



## Papers Scheduled for Presentation

### Symposia

*Better management practices in sugarcane fields.* **G. Kingston, J.H. Meyer, A.L. Garside, K.F. Ng Kee Kwong, A. Jeyabal and G.H. Korndörfer**

*Climate change and the sugar industry in South Africa: adapting for best management practices.* **R. Schulze**

*The potential of sugarcane as an energy source.* **M.R.L.V. Leal**

*Precision breeding to improve the usefulness of sugarcane.* **F.C. Botha**

*Prospects for the conversion of a sugar mill into a biorefinery.* **P.W. Rein**

*New strategic drivers for world sugar: what are they and how will they impact the market?* **L.O. Jolly**

*Trends in the world sugar market.* **Q.Hildebrand**

*The world sugar market, product structure and pricing of physical sugar.* **L. Jolly**

### Agricultural Engineering

*Sequence of tillage practices and reduction of land preparation costs on a Mollisol of the Cauca Valley, Colombia.* **J.S. Torres, G.A. Criollo and R. Franco (AE-1)**

*Productivity improvement under green cane harvesting conditions.* **C. Norris, J.C. Mirande, R. Guillen, E. Jacquin, C. Richard, Lyne, P. and J. Scandaliaris (AE-2)**

*Performance of irrigation systems and water use of sugarcane: a field to catchment scale perspective.* **N.L. Lecler, D.J. Clark, R.E. Schulze, B.A.K. Griffiths and J.C. Smithers (AE-5)**

*Development and modification of machinery for an improved farming*

*system in the Australian sugar industry.* **J.G. Kidd, B.G. Robotham, C. Whiteing and A.L. Garside (AE-6)**

*Sugarcane trash collection at the small farms in Southern India.* **H. Vincent Paul and M. Krishnamurthi (AE-7)**

*Mill-scale supply chain and logistics model integration for improved decision support.* **P.Y. Le Gal, C.N. Bezuidenhout and P.W.L. Lyne (AE-8)**

*Evaluation of green-cane harvesting and crop management with a trash-blanket.* **O. Núñez and E. Spaans (AE-9)**

*High efficient diagnosis of sugarcane farm land using NIR spectroscopy networking system.* **E. Taira, M. Ueno, Yoshinobu and R. Matsukawa (AE-14)**

*A review of the cane haulage problems at Hippo Valley Estates.* **S. Chidoma (AE-15)**

*Mechanization of sugarcane production in India.* **R.N.S. Yadav (AE-16)**

### Agricultural Engineering Posters

*Performance and economics of the Illovo mechanical cane cutter.* **P.W.L. Lyne, M.I. Langton, C.N. Bezuidenhout and J.C. Smithers**

*Evaluating the applicability of MODIS data for forecasting sugarcane yields in Colombia.* **E. Bastidas-Obando and J. Carbonell-González**

*Discrimination of sugarcane varieties CC 85-92 and CC 84-75 using Landsat 7 ETM+ satellite imagery.* **P.J. Murillo, J.A. Carbonell, C.A. Osorio and E. Bastidas-Obando**

*Performance and characteristics of the harvester under green cane harvesting in Okinawa.* **T. Akachi**

*Optimized agricultural planning of sugarcane using linear programming.*



*Editor's Note: Only papers available at press time are shown.*

**M.S. Scarpari, M.G.A. Landell and E.G.F. de Beauclair**

### Agronomy

*Soil loss and declining sugarcane yields on sloping land in Fiji.* **A.N. Ram, J.S. Gawander, A.D. Jokhan and K. Garan (AG-1)**

*The Better Sugarcane Initiative—impacts and benefits on the global sugarcane industry.* **R. Quirk, H. Morar, R. Perkins, G. Kingston and W. Burnquist (AG-2)**

*Integrated agronomic practices for sustainable sugarcane production—a report on the 2006 Agronomy Workshop.* **K.F. Ng Kee Kwong (AG-5)**

*A new approach to implementing computer-based decision support for sugarcane farmers and extension staff: the case of My Canesim.* **A. Singels (AG-15)**

*Improving cane productivity with dual row planting in Mauritius.* **F.M. Ismael, S. Seeruttun, C. Barbe and A. Gaungoo (AG-18)**

*New herbicide tank-mix, Krismat® + Dinamic®: a cost-effective broad-spectrum pre- & post-emergence treatment for managing weeds in sugarcane.* **S. Seeruttun, C. Barbe and A. Gaungoo (AG-19)**

*Recent advances to improve nitrogen use efficiency of sugarcane in the South African sugar industry.* **J.H. Meyer, A.W. Schumann, R.A. Wood, D.J. Nixon and M. Van Den Berg (AG-22)**

*Minimum tillage: Ten years of experience.* **P. Prammanee, S. Saensupo, P. Weerathaworn and A. Sriwarome (AG-23)**

*Electrical resistivity measurements for fast and precise large scale*

*characterization of the agricultural land of Cameroon Sugar Society (SOSUCAM).* **T. Viremouneix, L. Guiard, M. Dabas and B. Tsogo Zamba (AG-25)**

*The effect of a novel system of vinasse application on sugarcane growth and yield in China.* **Y.R. Li, Q.Z. Zhu, W.Z. Wang and S. Solomon (AG-29)**

*Factors associated with a healthy soil in sugarcane production in KwaZulu Natal.* **T. Van Antwerpen, R. Van Antwerpen, J.H. Meyer, P. Naidoo, S. Berry, V.W. Spaull, K. Govender, P. Cadet, S. Rutherford and M. Laing (AG-32)**

*Ammonia volatilization from urease inhibitor-treated urea applied to sugarcane trash blankets.* **H. Cantarella, P.C.O. Trivelin, T.L.M. Contin, F.L.F. Dias, R. Rossetto, R. Marcelino, R.B. Coimbra and J.A. Quaggio (AG-37)**

