PROCEEDINGS

of the

1998 CONFERENCE

of the

Australian Society

of

Sugar Cane Technologists

held at

BALLINA, NSW

From 28th April to 1st May 1998

Edited by D.M. Hogarth

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TUESDAY, 28TH APRIL 1998

MORNING SESSION — 9.00 a.m.

Official opening of the Conference by Mr John Williams, Regional Director, NSW Agriculture

10.00 a.m.—10.30 a.m. Morning tea

GENERAL SESSION
Chairman: W.J. Walker

Paper: 10.30 a.m.—11.00 a.m. Gasification technology — prospects for large-scale, high-efficiency cogeneration in the Australian sugar industry, by P.A. Hobson and T.F. Dixon ............................................. 1

Paper: 11.00 a.m.—11.30 a.m. An alternative approach to cane harvester design: an initial review of the Massey Ferguson 405, by C.P. Norris, R.J. Davis, D.J. Quick and Y. Mohommad ............................................. 10

Paper: 11.30 a.m.—12.00 p.m. A comparative analysis of vehicles used for road transportation of sugarcane, by R. Geddes, B.G. Robotham, R. Berry and R. Rieschieck ............................................. 17

12.00 p.m.—1.30 p.m. Lunch

AFTERNOON SESSION — 1.30 p.m.

GENERAL SESSION
Chairman: J.C. Baird

Paper: 1.30 p.m.—2.00 p.m. The effect of cane factors on bin weights, by G.M. Pope ............................................. 22

Paper: 2.00 p.m.—2.30 p.m. Cane cleaning systems, by Rino Cargnello and Trevor Fuelling ............................................. 28

Paper: 2.30 p.m.—3.00 p.m. At-line analysis of mill-prepared cane using near infrared spectroscopy, by G.A. Brotherton and Nils Berding ............................................. 34

3.00 p.m.—3.30 p.m. Afternoon tea

GENERAL SESSION
Chairman: W.J. Walker

Paper: 3.30 p.m.—4.00 p.m. Investigations into a differential charging system for harvesting, by F.L. Chapman and I. Grevis-James ............................................. 43

Paper: 4.00 p.m.—4.30 p.m. Continuous 12-hour shift operation at Harwood, by D.J. Moller ............................................. 47

Paper: 4.30 p.m.—5.00 p.m. Some implications of the recycling of sugar industry by-products, by G.A. Barry, A.M. Price and P.J. Lynch ............................................. 52

6.00 p.m. Cocktail party

WEDNESDAY, 29TH APRIL 1998

MORNING SESSION — 8.00 a.m.

AGRICULTURE SESSION
Chairman: P.J. Nielsen

Paper: 8.00 a.m.—8.30 a.m. Monitoring of irrigation with urban waste water, by A.I. Linedale ............................................. 56

Paper: 8.30 a.m.—9.00 a.m. Heavy metals in New South Wales canelands, by G.E. Rayment, A.J. Jeffrey and G.A. Barry ............................................. 63

Paper: 9.00 a.m.—9.30 a.m. Re-use of sewage biosolids on canelands, by G.A. Barry, P. Bloesch, E.A. Gardner and G.E. Rayment ............................................. 69

9.30 a.m.—10.00 a.m. Morning tea

Paper: 10.00 a.m.—10.30 a.m. A review of yield losses caused by Australian and selected exotic sugarcane diseases, by R.C. Magarey and B.J. Croft ............................................. 76

Paper: 10.30 a.m.—11.00 a.m. Observations on *Rhopaea magnicornis* Blackburn in sugarcane at Condong, NSW, by A.G. Hayes ............................................. 85

Paper: 11.00 a.m.—11.30 a.m. Pesticides under pressure — options for sustainable pest management, by P.R. Samson, P.G. Allsopp, A.J. Brodie, K.J. Chandler and L.N. Robertson ............................................. 90

11.30 a.m.—12.30 p.m. Posters (including brief presentations by authors)
MANUFACTURING SESSION
Chairman: D.R. Paddock

Paper: 8.00 a.m.–8.30 a.m. Properties of prepared cane for computational crushing models, by J.G. Loughran and C.J. Adam 307

