COMMITTEE REPORTS AND SECTION MEETINGS

REPORT OF THE STANDING COMMITTEE ON GERMLAST AND BREEDING

Major activities of the Standing Committee on Germplasm and Breeding since the Fifteenth Congress of the ISSCT in South Africa in 1974 have been collection of germplasm in Indonesia and Papua New Guinea, publication of the ISSCT Sugarcane Breeders’ Newsletter, and coordination of the two World Collections of Sugarcane Germplasm, one maintained by USDA at Beltsville, Maryland and Canal Point, Florida, and the other maintained by Coimbatore Sugarcane Breeding Institute, Cannanore, India.

During the period, Mr. Joe Daniels resigned as Chairman of the Committee. It is recommended the Resolutions Committee be instructed to prepare an appropriate resolution commending Mr. Daniels for dedication.

GERMLASM COLLECTION

Resolution Number Nine passed at the Fifteenth ISSCT Congress provided guidelines and partial financing for a jointly supported international sugarcane germplasm expedition. Funds available from ISSCT would not cover the costs of an expedition, so additional financing was solicited from other sources. Attached, as a counterpart of this report, is a list of the contributing organizations and the amount contributed.

Two expeditions were financed: one to Indonesia including Kalimantan, Sulawesi, Moluccas, and Irian Jaya, and another to Papua New Guinea.

Indonesian Expedition

The Expedition Team to Indonesia consisted of Dr. N. Berding, Leader, plant breeder, Bureau of Sugar Experiment Stations, Queensland; Dr. H. Koike, plant pathologist, United States Department of Agriculture, stationed at Houma, Louisiana; and Dr. S. Soenarko, taxonomist, Herbarium Bogoriense, Java.

The expedition was sponsored by the Indonesian Lembaga Biologi Nasional (National Biological Institute), an institution of the Lembaga Ilmu Pengelatan (Institute of Sciences). Dr. Setijati Sastrapradja, Director of Lembaga Biologi Nasional, deserves special recognition for helping to organize and to obtain permits for the expedition to enter various areas in Indonesia.

The expedition was in the field from April 9 to July 4, 1976. Species and genera collected were: Saccharum robustum (177), S. officinarum (124), S. spontaneum (51), S. edule (34), Miscanthus sp. (40), and Rhipidium sp. (152). A comprehensive report by Dr. Nils Berding and Dr. Hideo Koike on the Indonesian expedition detailing the areas covered, diseases, and description of individual clones has been submitted for publication in the Brazilian ISSCT Proceedings.
Papua New Guinea Expedition

The Expedition Team to Papua New Guinea consisted of Mr. M. Krishnamurthi, Director of Experiment Stations Fiji Sugar Corporation, and, again, Dr. H. Koike, United States Department of Agriculture. They were assisted by personnel of the Department of the Primary Industries, Konedobu, Papua, New Guinea under the direction of Mr. A. E. Charles, chief agronomist. They entered Wewak on April 15 and spent 43 days in Sepik, Maprik, Ramu Valley, Markham Valley, Central Highlands, Fly River, Lake Murray, and Port Moresby. As of May 24, 1977 they had collected 242 specimens consisting of: Saccharum officinarum (115), S. robustum (83), S. spontaneum (22), S. edule (9), Miscanthus (12), and Imperata (1).

Quarantine

Quarantine of the Indonesian collection was at the David North Laboratories of CSR at Brisbane, Australia. The asexual cuttings were sent from Brisbane during July and August 1977 to Beltsville, Maryland where they will be held in the United States Department of Agriculture greenhouses for one year prior to transfer to the World Collections at Canal Point, Florida and Cannanore, India.

A duplicate sample of the Indonesian collection was held on Puteran Island, Indonesia. Clones lost in quarantine at Brisbane will be obtained from this planting for shipment to Beltsville.

All cuttings from the Papua New Guinea collection were shipped directly to Beltsville, Maryland for quarantine in the United States Department of Agriculture greenhouses. These will be released during 1978 for distribution to the World Collections.

Finances — As of May 1977

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total funds available</td>
<td>US $ 42,112.00</td>
</tr>
<tr>
<td>Expended on Indonesian Expedition</td>
<td>($ 26,582.00)</td>
</tr>
<tr>
<td>Committed to Papua New Guinea Expedition</td>
<td>$ 11,000.00</td>
</tr>
<tr>
<td>Reserve for processing out of quarantine and shipment to World Collections</td>
<td>$ 4,500.00</td>
</tr>
</tbody>
</table>

It is recommended the Resolutions Committee be instructed to prepare appropriate resolutions commending Drs. Berding, Koike, and Soenarko, Lembaga Biologi Nasional (Dr. Setijati Sastrapradja), Messrs. Krishnamurthi and Charles, Department of Primary Industries Papua New Guinea, CSR, Bureau of Sugarcane Experiment Stations, Queensland, and U.S.D.A. for their efforts in helping to make the expeditions successful.
COMMITTEE REPORTS AND SECTION MEETINGS

WORLD GERMPLASM COLLECTIONS

Reports covering the activities of the two World Collections of sugar-cane germplasm over the past three years and of their present status are attached. It is recommended that the Resolutions Comité be instructed to prepare an appropriate resolution to be transmitted to the government agencies involved.