*Dry matter production and N accumulation in sugarcane for use as animal feed.* **S. Ishikawa, S. Ando, T. Sakaigaichi, Y. Terajima, M. Sugiura and M. Matsuoka (AG-39)**

*Dual row planting—a system to increase Thai farmers' cane yield and economic returns.* **T. Klomsa-Ard, C. Prasantree, S. Jomsri, A. Tenglolai, P. Prammanee and P. Weerathaworn (AG-42)**

*Systems to balance production and environmental goals of nitrogen fertilizer management.* **P.J. Thorburn, A.J. Webster, I.M. Biggs, J.S. Biggs, S.P. Staunton and S.E. Park (AG-46)**

*Evaluating the impact of and capacity for adaptation to climate change on sectors in the sugar industry value chain in Australia.* **S. Park, M. Howden and H. Horan (AG-47)**

*Practical methods of evaluating on-farm irrigation systems.* **D. Musa (AG-50)**

*Site specific agriculture and productivity in the Colombian sugar industry.* **C.H. Isaacs, J.A. Carbonell, A. Amaya, J.S. Torres, J.I. Victoria, R. Quintero, A.E. Palma and J.H. Cock (AG-57)**

*Sugarcane water use and irrigation requirements in a semi-arid environment.* **R.P. Wiedenfeld (AG-59)**

*Effects of trash, vinasse and nitrogen application on ratoon sugarcane.* **A.A. Casagrande, P.R.S. Buzolin, M.A. Mutton, M.J.R. Mutton and M.S. Campos (AG-60)**

*Microbial degradation of post-harvest residues.* **R.M. Johnson, R.P. Viator, M.P. Grisham, E.P. Richard Jr. and R. Boopathy (AG-64)**

*Allelopathic effects of sugarcane postharvest residue.* **F. Villegas, J.S. Torres, J.E. Larrahondo and D.F. Restrepo (AG-74)**

### **Agronomy Posters**

*Fall panicum (Panicum dichotmiflorum) control and crop safety with hexazinone and diuron combinations in Florida sugarcane* **C.R. Rainbolt**

*Sugarcane reduces soil erosion by more than 80% in five major soil groups of Mauritius.* **S. Seeruttun, D. Ah Koon, F.M. Ismael and R. Ng Cheong**

*Performance of exogenous sugarcane germplasm on mineral soils of Florida, USA.* **R.A. Gilbert, J.D. Miller, J.C. Comstock, B. Glaz and S.J. Edme**

*Effects of various green manures on soil nutrient status.* **S. Berry and R. Rhodes**

*Developing systematic management for whole-farm infestations of Cynodon dactylon in sugarcane.* **P.L. Campbell, D. Armstrong and G. Ogilvie**



*Effect of a trash blanket on irrigation water use efficiency of sugarcane.* **F.C. Olivier and A. Singels**

*TSIGANE: An online geographic information system and decision support tool for the management of sugarcane production.* **P. Todoroff and J.B. Laurent**

*Effects of seedcane quality on sugarcane yield components in Tucumán (Argentina).* **M.I. Cuenya, M.B. García, C. Díaz Romero, S. Ostengo, D. Costilla and E.R. Romero**

*Sugarcane potential trash estimation: variety and cane yield effect.* **E.R. Romero, J. Scandaliaris, P. Dignozzelli, L. Alonso, F. Leggio Neme, J. Giardina, S. Casen, J. Tonatto and J. Fernández de Ullivarri**

*Sugarcane burning statistics using remote sensing technology in Tucumán—Argentina.* **J. Tonato,**

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**J. Fernandez de Ullivarri, J. Alonso and E.R. Romero**

*Effects of potassium on photosynthesis and sugar yield in sugarcane.* **T. Azama, Y. Kawamitsu, Y. Fukuzawa, M. Ueno and Y. Komiya**

*Incorporating the CANEGRO sugarcane model into the DSSAT V4 crop modeling system.* **M. Jones, C. Porter, J.W. Jones, G. Hoogenboom, A. Singels, J. Shine, R. Nayamuth, G. Kingston, S. Chinorumba and M. Van Den Berg**

*Sugarcane yields and soil chemical properties due to mill mud application to a sandy soil.* **D.R. Morris, R.A. Gilbert, C.R. Rainbolt, R.E. Perdomo, G. Powell, B. Eiland and G. Montes**

*Integrated practices for an improved sustainable, subtropical sugarcane industry: a case study.* **R.G. Quirk**

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*You don't have to be M.A.D. but it helps—changing a whole farming system.* **M.J. North, D.K. Bartlett, A.C. Durrington and P.J. McGuire**

*A web-based system for scheduling irrigation in sugarcane.* **N.G. Inman-Bamber, S.J. Attard, S.A. Verrall, W.A. Webb and C. Baillie**

*Effect of rate and split application of nitrogen on agronomic characteristics, cane yield and juice quality.* **Sreevarome, A. Saensupo, S. Prammanee, and P. Weerathorn**

*Changes in soil physical parameters of a virgin soil due to compaction by commercial sugarcane haulage vehicles.* **R. Van Antwerpen, P.W.L. Lyne, E. Meyer and M. Brouwers**

*Thiamethoxam stimulates sugarcane stalk productivity.* **M.A. Mutton, M.J.R. Mutton, O. Euzébio Filho, G. Nakamura and P. Aramaki**

*Sugarcane nutrition through rain gun sprinkler irrigation.* **P.P. Shinde and A.S. Deshmukh**

*Better management of acid sulfate soils improves drainage, water quality and sugarcane yields.* **R.G. Quirk, M.D. Melville, I. White, B.C.T. Macdonald and A.F. Keene**

*FIVE-CoRe: a simple model for farm irrigation volume estimates according to constraints and requirements. Application to sugarcane in Reunion (France).* **J.L. Chopart, M. Mezino, L. Le Mezo and J.L. Fusillier**

*Metribuzin and atrazine adsorption by sugarcane residue.* **H.M. Selim and B.J. Naquin**