Paper: 8.30 a.m.–9.00 a.m. Describing the mechanical behaviour of prepared cane using critical state theory, by M. Schembri, J.M. Kirby and G.A. Kent 313

Paper: 9.00 a.m.–9.30 a.m. Investigation of the effects of soil contamination on the mechanical properties of prepared sugarcane, by C.M. Downing, S.A. Domanti and J.G. Loughran 320

Paper: 9.30 a.m.–10.00 a.m. A soil shear test to investigate feeding at the pressure feeder, by F. Plaza and G.A. Kent 327

MANUFACTURING SESSION (concurrent)
Chairman: M. Statham

Paper: 8.00 a.m.–8.30 a.m. Additional heavy-up module to the Racecourse low-grade continuous pan, by R.G. Attard and C.D. Doyle 357

Paper: 8.30 a.m.–9.00 a.m. Pneumatic agitation of high grade massecuite in a 136 m³ batch pan, by Robert M. Stobie 362

Paper: 9.00 a.m.–9.30 a.m. Pan stage productivity and efficiency gain at South Johnstone, by D.P. Zeller, N. Trapp and J. Herrman 366

Paper: 9.30 a.m.–10.00 a.m. Experience with magma preparation for continuous high-grade seed duty at Victoria Mill, by S.N. Vigh, J.K. Little and J. Mason 371

10.00 a.m.–10.30 a.m. Morning tea

MANUFACTURING SESSION
Chairman: D.R. Paddock

Paper: 10.30 a.m.–11.00 a.m. Experiments into the constitutive behaviour of sugarcane billets, by J. Skantz and S.A. Domanti 334

Paper: 11.00 a.m.–11.30 a.m. Examining the effectiveness of smashing cane by impact loading in the shredder, by M.G. Schembri and H.D. Harris 340

Paper: 11.30 a.m.–12.00 p.m. The specific splitting energy of sugarcane, by S. Kroes 349

MANUFACTURING SESSION (concurrent)
Chairman: M. Statham

Paper: 10.30 a.m.–11.00 a.m. Performance assessment of continuous high-grade fugals, by R. Broadfoot and K.F. Miller 376

Paper: 11.00 a.m.–11.30 a.m. A new approach for the control of a sugar dryer, by Randolph Pax, Andrew Cronin, Mike McFarlane and Ashley Plank 383

Paper: 11.30 a.m.–12.00 p.m. Rheology of high grade massecuites, by R. Broadfoot, K.F. Miller and R.L. McLaughlin 388

12.00 p.m.–12.30 p.m. Manufacturing AGM

12.30 p.m.–1.00 p.m. Lunch

AGRICULTURE SESSION
Chairman: P.J. Nielsen

Paper: 1.30 p.m.–2.00 p.m. Grain legumes in sugarcane farming systems, by M.J. Bell, A.L. Garside, G. Cunningham, N. Halpin, J.E. Berthelsen and C.L. Richards 97

Paper: 2.00 p.m.–2.30 p.m. Fallow histories: effects on nitrogen contribution, growth and yield of plant and ratoon crops of sugarcane, by A.L. Garside, A.D. Noble, J.E. Berthelsen and C.L. Richards 104

2.30 p.m.–3.00 p.m. Afternoon tea

AGRICULTURE SESSION
Chairman: P.J. Nielsen

Paper: 3.00 p.m.–3.30 p.m. Soil water extraction by sugar cane beyond the readily available limit, by N.G. Inman-Bamber, R.C. Muchow, J.R. Holden, M.J. Robertson and G.J. Ham 112

Paper: 3.30 p.m.–4.00 p.m. Production and environmental benefits of trickle irrigation for sugarcane: A review, by P.J. Thorburn, C.A. Sweeney and K.L. Bristow 118

Paper: 4.00 p.m.–4.30 p.m. Water check—improving irrigation efficiencies in the Queensland sugar industry, by J. Holden, B. Hussey, A. McDougall, K. Mallon and E. Shannon 126

