BSES Limited

FINAL REPORT – SRDC PROJECT BSS289

EVERYTHING YOU WANTED TO KNOW ABOUT CANE PAYMENT BUT WERE TOO AFRAID TO ASK - INFORMATION WORKSHOPS FOR FEMALE BUSINESS PARTNERS IN THE SUGAR INDUSTRY

by

DJW BURGESS and MJ WARD*

SD07002

***Bundaberg Sugar Limited**

Contact:
Drewe Burgess
Senior Extension Officer
BSES Limited
PO Box 1712
Mareeba Q 4880
Telephone: 07 4092 7549
Facsimile: 07 4092 7569
Email: dburgess@bses.org.au

Australian Government
Sugar Research and Development Corporation

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SUMMARY

After a grower shed meeting at a Tableland cane farm, Drewe Burgess from BSES and Mick Ward from Bundaberg Sugar spent quite some time answering questions from the grower's wife on cane payment, why harvesters cut in rounds, relative CCS, sugar pricing and general industry matters.

As a result, Drewe and Mick successfully put a proposal to SRDC to support, with BSES, Bundaberg Sugar, QSL and CANEGROWERS a series of female 'Farm Business Partners' workshops on these issues in the Tableland and Innisfail-Babinda region.

Workshops were run in Mareeba, Innisfail and Babinda in October 2006. Feedback from the 60 participants was excellent.

As a result of the workshops, the investigators believe that female farm business partners value opportunities to increase their industry knowledge so that they can contribute more effectively to the farm business, and that just as traditional primarily male-participant activities cater for a male farmer environment (eg shed meetings), a feature of the success of these workshops was that they catered specifically for women. Hence, the workshops were designed with start and finish times to allow for children to be dropped off and picked up from school, an equal or greater number of female presenters, venues away from the (male-domain) farm shed, and workshop activities that build on women's propensity to network and share information.

1.0 BACKGROUND

After a grower shed meeting at a Tableland cane farm, Drewe Burgess from BSES and Mick Ward from Bundaberg Sugar spent quite some time answering questions from the grower's wife on cane payment, why harvesters cut in rounds, relative CCS, sugar pricing and general industry matters.

As a result, Drewe and Mick successfully put a proposal to SRDC to support, with BSES, Bundaberg Sugar, QSL and Canegrowers a series of female 'Farm Business Partners' workshops on these issues in the Tableland and Innisfail-Babinda region.

2.0 OBJECTIVES

- To raise the level of understanding about cane payment, relative CCS, sugar marketing and pricing, interpreting cane productivity information and the role of SRDC of 70 to 100 female 'farm business partners' involved in farms supplying cane to mills in the Innisfail-Babinda-Tableland areas.
- To improve the business skills of these farm business partners by increasing their comprehension of cane payment and pricing information, including delivery advices, despatched to sugarcane businesses by Bundaberg Sugar Ltd.
- To use this series of information workshops as a catalyst to create more farm business level interaction between male and female partners.

3.0 METHODOLOGY

Workshops were run in Mareeba, Innisfail and Babinda in October 2006. Each was advertised widely (Appendix 1) and a workbook of the presentations was prepared (Appendix 2). Feedback was assessed from the participants (Appendix 3).

4.0 KEY LEARNINGS, ACHIEVEMENTS AND/OR KNOWLEDGE GAINED

- 60 farm business partners supplying Tableland, Babinda and South Johnstone mills participated in the three half-day workshops.

- Feedback (see Appendix 3) was excellent. On a scale of 1 (not useful) to 5 (very useful) participants ranked the cane payment information as 4.6 and sugar marketing and pricing as 4.5. 100% of participants would recommend others attend a similar workshop and 100% indicated an intention to discuss what they learnt with others, primarily their husbands, other family members and other growers.

- In their project proposal the investigators stated: "Overwhelmingly, it is the female partner in sugarcane farming businesses in Australia who conducts the daily administration tasks of dealing with the mail, bookkeeping and paying the bills. It is also often the female partner who is computer literate and possesses the knowledge, skills and motivation to access electronic information such as that provided through e-mail". The investigators' 'hunch' that a real need for this type of workshop existed and that the workshops would be well received was justified.

- Based on the feedback received, workshop participants highly valued the opportunity to increase their level of understanding of general sugar industry matters and cane payment and relative CCS schemes in particular, despite the majority many of them having been long-time sugar industry participants.

5.0 IMPLICATIONS AND RECOMMENDATIONS RESULTING FROM PROJECT

As a result of the workshops, the investigators have formed a view that:

- A number of female farm business partners feel to some extent marginalised in industry extension and education activities and, as a result, value opportunities to increase their industry knowledge so that they can contribute more effectively to the farm business.
- More complex industry matters including, but not limited to, CCS schemes, sugar and cane-pricing arrangements are not generally well understood. Workshop-style activities, with skilled presenters and high-quality presentations (Appendix 2) are effective in raising levels of understanding.
- Just as traditional primarily male-participant activities catered for a male farmer environment (eg shed meetings), a feature of the success of these workshops was that they catered specifically for women. Hence, the workshops were designed with start and finish times to allow for children to be dropped off and picked up from school, an equal or greater number of female presenters, venues away from the (male-domain) farm shed, and workshop activities that build on women's propensity to network and share information.

As the project was itself an information transfer exercise, workshop *content* was transferred to Innisfail-Babinda and Tableland growers via the workshops and resultant discussions between participants and their farming partners. Without detailed knowledge of extension/education activities conducted in other areas, it is difficult to comment on the broader applicability of this workshop content. However, the experience gained through workshop *process* (inviting particularly women, the family-friendly mode of delivery, using female presenters where possible, the goodwill this project seemingly generated) provides some valuable learnings for industry. The investigators recommend that extension/education service providers (BSES, Cane Productivity Service Companies, CANEGROWERS, Milling Companies, Government agencies) consider female farm business partner specific extension/education as part of their normal activities. For example, when planning a round of information meetings, one or more of the meetings could be targeted specifically at the female farm business partners. Likewise, a round of female-specific workshops, with tailored content, could be conducted across a region on a regular (eg annual) basis.

6.0 BENEFITS TO THE INDUSTRY, THE COMMUNITY AND/OR THE PARTICIPANTS

Based on the feedback they have received (formally at the workshops and subsequently in their day-to-day work), the investigators are confident that this project has achieved its aims of:

- increasing levels of understanding about cane payment, relative CCS, sugar marketing and pricing, interpreting cane productivity information and the role of SRDC;
- improving the business skills of these farm business partners; and
- creating more farm business level interaction between male and female partners.

Additionally the act of open and honest sharing of information about business aspects of the industry assists an incremental shift away from adversarial relationships between industry participants to more collaborative ones. The feeling of goodwill at these workshops was palpable, encouraging the investigators that industry participants can genuinely 'collaborate to compete'.

7.0 COMMUNICATION

The *Australian Canegrower* magazine and SRDC's electronic newsletter ran articles on these workshops.

APPENDIX 1 - Invitation to the workshop

Calling all sugar industry women
You're invited to attend a free 'Farm Business Partners' workshop.

This workshop is designed especially for women involved in any aspect of cane growing businesses and is an ideal opportunity to network with other women involved in the industry.

This half-day course will help you to find out more about:

- Your cane pay advice and how to make sense of cane payment;
- Sugar marketing and pricing – how it effects you on the farm;
- How the relative CCS scheme works;
- Interpreting your farm productivity information;
- Checking your delivery advices; and
- What's going on in sugar research and development.

The workshops run from 9.45 am to 2.00 pm, with lunch provided. Dates and venues are:

Mareeba:	Tuesday 24 October Australian Coffee Centre, Ivicevic Rd
Innisfail:	Wednesday 25 October Riverside Tavern, Edith Street
Babinda:	Thursday 26 October Training Room, Babinda Mill

To assist with catering arrangements, it is essential that you register to attend a workshop.

To register, or to find out more, contact:

- Marian Davis at BSES Innisfail on 4064 3458 or 0427 771 845
- Bronny Francis at Tableland Canegrowers on 4092 6065

Registrations close Tuesday 17th October.

Farm Business Partners Workshops 2006

Mareeba 24th October

Innisfail 25th October

Babinda 26th October

Farm Business Partners Workshops

Innisfail Wednesday 25th October
Babinda Thursday 26th October

CANEGROWERS

Workshop Team

Mick Ward	Bundaberg Sugar
Ken Hall	Bundaberg Sugar
Mark Magnanini	Bundaberg Sugar
Ginette Barret	QSL
Tracy Henderson	SRDC
Drewe Burgess	BSES
Marian Davis	BSES
Sarah Standen	Canegrowers

Program

- Industry profile
- Sugar marketing & pricing
- Cane payment
- Relative CCS
- Harvesting logistics
- Lunch
- Auditing delivery advices
- Canegrowing basics
- Interpreting productivity information
- What's going on in R & D?
- Finish ~ 2.00pm

Fostering an innovative and sustainable Australian sugar industry through targeted investment in research and development

Everything you need to know about… SRDC

Tracy Henderson
R&D Investment Manager

Fostering an innovative and sustainable Australian sugar industry through targeted investment in research and development

Our Corporate Outcome

A profitable and internationally competitive Australian sugar industry providing economic, environmental and social benefits for rural and regional communities.

