes. Yield losses in a highly susceptible variety have been quantified and this data included in the presentations. (BSS302)

*Drying-off irrigation scheduling (completed) **

Simple crop measurement methods and irrigation guidelines to increase sucrose yields by indicating when to dry-off mature cane crops and when to irrigate due to delayed harvesting are now available. Growers that participated in the project have already begun to adopt the research findings by purchasing the relevant tools that give direct information to control crop development, improve crop yields and avoid detrimental practices. (BSS304)

Improving water quality in the Herbert (completed)

It is important that growers in the Herbert region are aware of and participate in water quality monitoring given their proximity to the Great Barrier Reef. This project had growers on eleven water quality sites collect and monitor samples and document their management practices to establish their relationship with water quality. Apart from influencing the perception of water quality issues in the region, a literature review was conducted, A Field Guide for Water Quality Monitoring in the Sugar Industry was produced and growers' skills and confidence to measure water quality was greatly improved. (CG013)

Sustainable irrigation in the Burdekin (completed)

The Burdekin Region Irrigation Area (BRIA) is experiencing a rise in the groundwater levels that is threatening the future of sugarcane farming. Following an analysis of the BRIA groundwater system, recommendations were made that led to the formation of a strategic working group and implementation of a five-year regional Land and Water Management Plan that deals with irrigation efficiency; groundwater pumping; channel and weir losses; export of salt water; communication; and monitoring. (CG018)

Innovative management of nitrogen (completed)

All intensive agricultural industries face the challenge of maintaining productivity while minimising environmental impacts of nitrogen (N) fertiliser use. This is particularly important for sugarcane production in Australia because of community concern over the impact of N on the health of the Great Barrier Reef. The outcomes of this project demonstrate the possible potential for the adoption of new N management regimes in sugarcane farming to reduce the current practice of over applying nitrogenous fertiliser. Nitrogen contributions from organic sources were measured and compared and were clearly shown to be practical alternatives to traditional fertiliser sources. (CSE011)

Improving water, nutrient and crop management in the Burdekin (completed)

Improving water, nutrient and crop management can increase profitability, control the rising water table, reduce the risk of irrigation-induced salinity and improve off-farm water quality. This project monitored water, nitrogen and herbicide losses and evaluated and developed a range of management practices to deliver sustainable

sugarcane production systems in the Burdekin region. Through extensive interactions with local industry and agencies responsible for natural resource management policy in the region the project provided the foundation for 'management action targets' in the region's Water Quality Improvement Plan an important step in meeting the needs of the government's policy for protecting the Great Barrier Reef. (CSE012)

*Review of Harvester Technology (completed) **

This project concluded that there is little interest by manufacturers in harvester design changes. Manufacturers are targeting the Brazilian industry where the emphasis is on whole-of-crop harvesting. Therefore, the recommended research and development for Australia should focus on gaining the most efficiency from existing machine designs, including developing protocols for measurement of cane and sugar loss. (FSA001)

Development of a constructed wetland (completed)

This project constructed a wetland of around 1.5 ha to assess its ability to ameliorate acidity in drainage water from a cane farm in Northern NSW. The wetland showed a clear ability to precipitate the important dissolved metals from the drain water and thereby removed nearly all of the acidity. Given that it occupied about two percent of the farm, but only treated about 10 percent of the drainage, the application of such a wetland as a standard management technique to treat all of the acidity discharge on a cane farm is impracticable. Nevertheless, the results might encourage farmers to use their existing drains as extended wetlands, rather than seeing any in-drain vegetation as a problem. (UNW003)

REGIONAL FUTURES

| | |
|--------------------------------------|--|
| Key Performance Indicator (3) | Enhanced processes and product range in the transport, milling and marketing sectors. |
| Measure | Implementation of more productive and cost-effective transport, milling and marketing systems in harmony with the environment and societal expectations. |

*Restoring efficiency to harvested cane transport in NSW (ongoing) **

Difficulties in processing whole-crop cane led the NSW sugar Milling Co-Operative to instruct Broadwater harvesters to deliver conventionally harvested (burnt) cane to the mill for the majority of the 2009 harvest season. As a result the projects trials have been suspended until a longer period of whole-crop harvesting is available in Broadwater. (LEV001)

Use of the SRI noxious gas jigger system to increase the juice processing capacity of evaporator stations (completed)

The outputs from the project, resulting from the use of the SRI noxious gas jigger system, include improved understanding of the changes to heat transfer levels and juice flow patterns for the final evaporator vessel; improved juice processing capacity for the whole evaporator set; and a set of implementation procedures.

A cost benefit analysis found that there were positive benefits for mills adopting this technology, but noted that the costs would differ depending on the size of the mill concerned. The trials were not able to differentiate any change to the scaling rate of the heating tubes resulting from the use of the jigger system, but were able to demonstrate that the positioning of the jigger system relative to the position of the juice inlets will influence the juice flow patterns within the base of the evaporator. (QUT020)

*Semi-automated stockpile tarping system (completed) **

This project involved the design of a novel semi-automated technology for tarping bagasse stockpiles. An extensive desktop feasibility study indicated that the concept was technically feasible, but that the predicted costs were significantly greater than those associated with manual tarping. For reasons associated primarily with cost a decision was taken by the project partners not to proceed beyond the stop/go milestone to the building and testing of a prototype. (QUT028)

EMERGING TECHNOLOGIES

| | |
|----------------------------------|--|
| Key Performance Indicator | Enhanced approaches for sugarcane genetic improvement. |
| Measure | Technologies developed that accelerate the delivery of improved varieties for sugar production and value-added products. |

Complete genome mapping (completed)

Sugarcane has the largest and most complex polyploid genome of any crop plant in the world. A comprehensive genetic map is needed to determine and analyse markers and provide comparative mapping. This will enable breeders to target specific gene combinations and increase the speed of development of new varieties. Genome maps also help to understand physiological processes occurring in sugarcane and may enable access to beneficial traits from wild germplasm. This project expanded the genome map of cultivar Q165 by nearly 1200 markers, bringing the total to almost 2200. New project CPI019 is building on this work. As it advances, this technology will contribute to the cost-effective acceleration of genetic gain in commercial traits. (CRC006) *

Bioactive natural products from sugarcane (completed)

This CRC project, which is partially funded by SRDC, sought to identify biologically-active compounds in sugarcane juice. Several promising compounds have been evaluated and one that has the potential as a low GI food supplement is the subject of a preliminary patent. (CRC007)

Reducing plant nitrogen demand (completed)

An exploratory study into the variation among sugarcane clones and wild relatives for traits linked to nitrogen use efficiency has found useful levels of variation among clones in traits such as leaf chlorophyll, leaf nitrogen, and discrimination by roots between forms of nitrogen. This project provided the foundation for project UQ044: SaveN Cane: Developing selection tools for N-efficient sugarcane, which commenced in July 2009. (CRC008) *

Production of PHB/PHAs in sugarcane plants (completed)

The project is aimed at producing PHB in sugarcane plants at commercially significant levels. The work is done in collaboration between teams at the University of Queensland and at Metabolix Inc. in Boston, who became a supporting party to the CRC in order for this project to proceed. Progress has been positive and there are indications that it will continue ARC funding after the term of the CRC. (CRC011)

Genetics and management to increase CCS and yield (completed)

This successful project was established in 2005 with a broad objective to better understand the physiological responses to interactions between genetics and management for sugar accumulation, and to identify means of enhancing cane and sugar yield. Dr Inman-Bamber's work has provided inspiration to a new generation of international scientists and it is hoped that Australian scientists will build on the platform he has established. This research has fostered international collaboration among physiologists, agronomists and plant breeders resulting in the development of enhanced models of partitioning and growth. The project has also led to recommendations for improved water management to deliver improved sugar yield and reduced lodging. (CSE014)*

| | |
|--------------------------------------|--|
| Key Performance Indicator (2) | Enhanced technological innovation across the sugarcane industry. |
| Measure | Technologies developed that improve business performance across different sectors of the sugarcane industry. |

Controlling harvester and haul-out progression (ongoing)

Prototype experimentation and analysis continue for a positioning system to assist haul-out operators consistently and accurately position the vehicle relative to the harvester and automate the forward speed of the harvester to obtain the optimum throughput and reduce cane loss. (GRF001) *

Evaluation of membrane technology for clarification of sugarcane juice (completed)

This project investigated the application of ceramic membranes in the sugarcane clarification process to remove chemical usage and increase the efficiency of the system. Various outputs were achieved including: a comprehensive literature review; an evaluation of performance of ceramic membranes; identification and testing of a mathematic model for the fouling of the membrane; design of a full scale membrane system to treat 500 tonnes/hr of cane juice; membrane cleaning protocols; and a cost analysis of four possible scenarios documented. (JCU029)

Producing furfural and fuel from bagasse (completed)

Proserpine Cooperative Sugar Milling Association Limited developed technology to produce furfural and this project benchmarked the Proserpine method against another method developed by the then CRC-WI in Victoria. It found the Proserpine technology to be superior. (QUT015) *

High value products from furfural waste residue (completed)

The project examined the thermal decomposition of bagasse from different sugarcane cultivars, characterised the bagasse residues after furfural was recovered and identified the major compounds in condensate samples obtained from the Proserpine Furfural Plant. The study led to the identification of areas where value-adding could be achieved. (QUT016) *

Vacuum condenser design modification (ongoing)

The objectives of the project were to design and demonstrate a modification to factory rain tray condensers that would allow operation without vacuum pumps. Enough information was gained during the year to be positive about the potential for the venturi condenser to achieve improvement of the energy efficiency of the factory, increase export of electricity, and reduce maintenance costs. Trials are continuing. (QUT030) *

PEOPLE DEVELOPMENT

| | |
|---------------------------|---|
| Key Performance Indicator | Enhanced effectiveness of individuals contributing to the sugarcane industry. |
| Measure | Demonstration of improved capability and capacity of sugarcane industry participants to learn change, collaborate, lead and innovate to advance the sugarcane industry. |

Australian Agriculture and Natural Resources Online (AANRO) (completed)

Is an integrated knowledge discovery tool for agriculture and natural science. It is a joint initiative of the Primary Industries Standing Committee, Natural Resource Management Standing Committee and the rural Research and Development Corporations. SRDC contributed content and expertise in the establishment of this website. (AANR01)

Attend ISSCT Entomology Workshop and model dynamics of canegrub populations (completed)

Dr Peter Samson (BSES Principal Entomologist) attended the Entomology Workshop of the International Society of Sugarcane Technologists in Argentina in April 2009. The experience has increased his knowledge of the biology and management of insect pests of international significance and provided him with a useful network of entomological contacts, as well as giving new insights into ways of improving management of greyback canegrubs. (BSS326)*

Enhancing the impact of Near Infra Red (NIR) methods for varietal selection (completed)

As part of a SRDC funded project BSES researcher Dr Deborah Purcell attended a Near Infra Red (NIR) conference in Bangkok Thailand in 2009. Dr Deborah Purcell, Dr Serge Kokot (QUT) and Dr Michael O'Shea (BSES) authored a paper titled "Rapid Screening by NIRS for Sugarcane Smut Resistance to Improve Breeding and Selection Outcomes" at the conference. Dr Purcell also attended a "Process Analytical Technologies and Advanced Chemometrics" workshop to hear about alternative applications of NIR methods with other crops to improve the effectiveness of NIR based plant selection tools. Information gained during the conference has led to Dr Purcell and other researchers applying this knowledge to existing research projects. (BSS330)

Participation in Solute Signatures Masterclass and Vision for Irrigation workshop (completed)

Funded through an SRDC travel and learning grant, Steve Attard, Toni Anderson and Jayson Dowie attended the CRC for Irrigation Futures and NPSI Solute Signatures Masterclass in Melbourne. (BSS336)

Studying wild sugarcane in Panama (completed)

Dr Graham Bonnett of CSIRO Plant Industry spent five months in Panama understanding why *Saccharum spontaneum*, a wild relative of sugarcane, has become such an invasive weed.

A main finding of his research was that, in Panama, this wild sugarcane flowers in the wettest time of the year and only a few seeds germinate below 30 C. In contrast, most of the populations of wild sugarcane growing in northern Australia flower in autumn/winter and produce seed when average temperatures are below 30 C.

This information is vital to the Australian sugar industry because before genetically modified sugarcanes are developed they have to be assessed by government regulators to understand if the proposed plants are capable of transferring undesirable traits that put sexually compatible plants at risk of weediness. (CPI015) (See also CRC005) *

Development of an integrated wallaby management strategy (completed)

This project assessed the damage to crops by wallabies in the Barron River Delta area to the North of Cairns. With the expansion of urban development in the River Delta wallabies are becoming trapped in the area and adapting to the green cane environment. With the population increasing and traditional control methods using firearms being prohibitive, it was time for a cooperative response with local growers to develop an integrated strategy for wallaby damage mitigation in the area. This grower group developed an overall report of the projects activities and results for subsequent refinement and for reference in other regions. (GGP002)

Harnessing soil biology (completed)

Two blocks in Bundaberg and Ingham were managed using the new farming system and compared with traditional management on adjacent blocks. Detailed measurements of soil microbes and minerals, particularly nitrogen and carbon, were taken and assessed to determine the impact of the new farming system on the amount and composition of microbes in the soil. The results of this project, due to end in 2010, will deliver improved soil health through management that enhances soil microbes, and may lead to a reduction in the need for nitrogen fertiliser or recommendations for better management of the application of nitrogen so it stays in the system rather than being released to the atmosphere in a gaseous form. (UQ043)

Attend ISSCT Congress in Mexico to present papers (completed)

For this capacity building project, NSW grower and researcher, Robert Quirk, delivered two papers at the ISSCT congress in Mexico; visited representatives of the Louisiana sugarcane industry to discuss front tolerant varieties; and met with the chief development engineer at the DEDINI sugar mill manufacturing company from Brazil. (NCT004)

PEOPLE DEVELOPMENT

| | |
|----------------------------------|--|
| Key Performance Indicator | Enhanced effectiveness of partnerships and networks contributing to the sugarcane industry. |
| Measure | Demonstration of improved capability and capacity of regional groups, networks, and industry sectors and researchers to collaborate and innovate to beneficially change the operation of the industry. |

GREAT symposium in the Burdekin (completed)

A joint venture of the BSES and BPS, GREAT 2009 (Grower Research Extension Activities and Trials) bought together research, extension and grower groups to present and receive feedback on their activities to the Burdekin sugar industry and the community. About 60 growers received the most up-to-date information directly from the people doing the trials and developing the technology through a series of short presentations. The presenters saw it as a good opportunity to present their work, while most attendees were positive and provided valuable feedback for future events. The symposium gathered feedback on current and proposed activities with the aim of assisting organisations to optimise their activities. (BSS315) *

Broadacre management of herbicides for sugarcane (completed)

Growers and selected industry personnel from Mulgrave, Mackay, Bundaberg and Maryborough travelled to Dalby and Goondiwindi to learn broadacre integrated weed management techniques for dealing with herbicide resistance and how they could be applied to sugarcane growing. Their findings were shared with other growers through written articles and face-to-face presentations. (BSS321) *

Validation of a model to predict population trends of greyback canegrub (completed)

Revisiting the GrubPlan predictive model dataset addressed the prediction of greyback canegrub and its population dynamics. It also enabled re-parameterisation of existing models and development of new models based upon a larger sample size representing a greater range of conditions that farmers might experience in the future. (BSS327)

Workshop for sugar industry staff on sugarcane disease identification and management (completed)

Sugar industry staff from BSES Ltd, Productivity Services, Extension Services, Federal and State Government attended a sugarcane pathology workshop held over two days at the BSES Pathology Farm at Woodford where participants learnt how to identify the major sugarcane diseases and the resources for managing these diseases. (BSS328)

Building capacity for the Future Farmers group Mackay (completed)

A capacity building project held in March this year involved a workshop with 16 cane growers from the Mackay region. This group met with sugarcane industry leaders from BSES Limited, Canegrowers, ASMC and QSL. All members of the Mackay Future Farmers believe the trip was very worthwhile and would recommend a similar trip to any other grower. (BSS335)

Mackay alignment of grower services (completed)

Before this project regional growers and millers in the Mackay region had no united and coordinated.

