



CSR Sugar Milling Site Tour – 17 September 2004



Ian McMaster
CEO CSR Sugar

CSR Sugar Milling – key strategies

- ❑ **Ensure a secure and growing raw material supply**
 - Continued focus on Cane Productivity Initiatives
- ❑ **Develop sustainable business models to achieve world class cost position**
 - Regional business models that ensure viability in a low price environment
- ❑ **Ensure efficient responsive industry structures**
 - Management of deregulation and industry restructuring
- ❑ **Achieve growth in targeted opportunities**
 - Key focus on development of co-generation business
- ❑ **Safety leadership and environmental sustainability**

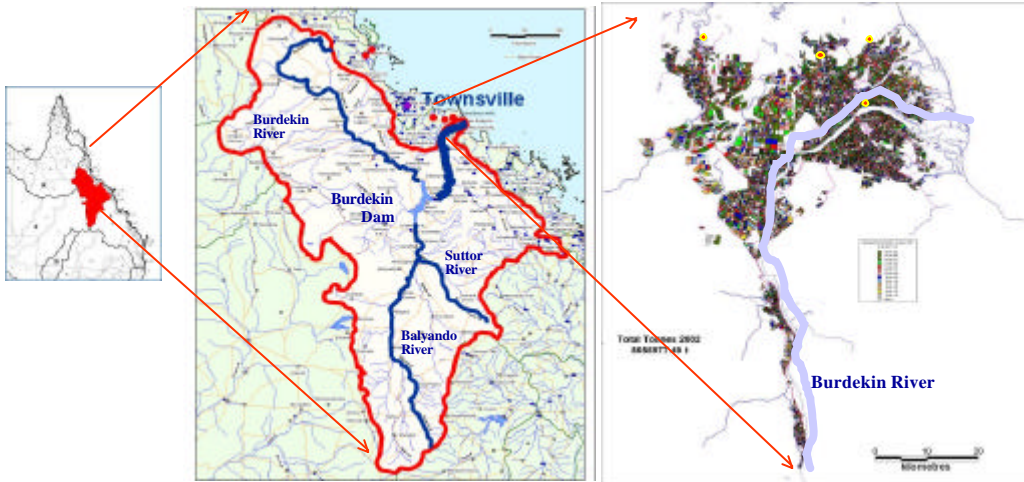


Burdekin Region Invicta, Pioneer, Kalamia and Inkerman mills

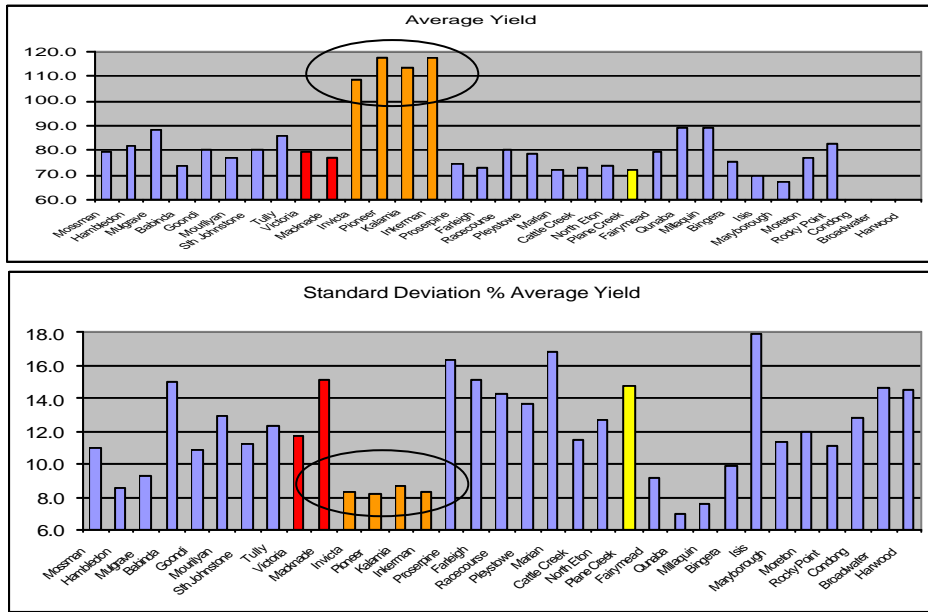


**Mark Day
General Manager**

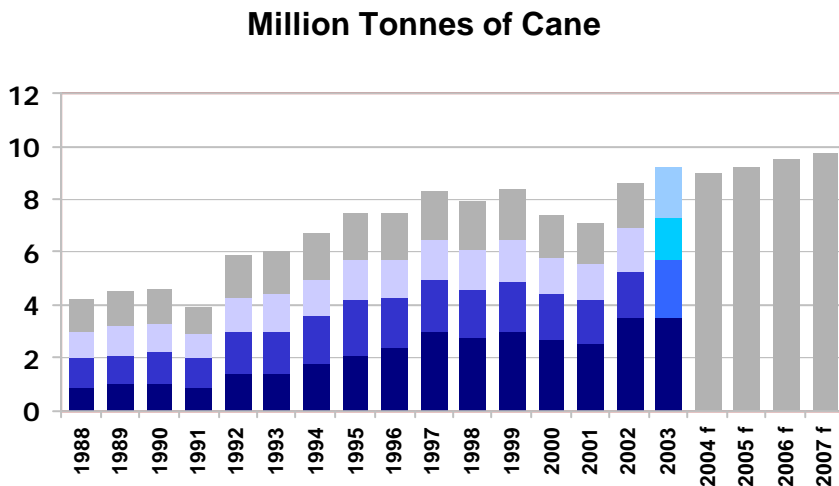
**Burdekin Dam catchment is >700km long and highly
reliable source of irrigation water**



Burdekin region's high cane yield and low variation are arguably the best in the world (1970-1996)