Fostering an innovative and sustainable Australian sugar industry through targeted investment in research and development

A partnership approach

Critical to our success:

- ✓ Engagement with industry participants
- ✓ Emphasis on value chain
- ✓ Partnering with researchers
- ✓ Focusing on change that ***adds value.***

Fostering an innovative and sustainable Australian sugar industry through targeted investment in research and development

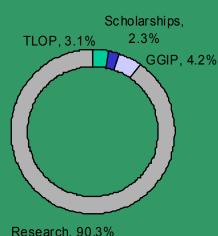
Our funding

- **Funded by levies paid by the sugar industry *(currently $.07/tonne from growers and $.07/tonne from millers)* and matching funds from the Australian Government).**
- **Levies are collected by mills by the Levies Revenue Service (Department of Agriculture, Fisheries and Forestry).**

Fostering an innovative and sustainable Australian sugar industry through targeted investment in research and development

Our Investment Approach

- ✓ Focus is on investing in new and improved ways of doing things not core or ongoing services.
- ✓ Committed to setting the right targets, managing investments so they succeed
- ✓ Committed to maximising the return on industry and Government investment into research and development.
- ✓ Three Investment Arenas
- ✓ Four types of projects



Fostering an innovative and sustainable Australian sugar industry through targeted investment in research and development

Measuring our success

1. **Are our R&D investments well targeted and responsive to priority needs?**
   - ✓ **Feedback from industry at the 2006 series of regional workshops 91% of participants indicated that thought SRDC investments in R&D were valuable.**
   - ✓ **Feedback from Government on acceptance of Annual Operational Plan and Annual Report**

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Measuring our success

2. **Are we continually improving our R&D portfolio management by learning, experimenting and influencing change?**
   - ✓ **Industry indicated that there is a need to have a regional and mill area focus to R&D investment –***regional futures arena*;
   - ✓ **Feedback indicated the need ongoing investment in the area of strategic research -** *emerging technologies arena*; **and**
   - ✓ **focus on building capacity for learning, change or innovation in sugar industry people to continue -** *people development arena***.**

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Measuring our success

3. **Is the Corporation delivering on industry priorities and the Australian Government's National and Rural industry priorities?**
   - ✓ **Sources of advice on priorities:**
     - ***The Australian Government***
     - ***The Representative Bodies***
     - ***Other Industry Groups***
     - ***Industry Participants***
     - ***R&D Partners***
   - ✓ **SRDC's R&D portfolio balanced to ensure all priorities are met.**

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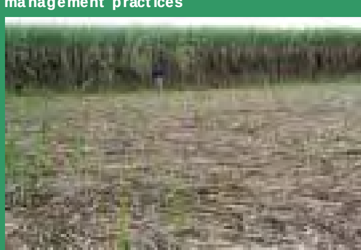
Celebrating our success

1. Delivering regional results:

- ✓ **Yield Decline Joint Venture delivering economic and environmental benefits**
- ✓ **Specialist grower groups enhancing best management practices**



Fostering an innovative and sustainable Australian sugar industry through targeted investment in research and development

Celebrating our success

2. Harnessing the potential of emerging technologies

- ✓ Horizon 3 research – the value of this research lies in identifying options for future development.
- ✓ Harder to see tangible outcomes immediately.
- ✓ In early November SRDC will launch a publication which analyses the options of utilising bagasse and trash.

Fostering an innovative and sustainable Australian sugar industry through targeted investment in research and development

Celebrating our success

3. Developing the industry's people

- ✓ Recognising the importance of individuals and networks:
  - Grower Group Innovation Projects have had a huge impact on industry. In 2005-06, over 150 growers and harvesters were involved in 18 projects, allowing them to try something that they had not tried or tested before.
  - In May 2006, 30 younger-people from the Far North, Herbert and Burdekin regions graduated from the Impact on Sugar program. Graduates are now equipped with the skills, knowledge and confidence to make a significant contribution to the Australian sugar industry at an individual, enterprise and regional level.
  - Events such as GGIP workshops and the GIVE (Grower Innovation Virtual Expo) Day are reinforcing the benefits of establishing links with researchers and extension people.

Fostering an innovative and sustainable Australian sugar industry through targeted investment in research and development

Contact Details

www.srdc.gov.au

Phone
07 3210 0495

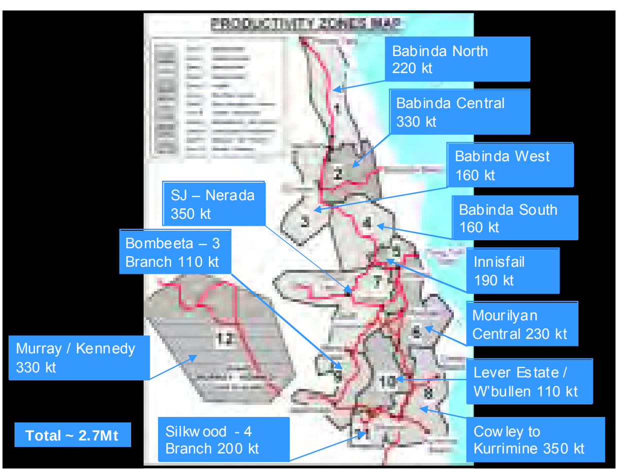
141 Queen St Brisbane

NQ Coastal Mills District Profile 2005

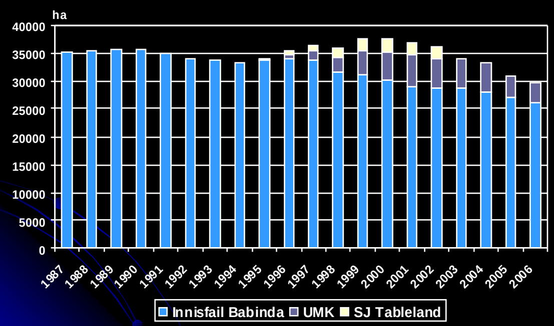
Mick Ward
FBP Workshops
October 2006

Summary Data

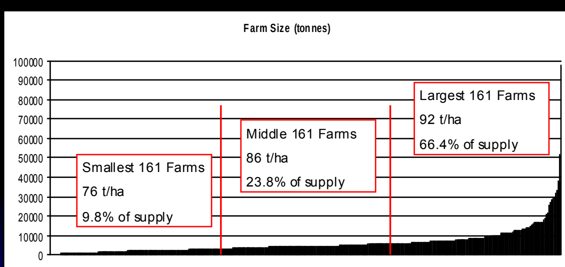
Tonnes	2 737 600		ha harv.	30 877
CCS	12.48		avg t/ha	88.7
no. ABNs	483		median tonnes / ABN	3964



Harvested Area – Innisfail Babinda Mills 1987 - 2006



Farm Size & % of Cane Supply

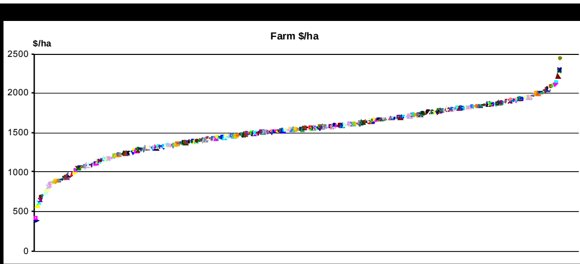


Farm size range was 62 tonnes to 98 000 tonnes.

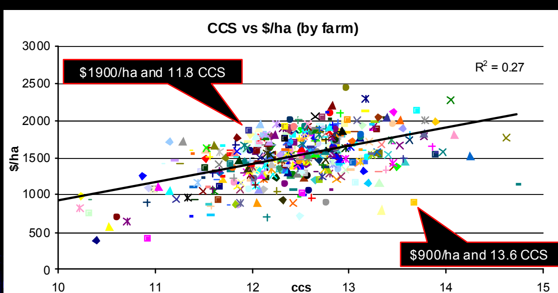
Farm Size Category Statistics

	tonnes	% supply	ha	t/ha	ccs	$/ha
161 largest farms	1 817 183	66.4	19 744	92	12.48	1643
161 middle farms	652 039	23.8	7595	86	12.53	1545
161 smallest farms	268 378	9.8	3537	76	12.32	1320

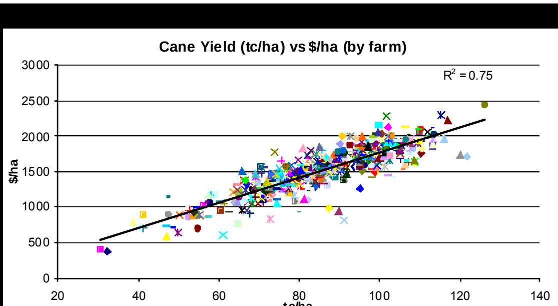
Larger farms tended to have higher yields…



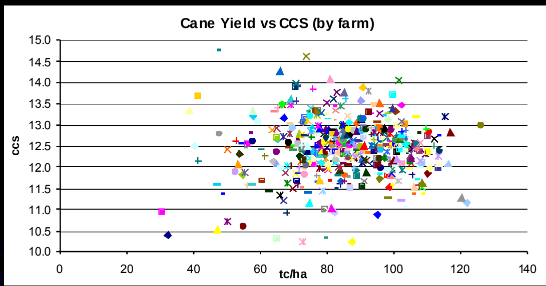
Farm $/ha ranged from $384 to $2434 /ha



Weak relationship between CCS and $/ha



Strong relationship between cane yield and $/ha



No relationship between CCS & yield at farm level – ie

- Low yield farms don't have better CCS
- High yield farms don't have worse CCS

The Message: What Drives Farm Profitability?