R, D & E service delivery system. The MAPS (Mackay Area Productivity Services) Board was established to plan the strategic direction and engage service providers for R, D&E resulting in better leadership and communication, with growers having more responsibility for funding. In addition, a single extension service, AgriServ, was established between MAPS and BSES ensuring there is no duplication of service. (MAP002) *



Joe Muscat and Che Trendell from Grower Group Services at Farmer of the Year Awards 2010.



Grower group tour of local cane farm operation.

SECTION 3

Capacity Building Projects

Capacity Building Projects (CBP) provide support for individuals or groups to extend their experience and try something new that is of considerable value to the sugarcane industry. Funding of up to \$5,000 for an individual or \$10,000 for a group is available. There are no set definitions for projects providing they demonstrate an ability to assist people to learn, change, or enhance their leadership skills.

During 2009–10, 14 CBPs were completed – eight individual projects and six group projects.

Individual CBPs completed during 2009–2010

| Project number | Researcher and Organisation | Project |
|----------------|--|--|
| BSS326 | Peter Samson from BSES Limited | Attend the ISSCT Entomology Workshop and model the dynamics of cane grub populations. |
| BSS330 | Deborah Purcell from BSES Limited | Enhancing the impact of near infrared (NIR) methods as rapid varietal selection tools. |
| BSS332 | David Donald from BSES Limited | Trade certification for near infrared payment in the sugar industry. |
| BSS336 | Jayson Dowie from BSES Limited | Participation in Solute Signatures Masterclass and 'Vision for Irrigation Research, Development and Extension' planning. |
| CPI015 | Graham Bonnett from CSIRO | Learning from the development of a significant weed issue, the incursion of wild sugarcane in Panama. |
| GGP002 | Mick Andrejic from Barron Delta Farming Group | Development of an integrated wallaby management strategy. |
| NCT004 | Robert Quirk from NSW Canegrowers | Travel to attend the ISSCT congress in Mexico to present two papers. |
| NSC018 | Rex Farrell from NSW Sugar Milling Cooperative | Study Tour of mills with dry trash removal plants in Brazil and Argentina. |

Group CBPs completed during 2009–2010

| Project number | Researcher and Organisation | Project |
|----------------|---|---|
| BSS315 | Marian Davis from BSES Limited | Conduct an R, D& E symposium in the Burdekin. |
| BSS321 | Barry Callow from BSES Limited | Contrasting broad acre enterprise management of herbicide resistance development with that of the sugarcane industry. |
| BSS327 | Peter Samson from BSES Limited | Validation of a model to predict population trends of grey back cane grub. |
| BSS328 | Barry Croft from BSES Limited | Workshop for sugar industry staff on sugarcane disease identification and management. |
| BSS335 | Philip Deguara from JC Deguara Family Trust | Building capacity for the Future Farmers group Mackay. |
| MAP002 | Mackay Area Productivity Services | Mackay Alignment of Grower Services (MAGS) Services Ltd. |

SECTION 3

Grower Group Innovation Projects

As part of SRDC's commitment towards improving collaboration and innovation, it invests in Grower Group Innovation Projects (GGIPs) that enable growers to build capability to conduct their own research and development in their own region. SRDC calls for contracts and assesses the projects, however the Grower Group Network is managed by Grower Group Services (GGN001), a project led by three part-time officers who oversee the conduct and reporting of projects, group training and program coordination. This section highlights GGIPs completed in 2009–2010.

Development of an integrated wallaby management strategy – Barron River Farmers Group

The wallaby population is thought to have been increasing over the last 20 years and to have 'exploded' recently, coinciding with changes in farming practices, such as green trash blanketing. The key outcome of the project was a Wallaby Management Strategy that included a series of recommended strategies for cane farmers to keep wallabies at a sustainable population without losing cane productivity. (GGP002)

Peanuts as a sugarcane rotation crop – Sustainable Sugar and Peanut Agriculture P/L (SSPag)

Producers on sandy soil have found that the nematode controlling effects of growing peanuts as a break crop for sugarcane is more beneficial than other legumes. However, peanut production in cane-based farming systems involves a number of cultivations, so the members of SSPag decided to research growing peanuts in an uncultivated cane trash blanket. The trials highlighted the difficulty of not only adapting all of the components of the new farming system into a commercial situation, but also in evaluating results. The group, through its directors, designed a

prototype planter (GGP040) to better deal with cane trash in the sugarcane farming system. As a result of these projects the group developed a greater appreciation of how to conduct detailed trials and evaluation of tillage treatments. (GGP028)

Strategic grub management – Mulgrave Cane Grub Management Group

The need for more grower involvement in a thorough grub monitoring program led to the formation of this group. Twenty Mulgrave growers and staff from the Mulgrave Productivity Service assisted BSES entomologist Dr Nader Sallam and the entomology research team at BSES Meringa in the field work and data collection. They used the monitoring results to predict greyback cane grub population dynamics and potential damage over two consecutive seasons, which was conveyed to growers through GrubPlan meetings and face-to-face discussions. The grower's reaction to the research was proactive. Treatment rates rose simultaneously with the predicted rise in grub numbers. Most saw the benefit in this project to the extent that the Mulgrave Cane Grub Management Group succeeded in raising funds to keep the grub monitoring activity going for another year after this project concluded. (GGP029)

Managing cane grubs in the Mackay region – Mount Kinchant Growers Group

Growers rely heavily on insecticides for greyback canegrub management, however the treatments are expensive and there is no system that enables the strategic application of insecticides to only the fields that need treatment. The Mount Kinchant Growers Group engaged a consultant to test a predictive model (BSS257) for cane grub infestation and evaluate a system that could be used by growers to vary their treatment decisions as circumstances changed. While the predictive models require refinement, the

group learned that canegrub management can be undertaken strategically and cost effectively. They gained knowledge from the exchange of canegrub-management information and the cooperative collaboration between industry R&D providers. (GGP030)

***Two-in-One harvesting attachment
– Castellani Harvesting Group***

The sugarcane industry is one of the only remaining mechanised industries that harvests its crop as a single row. The Two-in-One concept is the first step towards wide swath harvesting and is the only commercially available cane harvesting system available to the sugar industry globally at this point in time. This group developed an automatic base cutter system to assist harvester operators utilising the Two-in-One harvesting attachment, which has cost and environmental potential to reduce operator fatigue; reduce maintenance and fuel costs; and increase operational efficiencies compared to single row harvesters. The uptake of the Two-in-One has been gradual within the industry; with those committed to the concept using the unit to its full potential. Many perceive the system to be difficult because of the higher skills required to operate the unit. It is agreed by most that an automatic base cutter system and auto-steer

will remove some of the reluctance to use the system. Due to this project both Two-in-One harvesters operating in the Herbert are now fitted and operational with Techagro automatic base cutter sensing equipment. (GGP032)

***Nutrient management using compost
– CRRIS Inc. Trading as Advanced
Nutrient Solutions Pty Ltd***

Four Mackay cane growing families looking to improve the environmental sustainability of their nutrient management and increase farm profitability joined together to research the benefits of using compost. The experiment compared fertilising with various compost and granular fertiliser combination treatments to determine whether the plant cane yield and quality was influenced by the type and rate of applied nutrients. The group was not able to capture any conclusive outcomes during the two-year project after realising that a crop cycle of at least five years is needed to confirm results. However, they made some worthwhile observations, which have been communicated to other growers and industry representatives, and will continue researching, resolute in their conviction that composting has potential benefits to the industry and the environment. (GGP034)

NSW grower Angus Stainlay was a finalist of the Young Farmer of the Year Awards in 2010





Daryl Morellini (right) and farm employee Ryan Anderson (left) are pictured with an innovative all-in-one planting system developed by a group of Herbert River growers with financial assistance from SRDC. It cuts farming costs, minimises labour and reduces machine hours, fuel usage and wear-and-tear by combining bed formation and planting in one fast controlled traffic operation. (Photo taken by Bill Kerr)

Testing frost tolerant varieties for NSW – NSW Farming Systems Group Inc

Frost damage affects about one third of the NSW cane growing lands at least once every three years, reducing production by up to 30 percent and costing the industry up to \$2.5 million. This group investigated whether artificial freeze testing of sugarcane seedlings can help to identify varieties that would perform well under field frosting conditions. They found that the degree of differentiation between the good, average and poor categories is very small and it is difficult to rate varieties for field performance from the artificial freeze test results. Despite this, the group will now extend the project and conduct further cold room research. They will modify the testing regime (using a dryer moisture regime and testing mature cane stalks of standard varieties) in the hope that this will provide greater differentiation between the frost tolerances of different varieties. (GGP041)

Total concept sugarcane planting system – P.A.D. Farming Company

The aim of this project was to build a one-pass plant and mound planter that would reduce the cost of growing sugarcane and eliminate the need to work the ground after planting. The group successfully built a one-pass planter maunder that can also plant conventionally and can travel speeds of up to 14km/hr, and this has received much positive feedback from farmers and planting and harvesting contractors and is awaiting patent. An expected outcome from the project is a low cost profiling attachment device that can be fitted to existing planters or made available for new planters. Considerable environment and cost savings were made using the new system, where it was estimated that more than \$16,000 and 17,316 kg of carbon dioxide was saved in a comparison planting of 300 acres. The group members have adopted the use of the planter and one contract planter has installed the attachment. The new system received a lot of interest from farmers when profiled at several field days and in the media. (GGP036)

SECTION 3

Scholarship Projects

The Sugar Research and Development Corporation's investment in higher education through its scholarship program ensures the future of the sugar industry by fostering scientific skills and knowledge. Six scholarship projects were due to finish in 2009–10. Three were completed and three applied for an extension of time to complete.

Su Yin Tan – Studies on bagasse fractionation using ionic liquids

The aim of this project was to develop a process that utilises ionic liquids at atmospheric pressure for the fractionation of bagasse into lignin, cellulose and hemicellulose. Each of the resultant bagasse fractions has the potential to underpin the sustainability of the sugarcane industry by the production of renewable chemicals. In order to commercialise this process it is necessary to have an understanding of ionic liquid structure-function relationships relating to bagasse fractionation. Studies at Monash University have shown that an ionic liquid mixture containing the 1-ethyl-3-methylimidazolium cation and a mixture of alkylbenzenesulfonates with xylene sulphonate as the main anion was successfully used to extract lignin from bagasse at atmospheric pressure and elevated temperatures (170 C to 190 C). The lignin was recovered from the ionic liquid by precipitation so that the ionic liquid can be re-used. An extraction yield exceeding 93 percent was attained. The regenerated ionic liquid showed good retention of structure and properties. The other product of extraction was a cellulose pulp, which can be used in further processing. (STU053)

Kenji Osabe – Development and application of a mature stem specific promoter in sugarcane.

This research relates to gene technology for sugarcane improvement through increased sucrose or higher-value product yields, which depends on ability to drive expression of introduced genes in sugarcane and aimed to reach the point of practical application of the most useful of these sequences. Kenji's research demonstrated for the first time that different alleles (gene versions) in sugarcane can have very different developmental expression patterns. He showed that one isolated promoter can express introduced genes in mature sugarcane stems. This promoter is already being tested with genes aimed to increase sugar yield and produce higher value materials in sugarcane. (STU056)



PhD scholarship graduate Dr Tom Rainey holding sugarcane bagasse fibre.

Tom Rainey – Improved bagasse fibre properties for the manufacture of paper, board and composite materials.

Imported bagasse products are available in local supermarkets and Tom believed these should be displaced by local production, which generates income for millers and growers. This project addressed a major technical hurdle to optimise the drainage/retention properties of bagasse fibres so it can be made into pulp, paper, board, structural and packaging materials.

Tom trialled inorganic and polymer microparticle systems to optimise bagasse fibre properties. This investigation showed that if carefully prepared, sugarcane can be used to produce paper at the same production rate as from wood, contrary to the previously held conventional wisdom. The quality of the pulp was better than the bagasse pulp that is imported for local paper manufacture. The next stage is to validate the laboratory investigation by undertaking factory trials. Elements of the study were undertaken in Canada, New Zealand and India and the research has been peer-reviewed and published in major international journals. (STU057)

NEW POSTGRADUATE SCHOLARSHIPS AWARDED

Three postgraduate students were offered a SRDC scholarship to complete PhD research from 2010:

Richard Brackin will investigate the microbiology of sugarcane soils through the University of Queensland, which could lead to reduced requirements for fertiliser.

Mark Wang will determine greenhouse gas emissions from sugarcane agriculture and mitigation options through the Australian National University.

Patrick Bewg will research modification of lignin bio-synthesis in sugarcane for the production of cellulosic ethanol through the Queensland University of Technology.

In addition, SRDC entered into a partnership with Sugar Research Limited and the Queensland University of Technology to fund five milling-related post graduate scholarships at PhD and Masters level.

SECTION 3

SRDC Innovation Awards

Each year SRDC acknowledges excellence in research and science through our Innovation in R&D Awards. On 11 May 2010 the winners of three award categories were announced at the Australian Society of Sugar Cane Technologists conference held in Bundaberg.

Announcing the winners of the awards were ABC TV Landline Presenter Peter Lewis, SRDC Board Member Angela Williams, and Acting SRDC Executive Director Annette Sugden. The ceremony showed an impressive video presentation showing the innovative, and ground breaking research achieved by the industry's top researchers. All three awards categories were won by talented, dedicated and forward-thinking people.

2010 SRDC Innovation Award Winner

BSES Limited's Smut Buster team led by plant breeder and pathologist scientists Dr Mike Cox, Dr Nils Berding, Dr Shamual Bhuiyan and Dr Barry Croft were awarded this prize for development of smut resistant cane varieties in response to the sugarcane smut incursion in Queensland in 2006, preparing Australia's sugarcane industry to tackle the smut disease outbreak and incur minimal losses.

Technicians and research assistants who supported the Smut Buster program each received an SRDC certificate during local award ceremonies at BSES research centres in Meringa, Bundaberg and Mackay.

2010 SRDC Research Award Winner

Queensland University of Technology Principal Research Fellow, Dr Bill Doherty was awarded this prize for development of an efficient one-step cleaning process using a novel formulation to remove scale from mill evaporators. Using this technology, Australian sugar mills are now building chemical recovery plants that are cost effective, fast and reduce disposal problems.

SRDC Service Award Winners

For individual excellence and leadership in influencing research through management, policy development and promotional activities. Due to the high caliber of entries, three prizes were awarded in this category:

- BSES Limited Principal Scientist, Dr Nils Berding.
- Retired Director of the Department of Foreign Affairs and Trade, Ms Joan Hird.
- BSES Limited Research Officer, Keith Chandler.



SRDC Chair presents BSES Meringa staff with Innovation certificates during Board visit in June 2010.



BSES Smut Buster Team wins 2010 SRDC Innovation Awards.

SECTION 4

Statutory Reporting

- Due diligence
- Management
- CAC Act compliance
- Indemnities for officers
- Intellectual property management
- Environment Protection and Biodiversity Conservation Act
- Privacy Commission
- Freedom of Information
- Australian Bargaining Framework
- Occupational Health and Safety
- Commonwealth Disability Strategy Performance Report

Due diligence

At every meeting in 2009–10, the Board confirmed that all decisions had complied with the requirements of the Due Diligence checklist.

Management

The SRDC Business Process Management System is an essential tool to manage risk and control fraud and provides quality assurance of the daily management of SRDC. Its annual audit is conducted by the Audit Committee.

CAC Act compliance

A report indicating CAC Act compliance and financial sustainability for the 2009–10 financial year was approved by the Board on 27 August 2010 and forwarded to the Department of Finance and Administration and the Department of Agriculture, Fisheries and Forestry shortly after the Board meeting and approval granted.

Risk management

SRDC is committed to managing risk to continue to protect its:

- stakeholders
- employees and their skills
- environment
- quality of service
- assets and intellectual property
- contractual and statutory obligations
- corporate image and reputation.

The Board reviews the Fraud Control Plan, Risk Management Plan and Business Continuity Plan via the Audit Committee annually. SRDC complies with the policies of the Protective Security Manual.

Indemnities for officers

SRDC has taken steps to ensure that adequate cover for Directors and Officers is in place. No issues arose under the relevant legislation that required reporting.

Intellectual property management

SRDC incorporates an Intellectual Property Management (IPM) Plan developed in consultation with major R&D providers into its application and project management system to ensure that intellectual property issues are considered fully during the development of project proposals.

