



# SASTA NEWS

Newsletter of the SA Sugar Technologists' Association

June 2008

SASTA contact details: [sasta@sugar.org.za](mailto:sasta@sugar.org.za) Telephone: 031 508 7543 Fax: 031 508 7420 Website: [www.sasta.co.za](http://www.sasta.co.za)

## SASTA Field Day at Sezela

After a very successful ISSCT Pre-Congress tour to Sezela in July 2007, this tour was repeated for members of SASTA on Thursday 15th May 2008.

The Sezela team who hosted 56 SASTA delegates consisted of South African Sugarcane Research Institute (SASRI) Extension, Sezela Illovo Sugar "Miller-cum-Planter" (MCP) and Mill Staff..

The tour commenced on the MCP Esperanza Farm where the local SASRI Extension Specialist (Dirk McElligott) set the scene for the proceedings of the day.

The biggest challenge facing growers in the Sezela area is achieving optimal yields on steep slopes with marginal soils under rainfed conditions. The current trends show that since 1970, yields have declined

and have reached a plateau at an average of 62 tons/ha. Dirk McElligott discussed the recovery strategy that Illovo Sugar Limited (ISL) MCP have adopted and would later demonstrate the practices adopted in order to increase yields i.e. soil and water conservation, variety improvement, soil health and Pest & Disease management.

Stan Munsamy, the Operations Manager at Sezela Mill discussed how ISL Sezela was fully committed to meeting the current challenges facing the area, which include cane yield plateau, land restitution/reform, labour shortage, environmental issues, and soil health. It is vital that all these challenges are met in order to maintain a sustainable cane supply in the area.

Eric Ardé, the acting Agricultural Manager, introduced the three-

legged pot concept which ISL has committed itself to, namely Miller-cum-Planter, New Freehold Growers, and Small-scale Growers.

Not only has ISL Sezela invested financially into supporting this new sector of growers but they also have a dedicated staff complement who work closely with SASRI, South African Cane Growers Association (SACGA) Managers and Sezela Cane Growers Association (SCGA) members ensuring that there is total dedication in sustaining the survival of the New Freehold and Small-scale Growers.

The theme discussed on the MCP Esperanza Farm was Steep Land Farming. The Esperanza Farm has 1500 ha under cane producing 95 000 tons per season. This farm is a prime example of how sugarcane on steep slopes should be managed with minimal impact on the natural resources i.e. soil, water and natural vegetation.

Derrick Rein, the Farm Manager discussed the whole field approach that MCP adopts when re-establishing cane fields.

He explained that if a person is not interested in soil and water conservation then that person should not be farming i.e. farmers are conser-

*Continued on Page 2*



### In this issue:

- SASTA Field Day at Sezela
- SASTA Congress 2008
- AGM 2008 notice and Agenda
- Proposed Amendment to the SASTA Constitution
- SASTA Congress 2008 preliminary programme (Attached)



vationists at heart. The first step is to have a Land Use Plan drawn up for your farm. Derrick demonstrated all the conservation structures and management practices implemented in accordance to the LUP. This included correct terrace spacing, waterways with rivettes and correctly designed cane extraction roads (diagonal and crest roads).

It is important that replant fields are left fallow for a period of 6 – 9 months in order to eradicate any volunteers and also to improve soil health. Fallow fields are planted to a green manure crop, like Sunnhemp in summer or to dry beans, which

are reaped by the local communities in the winter. A long fallow will also assist in breaking the cycle of certain pests and diseases e.g. Ratoon Stunting Disease (RSD).

Minimum tillage is a common practice on these slopes as well as the use of oxen to ridge for planting, which was demonstrated on the day. When the slopes are too steep, ridging by hand is still practised but proves to be extremely labour intensive.

Another practice implemented in the “whole field approach” is the clearing of all noxious weeds from within and

around fields being re-established. Apart from replant fields, ISL has a noxious weed programme for all their farms. This was quite evident when observing the number of weed free water courses left to indigenous bush and trees on the two MCP farms on the tour.