- Cane yield *strongly* drives profitability
- CCS alone is less important
- You *can* have both - high yield doesn't mean low CCS

Marketing and Pricing of Raw Sugar

October 2006

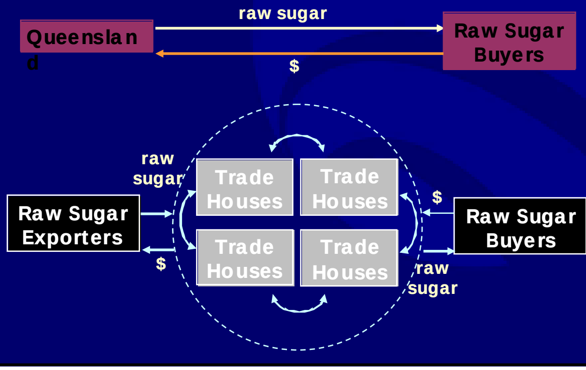
The Market

- World production around 158mt/year
- Consumption 151mt/year
- Growing at 2.0%/year
- Most sugar is consumed in country of origin
- Tradeable raw sugar around 46mt/year (30%of total production)
- Queensland @ 8.5% of tradeable raw sugar

Who are the major players in the raws tradeable market?

- Major exporters - Brazil, Thailand, Guatemala, South Africa, EU & Australia
- Major importers - Russia, Japan, Korea & Malaysia
- Swing importer/exporter - India
- Growing markets – China, Indonesia
- Major Traders – Cargill, Sucden, Dreyfus and ED&F Man

Queensland Deals Direct



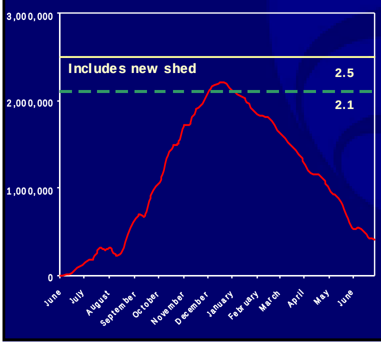
Queensland Marketing Package

- Buy direct from the producer
- Cost & Freight (C&F) basis
  - control supply chain
- Consistent high quality
- In full on time delivery
- Flexibility & responsiveness
- Technical support
- Commercial integrity

MARKETING OF RAW SUGAR

Part 1: Develop a Marketing Plan

- Forecast production
- Storage constraints



- First Half Season: July - November
  - coincides with the harvesting and crushing
  - must sell & ship at least 60% of production
- Second Half Season: December – June
  - coincides with the storage period
  - aim to have sheds full at end of crush to gain max. advantage for the pool

Marketing Plan

	Sold	Unsold	Total
ASIA			
China	0	0	0
Indonesia	0	0	0
Japan	0	0	0
Korea	0	0	0
Malaysia	0	0	0
New Zealand	0	0	0
Philippines	0	0	0
Taiwan	0	0	0
Vietnam	0	0	0
Subtotal-Asia	**0**	**0**	**0**
MIDDLE EAST			
India	0	0	0
Iran	0	0	0
Saudi Arabia	0	0	0
Bangladesh	0	0	0
Subtotal-ME	**0**	**0**	**0**
WESTERN HEMISPHERE			
Canada	0	0	0
USA	0	0	0
EU	0	0	0
Subtotal-WH	**0**	**0**	**0**
Total Tonnage	**0**	**0**	**0**

- Once production is agreed the marketing plan is developed
- It is updated throughout the season as crop changes occur
- Timing and delivery is important to our storage profile

Part 2: Where to sell sugar

Individual markets are assessed on the following basis:

- Net Returns
  - needed to sustain the industry in the long term
  - simply the net return we believe is available from a particular market
- Payment Reliability
  - ensures viability & sustainability
- Market Size and Growth
  - large importers provide security for the long term
  - growing markets provide scope for industry growth
- Strategic Value
  - The fit with QSL's shipping, storage & quality considerations
  - Potential for innovative marketing techniques

Who are Queensland's main Customers?

- Limited number of stable & reliable customers
- Primary markets – New Zealand, Korea, Japan, Indonesia, Malaysia & Taiwan
- Secondary markets – Canada, USA, Saudi Arabia & EU
- Contingency markets – China, Iran, Philippines & Bangladesh

How do we know when customers require supplies?

- Longstanding relationships
- Regular customer contact
- Knowledge of customers meltsheet
- Understanding competitor's sales & shipping patterns
- Understanding of customer's product quality & timing constraints

Part 3: Negotiating a Sale

Normally a potential customer will request an offer to supply a specific quantity of sugar for a specified delivery period.

Once we determine we want to do a deal & they want to buy, we enter into negotiations to determine the following:

- Tonnage
  - do we have sugar available?
  - refer to marketing plan

Negotiating a Sale cont.

- Delivery period
  - how will it effect storage?
  - how will sugar be priced?
- Fixed or Futures
  - sophisticated market - sophisticated pricing
  - Countries where the domestic price of refined sugar is regulated by the government, normally are fixed price buyers because they have some certainty of the margin
  - futures pricing enables both QSL & the customer to best manage their own price risk & make their own pricing decisions independently of each other

Negotiating a Sale cont.

- Freight
  - we sell on a C&F (cost & freight) basis or CIF (cost insurance freight) basis
  - we are responsible for delivering sugar to the customers port & in the case of CIF, arrange the insurance as well
  - this is an integral part of QSL's strategy, as it allows us to control the destination of all raw sugar
  - by coordinating freight & logistics, QSL is able to achieve attractive freight rates
  - more competitive on a landed cost or total cost to customer basis.

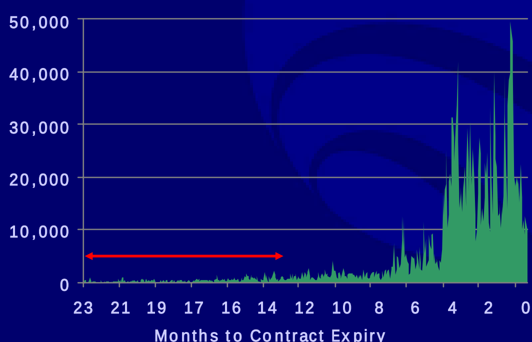
Once we know the tonnage to be lifted, the destination and the timing we are able to establish the cost of freight.

PRICING OF RAW SUGAR

How do we determine the base price?

- All raw sugar sales are in US dollars
- NY11 international benchmark price for raw sugar
  - Most sugar priced at a premium to NY11
- NY11 also plays price risk transfer role
  - Hedgers & speculators
  - QSL hedges price risk
- Futures market allows producers & consumers to set the price of their commodity independent from the sale of the physical product

Liquidity – Futures Contract



Centre South Brazil

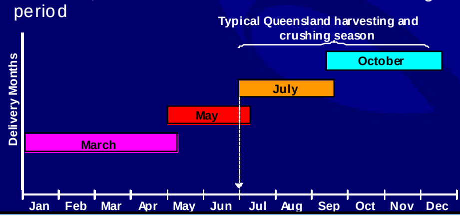
- Sugar (52%) vs. Ethanol (48%) Split
- Flex fuel vehicle fleet (FFV)
  - 2.2 million vehicles
  - 8% of the total fleet
  - monthly sales 80% are FFV
  - 20% blend
    - UNICA lobbying to increase to 25% blend
    - 1.2bln ltrs p.a. = 14mln mt of cane & 2.3mln mt of sugar

CS Brazil Relative Returns

Negotiating a Sale cont.

- Physical Price
  Two components: base price and premiums

  Base Price
  - NY11 is used as a reference for the contract month that reflects the delivery period, which is used to calculate the physical sales price
  - pricing tends to be weighted toward the July & October contracts, because more sales are delivered during this period



Negotiating a Sale cont.

Premiums
Two types of premiums: physical & regional

Physical
- NY11 is basis 96 degrees polarization. A pol premium is charged to account for sugars over this
- International Pol Scale or the Sugar Association of London (SAL) pol scale:

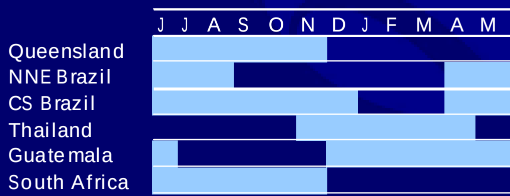
Min Degree	Max Degrees	Percentage
96.00	97.00	1.50
97.00	98.00	1.25
98.00	99.00	1.00

- sugar >99 degrees pol a fixed price quality premium is extracted

Negotiating a Sale cont.

