

PROCEEDINGS

of the

2010 CONFERENCE

of the

Australian Society

of

Sugar Cane Technologists

held at

BUNDABERG, QUEENSLAND

from 11 MAY to 14 MAY 2010

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**AUSTRALIAN SOCIETY OF SUGAR CANE TECHNOLOGISTS LTD**

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# **THIRTY-SECOND CONFERENCE BUNDABERG, 2010**

## **PROGRAM**

T

The Official Opening, Annual General Meeting, General Session  
and some Technical Sessions of the Conference  
will be held at the Moncrieff Theatre,  
Bourbong Street, Bundaberg.

The balance of the sessions will be in the Parish Hall.  
Poster Papers and the Industry Equipment Exhibition will be held in the  
Civic Centre.

## **TUESDAY, 11 May 2010**

Registration at the Moncrieff Theatre from 8.00.

### **MORNING SESSION—9.00**

Chairman: Dr Mike Cox

### **WELCOME**

**Mayor, Bundaberg Regional Council,  
COUNCILLOR LORRAINE PYEFINCH**

### **OFFICIAL OPENING**

**MR ALAN WINNEY**

**Chairman, Queensland Sugar Corporation**

9:30–10:00 President's address, Dr Mike Cox  
10:00–10:30 Morning tea

Chairman: Dr Mike Cox

10.30–11.15 Keynote Speaker Outcomes from CRC. Dr P Twine, Dr J Manners,  
Dr L Nielsen CRCSIIB  
11:15–11:45 Keynote Speaker GM sugarcane and sugarbeet. Dr E Mirkov, Texas  
AgriLife Research USA  
11:45–12:15 Keynote Speaker Future Delivery of biotechnology. Dr R Broglie,  
DuPont Agricultural Biotechnology  
12.15–12.30 Official opening of the Industry Equipment Exhibition  
12.30–1.30 Lunch

**AFTERNOON SESSION–1.30**

**GENERAL SESSION**

Chairman: Dr B Schroeder

Paper: 1.30–2.00	Sugarcane sexual reproduction in a commercial environment: Research to underpin regulatory decisions for genetically modified sugarcane, by GD Bonnett, JJ Olivares-Villegas, N Berding, T Morgan .....	1
Paper: 2.00–2.30	Overview of sugarcane industry Biotechnology workshops, by Suzanne E Morris .....	10
Paper: 2.30–3.00	Asset management and electronic consignment, by S Marrero, E Ponce, A Guerrero, M Sefton, A Camacho, LP Di Bella, R De Lai, A Girgenti	20
3.00–3.30	Afternoon tea	

**GENERAL SESSION**

Chairman: M M Gayton

Paper: 3.30–4.00	Environmental benefits and trade-offs of producing bio-energy and bio-materials from Australian sugarcane, by MA Renouf, RJ Pagan, MK Wegener .....	28
Paper: 4.00–4.30	Sugarcane smut after three years: a policy retrospective, by G Antony, R Magarey, B Milford .....	38
4.30–5.30	Presentation of the Sugar Industry Innovator Awards/Research Awards	
6.00	Welcome function	

**WEDNESDAY, 12 May, 2010**

**MORNING SESSION–8.00**

**AGRICULTURE SESSION (Concurrent A)**

Chairman: Mr T Willcox

Paper: 8.00–8.30	Efficacy of BIOCANETM against southern one-year canegrub, <i>Antitrogus consanguineus</i> , by PR Samson, GS Bade, WJ Harris .....	50
Paper: 8.30–9.00	Status of winter cereals, other rotation crops and common weeds as hosts of lesion nematode ( <i>pratylenchus zae</i> ), by GR Stirling, NV Halpin, A Dougall, MJ Bell .....	62
Paper: 9.00–9.30	Quantifying spatial movement of the greyback cane beetle in the sugarcane landscape: data available and research needs, by FR Goebel, N Sallam, PR Samson, K Chandler .....	71
Paper: 9.30–10.00	suSCon® Maxi and control of greyback canegrub in sugarcane, by KJ Chandler, GR Tucker .....	84

