

“SPECIALIST GROWER GROUPS ENHANCING BMP PACKAGING AND ADOPTION IN INNISFAIL & BABINDA DISTRICTS.”

Final Report - IBS002



Innisfail Babinda Cane Productivity Services



Australian Government
Sugar Research and
Development Corporation

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Executive Summary

It was generally accepted throughout the sugar fraternity that grower group structures within the Innisfail / Babinda region were generally disjointed and, at times, lost credence by peers through the lack of network communications available to the existing group structures. Funding opportunities for these loose groups and some individuals were limited as government agencies demanded accurate grant applications, community consultation, fiscal accountability and prompt acquittal of funds. Even with this ad hoc approach there was a history of innovation (from the region) and it was felt structured and better organised grower groups would assist greatly in nurturing and developing these innovative ideas. The concept was to develop the skills of key leaders to lead and develop the group processes throughout the district whilst recognising the unique locality and nature of the industry in this region.

This project has addressed these issues by:

- Offering a structured approach to the grower group processes through the funding of an employment of an officer with the Innisfail Babinda Cane Productivity Services who primary role was the day to day running of this project (IBS002). This position has been filled (uninterrupted) by the author of this report from March 2005 through to the present day. The author came to the role with over 20 years experience as a cane producer, an intimate knowledge of the region, previous extension service employment and, more recently, training qualification and experience.
- The formal training of key group personal (facilitators) to lead the group process whilst mentoring group personal. This training was undertaken by local training consultants, Tropic Education and Training, Innisfail. This process has enabled key grower personal to develop their
 1. interpersonal and public speaking skills;
 2. meeting and group facilitation skills;
 3. leadership skills;
- The further development and education of our group facilitators, group members, partners, mill staff and R & D staff through a series of travel and learn projects compiled using themes as identified by the group processes. The scope of these travel and learn projects involved differing sized groups of members travelling locally, regionally and interstate to experience an array of innovation, technology and educational opportunities. The regions visited included:
 1. 31 growers visiting the Burdekin and Herbert in 2005 to view how colleagues in those regions were coping with producing a sustainable product during periods of low prices;
 2. 42 harvester contractors and growers visiting the Herbert in 2005 to view dual row harvest in operation;
 3. 38 growers and their partners visited the Mossman and Atherton Tableland regions in 2006 to investigate alternate farm enterprises to supplement sugar cane income;
 4. A delegation of 3 attended the 2007 National Controlled Traffic and Precision Agriculture Conference in Perth in 2007 to investigate emerging technologies in that field;

Executive Summary (cont)

- The presentation of the latest technologies and emerging best practice, adopted through the group process, through a series of newsletters, shed meetings and productivity forums, Travel and Learn Projects, informative workshops and farm field walks.
- A sliding level of grant application assistance and project planning. We have discovered that key group personal are now almost 100% responsible for the drafting, formalisation and orchestration of their own grower group projects. We have also identified the focus of these grower group projects shifting away from “personal” localised problems to issues faced by the wider cane growing community eg trialling of coulter for volcanic red soils.

Methodology

The concept of grower groups in the Innisfail / Babinda was not new prior to the granting of this full project however well meaning groups seemed to dissolve once projects were completed or key personal refocused interest. A major aim of this project was to leave a legacy of active groups operating in the district once the project funding was completed. Co jointly the IBCPS would scale down the level of administrative assistance given to the process at the completion of the project timeframe arrived. It was important that a strong methodology of delivery accompany the project. This was the format of delivery of this projects as advised by the Operational Group and facilitated by IBCPS staff:

- The employment of a suitable officer by IBCPS to deliver the project in March 2005.
- Launch of Project to Innisfail / Babinda growers – this event occurred at the 2005 Annual Productivity Awards, an event attended by over 250 growers, partners, harvesting contractors, millers, extension staff and industry providers.
- Following a survey process seven groups were initially identified and initial meetings advertised and conducted. The seven original groups were:

SPECIALIST GROWER GROUPS
Precision Farming Group
Harvesting contractor's group
Kennedy / Murray Group
Innisfail Innovative Growers Group
Babinda Innovative Growers Group
Mixed Cropping Interest Group
Improving Riparian Boundaries Group

- **Groups Advancement**

Groups continued to meet on an as needs basis with several of these groups restructuring in the wake of Cyclone Larry and the detection of smut on the eastern coast in 2006. The groups restructure occurred along the following lines:

Methodology (cont)

SPECIALIST GROWER GROUPS
Precision Farming Group
Harvesting contractor's group
Kennedy / Murray Group
Innisfail / Babinda Innovative Growers Group
Variety Yield Trialling Group (incorporating smut resistant trialling, propagation and release)
Drainage Management Groups

