INTERNATIONAL

SOCIETY

OF

SUGAR CANE

TECHNOLOGISTS

Proceedings (Abstracts)
of the XXVIIIth Congress

June 24 to June 27, 2013
São Paulo, Brazil

Edited by
D.M. HOGARTH

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Sociedade dos Técnicos Açucareiros e Alcooleiros do Brasil (STAB) &
The XXVIIIth ISSCT Organising Committee

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Sociedade dos Técnicos Açucareiros e Alcooleiros do Brasil (STAB)
&
The XXVIIIth ISSCT Organising Committee

International Society of Sugar Cane Technologists Proceedings (Abstracts)
XXXVIIIth Congress
June 24–June 27, 2013, São Paolo, Brazil

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WELCOME
to the
ISSCT Congress
in Brazil

There are no words to express our satisfaction of taking part in this important event once again. For the third time, we are experiencing the tradition, and we are proud to be a part of ISSCT and the reverence that is made to this international conclave.

For STAB, which is the front door of the Congress, and for the members of its Committee who are the support to reach this goal, a long way of hard work was traveled.

São Paulo, Ribeirão Preto and Piracicaba look forward to hosting the delegates of XXVIII ISSCT Congress and we hope that their expectations may be exceeded.

As part of the Pre and Post Congress activities, visits will take place in different centers of production of cane, sugar, ethanol and electric energy so that the delegates may understand better the dynamic of the Brazilian sugarcane industry.

Besides the important sugarcane mills, we will visit the CTC, a sugarcane technology center, and the Agronomic Institute of Campinas showing the most advanced
research and innovation in the field and the industry. The delegates will be able to learn more about the interaction between the sugar mills, the research centers and their environment.

At the Post Congress, the participants will have the opportunity to find out about technologies applied in sugarcane production in Brazil.

Considering its culture and unmatched beauty, São Paulo has so much to offer. It is a city where 70 different nationalities live together among their diversity. It is also a big center of agricultural, industrial and entertainment production. It is worth knowing this global city which is full of knowledge, trends, smells and colors. The entire organization is ready and willing to offer alternatives that will make the Congress an unforgettable experience.

Furthermore, the Transamerica Expo Center offers excellent facilities to carry out the plenary and conferences as well as the exhibition of equipment.

For us, all of it represents motivation and great satisfaction, forcing us to provide all the devices required so that the activities might be carried out under the best possible conditions.

Be very welcome!

José Paulo Stupiello
I have almost completed my fifth and final term as editor of the ISSCT Proceedings. It has been a privilege to serve the Society in this way, but it is time to hand the baton over to a younger person who is more familiar with current technology.

Production of the ISSCT proceedings is a massive undertaking and a very large number of people are involved. Firstly, of course, there are the authors, then we have the Section Chairs and their referees, and we have a dedicated band of translators who translate the abstracts of papers into French, Spanish and, in 2013, Portuguese. Finally, there is the Editor and, importantly, there is the Production Editor who formats the papers and is the person who is responsible for making the proceedings look so professional.

All Congress Organising Committees are surprised at the cost of the proceedings, but it is not possible to produce a quality product cheaply. We could just publish the papers as they come in, but the quality of the science, the command of English, and the appearance of the final product would be poor. I commend the members of the Executive of ISSCT who have always supported me and my Production Editor in our aim to produce a quality product, and I hope we have achieved that.

Brazil is obviously a very attractive venue for a conference on sugarcane, and there was immense interest in being involved. We received over 500 submissions for papers, and we have finished with 180 papers, 137 poster papers, 12 very interesting plenary papers, as well as workshop reports. The number of papers and posters is easily a record for ISSCT, and I believe the quality of papers is higher than in the past. This means that we should have an excellent conference.

I would like to thank the Section Chairs who have the onerous task of organising the refereeing of papers and communicating with authors. For this conference, several Section Chairs commented on the difficulty in obtaining willing referees and, often, they did a lot of the refereeing themselves. Some referees also took on many papers, and the Society also owes them their gratitude.

I have a lot of contact with the people who translate the abstracts into the different languages. Some of these translators have been working with me since I started as Editor in 2001. These people are Jorge Victoria, Asha Saumtally, Oscar
Almazan, Raoul Lionnet and Adolfo Gomez. It is difficult to find words to express my gratitude to these people who have served the Society so faithfully over so many years. This year, we had some new translators and I would like to express my gratitude to them as well for being so willing to help me.

Jean Claude Autrey, as General Secretary, and Peter Allsopp, as Chairman of the Technical Program Committee, have both been a tower of strength. They respond to emails promptly which is greatly appreciated and are always ready to give advice when needed.