Although formal ownership of intellectual property developed in most SRDC-funded R&D projects is vested in the research organisations, the Corporation retains an interest in capitalising on it and is a party to several patents and provisional patent applications.

Environment Protection and Biodiversity Conservation Act

SRDC's obligations under section 516A of the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) require consideration of the environmental impacts of proposals and projects. Research project proponents are required to outline potential risks relating to the project, and appropriate management strategies.

These are considered during assessment of proposals. Potential and/or actual impacts of existing projects are also considered during the assessment of milestone reports and in project reviews. No proposals or projects with adverse environmental consequences were identified in 2009–10. In accordance with the requirements of the EPBC Act SRDC has reported to the Australian government on how SRDC's actions accord with the principles of ecologically sustainable development.

Privacy Commission

SRDC complied with all obligations to the Privacy Commission in 2009–10.

Freedom of Information

SRDC received no enquiries under the *Freedom of Information (FOI) Act* in 2009–10.

Australian Bargaining Framework

SRDC complied with the Australian Government Bargaining Framework when exercising power to engage employees in accordance with the requirements of section 143 of the PIERD Act and clause 12 of Schedule 1 of the CAC Act ROO Orders in 2009–2010.

Occupational Health and Safety

SRDC's policy is to conduct its activities in such a way as to provide an environment that protects the health, safety and welfare of staff and visitors and actively encourages safe working practices.

The OH&S Management System sets out the policies and establishes procedures for planning, implementation, monitoring and review of OH&S matters.

No health and safety issues required external reporting during 2009–10.



ASSCT conference delegates visited the Bundaberg sugarcane mill in May 2010. All visitors attended an OH&S briefing and were given full protective safety gear before the tour commenced.

SECTION 5

Auditor's Letters

Financial Statements

Notes of the Financial Statements



27 August 2010

Ms Annette Sugden
Executive Director
Sugar Research and Development Corporation
PO Box 12050
BRISBANE GEORGE STREET QLD 4003

Dear Ms Sugden

**SUGAR RESEARCH AND DEVELOPMENT CORPORATION
2009-2010 FINANCIAL STATEMENTS AUDIT**

Attached are the original signed financial statements, together with an audit opinion on the above audit. A report and a copy of the signed financial statements have been forwarded to the Minister for Agriculture, Fisheries and Forestry.

I would like to take this opportunity to thank you and your staff for the co-operation and assistance provided during the audit.

Yours sincerely



Mark A. Moloney
Senior Director



INDEPENDENT AUDITOR'S REPORT

To the Minister for Agriculture, Fisheries and Forestry

Scope

I have audited the accompanying financial statements of Sugar Research and Development Corporation (the Corporation) for the year ended 30 June 2010, which comprise: a Statement by the Directors and Executive Director, Statement of Comprehensive Income; Balance Sheet; Statement of Changes in Equity; Cash Flow Statement; Schedule of Commitments; Schedule of Contingencies; Schedule of Asset Additions; and Notes to and forming part of the Financial Statements, including a Summary of Significant Accounting Policies.

The Directors' Responsibility for the Financial Statements

The directors are responsible for the preparation and fair presentation of the financial statements in accordance with the Finance Minister's Orders made under the *Commonwealth Authorities and Companies Act 1997*, including the Australian Accounting Standards (which include the Australian Accounting Interpretations). This responsibility includes establishing and maintaining internal controls relevant to the preparation and fair presentation of the financial statements that are free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

Auditor's Responsibility

My responsibility is to express an opinion on the financial statements based on my audit.

I have conducted my audit in accordance with the Australian National Audit Office Auditing Standards, which incorporate the Australian Auditing Standards. These auditing standards require that I comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error.

In making those risk assessments, the auditor considers internal control relevant to the Corporation's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Corporation's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the directors, as well as evaluating the overall presentation of the financial statements.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

Independence

In conducting the audit, I have followed the independence requirements of the Australian National Audit Office, which incorporate the requirements of the Australian accounting profession.

Auditor's Opinion

In my opinion, the financial statements of Sugar Research and Development Corporation:

- (a) have been prepared in accordance with the Finance Minister's Orders made under the *Commonwealth Authorities and Companies Act 1997*, including the Australian Accounting Standards; and
- (b) give a true and fair view of the matters required by the Finance Minister's Orders including Sugar Research and Development Corporation's financial position as at 30 June 2010 and its financial performance and cash flows for the year then ended.

Australian National Audit Office



Mark A Moloney

Senior Director

Delegate of the Auditor-General

Canberra

27 August 2010

SECTION 5

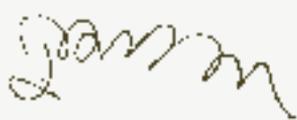
Financial Statements for the Period Ended 30 June 2010

SUGAR RESEARCH AND DEVELOPMENT CORPORATION
STATEMENT BY THE DIRECTORS AND EXECUTIVE DIRECTOR

In our opinion, the attached financial statements for the period ended 30 June 2010 are based on properly maintained financial records and give a true and fair view of the matters required by the Finance Minister's Orders made under the *Commonwealth Authorities and Companies Act 1997*, as amended.

In our opinion, at the date of this statement, there are reasonable grounds to believe that the Corporation will be able to pay its debts as and when they become due and payable.

This statement is made in accordance with a resolution of the directors.



Ian RG Knop AM
Chairperson

Date: 26 August 2010



Annette Sugden
Executive Director

Date: 26 August 2010



Christine Ipson
Board Secretary

Date: 26 August 2010

SUGAR RESEARCH AND DEVELOPMENT CORPORATION
 STATEMENT OF COMPREHENSIVE INCOME
 for the period ended 30 June 2010

| | Notes | 2010 \$'000 | 2009 \$'000 |
|---|-------|----------------|----------------|
| EXPENSES | | | |
| Employee benefits | 3A | 1,046 | 1,005 |
| Supplier expenses | 3B | 898 | 912 |
| Grants | 3C | 7,764 | 8,292 |
| Depreciation and amortisation | 3D | 69 | 37 |
| Write down and impairment of assets | 3E | 8 | 6 |
| Total expenses | | 9,785 | 10,252 |
| LESS: | | | |
| OWN SOURCE INCOME | | | |
| Own source revenue | | | |
| Industry contributions (sugar levies) | | 4,136 | 4,317 |
| Interest | 4A | 457 | 647 |
| Rental Income | 4B | 14 | - |
| Other | 4C | 20 | 19 |
| Total own source revenue | | 4,627 | 4,983 |
| Total own source income | | 4,627 | 4,983 |
| Net cost of services | | 5,158 | 5,269 |
| Revenue from Government | 4D | 5,817 | 6,110 |
| Surplus attributable to the Australian Government | | 659 | 841 |
| OTHER COMPREHENSIVE INCOME | | | |
| Total other comprehensive income | | - | - |
| Total comprehensive income | | - | - |
| Total comprehensive income attributable to the Australian Government | | 659 | 841 |

The above statement should be read in conjunction with the accompanying notes.

SUGAR RESEARCH AND DEVELOPMENT CORPORATION
BALANCE SHEET
as at 30 June 2010

| | Notes | 2010 \$'000 | 2009 \$'000 |
|-----------------------------------|-------|----------------|----------------|
| ASSETS | | | |
| Financial Assets | | | |
| Cash and cash equivalents | 5A | 9,990 | 9,633 |
| Trade and other receivables | 5B | 1,428 | 1,308 |
| Total financial assets | | 11,418 | 10,941 |
| Non-Financial Assets | | | |
| Leasehold improvements | 6A | 81 | 77 |
| Plant and equipment | 6B,C | 16 | 55 |
| Other | 6D | 1 | 24 |
| Total non-financial assets | | 98 | 156 |
| Total Assets | | 11,516 | 11,097 |
| LIABILITIES | | | |
| Payables | | | |
| Suppliers | 7A | 36 | 38 |
| Grants | 7B | 18 | 489 |
| Other | 7C | 33 | 11 |
| Total payables | | 87 | 538 |
| Provisions | | | |
| Employee provisions | 8A | 263 | 110 |
| Other | 8B | 58 | - |
| Total provisions | | 321 | 110 |
| Total Liabilities | | 408 | 648 |
| Net Assets | | 11,108 | 10,449 |
| EQUITY | | | |
| Reserves | | - | 2 |
| Retained surplus | | 11,108 | 10,447 |
| Total Equity | | 11,108 | 10,449 |

The above statement should be read in conjunction with the accompanying notes.

SUGAR RESEARCH AND DEVELOPMENT CORPORATION
 STATEMENT OF CHANGES IN EQUITY
 for the period ended 30 June 2010

| | Retained surplus | | Asset revaluation reserve | | Total equity | |
|--|------------------|----------------|---------------------------|----------------|----------------|----------------|
| | 2010 \$'000 | 2009 \$'000 | 2010 \$'000 | 2009 \$'000 | 2010 \$'000 | 2009 \$'000 |
| Opening balance | | | | | | |
| Balance carried forward from previous period | 10,447 | 9,606 | 2 | 2 | 10,449 | 9,608 |
| Adjustment for errors | 2 | - | (2) | - | - | - |
| Adjusted opening balance | 10,449 | 9,606 | - | 2 | 10,449 | 9,608 |
| Comprehensive income | | | | | | |
| Surplus for the period | 659 | 841 | | | 659 | 841 |
| Total comprehensive income | 659 | 841 | - | - | 659 | 841 |
| of which: | | | | | | |
| Attributable to the Australian Government | 659 | 841 | - | - | 659 | 841 |
| Closing balance as at 30 June | 11,108 | 10,447 | - | 2 | 11,108 | 10,449 |
| Closing balance attributable to the Australian Government | 11,108 | 10,447 | - | 2 | 11,108 | 10,449 |

The above statement should be read in conjunction with the accompanying notes.

SUGAR RESEARCH AND DEVELOPMENT CORPORATION
 CASH FLOW STATEMENT
 for the period ended 30 June 2010

| | Notes | 2010 \$'000 | 2009 \$'000 |
|--|-------|----------------|----------------|
| OPERATING ACTIVITIES | | | |
| Cash received | | | |
| Industry contribution (sugar levies) | | 4,146 | 4,489 |
| Receipts from Government | | 5,845 | 6,471 |
| Interest | | 410 | 868 |
| Net GST received | | 703 | 788 |
| Other | | 77 | 25 |
| Total cash received | | 11,181 | 12,641 |
| Cash used | | | |
| Employees | | 880 | 1,021 |
| Suppliers | | 996 | 1,032 |
| Grants | | 8,944 | 9,005 |
| Total cash used | | 10,820 | 11,058 |
| Net cash from operating activities | 9 | 361 | 1,583 |
| INVESTING ACTIVITIES | | | |
| Cash used | | | |
| Purchase of property, plant and equipment | | 4 | 67 |
| Total cash used | | 4 | 67 |
| Net cash used by investing activities | | (4) | (67) |
| Net increase in cash held | | 357 | 1,516 |
| Cash and cash equivalents at the beginning of the reporting period | | 9,633 | 8,117 |
| Cash and cash equivalents at the end of the reporting period | 5A | 9,990 | 9,633 |

The above statement should be read in conjunction with the accompanying notes.

SUGAR RESEARCH AND DEVELOPMENT CORPORATION
 SCHEDULE OF COMMITMENTS
 as at 30 June 2010

| | 2010 \$'000 | 2009 \$'000 |
|---------------------------------------|----------------|----------------|
| BY TYPE | | |
| Commitments receivable | | |
| GST recoverable on commitments | 2,027 | 1,481 |
| Total commitments receivable | 2,027 | 1,481 |
| Other commitments | | |
| Operating leases ¹ | 475 | 689 |
| Research and development grants PIERD | 21,830 | 15,604 |
| Total other commitments | 22,305 | 16,293 |
| Net commitments by type | 24,332 | 17,774 |
| BY MATURITY | | |
| Other commitments receivable | | |
| One year or less | 824 | 691 |
| From one to five years | 1,203 | 773 |
| Over five years | - | 17 |
| Total other commitments receivable | 2,027 | 1,481 |
| Operating lease commitments | | |
| One year or less | 214 | 214 |
| From one to five years | 261 | 475 |
| Over five years | - | - |
| Total operating lease commitments | 475 | 689 |
| Other commitments | | |
| One year or less | 8,858 | 7,383 |
| From one to five years | 12,972 | 8,032 |
| Over five years | - | 189 |
| Total other commitments | 21,830 | 15,604 |
| Net commitments by maturity | 24,332 | 17,774 |

NB: Commitments are GST inclusive where relevant.

¹Operating leases included are effectively non-cancellable and comprise:

Leases for office accommodation

Lease payments are subject to an annual increase of 5%. The initial periods of office accommodation leases are still current.

The above schedule should be read in conjunction with the accompanying notes.

SUGAR RESEARCH AND DEVELOPMENT CORPORATION
 SCHEDULE OF CONTINGENCIES
 as at 30 June 2010

| | 2010 \$'000 | 2009 \$'000 |
|--|----------------|----------------|
| Contingent liabilities | - | - |
| Total contingent liabilities | - | - |
| Net contingent assets (liabilities) | - | - |

Details of each class of contingent liabilities and contingent assets listed above are disclosed in Note 10: Contingent Liabilities and Assets, along with information on significant remote contingencies and contingencies that cannot be quantified.

During 2009–10, Sugar Research and Development Corporation gave a financial guarantee over the lease of the head office premises at Level 16, 141 Queen Street, Brisbane. Details are provided in Note 15: Financial Instruments.

The above schedule should be read in conjunction with the accompanying notes.

SUGAR RESEARCH AND DEVELOPMENT CORPORATION
 SCHEDULE OF ASSET ADDITIONS
 for the period ended 30 June 2010

The following non-financial non-current assets were added in 2009–10:

| | Leasehold improvements \$'000 | Plant and equipment \$'000 | Total \$'000 |
|------------------------|-------------------------------------|----------------------------------|-----------------|
| By purchase – other | 57 | 4 | 61 |
| Total additions | 57 | 4 | 61 |

The following non-financial non-current assets were added in 2008–09:

| | Leasehold improvements \$'000 | Plant and equipment \$'000 | Total \$'000 |
|------------------------|-------------------------------------|----------------------------------|-----------------|
| By purchase – other | 17 | 51 | 68 |
| Total additions | 17 | 51 | 68 |

Index to the Notes of the Financial Statements

- Note 1: Summary of Significant Accounting Policies
- Note 2: Events after the Balance Sheet Date
- Note 3: Expenses
- Note 4: Income
- Note 5: Financial Assets
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Note 1: Summary of Significant Accounting Policies

1.1 Objectives of Sugar Research and Development Corporation

The objective of Sugar Research and Development Corporation (the Corporation) is to foster an innovative and sustainable Australian sugar industry through targeted investment in research and development.

The Corporation's corporate outcome expresses the overall goal of a profitable and internationally competitive and sustainable Australian sugar industry providing economic, environmental and social benefits for rural and regional communities through targeted investment in research and development.

The continued existence of the Corporation in its present form and with its present programs is dependent on Government policy and on continuing funding by Parliament for the Corporation's administration and programs.

1.2 Basis of Preparation of the Financial Report

The financial statements and notes are required by clause 1(b) of Schedule 1 to the *Commonwealth Authorities and Companies Act 1997* and are general purpose financial statements.

The financial statements and notes have been prepared in accordance with:

- Finance Minister's Orders (or FMO) for reporting periods ending on or after 1 July 2009; and
- Australian Accounting Standards and Interpretation issued by the Australian Accounting Standards Board (AASB) that apply for the reporting period.

The financial statements have been prepared on an accrual basis and in accordance with the historical cost convention, except for certain assets at fair value. Except where stated, no allowance is made for the effect of changing prices on the results or the financial position.

The financial statements are presented in Australian dollars and values are rounded to the nearest thousand dollars unless otherwise specified

Unless an alternative treatment is specifically required by an accounting standard or the FMO, assets and liabilities are recognised in the balance sheet when and only when it is probable that future economic benefits will flow to the Corporation or a future sacrifice of economic benefits will be required and the amounts of the assets or liabilities can be reliably measured. However, assets and liabilities arising under Agreements Equally Proportionately Unperformed are not recognised unless required by an accounting standard. Liabilities and assets that are unrecognised are reported in the schedule of commitments or the schedule of contingencies.