At the compilation of this report the above mentioned groups were continuing to meet on an as need basis. Several applications for grant funding to support group project work were still being assessed and, generally speaking, groups have reached the stage where they can be considered self sufficient. Requests for assistance are still received at our IBCPS office however most of these are for grant writing assistance and general technical information. The highlights of the above mentioned groups have been:

SPECIALIST GROWER GROUPS	HIGHLIGHTS
Precision Farming Group	<ul style="list-style-type: none"> * Adoption of CTF farming principals * Set up of GPS networks with coverage of over 50% of region *Development of auto steer billet planters (Marano, Cecchi, Brooks) * Adoption and development of precision agriculture technology within the region (Cecchi)
Harvesting contractor's group	<ul style="list-style-type: none"> *Investigation and adoption of dual row harvesting within the region *Investigation of harvester data monitoring
Kennedy / Murray Group	<ul style="list-style-type: none"> *Investigation of harvester data monitoring
Innisfail / Babinda Innovative Growers Group	<ul style="list-style-type: none"> *Investigation and establishment of 2m dual row system (Brooks Brothers)

	*Investigation and trialling of coulters for volcanic red soils (Darveniza)
Variety Yield Trialling Group (incorporating smut resistant trialling, propagation and release)	*Establishment of Grower plots for yield trialling *Transport of smut resistant varieties (Q208, KQ228) from the Burdekin in 2006 *Maximum propagation (in IBCPS and grower)of Q208 & KQ228 in 2007 for release to growers in 2008
Drainage Management Groups	*Consultation and establishment of sediment traps in the Silkwood east drainage region

Partnerships:

Partnerships have been nurtured and developed with several key industry peak bodies, milling identities, research organisations, local authorities, and industry supply companies including:

- Bundaberg Sugar Ltd
- Innisfail Canegrowers Organisation
- Innisfail and Babinda Cane Suppliers
- Tully Cane and Productivity Services
- Tully Sugar Ltd
- BSES
- Mossman Agricultural Services
- Herbert Cane Productivity Services
- Australian Controlled Traffic Farming Association
- Cocoa Australia
- Great Barrier Reef Marine Park
- Johnstone Shire Council
- Cardwell Shire Council
- Queensland Department of Primary Industries and Fisheries
- Queensland Department of Natural Resources and Water
- Australian Government Department of Agriculture, Forestry and Fisheries

Project Outputs

The following outputs were delivered by the project;

- Education and knowledge gained by our facilitators and other group members on procedure, process, development, trialling, application, acquittal and communication.
- Skills gained by our facilitators and other members in the field of meeting procedure, accruing and assessment of technical advice, project delivery and transferral of results to the wider farming community.
- Processes and practices - Advancements in the fields of harvesting practice, farming systems, minimum tillage ground preparation, herbicide trialling, cultivation practices, nutrient prescription, variety trialling, smut resistant variety progress and community farm sharing of assets are a sample of several processes and practices adopted by the group process since its inception.
- Products and technology – Adopted as a matter of course through the group processes include the Corradini 2 in 1 harvester front, GPS base stations and networks, GPS steered billet planters, GPS steered bed former, GPS steered harvester, yield monitoring sensors and block mapping software, sediment trapping on farm drainage and spring loaded coulters for volcanic red soils.

Project Outputs (Pictorial)



2m Dual Row System



GPS Mobile Base Station



Alternate on farm income



Educational trips to extension stations



Attending National Forums



Investigation Dual Row Harvesting



Investigating different systems



Investigating emerging technology



Presentation of results



Propagation of smut resistant varieties



GPS Tractor Auto Steer



Yield Monitoring sensor technology

Project Outcomes

Returns to the sugar industry

The sugar benefits from the skilled people trained in the program and from the value of their development of facets of the industry through education, research and project work.

- *Skilled People*

The sugar industry benefits directly from the skilled people who have received training and experience through this program and remain active in the core business(s) of sugar cane production, processing and agricultural extension. These personal can be expected to problem solve and deliver on a higher plane than those without such experiences.

- *Research Findings*

The sugar industry has benefited directly from the findings of projects undertaken by the groups. The findings of these projects have been communicated to the wider cane farming community through newsletters, presentations, shed talks and general word of mouth.