In Brazil, Juliana Carvalho was a very dedicated contact person who liaised between me and the Congress Organising Committee. Juliana left her position two months before the conference and her place has just been taken by Ana Thomazella who has already shown that she responds to requests quickly, which is appreciated. For the translations into Portuguese, Erika Stupiello was appointed, and she has had a massive job to do but has done it with good humour and a very pleasant manner.

My Production Editor, Peter Knight, has done his usual dedicated job. Despite a serious health scare, Peter has worked long hours to complete these very large proceedings, and I am confident that the Society will be pleased with his performance as usual. I would like to thank Peter for his assistance to me and his patience when I make my mistakes. Peter will be retiring as Production Editor after this conference, but he is leaving a very high standard for future Production Editors to maintain.

I do need to thank my wife, Tricia, who does not see much of me while I am editing the proceedings. However, she takes a lot of interest in what I am doing and will be rewarded with a trip to Brazil to enjoy the conference and to see something of the country afterwards.

Finally, I would like to thank ISSCT and the Congress Organising Committee for entrusting me with the role of Editor. I hope that the final product is a fitting tribute to all the people who have made it possible.

Mac Hogarth
Editor
Overview

The world of sugar has seen some of the biggest swings in sugar prices during this 10/13 inter Congress period. The ICE #11 changing from 13 c/lb in 04/10 to 35 c/lb in 1/11 back to 18.2 c/lb by 4/13 and likewise the #5 white premium ranging from $150 to $80 back to $100 over the same time periods. During this time, one of the drivers of these prices was consumption which has reached 174 Mt and production was about 9 Mt higher, creating this surplus.

The surplus has resulted in the current lower pricing which will probably boost consumption and so the cycle repeats. During these ups and downs, some industries’ fortunes varied as does their propensity to fund research and attendance at conferences such as the 2013 ISSCT Conference in Brazil. The 2013 Conference finds itself in a period of low world market prices. In addition to the pressures of world market sugar pricing, we also see regional currency fluctuating.

The AUSD has appreciated against the USD by some 30% whereas the BRL has depreciated by some 13% as have many other ‘sugar producing’ currencies such as EUR 13%, INR 12%, ZAR 19%. All these factors impact member’s ability to attend ISSCT activities such as workshops and the Congress.

Executive Committee

The Executive Committee elected in Mexico is made up of Tim Murray (ZAF) Chairman, Bill Burnquist (BRA) Vice Chairman, Philippe Rott (FRAN) Chair of Finance, Freddie Martin (USA) immediate past Chairman, Peter Allsopp (AUS) Chair of the Technical Programme Committee (TPC), Alvaro Amaya (COL), Mario Melgar (GTM), Raul Reissner (MEX), Jorge Scandaliaris (ARG) and Vinay Kumar (IND). The Editor is Mac Hogarth (AUS) and Jean-Claude Autrey (MUS) is the General Secretary.

The Executive Committee’s work load is distributed across the inter congress period on an ad hoc basis as and when issues arise. Those folks in the TPC activity certainly have an increased workload leading up to a Congress where academic papers are submitted, reviewed, edited by Mac and then set up into an academic program that forms the basis of the Conference. Many of the TPC folks are also very
The main activity of the Executive Committee during the Inter Congress period is the participation in the mid-term meeting. This meeting was held in Brazil during March 2012.

The meeting was hosted by STAB at their office in São Paulo and included visits to the proposed conference venue as well as a visit to Ribeirão Preto and Piracicaba where pre- and post-conference activities will be held in the 2013 Congress time.

The procedure of the MTM and the work of the TPC were carried out satisfactorily; the hosts, STAB, were gracious in their hosting of the Executive and TPC people.

The facilities available and the preparations for the 2013 Congress that were presented to the Executive and TPC were adequate. The communication with the Congress Organising Committee and the functions facilitator, Reed Exhibitions Alcantara Machado SA, were both testing and difficult but the end result will be very adequate for the ISSCT members to be able to enjoy a fruitful Congress in 2013.

Commissions and Workshops

During the inter congress period the Commissions and Sections held seven workshops.

- An Agricultural Engineering and Agronomy Workshop at Townsville, Australia on the subject of ‘Sustainable Cane Production’ (September 2012)
- The Biology Commission held three workshops, one Breeding, Germplasm & Molecular Biology Workshop in Brazil, ‘Breaking Breeding and Biology Paradigms’ (May 2011); another Entomology Workshop held in Mauritius (March 2012) on ‘Recent Advances and new Challenges in Cane Pest Management’ and a Pathology Workshop held in China (May 2012).
- The Factory Commission held an Engineering and Processing Workshop on ‘Co-generation’ in Australia in May 2011.
- Co-Products Commission held a Workshop in Thailand (March 2012) on ‘Value Added Co-products’.
- Management and Technology Transfer Commission held a Workshop in India (August 2011) on ‘Effective Research Analysis and Technology Transfer’.

