



SASTA

NEWS

Newsletter of the SA Sugar Technologists' Association

JULY 2010

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SASTA CONGRESS 2010

SASTA Congress 2010 takes place from 25th to 27th August at the ICC, Durban.

The draft programme for this event is appended to this newsletter. Registration for Congress is still open – register on-line from www.sasta.co.za or contact sithembile@confco.co.za or Tel +27-(0) 31-3039852.

Cost for the full three days: R2 150.00 for SASTA members or R2 500.00 for non-members.

One-day-only registration is R1200.00 per day.

The Congress has been accredited as an ECSA CPD event. ECSA – registered engineers who wish to use this Congress as CPD points should contact www.sasta.co.za before 12 August 2010.

The BNC/SASTA Inter Sugar Mill Golf Challenge will take place the day before Congress starts (Tuesday 24th August 2010). See the advert appended to this newsletter for details. Participants and sponsors should contact Virranna Singh on reception@bncprojects.co.za or Tel +27-(0)31-9023777

The exhibition stands are sold out!

There is an Exhibition Networking Open Time on Thursday 26th August from 15:00 – 17:00. Interested non-delegates and visitors are welcome to come to the SASTA Exhibition during those two hours (free of charge but by invitation letter).

There are still a few slots available to sponsors, including Congress session sponsorships and the prestigious Authors' Dinner sponsorship. Contact Deidre@confco.co.za.

The guest speaker will be **Peter Johnston**.

As a climatologist at the University of Cape Town, Peter's research focuses on the applications and impacts of climate variability and climate change on various user sectors. He specialises in agriculture and water related activities with special emphasis on vulnerability and adaptation options. He has worked closely with the Western Cape Government in developing a climate change vulnerability study and this was followed by a strategy and action plan. He is also involved in the African centre for cities looking at adaptation frameworks for both Cape Town and Johannesburg. His interests and involvements have taken him to many African countries to learn from and contribute to other



water and agricultural adaptive practices to climate change and variability. Current research includes the application of models to determine the sustainable long term water use in the larger Berg river catchment area of the SW Cape Province of South Africa. Peter gives numerous presentations on the science and applications of climate change for southern Africa at various public and sector meetings.

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E-Mail Address appeal

SASTA would like to send all correspondence including annual invoices, statements, notices of upcoming events, and newsletters by email. If this newsletter is being posted to you snail-mail, it is because SASTA does not have your current email address. Please email your updated particulars to sasta@sugar.org.za



SASTA working group on sugar industry skills development, shortages and lack of technology adoption

SASTA working group on sugar industry skills development, shortages and lack of technology adoption.

At a recent strategy meeting SASTA council identified two topics of concern in the sugar industry and agreed to combine these topics to be addressed during a working group meeting held at the SMRI on 15 April 2010. The 32 participants at this meeting were drawn from a wide range of backgrounds including industrial and behavioural psychologists, human resources and marketing practitioners, sugar technologists, researchers, farmers, contractors, academics, education and training practitioners

as well as high level executives and managers from both inside and outside the sugar industry.

The presentations given were as follows:

SKILLS SHORTAGES

- Mr Gavin Smith: Education: An overview of the sugar industry's needs and trends in modern manufacturing practices
- Prof Volker Wedekind: Limitations and opportunities in the education system - a focus on technical training and the FET colleges

- Prof Peter Zacharias: Limitations and opportunities in the education system - a focus on the university education system

LACK OF TECHNOLOGY ADOPTION

- Mr Martin Eweg: Agricultural extension, adoption and training - what is the real problem out there?
- Prof Carel Bezuidenhout: Adoption, innovation and experiences from the sugar industry
- Dr Edilegnaw Wale: Fundamental principles and flaws pertaining to technology adoption in agriculture
- Dr Shamim Bodhanya: The relationship between technology adoption and adaptive complexity

The first topic; "skills shortages", dealt with the sugar industry's inability to attract and retain technical specialists (e.g. engineers, artisans, pan-boilers, process managers, etc...). The nature of the sugar business demands experienced resident technicians and professionals who are willing to remain in the industry. Young professionals, however, have a tendency