- *Project Work*

Project work undertaken by the groups has involved advancements in the following areas:

1. Advancement of dual row harvesting in the district.
2. Advancement of 2m dual row farming systems in the district.
3. Advancement of controlled traffic farming in the district.
4. Advancement of precision agriculture in the wet tropics.
5. Advancement of variety release through controlled grower plots.
6. Advancement of smut variety release through sourcing of BSES approved varieties from the Burdekin and subsequent propagation and planned release of this plant source in 2008.
7. Advanced drainage systems acknowledging our proximity to the Great Barrier Reef.
8. Advancement of cutting discs (coulters) specifically for use in volcanic red soils therefore allowing placement of nutrient and pest treatment chemicals beneath the surface.
9. Advancement of general capacity building within the Industry.

Project Outcomes (Pictorial)



Skilled industry personal through education



Research finding through grower involvement in variety selection



Technical advances through project work



Improved production through acceptance of trialled techniques

Impact of the project on the sugar industry

The actual and expected benefits of the project have been:

Environmental Benefits:

- Less soil disturbances and resultant top soil run off during times of torrential downpours (sediment trapping, CTF, 2m dual row);
- Less nutrient loss to the atmosphere (volcanic red coulter, CTF, PA);
- Less nutrient run off to the Great Barrier Reef (volcanic red coulter, CTF, PA, sediment trapping);
- Less risk of feral pigs foraging for grubs (volcanic red coulter);
- The ability to grow soy beans as a rotational crop (2m dual row);
- The ability to direct double disc open plant as opposed to traditional planting methods (2m dual row, CTF).
- Less dependence on herbicide control (2m dual row)

Social Benefits:

- More time to commit to the family;
- Improved group member skills sets in project management and working within the group environment.
- Linkages with other groups in neighbouring areas.
- Involving partners in several of the programmes and outings so as not to isolate that integral part of the family farming unit.
- Networking opportunities with R & D providers such as BSES Ltd.

Economic Benefits:

- Better productivity
- Better best practices through education and grower forums
- Sustainable industry application
- Sustainability through sugar diversity partnerships
- Better application of nutrient and chemicals
- Less wear and tear on farm machinery
- Less fuel usage
- Better time planning
- More time to pursue off farm investments

Objectives

The project aimed to improve the flow of information within the Innisfail and Babinda sugar growing districts. This was primarily aimed at the grower level however there was also the desired interaction with millers, harvesting contractors and R, D & E providers. By bringing all parties together in regular, themed structured forums, the project aimed to:

- Help growers learn from each other (with support from R,D & E) to facilitate uptake of existing and emerging best practise such as fertiliser and nutrient management, by product use, fallow management, strategic tillage / controlled traffic, drainage, variety management, weed control and harvesting.
- Continue to develop partnerships and understanding of whole of industry issues between growers and millers.
- Assist key regional farming leaders to develop group facilitation and mentoring skills.
- Develop and enhance extension skills and knowledge in the regions major service providers (IBCPS, BSES Limited and Bundaberg Sugar)

We have met the stated objectives of the original application by:

- Establishing a network of grower communication (groups) not formally in existence in the district. These groups served as a catalyst for growers to “bounce” ideas off each other and to relay degrees of success (and sometimes failure) they had experienced in their own projects, trials and systems.
- An all ready existing partnership between growers and millers was enhanced with the two parties sitting around the table in various groups, sharing the work load with group project work, travelled to and attended conferences together, shared resources and generally communicated well with a similar goal.
- Our facilitators and several extension staff gained professional invaluable training on meeting facilitation and mentoring through a program devised by local training company, Tropic Education and Training. This enabled the transition of full management and ownership of the groups to the growers.
- Our extension staff’s skills have been enhanced through the process by exposing them to training, innovation, technology development and different farming systems to which they would have otherwise never had the opportunity to experience.

Recommendations

Recommendation 1: The Board of Directors of the IBCPS continue to support the grower group processes in the Innisfail / Babinda region by offering staff and in-kind support to specific requests delivered through the group process.

Recommendation 2: The Board of Directors of the IBCPS consider moves to enter into a partnership with a post graduate PhD student so as to give credence to research findings as undertaken by previous, current and future group (and service) project work.

Recommendation 3: Group finding from SRDC funded projects be communicated to the wider cane farming community in as precise and expedient manner as possible. This may again involve the groups utilising resources and networks available to the IBCPS.

Recommendation 4: Recognition of successful group work findings through project and investigative work be given at the Annual Production Awards each year and the recipients of the recognition are allocated a suitable amount of time to present their findings.

Recommendation 5: SRDC continue with their current policy of supporting groups with:

1. Concept design,
2. Information flow egress,
3. Application of design and,
4. Project management

in regard funding of Grower Group Innovation Projects.

Recommendation 6: SRDC continue with their current policy of supporting groups with:

1. Concept,
2. Application,
3. Management

in regard Travel and Learn Projects.