The ratoon management operations such as manual fertiliser application through the Mayfield applicator and the herbicide spraying practices were also demonstrated to the SASTA delegates.

Because of the difficulty in applying chemical ripeners by aeroplane on an individual panel basis, most fields are divided according to crest, mid slope and valley bottom. This makes ripening by aeroplane possible but also allows for more panels of cane to be burnt at harvest, minimising the chance of runaway fires into surrounding unplanned harvest fields. This is not quite strip harvesting but under such circumstances only sections of the slope are harvested at a time, rather than the entire slope.

N12 is still the dominant variety grown on the farm (27% of area under cane). However with the new varieties available, Sezela MCP has implemented a programme which ensures that the correct variety is planted in accordance to soil type and pest and disease pressure. N39, N27 and N21 are the varieties dominating all replantings on MCP estates.



### Small-scale Growers (SSG's)

The SASTA delegates were taken to the Mission Section where the Sezela ISL Junior Field Manager for SSG, Gavin Massey, discussed ISL's involvement with this important section of their cane supply.

This sector comprises approximately 2000 growers with an average area of approximately 1.5ha per grower and an average yield of 55tc/ha. The crop has reduced from a peak of 327 000 tons cane in 1996 to 150 000 tons in 2007. The main reason for this has been the lack of affordable credit finance for replant operations at this scale of farming.





However, during the last two years there has been some support in the form of grant funding (non-repayable) for between 70% and 80% of the replant costs. The results of some of this development can be easily observed in comparison with fields in a poor condition.

The gross revenue from the current tonnage is approximately R30 million and this has a significant impact on the livelihoods of the rural communities, but these communities still experience unacceptably high unemployment and poverty levels. This is why the grant funding from

both foreign (e.g. European Union) and South African donors (e.g. the Department of Agriculture) brings with it a hope of a better future for these communities.

Contractors for replant mainly service the Small-scale Growers; crop removal and ratoon management operations and some of these operations were demonstrated during the tour. These contractors are generally described as small-to-micro-medium enterprises (smme's) and suffer from poor economies of scale to the point that many contractors do not make enough money to properly maintain

and replace vehicles and equipment to ensure a reliable operation. This is an area that needs financial support and proper mentorship programs to develop more efficient and viable contacting units.

During the tour the delegates were shown how the Miller (ISL), the grower and contractor work together by paying a visit to a service centre or depot that is used to provide a range of services to this sector. Illovo Sugar Ltd is committed to the development of sustainable Small-scale Growers and the social and financial improvement of the community at large.

Illovo Sugar Ltd and the growers have hosted international guests (e.g. from Australia and Netherlands), held workshops to transfer knowledge and skills to both farmers and contractors alike. The outreach and awareness campaign for HIV/AIDS is an ongoing activity both within the company and also externally for the community.

Beneva Trading hosted the SASTA delegates for lunch. Another success story for the South Coast - 4 NFG's, S.P. Ngidi, S.N. Ndlazi, D.T. Ndlovu and M.R. Nyuswa joined forces and formed a CC (Beneva Trading) and purchased a 12000 ha sugarcane farm previously owned by ISL. With their joint agricultural and financial experience this new partnership is well established in maintaining the 58 000 tons of cane produced from this farm.

The second MCP farm visited on tour was Sezela Section, which stretches over a distance of 22 km from north to south and has 878 ha under cane producing 64 652 tons per annum.

Green cane harvesting (trashing), manual and mechanical harvesting methods and cane transshipment were the practices demonstrated on this farm.

Sezela farm has been trashing for the past five seasons and as a result has started to experience a yield increase i.e. from 4.34 t/ha/mth (2003) to 5.42t/ha/mth (2006).

*Continued on Page 4*





When comparing five consecutive seasons of burnt vs trashed farms at Sezela, the results showed that growers who only trashed, achieved an average of 15.2 t/cane or 1.39 tons RV/ha more than growers who practised burning at harvest.

