



Minutes of the Maize Crop Germplasm Committee December 5, 1995 - Chicago, IL

Attendees: J. Dudley (Chair), J. Bing, M. Bohning, P. Bretting, J. Coors, S. Duvick, M. Goodman, A. Hallauer, R. Holley, M. Millard, C. Murphy, L. Pollak, H. Shands, D. Smith, P. Stinard, S. Taba, W. Tracy, L. Wiesner, N. Widstrom

John Dudley opened the meeting and welcomed members and guests. The name of the committee has changed from Crop Advisory Committee to Crop Germplasm Committee. This change was necessary because of the Federal Advisory Committee Act which limits the advisory role of non-federal participants to those serving on committees authorized by the Congress. Although the name has been changed, their importance, role and responsibility remains the same. An updated set of plant exploration guidelines has been distributed to each CGC chair and is available upon request. The National Corn Initiative has been considered by Congress in the past, however it was not mentioned in the FY96 budget.

A report concerning the status of germplasm in the U.S. was developed by each of the CGCs for their respective crops several years ago. Allan Stoner has requested that these reports be updated and forwarded to his office by April 1, 1996. John Dudley split the report into its major sections and assigned members to take the lead in preparing a revised draft for their respective sections. These include:

- I. Introduction - J. Dudley
- II. Present Germplasm Activities
 - A. Breeding Programs - A. Hallauer
 - B. Genetic Stocks - M. Sachs
 - C. Germplasm Storage Bank - P. Bretting
- III. Status of Crop Vulnerability - Don Duvick
- IV. Germplasm Needs
 - A. Collection - M. Goodman
 - B. Evaluation - L. Pollak and R. Holley
 - C. Enhancement - L. Pollak
 - D. Preservation - W. Salhuana
- V. Recommendations
 - A. Priorities - R. Holley

John Dudley asked to receive the drafts by March 1, 1996 which will give him time to summarize and prepare the final report.

Loren Wiesner presented a report on the LAMP regeneration project. Approximately 6,892 accessions have been sent to NSSL and have been placed in cold storage. Additional accessions will be shipped next year. The USAID grant to support this project will end in September of 1996. CIMMYT and NSSL are developing an agreement for the continued support of the project. A draft NPGS Policy statement regarding the backup of the CIMMYT maize collection was then distributed. It states that NSSL will maintain a backup collection of the entire CIMMYT maize collection. The active collection in Ames (NC7) will then contain the CIMMYT core collection, the Caribbean flints and the top 5 percent of the LAMP accessions. The CGC agreed in general with this policy but recommended that NC7 should maintain the top 20 percent of the LAMP accessions. That change will be incorporated into the final document. Any additional LAMP material which U.S. breeders would be interested in could be obtained from CIMMYT. Loren Wiesner then updated the committee on the LAMP project. Stage 4 results for Homologous Areas 1 and 5 have been summarized and distributed. A CD-ROM containing all the LAMP data along with maize genebank data from Agriculture/Agri-foods Canada, CIMMYT and USDA, ARS has also been generated and is available upon request. Summarization of stage 4 results for Homologous Areas 2, 3 and 4 are nearly complete at which time a catalog will be printed and distributed. A report will also be generated for stage 5 once all reports have been received. A meeting of the principal investigators for LAMP-II is being planned for 1996.

Mark Millard reported on the current activities of the NPGS Maize collection maintained in Ames, Iowa. The maize collection currently consists of 14,129 accessions of which 10,048 are available for distribution. Two hundred sixty one accessions were regenerated in 1995 and an additional 250 are planned for 1996. An additional 100 accessions were increased in 1995 in Puerto Rico.

Significant progress has been made in acquiring images of the maize collection which will provide more detailed information on the accessions. A cold room which is capable of handling -20 degrees centigrade storage has recently be completed. This room will be used to store original seed samples. The Galinat-Mangelsdorf collection has been placed in sealed plastic pouches and placed in the -20 C cold storage facility which will provide optimum storage conditions until it can be regenerated. A discussion then ensued on incorporating the Barbara McIntock collection into the NPGS. The committee recommended that the upcoming maize genetic stock meeting would be an appropriate place to address this issue.

Philip Stinard updated the committee on the activities of the Maize Genetics Cooperative Stock Center. 2,022 accessions were distributed in response to 245 requests. Seed increases on several new stocks along with stocks in low supply were obtained despite problems with the weather and pests. Data on the stocks are being entered into a local database which is now accessible over the World Wide Web (WWW). An order module has also been established along with direct links to GRIN.

A report was presented on the disease and insect problems encountered in 1995. The major disease problems included gray leaf spot, Stewart's disease, anthracnose, Aspergillus ear rot and Diplodia ear rot. The increase in these diseases appears to be directly correlated with minimum tillage practices. Several members recommended that this hypothesis should be studied in more detail and suggested that programs dealing with natural resources and water quality should be considered as possible funding sources. Major insect problems included western corn rootworm, european corn borer and spider mites. A discussion then ensued on identifying evaluation priorities for the maize collection. Dave Smith presented a proposal to evaluate the core subset and elite LAMP accessions (500 accessions per year) for resistance to 10 foliar diseases. The evaluations would be conducted at several locations for a cost of approximately \$18,000 per year. Private industry is willing to provide 50% of the funding but the remainder would most likely be requested from the NPGS. Henry Shands indicated that in order to fund this project dollars would probably need to be taken from other existing projects such as the maize regeneration program. After a lengthy discussion on priorities for the maize collection, John Dudley volunteered to develop a list of priorities which he will distribute to the entire committee for review.

Linda Pollak distributed a report on the GEM project. \$500,000 was allocated to the project by Congress in 1994 to support GEM coordination, data management and analysis, evaluation of value added traits and management/release of enhanced germplasm. Two additional USDA-ARS support scientists have been added to the Ames, IA staff in support of GEM. One position will concentrate on evaluating value added traits and the other will work with data management and analysis. Two field days were held in 1995 at Ames, IA and Madison, WI which increased the projects exposure to farmers and the general public.

The membership of the Maize CGC was reviewed by committee members. The committee agreed to rotate membership with a three year membership term and the opportunity for renewal. New members whose tenure will begin with the 1996 meeting of the committee include:

Dr. Neal Widstrom
Georgia Coastal Plain Experiment Station
P.O. Box 748
Tifton, GA 31793-0748

Dr. James G. Coors
1218 Sweetbriar Road
Madison, WI 53705

An additional new member will be named at a later date. These appointments replace Dr. M. M. Goodman, Dr. C. W. Stuber and Dr. A. R. Hallauer.

There being no more business, the meeting was adjourned.