ISSCT SUGARCANE BREEDERS’ NEWSLETTER

Mr. Brian Roach of CSR has been the Editor of the Newsletter for the last three years and has instituted changes leading to an even higher standard of publication. Mr. Roach deserves the recognition of his colleagues and the Society for his dedicated work. CSR, which published the Newsletter without cost to the Society, deserves recognition as well.

Mr. Roach will finish his term as Editor with the March 1977 issue. Mr. J. A. Lalouette, Head of the Biometry and Plant Breeding Divisions of Sugar Industry Research Institute, Reduit, Mauritius, has agreed to be Editor for the next three-year term, during which time the publication will be sponsored by the Mauritius Sugar Industry Research Institute (MSIRI).

D.J. Heinz,
Chairman

ISSCT GERMPLASM EXPEDITION CONTRIBUTORS

<table>
<thead>
<tr>
<th>Monetary</th>
<th>$</th>
</tr>
</thead>
</table>

ISSCT — General Fund 15,000
American Sugar Cane League 1,000
Copersucar 2,000
Florida Sugar Cane League 5,000
Gulf and Western, Dominican Republic 500
Hawaiian Sugar Planters’ Association 5,000
Japan Cane Sugar Mfg. Association 300
Japan Centrifugal Sugar Industries’ Association 1,000
Japan Sugar Corp. Development Fund 200
Mauritius Sugar Industry Research Institute 1,000
Philippine Sugar Institute 1,000
South African Sugar Association 5,000
The Sugar Association of the Caribbean 2,000
Syndicat des Fabricants de Sucre de L’Île de la Réunion 1,117
Taiwan Sugar Corporation 1,000
Victorias Milling Co., Inc. 1,000

Total 42,117
Personnel

Bureau of Sugarcane Experiment Stations — Nils Berding, Ph.D.
Expedition head and personnel for pathological supervision of quarantine
CSR — Joe Daniels for organization
Quarantine facilities at David North Research
USDA-Houma, Louisiana — Hideo Koike, Ph.D.
Expedition pathologist
National Biological Institute, Bogor, Indonesia — Setijati Sastrapradja, Ph.D., Director and Soejatmi Soenarko, Ph.D., Expedition taxonomist
Fiji Sugar Corporation — M. Krishnamurthi
USDA, Beltsville, Maryland, Quarantine facilities
HSPA — Don J. Heinz for organization

REPORT OF ISSCT GERMPLASM EXPEDITION FUNDS

The ISSCT Custodian, Mr. D. J. Dougherty, submitted the following financial statement dated September 6, 1977:

1. Total Amount Received
   From Contributors .................. $27,112.00
   From ISSCT .................. 9,414.21*
   Total .................. $36,526.21

2. Total Amount Disbursed
   Indonesia Expedition ................ $25,970.38
   New Guinea Expedition .............. 10,555.83
   Total .................. $36,526.21

* Original ISSCT appropriation was $15,000. Funds are available for transfer of collected clones from Indonesia and Brisbane to USDA Quarantine Station, Beltsville, Maryland, USA, and subsequent distribution to World Collections at Canal Point, Florida, and Cannanore, India.

REPORT OF THE STANDING COMMITTEE ON SUGARCANE QUALITY

The XV Congress of the ISSCT created this Standing Committee by passage of resolution No. 8 in June, 1974, at Durban, South Africa. The resolution directed that members be selected from the Agronomy, Agricultural Engineering, Processing, and Physiology and Biochemistry Sections and
from diverse geographical areas. An interim committee was formed in Dur-
ban which consisted of the following:

**Agronomy:**

Dr. Gilberto Azzi  
Planalsucar  
Instituto do Açúcar e do Álcool  
C.P. 88  
Piracicaba (São Paulo) 13400  
Brazil

Processing:

Mr. Emile Hugot  
Sucreries de Bourbon  
BP 49  
St. Denis 97400  
Mauritius

**Agricultural Engineering:**

Dr. James E. Irvine  
U.S. Sugarcane Field Laboratory  
P.O. Box 470  
Houma, Louisiana 70361  
USA

**Physiology and Biochemistry:**

Dr. Gerhard De Beer  
SASA Experiment Station  
Mt. Edgecombe 4300  
Rep. of South Africa

The committee membership was confirmed by the XVI ISSCT Congress and J. E. Irvine was appointed chairman. Dr. Azzi passed away Dec. 18, 1976, and his loss has been greatly felt.

The Standing Committee on Sugarcane Quality was charged with encouraging research in problems related to sugarcane quality, with evaluating the conditions that affect quality, with indicating the areas of need for further research, with acting as a clearinghouse for the exchange of ideas and information, and with providing continuity between Congresses by promoting and fostering symposia.