Working group presenters (left to right): Mr Martin Eweg, Prof Volker Wedekind, Prof Peter Zacharias, Dr Edilegnaw Wale, Dr Shamim Bodhanya, Prof Carel Bezuidenhout, Mr Gavin Smith and Mr Paul Schorn (SASTA president).

to move between jobs more readily and it is difficult to attract these individuals into long-term positions where routine maintenance is often the main job activity and where factories and farms are situated in relatively remote areas. The industry may need to seriously assess its succession planning, performance management systems, remuneration packages, bursary schemes, mentoring programmes and marketing in order to create a positive image among young job seeking individuals. All SADC countries have seen an increase in students studying management, law and humanities as opposed to engineering, agriculture and science. Recently FET colleges have focused on pre-matric qualifications and the former technikons are now called universities focusing on degree programmes. This has created a significant post-matric technical training void in the South African education system, while post-matric business schools have become a well established concept. The industry as a whole and as a single and unfragmented cluster will need to address these issues by engaging with government and the education institutions. This skills shortage is not unique to the South African Sugar Industry, similar difficulties and skills shortages are experienced in Africa in particular. The second topic; "lack of technology adoption", acknowledged the fact that technologists try to transfer new concepts into heterogeneous systems that are already very complex (in terms of risk preferences, educational levels and poverty factors). Technologists do not sufficiently translate their product into the language with which end-users can associate. The need to include beneficiaries at an earlier stage and, likewise, the need to change some of the researchers' perceptions were emphasised. A current wave of first generation farmers with limited knowledge and resources should place an emphasis on the need to go back to the basics. A certain degree of system innovation is needed in order to adopt new technologies into an already existing system. This innovation is most often simply left to growers and within a culture where trial and error is not easily practiced. Interestingly, numerous papers have been written on the importance of informal learning and the use of social networks to enhance adoption.

The two topics can be synergetic if industry stakeholders were to aggressively promote an informal learning and innovative environment at a grass roots level. This will increase the adaptive capacities of practitioners on the ground, but will also create an environment where young upcoming professionals will be nurtured by the experienced silverbacks. The suggestion was made that HR departments assess the way by which strong

social learning environments can be fostered.

SASTA would like to thank the SMRI for providing the venue for this event, Dr Barbara Muir for audio-visual arrangements and Mrs Danny Macdonald who took care of admin and logistical arrangements.

**Article written by:
Carel Bezuidenhout**

ANNUAL GENERAL MEETING OF THE SA SUGAR TECHNOLOGISTS' ASSOCIATION

25 AUGUST 2010 Time: 13:40 -14:40

International Convention Centre, Durban

Venue: SASTA Congress Plenary Hall

AGENDA

1. Apologies
2. Minutes of AGM of 26 August 2009
3. Matters arising from the minutes
4. Presentation of awards from Congress 2009
5. President's report 2010
6. Membership
7. Financial Statement
8. Election of auditors
9. Result of ballot for Council members 2010/2011
10. General

Cancellation of SASTA Membership as a result of overdue subscriptions

SASTA Council has decided to cancel any member's SASTA membership if any subscription fees remain unpaid for a period exceeding 12 months. This decision has been necessitated due to the increased cost of printing and postage of newsletters and statements, costs that SASTA does not recover when memberships are terminated.

Should your membership be terminated as a result of overdue subscriptions, you would need to reapply for membership and may be required to pay all arrear subscriptions from the time of cancellation before your membership will be re-instated.



New SASTA members (since April 2010)

Bearing Man Group	Mack, Richard (Illovo – Noodsberg)
Ferrer, Stuart (Canegrowers)	Mackenzie, Ryan (Illovo – Noodsberg)
Finnemore, Olivia (Canegrowers)	Maharaj, Parushka (SASRI)
Funke, Thomas (Canegrowers)	Mathias, Kathryn
Gent, Roy Derek (Illovo – Sezela)	Msane, Ndabenhle Khulani (Illovo – Umzimkulu)
Govender, Karl (THS – Amatikulu)	Ndlovu, Zamokwakhe Selby (Illovo – Noodsberg)
Govender, Marilyn (SASA)	Nzama, Msizi (THS – Refinery)
Griffiths, Brent (Illovo H/O)	Pillay, Dhashogan (Illovo - Umzimkulu)
Jackson, Miles (SASRI)	Qwabe, Bonginkosi Vincent (Canegrowers)
Keeping, Natalie (SASRI)	Robertson, Carol (Komatipoort Mill Group Board)
Klusener, Devlin (Illovo – Sezela)	Sachs, Andy (SMRI)
Koberstein, Heike (SASRI)	Sithole, Mfundo (THS – Amatikulu)
Mabuza, Zonke (Tsb Sugar)	Walters, Charles Durieux (Rheochem)