**AGRICULTURE SESSION (Concurrent B)**

Chairman: Dr G Kingston

Paper: 8.00–8.30	Effect of zero and zonal tillage on cane growth and yield on a heavy cracking clay soil in the Herbert Valley, by G Park, AL Garside, B Salter, JM Perna .....	97
Paper: 8.30–9.00	Assessment and possible adaption of the double-disc opener planter technique in the wet tropics, by AP Hurney, DM Skocaj .....	110
Paper: 9.00–9.30	Interactions between rotation breaks, tillage and n management on sugarcane grown at bundaberg and ingham, by MJ Bell, AL Garside, N Halpin, B Salter, PW Moody, G Park .....	119
Paper: 9.30–10.00	An evaluation of the possibility of using minimum tillage in a cane/peanut rotation farming system: a grower group perspective, by DJ Halpin, NV Halpin, D Randell, L Pippia, A Chapman .....	140

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**MANUFACTURING SESSION**

Chairman: Mr C Garson

Paper: 8.00–8.30	Achieving low steam on cane with direct contact juice heaters, by B Tyson, T Drury, D Heck .....	517
Paper: 8.30–9.00	Formation of thermodynamically unstable calcium oxalate dihydrate in sugar mill evaporators, by Christopher P East, William Os Doherty, Christopher M Fellows, Hong Yu .....	522
Paper: 9.00–9.30	The implementation of a mill mud and ash delivery strategy in Mackay, by J Markley, A Raines, P Everitt, R Crossley .....	534
Paper: 9.30–10.00	Trade display	
10.00–10.30	Morning tea	

**AGRICULTURE SESSION (Concurrent A)**

Chairman: Mr T Willcox

Paper: 10.30–11.00	Impact of tillage and residues from rotation crops on the nematode community in soil and surface mulch during the following sugarcane crop, by GR Stirling, NV Halpin, MJ Bell, PW Moody .....	152
Paper: 11.00–11.30	IPM strategies for pest and disease control in Indonesia: project overview and outcomes from recent ACIAR-funded research, by RC Magarey, A Kristini, N Sallam, PR Samson, E Achadian, PJ McGuire, R Goebel, KJ Lonie .....	169
Paper: 11.30–12.00	Monitoring sugarcane moth borers in indonesia: towards better preparedness for exotic incursions, by Nader Sallam, Etik Achadian, Ari Kristini, Muchamad Sohib, Herwan Adi .....	181

**AGRICULTURE SESSION (Concurrent B)**

Chairman: Dr G Kingston

Paper: 10.30–11.00	District yield potential: an appropriate basis for nitrogen guidelines for sugarcane production, by BL Schroeder, AW Wood, M Sefton, AP Hurney, DM Skocaj, T Stainlay, PW Moody .....	193
Paper: 11.00–11.30	Farming systems and their effect on the response of sugarcane to nitrogen, by B Salter, B Schroeder, J Perna .....	210
Paper: 11.30–12.00	Opportunities for improving the efficiency of use of nitrogen fertiliser in the Australian sugar industry, by AW Wood, BL Schroeder, R Dwyer	221

**MANUFACTURING SESSION**

Chairman: Mr C Garson

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Paper: 11.30–12.00	Whole crop processing at Broadwater Mill: Impacts on process operations, by D Moller, R Broadfoot, S Bell, H Bakir .....	573
12.00–12.30	Section AGMs	
12.30–1.30	Lunch	

**AFTERNOON SESSION–1.30**

**AGRICULTURE SESSION (Concurrent A)**

Chairman: Dr G Kingston

Paper: 1.30–2.00	Pursuing higher efficacy for managed photoperiodic initiation of sugarcane flowering in the tropics, by Nils Berding, Rhylee S Pendrigh, Vivien Dunne .....	234
Paper: 2.00–2.30	Managing variety improvement program operations using an integrated database and handheld computers to improve efficiency and reduce errors, by Phil Lethbridge, Mike Cox .....	251
Paper: 2.30–3.00	Evaluation of commercial performance and attributes of Q200 <sup>b</sup> in North Queensland, by Nils Berding, Ross K McIntyre .....	262