Derrick Rein, Farm Manager discussed both the agronomic and labour challenges that MCP face under a trashing regime. Illovo MCP believes that the benefits of trashing outweigh the problems and that the problems can be reduced through cutter training and good management. Burning however still remains a management tool and will be continued in cases of heavily lodged fields; fields due for replanting, eldana infected fields (>10e/100 stalks) and wet cold valley bottoms.



When it comes to infield cane haulage and transshipment, ISL MCP mainly uses the TI Trailer for infield loading. The cane is then weighed on Mascott scales before being loaded into hilos.

SASTA delegates stood in awe as a large excavator was used to grab bundles from the loading zone into the Hilo truck. This is being done on a trial basis in order to reduce the trans loading time. Using the trex-cavator a Hilo is fully loaded in 12 - 15 minutes against 30 - 35 minutes for the average Bell loader.



One of the biggest challenges facing growers on the South Coast is having to rely on manual harvesting. Alternatives to manual cutting have been investigated e.g. the "Illovo Cutter" where ISL and SASRI were involved in the research and development of a hand-held type of brush cutter to harvest sugarcane. Unfortunately, the devices were being damaged frequently during harvesting operations resulting in the project being discontinued.

Fortunately, through the initiative of an Umzumbe sugarcane farmer J. van Tichelen, a new type of hand-held cutter was developed, known as the "Thumper". Matt Langton who is employed by EMS, demonstrated the Thumper on the day. Harvesting between 0.5 – 1.2 ha per day (slope

Dirk McElligott discussed the costs of harvesting green cane vs burnt cane, which on average amounts to R1072/ha (R17.86/ton cane on 60 t/ha crop) more than a burnt cane operation. However the benefits in the form of weed control, nutri-

ent replacement and soil moisture enhancement far outweighed the harvesting costs. Over and above the R1072/ha harvesting costs, a financial benefit of R1764/ha (R29/t cane on 60 t/ha crop) is achievable when harvesting green cane.

*Continued on Page 5*



and terrain dependant) at a cost of R13 – R14 per ton cane is proving to be very popular amongst growers in South Africa (± 30 sold to date). There is also much interest in Brazil and India where Matt has demonstrated this harvesting machine.

The objective of the Thumper is not to replace labourers but to be less reliant on experienced cane cutters, which allows for casual labourers being used in the harvesting operation. Using the Thumper also assisted in ensuring that the crop gets into the Mill i.e. not allowing for unscheduled carryover cane in the following season. It was comforting to observe how effortlessly the Thumper cut through trashed cane at an acceptable base level.

### The Sezela Speedling Nursery:

Having a reliable supply of good disease free seedcane is vital for the assurance of a yield recovery in the Sezela area.

Sezela has a voluntary seedcane scheme whereby growers can purchase speedlings from the Sezela Nursery to start their own “on farm” 1st stage seedbeds.

William Gillham, SCGA General Manager highlighted the invaluable relationship the nursery has with Sezela ISL i.e. ISL leases the land to the Sezela Local Pest & Disease & Variety Control Committee at no charge and the nursery

also purchases seedcane from ISL seedbeds at Sezela. With the support from ISL the nursery is able to keep the price of plants at acceptable levels.

Over a period of 16 years average sales of 1 185 000 plants per annum have been achieved. Roland Bridgmohan, the Nursery Manager, mentioned that at 40c per plant with a requirement of 20 000 plants per ha has proved to be an attractive source of seed for the establishment of on-farm 1st stage nurseries not only for growers in the Sezela area but also for growers in Mpumalanga and Mozambique.

Roland took the group on a very informative tour through the nursery. Should anyone request information regarding the purchasing or growing of speedlings, Roland is available on Cell no. 083 362 9937.

The field day was concluded by a brief discussion by Allan Simpson, the Cane Procurement Manager at the Sezela Mill on the logistics of the Sezela cane supply. The main emphasis is to maximize the efficiencies in both cane haulage and mill throughput.