BNC Industrial Services and SASTA have pleasure in announcing the:

2010 Inter Sugar Mill Golf Challenge



Date: 24th August 2010
(One day prior to SASTA Congress Opening)

Venue: Bluff National Park Golf Estate

Time: 11h00 Onwards Tee off

Suppliers to the sugar industry are invited to this unique marketing opportunity in which you can interact directly with personnel from all the sugar mills in South Africa/Swaziland. Various sponsorship opportunities exist as listed below:

Tees 1-18	R1500.00 each
Greens 1-18	R1000.00 each
Sugar Mill Teams	R1500.00 each
Club House and Registration Desk	R3000.00 each
Company Fourball	R2000.00 each

Tee Sponsorship: Placement of marketing banners, flags and personnel around the tee box. A desk with refreshments can be provided. One person to the evening function per tee box sponsored.

Green Sponsorship: Placement of marketing banners and flags around the greens. One person to the evening function per green sponsored.

Sugar Mill Teams: Teams will bear the sponsors logos on the provided golf shirts. Teams will be named by sponsor and mill name which will be announced and displayed at the prizegiving. One person to the evening function per team sponsored.

Club House and Registration Desk: Placement of marketing banners, flags and personnel at the registration desk. A desk with refreshments can be provided. One person to the evening function.

We look forward to your participation and require your confirmation by 23rd July 2010.

Contact: Virranna Singh on 031 902 3777 or e-mail on reception@bncprojects.co.za



SASTA CONGRESS 2010 DRAFT PROGRAMME		
WEDNESDAY 25 AUGUST 2010		
08:00-10:00	REGISTRATION and TEA/COFFEE in EXHIBITION HALL	
10:00-11:00	Opening Plenary Session	Chair: Paul Schorn
10:00	Paul Schorn (SASTA President)	Welcome
10:05	Dr Peter Johnston - Climate systems analysis group, UCT	Climate Change and SA Agriculture - is there cause for concern?
10:35	Bongani Linda (SASTA Patron)	Reply and vote of thanks
10:45	Presentation of SASTA Awards (SASTA gold medal and PGBI Robin Renton award)	
10:50-11:20	TEA	
11:20-13:00	Plenary Session Two: Special Congress Theme with International Guest Speakers	Chair: Gavin Smith
13:00-14:45	LUNCH	
13:40	AGM and Awards from Congress 2009	
14:45-16:30	Plenary Session Three	Chair: Janice Dewar
14:45	Smith GT, Davis SB and Achary M	Eighty-fifth annual review of the milling season in Southern Africa (2009-2010)
15:15	Singels A, McFarlane SA, Way MJ, Ferrer S and van der Laan M	Review of South African sugarcane production in the 2009-2010 season from an agricultural perspective
15:45	Lecler NL and Tweddle PB	Double profits with a controlled traffic zero-till irrigation farming system?
16:10	Bezuidenhout CN	Review of sugarcane material handling from an integrated supply chain perspective
16:30-19:30	MEET AND GREET	

