



**Case in support of retention of a specific Research and Development Corporation
to serve the Australian sugar industry**

Queensland University of Technology (QUT) is a major research and development provider to the Australian sugar industry. With an export value alone of \$1,335M (2008-09 ABS), sugar is Australia's third largest crop-based export industry after (i) wheat and flour and (ii) grapes and wine. QUT supports this industry with R&D in both biotechnology and in processing technology. Therefore, as a significant stakeholder in R&D for the Australian sugar industry, QUT provides the following case in support of the current Sugar Research and Development Corporation (SRDC) funding model.

- Australia's sugar industry is complex:
 - it produces a diversity of products - sugar, electricity, biofuels, animal feed, fibre products, chemicals, fertilizers
 - it incorporates 25 heavy industrial processing plants, 4,000 cane farm businesses, 6 bulk storage terminal ports, and innumerable support industries
 - the SRDC targets both the agriculture and industrial processing sectors, and pursues efficiencies across the whole value chain (integrating agriculture with industrial processing)
 - management of R&D in the sugar industry needs broad knowledge across both agricultural and industrial processing fields, as vested in SRDC
 - the diverse technical challenges facing the sugar industry are very different from those encountered by other rural industries:-
 - sugarcane production methodology is unlike that of other crops
 - sugarcane processing and sugar refining is unlike that of any other agricultural feedstocks
 - the range of products derived from sugarcane is greater and more diverse than for any other agricultural commodity
 - the sugar industry is diversifying further into a new generation of transformed products such as cellulosic biofuels, bioplastics and chemicals
- The sugar industry is currently at the leading edge and positioned to be the ongoing main player in future large scale sustainable bioenergy projects for meeting national greenhouse gas emissions targets. Studies have shown that sugarcane can provide bioenergy more efficiently and with lower net greenhouse gas emissions than any other commercial crop. Diversification of production to include biofuel, bioelectricity and biochemical products from sugarcane fibre (bagasse) will be the future direction for broadening the revenue base for the industry and securing its advancement. SRDC has recently funded enabling projects in the area of energy efficiency in the sugar processing factories and bagasse storage as well as supporting a major project in the area of novel technologies for thermochemical production of biofuels and chemicals. These are important steps. However, at this point in time, the Australian sugar industry has no clear direction in how to proceed down a bioenergy path. There is a need for an organisation like SRDC which has links to both the agricultural feedstock and processing sides of the industry, and a strategic view, to play a role in steering the industry into the future by promoting its diversification and value-added product development.

- The Australian sugar industry competes internationally against major producers which benefit from low labour and low capital costs. Our industry has until now maintained its competitiveness through research and innovation in the areas of growing and processing technology. Smart targeting of R&D is essential in maintaining a position which is increasingly under pressure from the emerging economies of South America, India and China. These challenges will have to continue to be met in the traditional production locations through research, development and extension. Diversification will take a key role in securing competitiveness in the future. However, QUT is very concerned that failure to maintain the SRDC model of R&D funding could result in a loss of the fundamental appreciation of the challenges facing the sugar industry and of how best to address these challenges.
- Appropriate and timely responses to the tactical and strategic R&D requirements in a rapidly diversifying international industry need a sophisticated understanding of the industry and its markets. For example, SRDC has recently supported at short notice an extensive trial of whole crop harvesting critical to the development of an expanding bioelectricity industry. The ability of SRDC to respond quickly when the opportunity arose for this commercial scale investigation was extremely important in the timely delivering of significant economic and environment benefits for Australia. QUT is keen that this responsiveness to the industry's needs is maintained.
- Geographical location adjacent to the Great Barrier Reef and proximity to urban centres presents unique environmental challenges for the sugarcane growing and processing sectors. Only through an integrated and inclusive approach to the multifarious strategies required to ensure environmental protection whilst concurrently maintaining industry profit maximisation, can these challenges be met effectively. Just one example is the current SRDC-funded project at QUT which addresses the national and state priority to improve water quality in the reef area through development of mill refuse pelletisation technology to prevent entrainment of residues into the environment. We feel that a sophisticated industry-focused R&D agency such as SRDC is vital in this role.
- The SRDC has played a pivotal role in developing the research, development and extension skills that support the whole sugar industry. Research projects develop the skills and careers of scientists, engineers and technologists who provide the extension services on which the competitiveness of the industry is based. The SRDC has played a central role in the industry in this regard and has supported a very strong, targeted capability building program for many years. This has provided career development to many industry technologists, canegrowers and millers. It also supports people development across the sugar industry value chain and communicates research outcomes broadly. QUT has serious concerns that without a strong SRDC this essential capability will be eroded, to Australia's loss in terms of global competitiveness, industry profitability, product diversification and development of innovative industry opportunities.

QUT appeals to the Productivity Commission Inquiry to give favourable consideration to promoting and strengthening the existing SRDC model of R&D support to the Australian sugar industry's future.