

38th Conference of the Australian Society of Sugar Cane Technologists (ASSCT 2016)

Makay, Queensland, Australia
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Editor:

R. C. Bruce

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For permission requests, please contact Australian Society of Sugar Cane Technologists
at the address below.

Australian Society of Sugar Cane Technologists
PO Box 5596
Mackay Mail Centre
QLD Australia 4741

Phone: (07) 4954 3956
Fax: 07 7 4829 4115

assctadmin@ozemail.com.au

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GENERAL SESSION

- 10.45–11.30 Keynote address: Simon Usher: Who ate all the pies?
Creating shared value
- Paper 11.30–12.00 Modelling the sugarcane value chain: a real time
decision-making tool, by S Norris, C Norris 1
- Paper 12.00–12.30 Managing the risk of beneficial re-use of milling
by-products, by C Miller, P Brown, J Crane 2
- 12.30–1.00 *Lunch*

AFTERNOON SESSION–1.00 pm

AGRICULTURE SESSION

Chair: George Piperidis

- Paper 1.00–1.30 Starch accumulation in sugarcane in response to stress,
by Priya Joyce, Nirosha Hewage Don, Monica
Sousa, Davey Olsen 3
- Paper 1.30–2.00 Industry perspectives on precision agriculture, by
Tony Webster, John Panitz, Troy Jensen, Rob
Bramley 4
- Paper 2.00–2.30 Lagoons Creek rehabilitation at Racecourse Mill, by
Carissa Mansfield, Scott Hayes-Stanley 5

AGRICULTURE SESSION (Concurrent)

Chair: Phil Ross

- Paper 1.00–1.30 Barcoding: a tool to assist the industry to manage
insect incursions, by Kathy Braithwaite, Keith
Chandler, Nader Sallam 6
- Paper 1.30–2.00 Effects of *Pachymetra* root rot and nematodes on
some elite sugarcane clones in Australia, by
Shamsul A Bhuiyan, Barry J Croft, Eunice
Wong, James Ogden-Brown, Michael Turner,
Roy Parfitt, Rob Magarey, Judi Bull,
Mike Cox 7
- Paper 2.00–2.30 *Pachymetra* root rot survey in the Herbert River
District 2014–2015, by G Holzberger, RC
Magarey, L DiBella, JI Bull, R Nielson 8

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MANUFACTURING SESSION

Chair: John Hodgson

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Paper	1.30–2.00	Microbial oil production from sugarcane bagasse hydrolysates by oleaginous yeast and filamentous fungi, by FB Ahmad, Z Zhang, WOS Doherty, IM O’Hara 44
Paper	2.00–2.30	Modelling the effect of steam economy measures on effluent flows from the raw sugar factory, by PG Wright 45
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AGRICULTURE SESSION

Chair: Barry Salter

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Paper	3.30–4.00	Spatial analysis of the relationship between nitrogen surplus and yield in sugarcane, by Tony Webster, Rob Bramley, Troy Jensen 10
Paper	4.00–4.30	Evaluating remote sensing technologies for improved yield forecasting and for the measurement of foliar nitrogen concentration in sugarcane, by Andrew Robson, Muhammad Moshiur Rahman, Gregory Falzon, Niva Kiran Verma, Kasper Johansen, Nicole Robinson, Prakash Lakshmanan, Barry Salter, Danielle Skocaj 11
Paper	4.30–5.00	Factors associated with excess use of nitrogen in sugarcane crops in selected districts of Kyber Pakhtunkhwa Province, Pakistan, by Faheem Khan, Malcolm Wegener 12

AGRICULTURE SESSION (Concurrent)