Regional Premiums

- value of physical sugar is largely influenced by its location
- refiners look to purchase on the basis of delivered price
- QSL are best positioned to deliver into the Asian region
- QSL competition & production periods of raw sugar exporters



Marketing and Pricing of Raw Sugar

October 2006

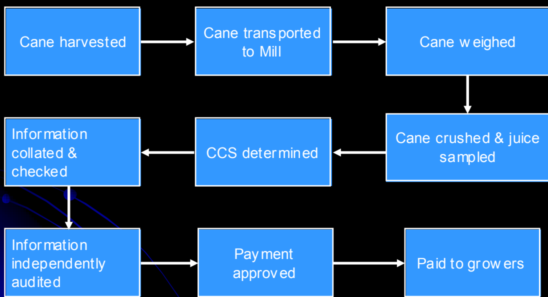
BUNDABERG SUGAR

Cane Payment

Mark Magnanini
Financial Controller
Northern Region

Farm Business Partners Workshops
October 2006

Supply Chain for Payment



Cane Price Formula - History

- Cane payment in Queensland has traditionally been based on a formula originally designed to allocate net proceeds from sugar sales between millers and growers so that profits were shared on roughly the ratio of their assets.
- When introduced in 1916, the formula was based on industry production relativities at that time. Average recovery of CCS in the mills at that time was 90 (90 tonnes of sugar produced for each 100 tonnes of CCS) and the average CCS of cane was 12.
- It was determined that at base levels of efficiency, the proceeds should be split in the ratio of two-thirds to farmers and one-third to the miller. Standard efficiency of 90 on the millers' part and cane of average 12 CCS on the farmers' part resulted in a formula of:

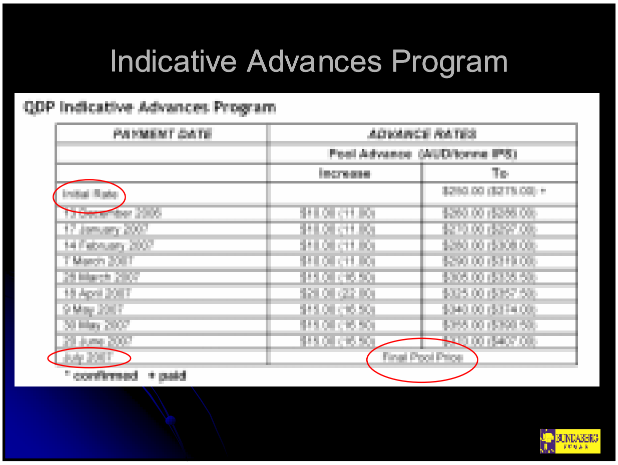
  Pc = Ps x 0.009 X (CCS-4) + 0.328
  (where Pc and Ps are price of cane and sugar respectively).

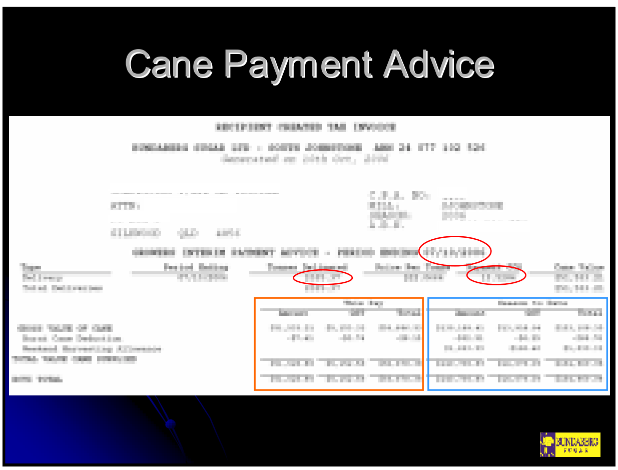
Cane Price Formula - Today

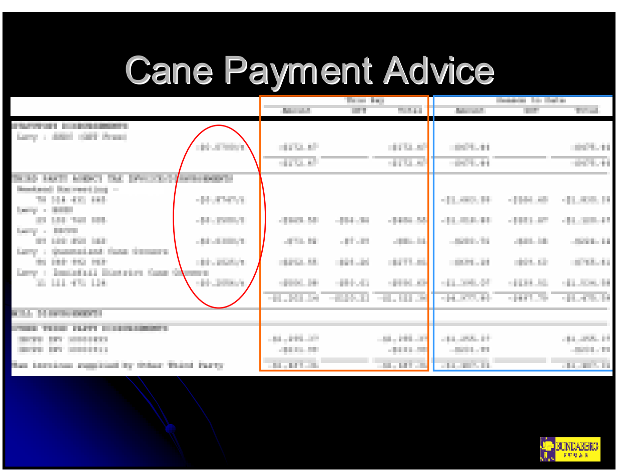
- Negotiated in the cane supply contract
- Cane price* = sugar price* x 0.009 x (CCS - 4) + $0.6275

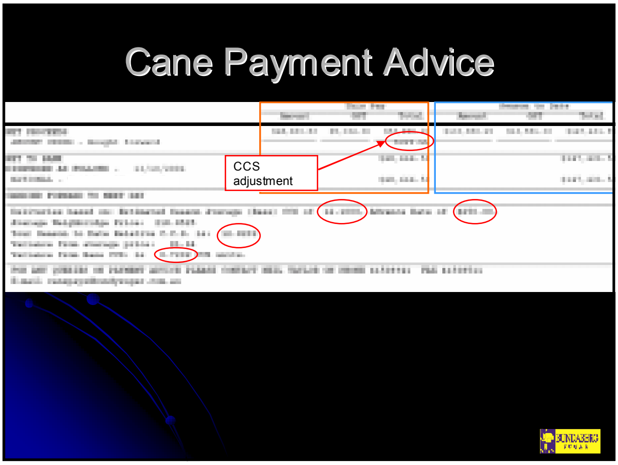
(* both in $/tonne)

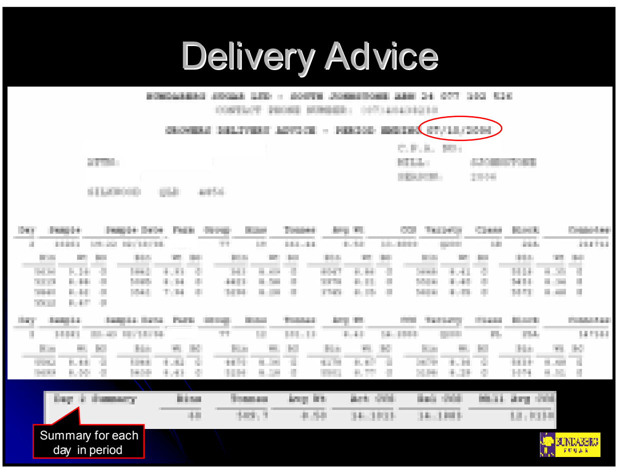
- Example: Sugar price = $400
  CCS = 12.5
- Cane price = $400 x 0.009 x (12.5 - 4) + $0.6275
  = $31.23

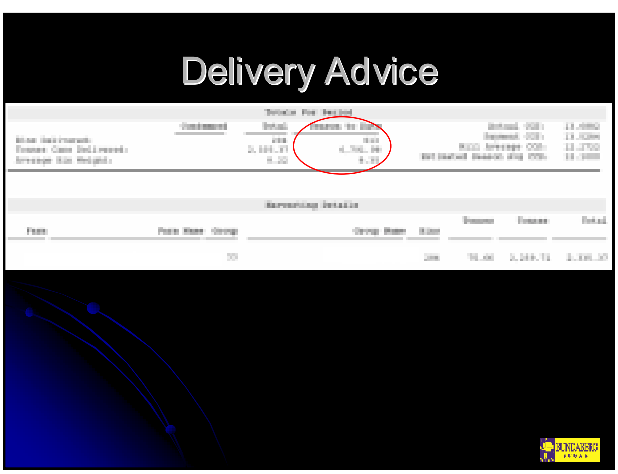

Indicative Advances Program
QDP Indicative Advances Program
PAYMENT DATE
ADVANCE RATES
Pool Advance (AUD/tonne IPS)
Increase
To
Initial Rate
July 2007
Final Pool Price
* confirmed + paid