After such an event one can only leave Sezela with a positive impression of an area with many challenges, lead by a dedicated team of people that believe in a common objective of “Seizing the challenges before the challenges seize you”

Many thanks to the sponsors of the day namely:

New Holland (Bruce Anderson)  
– agents of the “Thumper” cutter

Unitrans (Eddie Kotze)

Illovo Sugar Ltd – Sezela

Beneva Trading (Hosting lunch)

**Article written by Dirk McElligott**



# SASTA Congress 2008

The 81st Annual SASTA Congress will take place from 29 – 31 July 2008. The venue is the International Convention Centre, Durban. The preliminary programme is included in this newsletter.

The 2008 Congress has been accredited by ECSA as a Continuous Professional Development Event (8 hours per day = 24 hours in total) for registered engineers. Anyone wishing to use this Congress as CPD credits must notify SASTA of their intention. Furthermore, they must supply SASTA with their ECSA registration number before 15 July 2008.

## **CHARGES**

---

SASTA Member Late registration: R1 750.00

SASTA Non-member Late registration: R2 050.00

One day only registration: R1 000.00

## **TRADE EXHIBITION AND SPONSORSHIP**

---

Exhibitors and sponsors have a choice of sponsorship, advertising and promotional opportunities. Contact Deidre Hancke-Haysom (deidre@confco.co.za) for details on pricing options and to reserve a sponsored item

or exhibition booth. Exhibitors will qualify for two free registrations per stand. Any additional staff needed at the stand must register as delegates. Exhibition displays must be set up on Monday 28th July 2008 and must be broken down after the Congress on 31 July 2008.

## **REGISTRATION**

---

Registration is on-line from the SASTA website (www.sasta.co.za) or if no website access: email deidre@confco.co.za or phone +27 (0)31 3039852 or fax +27 (0)31 3039529.

Late registration: 15 June 2008 - 21 July 2008 (Must have paid by 21 July)

## **QUERIES**

---

For registration, exhibition and sponsorship opportunities please contact Deidre Hancke-Haysom at The Conference Company. Ph: +27 (0)31 3039852, email: deidre@confco.co.za.

For more details please refer to the SASTA website www.sasta.co.za or email sasta@sugar.org.za with any other matters.

## **ANNUAL GENERAL MEETING OF THE SA SUGAR TECHNOLOGISTS' ASSOCIATION**

To be held on **30 JULY 2008** from 13:40-14:10

at the International Convention Centre, Durban

On Day 2 of SASTA Congress 2008

### **AGENDA**

---

1. Apologies
2. Minutes of AGM of 14 September 2007
3. Matters arising from the minutes
4. President's report
5. Membership
6. Financial Statement
7. Election of auditors
8. Result of ballot for Council members 2008/2009
9. Amendments to Constitution
10. General

## **Proposed amendment to the Constitution**

To be discussed at AGM 2008

### **Old Wording**

#### 1. OBJECTS

The Association is established in order to:

- 1.1 promote the interchange of scientific knowledge of, and the discussion and investigation of technical problems related to, the production of sugar;

### **Proposed New Wording**

#### 1. OBJECTS

The Association is established in order to:

- 1.1 Promote the interchange of scientific knowledge of and the discussion and investigation of technical problems related to, the production and processing of sugarcane products.

### **Motivation for change**

With the recent emphasis in the industry on products other than sugar, it is opportune to amend the constitution to reflect the broadening of scope.