1.3 Significant Accounting Judgement and Estimates

Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that may have a financial impact on the entity and that are believed to be reasonable under the circumstances.

Makegood provision on office lease

A condition of the lease over the office premises is that the space occupied by the Corporation will be returned to its original condition at the end of the lease period. The Lease agreement specifies the conditions that must be met. The Corporation has engaged an independent third party to make an assessment of the costs which are likely to be incurred in this regard.

1.4 New Accounting Standards

Adoption of New Australian Accounting Standard Requirements

No accounting standard has been adopted earlier than the application date as stated in the standard. The following new standards and amendments to standards are applicable to the current reporting period.

The following new standards/revised standards/Interpretations/amending standards were issued prior to the signing of the statement by the Directors and Executive Director, were applicable to the current reporting period and had a financial impact on the entity:

AASB 101 : Presentation of Financial Statements

The Australian Accounting Standards Board revised AASB101 and as a result, there have been changes to the presentation and disclosure of certain information within the financial statements. Below is an overview of the key changes of the impact on the financial statements.

Disclosure impact

Terminology changes – The revised version of AASB 101 contains a number of terminology changes, including the amendment of the names of the primary financial statements.

Reporting changes in equity – The revised AASB 101 requires all changes in equity from transactions with owners, in their capacity as owners, to be presented separately from non-owner changes in equity. Owner changes in equity are to be presented in the statement of changes in equity, with non-owner changes in equity presented in the statement of comprehensive income. The previous version of AASB 101 required that owner changes in equity and other comprehensive income be presented in the statement of changes in equity.

Statement of comprehensive income – The revised AASB 101 requires all income and expenses to be presented in the statement of comprehensive income.

Other comprehensive income – the revised version of AASB 101 introduces the concept of other comprehensive income which comprises income and expenditure that are not recognised in profit or loss as required by other Australian Accounting Standards. Items of other comprehensive income are to be disclosed in the statement of comprehensive income.

Other new standards/revised standards/Interpretations/amending standards that were issued prior to the signing of the statement by the Directors and Executive Director and are applicable to the current reporting period did not have a financial impact, and are not expected to have a future financial impact on the entity.

- AASB 1 First time Adoption of Australian Accounting Standards – May 2009 (Principal)
- AASB 7 Financial Instruments: Disclosures – June 2009 (Compilation)
- AASB 107 Statement of Cash Flows – June 2009 (Compilation)
- AASB 108 Accounting Policies, Changes in Accounting Estimates and Errors – July 2008 (Compilation)
- AASB 110 Events after the Reporting Period – June 2009 (Compilation)
- AASB 116 Property, Plant and Equipment – June 2009 (Compilation)
- AASB 117 Leases – June 2009 (Compilation)
- AASB 118 Revenue – August 2008 (Compilation).
- AASB 119 Employee Benefits June 2009 (Compilation)
- AASB 120 Accounting for Government Grants and Disclosure of Government Assistance – July 2008 (Compilation)
- AASB 132 Financial Instruments: Presentation – June 2009 (Compilation)
- AASB 136 Impairment of Assets – June 2009 (Compilation)
- AASB 137 Provisions, Contingent Liabilities and Contingent Assets – June 2009 (Compilation)
- AASB 138 Intangible Assets – June 2009 (Compilation)
- AASB 139 Financial Instruments: Recognition and Measurement – October 2009 (Compilation)
- AASB 1031 Materiality – December 2007 (Compilation)
- AASB 1048 Interpretation of Standards – June 2010 (Principal)
- AASB 1049 Whole of Government and General Government Sector Financial Reporting – September 2008 (Compilation)
- Interp. 4 Determining whether an Arrangement contains a Lease – June 2009 (Compilation)
- Interp. 127 Evaluating the Substance of Transactions Involving the Legal Form of a Lease – June 2009 (Compilation)
- Interp. 132 Intangible Assets – Web Site Costs – September 2007 (Compilation)
- Interp. 1031 Accounting for the Goods and Services Tax (GST) – December 2007 (Compilation)

Future Australian Accounting Standard Requirements

The following new standards/revised standards/Interpretations/amending standards were issued by the Australian Accounting Standards Board prior to the signing of the statement by the Directors and Executive Director, which are expected to have a financial impact:

AASB 9: Financial Instruments and AASB 2009–11: Amendments to Australian Accounting Standards arising from AASB 9 [AASB 1, 3, 4, 5, 7, 101, 102, 108, 112, 118, 121, 127, 128, 131, 132, 136, 139, 1023 & 1038 and Interpretations 10 & 12] (applicable for annual reporting periods commencing on or after 1 January 2013) on the entity for future reporting periods:

These Standards are applicable retrospectively and amend the classification and measurement of financial assets. The Corporation has not yet determined any potential impact on the financial statements.

The changes made to accounting requirements include:

- Simplifying the classifications of financial assets into those carried at amortised cost and those carried at fair value;
- Removing the tainting rules associated with held to maturity assets;
- Requiring financial assets to be reclassified where there is a change in an entity's business model as they are initially classified based on: (a) the objective of the entity's business model for managing the financial assets; and (b) the characteristics of the contractual cash flows.

AASB 124: Related Party Disclosures (applicable for annual reporting periods commencing on or after 1 January 2011).

This Standard removes the requirement for government related entities to disclose details of all transactions with the government and other government related entities and clarifies the definition of a 'related party' to remove inconsistencies and simplify the structure of the Standard. No changes are expected to materially affect the Corporation.

AASB 2009–4: Amendments to Australian Accounting Standards arising from the Annual Improvements Project [AASB 2 and AASB 138 and AASB Interpretations 9 & 16] (applicable for annual reporting periods commencing from 1 July 2009) and AASB 2009–5: Further Amendments to Australian Accounting Standards arising from the Annual Improvements Project [AASB 5, 8, 101, 107, 117, 118, 136 & 139] (applicable for annual reporting periods commencing from 1 January 2010).

These Standards detail numerous non-urgent but necessary changes to Accounting Standards arising from the IASB's annual improvements project. No changes are expected to materially affect the Corporation.

AASB 2009–12: Amendments to Australian Accounting Standards [AASBs 5, 8, 108, 110, 112, 119, 133, 137, 139, 1023 & 1031 and Interpretations 2, 4, 16, 1039 & 1052] (applicable for annual reporting periods commencing on or after 1 January 2011).

This Standard makes a number of editorial amendments to a range of Australian Accounting Standards and Interpretations, including amendments to reflect changes made to the text of IFRSs by the IASB. The Standard also amends AASB 8 to require entities to exercise judgment in assessing whether a government and entities known to be under the control of that government are considered a single customer for the purposes of certain operating segment disclosures. The impacts of the amendments will be in the form of disclosure.

AASB 2009–14: Amendments to Australian Interpretation — Prepayments of a Minimum Funding Requirement [AASB Interpretation 14] (applicable for annual reporting periods commencing on or after 1 January 2011).

This Standard amends Interpretation 14 to address unintended consequences that can arise from the previous accounting requirements when an entity prepays future contributions into a defined benefit pension plan.

AASB 2010 4 Further Amendments to Australian Accounting Standards arising from the Annual Improvements Project [AASB 1, AASB 7, AASB 101 & AASB 134 and Interpretation 13] (applicable for annual reporting periods commencing on or after 1 January 2011).

This standard amends the identified standards providing additional disclosure requirements.

There were additional new standards/revised standards/Interpretations/amending standards issued by the Australian Accounting Standards Board which are not listed above that are not relevant to the operations of the Corporation.

1.5 Revenue

Revenues from Government

Revenue is predominantly derived from levies collected from the sugar industry with matching Commonwealth Contributions in accordance with the *Primary Industries and Energy Research and Development Act 1989* (PIERD).

Funding received or receivable from agencies (appropriated to the Corporation as a CAC body payment item for payment to the Corporation) is recognised as Revenue from Government unless they are in the nature of an equity injection.

PIERD Commonwealth Contribution revenue is recognised based on a percentage of monthly expenditure incurred by the Corporation, subject to a cap of 0.5% of the Gross Value of Production.

Amounts appropriated for Departmental outputs appropriations for the year (adjusted for any formal additions and reductions) are recognised as revenue when the Corporation gains control of the appropriation, except for certain amounts which relate to activities that are reciprocal in nature, in which case revenue is recognised only when it has been earned.

Appropriations receivable are recognised at their nominal amounts.

The Corporation has received additional funding as part of the Regional and Community Projects (RCP) initiative run by the Australian Government to improve the production and performance of sugarcane varieties. The Corporation has selected a project which is to be supported by this additional funding.

Interest revenue is recognised using the effective interest method as set out in AASB 139 Financial Instruments: Recognition and Measurement.

1.6 *Gains*

Sale of Assets

Gains from disposal of non-current assets are recognised when control of the asset has passed to the buyer.

1.7 *Transactions with the Government as Owner*

Equity Injections

Amounts that are designated as equity injections for a year are recognised directly in contributed equity in that year.

1.8 *Employee Benefits*

Liabilities for short term employee benefits (as defined in AASB 119) and termination benefits due within twelve months of balance date are measured at their nominal amounts.

The nominal amount is calculated with regard to the rates expected to be paid on settlement of the liability.

All other employee benefit liabilities are measured as the present value of the estimated future cash outflows to be made in respect of services provided by employees up to the reporting date.

Leave

The liability for employee benefits includes provision for annual leave and long service leave. No provision has been made for sick leave as all sick leave is non-vesting and the average sick leave taken in future years by employees of the Corporation is estimated to be less than the annual entitlement for sick leave.

The leave liabilities are calculated on the basis of employees' remuneration at the estimated salary rates that applied at the time the leave is taken, including the Corporation's employer superannuation contribution rates to the extent that the leave is likely to be taken during service rather than paid out on termination.

The estimate of the present value of the liability takes into account attrition rates and pay increases through promotion and inflation.

Superannuation

Staff of the Corporation are members of the Commonwealth Superannuation Scheme (CSS), the Public Sector Superannuation Scheme (PSS), the PSS accumulation plan (PSSap) or other retail superannuation funds.

The CSS and PSS are defined benefit schemes for the Australian Government. The PSSap is a defined contribution scheme.

The liability for defined benefits is recognised in the financial statements of the Australian Government and is settled by the Australian Government in due course. This liability is reported by the Department of Finance and Deregulation as an administered item.

The Corporation makes employer contributions to the Employee Superannuation Scheme at rates determined by an actuary to be sufficient to meet the cost to the Government of the superannuation entitlements of the Agency's employees. The Corporation accounts for the contributions as if they were contributions to defined contribution plans.

The liability for superannuation recognised as at 30 June represents outstanding contributions for the final fortnight of the year.

1.9 Leases

A distinction is made between finance leases and operating leases. Finance leases effectively transfer from the lesser to the lessee substantially all the risks and rewards incidental to ownership of leased non-current assets. An operating lease is a lease that is not a finance lease. In operating leases, the lesser effectively retains substantially all such risks and benefits.

Operating lease payments are expensed on a straight line basis which is representative of the pattern of benefits derived from the leased assets.

The Corporation has no finance leases.

1.10 Grants

Most grant agreements require the grantee to perform services, provide facilities or meet eligibility criteria. In these cases, the Corporation recognises grant liabilities only to the extent that the services required have been performed or the eligibility criteria have been satisfied by the grantee.

In cases where grant agreements are made without conditions to be monitored, liabilities are recognised on signing the agreement.

Grants expenses are recognised when a milestone is approved.

1.11 Cash

Cash and cash equivalents includes cash on hand and any deposits in bank accounts with an original maturity of 3 months or less that are readily convertible to known amounts of cash and subject to insignificant risk of changes in value. Cash is recognised at its nominal amount.

1.12 Financial Assets

The Corporation classifies its financial assets in the following categories:

- held to maturity investments;
- loans and receivables.

The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition.

Financial assets are recognised and derecognised upon trade date.

Effective Interest Method

The effective interest method is a method of calculating the amortised cost of a financial asset and of allocating interest income over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset, or, where appropriate, a shorter period.

Income is recognised on an effective interest rate basis except for financial assets that are recognised at fair value through profit or loss.

Held to Maturity investment

Non-derivative financial assets with fixed or determinable payments and fixed maturity dates that the group has the positive intent and ability to hold to maturity are classified as held to maturity investments. Held to maturity investments are recorded at amortised cost using the effective interest method less impairment, with revenue recognised on an effective yield basis.

Loans and Receivables

Trade receivables, loans and other receivables that have fixed or determinable payments that are not quoted in an active market are classified as loans and receivables. Loans and receivables are measured at amortised cost using the effective interest method less impairment. Interest is recognised by applying the effective interest rate.

Impairment of Financial Assets

Financial assets are assessed for impairment at each balance date.

- Financial assets held at amortised cost if there is objective evidence that an impairment loss has been incurred for loans and receivables or held to maturity investments held at amortised cost, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the asset's original effective interest rate. The carrying amount is reduced by way of an allowance account. The loss is recognised in the statement of comprehensive income.

1.13 *Financial Liabilities*

Financial liabilities are classified as either financial liabilities at fair value through profit or loss or other financial liabilities.

Financial liabilities were recognised and derecognised upon trade date.

Supplier and other payables are recognised at amortised cost. Liabilities are recognised to the extent that the goods or services have been received (and irrespective of having been invoiced).

1.14 *Contingent Liabilities and Contingent Assets*

Contingent liabilities and contingent assets are not recognised in the balance sheet but are reported in the relevant schedules and notes. They may arise from uncertainty as to the existence of a liability or asset or represent an asset or liability in respect of which the amount cannot be reliably measured. Contingent assets are disclosed when settlement is probable but not virtually certain and contingent liabilities are disclosed when settlement is greater than remote.

1.15 *Acquisition of Assets*

Assets are recorded at cost on acquisition except as stated below. The cost of acquisition includes the fair value of assets transferred in exchange and liabilities undertaken. Financial assets are initially measured at their fair value plus transaction costs where appropriate.

Assets acquired at no cost, or for nominal consideration, are initially recognised as assets and revenues at their fair value at the date of acquisition, unless acquired as a consequence of restructuring of administrative arrangements. In the latter case, assets are initially recognised as contributions by owners at the amounts at which they were recognised in the transferor agency's accounts immediately prior to the restructuring.

1.16 *Leasehold Improvements, Plant and Equipment*

Asset Recognition Threshold

Purchases of leasehold improvements, plant and equipment are recognised initially at cost in the balance sheet, except for purchases costing less than \$2,000, which are expensed in the year of acquisition (other than where they form part of a group of similar items which are significant in total).

Assets which have a net book value of less than \$2,000 at year end are removed from the asset register and expensed.

The initial cost of an asset includes an estimate of the cost of dismantling and removing the item and restoring the site on which it is located. This is particularly relevant to makegood provisions for the office lease taken up by the Corporation where there exists an obligation to original condition. These costs are included in the value of the Corporation's leasehold improvement with a corresponding provision for the makegood recognised.

Revaluations

Fair values for each class of asset are determined as shown below:

| Asset class | Fair value measured at: |
|------------------------|--------------------------------|
| Leasehold improvements | Depreciated replacement cost |
| Plant and equipment | Market selling price |

Following initial recognition at cost, leasehold improvements, plant and equipment are carried at fair value less accumulated depreciation and accumulated impairment losses. Valuations are conducted with sufficient frequency to ensure that the carrying amounts of assets do not differ materially from the assets' fair values as at the reporting date. The regularity of independent valuations depends upon the volatility of movements in market values for the relevant assets.

Revaluation adjustments are made on a class basis. Any revaluation increment is credited to equity under the heading of asset revaluation reserve except to the extent that it reverses a previous revaluation decrement of the same asset class that was previously recognised through surplus and deficit. Revaluation decrements for a class of assets are recognised directly through surplus and deficit except to the extent that they reverse a previous revaluation increment for that class.

Any accumulated depreciation as at the revaluation date is eliminated against the gross carrying amount of the asset and the asset restated to the re-valued amount.

Depreciation

Depreciable leasehold improvements, plant and equipment assets are written off to their estimated residual values over their estimated useful lives to the Corporation using, in all cases, the straight-line method of depreciation.