Steady increase in cane production in the Burdekin since 1988



History of the Cane Productivity Initiative

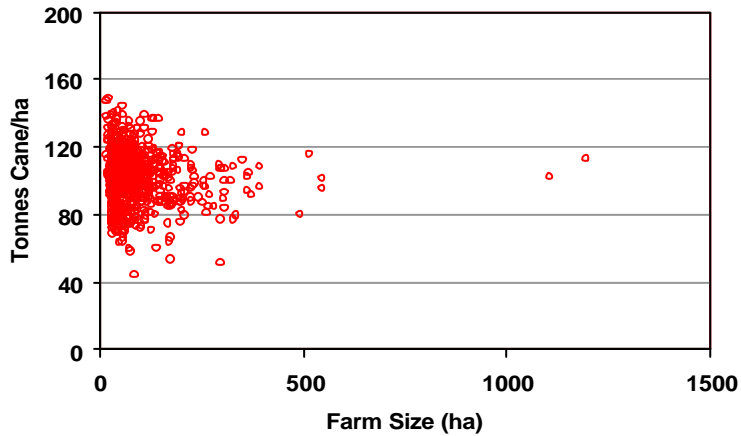
- ❑ Engaged McKinsey to assist in developing the Cane Productivity Initiative (“CPI”)
- ❑ CSR developed a regional management approach (Herbert, Burdekin, Mackay)
- ❑ Various reviews of the industry confirmed the direction
- ❑ CPI program initiated in regions - redirected focus

Underlying principles

Mission	Focus on improvement of the whole of value chain, as well as the components
Targets	+20% increase in yield was the primary target in the cane growing sector
Organisation	Reallocate BSES, Cane Productivity Boards, CSR staff To focus on this objective. Formed 45 grower cell groups
Performance feedback	Grower website as a main platform for information and benchmarking
Consequence management	Review incentives and disincentives

Variation in Burdekin cane fields

2000

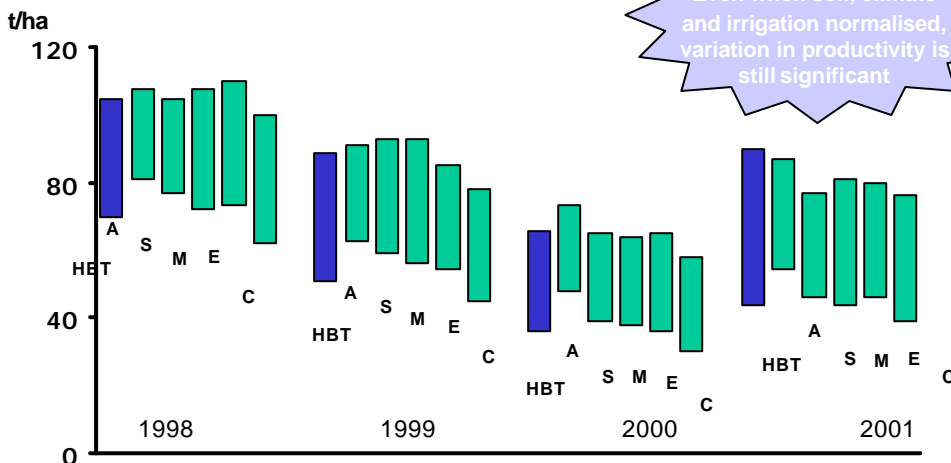


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Variation existing in sub-regions