THURSDAY 26 AUGUST 2010 AGRICULTURE SESSIONS		
08:30-10:30	Agriculture Session One: Breeding and Varieties	Chair: Kerry Redshaw
8:30	Chambi JY and Isa DW	Performance evaluation of SASRI varieties N19 and N25 in Tanzania
8:55	Ramburan S, Paraskevopoulos A, Saville G and Jones M	Development of a variety selection decision support system: genotype x environment analyses and system validation
9:20	Zhou MM and Kimbeng CA	Multivariate repeated measures: A statistical approach for analysing data derived from sugarcane breeding variety trials
9:45	Ramburan S, McElligott DM and de Haas O	Integrating agronomic and economic principles through applications of variety trial data: The Illovo case study
10:10	Meyer GM, Banasiak M, Keeping N, Pillay N, Parfitt R and Snyman SJ	NOVACANE [®] as a tool for rapid propagation of material for the SASRI plant breeding programme
10:30-11:00	TEA	
11:00-12:30	Agriculture Session Two: Small-Scale Growing	Chair: Thulani Masondo
11:00	Thomson DN	Enhancing small-scale grower sustainability through institutional change
11:25	Murray JJ	Analysis of small-scale grower returns in Mpumalanga: Tenant farmers or sustainable producers?
11:50	Qwabe BV and Murray JJ	Financial management of Farmers'Associations for Small-Scale Growers: Lessons from the Malelane Mill Cane Committee
12:10	Campbell PL, Gillespie WA, Rhodes R, Leslie GW, Phewa F and Smit MA	Economic control of Cynodon - a theoretical strategy for emerging sugarcane farmers
12:30-13:30	LUNCH	
13:30-15:00	Agriculture Session Three: Irrigation	Chair: Neil Lecler
13:30	Jumman A and Lecler NL	Electricity tariff increases: the impact on irrigators?
13:40	Singels A, Harding R, Sithole P and Ntombela L	The revamped SASRI weather data service
13:50	Jumman A and Lecler NL	Deficit irrigation: a strategy to counteract escalating electricity tariffs and water shortages
14:15	Singels A and Paraskevopoulos A	Optimizing irrigation scheduling of portable overhead systems: A simulation study
14:35	Sithole P, Singels A and Walker S	Influence of climate data quality on the accuracy of South African sugarcane yield estimates
15:00-15:30	TEA	
15:00-17:00	EXHIBITION NETWORKING OPEN TIME	
19:00-23:00	AUTHORS' DINNER	

FRIDAY 27 AUGUST 2010 AGRICULTURE SESSIONS		
08:30-10:00	Agriculture Session Four: Nutrition	Chair: Ruth Rhodes
8:30	van der Laan M and Miles N	Nutrition of the South African sugar crop: current status and long-term trends
8:55	Miles N	Challenges and opportunities in leaf nutrient data interpretation
9:20	Weigel A, Meyer JH and Moodley S	Nitrogen responses and nitrogen use efficiency of four sugarcane varieties in Mpumalanga
9:40	Simwanga E, Makuka R and Kamwale H	The use of twin-N (Nitrogen fixing bacteria for non-legumes) as an alternative source of nitrogen for sugarcane production
10:00-10:30	TEA	
10:30-12:10	Agriculture Session Five: Agronomy	Chair: Sanesh Ramburan
10:30	Olivier FC, Singels A and Savage M	The effect of a trash blanket on the energy balance of a sugarcane crop: preliminary results
10:50	Smit MA	Characterising the factors that affect germination and emergence in sugarcane
11:10	Stray BJ, Bezuidenhout CN and van Vuuren JH	An applied approach to sugarcane harvest scheduling decision support
11:30	Soobadar A and NG Kee Kwong R	Adsorption of atrazine and hexazinone in a sugarcane soil amended with coal flyash
11:50	Sutherland, D	A running grass control strategy that is working
12:10-13:15	LUNCH and Exhibition Stand Awards	
13:15-14:20	Agriculture Session Six: Crop Protection: Insect Pests	Chair: Des Conlong
13:15	Way MJ, Rutherford RS, Sewpersad C, Leslie GW and Keeping MG	Impact of sugarcane thrips, <i>Fulmekiola serrata</i> (Kobus) (Thysanoptera: Thripidae) on sugarcane yield in field trials
13:40	Sweby DL, Martin LA, Govender S, Conlong DE and Rutherford RS	The presence of <i>Wolbachia</i> in <i>Eldana saccharina</i> Walker (Lepidoptera: Pyralidae): Implications for biological control
14:00	Ramgareeb S, McFarlane SA, Conlong DE and Rutherford RS	Identification of herbivore induced plant volatiles from "push-pull" plants and <i>Fusarium</i> species: aids for the management of <i>Eldana saccharina</i> Walker (Lepidoptera: Pyralidae) in sugarcane?
14:20-15:00	TEA	
15:00-16:00	Agriculture Session Seven: Crop Protection	Chair: Graeme Leslie
15:00	Govender P, McFarlane SA and Rutherford RS	<i>Fusarium</i> species causing pokkah boeng and their effect on <i>Eldana saccharina</i> Walker (Lepidoptera: Pyralidae)
15:20	Keeping MG, McFarlane SA, Sewpersad N and Rutherford RS	Effects of silicon and plant defence inducers on sugarcane yield parameters, <i>Eldana saccharina</i> Walker (Lepidoptera: Pyralidae) and <i>Fulmekiola serrata</i> Kobus (Thysanoptera: Thripidae)
15:40	Conlong DE and Campbell PL	Integrated weed management for sugarcane field verges: <i>Melinis minutiflora</i> and <i>Cynodon dactylon</i> encroachment
16:00	END OF CONGRESS	