Depreciation rates (useful lives) and methods are reviewed at each reporting date and necessary adjustments are recognised in the current, or current and future reporting periods, as appropriate.

Depreciation rates applying to each class of depreciable asset are based on the following useful lives:

| | 2010 | 2009 |
|------------------------|--------------|--------------|
| Computer equipment | 3 years | 3 years |
| Furniture and fittings | 13 1/3 years | 13 1/3 years |
| Leasehold improvements | Lease term | Lease term |

Impairment

All assets were assessed for impairment at 30 June 2010. Where indications of impairment exist, the asset's recoverable amount is estimated and an impairment adjustment made if the asset's recoverable amount is less than its carrying amount.

The recoverable amount of an asset is the higher of its fair value less costs to sell and its value in use. Value in use is the present value of the future cash flows expected to be derived from the asset. Where the future economic benefit of an asset is not primarily dependent on the asset's ability to generate future cash flows, and the asset would be replaced if the Corporation were deprived of the asset, its value in use is taken to be its depreciated replacement cost.

1.17 Taxation

The Corporation is exempt from all forms of taxation except fringe benefits tax (FBT) and the goods and services tax (GST).

Revenues, expenses and assets are recognised net of GST:

- except where the amount of GST incurred is not recoverable from the Australian Taxation Office; and
- except for receivables and payables.

Note 2: Events After the Balance Sheet Date

No events have occurred after balance date that affect the Corporation's 2009–2010 financial statements.

Note 3: Expenses

Note 3A: Employee Benefits

| | 2010 | 2009 |
|--------------------------------|--------------|--------------|
| Wages and salaries | 622 | 831 |
| Superannuation | | |
| Defined contribution plans | 48 | 67 |
| Defined benefit plans | 44 | 50 |
| Leave and other entitlements | 109 | (40) |
| Other employee expenses | 223 | 97 |
| Total employee benefits | 1,046 | 1,005 |

Note 3B: Suppliers

Goods and services are made up of:

| | | |
|---|------------|------------|
| Stationery | 12 | 11 |
| Other | 669 | 696 |
| Total goods and services | 681 | 707 |
| Goods and services | | |
| Provision of goods – external parties | 178 | 199 |
| Rendering of services – external parties | 503 | 508 |
| Total goods and services | 681 | 707 |
| Other supplier expenses | | |
| Operating lease rentals external parties: | | |
| Minimum lease payments | 217 | 205 |
| Total other supplier expenses | 217 | 205 |
| Total supplier expenses | 898 | 912 |

Note 3C: Grants

| | 2010 | 2009 |
|---|--------------|--------------|
| Private sectors: | | |
| Research and development grants – PIERD | 7,764 | 8,292 |
| Total grants | 7,764 | 8,292 |

Note 3D: Depreciation and amortisation

| | | |
|--|-----------|-----------|
| Depreciation: | | |
| Plant and equipment | 16 | 16 |
| Leasehold improvements | 53 | 21 |
| Total depreciation and amortisation | 69 | 37 |

Note 3E: Write-down and Impairment of Assets

Asset write-down and impairments from:

Non-financial assets

| | | |
|--|----------|----------|
| Plant and equipment | 8 | 6 |
| Total write-down and impairment of assets | 8 | 6 |

Note 4: Income

Note 4A: Interest

| | | |
|-----------------------|------------|------------|
| Cash at bank | 149 | 164 |
| Short term deposits | 308 | 483 |
| Total interest | 457 | 647 |

Note 4B: Rental Income

| | | |
|-----------------------------|-----------|----------|
| Rental income from sublease | 14 | - |
| Total rental income | 14 | - |

Note 4C: Other Revenues

| | | |
|-----------------------------|-----------|----------|
| Royalties | 20 | 19 |
| Total other revenues | 20 | 1 |

Note 4D: Revenue from Government

| | 2010 | 2009 |
|---------------------------------------|--------------|--------------|
| Commonwealth contribution – PIERD Act | 5,817 | 5,110 |
| Commonwealth contribution – RCP | - | 1,000 |
| Total revenue from Government | 5,817 | 6,110 |

Note 5: Financial Assets

Note 5A: Cash and Cash Equivalents

| | | |
|--|--------------|--------------|
| Cash at bank | 2,990 | 2,850 |
| Cash on deposit | 7,000 | 6,783 |
| Total cash and cash equivalents | 9,990 | 9,633 |

Note 5B: Trade and Other Receivables

Goods and Services:

| | | |
|---|-----------|-----------|
| Goods and services – external parties | 48 | 18 |
| Total receivables for goods and services | 48 | 18 |

Department of Agriculture, Fisheries and Forestry:

| | | |
|--|--------------|--------------|
| Commonwealth contribution receivable | 1,059 | 1,087 |
| Levies receivable | 58 | 68 |
| Total receivable from the Department of Agriculture, Fisheries and Forestry | 1,117 | 1,155 |

Other receivables:

| | | |
|--|--------------|--------------|
| GST receivable from the Australian Taxation Office | 181 | 100 |
| Interest receivable | 82 | 35 |
| Total other receivables | 263 | 135 |
| Total trade and other receivables (gross) | 1,428 | 1,308 |

Receivables are expected to be received in:

| | | |
|--|--------------|--------------|
| No more than 12 months | 1,428 | 1,308 |
| Total trade and other receivables (net) | 1,428 | 1,308 |

Receivables are aged as follows:

| | | |
|----------------------------------|--------------|--------------|
| Not overdue | 1,428 | 1,308 |
| Total receivables (gross) | 1,428 | 1,308 |

Note 6: Non-Financial Assets

Note 6A: Leasehold Improvements

| | 2010 | 2009 |
|-------------------------------------|-----------|-----------|
| Leasehold improvements: | | |
| Fair value | 162 | 105 |
| Accumulated depreciation | (81) | (28) |
| Total leasehold improvements | 81 | 77 |

Note 6B: Plant and Equipment

| | | |
|----------------------------------|-----------|-----------|
| Other plant and equipment: | | |
| Fair value | 28 | 72 |
| Accumulated depreciation | (12) | (17) |
| Total other plant and equipment | 16 | 55 |
| Total plant and equipment | 16 | 55 |

All revaluations are conducted in accordance with the revaluation policy stated in Note 1.

No indicators of impairment were found for leasehold improvements, plant and equipment.

Note 6C: Analysis of Leasehold Improvements, Plant and Equipment

TABLE A *Reconciliation of the opening and closing balances of leasehold improvements, plant and equipment (2009–2010)*

| Item | Leasehold improvements \$'000 | Plant and equipment \$'000 | Total \$'000 |
|--|-------------------------------------|----------------------------------|-----------------|
| As at 1 July 2009 | | | |
| Gross book value | 105 | 72 | 177 |
| Accumulated depreciation/amortisation and impairment | (28) | (17) | (45) |
| Net book value 1 July 2009 | 77 | 55 | 132 |
| Additions: | | | |
| By purchase | 57 | 4 | 61 |
| Depreciation/amortisation expense | (53) | (16) | (69) |
| Disposals: | | | |
| Other disposals | - | (27) | (27) |
| Net book value 30 June 2010 | 81 | 16 | 97 |
| Net book value as of 30 June 2010 represented by: | | | |
| Gross book value | 162 | 28 | 190 |
| Accumulated depreciation/amortisation and impairment | (81) | (12) | (93) |
| | 81 | 16 | 97 |

TABLE A *Reconciliation of the opening and closing balances of leasehold improvements, plant and equipment (2008–2009)*

| Item | Leasehold improvements \$'000 | Plant and equipment \$'000 | Total \$'000 |
|--|-------------------------------------|----------------------------------|-----------------|
| As at 1 July 2008 | | | |
| Gross book value | 88 | 40 | 128 |
| Accumulated depreciation/amortisation and impairment | (7) | (14) | (21) |
| Net book value 1 July 2008 | 81 | 26 | 107 |
| Additions: | | | |
| By purchase | 17 | 51 | 68 |
| Depreciation/amortisation expense | (21) | (16) | (37) |
| Other movements (give details below) | - | - | - |
| Disposals: | | | |
| Other disposals | - | (6) | (6) |
| Net book value 30 June 2009 | 77 | 55 | 132 |
| Net book value as of 30 June 2009 represented by: | | | |
| Gross book value | 105 | 72 | 177 |
| Accumulated depreciation/amortisation and impairment | (28) | (17) | (45) |
| | 77 | 55 | 132 |

Note 6D: Other Non-Financial Assets

| | 2010 | 2009 |
|--|------|------|
| Prepayments | 1 | 24 |
| Total other non-financial assets | 1 | 24 |
| Total other financial assets are expected to be recovered in: | | |
| No more than 12 months | 1 | 24 |
| Total other financial assets | 1 | 24 |

No indicators of impairment were found for other non-financial assets.

Note 7: Payables

Note 7A: Suppliers

| | | |
|--|----|----|
| Trade creditors and accruals | 36 | 38 |
| Total suppliers payables | 36 | 38 |
| Supplier payables expected to be settled within 12 months: | | |
| External entities | 36 | 38 |
| Total supplier payables | 36 | 38 |

Settlement is usually made within 30 days.

Note 7B: Grants

Private sector:

| | | |
|---|----|-----|
| Other | 18 | 489 |
| Total grants | 18 | 489 |
| Total grants are expected to be settled in: | | |
| No more than 12 months | 18 | 489 |
| Total grants | 18 | 489 |

Settlement is usually made according to the terms and conditions of each grant. This is usually within 30 days of performance or eligibility.

Note 7C: Other Payables

| | 2010 | 2009 |
|---|-----------|-----------|
| Salaries and wages | 12 | 10 |
| PAYG withholding | 19 | - |
| Superannuation | 2 | 1 |
| Total other payables | 33 | 11 |
| Total other payables are expected to be settled in: | | |
| No more than 12 months | 33 | 11 |
| Total other payables | 33 | 11 |

Note 8: Provisions

Note 8A: Employee Provisions

| | | |
|--|------------|------------|
| Leave | 263 | 110 |
| Total employee provisions | 263 | 110 |
| Employee provisions are expected to be settled in: | | |
| No more than 12 months | 28 | 49 |
| More than 12 months | 235 | 61 |
| Total employee provisions | 263 | 110 |

Note 8B: Other provisions

| | | |
|---|-----------|----------|
| Make good provision | 58 | - |
| Total other provisions | 58 | - |
| Other provisions are expected to be settled in: | | |
| No more than 12 months | - | - |
| More than 12 months | 58 | - |
| Total other provisions | 58 | - |

Note 9: Cash flow reconciliation

| | 2010 | 2009 |
|--|-------|---------|
| Reconciliation of cash and cash equivalents as per Balance Sheet to Cash Flow Statement | | |
| Report cash and cash equivalent as per: | | |
| Cash flow statement | 9,990 | 9,633 |
| Balance sheet | 9,990 | 9,633 |
| Difference | - | - |
| Reconciliation of net costs of services to net cash from operating activities: | | |
| Net cost of services | 5,158 | 5,269 |
| Add revenue from Government | 5,817 | 6,110 |
| Adjustments for non-cash items | | |
| Depreciation /amortisation | 69 | 37 |
| Loss on disposal of assets | 8 | 6 |
| Change in assets / liabilities | | |
| (Increase) / decrease in net receivables | (120) | 1,722 |
| (Increase) / decrease in prepayments | 23 | (6) |
| Increase / (decrease) in employee provisions | 153 | (33) |
| Increase / (decrease) in supplier payables | (2) | (44) |
| Increase / (decrease) in other payables | (16) | (1,000) |
| Increase / (decrease) in grants payable | (471) | 60 |
| Increase / (decrease) in other provisions | 58 | - |
| Net cash from operating activities | 361 | 1,583 |

Note 10: Contingent Liabilities and Assets

| | Guarantees | | Total | |
|--|----------------|----------------|----------------|----------------|
| | 2010 \$'000 | 2009 \$'000 | 2010 \$'000 | 2009 \$'000 |
| Contingent liabilities | | | | |
| Balance from previous period | - | - | - | - |
| Total contingent liabilities | - | - | - | - |
| Net contingent assets (liabilities) | - | - | - | - |

Quantifiable Contingencies

At 30 June 2010, the Corporation had no quantifiable contingencies.

Unquantifiable Contingencies

At 30 June 2010, the Corporation had no unquantifiable contingencies.

Significant Remote Contingencies

The Corporation has no significant remote contingencies

Note 11: Director Remuneration

| | 2010 | 2009 |
|--|-------------------|-------------------|
| The number of directors of the Corporation included in these figures are shown below in the relevant remuneration bands: | | |
| \$15,000 to \$29,999 | 6 | 7 |
| \$30,000 to \$44,999 | 2 | 1 |
| \$90,000 to \$104,999 | 1 | - |
| \$105,000 to \$119,999 | 1 | - |
| \$240,000 to \$254,999 | - | 1 |
| Total | 10 | 9 |
| Total remuneration received or due and receivable by directors of the Corporation | \$ 426,037 | \$ 411,335 |

Part-time directors and the Chairman of the Corporation received fees and allowances as determined by the Remuneration Tribunal. The Executive Director is the only full time director of the Corporation and receives a salary and allowances as approved by the Board. Remuneration includes salary, allowances and superannuation.

Note 12: Related Party Disclosures

During the 2010 year, no Director of the Corporation served on the Board of a related party.

Note 13: Executive Remuneration

The aggregate amount of Executive Director remuneration is disclosed in Note 11.

Note 14: Remuneration of Auditors

| | 2010 \$'000 | 2009 \$'000 |
|--|----------------|----------------|
| The fair value of audit services provided was: | 15 | 15 |

No other services were provided by the auditor of the financial statements.

Note 15: Financial Instruments

Note 15A: Categories of Financial Instruments

Financial Assets

Loans and receivables:

| | | |
|--|---------------|--------------|
| Cash at bank or on deposit | 9,990 | 9,633 |
| Receivables for goods and services | 48 | 18 |
| Interest receivable | 82 | 35 |
| Total | 10,120 | 9,686 |
| Carrying amount of financial assets | 10,120 | 9,686 |

Financial Liabilities

Other financial liabilities at amortised cost:

| | | |
|---|-----------|------------|
| Trade creditors | 36 | 38 |
| Grants payable | 18 | 489 |
| Provision for guarantees | 18 | 18 |
| Total | 72 | 545 |
| Carrying amount of financial liabilities | 72 | 545 |

Note 15B: Net Income and Expense from Financial Assets

Loans and receivables

| | | |
|--|------------|------------|
| Interest revenue | 457 | 647 |
| Net gain/(loss) loans and receivables | 457 | 647 |
| Net gain/(loss) from financial assets | 457 | 647 |

Note 15C: Fair Value of Financial Instruments

| | Carrying Amount | Fair Value | Carrying Amount | Fair Value |
|------------------------------|--------------------|---------------|--------------------|--------------|
| | 2010 | 2010 | 2009 | 2009 |
| | \$'000 | \$'000 | \$'000 | \$'000 |
| Financial Assets | | | | |
| Cash | 9,990 | 9,990 | 9,633 | 9,633 |
| Interest receivable | 82 | 82 | 35 | 35 |
| Other receivables | 48 | 48 | 18 | 18 |
| Total | 10,120 | 10,120 | 9,686 | 9,686 |
| Financial Liabilities | | | | |
| Trade creditors | 36 | 36 | 38 | 38 |
| Grants payable | 18 | 18 | 489 | 489 |
| Total | 54 | 54 | 527 | 527 |

Note 15D: Credit Risk

The Corporation is exposed to minimal credit risk as the majority of loans and receivables are cash and appropriations made under law (which guarantees fixed amounts of funding that the entity can drawdown as required) or amounts owed by the Australian Taxation Office in the form of a Goods and Services Tax Refund. The maximum exposure to credit risk is the risk that arises from the potential default of a debtor. This amount is equal to the total amount of trade receivables (2010: \$603 and 2009: \$17,975). The Corporation has assessed that there is no risk of default and has not recognised an impairment allowance account.

The Corporation manages its credit risk by undertaking background checks and general probity reviews as part of its project analysis process prior to allowing a debtor relationship.

The Corporation holds no collateral to mitigate against credit risk.