These workshop activities provide invaluable exposure of many technologists to front line thinking and are a major activity for the ISSCT to be able to fulfil its mission.
Mac Hogarth

Mac deserves some special comment. He has been Editor for the ISSCT for this and the previous four Congresses. When I first came to office, I was of the opinion that when, and if, Mac retired we could use the services that are available from a number of different organisations, who could manage the document flow, from the call for abstracts through to the finally produced record of proceedings.

That was before I was in a position to actually see the effort that Mac and his team of section chairmen, translators, reviewers and assistant editors do to create the academic program that is set up for all of ISSCT to enjoy at the Congress and via the proceedings. I no longer have the same view and do see that without a ‘Mac’ the ISSCT would be much the poorer.

Mac has indicated his intention to retire from the job as Editor with effect after this Brazilian Congress. We are all indebted to Mac for his hard work and wish both him and his family well.

The ISSCT Executive group and Council will have to propose a replacement for Mac during deliberations in Brazil.

Finances

The Finance Committee has been headed by Phillipe Rott. As at the end of March 2013, expenses were running a small excess to what was budgeted. The main reason for that were the higher than expected costs incurred during the mid-term meeting. None of these budgeted inaccuracies are material and the reserves available to the ISSCT are perfectly adequate to declare the Association solvent and in a healthy financial position.

General comments

The ISSCT is a unique organisation in the sugar cane world that brings together technologists from both factory and fields. The Inter Congress period, together with Congress every three years, is a tried and tested model that creates the required scientific exchange to help keep the sugar cane world competitive.

But if one looks at the scientific progress made in recent years by the competitive alternative sugar producers, the sugar beet industry, there is real concern that sugar cane production will need to become more economically competitive in the immediate future.

The sugar cane technologists will need to become more innovative in improving the sugar production economics as well as bringing other products from sugar cane manufacture ‘to the table,’ so to say. There is no time like the present to prepare for the future. These current times of economic hardship are not the time to ‘clip the wings’ of scientists and technologists; indeed it is time to invest in research to open the future of sugar cane!
INTERNATIONAL SOCIETY OF SUGAR CANE TECHNOLOGISTS

This Brazilian hosted Congress will hopefully be the catalyst that will lead to the improved prosperity of the cane-based sugar industries of the world.

May I finally extend my thanks to all those who support the ISSCT. A major part of that support which comes from the Executive Committee, the Technical Program Committee and last, but by no way least, the General Secretary, Jean Claude Autrey.

Jean Claude has been an outstanding servant of the ISSCT and his attention to detail and institutional knowledge has been responsible for the fact that sugar technologists from all over the world will be in São Paulo in 2013 to congregate and learn from one another. Well done Jean Claude!

May I wish you all well.
OVER THE PAST FEW YEARS we have seen, and will continue to see, changes in the way sugarcane RD&E is funded and how it is structured. Nowhere is this more evident than in the Australian industry. The future will be a very different place.

These changes are likely to impact on the way that technology is developed and ideas are shared.

ISSCT workshops and congresses provide important forums and contacts, often with long-term implications for the development and utilisation of technologies.

Science works best when ideas are talked about and debated and then built on—it does not work within a vacuum. The challenge for ISSCT is to continue providing that connection among sugarcane practitioners in as open an arena as possible.

Congress program

The procedures for submission of papers and posters put in place for the 26th Congress have continued to work well. The Editor, Mac Hogarth, and the Commissioners and Section Chairs have ensured that quality standards and timelines have been met.

We have 180 papers and 137 poster papers accepted for the 2013 Congress, as well as papers for three plenary sessions: a general one focusing on the future of RD&E organisation; one on the impact of genetics for the agriculturalists; one for the processing community on the future of biomass. These papers are well distributed over the 10 sections and are a significant increase in numbers over the last few congresses.

Workshops

Each section held a successful workshop during the inter-congress period. These workshops are important technical meetings, allowing important interchange of ideas and development of personal contacts.

I know from personal experience, both in Entomology and having attended the last Agronomy-Agricultural Engineering workshop how useful the contacts made at these workshops can be.

