

**BARBADOS**  
**13 - 17 NOVEMBER, 2000**

**Theme:** "Innovative Solutions for Future Progress - Sugarcane Breeding and Germplasm Management Strategies"

**WORKSHOP REPORT**

The 6th ISSCT Breeding Workshop was organised by the West Indies Central Sugar Cane Breeding Station (WICSCBS) in cooperation with the Agronomy Research & Variety Testing Unit (ARVTU) of Barbados Agricultural Management Co., and Barbados Society of Technologists in Agriculture (BSTA) and the Ministry of Agriculture and Rural Development.

The WICSCBS is owned and operated by the Sugar Association of the Caribbean Inc. on behalf of the sugar industries in Guyana, Trinidad, Barbados, St. Kitts, Jamaica and Belize. The WICSCBS also has an association with other sugar industries in the Caribbean, Central America and Africa.

The one-week Workshop was well attended with active participation from 56 breeders and scientists from 25 countries. There were eight subject sessions spread over three and half days. The highlight of the Workshop was a field visit to the WICSCBS and ARVTU. During the Field Day, the participants were able to see the breeding and research facilities of the WICSCBS, one of the two oldest breeding Stations in the world. This visit also included walking through the breeding plots under photoperiodic treatment for flowering control, promising interspecific hybrid selections of various generations from the genetic base broadening programme and parents selected for very high sugar content from a recurrent high quality selection programme. Promising and Commercial variety plots of the West Indies Sugarcane Breeding and Evaluation Network (WISBENO) were also on display.

The first session dealt with Germplasm Management in which various aspects of Germplasm collection, maintenance and exchange were discussed. Some aspects of Intellectual Property Rights and guidelines for the Cultivar Registration were discussed. In the second session on Germplasm Studies four papers were presented. The discussions covered germplasm characterisation and utilisation and genetic studies.

In the third session under the subject Management of Photoperiod in Sugarcane Breeding, five presentations reported the successful use of photoperiodic treatment to make desirable crosses between parents of choice.

The fourth session dealt with the subject, the Sugarcane Genome and Breeding. In addition to the presentation of three papers and discussion on the sugarcane genome, considerable time was spent by the breeding panel to discuss genetic transformation and marker-assisted selection.

Four papers were presented in the fifth session which covered Breeding Strategies for Improving Sugar Content in Sugarcane. The subject matter included recurrent selection for high sucrose content, molecular genetic studies on sucrose accumulation and potential versus realised cane sugar.

The sixth session dealt with Breeding for Resistance to Biotic Stress in Sugarcane. Four papers were presented on various aspects of the genetics of rust resistance. A paper was also presented on resistance to Sugarcane Weevil Borer.

In the seventh session, Sugarcane Breeding Strategies were discussed. There were eight presentations. The papers covered various topics of interest including family selection, selection strategies, genotype and environment interaction, sugarcane varieties and new techniques.

In the final session, a panel discussion took place on Shortening the time for Variety Development. The Workshop closed with a summation from the Germplasm and Breeding Committee Chairman and Recommendations for Future Progress.

**2000-12-22**