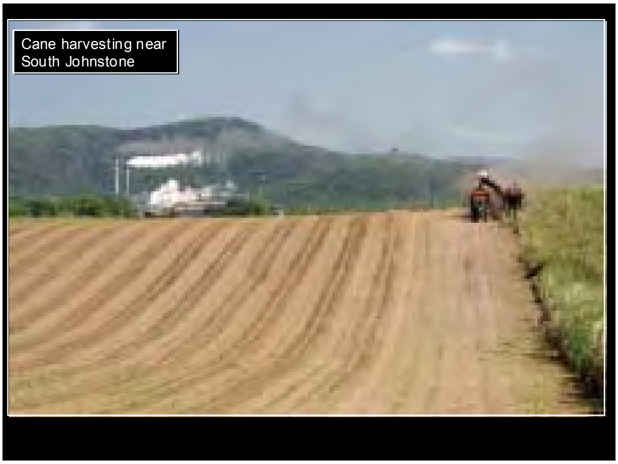

Cane Payment Advice


Cane Payment Advice

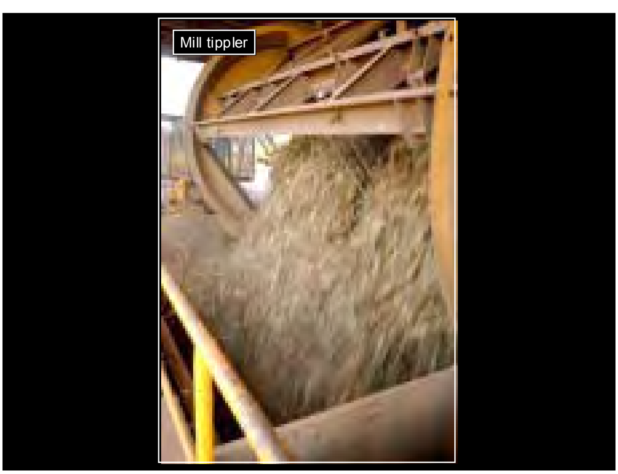

Cane Payment Advice
CCS adjustment

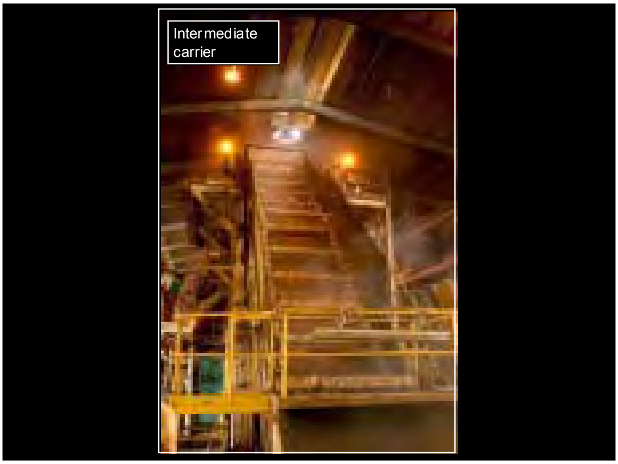

Delivery Advice
Summary for each day in period


Delivery Advice

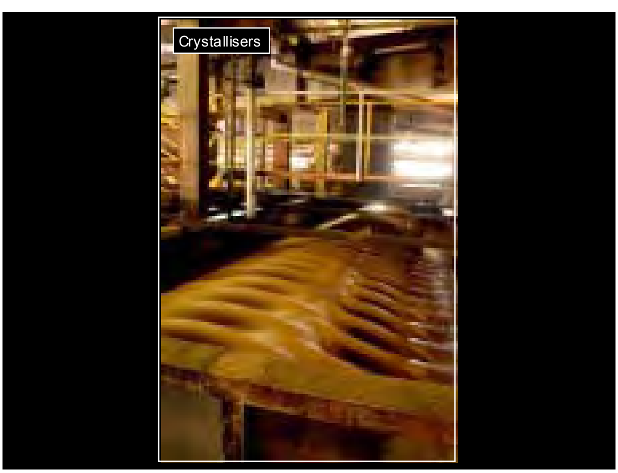

Cane harvesting near
South Johnstone


Loco returning to mill


Mill tippler


Intermediate carrier


Milling train


Crystallisers


Fugal stage


Interior of Fugal


Sugar drier


Sugar loading belt


Loading sugar for transport


Unloading sugar,
Mourilyan terminal


Sugar storage, Mourilyan terminal


Loading belt, Mourilyan terminal


Loading sugar ship, Mourilyan terminal

BUNDABERG
SUGAR

Innisfail Babinda Mills Relative CCS Scheme

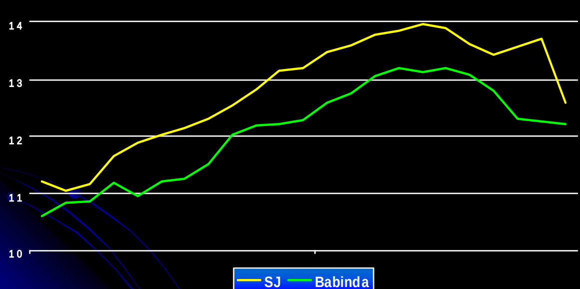
Mick Ward
FBP Workshops
October 2006

Innisfail Babinda Mills Relative CCS Scheme

- Commercial Cane Sugar (CCS) content in cane varies throughout the crushing season.
- CCS is usually low at the start of the harvest, rises to a peak around late September and falls towards the end of the season.

Mick Ward
October 2006

Average Weekly CCS Babinda and SJ Mills 2001 - 2006



Mick Ward
October 2006

Innisfail Babinda Mills Relative CCS Scheme

- A relative payment scheme is used to allow growers to supply cane early and late in the season (when CCS is lower) without penalty.
- CCS of cane supplied by growers is compared with the average CCS for all cane supplied to the mill *for that day*. The difference is then transferred across the *season average* CCS for the mill area.
- A farmer supplying mill average CCS cane in July when CCS is around 11 will receive the same payment as someone supplying mill average CCS cane in October when CCS is around 13.
- This allows an orderly harvest and maintains even supply of cane over a full season.

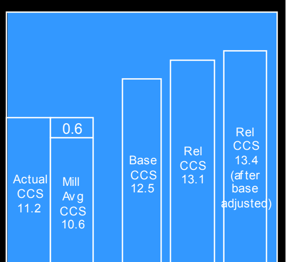
Mick Ward
October 2006

Innisfail Babinda Mills Relative CCS Scheme

- Because we don't know at the beginning of the season what the season average CCS will be, we use a 'base CCS' throughout the season for cane payment purposes.
- Base CCS is usually the average of the last 5 years season average CCS.
- At the end of the season we replace the base CCS with the season average CCS.
- Base CCS is also adjusted throughout the season to as close as possible to season average CCS.

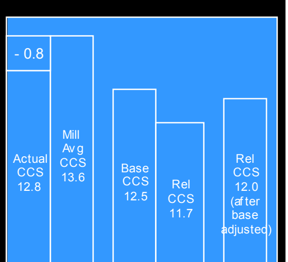
Relative CCS Scheme: Early Season Example

- (Pre-season) Mill & Growers set base CCS at 12.5
- A grower supplies cane at 11.2 *actual* CCS
- The average CCS for all cane supplied that day is 10.6
- The grower's cane was (11.2 minus 10.6) = 0.6 CCS units above mill average for that day
- We apply that difference (+ 0.6 units) to the base CCS (12.5): 12.5 + 0.6 = *13.1*
- The grower's *relative* CCS for that cane is therefore 13.1
- At season's end, if season average CCS is 12.8 (base was 12.5) that cane will be paid for at 12.8 + 0.6 = 13.4



Relative CCS Scheme: Mid-season Example

- (Pre-season) Mill & Growers set base CCS at 12.5
- A grower supplies cane at 12.8 *actual* CCS
- The average CCS for all cane supplied that day is 13.6
- The grower's cane was (13.6 minus 12.8) = 0.8 CCS units below average for that day
- We apply that difference (- 0.8 units) to the base CCS (12.5): 12.5 – 0.8 = *11.7*
- The grower's *relative* CCS for that cane is therefore 11.7
- At season's end, if season average CCS is 12.8 (base was 12.5) that cane will be paid for at 12.8 – 0.8 = 12.0



Your Turn

- Grower sends in cane at 11.5 CCS
- Mill average CCS for that day is 11.0
- Base CCS being used is 12.0
- What is the grower's relative CCS for that cane?

  11.5 – 11.0 = 0.5 units 'over the mill'

  Relative CCS = 12.0 + 0.5 = 12.5
- What is their actual CCS? 11.5
- What will the relative CCS for that cane be when we later adjust the base CCS to 13.0?

  13.0 + 0.5 = 13.5

Congratulations

Payment CCS

The payment CCS shown on growers' payment advices is calculated as per this example:

- If a grower supplied 1000 tonnes of cane over three days, with 200 tonnes at 14.0 relative CCS on day one, 300 tonnes at 13.5 relative CCS on day two and 500 tonnes at 13.8 relative CCS on day three, the 'payment CCS' would be calculated as below:

Tonnes supplied	Relative CCS	Relative units
200 tonnes	X 14.0 relative CCS	= 2800 rel. units
300 tonnes	X 13.5 relative CCS	= 4050 rel. units
500 tonnes	X 13.8 relative CCS	= 6900 rel. units
1000 tonnes		13750 rel. units

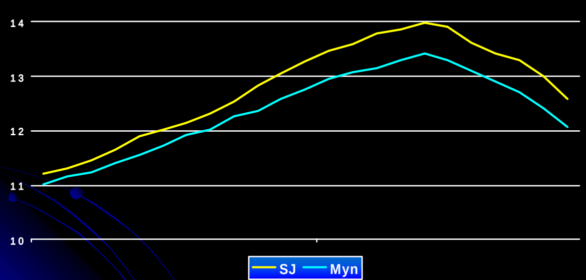
Payment CCS for the period = 13750 ÷ 1000 = 13.75

Ex-Mourilyan farms supplying SJ: better or worse off?