A feature was the joint meetings of some of the sections where subjects of common interest could be discussed. The reports of these Workshops are available on the ISSCT website at http://www.issct.org.
Workshops held were:

<table>
<thead>
<tr>
<th>Section</th>
<th>Venue</th>
<th>Theme</th>
<th>Date</th>
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<tr>
<td><strong>Agricultural Commission</strong></td>
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<tr>
<td>Agricultural Engineering</td>
<td>Australia</td>
<td>Sustainable sugarcane production</td>
<td>9–14 September 2012</td>
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<tr>
<td>Agronomy</td>
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<td><strong>Biology Commission</strong></td>
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<tr>
<td>Breeding &amp; Germplasm</td>
<td>Brazil</td>
<td>Breaking breeding and biotechnology paradigms – towards a complementary approach in sugarcane research</td>
<td>15–20 May 2011</td>
</tr>
<tr>
<td>Molecular Biology</td>
<td>Mauritius</td>
<td>Recent advances and new challenges in sugarcane pest management</td>
<td>27 March–1 April 2011</td>
</tr>
<tr>
<td>Entomology</td>
<td>China</td>
<td>Understanding sugarcane diseases for their efficient management</td>
<td>7–11 May 2012</td>
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<tr>
<td>Pathology</td>
<td>China</td>
<td></td>
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<tr>
<td><strong>Factory Commission</strong></td>
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<tr>
<td>Engineering</td>
<td>Australia</td>
<td>Technologies for profitable cogeneration</td>
<td>8–12 May 2011</td>
</tr>
<tr>
<td>Processing</td>
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<tr>
<td><strong>Co-products Commission</strong></td>
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<tr>
<td>Co-Products</td>
<td>Thailand</td>
<td>Successful utilisation of co-products in the sugar industry</td>
<td>19–22 March 2012</td>
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<tr>
<td><strong>Management Commission</strong></td>
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<tr>
<td>Management and Technology Transfer</td>
<td>India</td>
<td>Effective research analysis and technology transfer using a multidisciplinary approach</td>
<td>24–27 August 2011</td>
</tr>
</tbody>
</table>

**Publications**

Selected papers from the 2010 Congress proceedings have been published in *Sugar Cane International* (ceased publication 2011), *International Sugar Journal, Sugar Tech* and *Zuckerindustrie*. This provides a wider distribution of these papers and further recognition of the authors’ input. It reflects well on the standard of congress papers.

**Thanks**

Many people have made it possible for ISSCT to continue to be the premier technical organisation of the world’s sugarcane industries and have made my life easier.

Our Editor, Mac Hogarth, the Commissioners Bill White, Rob Gilbert, Rod Steindl, Pedro Avram and Frikkie Botha, and the Section Chairs and their committee members have contributed greatly to the Congress proceedings and to the successful workshops. I thank them all for their teamwork. I also thank Jean Claude Autrey for his guidance and for ‘keeping me in line’, and my wife Jenny for her continual forbearance.

**Dr Peter Allsopp**  
**Chairman, Technical Program Committee**  
**April 2013**
Introduction

During the inter-congress period 2010–2013 the main features at the level of the ISSCT Secretariat were a consolidation of previous facilities offered to members especially with the acquisition of new office electronic equipment, the creation of a Members’ Corner on the website which contained the proceedings of all ISSCT congresses as well as other items as sources of reference for members and actions in the framework of strategic initiatives for biomass utilization and enlistment of major sugar cane producers. There was a greater interest in the activities of the Society as shown by the higher number of participants at specialized Workshops and in the participation of the XXVIII Congress. The activities were however dominated by the organization of specialized workshops and the ISSCT XXVIII Congress.

Secretariat

The Secretariat was kept on the same premises as since its inception in 1996 and no problem was encountered with its functioning. The staff stayed the same. Two PCs were purchased with appropriate software to render more efficient the interaction with members especially their registration, with Congress Organizing Committee (COC) for smooth preparation of the XXVIII Congress and to meet various requests from members and non-members including international organizations in and outside sugar. The Secretariat was also deeply involved in the preparation of the Mid-Term Meeting held in November 2011. Furniture items were procured to accommodate the large volume of documents that have been acquired over the years especially as hard copies. As far as possible resort was made to soft copies and back up of all documents were made in a different location at the Omnicane Group, the largest sugar cane group in Mauritius.

Finance

Recovery of outstanding sums

In March 2010 the amount of USD 25,745 was owed to ISSCT by various debtors as follows:

- Corporate members: 6 – USD 9,000
- Individual members: 88 – USD 8,800
- Expenses for Secretariat and Editorship: USD 7,945

All these sums were recovered save USD 3000 which were written-off from the books upon advice from Auditors and approval of the Chair of the Finance Committee.
Accounts 2007–2010

The audited accounts for the period 1 September 2007 to 31 March 2010 were submitted to Executive at the Mid-Term Meeting and were approved. They had been audited by Deloitte, Chartered Accountants. All accounts were presented in USD. All expenses for the editing of proceedings and travel expenses of General Secretary and Editor were entirely met by COC and were not included in the Accounts. The income for the period amounted to USD 283,741 of which USD 222,176 represented membership dues, the other sources of income being the MSIRI: USD 13,272, interest: USD 8,412, congress host fee: USD 10,000 and other income: USD 5,265. Expenditure amounted to USD 290,443 presenting a deficit of USD 6,702 compared to surplus USD 45,651 for the period 2005–2007. The audited accounts for the period 1 April 2010 to 31 March 2013 will be submitted for consideration and approval by Executive and Council at the XXVIII Congress.