Chair: Allan Royal

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Paper	3.30–4.00	Chlorotic streak resistance screening in the Tully district, by RC Magarey, K Sventek, JI Bull, JK Stringer, R Zamora	14
Paper	4.00–4.30	Chlorotic streak transmission and crop dynamics research, by RC Magarey, K Sventek, JI Bull, KS Braithwaite	15
Posters	4.30–5.00	Effects of burning trashes on leaf feeders <i>Mythimna</i> spp. (Lepidoptera: Noctuidae) damage in sugarcane fields, by Amin Nikpay ..	16
		Fungal partners play their part: arbuscular mycorrhizae increase sugarcane growth and decrease canegrub performance, by A Frew, J Powell, N Sallam, P Allsopp, SN Johnson	17
		Spatial distribution of pink stalk borers <i>Sesamia</i> spp. (Lepidoptera: Noctuidae) in sugarcane fields in south west Iran, by Amin Nikpay, Haroldo Xavier Linhares Volpe	18
		Australian collaboration for development of detection methods for sugarcane streak mosaic virus, by EJ Wilson, N Thompson, R Magarey, EM Achadian, A Kristini, SH Hidayat	19
		Quantitative polymerase chain reaction for the detection of <i>Leifsonia xyli</i> subsp. <i>xyli</i> in plant tissue from sugarcane, by Amanda Johnson	20
		Nutrient uptake mechanisms in YCS affected sugarcane, by ZA Ostatek-Boczynski, D Olsen, F Darain, BL Schroeder	21

MANUFACTURING SESSION

Chair: Jeffrey Snoad

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Paper	3.30–4.00	Human reliability maintenance: sugar milling training for the future, by Alison Clift, Max Russell .	47
Paper	4.00–4.30	How gorillas innovate: the activities of MIST, by Bryan Lavarack, Paul Benecke	48
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Electrocoagulation of impurities in sugar industry
process streams, by Lindon Pyle, Darryn
Rackemann 50

5.00–6.00 *Happy hour with the IEE*

THURSDAY, 28 APRIL 2016

MORNING SESSION–8.00 am

MANUFACTURING SESSION

Chair: John Hodgson

8.00–9.30 Australian Renewable Energy Agency (ARENA)
Workshop

9.30–10.00 *Morning tea*

10.00–11.30 ARENA Workshop cont'd.

AGRICULTURAL SESSION

Chair: Allan Royal

Posters 11.30–12.00 Using an EM38 (ground conductivity meter) as a
co-variable to improve data accuracy in small
plot field trials, by Glen Park 22

Modelling yields in the wet tropics to improve
industry planning, by Yvette Everingham,
Justin Sexton, Geoff Inman-Bamber, Danielle
Skocaj 23

Best management practice—improving runoff water
quality while maintaining cane productivity, by
S Donaldson, K Rohde 24

Assessment of nitrification potentials of
Biodunder® formulations in combination with
nitrification inhibitors, by Richard Brackin 25

Modelling nitrogen release from controlled-release
fertilisers in Australian sugar systems, by
Zhigan Zhao, Kirsten Verburg 26

Understanding nitrogen release from controlled-
release fertilisers, by Tim Muster, Kirsten
Verburg, James Mardel, Kathy Wittwer-Schmid,
Mike Wong, Keith Bristow, Gordon McLachlan,
Zhigan Zhao 27

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MANUFACTURING SESSION

Chair: John Hodgson

11.30–12.00 Sponsor presentations

12.00–12.30 *Sectional AGMs*

12.30–1.30 *Lunch, including SRA presentation, IEE presentations*

AFTERNOON SESSION–1.30 pm

1.30–5.00 *Manufacturing and Agricultural Field Tours*

6.30–10.30 *Conference Dinner*

FRIDAY, APRIL 2016

MORNING SESSION–8.00 am

AGRICULTURAL SESSION

Chair: John Agnew

- Paper 8.00–8.30 Examination of opportunity for compost to reduce synthetic nitrogen fertiliser requirements of sugarcane and nitrous oxide emissions, by G Kingston, J Biala, S Chapman, W Wang, S Reeves, G Petersen 28
- Paper 8.30–9.00 Controlled release fertilisers—lessons from a review and early results characterising release, synchrony and nitrogen losses, by K Verburg, Z Zhao, JS Biggs, PJ Thorburn 29
- Paper 9.00–9.30 The use of targeted extension strategies to improve water quality outcomes in the Herbert sugarcane industry, by Lawrence Di Bella, Dominique O’Brien, Michael Nash, Carla Wegscheidl 30