*SuSFarMS Environmental management system: an extension tool for implementing better management practices in sugarcane.* **G.W. Maher**

*Sugarcane yields in the Ivory Coast as influenced by soil water balance over two critical growth stages.* **C.B. Péné and S.G. Koulibaly**

*Evaluation of bagasse and filter mud as sources of organic matter on the quality and quantity of sugarcane.* **L. Abdullahi, A.A. Moezzi, H. Amerikhah and A.A. Khdemalrasoul**

*Exploratory 'trials': valuable insights, or a waste of resources?* **R. Rhodes, R. Van Antwerpen and S. Berry**

*Effect of organic ameliorants to improve soils using sugarcane as a model.* **R. Tangkoonboribun, S. Ruaysoongnern, P. Vityakon, B. Toomsan and M.S. Rao**

*Agroclimatic and hydrological response surfaces for sugarcane production in South Africa.* **C.N. Bezuidenhout, P.J. Hull, R.E. Schulze, M. Maharaj and P.W.L. Lyne**

*Early and late-season screening of sugarcane varieties in northern Ivory Coast.* **C.B. Pene and K. Tuo**

*Soil dynamics and cane yield as influenced by organic and inorganic manures in a sugarcane system.* **R.B. Khandagave**

*Use of physiological parameters to detect differences in drought tolerance among sugarcane genotypes.* **M.A. Silva, J.A.G. Da Silva, J.L. Jifon and V. Sharma**

*Manipulation of cutting age, varieties and planting time to improve sugar and cane yield.* **R.B. Khandagave and B.H. Patil**

*Sodic soil management of the sugarcane area in western Thailand.* **C. Khodphuwang, P. Kongyoo, P. Prammanee and P. Weerathorn**

*Variety evaluation in the South African sugarcane industry: an overview.* **S. Ramburan, K.A. Redshaw and M. Van Den Berg**

*Evaluation of pump delivery rates in the Swaziland sugar industry.* **P.V. Mkhalihi and M.V. Dlamini**

*Quantifying the effects of environment and genotype on stalk elongation rate in sugarcane.* **M.A. Smit and A. Singels**

*The infestation of Mahanarva fimbriolata (Stål, 1854) affects cane quality, juice clarification and syrup production.* **M.J.R. Mutton, L.L. Madaleno, L.E. Presotti, G.C. Ravaneli and M.A. Mutton**

*Ethanol production in spittlebug-infested sugarcane.* **M.J.R. Mutton, M.A. Mutton, G.C. Ravaneli,**

**T.D. Gonçalves, L.L. Madaleno, L.E. Presotti and E.R. Guimarães**

*Free proline accumulation in spittlebug-infested sugarcane.* **E.R. Guimarães, M.A. Mutton, M.I.T. Ferro, M.J.R. Mutton and D.B. Kalaki**

*Evaluation of MOSICAS sugarcane growth model in Brazil.* **M.S. Bernardes, C. Suguitani, P.R. Laclau, J. Martiné and J. Chopart**

*A sustainable crop fertilization program for a sugar factory in Chiapas, Mexico.* **S. Salgado-Garcia, Palma-López, D.J. Zavala-Cruz, L. Lagunes-Espinoza, M. Castelañ-Estrada, F. Ortiz-Garcia, J. Juárez-López and J. Rincon-Ramirez**

*Soil tillage methods in unburnt, mechanically harvested systems.* **F.L.F. Dias, I. Andrioli, R. Rosseto, M.A. Mutton and A.A. Casagrande**

*Effects of different organic fertilizers, associated or not with chemical fertilizers, in the production of sugarcane and the theoretical yield of cachaça.* **J.C. Garcia and L.A.B. Andrade**

*Analysis and forecasting of the sucrose content of sugarcane crops during the harvest period in Reunion Island.* **J.F. Martiné**

## **Plant Breeding**

*Agronomic performance of sugarcane families in response to water stress.* **M.A. Silva, R.A.B. Soares, M.G.A. Landell and M.P. Campana (BB-2)**

*Benchmarking genetic gains from new cultivars in Queensland using productivity data.* **M.C. Cox and J.K. Stringer (BB-4)**

*Use of predictive statistics for early identification of genetic potential of sugarcane families to produce elite genotypes in advanced trials.* **M.G.H. Badaloo and K. Ramdoyal (BB-8)**

*Utilizing genetic dissimilarity for planning of crosses in sugarcane.* **J.A. Bressiani, M.I. Zucchi, J.A.G. Da Silva, C.A. Colombo, R. Vencovsky, M.G.A. Landell, W.L. Burnquist and E.C. Ulian (BB-11)**

*Multivariate analysis to characterize CENICANA's parental collection.*

**H. Rangel, C. Moreno, A. Amaya, C. Viveros and J. Victoria (BB-16)**

*Introgression of Erianthus for the development of commercial sugarcane cultivars.*

**M. Krishnamurthi, K. Shanmugha Sundaram, S. Sekar, S. Rajeswari and P.G. Kavar (BB-19)**

*Comparisons of sugarcane yields in trials and in commercial fields.*

**D. Bissessur, C. Ramnawaz and K. Ramdoyal (BB-27)**

*Estimating genetic parameters and the efficacy of molecular breeding for resistance to the stalk borer Eldana saccharina.* **M.K. Butterfield, M.G. Keeping and C. Sewpersad (BB-28)**

*Can flowering in sugarcane be optimized by use of differential declinations for the initiation and development phases?* **N. Berding, R.S. Pendrigh and V. Dunne**

*Sharing the vision: a young crop improvement program addressing the challenges of a difficult production environment.* **N. Berding and R.O. Castillo**

*An evaluation of interspecific families of different nobilised groups in contrasting environments for breeding novel sugarcane clones for biomass.* **K. Ramdoyal and M.G.H. Badaloo (BB-7)**