The Committee wishes to encourage research on the quantitative relationship between dextran and apparent and true sucrose recovery as an increased dextran concentration appears to be related to deterioration in sugarcane quality. The Committee was active in the initiation of a cooperative research project with the Audubon Sugar Institute, Baton Rouge, and the USDA, New Orleans. The thrust of the project will be to develop methods to increase dextran concentration quantitatively so that a mathematical relationship may be developed between the increase in dextran concentration and the loss in sucrose. Additional research will include the quantitative measurement of non-sucrose constituents of different cane parts and their effect on sugar recovery.

Considerable effort has been devoted to establishing the effects of chopper harvesters on cane quality. The deterioration of chopped cane with delayed milling is well documented, but widespread experience indicates that a drop in quality occurs even with fresh material; this may result from the inclusion of tops in the chopped cane. Current research in several areas hopefully will bring us closer to an appraisal of the cost of harvest in terms of the quantity of delivered cane, the quantity of cane left in the field, and the quality of the cane at crushing. Additional research on the relationship of disease and insect infestations on cane quality is being developed.

Much information on sugarcane quality already exists, but the sources are widely scattered. The Committee has established a bibliography, and
further additions are earnestly solicited. After collation has been completed, copies will be sent to interested persons. Because the Committee's objectives are shared, in part, by the International Commission for Uniform Methods of Sugar Analysis, an effort is being made to cooperate with ICUMSA on matters of mutual interest.

The Committee reacted with enthusiasm when requested by the XVI Congress to prepare a symposium entitled "Cane Deterioration". Experts attending the Congress were selected as panel members and were presented with questions on cane deterioration from the floor and from members throughout the world. Requests for relevant questions had been prepared in English and Spanish and sent to 45 countries; 40 replies were received. In view of the encouraging interest in problems of deterioration, the committee has considered applying a similar technique to questions of cane quality in general. A questionnaire was prepared, in English and in Spanish, asking that problem areas in cane quality be identified and their relative importance be indicated. The questionnaire was distributed to delegates at the XVI Congress and will also be mailed to interested members.

REPORT OF THE 1974-1977 STANDING COMMITTEE ON SUGARCANE DISEASES

It is with some regret that I submit my third and final report, after nine years as Chairman of this Committee. I shall miss the official involvement in international sugarcane pathology matters, which was an essential part of the job. The Committee was not as active in this term as in the previous two — perhaps a fresh approach from the new chairman is required.

1. World Disease List

Publication in the 1974 Proceedings of only the additions to the List was not particularly successful, but did save money for the Society. Further scope exists for clarification of disease occurrences in certain regions; while further name changes for countries will be necessary in the next List.

2. Sugarcane Pathologists Newsletter

Four issues have been published since the last Congress by the HSPA, viz. 13/14 in May 1975, 15/16 in July 1976, 17 in November 1976 and 18 in June 1977. Problems arose in 1974 and 1975 due to lack of contributions, so two combined issues were published at yearly intervals. This proved to be unsatisfactory to the editors and to the readers, so it was decided to revert to half-yearly issues irrespective of size. The final issue for 1977 will also be published by HSPA.
My thanks go to the pathologists and other staff of the HSPA Experiment Station for their efforts over the last three years. I am happy to report that the Mauritius Sugar Industry Research Institute will sponsor S.P.N. for the next three years, commencing with the first issue in 1978.

3. Incandex

The International Cane Disease Index continues to function as a free service, thanks to CSR Limited. However, the ranks of pathologists who voluntarily scan the wide range of journals are now rather thin. Additional helpers are needed urgently.

4. Affiliation with ISPP

The International Society for Plant Pathology represents almost 40 national or regional plant pathology societies, aiming to stimulate and coordinate international co-operation in work on plant diseases. Affiliated organizations of ISPP represent groups working on particular problems or with particular crops; they enjoy the use of the ISPP Newsletter for reaching a wide spectrum of interested people, and receive co-operation on matters of special interest. There is no affiliation fee.

I recommend to the Pathology Sectional Meeting that affiliation with ISPP be approved in principle, subject to any requirements of the ISSCT Executive Committee.

4. Retirements

Most of the sugarcane pathology stalwarts of the past 30 years have retired in recent years, or are about to do so. Graham Hughes, Peter Hutchinson, Dave Steindl and Chet Wismer are the latest in that group to go. All have contributed strongly to sugarcane pathology (e.g., Steindl and Hughes on r.s.d.), and to the ISSCT through Committee membership, establishing SPN (Hutchinson), or editing "Sugar Cane Diseases of the World" (Hughes and Wismer). On your behalf, I wish them a happy and fruitful retirement.

6. Other Matters

"Sugar Cane Diseases of the World Vol. I" was published by Elsevier in 1961 under the auspices of the ISSCT. It is now out of print. The publishers have indicated that they might consider reprinting it at some stage. If this is done, it would seem to be desirable to update at least some chapters where major advances in knowledge have been made.

My thanks to all those Committee members who have assisted me throughout my three terms as chairman.

B. T. Egan
Chairman