THURSDAY 26 AUGUST 2010 FACTORY SESSIONS		
08:30-10:30	Factory Session One: Factory Operations	Chair: Stephen Peacock
8:30	Voigt I	Experience of diffuser performance at very low imbibition water rates
9:00	Love DJ	Noises off: banging sounds from pipes and vessels in a sugar factory - causes and cures
9:30	Kochergin V, Gaudet C and Robert M	A juice clarifier with turbulence reduction devices: results of first industrial trials
10:00	Love DJ	Measuring the quantity of incondensable gas removed by a liquid ring vacuum pump
10:30-11:00	TEA	
11:00-12:00	Factory Session Two: Commercial	Chair: Barbara Muir
	Bartels B and Westendarp H-H	Novel design of a continuous cetrifuge for low grade massecuites
	Jack S	From "farm to fork" sugar traceability
	Karve P, Vaidya K and Gaikwad J	The solution to spent wash (Vinasse) & efficiency augmentation through high-pressure Co-gen route
	Chaudhari A	Observations about variations in composition of cane-molasses and their effects on ethanol production
	Smith GT	Feedback on Training workshop held at SASTA Congress 2009
12:00-13:00	LUNCH	
13:00-15:00	Factory Session Three: Optimisations	Chair: Muzi Ninela
13:00	Love DJ, Peacock SD and Bindoff A	Analysis of factory performance figures as an aid to identifying sources of undetermined loss
13:30	Moodley O, Rajoo N, Maharaj SH and Bond W	Maidstone Mill factory optimisation: Use it or lose it
14:00	Padayachee N	Environmental challenges facing the sugar manufacturing industry
14:30	Muir BM, Naidoo S and Gxaba A	A seasonal evaluation of the FilterKwik raw sugar filterability test
15:00-15:30	TEA	
15:00-17:00	EXHIBITION NETWORKING OPEN TIME	
19:00-23:00	AUTHORS' DINNER	

FRIDAY 27 AUGUST 2010 FACTORY SESSIONS		
08:30-10:00	Factory Session Four: Analysis and Control	Chair: Sinthi Rama-Naidoo
8:30	Simpson R and Naidoo Y	Using near infra red spectroscopy for rapid quantification of intermediate sugar factory products
9:00	Du Clou H and Walford SN	An introduction to gas chromatography mass spectroscopy for the structural elucidation of polysaccharides from sugar processing streams
9:30	Walford SN and Nel S	Are mannitol and lactic acid indicators of sugarcane deterioration in a South African context?
10:00-10:30	TEA	
10:30-12:00	Factory Session Five: Factory	Chair: Pradeep Sharma
10:30	Magasiner N	Backend corrosion in bagasse-coal fired boilers with particular reference to co-generation
11:00	Loubser RC, Smith GT and Davis SB	Prepex - a hammerless shredding technology
11:30	Muir BM	Evaluation of the SMRI juice colour analysis methods and laboratory clarification tests
12:00	Ngozo ST	Evaluation of a BMA k2300R continuous centrifugal at Ubombo Mill, Swaziland
12:30-13:30	LUNCH and Exhibition Stand Awards	
13:30-15:00	Factory Session Six: Refining	Chair: Paul Schorn
13:30	Moodley M	Carbonatation - Pilot plant evaluation of single stage membrane filter press in a carbonatation refinery
14:00	Mbanjwa CF, Deppa N and Pillay K	Evaluation of hydrogen peroxide at Hulett's Refinery: preliminary results
14:30	Rambakus Z and Moodley M	Refinery carbonatation - A practical approach
15:00	END OF CONGRESS	