

Highlights of the 2015 SASTA Congress Programme



The 88th annual SASTA Congress is once again being held at the International Conference Centre (ICC) in Durban, after a break in 2014 when it was held at the Royal Agricultural Showgrounds in Pietermaritzburg. The congress is a major highlight in the SASTA calendar and continues to be the congress of choice for local sugar technologists. Moreover, the event also enjoys consistent support from other African sugarcane-growing countries, and beyond.

The continued success of the SASTA Congress reflects the high quality research and technical papers presented as well as the valuable networking opportunities that are on offer. This year's scientific programme contains over 60 presentations and is a diverse mixture of topical subjects. With over 400 delegates attending Congress it promises to be a productive and lively event that adds value, and is of benefit, to the sugar industry.





ABOVE FROM LEFT:
Tawny African Rust, Thrips and Eldana.

CONGRESS OPENS WITH GUEST SPEAKER PRESENTATION

The official Congress programme commences at 9h30 on Tuesday 18 August with the keynote address by Professor Marjanne Senekal, Head of Division of Human Nutrition at the University of Cape Town. Professor Senekal's presentation will no doubt be most informative and SASTA is privileged to have attracted such a high calibre speaker to Congress.


The Plenary session follows the Opening and features the annual reviews of the 2014/2015 season from both a milling and agricultural perspective. This session will be followed by a lunch break during which delegates are invited to view the Agriculture and Factory Poster papers on display within the Exhibition venue. During this time the poster authors will be in attendance at their posters to answer any questions from delegates. After lunch the programme then splits into the traditional parallel Agriculture and Factory sessions.

HIGHLIGHTS FROM THE AGRICULTURE SESSION PAPERS

The Agriculture sessions commence with an exciting workshop that focusses on recent technologies in Global Positioning Systems, Geographic Information Systems, remote sensing and unmanned aerial vehicles. This rapidly developing field offers many technologies that can benefit the sugar industry. The workshop features speakers who will share their experiences using these technologies and will focus on how they can be applied within the sugar industry.

Day 2 of the Agriculture programme commences with a session directed at research into some of the Pests and Diseases that cause damage to sugarcane. Delegates will be informed of stem borer investigations and will also be updated on the status of tawny rust research. Progress on the release of a new nematocide/thripicide for use in the South African industry will also be presented. This session is followed by presentations that highlight some of the improvements and developments in the small-scale grower sector. There is a particular emphasis on efforts to increase productivity and sustainability. After lunch, the afternoon session is focused on mechanisation and irrigation research. Delegates will hear about the SUSFARMS® irrigation model and a paper which examines the application of the LOMZI model at various mills. Experiences with a whole stick sugarcane planter in South Africa are also presented.

The morning of the third Day of Congress kicks off with a presentation on the influence of locations and seasons and their implications for plant breeding. This is followed by a paper that focuses specifically on the influence of genotype by environment interactions on Eldana damage. Optimum harvest age for varieties grown in rainfed regions forms the topic of the third paper in this session. The final Agriculture session of Congress is devoted to Physiology, Soil and Nutrition. Three papers that deal with various facets of chemical ripening, including varietal



responses, will be presented. Developments in soil nutrient testing will also be highlighted.

HIGHLIGHTS FROM THE FACTORY SESSION PAPERS

The dedicated factory sessions begin on Tuesday afternoon with a session on boilers. This is a topic that will be of particular interest to many engineers in the industry, given the increasing focus on the efficient use of fuel and energy and the move towards increased electricity generation in our factories. It is the second year in a row that the factory sessions have focused heavily on this important area of the plant. The use of advanced modelling techniques for boiler design is a key topic in three of these papers, while the fourth covers gas side visual inspection and the importance of this sort of condition monitoring to maintaining the ongoing performance and reliability of a boiler.

Factory session 2 starts on the morning of Day 2 with papers on electrical engineering and cogeneration. The first of these reviews the technology choices available to allow a sugar mill to ride through disturbances on the national grid without a factory blackout, while the second discusses the economic benefits of carrying out energy efficiency modifications in a factory so as to maximise electrical power export. After tea, a session on evaporators and evaporator cleaning follows. The topics covered include the operating results obtained from falling film evaporator installations in India and Pakistan, determining the optimum heating surface distribution in a real-world evaporator station that is impacted by fouling during its operation and an investigation into the mechanical removal of scale deposits from inside evaporator tubes by the use of scrubbing objects that oscillate within the tube during boiling. Also in this session is a commercial presentation on plate heat exchangers and their benefits to sugar factories.





The afternoon of the second day closes with a commercial session which provides a useful opportunity to hear about the latest developments from our suppliers and to learn about the early findings in developing technologies. This year, the focus is on long-life continuous centrifugal screens, innovative turbine technology, microwave technology for concentration measurements and the automation of sugar plants.

The final day of the congress opens with a session on diffusion, which is the predominant extraction method used in the southern African industry. The morning begins with a presentation on modelling work related to the flow of juice through a packed bed of shredded cane. The second paper of the day presents the results of the most recent factory trials carried out on the Direct Clear Juice (DCJ) technology which produces clarified juice directly within a cane diffuser. The final factory session deals primarily with refining, starting with a paper which revisits the ion exclusion chromatographic separation of sucrose from refinery jet 4. This is followed by a discussion on the use of multi-bag filters in a back-end sugar refinery and a review of the safety improvements at the Huletts refinery which have ultimately led to five star performance. The congress ends with a presentation on the use of a cationic polymer for the reduction of colour and suspended solids content in raw sugar, including the results of a full scale factory trial.

TRADE EXHIBITION AND SOCIAL EVENTS

The Trade Exhibition continues to be a focal point at SASTA Congress. The Exhibition has seen a steady increase in size over recent years with 59 stands being sold for the 2015 Congress. Refreshments, lunches and social events are held in the Exhibition Hall, enabling maximum interaction between delegates and exhibitors during the three days of Congress. As in previous years the Trade Exhibition also hosts an 'open afternoon' on Wednesday 19 August from 15h00 –17h00. Exhibitors have the opportunity to invite clients to network and discuss business at their stands during this time.

The first day of Congress aptly concludes with a cocktail-style 'Meet and Greet' in the Exhibition Hall; the ultimate opportunity for catching up with old friends and meeting new ones!

The authors' dinner on Wednesday evening is a fitting commendation to all the contributors to SASTA Congress 2015; it is thanks to their dedication, expertise and willingness to share their knowledge and experience with the sugar industry that ensures the successes of SASTA Congress.



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