- Is a farm that used to get above mill average CCS supplying Mourilyan now worse off supplying South Johnstone and getting below mill average CCS?

Mick Ward
October 2006

Typical Weekly CCS – Myn & SJ Mills



Mick Ward
October 2006

Example:

- An ex-Mourilyan farm with average 12.6 CCS
- Mourilyan Mill average is 12.4 CCS
- SJ Mill average is 12.8 CCS
- Sugar price is $400 (one CCS unit = $3.60)

Supply Mourilyan

- Base price for cane (12.4 CCS) is $30.87
- At 12.6 CCS, example Mourilyan farm is 0.2 units *above* mill average
- Example farm's price per tonne of cane is 0.2 x $3.60 = $0.72 *above* base price
- $30.87 + $0.72 = $31.59

Supply South Johnstone

- Base price for cane (12.8 CCS) is $32.31
- At 12.6 CCS, example Mourilyan farm is 0.2 units *below* mill average
- Example farm's price per tonne of cane is 0.2 x $3.60 = $0.72 *less* than base price
- $32.31 - $0.72 = $31.59

Mick Ward
October 2006

Changing between Bundaberg Sugar Mills

- When changing to a mill with higher average CCS, what you 'lose' relative to mill average, you 'gain' in base price.
- When changing to a mill with lower average CCS, what you 'gain' relative to mill average, you 'lose' in base price.
- The same principle would apply if you had a single regional CCS, instead of one for each mill

Mick Ward
October 2006

Cane Supply Logistics

Ken Hall
Cane Supply Coordinator

Scope of Job

- Manage harvest & transport of ~ 2.6Mt over ~ 20 weeks to meet combined crushing requirements of 2 coastal factories

Mapping

- Map farms with modern GIS systems (annually / as required)
- Record cane variety and crop class (grower input)
- Correct maps are important for harvest management and accurate consignment info (payment & productivity)

Estimates

- Each year in April, we send growers a draft map and last year's production figures for them to make a block by block farm estimate
- Information arising from the estimate is used for:
  - Season start & finish date calculations
  - Allocating daily harvest tonnage quotas for each group
  - Harvesting arrangements *within* groups

Harvest Management: Bundaberg's Role

- Consolidate individual grower estimates into a season estimate.
- Actively manage the harvest to progress harvesting at an even rate throughout the district.
- This is important for growers' cash flow, replant, and even growth of ratoons

Harvest Management: Growers' & Groups' Role

- Harvest group members (growers) decide number of rounds and % (t or area) each round.
- Intra-group 'equity' (how much each farm within the group has cut) is an issue for the group to manage. We assist groups to do this by providing tonnage data to a nominated group controller.

Cane Transport - Scope

- Develop & manage a transport plan to deliver sufficient cane bin units to harvest groups for their daily allocation.
  - Loco shifts
  - Scheduled group start times
  - Bin fleet management
  - Cane storage management
- Delivery is based on a harvest output of 50 t/hour at the siding.

Regional Statistics

- 55 harvest groups
- 118 locomotive employees
- 500 + farmers
- 500 km of rail line
- 11 QR crossings
- 200 Bridges
- 972 Road crossings
- 480 Rail sidings

Each season we haul more tonnes of freight via our rail system in 20 weeks than the whole of Queensland Rail hauls in a year

Checking Your Delivery Advices

Sarah Standen

CANEGROWERS

CANEGROWERS

Checking Your Delivery Advices

- **Are you supplying the correct information to the mill to receive the correct payment for your cane?**

- Pre Season variety and block information
- Consignment note/proof of delivery and identity of rake
- Obligation under the CAP to fill in correctly
- Incomplete or incorrectly filled in tickets hinders the Cane Analyst Auditor's role should the grower make any inquiries

CANEGROWERS

Checking Your Delivery Advices

- **Growers harvest detail**

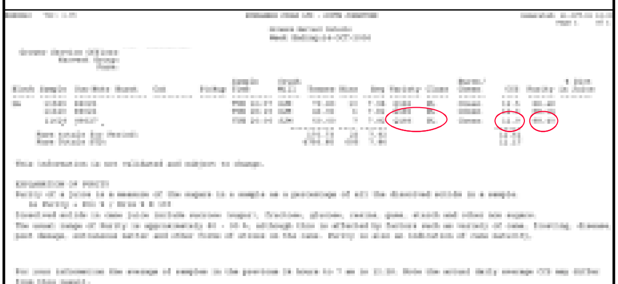
  "This information is not validated and subject to change"

  Preliminary check

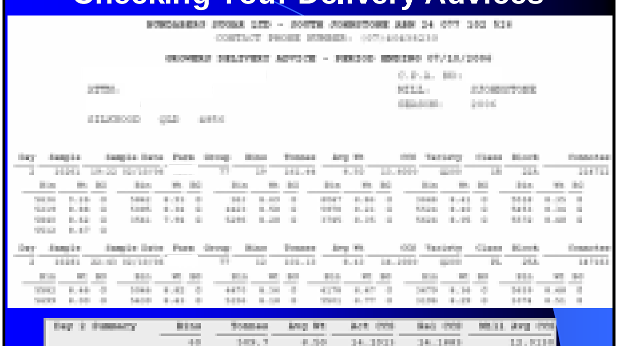
  - Bins
  - Variety
  - Block
  - Burnt/green
  - Purity/CCS

CANEGROWERS

Checking Your Delivery Advices



Checking Your Delivery Advices



CANEGROWERS

Checking Your Delivery Advices

- **On receival of growers delivery advice [final document for this process]**

- Check bin numbers ***and*** number of bins
- Individual bin weights
- Check samples from same block/variety, etc for any unexplainable variations in CCS
- Check allocated CCS

CANEGROWERS

Checking Your Delivery Advices

- **Allocated samples**

- Missed Sample …. M
- Dry Sample ………D
- Delay Cane ………L
- Off Samples ……...Off
- Reload Cane ……..

CANEGROWERS

Checking Your Delivery Advices

- **Cane Analysis Auditor - contact numbers**

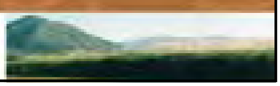
Babinda: 4043 8117
South Johnstone: 4064 3831

- Within time limit
- $$ lost or gained

CANEGROWERS

Growing sugarcane

All the stuff no one ever tells you about because you're a woman



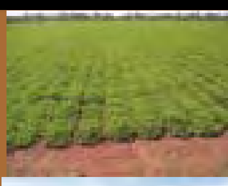
Basics of successful sugarcane production

Topics

- Crop rotation
- Weed control
- Planting
- Irrigation/drainage
- Pest management
- Disease management
- Crop nutrition
- Variety selection

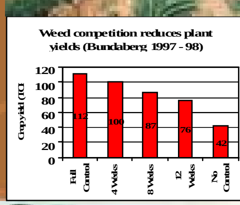
Crop rotation

- Continuous sugarcane leads to “yield decline” – a condition masked with greater inputs (e.g. fertiliser & water)
- Short term fallow provides some benefit (20% yield gain over plant & 3 rtns)
- Largest benefit from 18 to 36 month rotations
- Best responses from legume field crops such as peanuts & soybeans
- Economics are bolstered if rotation crops are harvested for cash



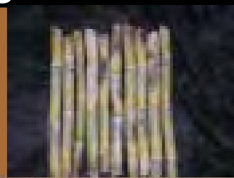
Weed control

- Sugarcane is slow to establish compared to most crops
- Grass competition during the establishment phase causes dramatic yield reductions
- There are no effective herbicides that kill grass but not cane that can be sprayed over cane
- Where possible use ‘pre-emergent’ herbicides
- Pre-emergent herbicides at ‘out of hand’ also provide yield benefits
- Never forget the adage “one years seeding, seven years weeding”



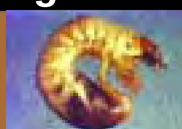
Planting

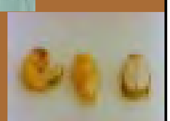
- Most important operation on a cane farm
- Basis of not only plant crop but also ratoons
- Essentials for good germination:
  - undamaged setts 250 to 300mm long
  - short internodes
  - uniform placement along row
  - complete coverage of cut ends with fungicide
  - good sett to soil contact
  - adequate soil moisture
  - soil temperature > 18 degrees C

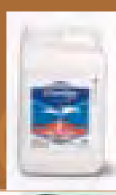


Pest Management

- Canegrubs single most serious pest of sugarcane
- Controlled with SuSCon Maxi or Confidor Guard insecticides
- Minimal tillage & trash retention benefit natural control organisms
- Natural controls more prevalent in wetter coastal districts