Paper: 4.30 p.m.–5.00 p.m. Benchmarking irrigation practices in the Ord sugar industry, by A.W. Wood, R.C. Muchow, J. Sherrard, T. Triglone and H. Vogelsang 133
## AGRICULTURE SESSION (concurrent)
**Chairman: P.J. McGuire**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>3.00 p.m.-3.30 p.m.</td>
<td>Genetic diversity: breeding to avoid future vulnerability, by Nils Berding, Warren G. Owens and David G. le Brocq</td>
<td></td>
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<tr>
<td>3.30 p.m.-4.00 p.m.</td>
<td>Efficacy of early generation selection in a sugarcane improvement program, by M.C. Cox and J.K. Stringer</td>
<td></td>
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<tr>
<td>4.00 p.m.-4.30 p.m.</td>
<td>Competition effects in selection trials, by T.A. McRae and P.A. Jackson</td>
<td></td>
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<tr>
<td>4.30 p.m.-5.00 p.m.</td>
<td>The application of spatial analysis to sugarcane variety trials, by V.J. Matassa, K.E. Basford, J.K. Stringer and D.M. Hogarth</td>
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<tr>
<td>5.00 p.m.-5.30 p.m.</td>
<td>Agriculture AGM</td>
<td></td>
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## MANUFACTURING SESSION

1.30 p.m.-3.00 p.m. **Posters Chairman: G. Pope (including brief presentations by authors)**

3.00 p.m.-3.30 p.m. **Afternoon tea**

## AFTERNOON SESSION — 3.30 p.m.

3.30 p.m.-5.30 p.m. **Workshop (Chairman: D.R. Paddock)**
- Variable speed electric drives — selection and application
  - Topic Chairman: R. Dephoff
- High grade fugals — batch or continuous
  - Topic Chairman: R. Broadfoot
- High pressure boilers — future in sugar industry
  - Topic Chairman: T. Dixon
- Measuring process materials in the sugar industry
  - Topic Chairman: P. Summerville

## THURSDAY, 30TH APRIL 1998

### MORNING SESSION — 8.00 a.m.

**AGRICULTURE SESSION**  
**Chairman: A.L. Garside**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>8.00 a.m.-8.30 a.m.</td>
<td>The potential for N losses via denitrification beneath a green cane trash blanket, by K.L. Weier, D.E. Rolston and P.J. Thorburn</td>
<td></td>
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<tr>
<td>8.30 a.m.-9.00 a.m.</td>
<td>How beneficial to productivity are fallowing practices in coastal Mossman? by R.C. Muchow, A.V. Rudd, A.J. Higgins, A.W. Ford</td>
<td></td>
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<tr>
<td>9.00 a.m.-9.30 a.m.</td>
<td>An operations research methodology to improve cane supply scheduling, by A.J. Higgins, and R.C. Muchow</td>
<td></td>
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<tr>
<td>9.30 a.m.-10.00 a.m.</td>
<td>Precision agriculture: what is it and what can it offer the Australian sugar industry? by R.G.V. Bramley, S.E. Cook, D.R.V. Cox, G.G. McMahon and C.H. Roth</td>
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**AGRICULTURE SESSION (concurrent)**  
**Chairman: P.J. McGuire**

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<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>8.00 a.m.-8.30 a.m.</td>
<td>BSES sugarcane breeding program in the Burdekin, by T.A. McRae, D.L. Erquiaga, L.F. Jensen, A.R. Rattey and J.K. Stringer</td>
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</tr>
<tr>
<td>8.30 a.m.-9.00 a.m.</td>
<td>Transgenic sugarcane resistant to sugarcane mosaic virus, by Priya A. Joyce, Richard B. McQuater, Jennifer A. Handley, James L. Dale, Robert M. Harding and Grant R. Smith</td>
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<td>9.00 a.m.-9.30 a.m.</td>
<td>Billet samples for measuring sugar content in variety trials, by T.A. McRae, J.K. Bull and B.G. Robotham</td>
<td></td>
</tr>
<tr>
<td>9.30 a.m.-10.00 a.m.</td>
<td>Optimum time of harvest for high early-CCS sugar varieties, by M.C. Cox, D.R. Ridge and B. Hussey</td>
<td></td>
</tr>
</tbody>
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MANUFACTURING SESSION
Chairman: D.R. Paddock