## PRELIMINARY SASTA CONGRESS 2008 PROGRAMME

Please note that this is a preliminary programme and is subject to change

### Tuesday 29 July 2008: Day 1: PLENARY (COMBINED FACTORY AND AGRICULTURE)

07:00-09:30	<b>REGISTRATION</b>	
08:00-10:15	<b>TEA in Exhibition Hall</b>	
10:15-12:30	<b>OPENING SESSION</b>	
10:15	SASTA President: Paul Schorn	Welcome
10:20	Keynote speaker	To be confirmed
11:10	SASTA Patron	Vote of thanks
		Presentation of SASTA gold medal and 2008 Agriculture Innovation Award
11:20	SB Davis & M Achary	Eighty-third annual review of the milling season in southern Africa (2007-2008)
11:45	M van den Berg, A Singels, RM Armitage, MJ	South African sugarcane production and quality in the 2007-2008 milling season: An unfulfilled promise?
12:10	CN Bezuidenhout	A farmers market at the local sugar mill: lean versus agile
12:30-13:30	<b>LUNCH in Exhibition Hall</b>	
13:30-15:10	<b>PLENARY SESSION ONE</b>	
13:30	G Eggleston, PG Morel du Boil and SN Walford	A review of sugarcane deterioration in the United States and South Africa
13:55	BS Purchase, AT Wynne, E Meyer and R van Antwerpen	Is there profit in cane trash? Another dimension to the assessment of trashing versus burning
14:20	AT Wynne, CG Gillitt, AB Gabriel and RM Armitage	Optimising industry productivity: re-thinking the strategy of technology transfer using a benchmark farm concept
14:45	RE Limb	The effective communication of agricultural R&D output in the UK beet sugar industry
15:10-15:40	<b>TEA in Exhibition Hall</b>	
15:40-16:45	<b>PLENARY SESSION TWO</b>	
15:40	AD Church, GM Groom, DN Thomson and VR Dlamini	Small-scale cane grower development models: some lessons from sub-Saharan Africa
16:05	I Mahlangu and F Lewis	Social and institutional constraints to the production of sugarcane by small-scale growers in the Amatikulu catchment
16:25	A Singels, N Kaptein and D Mthembu	Evaluation of an operational irrigation advisory service to small-scale sugarcane farmers
17:00-20:00	<b>MEET and GREET in Exhibition Hall</b>	