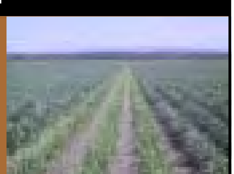






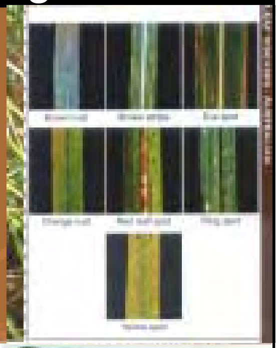
Nutrition

- Most soils need additional nutrition for sugarcane production
- Take guess work out of fertilising by soil testing
- Fertiliser rates based on critical values determined through research
- Replace nutrients removed by crop
- Reduce fertiliser inputs with mill mud
- Cut back plant cane fertiliser after legume fallows



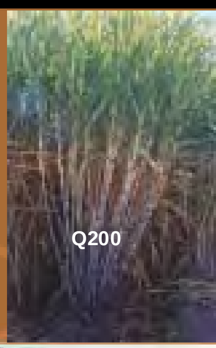
Disease management

- Spread your disease risk -grow a range of varieties
- Avoid ‘Maccarone’ effect – alternate varieties
- Be prepared for SMUT – maintain resistant/intermediate varieties on farm
- Introduce “clean” seed regularly to meet future planting needs
- Ensure all equipment moving on to farm is cleaned down & sterilised



Variety selection

- Avoid temptation to plant a variety because it is the only erect cane available
- Match variety to soil type & environment
- Avoid planting free-flowering varieties in late cut blocks
- Review mill info to monitor variety performance
- Avoid “eyeballing” plant crops to select varieties
- Remember sugarcane grows for more than a single plant crop



Drainage

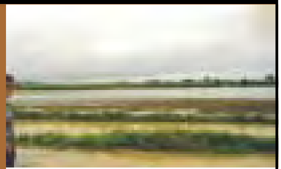
Surface

- Good drainage is essential for cane growth in rainfed *and* irrigated areas (including pivots)
- In-field drainage relies on each row acting as its own drain
- GCTB requires slopes > 0.2%
- Modern laser levelling machinery has revolutionised surface drainage
- Common problems:
  - Headlands too high
  - Low spots in fields
  - Wrong row/interrow shape & height
  - Wrong row direction
  - Poor drainage design
  - Inadequate drain maintenance

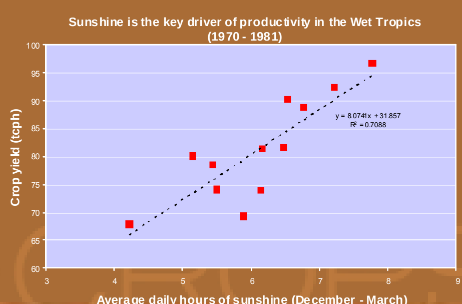
Drainage (continued)

Subsurface

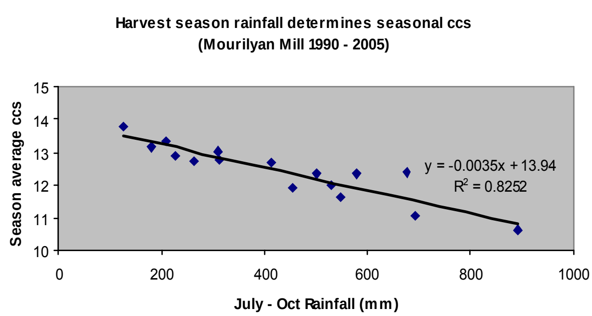
- High water tables (< 600mm below soil surface) reduce growth
- 0.5 tonne/hectare/day
- Water tables > 1m below soil surface are OK
- Remedial action involves:
  - open drains
  - slotted pipe
  - mole drains



Drainage (continued)



Drainage (continued)



5 EASY QUESTIONS

- What practice can growers adopt to arrest "yield decline" in sugarcane?
  LEGUME ROTATION
- During what stage of growth is sugarcane most vulnerable to grass/weed competition?
  ESTABLISHMENT – first 12 weeks
- Which nutrient should be cut back when fertilising sugarcane following legume fallows or mill mud applications?
  NITROGEN
- A lack of what often limits sugarcane growth on the wet tropical coast?
  SUNSHINE
- What is the most serious pest of sugarcane in Queensland?
  CANEGRUB

BSES

BSES QCROPS

BUNDABERG SUGAR

Interpreting Productivity Information

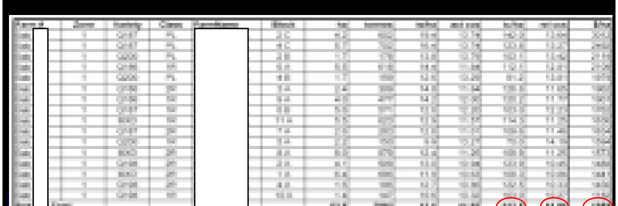
Bundaberg Sugar provides growers with three major types of productivity information:

- Productivity report (annual)
- Variety CCS reports (weekly)
- Harvest details reports (daily)

Productivity Reports

- Based on consignment information.
- 'GIGO' principle applies (put garbage in, get garbage out).
- Compare variety performance at region, zone and farm level.
- Benchmark your farm against other farms in your zone & across the region for CCS, tc/ha, ts/ha & $/ha
- Useful variety info – best time to harvest, pest & disease, soil suitability.
- Focus on $/ha

Productivity Report: Farm Block Report



- Use it to compare the blocks on your farm
- Ranked from highest to lowest for $/ha
- Farm totals / averages at bottom

Productivity Report:
Benchmarking your farm against the zone – tc/ha

Productivity Report:
Benchmarking your farm against the zone – CCS

Productivity Report:
Benchmarking your farm against the zone – $/ha

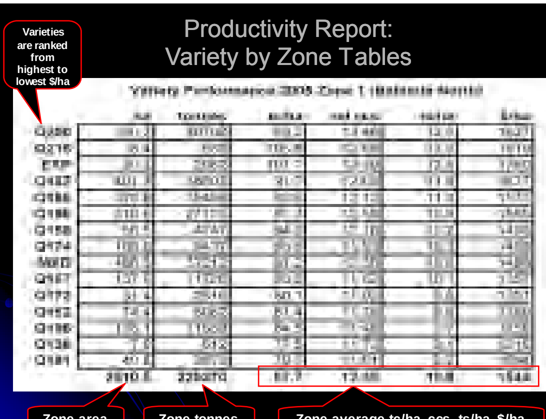
$/ha – why & how it's used

- We see $/ha as the major factor influencing profitability
- It is based on
  - sugar price
  - *your* relative ccs
  - *your* tonnes cane/ha
  - assumed harvest & levy costs
- It doesn't include other costs (fertiliser, chemical, water etc)

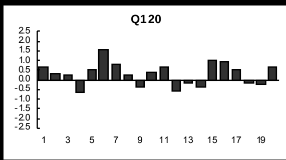
$/ha – example calculation

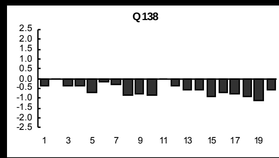
- Sugar price = $320
- Farm relative CCS = 11.96
- Cane price = $320 x 0.009 x (11.96 - 4) + 0.6275 = $23.56
- Farm tc/ha = 113.5
- Assumed harvesting & levies = $7.20
- $/ha = (cane price - harv & levies) x tc/ha
- = ($23.56 – $7.20) x 113.5
- = $1858

Productivity Report: Variety by Zone Tables



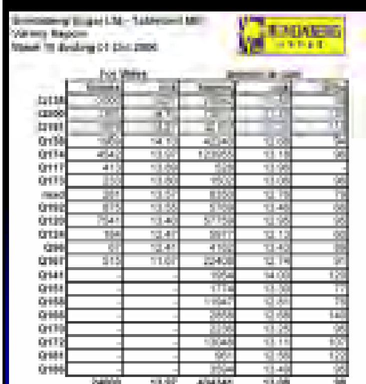
Productivity Report: Variety CCS Trend Charts





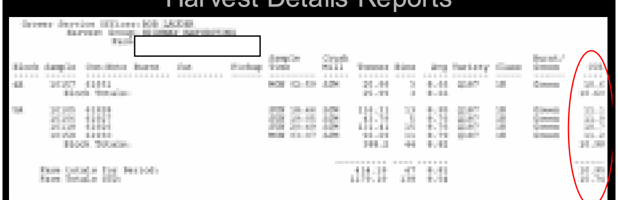
- Compare CCS of a particular variety to mill average for the week
- For simplicity, mill average represented as zero (variety is above or below)
- Provides a guide as to best time to harvest that variety

Weekly Variety CCS Reports



- Provide a guide to how varieties are going in-season.
- Give weekly and season-to-date figures.
- E-mailed or faxed weekly.

Harvest Details Reports



- E-mailed or faxed daily (automated system).
- Designed to provide rapid, automated grower feedback.
- Information is *not validated* (ie subject to change)

Farm Business Partners
Feedback Sheet

a. What were the three most important things you learned today?

1.

2.