## **Plant Breeding Posters**

*Improving sugar production—breeding Fiji's future.* **P.N. Naidu and A.N. Ram**

*Prospects of breeding for low starch content in sugarcane.* **M. Zhou, C.A. Kimbeng, G. Eggleston, J.C. Veremis and K. Gravois**

*Selection of multipurpose high-fibre sugarcane cultivars.* **M.S. Rao, S. Anusonpornpurn and P. Weerathaworn**

*Starch content in different cane cultivars and trash.* **R. Muangmontri, U. Pliansinchai and P. Weerathaworn**

*Development of effective selection technique through path coefficient analysis in inter varietal hybrid derivatives of sugarcane (Saccharum spp. L).* **R.B. Doule and N. Balasundaram**

*Collection and description of wild sugarcane species indigenous to Japan.* **S. Nagatomi and K. Degi**

*Evaluation of three promising Ecuadorian clones in semi-commercial trials.* **R.O. Castillo, E. Silva and W. Caicedo**

*Comparison of root distribution and root growth direction in two sugarcane hybrids with contrasting tolerance to water stress.*

**T. Sakaigaichi, Y. Terajima, A. Sugimoto, S. Irei, S. Fukuhara, M. Matsuoka, K. Ujihara, J. Abe and R. Tajima**

*Breeding for high-biomass sugarcane and its utilization in Japan.* **Y. Terajima, M. Matsuoka, S. Irei, T. Sakaigaichi, S. Fukuhara, K. Ujihara, S. Ohara and A. Sugimoto**

*Analysis of genotype-by-environment interaction for sugarcane using the sites regression model (SREG).*

**J.L. Quemé, J. Crossa, H. Orozco and M. Melgar**

## **Entomology**

*Eldana saccharina walker (Lepidoptera: Pyralidae) in sugarcane: impact and implications for the Zimbabwe sugar industry.* **A.R.S. Mutambara-Mabveni (BE-1)**

*Monitoring Eldana saccharina and other arthropod pests in South African sugarcane.* **M.J. Way and F.R. Goebel (BE-4)**

*Independent kids-or motherly moms? Implications for integrated pest management of Eldana saccharina Walker (Lepidoptera: Pyralidae).* **D.E. Conlong, B. Kasl and M. Byrne (BE-5)**

*Biological control of the sugarcane Woolly aphid (Ceratovacuna lanigera) in Indian sugarcane through the release of predators.* **A.S. Patil, S.B. Magar and V.D. Shinde (BE-9)**

*Crop losses due to two sugarcane stem borers in Reunion and South Africa.* **F.R. Goebel and M.J. Way (BE-10)**



*Impact of the lesser cornstalk borer, Elasmopalpus lignosellus, on sugarcane in Tucumán, Argentina.* **A.R. Salvatore, E.M. Acosta, G. Lopez and E. Willink (BE-11)**

*Advances and challenges in sugarcane pest management: A review of the 2006 Entomology Workshop.* **W.H. White, S. Ganeshan, F.R. Goebel, J.A. Salazar and P.R. Samson**

*Six armyworm species (Lepidoptera: Noctuidae) occur in sugarcane fields in Mauritius.* **S. Ganeshan**

*Management of sugarcane armyworms Mythimna spp. (Lepidoptera: Noctuidae) in Mauritius.* **S. Ganeshan**

### Entomology Posters

*Correlation between varietal traits and damage by sugarcane stemborers, Diatraea spp. (Lepidoptera: Crambidae).* **M. Ramon, F. Mauriello, Y. Graterol, M. Perez, R. Izarraga and C. Mendoza**

*Introgressing new sources of sugarcane borer resistance: Can theory become practice?* **W.H. White, T.L. Tew and E.P. Richard Jr**

*Biology of Micromus igorotus Bank (Neuroptera: Hemerobidae), a potential predator of Ceratovacuna lanigera Zehnt. (Hemiptera: Aphididae) in sugarcane.* **S.B. Magar, V.D. Shinde and A.S. Patil**

*Natural enemies of sugarcane longhorn stem borer, Dorysthenes buqueti Guerin (Coleoptera: Cerambycidae), in Thailand.* **P. Sommartya, W. Suasa-Ard and A. Puntongcum**

*Ecology and destructive behavior of cane boring grub (Dorysthenes buqueti Guerin) in north eastern Thailand.* **U. Pliansinchai, V. Jarnkoon, S. Siengsri, C. Kaenkong, S. Pangma and P. Weerathaworn**

### Molecular Biology

*On line devices for process monitoring and control of sugar production—the purity analyzer The Sucest-Fun Project: identifying genes that regulate sucrose content in sugarcane plants.* **F.S. Papini-Terzi, J.M. Felix, F.R. Rocha, A.J. Waclawovsky, E.C. Ulian, S.M. Chabregas, M.C. Falco, M.Y. Nishiyama Jr, R.Z.N. Vêncio, R. Vicentini, M. Menossi and G.M. Souza (BM-1)**

*Expression profiling of abiotic-stress-inducible genes in sugarcane.* **R.B. McQualter and A. Dookun-Saumtally (BM-5)**

*Development of a dependable microsatellite-based fingerprinting system for sugarcane.* **W. Maccheroni, H. Jordão, R. Degaspari and S. Matsuoka (BM-6)**

*Evidence of sugarcane resistance against Ahanarva fimbriolata (Stål, 1854) (Hemiptera: Cercopidae).* **E.R. Guimarães, M.A. Mutton, M.I.T. Ferro, J.A. Silva, M.J.R. Mutton, D.B. Kalaki and L.L. Madaleno (BM-7)**

*Identification and characterization of sugarcane proteins required for post-transcriptional gene silencing.* **R. Park, J.W. Huang and T.E. Mirkov (BM-9)**

*Understanding the concern about GM crops within the Australian population and among sugarcane growers.* **L.M. Romanach, J. Grice, M.K. Wegener and S.E. Morris (BM-10)**