<b>Wednesday 30 July 2008: Day 2 FACTORY</b>		
<b>09:00-10:30</b>	<b>FACTORY SESSION ONE: Mills and Diffusers</b>	
<b>09:00</b>	SS Munsamy	The effect of scalding juice temperature on extraction in a cane diffuser
<b>09:30</b>	BM Schoonees-Muir	Dosing of starch hydrolysing enzymes into a diffuser
<b>10:00</b>	SS Munsamy	Optimising bagasse dewatering in a cane diffuser at Sezela sugar factory
<b>10:30-11:00</b>	<b>TEA</b>	
<b>11:00-12:50</b>	<b>FACTORY SESSION TWO: Raw House Operations</b>	
<b>11:00</b>	BM Schoonees-Muir and BMM Gwegwe	The use of polyaluminium coagulants for the removal of colour during clarification
<b>11:25</b>	S Madho and SB Davis	Review of proven technologies available for the reduction of raw sugar colour
<b>11:55</b>	S Rama and SS Munsamy	The effect of tube wetting rate on Kestner performance at Sezela factory
<b>12:20</b>	MI Zulu, MB Ninela, DJ Muzzell and FS Mncube	Panfloor modifications that improved performance at Amatikulu mill
<b>12:50-13:40 or 12:50-14:15 (if not attending SASTA AGM)</b>	<b>LUNCH in Exhibition Hall</b>	
<b>13:40-14:10</b>	<b>SASTA AGM</b>	
<b>14:15-14:45</b>	<b>FACTORY SESSION THREE: Posters</b>	
<b>14:15</b>	B Barker and J Wesley-Smith	Pith/fibre measurement of sugarcane varieties using a stereomicroscope
<b>14:25</b>	RC Loubser and J Reeves	Force analysis in handling whole stick cane
<b>14:35</b>	BM Schoonees-Muir and MA Gooch	The use of ultrasound for on-line crystal size distribution (CSD) analyses
<b>14:45-15:15</b>	<b>TEA in Exhibition hall</b>	
<b>15:15-16:15</b>	<b>FACTORY SESSION FOUR: Computers and Modelling</b>	
<b>15:15</b>	RC Loubser	Data-logging using commercial off-the-shelf components
<b>15:45</b>	P Sharma and SD Peacock	Monte Carlo simulation: an alternative to single point data entry for technical modelling
	<b>EVENING AT LEISURE</b>	
<b>Thursday 31 July 2008: Day 3 FACTORY</b>		
<b>08:10-10:00</b>	<b>FACTORY SESSION FIVE: Measurement and Analyses</b>	
<b>08:10</b>	B Barker	Masseccuite consistency measurement using a pipeline viscometer
<b>08:35</b>	GRE Lionnet	The use of capillary viscometry to survey viscosity in cane sugar factories
<b>09:05</b>	R Simpson and J Oxley	Routine Analysis of molasses and mixed juice by NIR spectroscopy
<b>09:35</b>	SN Walford	Sugarcane bagasse - how easy is it to measure its constituents?
<b>10:00-10:30</b>	<b>TEA</b>	
<b>10:30-12:10</b>	<b>FACTORY SESSION SIX: Commercial</b>	
<b>10:30</b>	D James, K-H Theisen and I Geyer	Microwave technology: An ubiquitous in-line instrument for measuring Density, Total solids and Concentration, especially of Brix, in today's sugar factory
<b>10:50</b>	JH Bushong, A Bogari, CAD Gonzalez, W Odipo, JMP Marroquin, AL Massucato and EM Sarir	Improving daily production capacity and energy efficiency in sugar refineries and sugar mills with CarboUA high performance process aids
<b>11:10</b>	JR Braasch and P Toebe	Integration of plate falling film technology into multiple-effect evaporator stations in the cane sugar industry
<b>11:30</b>	K Mosich	Energy conservation through efficient utilisation of GEA Plate Heat Exchangers
<b>11:50</b>	Chaudhari A	Environmentally sustainable technologies for ethanol production from sugar bearing raw materials
<b>12:10-13:15</b>	<b>LUNCH</b>	
<b>13:15-14:45</b>	<b>FACTORY SESSION SEVEN: WORKSHOP I - The Future of Energy in a Cane Sugar Factory</b>	
<b>13:15</b>	Presentation 1	
<b>13:45</b>	Presentation 2	
<b>14:15</b>	Presentation 3	
<b>14:45-15:15</b>	<b>TEA</b>	
<b>15:15-16:45</b>	<b>FACTORY SESSION EIGHT: WORKSHOP II - The Future of Energy in a Cane Sugar Factory</b>	
<b>15:15</b>	Presentation 4	
<b>15:45</b>	Presentation 5	
<b>16:15</b>	<b>DISCUSSION</b>	