Credit quality of financial instruments not past due or individually determined as impaired

| | Not Past Due Nor Impaired | Not Past Due Nor Impaired | Past due or impaired | Past due or impaired |
|------------------------------------|------------------------------|------------------------------|-------------------------|-------------------------|
| | 2010 | 2009 | 2010 | 2009 |
| | \$'000 | \$'000 | \$'000 | \$'000 |
| Cash at bank or on deposit | 9,990 | 9,633 | - | - |
| Receivables for goods and services | 48 | 18 | - | - |
| Interest receivable | 82 | 35 | - | - |
| Total | 10,120 | 9,686 | - | - |

There are no financial assets that are past due or impaired for 2009 or 2010.

Note 15E: Liquidity Risk

The Corporation's financial liabilities are payables for goods and services. The exposure to liquidity risk is based on the notion that the Corporation will encounter difficulty in meeting its obligations associated with financial liabilities. This is highly unlikely due to appropriation funding and mechanisms available to the Corporation and internal policies and procedures put in place to ensure there are appropriate resources to meet its financial obligations.

The Corporation is appropriated funding from the Australian Government. The Corporation manages its budgeted funds to ensure it has adequate funds to meet payments as they fall due. In addition, the Corporation has policies in place to ensure timely payments are made when due and has no past experience of default.

Maturities for financial liabilities 2010

| | On demand | within 1 year | 1 to 2 years | 2 to 5 years | > 5 years | Total |
|-----------------|-----------|---------------|--------------|--------------|-----------|----------|
| | 2010 | 2010 | 2010 | 2010 | 2010 | 2010 |
| | \$'000 | \$'000 | \$'000 | \$'000 | \$'000 | \$'000 |
| Trade creditors | - | 36 | - | - | - | - |
| Grants payable | - | 18 | - | - | - | - |
| Total | - | 54 | - | - | - | - |

Maturities for financial liabilities 2009

| | On demand 2009 \$'000 | within 1 year 2009 \$'000 | 1 to 2 years 2009 \$'000 | 2 to 5 years 2009 \$'000 | > 5 years 2009 \$'000 | Total 2009 \$'000 |
|-----------------|-----------------------------|---------------------------------|--------------------------------|--------------------------------|-----------------------------|-------------------------|
| Trade creditors | | 38 | | - | | 38 |
| Grants payable | | 489 | | - | | 489 |
| Total | | 527 | | - | | 527 |

Note 15F: Market risk

The Corporation holds basic financial instruments that do not expose the Corporation to certain market risks. The Corporation is not exposed to 'currency risk' or 'other price risk'.

The Corporation's only exposure to interest rate risk is through credit cards. This risk is minimised by ensuring that the balance owing is paid monthly by the due date.

Note 16: Reporting of Outcomes

The Corporation's mission is 'to foster an innovative and sustainable Australian sugar industry through targeted investment in research and development'.

The Corporation is structured to meet one outcome; 'A profitable and internationally competitive and sustainable Australian sugarcane industry providing economic, environmental and social benefits for rural and regional communities through targeted investment in research and development'.

Three Output Groups have been identified as contributing to the one corporate outcome:

1.1 Implementation of innovative farming, harvesting, transport, milling and marketing systems tailored to the needs and opportunities of each region (Regional Futures).

1.2 Rapid translation of relevant emerging technologies that will enhance the industry's competitive edge in the global marketplace (Emerging Technologies).

1.3 Development of individuals and networks across the sugarcane industry that enhance the capacity for continuous improvement (People Development).

Note 16A: Net Cost of Outcome Delivery

| | Outcome 1 | | Total | |
|--|----------------|----------------|----------------|----------------|
| | 2010 \$'000 | 2009 \$'000 | 2010 \$'000 | 2009 \$'000 |
| Expenses | 9,785 | 10,252 | 9,785 | 10,252 |
| Income from non-government sector | | | | |
| Industry Contributions (Sugar Levies) | 4,136 | 4,317 | 4,136 | 4,317 |
| Interest | 457 | 647 | 457 | 647 |
| Other | 34 | 19 | 34 | 19 |
| Total | 4,627 | 4,983 | 4,627 | 4,983 |
| Net cost/(contribution) of outcome delivery | 5,158 | 5,269 | 5,158 | 5,269 |

Note 16B: Major Classes of Departmental Expenses, Income, Assets and Liabilities by Outcomes

| | Outcome 1 | | Total | |
|---------------------------------------|----------------|----------------|----------------|----------------|
| | 2010 \$'000 | 2009 \$'000 | 2010 \$'000 | 2009 \$'000 |
| Expenses | | | | |
| Employees | 1,046 | 1,004 | 1,046 | 1,004 |
| Suppliers | 898 | 914 | 898 | 914 |
| Grants | 7,764 | 8,292 | 7,764 | 8,292 |
| Depreciation | 69 | 37 | 69 | 37 |
| Write-down and Impairment of Assets | 8 | 6 | 8 | 6 |
| Total | 9,785 | 10,253 | 9,785 | 10,253 |
| Revenue | | | | |
| Income from Government | 5,817 | 6,110 | 5,817 | 6,110 |
| Interest | 457 | 647 | 457 | 647 |
| Industry Contributions (Sugar Levies) | 4,136 | 4,317 | 4,136 | 4,317 |
| Other | 34 | 19 | 34 | 19 |
| Total | 10,444 | 11,093 | 10,444 | 11,093 |
| Assets | | | | |
| Cash and cash equivalents | 9,990 | 9,633 | 9,990 | 9,633 |
| Trade and other receivables | 1,428 | 1,308 | 1,428 | 1,308 |
| Land and buildings | 81 | 77 | 81 | 77 |
| Property, plant and equipment | 16 | 55 | 16 | 55 |
| Other | 1 | 24 | 1 | 24 |
| Total | 11,516 | 11,097 | 11,516 | 11,097 |
| Liabilities | | | | |
| Suppliers | 36 | 38 | 36 | 38 |
| Grants | 18 | 489 | 18 | 489 |
| Other | 91 | 11 | 91 | 11 |
| Employee provisions | 263 | 110 | 263 | 110 |
| Total | 408 | 648 | 408 | 648 |

Section 6 Appendices

| | |
|------------|--|
| Appendix A | Composition of National Research Priorities |
| Appendix B | Composition of Rural Research and Development Priorities |
| Appendix C | Research Project Listing 2009–10 |
| Appendix D | Final Reports Approved 2009–10 |
| Appendix E | Abbreviations |
| Appendix F | Table of compliance with publishing guidelines and legislation |
| Appendix G | General Index |

Appendix A

Composition of National Research Priorities attributed to each Program 2009–2010 (\$'000)

| National Research Priorities (NRP) | An Environmentally Sustainable Australia | | | | | Promoting and Maintaining Good Health | | Frontier Technologies for Building and Transforming Australian Industries | | | Safeguarding Australia | Total |
|------------------------------------|--|-----|-----|----|-----|---------------------------------------|------|---|----|------|------------------------|-------|
| | A1 | A2 | A3 | A5 | A7 | B3 | B4 | C2 | C4 | C5 | D3 | |
| Regional Futures | 403 | 389 | 426 | 25 | 185 | 22 | 1706 | 248 | 62 | 382 | 725 | 4574 |
| Emerging Technologies | 108 | 60 | 100 | | 631 | 50 | 515 | 683 | 11 | 66 | | 2225 |
| People Development | 27 | 8 | 16 | | 43 | | 230 | 9 | 20 | 600 | 6 | 957 |
| Total | 538 | 457 | 542 | 25 | 859 | 72 | 2451 | 941 | 93 | 1048 | 731 | 7756 |

Key to NRP Goals in which SRDC has R&D investments

An Environmentally Sustainable Australia

A1: Water – a critical resource

A2: Transforming existing industries

A3: Overcoming soil loss, salinity and acidity

A5: Sustainable use of Australia’s biodiversity

A7: Responding to climate change and variability

Promoting and Maintaining Good Health

B3: Preventive healthcare

B4: Strengthening Australia’s social and economic fabric

Frontier Technologies for Building and Transforming Australian Industries

C2: Frontier technologies

C4: Smart information use

C5: Promoting an innovation culture and economy

Safeguarding Australia

D3: Protecting Australia from invasive diseases and pests

Appendix B

Composition of Rural Research and Development Priorities attributed to each Program 2009–2010 (\$'000)

| Arena | Productivity and Adding Value | Supply Chain and Markets | Natural Resource Management | Climate Variability & Climate Change | Bio-security | Innovation skills | Technology | Total |
|-----------------------|-------------------------------|--------------------------|-----------------------------|--------------------------------------|--------------|-------------------|------------|-------------|
| (\$'000 VALUE) | | | | | | | | |
| Regional Futures | 1621 | 210 | 1305 | 207 | 725 | 370 | 136 | 4574 |
| Emerging Technologies | 821 | | 147 | 631 | 50 | 151 | 425 | 2225 |
| People Development | 142 | 42 | 18 | 48 | 6 | 693 | 9 | 957 |
| Total | 2583 | 252 | 1470 | 886 | 781 | 1214 | 570 | 7756 |

Composition of Rural Research and Development Priorities attributed to each Program 2009–2010 (%)

| Arena | Productivity and Adding Value | Supply Chain and Markets | Natural Resource Management | Climate Variability & Climate Change | Bio-security | Innovation skills | Technology | Total |
|-----------------------|-------------------------------|--------------------------|-----------------------------|--------------------------------------|--------------|-------------------|------------|------------|
| (% value) | | | | | | | | |
| Regional Futures | 21 | 3 | 17 | 3 | 9 | 5 | 2 | 59 |
| Emerging Technologies | 11 | 0 | 2 | 8 | 1 | 2 | 5 | 29 |
| People Development | 2 | 1 | 0 | 1 | 0 | 9 | 0 | 12 |
| Total | 33 | 3 | 19 | 11 | 10 | 16 | 7 | 100 |

Appendix C

All Active Projects 2009–2010

| ARENA: Regional Futures | | | | | |
|--|--|---------------|-------------------|--|------------------|
| Priority strategy: Value Chain Integration | | | | | |
| Project No | Title | Period | Research Contact | Organisation | Funds |
| CGT001 | Development and implementation of harvest management planning tools for the maximisation of CCS in the Tully district | Jul 06–Aug 10 | Trent Stainlay | Canegrowers Tully | \$20,811 |
| CHC002 | Development of a real time information system for Clarence harvesters | Jul 06–Apr 10 | Peter Rose | Clarence Harvesters Cooperative | \$27,089 |
| CRC005 | Understanding the reproductive biology and ecology of sugarcane to manage the safe release of genetically modified cultivars | Jul 06–Jun 10 | Graham Bonnett | CRCISIIB | \$48,152 |
| CSR038 | Increasing in-mill NIR effectiveness and communicating data to all sectors for improved decision making in the sugarcane value chain | Jul 06–Feb 11 | John Markley | Mackay Sugar Limited | \$33,000 |
| CVA003 | Managing Climate Variability Program Phase 2 | Jul 07–Sep 10 | Diana Saunders | Joint RDCs coordinated by GRDC | \$60,000 |
| GTG002 | Implementation of the communication plan for the Sugarcane Gene Technology Group | Jul 07–Feb 11 | Warren Males | Australian Sugar Milling Council | \$10,000 |
| JCU027 | Defeating the Autumn Predictability Barrier | Jul 06–Aug 09 | Yvette Everingham | James Cook University | \$18,239 |
| JCU032 | How will climate change impact climate variability in sugarcane growing regions? | Jul 09–Oct 12 | Yvette Everingham | James Cook University | \$30,000 |
| LWA003 | Climate Change Research Strategy for Primary Industries Phase 2 | Nov 08–Jul 09 | Diana Saunders | Melbourne University | \$0 |
| NSC019 | Improving the harvesting and transport of biomass for sugar and power production in NSW | Jul 09–Aug 12 | Rick Beattie | NSW Sugar Milling Council | \$83,000 |
| OHS003 | Farming and Fishing Health and Safety Collaborative Partnership Phase 3 | Mar 08–May 12 | Bianca Cairns | Joint RDCs coordinated by RIRDC | \$20,000 |
| PCS003 | Sweet sorghum–Enhancing the Plane Creek value chain, capital utilisation and district viability | Jul 08–Nov 09 | Jackie Richters | Plain Creek Productivity Services | \$37,500 |
| QUT027 | Opportunities for the Australian sugar industry in greenhouse gas abatement and carbon trading | Dec 09–Dec 11 | Phil Hobson | Queensland University of Technology | \$0 |
| WS009 | R&D Communication | Jul 03–Jun 13 | Carolyn Martin | Sugar Research and Development Corporation | \$3,769 |
| TOTAL | | | | | \$392,560 |

| ARENA: Regional Futures | | | | | |
|---|--|---------------|-------------------|--------------------------------|-----------|
| Priority Strategy: Farming and Harvesting Systems | | | | | |
| Project No | Title | Period | Research Contact | Organisation | Funds |
| BBF001 | Pilot area-wide natural resource management group—Building grower capacity to understand and better manage groundwater | Jul 06–Nov 09 | Enrico Mio | BBIFMAC | \$17,000 |
| BPS001 | Identifying management zones within cane paddocks: an essential foundation for precision sugarcane agriculture | Jul 07–Aug 11 | Ross Coventry | Burdekin Productivity Services | \$213,972 |
| BSS266 | Optimum canegrub management within new sustainable cropping systems | Jul 04–May 10 | Peter Samson | BSES Limited | \$71,994 |
| BSS268 | Accelerated adoption of best-practice nutrient management | Jul 04–Sep 10 | Bernard Schroeder | BSES Limited | \$50,000 |
| BSS286 | Improved sugar-cane farming systems | Jul 05–May 10 | Barry Salter | BSES Limited | \$104,000 |
| BSS294 | Whole-farm planning for management of varieties to maximise productivity and reduce losses from diseases | Oct 06–Dec 09 | Barry Croft | BSES Limited | \$63,794 |
| BSS296 | Evaluation of genotypes for a controlled-traffic farming system | Jul 06–Dec 11 | Barry Salter | BSES Limited | \$143,839 |
| BSS297 | Delivering web-based irrigation management | Jul 06–Sep 09 | Trevor Willcox | BSES Limited | \$75,551 |
| BSS302 | Epidemiology studies into sugarcane smut | Jan 07–Dec 10 | Robert Magarey | BSES Limited | \$200,000 |
| BSS303 | Sugarcane biosecurity integrated plan | Jul 07–Aug 10 | Mohamed Sallam | BSES Limited | \$76,427 |
| BSS304 | Cane-grower implemented drying-off irrigation scheduling on the Tableland | Jul 07–Mar 10 | David Donald | BSES Limited | \$32,037 |
| BSS306 | Establishing the second crop cycle into permanent beds | Jul 07–Dec 10 | Bradley Hussey | BSES Limited | \$103,941 |
| BSS318 | Measurement of in-field sucrose loss by mobile refractometry | Jul 08–May 12 | Cam Whiteing | BSES Limited | \$40,000 |
| BSS325 | SmutBuster: Accelerated breeding of smut-resistant sugarcane varieties | Jul 08–Jun 11 | Frikkie Botha | BSES Limited | \$659,921 |
| BSS329 | Understanding water quality in sugarcane farming systems | Feb 10–Aug 12 | Toni Anderson | BSES Limited | \$197,500 |
| BSS331 | Preparing the Australian sugar industry for threats from exotic pests and diseases | Jul 09–Dec 12 | Robert Magarey | BSES Limited | \$115,511 |
| CG013 | Growers working together to improve water quality in the Herbert Sugar Industry | Jul 05–Oct 09 | Eric Danzi | Canegrowers Herbert River | \$20,000 |
| CG018 | A review of institutional arrangements in the Burdekin Irrigation Area with a view to managing sustainable farming practices in the region | Mar 06–Sep 09 | Eric Danzi | Canegrowers | \$25,000 |
| CSE011 | Improved environmental outcomes and profitability through innovative management of nitrogen | Jul 04–Jul 09 | Peter Thorburn | CSIRO CSE | \$97,292 |
| CSE012 | Adopting systems approaches to water and nutrient management for future cane production in the Burdekin | Jul 04–Jul 09 | Peter Thorburn | CSIRO CSE | \$48,954 |
| CSE022 | A collaborative approach to Precision Agriculture RD&E for the Australian sugar industry | Jul 08–Sep 14 | Rob Bramley | CSIRO CSE | \$252,626 |
| DPI020 | Management solutions to optimise performance of new farming systems in southern canelands | Jul 08–Oct 12 | Mike Bell | DEEDI | \$110,000 |