Cane yield range: Herbert and productivity sub-regions

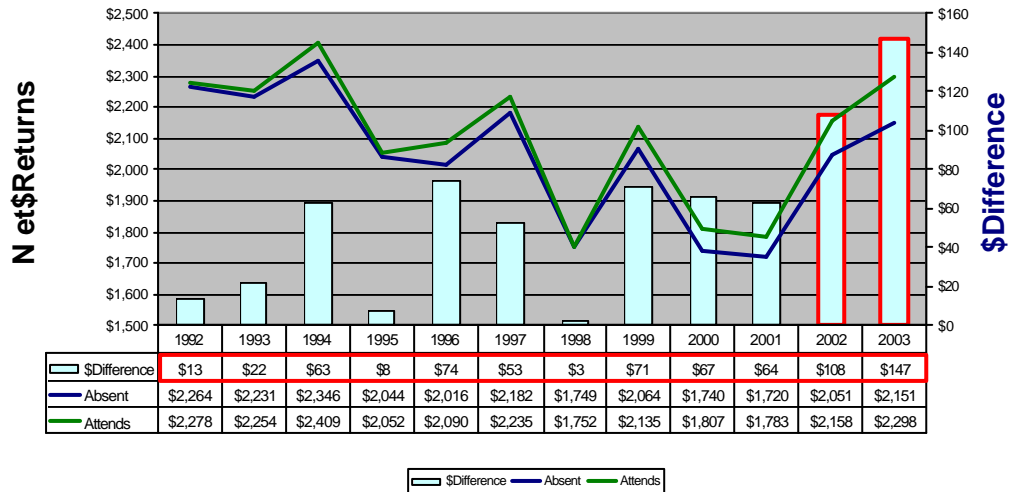


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Participating growers are building a gap in performance

CPI - Population Comparison - Attends v's Non Attends





Pioneer mill renewable energy project



Shayne Rutherford
GM Business Development

CSR is the largest sugar miller in Australia

- ❑ CSR produces ~40% of Australia's raw sugar production, milling capacity 2.4 mt, operating 7 sugar mills in Queensland
- ❑ CSR is already a significant producer of renewable energy at each of its 7 mills
- ❑ Generation capacity of 125 MW with 45 MW available for export
- ❑ 130,000 MWh exported to national grid annually (similar number of RECs)
- ❑ All mills sell electricity & RECs to Ergon the local franchise retailer

Renewable energy at Invicta mill



- ❑ Invicta was CSR's first major renewable energy project, completed in 1996 (pre MRET)
- ❑ 50 MW plant, 35-40 MW export capacity
- ❑ 115,000 megawatt hours exported in YEM03
- ❑ Revenue gained from electricity and renewable energy credits
- ❑ Invicta contributes 85% of CSR Sugar electricity exports, 95% RECs

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Pioneer renewable energy project

Pioneer Mill in the Burdekin



Project Overview

<u>Capital Investment:</u>	\$100 m
<u>Plant Structure:</u>	63 MW installed 45 MW export
<u>Export Power:</u>	200,000 MWh

(enough power for 50,000 households, reduces greenhouse gases by 400,000 tonnes per year)

SVA positive from first year of operation

Timing:

Sep 2003	Launched
Dec-Jun 2004	Demolition & early works
Jun-Nov 2004	Milling season & construction
Dec-May 2005	Construction
May/Jun 2005	Mill/Power station complete

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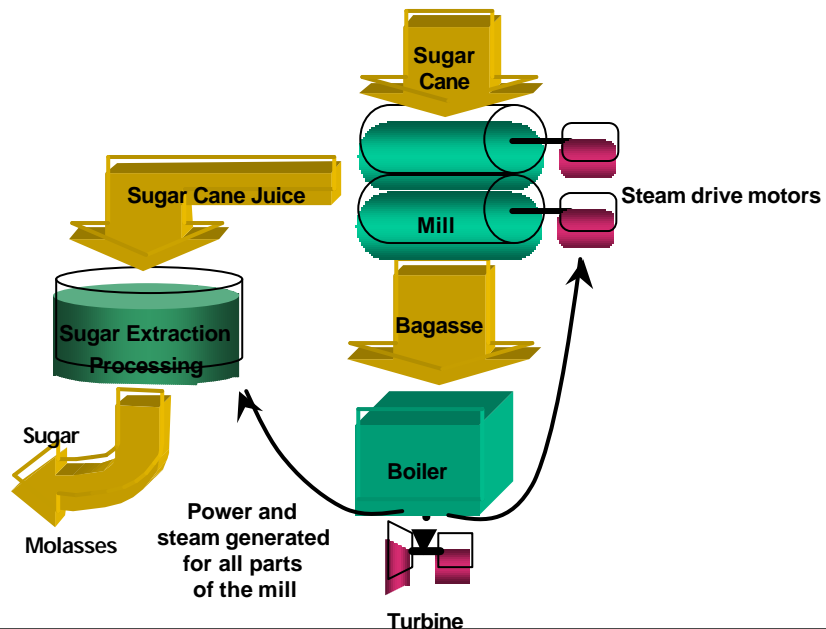
Sugar mill processing