*Molecular cloning and characterization of a non-TIR-NBS-LRR type disease resistance gene analogue from sugarcane.* **Q. You-Xiong, L. Jian-Wei, Z. Ji-Sen, R. Miao-Hong, X. Li-Ping and Z. Mu-Qing**

*Fifth ISSCT Molecular Biology Workshop report.* **A. Dookun-Saumtally, A. d'Hont, E. Mirkov, B. Hockett and E.C. Ulian**

### Molecular Biology Posters

*Micropropagation by direct somatic embryogenesis: is disease elimination also a possibility?* **S.J. Snyman, T. Van Antwerpen, V. Ramdeen,**

**G.M. Meyer, J.M. Richards and R.S. Rutherford**

*Photosynthesis and the regulatory role of sucrose and hexose in sugarcane leaves.* **A.J. McCormick, M.D. Cramer and D.A. Watt**

*Water deficit-related expressed sequence tags (ESTs) in the sugarcane (Saccharum spp.) leaf roll.* **M.I.T. Ferro, R.W. Noda, R.I.D. Tezza, D.F.R. Jovino, K.M. Dabbas, S.M. Zingarette and J. Suzuki**

*Sugarcane Dhurrin: biosynthetic pathway regulation and evolution.* **V.E. De Rosa Jr, F.T.S. Nogueira, P. Mazzafera, M.G.A. Landell and P. Arruda**

*Transgenic sugarcane with coat protein gene-based silencing shows increased resistance to Sugarcane yellow leaf virus (ScYLV).* **Y.J. Zhu, H. McCafferty, G. Osterman, R. Agbayani, S. Schenck, A. Lehrer, E. Komor and P. Moore**

### Pathology

*Recent advances in research on Sugarcane yellow leaf virus, the causal agent of Sugarcane yellow leaf.* **P. Rott, T.E. Mirkov, S. Schenck and J.C. Girard (BP-1)**

*Identification of parents for breeding sugarcane yellow leaf and ratoon stunt resistant cultivars.* **J.C. Comstock, P.Y.P. Tai and J.D. Miller (BP-3)**

*Genetic diversity of Sugarcane Mosaic Virus complex in Tucumán, Argentina.* **M.F. Perera, M.P. Filippone, J. Ramallo, M.I. Cuenya, M.L. Garcia and A.P. Castagnaro (BP-4)**

*Status of Sugarcane Yellow Leaf Virus in commercial fields and risk assessment in Guadeloupe.* **C. Edon-Jock, P. Rott, J. Vaillant, E. Fernandez, J.C. Girard and J.H. Daugrois (BP-5)**

*Sugarcane leaf yellows phytoplasma in Mauritius: molecular characterization, transmission and alternative hosts.* **N. Joomun, A. Dookun-Saumtally, S. Saumtally and S. Ganeshan (BP-7)**

*Management of sugarcane cultivars imported into Colombia.* **J.I. Victoria, J.C. Angel, M.L. Guzmán and M. Oicatá (BP-10)**

*A review of the 2006 International Society of Sugar Cane Technologists' Pathology Workshop.* **J.C. Comstock, B.J. Croft, G.G. Rao, S. Saumtally and J.I. Victoria**

### Pathology Posters

*Impact of post-harvest delays and temperature on cane deterioration.* **L.A. Perry, C. Hunter and D.A. Watt**

*Laboratory, glasshouse and field assessments of fungicides to control Ustilago scitaminea, causal organism of sugarcane smut.* **K. McFarlane, D. Moodley, G. Chinnasamy and S.A. McFarlane**

*Intensive surveys to estimate the incidence and effects of ratoon stunting disease (RSD) in the South African sugar industry.* **S.A. McFarlane and D.S. Subramoney**

*Occurrence of sugarcane diseases in the germplasm collection at Mitr Phol Sugarcane Research Centre at Chaiyaphum, Thailand.* **K. Jaroenthai, S. Dongchan, S. Anusonpornpurn and U. Pliansinchai**

*Control of ratoon stunt (RSD) through a healthy seedcane program in Tucumán, Argentina.* **J. Ramallo, V. Martínez, M. Acosta and C. Funes**

*Effects of Sugarcane Yellow Leaf Virus infection on sugarcane yield and root system development.* **A.C.M. Vasconcelos, M.C. Gonçalves, L.R. Pinto, M.G.A. Landell and D. Percin**

### Co-Products

*Additional exportable energy from bagasse.* **A.F. Lau, K.T.K.F. Kong Win Chang and D. Guinness (CO-1)**

*A sugar mill cogeneration plant repowering alternatives: evaluation through the combination of thermodynamic and economic concepts.* **E.E.S. Lora, M. Zampieri, O.J. Venturini and J.J. Santos (CO-2)**

*Life cycle analysis of different alternatives for the treatment and*

*disposal of ethanol vinasse.* **M.H. Rocha, E.E.S. Lora and O.J. Venturini (CO-3)**

*Conversion of cane-derived sugars into poly (3-hydroxyalkanoates) (bioplastics).* **R. Mungaroo, K.T.K.F. Kong Win Chang, A.S. Saumtally, J-F.Y. Moutia, M.H.R. Khoodoo and G. Triton (CO-4)**

*Simulation and design of a bagasse gasifier.* **P.A. Hobson and J.A. Joyce (CO-6)**

*An overview of bagasse gasification R&D activities at Sugar Research and Innovation.* **P.A. Hobson (CO-7)**

*A techno-economical method to guide decision making over the energy-sugar-ethanol combined production under the changing world market conditions.* **A. Torres, G. Blanco, M. Herryman, O. Almazan and A. Cabello (CO-9)**

*Benchmarks for a strategy in the energy generation of the sugarcane industry: a really clean source of energy.* **O.A. Almazán and M.A. Otero (CO-10)**

*Fodder yeast production: a new approach for distillery vinasse treatment.* **M.A. Otero Rambla, G. Saura Laria, J.A. Martínez Valdivielso and O.A. Almazán Del Olmo (CO-11)**