Income during that period was USD 215,652 compared to an estimated amount of USD 328,900. The difference is due to the fact that membership dues of various categories of members had not been received in their totality as registration is still going on until Congress. Expenditure amounted to USD 353,807 compared to a budgeted amount of USD 326,825 as some items like the Expenses for the Mid-Term Meeting and bank charges were overspent while the fee of the Editor and Production Editor had not yet been reimbursed by COC. The audited accounts will be presented at Congress.

With the Congress being held in June 2013, Executive Committee approved a Supplementary Estimate of USD 15,060 for the period April to June 2013 representing Honorarium of General Secretary, salary for staff, fees, office material, rent, insurance, various expenses and bank charges. The final audited accounts for the period 2010–2013 will be submitted at the Mid-Term Meeting of the inter-congress period 2013–2016.

Online payment system

The Online Payment System established in May 2009 continued to function very efficiently with most members using this mode for settlement of their membership dues. Some, however, prefer credit card which was accommodated by the Secretariat. Dues are now rarely paid by bank draft or bank transfer. This has avoided bank charges which could be quite significant as mentioned in past reports.

Constitution – Policy and Procedures

The changes made to the Constitution at the XXVII Congress have all been included in a version which was approved by the Executive and TPC at the Mid-Term Meeting and which will be submitted to Council at the XXVIII Congress for approval.

The texts of Policy and Procedures associated with the Constitution have also been updated and considered at the Mid-Term Meeting. A hard copy will be circulated to the Council at Congress.

Membership

As at 30 April 2013, membership stood at 1146 including 1050 Individuals, 54 Corporates, 24 Life Honorary, 13 Affiliated, 4 Institutional and 1 Associate. Among the 1146 members there were 805 new ones and 341 renewals.
Among the spheres of activity indicated by members which was not limited to one area, 400 were for Agronomy; 253 for Biology, 339 for Factory, 162 for Co-Products and 265 for Other areas which included Management, Marketing, Economics, Information Technology and Consultancy Services.

Membership exceeded that of the last congress period which amounted to 1087 including 957 Individuals and 76 Corporate members at time of Congress. As the data for 2010–2013 was compiled on 30 April 2013, as it is known that there a large number of registrations in the final weeks before Congress, it is estimated that membership for the current period will far exceed that of the previous one.

The breakdown per country of members for the XXVII Congress and for the XXVIII Congresses as at 30 April 2013 was as follows:

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<td>SOUTH AFRICA</td>
<td>48</td>
</tr>
<tr>
<td>ECUADOR</td>
<td>10</td>
<td>5</td>
<td>KENYA</td>
<td>4</td>
<td>9</td>
<td>SPAIN</td>
<td>–</td>
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</tbody>
</table>

NO INDICATION GIVEN AT CONGRESS REGISTRATION
Honorary Life Membership

At the close of the XXVII Congress the number of Honorary Life Members stood at 25, with the nomination of Louis Jean Claude Autrey (Mauritius) and Mario Melgar (Guatemala). On 4 March 2011 Professor August John Vlitos, passed away. Chuck as he was known was a man of vision and was considered as a charismatic leader by those that worked for him. He had been a very enthusiastic member of ISSCT for decades and played a pivotal role in the reorganization and modernization of the ISSCT in the 1980s. He was an eminent scientist and researcher in his own right, as shown by his large number of publications and his inclination for innovation. He was Director of Research for Tate & Lyle for two decades and, after retirement, was a Director of T&L America. He then went on to be the Director of the World Sugar Research Organisation. Chuck was also a loyal supporter of the British Society of Sugar Technologists. A letter of sympathy was sent by the Secretariat to his family.

Since the number stands at 25 as per Constitution, there could be one possible nomination at the XXVIII Congress. At the request of the Chair Executive Committee, a paper prepared by the Secretariat was tabled at the Mid-Term Meeting to review the procedures for the nomination of Honorary Life Members. At the time of writing this report one nomination had been received in conformity with established procedures.

Website

The Website was completely revamped at the beginning of the present inter-congress period. Its presentation was improved with illustrations from Affiliated members. The presentation of the various sections was also modernized to make them more attractive and more easily accessible by members and other interested parties. Social network Facebook was also included but was not popular with members. Various attempts were made to establish Discussion Fora especially by sections of the Biology Commission but at the end no one volunteered, mainly because of the time that was needed to run such Fora.

A Members’ Corner was created in April 2010. Members upon registration are being provided with a username and password to access the Corner. It contains the Proceedings of the 27 Congresses of ISSCT held from 1924 to 2010. The Proceedings are fully searchable by authors’ names, title, keywords, etc.... Also included in the Members’ Corner is the list of members for the period 2007–2010 and 2010–2013. The Secretariat has assisted various members who wanted to contact other members present on those lists.

