

PROGRAMME

SUNDAY, April 30

Registration and information

MONDAY, May 1

Welcome - Dr. Raúl O. Castillo, Workshop Coordinator
Opening - Dr. Nils Berding, Chairman, ISSCT Breeding and Germplasm Committee
Opening address - Ing. Mariano González, President of the Ecuadorian Sugar Research Foundation
Keynote speaker: **Sugarcane Through the Centuries**, *Dr. Guilheme Rossi Machado, Brazil*

GENETIC DIVERSITY, BREEDING AND BIOTECHNOLOGY INTERACTIONS

Chair: *Dr. Anthony Kennedy*

- Genetic diversity in a large collection of *Saccharum spontaneum*
Karen Aitken, Phillip Jackson, George Piperidis, Cai Qing and Fan Yuanhong
- Identification and characterization of intergeneric hybrids of sugar cane (*Saccharum* spp.) and relatives
S. Fukuhara, Y. Terajima, S. Irei, K., Ujihara, T. Sakaigaichi, M. Matsuoka, and A. Sugimoto
- Microsatellite-based paternity analysis of a seven-parent sugar cane polycross
Thomas L. Tew and Yong-Bao Pan
- Progress and plans in applying DNA markers to sugarcane breeding programs in Australia
Phillip Jackson, Karen Aitken, Xianming Wei, George Piperidis, Lynne McIntyre, Jingchuan Li, John Foreman, and Michael Hewitt
- Significance of induced mutation combined with gamma rays and cell culture techniques in sugarcane
Shigeki Nagatomi and Kounosuke Degi
- Optimization of day-length decrement and commencement of initiation for synchronization of tropical sugarcane flowering
Nils Berding

Discussion

Biotechnology and Plant Breeding open discussion

Chair: *Mike Butterfield*

Topics:

1. Where can biotech tools add value to traditional breeding?
2. Where is biotech not useful in breeding?
3. What is preventing programs adopting the currently available tools?
4. Specific applications in your breeding program.
5. Status on transformation of sugarcane.
6. IPRs and biotechnology related to plant breeding.

TUESDAY, May 2

SELECTION METHODOLOGIES, TRIAL DESIGN AND SELECTION CRITERIA OBJECTIVITY IN DETERMINATION

Chair: *Dr. Nils Berding*

- Changes being considered in the early stages of the SASRI selection program
R. C. Parfitt, J. van der Lingen and C. N. MacMillan

- Progress in selection for cane yield and sucrose content in Ecuador
E. Silva, R. Castillo, W. Caicedo, and F. Martínez
- Utilization of wild relatives in sugarcane breeding program in Japan
S. Irei, Y. Terajima, S. Fukuhara, T. Sakaigaichi, K. Ujihara, M. Matsuoka, and A. Sugimoto
- Variety selection to increase sucrose content under less favorable environmental conditions in the Cauca river valley, Colombia
C. A. Viveros, C. Cassalet, and A. Amaya
- A practical method for the early assessment of the value of sugarcane crosses in generating potentially elite genotypes for selection
K. Ramdoyal and M. G. H. Badaloo
- The Central Romana Breeding Program: 50 years of experience of a private effort for the development of sugarcane varieties
J.O. Despradel, A. Edwards, W. Schnirpel, N. Mejia, M. Muñoz, and L.O. Cedeño

Discussion

SELECTION METHODOLOGIES, TRIAL DESIGN, AND SELECTION CRITERIA OBJECTIVITY IN DETERMINATION

Chair: *Dr. William Lee Burnquist*

- Relative economic effect of some pest, disease and harvest traits on variety value: Prioritising non-yield traits for breeding and selection
M. K. Butterfield
- Family x environment interactions in sugarcane in Guadeloupe
D. Roques, L. Toubi, Jean-Yves Hoarau, and P. Oriol
- Breeding for Ratoon Stunt Resistance at Canal Point, Florida
J. C. Comstock and S. Sood
- 'LCP58-384'-The rise and fall of a monoculture
K. A. Gravois and K. P. Bischoff
- Genotype x region interactions in Australia and implications for breeding programs
P. Jackson, S. Chapman, A. Rattey, and X. Wei

Discussion

WEDNESDAY, May 3

Field tour to CINCAE facilities and advanced trials in Valdez and San Carlos Mill areas

THURSDAY, May 4

BREEDING FOR NEW INDUSTRY NEEDS

Chair: *Dr. Thomas L. Tew*

- Adapting a breeding programme to meet new industry needs: from sugar to biomass as quickly as possible
A. Kennedy
- Assessing a pathogen-free smut screen –near infra-red spectroscopic scanning of axillary buds
Nils Berding

Introduction to discussion on Breeding for new industry needs

Dr. Kishore Ramdoyal

Breeding for new industry needs open discussion

Chair: *Dr. Kishore Ramdoyal*

Topics:

1. Breeding for short-cycle crops
2. High quality canes

3. High fibre canes
4. Energy and alcohol canes
5. Agricultural rum
6. Mechanized harvesting
7. High-density planting
8. Marginal areas
9. Low fertilizer input
10. Response to irrigation
11. Precision agriculture and varieties

POSTER SESSION

- **Family effects and phenotypic correlations among industrial quality attributes of sugar cane**
R. A. Sopena and J. A. Mariotti
- **Cryopreservation as a tool for long-term conservation of sugar cane germplasm**
F. Engelmann, M. T. Gonzalez A., F. Paulet, & D. Roques
- **Genetic diversity of Sugar cane Genotypes (Saccharum species hybrids) using agronomic attributes and RAPD markers**
S. Srivastava, Prashant S. Gupta and B. L. Srivastava
- **Venezuelan Sugar cane Variety Development Program**
O. De Sousa-Vieira, R. Briceño, A. Díaz, and R. Rea
- **Releasing three promising sugar cane varieties in Venezuela**
R. Briceño, A. Diaz, De O. Sousa-Vieira, and R. Rea
- **Genetic diversity assesment of the Ecuadorian Sugar cane Collection using RAPD Markers**
K. Cedeño, R. Castillo and E. Silva
- **CENGICAÑA Sugar cane Variety Development Program**
Héctor Orozco, José L. Quemé, Werner Ovallle

Plant Breeding & Germplasm Committee meeting

FRIDAY, May 5

INFORMATION AND COMMUNICATIONS (ICT), INTELLECTUAL PROPERTY RIGHTS AND GERmplasm

Chair: *Dr. Philip Jackson*

- **Plant Breeders' Rights for sugarcane cultivars in Australia –A 10 years history**
G. Piperidis, M. Cox
- **The Plant Breeding Management Information System, a tool to improve the utilization and management of sugar cane germplasm in the MSIRI programme**
K. Ramdoyal, D. Mundil, L. Rivet, F. M. Ng See Choeng, and E. Chintaram
- **Flowering induction under tropical conditions of Ecuador**
H. Romero, E. Silva and R. Castillo

Discussion

Workshop discussions, ISSCT Matters, wrap up