*The economical viability of animal production based on sugarcane co-products under the present prices of commodities.* **A. Cabello, A. Torres and O. Almazán (CO-12)**

*Deterioration of molasses during storage: possible cause and means to prevent it.* **V.M. Kulkarni (CO-14)**

*Co-generation thermodynamics revisited.* **M. Inkson and B. Misplon (CO-16)**

*ISSCT Co-Products Workshop in Maceió, Brazil.* **M.R.L.V. Leal (CO-17)**

*By-products from bagasse.* **D.F. Day, G. Dequeiroz, C-H. Chung and M. Kim (CO-18)**

*New sugarcane varieties and year round sugar and ethanol production with bagasse-based cogeneration in Barbados and.* **P.S. Rao, H. Davis and C. Simpson (CO-19)**

*Formulation of a cattle feed from co-products of the sugarcane industry of Sri Lanka.* **G. Chandrasena, A.P. Keerthipala, V.P. Jayawardena, W.A.M.J.S.B. Abeysinghe and A. Nimal Perera (CO-20)**

*An update of the ZeaChem process for increased ethanol production.* **B.P. Lavarack, T. Eggeman, L.A. Edye, P.A. Hobson, J.L. Blinco and G.E. Bullock (CO-22)**

*Carbonisation and gasification of bagasse for effective utilization of sugarcane biomass.* **M. Ueno, Y. Kawamitsu, Y. Komiya and L. Sun (CO-25)**

*Applying consistent technology for fuel ethanol production.* **A.G. Moura and J.R. Medeiros (CO-27)**

*Efficient cooling of fermentation vats in ethanol production—Part 1.* **M.O.S. Dias, R. Maciel Filho and C.E.V. Rossell (CO-29)**

*Monte Carlo simulation as a tool for technical modeling and project analysis.* **J.A. Joyce and P.A. Hobson (CO-30)**

*Integrated biodiesel production in Barralcool sugar and alcohol mill.* **J.L. Oliverio, S.T. Barreira and SCP. Rangel**

*Cane energy for sustainable development and economic competitiveness in Southern Africa.* **F.X. Johnson, J. Woods, F. Rosillo-Calle, G. Brown, V. Seebaluck, H. Watson, F. Yamba, M. Mapako, L. Jolly, F. Farioli, M.R.L.V. Leal and P.R.K. Sobhanbabu**

### Co-Products Poster

*Sweet sorghum (Sorghum bicolor L.): a supplemental sugar crop for ethanol production.* **G. Hunsigi, N.R. Yekkeli and B.Y. Kongwad**

### Factory Engineering

*Cane tracking and sampling equipment: an update.* **F. Calboutin and S. Naidoo (FE-2)**



*Sintered alloy powder carbide and tungsten carbide materials for shredder hammer tips.* **J. Duttagupta and T.R. Rama Mohan (FE-3)**

*Flue gas scrubbing equipment for bagasse fired boilers.* **B.St.C. Moor (FE-4)**

*Fibre extracted with juice from mills—an omission in milling theory.* **B.St.C. Moor (FE-5)**

*The conversion of a BMA diffuser to a Bosch Projects chainless diffuser—the first season's experience.* **K.E. Schröder, I. Voigt and B.St.C. Moor (FE-8)**

*The detection of sugar traces in the Tongaat Hulett refinery condensates by NIR spectroscopy.* **G.R.E. Lionnet, M.M. Mavuso, N. Oosthuizen, P.F. Nieuwoudt and D. Sear (FE-9)**

*Detection of sucrose in boiler feed water.* **M.A. Gooch and A. Wienese (FE-10)**

*Integrated beet and cane sugar*

*processing with high cogeneration efficiency.* **P. Avram, B. Morgenroth and S. Pfau (FE-11)**

*Unique two-roller mill combination: the CMR mill.* **B.B. Nikam and S.B. Nikam (FE-14)**

*Measurements and CFD simulation of the flow in vacuum pans.* **L.F. Echeverri, P.W. Rein and S. Acharya (FE-15)**

*Characterization of polluting emissions from sugarcane bagasse boilers and their removal.* **F.N. Teixeira, E. Olivares-Gómez, E.E. Silva Lora and A.L. Brito Sauvanell (FE-16)**

*Hard faced welded tips in shredder hammers: technical and economical performance.* **A.L. Gómez, C.F. Cañón and D.E. Ramírez (FE-17)**

*Steady-state simulation of a complete sugar mill with ethanol plant.* **A.L. Gomez, A. Carvajal, C.F. Cañón, D. Barrientos and C.O. Briceño (FE-18)**

*Torque signatures in crushing mills.* **A.L. Gómez, C.F. Cañón and L.F. Rosero (FE-19)**

*An economical means of improving the juice extraction performance of four-roll mills.* **G.A. Kent and C.A. Zapatero (FE-20)**

*Cleaner production assessment in a sugar factory.* **D. Gunness, K.T.K.F. Kong Win Chang and A.F. Lau (FE-23)**

*Milling and diffusion extraction—theory and practice.* **G. Kent and J. Lewinski**

## **Factory Engineering Posters**

*Automatic hardfacing and arcing on mill rolls.* **A.F. Toito Jr**

*The use of electrical resistive tomography for the improvement and validation of computational fluid dynamics modeling of process vessels.* **J.J. Loots, A.L.L. Jarvis, S.B. Davis and R.C. Loubser**

*From bi-drum to Monodrum™ steam boilers—a step forward into co-generation in Brazilian sugar mills.* **J.C.F. Barata, J.E. Gomes, M.G. Sanchez and H. Verbanck**

*Energy conservation at Deccan Sugars.* **N. Prabhakar and J. Amarnath**

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## **Factory Processing**

*The effect of final effect operating pressure on sucrose degradation in evaporator stations.* **S.D. Peacock (FP-1)**

