PROCEEDINGS

of the

2010 CONFERENCE

of the

Australian Society

of

Sugar Cane Technologists

held at

BUNDABERG, QUEENSLAND

from 11 MAY to 14 MAY 2010

Edited by RC BRUCE

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The views of the authors as set out in these Conference Proceedings do not necessarily represent the views of the Australian Society of Sugar Cane Technologists.

All papers published in these Conference Proceedings are peer reviewed by at least two Referees.
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 Moncrief 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

Paper: 2.00–2.30 Overview of sugarcane industry Biotechnology workshops, by Suzanne E Morris


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 biomaterials from Australian sugarcane, by MA Renouf, RJ Pagan, MK Wegener

Paper: 4.00–4.30 Sugarcane smut after three years: a policy retrospective, by G Antony, R Magarey, B Milford

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 BIOCANE™ against southern one-year cane grub, Antitrogus consanguineus, by PR Samson, GS Bade, WJ Harris

Paper: 8.30–9.00 Status of winter cereals, other rotation crops and common weeds as hosts of lesion nematode (Pratylenchus zeae), by GR Stirling, NV Halpin, A Dougall, MJ Bell

Paper: 9.00–9.30 Quantifying spatial movement of the greyback cane beetle in the sugarcane landscape: data available and research needs, by FR Goebele, N Sallam, PR Samson, K Chandler

Paper: 9.30–10.00 suSCon® Maxi and control of greyback cane grub in sugarcane, by KJ Chandler, GR Tucker

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, BS Salter, JM Perna

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

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, NV Halpin, BS Salter, PW Moody, G Park

MANUFACTURING SESSION
Chairman: Mr C Garson

Paper: 8.00–8.30 Achieving low steam on cane with direct contact juice heaters, by B Tyso, 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

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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

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Chairman: Dr G Kingston


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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

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Chairman: Mr C Garson

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Paper: 11.00–11.30 The effect of whole crop processing on sugar recovery and sugar quality, by GA Kent, DJ Moller, PD Scroope, R Broadfoot ........................................ 559

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
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Chairman: Dr G Kingston

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Paper: 2.00–2.30 Linking measured carbon dioxide exchange by sugarcane crops and biomass production, by OT Denmead, BCT Macdonald, I White, DWF Griffith, G Bryant, T Naylor, SR Wilson, WJ Wang .................. 286

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

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Chairman: Mr C Garson

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3.00–3.30 Afternoon tea

AGRICULTURE SESSION (Concurrent A)
Chairman: Dr B Schroeder


AGRICULTURE SESSION (Concurrent B)
Chairman: Mr J Markley

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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
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12.30–1.30 Lunch

2.00 Manufacturing and Agricultural Field Trips

5.15 BBQ

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JOINT SESSION
Chairman: Mr J Markley

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Paper: 9.00–9.30 Wielding the cane: outcomes from the CRC SIIB’s Postgraduate Education Program, by Suzanne E Morris ......................... 507

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10.00–11.00 Closing ceremony