Items were put on the website as frequently as possible and it is now fully functional in English, Spanish and French.

Workshops

The reports of the all the Workshops have been put online and members informed accordingly.
INTERNATIONAL SOCIETY OF SUGAR CANE TECHNOLOGISTS

The attendance at Workshops was as follows:
Entomology: 27 March to 1 April 2011, Mauritius: 51
Engineering/Processing: 8 – 12 May 2011, Australia: 57
Germplasm & Breeding/Molecular Biology: 15 – 20 May 2011, Brazil: 148
Management: 24 – 27 August 2011, India: 43
Co-Products: 19–22 March 2012, Thailand: 70
Pathology: 7–11 May 2012, China: 66
Agricultural Engineering/Agronomy: 9 – 14 September 2012, Australia: 105

The total number of participants was 540. It is of note that combined Workshops of Germplasm & Breeding/Molecular Biology and Agricultural Engineering/Agronomy were extremely popular, attracting 148 and 105 participants respectively, representing 47% of all attendees.

Strategic actions and initiatives

Opening of ISSCT to major producers

For the first time an ISSCT activity e.g. the Pathology Workshop was held in China and was very successful as per the report published by the Pathology Section and posted on the website. This activity formed part of one of the strategic initiatives of ISSCT for its opening to major producers, China being the third largest world sugar producer. This initiative will be reinforced in the coming inter-congress period. The General Secretary took advantage of his participation to visit research institutions, universities as well as factories and cane production areas. He had discussions with officials of the International Affairs Department of the China Sugar Association the apex body concerning sugar production in China. The Association expressed the wish to host the ISSCT XXIX Congress and/or its related activities in 2016. Mention was also made of the capacity to host specialized workshops and breeding was one of the areas being privileged. It is evident that both ISSCT and CSA will benefit mutually from common ventures.

ISBUC

Following the meeting held at the XXVII Congress, the Steering Committee made up of Philip Hobson (Queensland University of Technology, Australia), Suleiman Hassuani (Centro de Tecnologia Canavieira, Brazil), Manoel Regis Lima Verde Leal (Centro de Energias Alternativas e Meio Ambiente, Brazil) and of which the General Secretary is the Coordinator, finalized a Project Proposal entitled Proposal to develop gasification for high efficiency power and biofuel production in the sugarcane industry: Stage I – Development of enabling technologies and feasibility. A Call for Expressions of Interest (EOI) to which was attached a Non-Disclosure Agreement (NDA) and a Non-Confidential Summary of the proposal, was circulated to all ISBUC members. Eleven members signed the EOI and the NDA, following which the full project proposal was sent to them. One member has made a formal commitment to provide cash funding to the project.

Given the convergence between the objectives of ISBUC and the Brazilian Gasification Project, discussions were held between its Coordinator Dr Fernando
Landgraf of Instituto de Pesquisas Tecnológicas do Estado de Sao Paulo - SA (IPT) and the Steering Committee of ISBUC with a view to reaching an agreement to undertake a common project. One member of ISBUC Dr David Harris of CSIRO, Australia participated in the Biomass Gasification Symposium held in São Paulo, Brazil from 16 to 21 September 2012. Potential synergies between the ISBUC and Brazilian gasification projects were explored in terms of the project goals and capabilities of the respective development teams with a view to establishing a collaborative agreement. The discussions were inconclusive due to the perception by the Brazilian consortium members that such a collaboration at this stage in the negotiations with their financial backers, the project being worth USD 40 M would introduce unnecessary complexity as well as raising uncertainty in the area of intellectual property ownership.

On account of the difficulties to reach an agreement with the Brazilian consortium the Steering Committee proposes that ISBUC should independently progress aspects of the originally proposed project in which its members have in house expertise. Proposed options for the way forward will be presented to members at the meeting of ISBUC scheduled for Wednesday 26 June 2013 at the XXVIII Congress. Members at this meeting will be asked to indicate their level of support for these proposed options.

**Mid-Term Meeting**

The Mid-Term Meeting was held in Sao Paulo State in November 2011 and was hosted by COC. Among the administrative matters considered were the conclusion of the XXVII Congress in Mexico, amendments to the Constitution, Policy and Procedures, the approval of the Final Accounts 2007–2010, the revision of the 2010–2013 budget, membership fees, cost of attendance at the Mid-Term Meeting, Secretariat, Editorship, Standing Committees, Election of Honorary Life Members, appointment of Councillors, relations with large producers and their organizations, Survey of Members’ Expectation and Satisfaction, service provision and Manual of Procedure for Congress.