*Glyphosate ripener effects on the processing quality of different sugarcane tissues.* **G. Eggleston, R. Viator and M. Grisham (FP-5)**

*Microwave measuring technology for the sugar industry.* **D.I.U. Klute (FP-7)**

*Experience and utilization of an on-line sugar colorimeter in a raw cane mill.* **S. King (FP-8)**

*Simulation of the dynamic behavior of a compartment of a continuous pan.* **D.J. Love (FP-9)**

*Options for retrofitting white sugar milling (WSM) technology into existing raw sugar factories.* **C.R.C. Jensen and S.M. Kitching (FP-12)**

*An assessment of post harvest sucrose losses in sugarcane billets under sub-tropical conditions.* **S. Solomon, A.K. Shrivastava, P. Singh, I. Singh, A. Sawhani and C.P. Prajapati (FP-13)**

*Five years on—was the implementation of LIMS at SMRI worth it?* **S.N. Walford (FP-14)**

*Aconitic acid ratio as a post-harvest whole-stalk green sugarcane age indicator.* **L. Corcodel and T. Mullet (FP-17)**

*Investigation into the use of the fractal concept for improving mixed juice clarifier performance.* **Loubser, R.C. and Davis, S.B.(FP-19)**

*A practical approach towards reducing the dextran levels in sugar at the Appleton Sugar Mill in Jamaica.* **D. Foster and R. Bryan (FP-20)**

*A new design of jigger system to improve vacuum pan performance.* **D.W. Rackemann and R. Broadfoot (FP-24)**

*Improved pan stirrer performance through CFD modeling.* **D.W. Rackemann and R. Broadfoot (FP-25)**

*Innovative production of white sugar from raw sugar during sugarcane shortage.* **S. Ravichandran, N. Dharmalingam, R. Ramamoorthy, C.K. Venkatesh and K. Sajith (FP-26)**

*Thirty years of progress in the South African sugar industry through benchmarking and technical innovation.* **S.B. Davis (FP-28)**

*ISSCT Process Section Workshop: chairman report.* **V. Sens-Guichard (FP-30)**

*DRD – Dedini Refinado Direto (Dedini Direct Refined): refined sugar without refinery.* **J.L. Olivério, F.C. Boscarior and H.G. Filho (FP-38)**

*The effect of trash on the operation and performance of a raw sugar factory.* **G.A. Kent (FP-39)**

*Optimizing the performance of rotary sugar dryers through modeling and control.* **R.J. Steindl (FP-40)**

*Aspects of mud thickening and handling in juice clarifiers.* **R.J. Steindl (FP-41)**

*Measuring vacuum pan dynamics using pseudo random binary signals.* **D.J. Love (FP-10)**

## Factory Processing Posters

*Successful innovation: results from the Bosch continuous pan.* **B.St.C. Moor**

*The effective use of a chemical scale inhibitor for evaporator scale control.* **P.J. Allison, D.T. Munford, A. Palazzo and B. de Beer**

*Some notes on developments in high grade continuous pan boiling.* **M.A. Getaz, G. Journet, D.J. Love, and R.R. Sanders**

*Discovery of sugarenes: a major commercial breakthrough for the sugar industry.* **K. Singh and A. Deep**

*On line devices for process monitoring and control of sugar production—the purity analyzer.* **M. Kuchejda and S. Yilmaz**

*Adsorbents for sugarcane juice clarification: an innovative technology.* **R. Condemarin**

*Improving sugar quality and reducing process difficulties by emphasizing impurities rather than purity: minimizing soluble polysaccharides by use of biocides.* **V.M. Kulkarni**

## Management

*Managing research: lessons from Australia.* **E.S. Wallis, P.G. Allsopp and R.F. Gilmour (MA-1)**

*Miller/grower relations at the local mill group board level in South Africa: an empirical investigation.* **A.T. Wynne and B.J. Milford (MA-2)**

*Cane quality payment incentives to optimize the production of sugar, ethanol and cogeneration.* **A.T. Wynne (MA-3)**

*Catalysts for change and engines of growth for the modern sugar industry.* **L.D. Mamet (MA-5)**

*A report on the first ISSCT Management Workshop, July 2006.* **A.T. Wynne and R. Rivalland (MA-6)**

*Setting up of a Greenfield Sugar Project in Africa: A practical approach.* **V. Bhardwaj, E.Y. Alloo and I.Y. Alloo (MA-7)**

*Development of a new research strategy for the SMRI.* **J. Dewar and S.B. Davis (MA-9)**

*Cooperative systems in practice: implementation of value chain management strategies in the Mackay sugar industry.* **G.F. Fleming, J.A. Crane and J.A. Markley (MA-14)**

*Managing an incursion of sugarcane smut in eastern Australia.* **B.J. Milford, P.G. Allsopp and C. (MA-15)**

*Sugarcane cultivation on ecologically sensitive sites in Southern Africa: profitability and conservation issues.* **A. Cartwright, R. Perkins and C. Von Der Heyden**

*Introduction of laboratory information systems as an aid to managing factory processes.* **S. King and C. Von Pannier (MA-19)**

*Evaluating regional net benefits of whole crop harvesting to maximize cogeneration.* **P.J. Thorburn, A.A. Archer, P.A. Hobson, A.J. Higgins, G.R. Sandel, D.B. Prestwidge and G. Antony (MA-20)**

*Fast track implementation of one of the world's largest and most complex sugar factory projects.* **A.R. Jansen and M. Wade**

## Management Posters

*An airborne imaging system for mapping spatial variability in sugarcane.* **V. Lebourgeois, A. Bégué, S. Labbé and B. Roux**

*Sugarcane fertilization management in island regions of Japan and its impact on production: a case study of Kitadaito Island.* **K. Kikuchi, M. Ueno, Y. Kawamitsu, L. Sun, E. Taira and K.**

*Predicting lost mill processing time due to rain for the Burdekin, Australia.* **Y.L. Everingham, C.C.M. Chen and B. Edwards**