| | | | | | |
|--------|--|---------------|------------------|---------------------------------|-----------|
| DPI021 | Remote sensing-based Precision Agriculture tools for the sugar industry | Jul 09–Aug 12 | Andrew Robson | DEEDI | \$128,015 |
| FSA001 | A review of opportunities to improve the design and performance of sugarcane harvesters | Jul 08–Nov 09 | Rod Davis | FSA Consulting | \$62,210 |
| GGP017 | Improving soil health in undulating, dryland farms in the Central region | Jul 06–Jul 09 | Rino De Boni | CDFG | \$1,000 |
| GGP018 | Nutrient management from variable rate technology in a control traffic system by the Oakenden Grower Group | Jul 06–Sep 09 | John Muscat | Oakenden Grower Group | \$3,000 |
| GGP021 | Bed forming utilising GPS guidance by the CASH (Calen and St Helen) Young Farmers Association | Jul 06–May 10 | Colin Mackenzie | CASH Young Farmers Association | \$35,000 |
| GGP028 | Facilitating enhanced peanut / sugarcane rotations by assessing and managing the issues related to growing peanuts | Sep 06–Mar 10 | Don Halpin | SSPA | \$3,400 |
| GGP029 | Mulgrave cane growers strategic grub management: implementing BSES decision-making tools | Jul 07–Jan 10 | Jeffrey Day | Mulgrave Canegrowers | \$10,000 |
| GGP030 | Utilising a predictive model for the monitoring and management of canegrubs in the Mackay region by the Mount Kinchant Growers Group | Dec 07–Jun 10 | Paul Vassallo | MAPS | \$13,000 |
| GGP031 | Seed To Fuel: Enhancing the value of rotational break crops to produce oil and bio-fuel in the Central region | Jul 07–Aug 09 | John Werner | Mackay Fibre Producers | \$8,000 |
| GGP032 | The operation of the two-in-one harvesting attachment in a controlled traffic system | Jul 07–Oct 09 | Elio Castellani | Castellani Harvesting Group | \$10,000 |
| GGP034 | Profits through Recycling: Pilot processing of sugar industry and community by-products to improve on-farm sustainability | Jul 07–Jun 10 | Neal Ross | CRRISI | \$4,000 |
| GGP035 | Developing implement coulters for volcanic red soils | Jul 07–Mar 10 | Miles Darveniza | IBIF | \$6,000 |
| GGP036 | Total concept sugarcane planting system | Jul 07–Oct 09 | Daryl Morellini | PAD Farming Company | \$2,792 |
| GGP038 | Improving billet planter efficiency | Jul 07–Aug 10 | Chris Shannon | NCIPG | \$4,000 |
| GGP039 | Precision spot spraying system: it works in grains will it work in cane? | Jul 07–Apr 11 | Joe Linton | ABCR | \$13,500 |
| GGP041 | Better frost tolerant varieties for NSW | Jan 09–Dec 10 | Alan Munro | NSW Farming Systems Group | \$9,000 |
| GGP042 | Winter soybean for biodiesel and nitrogen fixation | Jan 09–Mar 12 | David Singh | Innisfail District WSBNFG | \$7,110 |
| GGP044 | Enhancing nutrient placement: Sub surface application of cane specific compost | Jan 09–May 11 | Barbara Walker | Advanced Nutrient Solutions | \$9,500 |
| GGP045 | Developing extended fallow options for the Plane Creek district | Jan 09–Aug 11 | Robert Sluggett | Plane Creek Sustainable Farmers | \$26,100 |
| GGP046 | Investigate skip row configuration in sugar cane | Dec 09–Apr 12 | Lee Blackburn | Blackburn Harvesting Group | \$8,500 |
| GGP047 | Maximising soy in Central Queensland | Mar 09–Apr 12 | Simon Mattson | Mackay Area Soybeans in Sugar | \$0 |
| GGP048 | Better targeting of new cultivars for north Queensland through additional trials in four areas | Mar 09–Dec 11 | Chris McClelland | Mossman Agricultural Services | \$37,500 |

| | | | | | |
|--------------|---|---------------|------------------|--|--------------------|
| GGP049 | Investigating reduced nitrogen application rates for profitability and sustainability | Apr 09–May 12 | Chris McClelland | Mossman Agricultural Services | \$20,000 |
| GGP050 | Improving soybean and nitrogen management in subtropical NSW cane systems | Apr 09–Dec 11 | Alan Munro | NSW Farming Systems Group | \$24,650 |
| GGP051 | Maximising centre pivot efficiencies | Apr 09–Mar 11 | John Fox | Precise Pivot Management | \$13,300 |
| GGP052 | The next step for Precision Agriculture | May 09–Jan 11 | Tony Bugeja | Homebush Innovative Farmers | \$6,000 |
| GGP053 | Improvement of internal soil drainage and yield on heavy clay soils in the Herbert | Jan 10–Dec 12 | Vince Russo | LUMPS Farming Group | \$1,500 |
| GGP054 | Herbert cane growers strategic grub management implementing BSES decision-making tools | May 10–Jan 13 | Geoff Morley | Herbert CaneGrub Management Group | \$1,000 |
| GGP055 | Helping sugarcane farmers integrate electronic recording systems into their farming business | Jan 10–Jan 12 | Michael Reinaldo | Herbert Cane Productivity Services Limited | \$18,050 |
| GGP056 | A monitoring-based system to enhance canegrub control best management practice for Isis sugarcane growers | Feb 10–Jan 13 | Wayne Stanley | Isis Productivity Ltd | \$6,500 |
| GGP057 | SECMAPPER (Soil Electrical Conductivity Mapper) mapping soil electrical conductivity patterns below trash blankets and stubble | Jan 10–Dec 11 | Alan Pace | EM Mapping In Trash Group | \$47,000 |
| GGP059 | Developing prescription compost to suit specific soils in Maryborough | Feb 10–Feb 13 | Glen Grohn | Driving Agricultural Goals Group | \$35,000 |
| MAF002 | Evaluating alternative irrigation for a greener future | Jul 06–Aug 11 | Chris Hesp | Mulgrave Area Farm Integrated Action | \$101,483 |
| NFS002 | An integrated approach to nut grass control | Jul 07–Aug 10 | Bob Aitken | NSW Farming Systems Group | \$11,810 |
| NPSI01 | National Program for Sustainable Irrigation | Jul 07–Jun 11 | Guy Roth | Cotton R&D Corporation | \$100,000 |
| UNW003 | Development of a constructed wetland for improving water quality in sugarcane drainage, and ensuring its community acceptance and industry adoption | Sep 04–Feb 10 | Mike Melville | University of NSW | \$13,951 |
| UQ043 | Harnessing soil biology to improve the productivity of the new sugarcane farming system | Jul 07–Aug 10 | Susanne Schmidt | University of Queensland | \$191,342 |
| TOTAL | | | | | \$3,747,138 |

| ARENA: Regional Futures | | | | | |
|---|---|---------------|------------------|---|------------------|
| Priority strategy: Transport, Milling and Marketing Systems | | | | | |
| Project No | Title | Period | Research Contact | Organisation | Funds |
| LEV001 | Restoring efficiency to harvested cane transport in New South Wales | Jul 08–Nov 10 | Michael O'Connor | Lower Empire Vale Harvesting Co-operative Limited | \$30,000 |
| QUT020 | Use of the SRI noxious gas jigger system to increase the juice processing capacity of evaporator stations | Nov 08–Nov 09 | Darryn Rackemann | Queensland University of Technology | \$19,132 |
| QUT024 | Reducing transport costs through the automation of schedule generation | Nov 08–Nov 11 | Geoff Kent | Queensland University of Technology | \$47,994 |
| QUT028 | Semi-automated stockpile tarping system for improved safety and fuel quality | Nov 08–Dec 09 | Phil Hobson | Queensland University of Technology | \$29,551 |
| QUT029 | Evaluation of a prototype dewatering mill | Nov 08–May 14 | Geoff Kent | Queensland University of Technology | \$77,000 |
| QUT037 | Assessing the impact of processing the whole crop on factory performance and operations | Aug 09–May 11 | Geoff Kent | Queensland University of Technology | \$106,073 |
| TSL001 | Improved management of scale formation and scale removal in the Tully evaporator station | Jul 07–Aug 10 | John King | Tully Sugar Limited | \$109,263 |
| TSL002 | Pelletising mill mud and ash | Jul 07–Mar 14 | John King | Tully Sugar Limited | \$60,247 |
| TOTAL | | | | | \$422,260 |

| ARENA: Emerging Technologies | | | | | |
|--|---|---------------|------------------|-------------------------------------|------------------|
| Priority strategy: Farming, Harvesting, Transport, Milling and Marketing Systems | | | | | |
| Project No | Title | Period | Research Contact | Organisation | Funds |
| CRC007 | Bioactive natural products from sugarcane | Jan 07–Apr 10 | David Leach | CRCSIIB | \$100,000 |
| GRF001 | Automating harvester and haulout forward progression during harvest utilizing DGPS | Jul 07–Nov 11 | Bryan Granshaw | Granshaw Farming | \$33,965 |
| JCU029 | Evaluation of membrane technology for clarification of sugar cane juice | Jul 07–Jan 10 | Vega Jegatheesan | James Cook University | \$40,000 |
| QUT015 | Pilot scale development and evaluation of an improved process for furfural and fuel production from bagasse | Mar 07–Aug 10 | Phil Hobson | Queensland University of Technology | \$0 |
| QUT016 | High value products from furfural waste residue | Oct 06–Jun 10 | William Doherty | Queensland University of Technology | \$12,421 |
| QUT030 | Vacuum condenser design modification | Nov 08–Dec 10 | Kameron Dunn | Queensland University of Technology | \$40,677 |
| QUT036 | The production of biofuels and value added co-products from thermo-chemical processing of sugarcane bagasse | Jul 09–May 14 | Phil Hobson | Queensland University of Technology | \$161,591 |
| TOTAL | | | | | \$409,918 |

| ARENA: Emerging Technologies | | | | | |
|--|---|---------------|--------------------|--------------------------|--------------------|
| Priority strategy: Farming, Harvesting, Transport, Milling and Marketing Systems | | | | | |
| Project No | Title | Period | Research Contact | Organisation | Funds |
| BSS305 | More crop per drop: developing water-efficient and drought tolerant sugarcane cultivars for irrigated and dryland farming | Jul 07–Apr 11 | Prakash Lakshmanan | BSES Limited | \$194,537 |
| BSS307 | Development and implementation of NIR based predictive tools to rate sugarcane varieties against smut and Fiji leaf gall | Jul 07–Nov 10 | Michael O'Shea | BSES Limited | \$100,000 |
| BSS319 | Maximising the rate of parental improvement in the Australian sugarcane breeding program | Jul 08–Mar 15 | Xianming Wei | BSES Limited | \$181,437 |
| CPI017 | Developing sugarcane for production systems utilising total biomass | Jul 09–Dec 13 | Phillip Jackson | CSIRO Plant Industry | \$280,000 |
| CPI018 | Climate ready sugarcane: Traits for adaptation to high CO2 levels | Jul 09–Aug 13 | Geoff Inman-Bamber | CSIRO Plant Industry | \$97,267 |
| CRC006 | Complete genome map of sugarcane | Jul 06–Aug 09 | Karen Aitken | CRCSIIB | \$56,300 |
| CRC008 | Creating sustainable sugarcane production systems: reducing plant nitrogen demand | Sep 07–Apr 10 | Susanne Schmidt | CRCSIIB | \$100,000 |
| CRC011 | Production of PHB/PHAs in sugarcane plants | Sep 07–Apr 10 | Stevens Brumbley | CRCSIIB | \$155,564 |
| CSE014 | Increased CCS, cane yield and water use efficiency by exploiting interactions between genetics and management | Jul 05–Aug 09 | Geoff Inman-Bamber | CSIRO CSE | \$35,000 |
| CSE023 | Pathways to exploiting enhanced photosynthetic efficiency for higher sucrose and biomass yield | Jul 08–Aug 11 | Geoff Inman-Bamber | CSIRO CSE | \$190,128 |
| UQ040 | Extending Sugar Booster technology into multiple sugarcane cultivars for optimal deployment by Australian industry | Jul 05–Aug 10 | Robert Birch | University of Queensland | \$301,281 |
| UQ044 | SaveN Cane: Developing selection tools for N-efficient sugarcane | Jul 09–Dec 14 | Susanne Schmidt | University of Queensland | \$120,200 |
| TOTAL | | | | | \$1,811,714 |

| ARENA: People Development | | | | | |
|--|--|---------------|------------------|--|----------|
| Priority strategy: Individual Capacity | | | | | |
| Project No | Title | Period | Research Contact | Organisation | Funds |
| AANR01 | Australian Agriculture and Natural Resource Online | Jul 07–Sep 09 | Carolyn Martin | Joint RDC's coordinated by RIDIC | \$3,100 |
| BSS326 | Attend the ISSCT Entomology Workshop and model the dynamics of canegrub populations | Dec 08–Jul 09 | Peter Samson | BSES Limited | \$0 |
| BSS330 | Enhancing the impact of near infrared (NIR) methods as rapid varietal selection tools | Sep 09–May 10 | Deborah Purcell | BSES Limited | \$5,000 |
| BSS332 | Trade certification for near infrared payment in the sugar industry | Aug 09–May 10 | David Donald | BSES Limited | \$5,000 |
| BSS336 | Participation in Solute Signatures Masterclass and Vision for Irrigation R,D&E | May 10–Jun 10 | Jayson Dowie | BSES Limited | \$750 |
| CPI015 | Learning from the development of a significant weed issue, the incursion of wild sugarcane in Panama | Jan 09–Mar 10 | Graham Bonnett | CSIRO Plant Industry | \$0 |
| GGP002 | Development of an integrated wallaby management strategy | Jul 05–Aug 09 | Mick Andrejic | Barron Delta Farming Group | \$10,000 |
| NCT004 | Travel to and attend the ISSCT congress in Mexico to present two papers | Jan 10–Jun 10 | Robert Quirk | New South Wales Canegrowers Council | \$5,000 |
| QUT003 | An integrated pest management strategy for climbing rat in the far-north Queensland sugarcane production system | Jul 05–Mar 12 | Susan Fuller | Queensland University of Technology | \$5,000 |
| QUT032 | Developing a new methodology for competency based training courses for shift supervisors in sugar factories | Nov 08–May 12 | Ross Broadfoot | Queensland University of Technology | \$84,445 |
| QUT033 | Improving the efficiency of traffic office operations through improved traffic officer training | Nov 08–Aug 11 | Geoff Kent | Queensland University of Technology | \$54,368 |
| QUT043 | Investigate technologies and opportunities for biofuels production and diversification in the processing of sugar cane | Jan 10–May 10 | Darryn Rackemann | Queensland University of Technology | \$5,000 |
| RDA005 | Rewarding an innovation culture in the Australian sugar industry | Jul 06–May 13 | Carolyn Martin | Sugar Research and Development Corporation | \$30,788 |
| STU053 | Su Yin Tan–Studies on bagasse fractionation using ionic liquids | Mar 05–Oct 09 | Doug MacFarlane | Queensland University of Technology – Sugar Research Institute | \$0 |
| STU056 | Kenji Osabe–Development and application of a mature stem specific promoter in | Feb 06–Mar 10 | Robert Birch | University of Queensland – Sugar Research Institute | \$0 |
| STU057 | Tom Rainey–Improved bagasse fibre properties for the manufacture of paper, board and composite materials | Feb 06–Jul 09 | William Doherty | Queensland University of Technology – Sugar Research Institute | \$0 |