Paper: 8.00 a.m.–8.30 a.m. The 2550 mm milling tandem at Proserpine Sugar Mill, by J. Handley, P. Murphy and D. Gordon ................................................................. 398
Paper: 8.30 a.m.–9.00 a.m. Hygroscopic water and compression, by C.R. Murry, K. Katri and E.T. White 404
Paper: 9.00 a.m.–9.30 a.m. Adequate assessment of factory extraction performance, by G.A. Kent ........ 407
Paper: 9.30 a.m.–10.00 a.m. Low pressure compression characteristics of prepared cane: a review, by C.R. Murry ................................................................. 413

10.00 a.m.–10.30 a.m. Morning tea
10.30 a.m.–11.30 a.m. AGM
11.30 a.m.–1.00 p.m. Lunch

AFTERNOON SESSION — 1.00 p.m.

AGRICULTURE SESSION
Chairman: D. Parsons

Paper: 1.00 p.m.–1.30 p.m. An investigation into the feeding of lodged green cane by harvesters, by C.P. Norris, R.J. Davis and L.S. Poulsen .................................................. 224
Paper: 1.30 p.m.–2.00 p.m. Soil strength changes in trials using two tyre options on haulout trucks, by M.V. Braunack and L.R. Crees ........................................ 232

AGRICULTURE SESSION (concurrent)
Chairman: A.L. Garside

Paper: 1.00 p.m.–1.30 p.m. Re-evaluation of the basis for fertiliser recommendations in the Australian sugar industry, by B.L. Schroeder, A.W. Wood and G. Kingston .................................................. 239
Paper: 1.30 p.m.–2.00 p.m. Soil sodicity: its influence on cane yield in the Burdekin, by Paul Nelson and Gary Ham ................................................................. 248

2.15 p.m. Field tour

MANUFACTURING SESSION
Chairman: V. Mason

Paper: 1.00 p.m.–1.30 p.m. Condenser investigations at Mulgrave Mill, 1994–1997, by Jeff Snoad .......... 421
Paper: 1.30 p.m.–2.00 p.m. The reduction of ethanol levels in raw sugar factory cooling waters, by P.G. Wright and G. Petersen .................................................. 427
Paper: 2.00 p.m.–2.30 p.m. The application of power station technology to sugar mills for year-round electricity export, by Clyde N. Anderson and Jack M. Taylor .................................................. 434

2.30 p.m.–3.00 p.m. Afternoon tea

MANUFACTURING SESSION
Chairman: V. Mason

Paper: 3.00 p.m.–3.30 p.m. Operational experience with a bagasse boiler at low firing rates using multiple fuels, by R.M. Dephoff and R.W. Sawatzki .................................................. 440
Paper: 3.30 p.m.–4.00 p.m. Increasing boiler capacity by dried bagasse firing, by T.F. Dixon, K.N. Joyce and R. Treloar .................................................. 445
Paper: 4.00 p.m.–4.30 p.m. NOx emissions from bagasse-fired boilers, by S. Kros and T.F. Dixon .......... 453
Paper: 4.30 p.m.–5.00 p.m. Computational modelling of a bagasse-fired furnace—effects of fuel moisture, by P.L. Woodfield, J.H. Kent and T.F. Dixon .................................................. 458

MANUFACTURING SESSION (concurrent)
Chairman: M. Statham

Paper: 3.00 p.m.–3.30 p.m. Lime systems in sugar mills—opportunities for improvement, by P. Ribinsky and C. White .................................................. 465
Paper: 3.30 p.m.–4.00 p.m. Screening of factory liquor using a vibratory unit, by C.D. Doyle and R.G. Attard .................................................. 470
Paper: 4.00 p.m.–4.30 p.m. Recent developments in clarifier design, by R.J. Steindl, A.L. Fitzmaurice and C.W. Alman .................................................. 477
Paper: 4.30 p.m.–5.00 p.m. Dirt—its implications for the clarifier and filter stations, by R.J. Steindl .......... 484

5.30 p.m. BBQ
FRIDAY, 1ST MAY 1998

MORNING SESSION — 8.00 a.m.