*Cost control for cane sugar manufacturers.* **D.H. Mallalieu**



# ISSCT Schedule of Papers

*Editor's Note: Only papers available at press time are shown.*

## ISSCT Opening Ceremony, Monday, July 30, 2007

9:30-10:15	Entertainment
10:15	Welcome, Honorary Chairman, Dr. Bernard Ravno
10:25	Industry Address, Mr. Rodger Stewart, Sugar Association
11:00	Keynote Address, Mr. Paul Zoner, Principal Energy
11:45	Technical Address, Mrs. Muffy Koch, AGBIOS
12:15	Opening Address, Minister Mosibudi Mangena, Department of Science and Technology

## Paper # Designation And Paper Presenter

**S = Symposia**      **AG = Agronomy**      **AE = Ag Engineering**  
**BB = Breeding**      **BM = Molecular Biology**      **BE = Entomology**      **BP = Pathology**  
**CO = Co-Products, FE = Factory Engineering**      **FP = Factory Processing**      **MA = Management,**  
**ISBUC = International Sugarcane Biomass Utilization Consortium**

Time	Venue	Monday	Tuesday	Wednesday	Thursday
8:30	BR1		AE-16, Yadav	AG-42, Prammanee	
	BR2		BB-27, Bissessur	BB-2, Silva	BP-4, Scandaliaris
	BR3		CO-1, Chang	CO-4, Mungaroo	AG-22, Meyer
	BR4		FE-15, Rein	FE-5, Moor	FP-19, Loubser
	BR5		MA-2, Wynne	MA-19, King	FE-2, Calboutin
9:00	BR1		AE-7, Krishnamurthi	AG-18, Seeruttun	
	BR2		BB-4, Cox	BB-28, Butterfield	BP-7, Saumtally
	BR3		CO-2, Lora	Oliverio	AG-46, Thorburn
	BR4		FE-9, Lionnet	FE-14, Kulkami	FP-41, Stendl
	BR5		MA-16, Perkin	Management posters	FE-3, Duttagupta
9:30	BR1		AE-9, Nunez	AG-29, Li	
	BR2		BB-16, Amaya		BP-3, Comstock
	BR3		CO-16, Inkson	CO-27, Moura	AG-39, Ishikawa
	BR4		FE-23, Chang	FE-20, Kent	FP-25, Rackemann
	BR5		MA-5, Marmet	ISBUC	FE-17, Gomez
10:00	BR1		AE-2, Norris	AG-60, Casagrande	
	BR2		Breeding Comm	BB-19, Krishnamurthi	BP-10, Victoria
	BR3		CO-7, Hobson	CO-29, Rossell	AG-37, Cantarella
	BR4		Factory Eng Comm	FE-19, Gomez	FP-9, Love
	BR5		MA-14, Fleming	ISBUC	FE-8, Voigt
10:30	Break				
11:00	MR12/BR1		\Ag Posters	AE-8, Gai	
	BR2		BP-1, Rott	BM-1, Souza	
	BR3		BE-5, Conlong	CO-11, Almazan	AG-1, Ram
	BR4		FP-5, Eggleston	FP-39, Kent	FP-10, Love
	BR5		MA-1, Wallis	ISBUC	FE-4, Moor



Time	Venue	Monday	Tuesday	Wednesday	Thursday
11:30	MR12/BR1 BR2 BR3 BR4 BR5		Ag Posters BP-5, Daugrois BE-3, Patil FP-17, Corcodel MA-9, Dewar	AE-14, Taira Biology posters CO-12, Almazan FP-20, Foster ISBUC	AG-59, Wiedenfield FP-24, Rackermann FE-10, Gooch
12:00	MR12/BR1 BR2 BR3 BR4 BR5		Ag Posters Pathology Comm Entomology Comm FP-22, Kulkami MA-3, Wynne	AE-6, Kidd Biology posters CO-20, Chandrasena FP-1, Peacock ISBUC	BB-11, Bressiari AG-50, Musa FP-40, Stendl FE-16, Gomez
12:30		Lunch			
14:00	1AB/BR1 BR2 BR3 BR4 BR5	S-Schulze	S-Rein	S-Jolly	BM-9, Mirkov CO-3, Lora BE-11, Allsopp FE-11, Avram
14:30	BR1 BR2 BR3 BR4 BR5	S-Kingston	S-Leal	S-Hildebrand	CO-22, Lavarack Ganeshan FE-18, Gomez
15:00	BR1 BR2 BR3 BR4 BR5	S-Bellodi	S-Botha		CO-18, Day Ganeshan FP-38, Oliverio
15:30		Break			
16:00	BR1 BR2 BR3 BR4 BR5	AG-2, Quirk BM-10 Romanach CO-14, Kulkami FP-28, Davis Rein	AG-15, Singles BE-1, Mutambara CO-6, Hobson MA-7, Aloo	AG-23, Prammanee BM-5, Saumtally CO-9, Almazan FP-14, Walford ISBUC	AE-1, Torres AG-64, White CO-19, Rao RP-26, Ravichandran
16:30	BR1 BR2 BR3/MR12 BR4/MR12 BR5	AG-5, Kwong Dookun CO-17, Leal FP-30, Steindl MA-6, Wynne	AG-25, Viremounei BE-4, Way Co-Products posters Factory posters MA-15, Milford	AG-32, Antwerpen BM-6, Maccheroni CO-10, Almazan FP-7, Sprenger ISBUC	AE-5, Lecier AG-74, Villegas CO-25, Ueno FP-12, Jensen
17:00	MR12/BR1 BR2 MR12/BR3 MR12/BR4 BR5	Poster-opening	AG-57, Amaya BE-10, Goebel Co-Products posters Factory posters MA-20, Thortburn	AG-19, Seeruttun BM-7, Silva CO-30, Hobson FP-8, King ISBUC	AE-15, Chidoma AG-47, Park

SJ