| | | | | | |
|--------------|---|---------------|-------------------|--|------------------|
| STU059 | Anna Satje–Improving the cation retention capacity of cane-growing soils using high activity clays | Mar 06–Apr 10 | Paul Nelson | James Cook University | \$16,000 |
| STU060 | Felicity Atkin–Estimates of breeding value of sugarcane clones and their impact on efficient parent management and cross pollination | Apr 07–Nov 10 | Joanne Stringer | BSES Limited | \$26,000 |
| STU062 | Henry Thomas–Effective methods for communicating the lessons learned from decision support systems to broader audiences | Jan 07–Feb 11 | Joseph Mula | University of Southern Queensland | \$16,000 |
| STU063 | Ian O'Hara–Pre-treatment of sugarcane bagasse for enzymatic hydrolysis and fermentation | Mar 08–Jul 11 | Les Edye | Queensland University of Technology – Sugar Research Institute | \$36,000 |
| STU064 | Daniel Zamykal–Intelligent data analysis methods from effective integration of Precision Agriculture within the Australian Sugar Industry | Mar 08–Jan 12 | Yvette Everingham | James Cook University | \$32,000 |
| STU065 | Milovan Bokan–Abiotic stress tolerant sugarcane: Drought-proofing sugarcane with cell-death protection genes | Feb 08–Jul 11 | Harjeet Khanna | Queensland University of Technology – Sugar Research Institute | \$32,000 |
| STU066 | Darryn Rackemann–Production of levulinic acid and its derivatives from sugarcane biomass | Jul 09–Jul 13 | William Doherty | Queensland University of Technology – Sugar Research Institute | \$16,000 |
| STU067 | Kameron Dunn–Conversion of lignin to industrial fuels and chemicals | Jul 09–Jul 13 | Phil Hobson | Queensland University of Technology – Sugar Research Institute | \$16,000 |
| STU068 | Patrick Bewg–Modification of lignin biosynthesis in sugarcane for the production of cellulosic ethanol | Feb 10–Jul 13 | Heather Coleman | Queensland University of Technology – Sugar Research Institute | \$16,000 |
| STU069 | Mark Wang–Greenhouse gas emissions from sugarcane agriculture and mitigation options | Mar 10–Sep 13 | Ben Macdonald | Australian National University | \$16,000 |
| STU070 | Richard Brackin–Microbiology of sugarcane soils | Jan 10–Jul 13 | Susanne Schmidt | University of Queensland | \$16,000 |
| TOTAL | | | | | \$446,451 |

| ARENA: People Development | | | | | |
|------------------------------------|---|---------------|------------------|--|------------------|
| Priority strategy: Social Capacity | | | | | |
| Project No | Title | Period | Research Contact | Organisation | Funds |
| BCA002 | Performance evaluation of SRDC R&D investments | Jul 07–Sep 13 | Annette Sugden | Sugar Research and Development Corporation | \$77,880 |
| BSS315 | Conduct an R,D& E symposium in the Burdekin | Mar 08–Aug 09 | Marian Davis | BSES Limited | \$0 |
| BSS321 | Contrasting broadacre enterprise management of herbicide resistance development with that of the sugarcane industry | Jul 08–Sep 09 | Barry Callow | BSES Limited | \$1,000 |
| BSS327 | Validation of a model to predict population trends of greyback cane grub | Aug 09–Feb 10 | Peter Samson | BSES Limited | \$5,000 |
| BSS328 | Workshop for sugar industry staff on sugarcane disease identification and management | Jun 09–Apr 10 | Barry Croft | BSES Limited | \$5,000 |
| BSS335 | Building capacity for the Future Farmers group Mackay | Jan 10–May 10 | Philip Deguara | Deguara Harvesting | \$10,000 |
| GGN001 | Grower Group Services | Jul 08–May 12 | Joe Muscat | Grower Group Services | \$190,550 |
| GGP014 | Better financial and operational decision making in grower owned farming/ harvesting businesses | Jul 06–Dec 09 | Ian Haigh | Burdekin Harvesting for Farming Group | \$31,970 |
| JCU030 | Pre-treatment of sugar cane | Jul 09–May 11 | Mohan Jacob | James Cook University | \$2,500 |
| MAP002 | Mackay alignment of grower services (MAGS) | Jul 07–Mar 10 | Burn Ashburner | MAPS | \$38,760 |
| TOTAL | | | | | \$362,660 |

Appendix D

Final Project Reports Approved

| Regional Futures | | | | |
|-------------------------|--|---------------|-------------------|---------------------------------|
| Value Chain Integration | | | | |
| Project No | Title | Period | Research Contact | Organisation |
| CHC002 | Development of a real time information system for Clarence harvesters | Jul 06–Apr 10 | Peter Rose | Clarence Harvesting Cooperative |
| CRC005 | Understanding the reproductive biology and ecology of sugarcane to manage the safe release of genetically modified cultivars | Jul 06–Jun 10 | Graham Bonnett | CSIRO |
| JCU027 | Defeating the Autumn Predictability Barrier | Jul 06–Aug 09 | Yvette Everingham | James Cook University |

| Regional Futures | | | | |
|--------------------------------|--|---------------|------------------|---|
| Farming and Harvesting Systems | | | | |
| Project No | Title | Period | Research Contact | Organisation |
| BBF001 | Pilot area-wide natural resource management group—building grower capacity to understand and better manage groundwater | Jul 06–Nov 09 | Enrico Mio | BBIFMAC |
| BSS266 | Optimum cane grub management within new sustainable cropping systems | Jul 04–May 10 | Peter Samson | BSES Limited |
| BSS286 | Improved sugar-cane farming systems | Jul 05–May 10 | Barry Salter | BSES Limited |
| BSS294 | Whole-farm planning for management of varieties to maximise productivity and reduce losses from diseases | Oct 06–Dec 09 | Barry Croft | BSES Limited |
| BSS297 | Delivering web-based irrigation management | Jul 06–Sep 09 | Trevor Willcox | BSES Limited |
| BSS304 | Cane-grower implemented drying-off irrigation scheduling on the Tableland | Jul 07–Mar 10 | David Donald | BSES Limited |
| CG013 | Growers working together to improve water quality in the Herbert Sugar Industry | Jul 05–Oct 09 | Eric Danzi | Canegrowers |
| CG018 | A review of institutional arrangements in the Burdekin Irrigation Area with a view to managing sustainable farming practices in the region | Mar 06–Sep 09 | Eric Danzi | Canegrowers |
| CSE011 | Improved environmental outcomes and profitability through innovative management of nitrogen | Jul 04–Jul 09 | Peter Thorburn | CSIRO |
| CSE012 | Adopting systems approaches to water and nutrient management for future cane production in the Burdekin | Jul 04–Jul 09 | Peter Thorburn | CSIRO |
| GGP017 | Improving soil health in undulating, dryland farms in the Central region | Jul 06–Jul 09 | Rino De Boni | Conningsby Dryland Farmers Group |
| GGP018 | Nutrient management from variable rate technology in a control traffic system by the Oakenden Grower Group | Jul 06–Sep 09 | John Muscat | Oakenden Grower Group |
| GGP021 | Bed forming utilising GPS guidance by the CAS (Calen and St Helen) Young Farmers Association | Jul 06–May 10 | Colin Mackenzie | Calen and St Helens Young Farmers Association |

| | | | | |
|--------|---|---------------|-----------------|--|
| GGP028 | Facilitating enhanced peanut/sugarcane rotations by assessing and managing the issues related to growing peanuts | Sep 06–Mar 10 | Don Halpin | Sustainable Sugar and Peanut Agriculture Pty Ltd |
| GGP029 | Mulgrave cane growers strategic grub management: implementing BSES decision-making tools | Jul 07–Jan 10 | Jeffrey Day | Mulgrave Canegrowers Ltd |
| GGP030 | Utilising a predictive model for the monitoring and management of cane grubs in the Mackay region by the Mount Kinchant Growers Group | Dec 07–Jun 10 | Paul Vassallo | Mackay Area Productivity Services |
| GGP031 | Seed To Fuel: Enhancing the value of rotational break crops to produce oil and bio-fuel in the Central region | Jul 07–Aug 09 | John Werner | Mackay Fibre Producers |
| GGP032 | The operation of the two-in-one harvesting attachment in a controlled traffic system | Jul 07–Oct 09 | Elio Castellani | Castellani Harvesting Group |
| GGP035 | Developing implement coulters for volcanic red soils | Jul 07–Mar 10 | Miles Darveniza | Grower Group Services |
| GGP036 | Total concept sugarcane planting system | Jul 07–Oct 09 | Daryl Morellini | PAD Farming Co |
| UNW003 | Development of a constructed wetland for improving water quality in sugarcane drainage, and ensuring its community acceptance and industry adoption | Sep 04–Feb 10 | Mike Melville | University of New South Wales |

Regional Futures

Transport, Milling and Marketing Systems

| Project No | Title | Period | Research Contact | Organisation |
|------------|---|---------------|------------------|--|
| QUT020 | Use of the SRI noxious gas jigger system to increase the juice processing capacity of evaporator stations | Nov 08–Nov 09 | Darryn Rackemann | Queensland University of Technology – Sugar Research Institute |
| QUT028 | Semi-automated stockpile tarping system for improved safety and fuel quality | Nov 08–Dec 09 | Phil Hobson | Queensland University of Technology – Sugar Research Institute |

Emerging Technologies

Farming, Harvesting, Transport, Milling and Marketing Systems

| Project No | Title | Period | Research Contact | Organisation |
|------------|---|---------------|---------------------|--|
| CRC007 | Bioactive natural products from sugarcane Pharmacology | Jan 07–Apr 10 | David Leach | Southern Cross University |
| JCU029 | Evaluation of membrane technology for clarification of sugar cane juice | Jul 07–Jan 10 | Veeriah Jegatheesan | Southern Cross University |
| QUT016 | High value products from furfural waste residue | Oct 06–Jun 10 | William Doherty | Queensland University of Technology – Sugar Research Institute |

| Emerging Technologies | | | | |
|-------------------------------|---|---------------|--------------------|--------------------------|
| Genetics and Breeding Systems | | | | |
| Project No | Title | Period | Research Contact | Organisation |
| CRC006 | Complete genome map of sugarcane | Jul 06–Aug 09 | Karen Aitken | CSIRO |
| CRC008 | Creating sustainable sugarcane production systems: Reducing plant nitrogen demand | Sep 07–Apr 10 | Susanne Schmidt | University of Queensland |
| CRC011 | Production of PHB/PHAs in sugarcane plants | Sep 07–Apr 10 | Stevens Brumbley | BSES Limited |
| CSE014 | Increased CCS, cane yield and water use efficiency by exploiting interactions between genetics and management | Jul 05–Aug 09 | Geoff Inman-Bamber | CSIRO |

| People Development | | | | |
|---------------------|--|----------------|------------------|--|
| Individual Capacity | | | | |
| Project No | Title | Period | Research Contact | Organisation |
| AANR01 | Australian Agriculture and Natural Resource Online | Jul 07–Sep 09 | Carolyn Martin | Joint RDCs coordinated by RIRDC |
| BSS326 | Attend the ISSCT Entomology Workshop and model the dynamics of canegrub populations | Dec 08 –Jul 09 | Peter Samson | BSES Limited |
| BSS330 | Enhancing the impact of near infrared (NIR) methods as rapid varietal selection tools | Sep 09–May 10 | Deborah Purcell | BSES Limited |
| BSS332 | Trade certification for near infrared payment in the sugar industry | Aug 09–May 10 | David Donald | BSES Limited |
| BSS336 | Participation in Solute Signatures Masterclass and Vision for Irrigation R,D&E | May 10–Jun 10 | Jayson Dowie | BSES Limited |
| CPI015 | Learning from the development of a significant weed issue, the incursion of wild sugarcane in Panama | Jan 09–Mar 10 | Graham Bonnett | CSIRO |
| GGP002 | Development of an integrated wallaby management strategy | Jul 05–Aug 09 | Mick Andrejic | Barron Delta Farming Group |
| QUT043 | Investigate technologies and opportunities for biofuels production and diversification in the processing of sugar cane | Jan 10–May 10 | Darryn Rackemann | Queensland University of Technology – Sugar Research Institute |
| STU053 | Su Yin Tan – Studies on bagasse fractionation using ionic liquids | Mar 05–Oct 09 | Doug MacFarlane | Monash University |
| STU057 | Tom Rainey – Improved bagasse fibre properties for the manufacture of paper, board and composite materials | Feb 06–Jul 09 | William Doherty | Queensland University of Technology – Sugar Research Institute |
| NCT004 | Travel to and attend the ISSCT congress in Mexico to present two papers | Jan 10–May 10 | Robert Quirk | NSW Canegrowers Council |

| People Development | | | | |
|--------------------|---|---------------|------------------|-----------------------------------|
| Social Capacity | | | | |
| Project No | Title | Period | Research Contact | Organisation |
| BSS315 | Conduct an R,D& E Symposium in the Burdekin | Mar 08–Aug 09 | Marian Davis | BSES Limited |
| BSS321 | Contrasting broadacre enterprise management of herbicide resistance development with that of the sugarcane industry | Jul 08–Sep 09 | Barry Callow | BSES Limited |
| BSS327 | Validation of a model to predict population trends of greyback cane grub | Aug 09–Feb 10 | Peter Samson | BSES Limited |
| BSS328 | Workshop for sugar industry staff on sugarcane disease identification and management | Jun 09–Apr 10 | Barry Croft | BSES Limited |
| BSS335 | Building capacity for the Future Farmers group Mackay | Jan 10–May 10 | Philip Deguara | JC Deguara Family Trust |
| MAP002 | Mackay alignment of grower services (MAGS) Services Ltd | Jul 07–Mar 10 | Burn Ashburner | Mackay Area Productivity Services |

Appendix E

Abbreviations

| | |
|---------|---|
| ABCR | Advanced Burdekin Collective Research |
| ACFA | Australian Cane Farmers' Association Limited |
| ACGC | Australian Cane Growers' Council |
| AOP | Annual Operational Plan |
| ASMC | Australian Sugar Milling Council Proprietary Limited |
| ASSCT | Australian Society of Sugar Cane Technologists |
| ASSCT | Australian Society of Sugarcane Technologists |
| BBIFMAC | Burdekin Bowen Integrated Floodplain Management Advisory Committee |
| BPMS | Business Process Management System |
| BPS | Burdekin Productivity Services |
| BSES | BSES Limited |
| CAC Act | Commonwealth Authorities and Companies Act 1997 |
| CASH | Calen and St Helens |
| CBP | Capacity Building Project |
| CCS | Commercial Cane Sugar |
| CDFG | Conningsby Dryland Farmers Group |
| CPPB | Cane Protection and Productivity Board |
| CRC | Cooperative Research Centre |
| CRCSIIB | Cooperative Research Centre for Sugar Industry Innovation through Biotechnology |
| CRDC | Cotton Research and Development Corporation |
| CRRISI | Central Region Rural Innovation Support Inc |
| CSE | Centre for Sustainable Ecosystems |
| CSIRO | Commonwealth Scientific and Industrial Research Organisation |
| DAFF | Australian Government Department of Agriculture, Fisheries and Forestry |
| DAFWA | Department of Agriculture and Food, Western Australia |
| DEEDI | Department of Employment, Economic Development and Innovation (Queensland) |
| FEAT | Farm Economics Assessment Tool |
| GGIP | Grower Group Innovation Project |

| | |
|--------|--|
| GI | Glycaemic Index |
| GIS | Geographical Information System |
| GVP | Gross Value of Production |
| IBIF | Innisfail Babinda Innovative Farmers |
| IPM | Integrated Pest Management |
| ISSCT | International Society of Sugar Cane Technologists |
| JCU | James Cook University |
| LEVHCL | Lower Empire Vale Harvesting Co-operative Limited |
| MAPS | Mackay Area Productivity Services |
| NCIPG | North Clarence Innovative Planting Group |
| NFIG | New Farming Initiative Group |
| NSW | New South Wales |
| OH&S | Occupational Health and Safety |
| PCSF | Plain Creek Sustainable Farmers |
| PIERD | Primary Industries and Energy Research and Development Act 1989 |
| QSL | Queensland Sugar Limited |
| QUT | Queensland University of Technology |
| R&D | Research and Development |
| RDC | Research and Development Corporation |
| RIRDC | Rural Industries Research and Development Corporation |
| SRDC | Sugar Research and Development Corporation |
| SRI | Sugar Research and Innovation within the Queensland University of Technology |
| SSPA | Sustainable Sugar and Peanut Agriculture Pty Ltd |
| UQ | University of Queensland |
| WSBNFG | Winter Soybean for Biodiesel and Nitrogen Fixation Group |

Appendix F

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Appendix G

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