AGRICULTURE SESSION
Chairman: P.J. Nielsen

Paper: 8.00 a.m.–8.30 a.m. Is lime doing what we want it to? by R.G.V. Bramley, A.D. Noble, D.E. Muller and A.W. Wood .......................................................... 251

Paper: 8.30 a.m.–9.00 a.m. Long-term profitability of liming to manage soil acidity in sugarcane: Tully, north Queensland, by T. Mallawaarachchi, A.P. Hurney and A.D. Noble .......................................................... 257

Paper: 9.00 a.m.–9.30 a.m. Acidulation to improve the function of controlled-release insecticide granules for canegrub control in soil, by K.J. Chandler, R.F. Cocco and F. Crawford .......................................................... 264

AGRICULTURE SESSION (concurrent)
Chairman: A.L. Garside

Paper: 8.00 a.m.–8.30 a.m. Further studies on the effect of soil treatments on shoot and root growth, by R.C. Magarey and D.J. Grace .......................................................... 288

Paper: 8.30 a.m.–9.00 a.m. Comparing the field performance of mechanical cane planters, by B.G. Robotham and W.J. Chappell .......................................................... 293

Paper: 9.00 a.m.–9.30 a.m. Improving the germination of sugarcane and the control of pineapple disease, by B.J. Croft .......................................................... 300

9.30 a.m.–10.00 a.m. Morning tea

AGRICULTURE SESSION
Chairman: P.J. Nielsen

Paper: 10.00 a.m.–10.30 a.m. Limestone can prevent canegrub control with controlled-release insecticide, by Keith J. Chandler .......................................................... 270

Paper: 10.30 a.m.–11.00 a.m. A simple and efficient method of rating sugarcane clones for resistance to Pachymetra root rot, by B.J. Croft, J.I. Bull and A.D. Greet .......................................................... 276

Paper: 11.00 a.m.–11.30 a.m. Contribution of first and second year growth to the yield of two-year cane in NSW, by R.M. Hughes and R.C. Muchow .......................................................... 280

MANUFACTURING SESSION
Chairman: M. Statham

Paper: 8.00 a.m.–8.30 a.m. Performance trials on the STG-FCB air-swept crystalliser, by P.J. Tait, J.A. Hepburn, S. Vigh, B.M. Rodriguez and M. Lamarque .......................................................... 491

Paper: 8.30 a.m.–9.00 a.m. Increasing the capacity of the pan stage at Proserpine Sugar Mill using SRI continuous pans, by L.J. Watson and R. Broadfoot .......................................................... 498

Paper: 9.00 a.m.–9.30 a.m. Exhaustion characteristics of Australian molasses, by K.F. Miller, G.D. Ingram and J.D. Murry .......................................................... 506

9.30 a.m.–10.00 a.m. Morning tea

MANUFACTURING SESSION
Chairman: M. Statham


Paper: 10.30 a.m.–11.00 a.m. Automated pol in juice analysis at Harwood Mill, by S.L. King and P.D. Scroope .......................................................... 520

Paper: 11.00 a.m.–11.30 a.m. Modelling growth rate dispersion (GRD) in sugar crystallisation, by E.T. White, D.L. Mackintosh, B.K. Butler, H. Zhang and M.R. Johns .......................................................... 524

MANUFACTURING SESSION (concurrent)
Chairman: D.R. Paddock

Paper: 10.00 a.m.–10.30 a.m. Automation of commodity data acquisition at Maryborough sugar factory, by Glyn Peatey, John Knight, and Gary McNair .......................................................... 532

Paper: 10.30 a.m.–11.00 a.m. The development and application of a schedule evaluation tool for a road-based harvest/transport system at Maryborough, by W. McWhinney and R. Haywood .......................................................... 537

Paper: 11.00 a.m.–11.30 a.m. The economics of ethanol manufacture from molasses and cereals, by P.T. Traicos .......................................................... 544

11.30 a.m.– Closing