<b>Wednesday 30 July 2008: Day 2 AGRICULTURE</b>		
<b>08:00</b>	<b>AGRICULTURE SESSION ONE: Pests</b>	
<b>08:00</b>	SD Berry, P Cadet, R Parfitt, D Thomas and VW Spaul	Nematological environment and selection pressure on six SASRI Research farms
<b>08:25</b>	EM Abdel-Rahman, FB Ahmed, M van den Berg and MJ Way	Preliminary study on sugarcane thrips ( <i>Fulmekioli serrata</i> ) damage detection using imaging spectroscopy
<b>08:45</b>	Y Assefa, DE Conlong, J van den Berg and BP Le Ru	The wider distribution of <i>Eldana saccharina</i> (Lepidoptera: Pyralidae) in South Africa and its potential risk to maize production
<b>09:10</b>	AJ Walton and DE Conlong	Use of oil soluble dyes to mark adult <i>Eldana saccharina</i> (Lepidoptera: Pyralidae)
<b>09:35</b>	SD Berry and VW Spaul	Use of Cropguard® to improve sugarcane yield on nematode-infested soils of South Africa
<b>10:00</b>	GW Leslie	Estimating the economic injury level and the economic threshold for the use of Fastac® against <i>Eldana saccharina</i> (Lepidoptera: Pyralidae)
<b>10:20-10:50</b>	<b>TEA in Exhibition Hall</b>	
<b>10:50-12:00</b>	<b>AGRICULTURE SESSION TWO: Crop Nutrition</b>	
<b>10:50</b>	N Miles, JH Meyer and R van Antwerpen	Soil organic matter data: what do they mean?
<b>11:15</b>	A Weigel, JH Meyer, S Moodley, W Tonsing, D Nixon and M van den Berg	Drip irrigated sugarcane response to nitrogen applied in the dry form and by fertigation in late and early season cycle
<b>11:40</b>	M Brouwers, N Vassal-Courtaillac and AA Osman	Mineral Nitrogen contents in a cane-cropped vertisols of Sudan and Guadeloupe as influenced by urea application management
<b>12:00-12:50</b>	<b>AGRICULTURE SESSION THREE: Agriculture Posters I</b>	
<b>12:00</b>	PL Campbell	Efficacy of glyphosate applied to short- and long-stolon <i>Cynodon dactylon</i> and the search for alternative post-emergence herbicides
<b>12:10</b>	A Chirchir, J Kimenju and F Olubayo	Occurrence, abundance and distribution of plant parasitic nematodes associated with sugarcane in western Kenya
<b>12:20</b>	CO Olweny and J Jamoza	Effect of plant density on seedcane yield of tissue cultured cane plantlets
<b>12:30</b>	P Sithole, A Singels and S Walker	Accuracy of solar radiation estimates in the South African sugar belt
<b>12:40</b>	MJ Way	Arthropods associated with sugarcane leaf spindles in South Africa
<b>12:50-13:40 or 12:50-14:15 (if not attending SASTA AGM)</b>	<b>LUNCH in Exhibition Hall</b>	
<b>13:40-14:10</b>	<b>SASTA AGM</b>	
<b>14:15-15:25</b>	<b>AGRICULTURE SESSION FOUR: Diseases</b>	
<b>14:15</b>	T van Antwerpen and RS Rutherford	Increased risk of new virus infections in the South African sugarcane industry: preparing for the future
<b>14:40</b>	P Zvoutete	Fluctuations in the levels of smut ( <i>Ustilago scitaminea</i> ) in response to changes in disease management strategies in the Zimbabwe sugar industry
<b>15:05</b>	SA McFarlane, JH Meyer, P Cadet and RS Rutherford	Investigation into the effect of nutrition on brown rust development in sugarcane
<b>15:25-15:55</b>	<b>TEA in Exhibition Hall</b>	
<b>15:55-17:30</b>	<b>AGRICULTURE SESSION FIVE: Mechanisation</b>	
<b>15:55</b>	SL Cowling	Mechanical design optimisation of a sugarcane haulage vehicle
<b>16:20</b>	MI Langton, TR Harding and PWL Lyne	Preliminary results of the Canethumper® operating on the lower South Coast of South Africa
<b>16:45</b>	R van Antwerpen, PWL Lyne, E Meyer and M Brouwers	Effect of surface applied pressure by vehicles fitted with pneumatic tyres on properties of a virgin soil
<b>17:10</b>	P-Y Le-Gal, J Le Masson, CN Bezuidenhout, LF Lagrange and PWL Lyne	Impacts of harvest mechanisation on mill cane supply: a modelling approach