- ❑ **Crushing:** Sugar cane is shredded and crushed using steam “engines”; Cane juice then flows to processing vessels
- ❑ **Bagasse:** Left over cane fibre is sent to the boilers to produce electricity and steam for the mill; Unused bagasse is stored in waste piles
- ❑ **Boilers:** Pioneer currently has two inefficient boilers to create steam for electricity and the process
- ❑ **Sugar Extraction:** Steam provides required energy to concentrate the juice and make raw sugar crystals. Molasses is a by-product of this product which is sold for ethanol production or as stockfeed
- ❑ **Turbines:** Turbine generators reduce steam pressure to required levels and create electricity for mill

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Sugar mill processing



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Capital investment

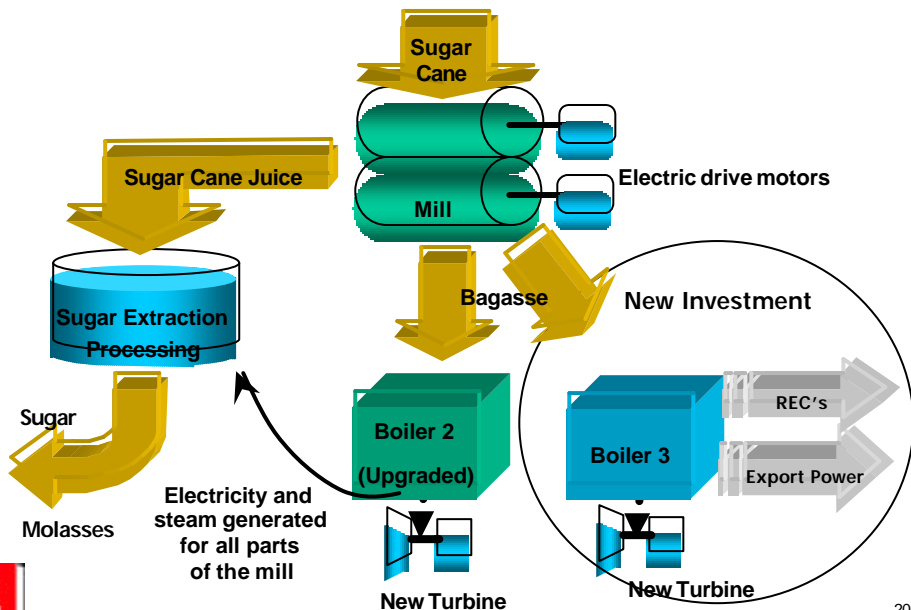
- ❑ **Dedicated power plant**
 - New boiler, steam turbine generator, cooling towers and associated works

- ❑ **Mill efficiency upgrade**
 - Upgrade existing boiler – to provide all power and steam for mill operations
 - Steam turbine mill drives replaced with electric drives
 - New evaporators
 - New steam turbine generator for Boiler 2
 - Improved scrubber system to reduce emissions

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Capital investment



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Indicative Pioneer financials

- ❑ Export 200,000 MWh at ~\$35 per MWh
- ❑ Create 250,000 REC's at ~\$40 per REC
- ❑ Approximate EBIT per year of \$15m

At completion of Pioneer, CSR will contribute 11% of the 2005 MRET target and 4% of the final (2010) MRET REC target

Pioneer risk management

- ❑ Crop variability
 - Burdekin region is the least variable and most productive sugar cane region in Australia
 - CSR operates four mills in the region with ability to switch cane supply or bagasse between mills
- ❑ Electricity & REC price volatility
 - 10 year Power Purchase Agreement (PPA) with Ergon Energy
 - Electricity prices fixed across term of PPA
 - A combination of fixed price and market price REC's

MRET Scheme has created REC market

- ❑ MRET provides a market for Renewable Energy Certificates (RECs) since 2001
- ❑ Renewable generators able to create (RECs) for each MWh electricity produced
- ❑ Wholesale electricity purchasers have a liability to remit a quantity of RECs in proportion to their total wholesale purchases of electricity
 - Non tax deductible penalty of \$40 for each MWh shortfall
- ❑ REC price determined by the supply (capacity of renewable energy generation) and demand for RECs (mandatory target set by Fed Govt).
- ❑ Scheme ends in 2020

MRET's status & potential future projects

- ❑ MRET Review, undertaken late 2003, recommended increasing the target and extending the life of the scheme
- ❑ Federal Government's Energy Statement in June 2004 rejected the Review's recommendations. Targets remain unchanged, scheme not extended past 2020
- ❑ Federal Opposition publicly supports increasing target to 5% increase in market share (as opposed to the current 2%)
- ❑ Without an increase in target and extension of end date, CSR may only consider 1 or 2 other bagasse based projects
- ❑ If scheme extended and targets increased, CSR may consider an additional 3 or 4 projects using trash as fuel