MANUFACTURING SESSION

Chair Jeffrey Snoad

- Paper 8.00–8.30 Cracking of pre-stressed concrete girders on BL Creek bridge, by David Ruhle 51

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Paper	8.30–9.00	Scheduling tools to reduce the cost of cane railway transport, by GA Kent, AJ Pinkney	52
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	9.30–10.00	<i>Morning tea</i>	

AGRICULTURAL SESSION

Chair: Dave McCallum

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Paper	10.30–11.00	The first sugarcane genome assembly: how can we use it? by Karen Aitken, Paul Berkman, Anne Rae	32
Paper	11.00–11.30	Development of a method to impose waterlogging on sugarcane grown in pots, by B Salter, E Kok	33
Posters	11.30–12.00	Understanding the impact of management practices on the soil biological community: the key to restoring the health of Australian sugarcane soils, by Graham Stirling	34
		In-field sugar loss assessments in Mackay, by John Agnew, Dave McCallum, Cam Whiteing	35
		Ranking varietal tolerance to canegrub damage, by Keith Chandler, Jillian Jennings, Allen Eaton, Lisa Derby, Alison Jensen	36
		Investigation into the effect of gibberellic acid on cane growth, by Allan Royal	37
		Efficacy of alternative pre-emergent herbicides applied in trash-blanketed ratoons in the wet tropics, by Emilie Fillols, Tim Staier	38
		Management practices to reduce nitrogen losses from cane, by Amanda Elledge, Bruce Cowie	39

MANUFACTURING SESSION

Chair: Neil Sichter

Paper	10.00–10.30	Sulfite does not react as expected with oxygen in sugar mill boiler systems, by D Rodman, A Banweg, P Hicks	54
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Paper	10.30–11.00	Inside a wet scrubber, by H Ali, AP Mann, F Plaza	55
Paper	11.00–11.30	The cost of wasting energy efficiently, by AP Mann	56
Paper	11.30–12.00	Permeability and diffusivity properties of bagasse stockpiles, by PA Hobson, N McKenzie, F Plaza, A Baker, C East, L Moghaddam	57

12.00–12.30 *Lunch*

AFTERNOON SESSION–12.30 pm

AGRICULTURAL SESSION

Chair: Danielle Skocaj

Paper	12.30–1.00	The fast fluorescence kinetics: a sensitive tool for early detection of water stress in sugarcane, by DJ Olsen, R Shafiei, FC Botha	40
Paper	1.00–1.30	Genetic variation in transpiration efficiency in sugarcane and its potential impact on yield in rainfed or low irrigation environments, by Chris Stokes, Phillip Jackson, Geoff Inman-Bamber, Prakash Lakshmanan Jaya Basnayake, Sijesh Natarajan	41
Paper	1.30–2.00	A screen to discriminate the water potential that limits sprouting of different sugarcane genotypes, by Farheen Bhatti, Johann S Pierre, Anne L Rae, Jai M Perroux, Graham D Bonnett	42

MANUFACTURING SESSION

Chair John Hodgson

Paper	12.30–1.00	Effective management of corrective maintenance work during the crushing season, by G Roberts	58
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Paper	1.30–2.00	Online cleaning of a vertical continuous vacuum pan, by J Wallace, L Rodriguez, B Aspinall	60
	2.00–2.30	<i>Afternoon tea</i>	
	2.30–3.15	<i>ASSCT AGM</i>	
	3.15–4.00	<i>Closing Ceremony</i>	