**AGRICULTURE SESSION (Concurrent B)**

Chairman: Mr J Markley

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Paper: 2.30–3.00	Interaction of iron and nitrogen cycles: implications for fertiliser management and greenhouse gas emissions, by BCT Macdonald, I White, OT Denmead .....	293

**MANUFACTURING SESSION**

Chairman: Mr C Garson

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3.00–3.30	Afternoon tea	

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Chairman: Dr B Schroeder

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Paper: 4.00–4.30	Screening for Ramu Stunt resistance at Ramu Agri-Industries, Gusap, PNG 1986–2008, by LS Kuniata, RC Magarey, GR Rauka, S Suma, JI Bull .....	312

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Chairman: Mr J Markley

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**MANUFACTURING SESSION**

Chairman: Mr B Tyson

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	4.30–5.00	Posters	

**THURSDAY, 13 MAY 2010**

**MORNING SESSION–8.00**

**AGRICULTURE SESSION (Concurrent A)**

Chairman: Mr T Willcox

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Paper:	8.30–9.00	Varietal resistance of sugarcane to natural infection of smut—preliminary results, by Shamsul A Bhuiyan, Barry J Croft, Mike C Cox, George Bade .....	355
Paper:	9.00–9.30	On-site rapid screening for sugarcane smut resistance using near-infrared (nir) spectroscopy, by DE Purcell, JP Oxley, MC Cox, BJ Croft, MG O’Shea .....	366
Paper:	9.30–10.00	The Australian sugarcane smut epidemic: epidemiological considerations and predictions for the final stages, by RC Magarey, D Denney, T Sheahan, JI Bull .....	375

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Chairman: Dr B Schroeder

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Paper:	8.10–8.30	Agdat: spatial applications to improve harvest management, data recording and reporting, and data exchange between organisations, by Robert Crossley, John Markley .....	388
Paper:	8.30–8.50	Stability of spatial patterns defined by electrical conductivity mapping of soils within sugarcane paddocks, by RJ Coventry, JR Hughes, AE Reid, P McDonnell .....	397
Paper:	8.50–9.10	Assessment of sugarcane yield monitoring technology for precision agriculture, by T Jensen, C Baillie, R Bramley, L Di Bella, C Whiteing, R Davis .....	410
Paper:	9.10–9.30	Machine vision-based weed spot spraying: a review and where next for sugarcane? by Cheryl McCarthy, Steven Rees, Craig Baillie .....	424
	9.30–10.00	Discussion	

**MANUFACTURING SESSION**

Chairman: Mr P Stuart

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AGRICULTURAL SESSION (Concurrent A)

Chairman: Mr J Markley

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Chairman: Dr B Schroeder

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MANUFACTURING SESSION

Chairman: Mr P Stuart

Paper	10.30–11.00	Achieving consistent locomotive braking performance, by GA Kent, NJ McKenzie, DE Koppen, C McCallum .....	679
Paper	11.00–11.30	Milling train maceration control utilising NIR technology. by T Lloyd, S Eastment, P Mitchell .....	688

11.30–12.30 ASSCT AGM

12.30–1.30 Lunch

2.00 Manufacturing and Agricultural Field Trips

5.15 BBQ

**FRIDAY, 14 MAY 2010**

**MORNING SESSION–8.00**

JOINT SESSION

Chairman: Mr J Markley

Paper:	8.00–8.30	Carbon partitioning in the sugarcane stalk, by FC Botha, ZA McDonald	486
Paper:	8.30–9.00	Video Mediated Social Networking: A case of how this occurred in the Australian Sugar Industry, by WHP Thomas .....	497
Paper:	9.00–9.30	Wielding the cane: outcomes from the CRC SIIB's Postgraduate Education Program, by Suzanne E Morris .....	507
	9.30–10.00	Morning tea	
	10.00–11.00	Closing ceremony	