3.

b. How useful was the workshop in providing you with useful information about how cane payments are made (please circle)

1	2	3	4	5
Not useful				**Very Useful**

c. How useful was the workshop in providing you with useful information about sugar marketing and pricing (please circle)

1	2	3	4	5
Not useful				**Very Useful**

d. Would you recommend others attend workshops like this?

÷ Yes ÷ No

e. Do you intend discussing what you have learned today with others? If so, who? ______________________________

÷ Yes ÷ No

f. Do you have any suggestions to improve future workshops?

Farm Business Partners Workshop – Feedback Sheets Mareeba

	Three most important things learnt 1.	2.	3.	Cane Payments	Marketing & Pricing	Recommend Workshops	Discuss info learnt	Discuss info learnt with who	Suggestions to improve workshops
1	Relative CCS	Woman's group w/ Judy		5	5	Yes	Yes	Husband	Want more workshops like this one
2	Irrigation to max yields	QSL Operations	Relative cane pay system	5	4	Yes	Yes	other family members	
3	P.Ryan - making a better crop	M.Ward - sugar payments & relative CCS	G.Barrett - sugar marketing	5	5	Yes	Yes	Husband	More Chocolates
4	Mill operations	Sugar marketing	Relative CCS & Cane payments	5	5	Yes	Yes	Other farmers	
5	Understanding relative & actual CCS	Sugar pricing	Everything else was educational	5	4	Yes	Yes	Husband	All Good
6	Gin - how sugar is priced and sold	Mark- understanding cane payments	Mick - relative CCS	5	5	Yes	Yes	Husband	Run workshops regularly
7	Irrigation needs	QSL facts & marketing	"Relative" pricing	4	4	Yes	Yes	Family & extended	More time- maybe 6hrs 9-3 or 8.30-2.30
8	Marketing	Mill operations	Sugar payments	5	4	Yes	Yes	Husband	
9	Relative CCS	Cane Payments	Sale of our cane	5	5	Yes	Yes		All Good
10	Basically a full overview of all areas			4	5	Yes	Yes	Husband	Good Job
11	Marketing	How CCS was based		5	4	Yes	Yes		
12	Sugar marketing & pricing	Importance of irrigation	How to read & understand our grower advice slips	5	4	Yes	Yes	Husband & other woman growers	It was very good Thankyou
13	How the mill works	How payments work	How cane grows	4	4	Yes	Yes	Husband & kids	Maybe a mill tour, womans networking brainstorming session, everyone has to put their hand up and ask questions in the group.
14				4	4	Yes	Yes	Husband	Less topics and more time
15	Structure of teams & cane industry functions	Marketing & Pricing	Payments & relative CCS	5	5	Yes	Yes	Husband	Regular on-going workshops for woman in sugar
16	Where sugar is sold	Our sugar is the best	Pricing	4	4	Yes	Yes		
				75	**71**				

Farm Business Partners Workshop – Feedback Sheets Innisfail

	Three most important things learnt 1.	2.	3.	Cane Payments	Marketing & Pricing	Recommend Workshops	Discuss info learnt	Discuss info learnt with who	Suggestions to improve workshops
1	Cane payment advice	Checking delivery advices	Relative CCs	5	4	Yes	Yes	Husband & family	
2	Relative CCS	Mill Mud & fertilizing	Mill averages	5	5	Yes	Yes	Friends	Keep up the good worl
3	Relative CCS	Cane payment advice	Growing sugar cane	4	3	Yes	Yes	Husband & family	Similar workshop for husband and wife team
4	Sugar cane pricing	All world news about sugar	Chaecking all delivery of cane to mill	5	5	Yes	Yes	Anyone who is interested Esp. Husband	
5	Don't use a trade house	Tonnes better than high CCS	Farmers get 2/3 & mil 1/3	4	4	Yes	Yes	Husband	Use a microphone
6	Harvest Managemen			5	5	Yes	Yes	Husband	
7	How payments work	CCS vs. tonnage	Our position in world picture of sugar industry	5	5	Yes	Yes	Husband & family	It was ample. Congrats to all
8	Howw CCS works	Cane payments	Production & marketing & tonnage vs CCS	5	5	Yes	Yes	Other sugar growers	No - It ws GREAT!
9	About world price	About CCS		4	5	Yes	Yes		
10	CCS not as important as Tonnes	What relatice CCS means	How sugar market on global scale works	5	5	Yes	Yes	Husband	
11	Relative CCS	Where we fit in the big picture	Tracking individual cane bins	5	5	Yes	Yes	Husband	
12	Cane payment advice	Relative CCS	Pricing & marketing	4	4	Yes	Yes		Farm Management Progran Cashflow program Program for young farmers
13	Cane payment advice	Relative CCS	Marketing	5	4	Yes	Yes		Farm Management Progran Cashflow program
14	Relative CCS	SRDC		5	5	Yes	Yes		
15	That the workshop team are interested in us	Sugar news generally	Cane Pricing	5	4	Yes	Yes	Family & other rural people	Need a mike to hear bette Keep the idea up of a booklet around updating all the info.
16	Relative CCS	SRDC		4	4	Yes	Yes	Family	You've done a good jo
17	Marketing & Pricing	Mill averages	Tonnage vs. CCS	5	5	Yes	Yes	Sons	Keep up the good work. It woulc help to have bigger writing for the bling people and a mike.
18	How cane price & CCS is calculated			5	5	Yes	Yes		
19	Understanding cane/pay reports/CCS	Understanding sugar market: to world prices: $USD	Cane supply logistics	5	5	Yes	Yes	Husband	More info on understanding variety

Farm Business Partners Workshop – Feedback Sheets Innisfail

	Three most important things learnt 1.	2.	3.	Cane Payments	Marketing & Pricing	Recommend Workshops	Discuss info learnt	Discuss info learnt with who	Suggestions to improve workshops
20	Tonnes per hectare are more important than CCS	Relative CCS	Cane payments	5	5	Yes	Yes	Family	
21	Relative CCS	Structure of cane payments	How we negotiate sales & pricing	5	5	Yes	Yes	Husband & family	Workshop was very well prepared & presented in a manner we found easy to understand
22	Marketing of sugar			4	4	Yes	Yes		Workshops to be held at the end of the week so fruit growers can attend
23	How sugar is marketed	Understanding cane price etc	BSES	5	5	Yes	Yes	Other sugar growers	Holding future workshops on Thurs or Friday once the fruit crops come back in.
24	Marketing of sugar	Weed control & use of fertilizer	Sugar cane process into sugar mill	5	5	Yes	Yes	Other sugar growers	
25	Reading & understanding cane payment advices	The way the sugarcane price is worked out	Relative CCs	4	4	Yes	Yes	Husband & family	Husband & wife workshops
26	Relative CCS	Pricing formula	Marketing of sugar	5	5	Yes	Yes		
27	Pricing formula	Relative CCS	Negotiating sale of sugar	5	5	Yes	Yes		
28	Relative CCS	Cane payment advice	Marketing	5	5	Yes	Yes	Husband	Cashflow & Farm Management
29	How to read info from the mill	How the price is reached	Effect of weather factors	4	4	Yes	Yes	Husband & family	Very good for me as we are only 2nd year in this industry but sugar needs to encourage women to be able to obtain the knowledge to make decisions with men.
				137	**134**				

Farm Business Partners Workshop – Feedback Sheets Babinda

	Three most important things learnt 1.	2.	3.	Cane Payments	Marketing & Pricing	Recommend Workshops	Discuss info learnt	Discuss info learnt with who	Suggestions to improve workshops
1	QSL - Marketing	Payment System		4.5	3	Yes	Yes	Husband	Follow-up workshops on:- Sugar quality & Cane analysis Chemical application - need
2	Weeds - Plants - CCS	Working from growing to selling	Funding - Help - Payment	5	5	Yes	Yes		Everyone was great
3	Understanding payment slips	On CCS - Payments		2	3	Yes	Yes	new farmers	Good Workshop - next time sugar quality analysis
4	Buying and selling process	CCS reading reports		4	3	Yes	Yes	Husband & other unattending wives	Varieties of cane for our area
5	SRDC - Their role	QSL		4	4	Yes	Yes	Husband	Cane Analysis
6	About CCS	Process of cane from start to finish Well presented	Sarah's information	4	4	Yes	Yes		Promote sugar in advertising as good not bad & Varieties of cane for Babinda area
7				4	4	Yes	Yes	Husband	
8	SRDC	QSL	Relative CCS estimate	5	5	Yes	Yes	Husband	Sugar qualit, Cane analysis & Varieties for our area
9	Reinforcement of Cane payment system	Although I have prior knowledge of the industry it was good to renew the differenr areas	A sense of being important as a woman & partner in the sugar industry	5	5	Yes	Yes	Partner	
10	Really there is so much to know (esp for newcomers) that woman should become involved & that everyone needs to work together for the better of the industry			5	5	Yes	Yes	Lots of questions for my husband & also encourage the other farmers wives to come to the next one and get involved & interested	On-going workshops / perhaps specfic subjects with a little more depth. Thanks it was excellent no improvement needed.
11	Cane pay info	Yield matters most	Value of crop rotation	5	5	Yes	Yes	Partner	
				47.5	**46**				