The organization of the XXVIII Congress was also covered (see below). Among the strategic initiatives discussed were ISBUC, Better Sugarcane Initiative, Mission Statement and New initiatives. The outcomes of these discussions are contained in the notes of meeting produced by Executive Committee.

**XXVIII Congress**

The XXVIII Congress will be held in São Paulo, Brazil 24 to 27 June 2013. Pre- and Post-Congress Tours will be organized in São Paulo State. An innovative feature is the Post-Congress Tour will be free of charge to delegates as a gesture of goodwill from the Brazilian sugar industry. If at first communication with COC was arduous, it was eased through the discussions held at the MTM in November 2011 in Sao Paulo state. The principles and the procedures concerning the organization of an ISSCT Congress were then adhered to in a large measure. The facilities at the Transamérica Expo Centre in São Paulo were visited and found adequate for the Congress and the Trade Exhibition. The proposals for the Pre-Congress, Post-Congress, Partners’ Programme and social events were agreed upon.
The Congress website which was regularly updated after the MTM, proved useful to prospective delegates. However, the registration system put in place was perceived as complex by prospective attendees who requested assistance to complete their registration for Congress and related activities as well as for accommodation facilities.

A large number of firms both local and international have acquired booths at the Trade Exhibition. The presence of so many institutions and commercial companies will allow delegates to be informed of the latest developments in sugar cane technology which are likely to be of great assistance to them in their professional life.

It is thought that the Congress will be attractive to delegates and their partners and that it will be a success given that the Brazilian industry is at the forefront of science and technology concerning the total exploitation of the sugar cane biomass.

**XXIX Congress**

At the time of this report only one Affiliated member has submitted a formal bid for the holding of the XXIX Congress. Another member had expressed interest in so doing. The deadline for submission of bids is one month before the Congress i.e. 27 May 2013. The bidder and any other ones that may be considered will be invited to make a formal presentation to Council and Executive on Monday 24 June 2013.

At the MTM, Executive Committee decided to produce a Congress Operations Manual on the same lines as the Technical Operations Manual. This new document would detail all the procedures to be followed in line with ISSCT Constitution and arrangements to be made as per the official Policy and Procedures of ISSCT. This document would facilitate the undertakings of COC and a contract is included at the end formally binding COC to ISSCT for the holding of the Congress along agreed mechanisms. A final draft of the document has been produced and will be approved at the XXVIII Congress in Brazil.

**Acknowledgements**

During the period under review, I received assistance and support from the Chair of Executive, Chair of TPC, Chair of Finance Committee, Editor, staff of the Secretariat and Director of MSIRI which have enabled the Secretariat to fulfil its objectives and functions efficiently. I would like to express to all of them my sincere appreciation and gratitude.

L. Jean Claude Autrey  
General Secretary

7 May 2013
OFFICERS OF THE ISSCT AND CONGRESS

XXVIII CONGRESS
Sao Paulo – Brazil – 2013

CONGRESS ORGANISING COMMITTEE
Honorary President of Congress R. Rodrigues
Congress Chairman R. Ometto Silveira Melo
Congress Vice-Chairman J.P. Stupiello
Congress Secretary-Treasurer P. Uchoa
Pre-Congress Coordinator R. Rossetto
Post-Congress Coordinator F. Castelllar
Manager R. Rossetto
Administrative Manager Fatima Tacla

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Vice-Chair William Lee Burnquist Brazil
Chair Technical Programme
Committee (TPC) Peter Allsopp Australia
Members:
Freddie Martin USA
Alvaro Amaya Estevez Colombia
Vinay Kumar Gupta India
Mario Melgar Guatemala
Raul Reissner Mexico
Philippe Rott France
Jorge Scandaliaris Argentina

General Secretary Jean-Claude Autrey Mauritius

*The Executive Committee appoints standing and sometimes ad hoc sub-committees to study and report on specific issues such as finance, constitution, eligibility and strategic initiatives.
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Juan Carlos Mirande  
Matt Keally  
P. Seshagiri Rao  
Paulo E A Uchôa  
Litao Yang  
Camilo Humberto Isaacs  
Carlos E. Saenz Acosta  
Eduardo Lamadrid  
Martinez  
Raúl O. Castillo  
Benoit Coquelet  
Jürgen Bruhns  
Max Letona  
G.S.C. Rao  
Nur Iswanto  
Argentina  
Australia  
Barbados  
Brazil  
China  
Colombia  
Costa Rica  
Cuba  
Ecuador  
France  
Germany  
Guatemala  
India  
Indonesia  
Abdolreza Sayad  
Mansour  
Thierry Merven  
Alberto Mauricio O. Saenz  
Muhammad Awais  
Qureshi  
Ramon Alvarez Picornell  
Gavin Smith  
Kitti Choonhawong  
Mike Getaz  
Jeffrey W. Hoy  
Jesús A. Salazar  
Velásquez  
Iran  
Mauritius  
Mexico  
Pakistan  
Philippines  
South Africa  
Thailand  
UK  
USA  
Venezuela