<b>Thursday 31 July 2008: Day 3 AGRICULTURE</b>		
<b>08:00-09:50</b>	<b>AGRICULTURE SESSION SIX: Transport</b>	
<b>08:00</b>	JJ Murray	Harvesting contractors: theory and evidence from Mpumalanga
<b>08:25</b>	AJ Harris, CN Bezuidenhout, LF Lagrange and PWL Lyne	Development of a sugarcane transport route planning model in a geographical information system
<b>08:45</b>	BC McDonald, E Dube and CN Bezuidenhout	Transwarm, a sugarcane transport simulation model based on behavioural logistics
<b>09:05</b>	LF Lagrange, TR Pletts, CN Bezuidenhout and PWL Lyne	The feasibility of automatic on-board weighing systems in the South African sugarcane transport industry
<b>09:25</b>	PA Nordengen, H Prem and PWL Lyne	Performance-Based Standards (PBS) vehicles for transport in the agricultural sector
<b>09:50-10:20</b>	<b>TEA in Exhibition Hall</b>	
<b>10:20-11:45</b>	<b>AGRICULTURE SESSION SEVEN: Irrigation</b>	
<b>10:20</b>	RM Armitage, NL Lecler, A Jumman and K Dowe	Implementation of the <i>Irriecon V2</i> decision support tool to assess net returns to irrigation systems
<b>10:45</b>	KR Greaves, NL Lecler and JC Smithers	Benchmarking irrigation water use and sugarcane yield in an irrigation scheme
<b>11:05</b>	NL Lecler, DC Mills and JC Smithers	Automated short-furrow irrigation
<b>11:25</b>	W Mahohoma, E Mashonjowa, S Dzikiti, B Chipundu and JR Milford	Assessment of the feasibility of using stalk diameter fluctuations for automated centre pivot irrigation scheduling of sugarcane in Zimbabwe
<b>11:45-12:25</b>	<b>AGRICULTURE SESSION EIGHT: Agriculture Posters II</b>	
<b>11:45</b>	CO Olweny, K Ngugi, H Nzioki and SM Githiri	Evaluation of smut inoculation techniques in sugarcane seedlings
<b>11:55</b>	BAM Potier, SJ Snyman, R Jacob, D Dheopursad and BI Hockett	Strategies for the alleviation of promoter silencing in sugarcane
<b>12:05</b>	R van Antwerpen, R Rhodes and AT Wynne	Economics of trashing: Improvement and sensitivity analysis of this decision support program
<b>12:15</b>	SA McFarlane, T van Antwerpen, P Govender and GF Buchanan	First report on maize streak virus in the South African sugar industry
<b>12:25-13:30</b>	<b>LUNCH in Exhibition hall</b>	
<b>13:30-14:55</b>	<b>AGRICULTURE SESSION NINE: Breeding and Molecular Biology</b>	
<b>13:30</b>	BI Hockett	A compact history of genetic transformation and its influence on crop development
<b>13:50</b>	S Ramburan	Comparing variety trial and commercial data: trends and relationships for practical use in the South African sugarcane industry
<b>14:15</b>	BAM Potier, C Baburam, R Jacob and BI Hockett	Stem-specific promoters from sorghum and maize for use in sugarcane
<b>14:35</b>	SJ Snyman, GM Meyer, M Banasiak, TL Nicholson, T van Antwerpen, P Naidoo and JD Erasmus	Micropropagation of sugarcane via NovaCane®: preliminary steps in commercial application
<b>14:55-15:25</b>	<b>TEA in Exhibition Hall</b>	
<b>15:25-17:00</b>	<b>AGRICULTURE SESSION TEN: Agronomy</b>	
<b>15:25</b>	RA Donaldson, K Redshaw, R Rhodes and R van Antwerpen	Season effects on productivity of some commercial South African sugarcane cultivars, I: Biomass and Radiation use efficiency
<b>15:50</b>	RA Donaldson, K Redshaw, R Rhodes and R van Antwerpen	Season effects on productivity of some commercial South African sugarcane cultivars, II: Trash production
<b>16:15</b>	FM Ismael, S Seeruttun, C Barbe and A Guangoo	A review of changing cultural practices to improve productivity of sugar cane in Mauritius
<b>16:40</b>	SD Berry, S Sala and M Jones	Simulated versus actual yields - how much of the difference is due to nematodes?
<b>19:00</b>	<b>CONGRESS DINNER at ICC</b>	