ISSCT TECHNICAL PROGRAMME COMMITTEE*

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Agricultural Commissioner  
Biology Commissioner  
Factory Commissioner  
Co-Products Commissioner  
Management Commissioner  
Editor  
Peter Allsopp  
Robert Gilbert  
William White  
Roderick John Steindl  
Pedro Avram Waganoff  
Frikkie C. Botha  
Douglas Macdonald Hogarth  
Australia  
USA  
USA  
Australia  
Germany  
Australia

*At Congress, the Technical Program Committee forms an enlarged Technical Panel which includes Chairmen of Sections and COC Collaborators and meets as often as needed to monitor organisation.
ISSCT COMMISSIONS AND SECTIONS

AGRICULTURAL COMMISSION

Commissioner
Robert Gilbert USA

Agricultural Engineering Section
Chair
Kitti Choonhawong Thailand
Members:
Jorge Luis Mangolini Neves Brazil
Neil L. Lecler Zimbabwe
Seif Eldin M. Elnegay UK
Oscar Núñez Ecuador
Cam Whiteing Australia

Agronomy Section
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Members:
Bernard L. Schroeder Australia
Daniel A.J. Marion Réunion
Raffaella Rossetto Brazil
Rianto Van Antwerpen South Africa
Ronald Ng Cheong Mauritius
P. Rakkiyappan India
Ovidio Pérez Guatemala

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Commissioner
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Members:
Philip Jackson Australia
Anna L. Hale USA
Kishore Ramdoyal Mauritius
Haihua Deng China

Entomology Section
Chair
Régis Goebel France
Members:
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Seelavarn Ganeshan Mauritius
Eduardo Willink Argentina
Sopon Uraichuen Thailand

Molecular Biology Section
Chair
Asha Dookun-Saumtally Mauritius
Members:
Angélique D'Hont France
Erik Mirkov USA
Derek A. Watt South Africa
Glaucia M. Souza Brazil
INTERNATIONAL SOCIETY OF SUGAR CANE TECHNOLOGISTS

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Chair
Salem Saumtally
Mauritius

Members:
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India
Freddy Fernando Garces Obando
Ecuador
Michael Grisham
USA
Nicole Thompson
Australia

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Commissioner
Roderick John Steindl
Australia

Engineering Section

Chair
Geoff Kent
Australia

Members:
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Switzerland
Paulo de Tarso Delfini
Brazil
Dev Kumar Goel
India
Adolfo León Gomez
Colombia
Boris Morgenroth
Germany
Morne Bester
South Africa

Processing Section

Chair
Roderick John Steindl
Australia

Members:
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Réunion
Fernando Cesar Boscariol
Brazil
Paul Schorn
South Africa
Michael Sask
USA
J.J. Bhagat
India
Nicolás J. Gil Z.
Colombia

CO-PRODUCTS COMMISSION

Commissioner/Chair
Pedro Avram-Waganoff
Germany

Members:
Rajagopalan Chandramouli
India
Nicolas J. Gil Z.
Colombia
Suleiman José Hassuani
Brazil
Bryan Peter Lavarack
Australia

MANAGEMENT & TECHNOLOGY TRANSFER COMMISSION

Commissioner/Chair
Frikkie Botha
Australia

Members:
Pipat Weerathaworn
Thailand
Mambully Chandrasekaran Gopinathan
India
Janice Dewar
South Africa
David Calcino
Australia
Kessawa Pillay Payandi Pillay
Mauritius
Adrian Theodor Wynne
South Africa
HONORARY LIFE MEMBERS

Honorary Life Membership of the Society was initiated at the XIth Congress in 1962 in Mauritius and the first members were elected at the XIIth Congress in 1965 in Puerto Rico.

J.R. Allen  
O. Almazan  
L.J.C. Autrey  
M.C. Bennett  
T.G. Cleasby  
B.T. Egan  
S. Flores Caceres  
R.M. Hadipoero  
D.M. Hogarth  
S. Kartasasmita  
B.L. Legendre  
M. Leopairote  
E.A.L. Lincoln  
Australia  
Cuba  
Mauritius  
UK  
South Africa  
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Mexico  
Indonesia  
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Those who have passed away

E.V. Abbott  
R. Antoine  
G. Arceneaux  
L. Baissac  
F. Cordovez  
J.L. Clayton  
H.F. Clements  
H.H. Dodds  
K. Douwes-Dekker  
J.L. du Toit  
C.W. Edgerton  
A.L. Fors  
A.G. Gallardo  
K. Gard  
J.E. Irvine  
USA  
Mauritius  
USA  
Mauritius  
Venezuela  
Australia  
Hawaii, USA  
South Africa  
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