

Minutes

11th RTWG Germplasm/Rice CAC Meeting
San Antonio, Texas
October 22, 1990

The 11th meeting of the RTWG Germplasm/Rice Crop Advisory Committee was held in conjunction with the 82nd Annual American Society of Agronomy Meeting at San Antonio, Texas. Members present were J. Bernhardt, K. Grubenman, S. Linscombe, J. Stroike, R. Dilday (Chairman) H. Bockelman (Curator), M. Bohning (CAC Facilitator) and C. Murphy (National Program Staff Representative). Other participants were H. Beachell, C. Bollich, P. Bollich, T. Chang, N. James, D. Ranney, D. Rathore, N. Rutger, H. Shands, and D. Vaughn. Agenda items were as follows:

- (1) Minutes of 10th meeting: The minutes were accepted as amended.
 - (a) One dissenting vote (C.W. Johnson) in item 6.
 - (b) C.W. Johnson was concerned that the accepted rotation of membership would result in loss of continuity. If this happens the committee should reevaluate the present rotation (addition to item 6).
- (2) Report on conference and workshop meetings at IRRI (May, 1990).
 - (a) Report on Rockefeller Conference - Shannon Pinson
The meeting stressed international cooperation to advance rice genome mapping; progress toward developing a gene map in rice; blast resistance, aromatic and Hoja blanca genes, genetic engineering methods and Bt gene insertion and testing.
 - (b) Report on the 2nd International Genetics Conference - Steve Linscombe.

The general conclusion at the Genetics Conference was that the practical uses of a gene map in rice for breeders may not be realized in the near future.
 - (c) Report on 3rd International Germplasm Workshop - Bob Dilday.
The objectives of the workshop were to assess the present status of global rice germplasm conservation, preservation and duplication; determine the needs for future collection of rice germplasm; standardizing documentation systems for rice germplasm; discuss a network approach that will integrate conservation, evaluation and utilization; and discuss new research techniques needed in rice conservation and evaluation.

Antonio Medeiros (Curator) of Brazil prepared an Oryza sativa (land race cultivars) and wild species collection project proposal to be submitted to the IBPGR for funding as part of a follow up to the workshop. The project would include a collection trip in 1991 to the North Region of Brazil, 1992 - Central/West Region, 1993 - Northeast Region, and 1994 - North and Central/West Regions.

Medeiros would like for the project to be a cooperative effort between scientists from the U.S. and Brazil.

Dilday reported that he had initiated rice germplasm exchange programs with Japan, Malaysia and Indonesia since the 3rd International Rice Germplasm Workshop at IRRI.

- (3) Cooperative rice germplasm activities between the U.S. and India, USSR, and China - Norman James.

China - The coordinator for the China project is Henry Shands

Objectives of project:

- (a) Exchange germplasm between USDA/ARS and State scientists of many disciplines with China.
- (b) On site training
- (c) Program designed toward exchange of visiting scientists.
- (d) Conduct joint germplasm explorations and share genetic resources and gene transfer technology.

USSR - The coordinator of the USSR project is Paul Fitzgerald

Objectives of the project:

- (a) Similar to China project.
- (b) Visiting scientists - the receiving country pays for the visit which is about \$20-25,000/year.

India - The coordinator of the Indian project is Norman James
This is a joint 5 year project between USAID (\$13 million) and India (\$8 million).

The major objectives are:

- (a) Build new seed storage facilities and laboratories at 8-10 regional sites.
- (b) Train 30-50 scientists over 5 years with each scientist being trained for 3-6 weeks.
- (c) U.S. consultants will travel to India.
- (d) Collaborative projects between U.S. and Indian scientists.
- (e) Field explorations.

Two rice proposals have been submitted (India Project):

- (a) J.N. Rutger submitted a proposal to enlarge our collection of wild species of rice germplasm.

- (b) R.H. Dilday submitted a cooperative state proposal with the University of Arkansas at Pine Bluff (Drs. Mazo Price and Md. Jalaluddin) to enlarge our rice collection for drought tolerant germplasm.

Germplasm Exchange

China has developed photoperiodic sensitive male sterile germplasm in rice.

U.S. scientists have requested the germplasm but have not received it. Also, T.T. Chang at IRRI has requested the photosensitive germplasm but IRRI has not received a response from China.

J.N. Rutger has developed an apparent photoperiodic male sterile line in rice and he has obtained a PI number and made seed available to the base collection at Fort Collins, Co. and the working collection at Aberdeen, ID.

The Rice CAC was asked for advice on seed distribution of the U.S. photoperiodic male sterile if seed request were received from China. Two approaches were discussed (1) U.S. policy is to supply germplasm to any bona fide scientist or their county and (2) the CAC suggested that the U.S. may want to bargain for the Chinese photoperiodic male sterile germplasm.

- (4) Status of USDA/ARS rice germplasm collection and Oryza species - Harold Bockelman.
 - (a) The collection currently has 16,059 accessions.
 - (b) Data on plant height, days from emergence to flowering, straighthead, salt tolerance, 100 kernel weight and allelopathic activity to duck salad and redstem have been entered into GRIN.
 - (c) The manual dealing with rice quarantine is being revised and a new in vivo method of testing accession in quarantine is being evaluated. The quarantine facility at Glendale, MD can currently handle about 250 accession per year.
- (5) Germplasm Resources Information Networks (GRIN) - Mark Bohning.
 - (a) Need to enter passport data and possibly some data from previous curator files.
 - (b) Increasing the use of GRIN by international users is being encouraged.
- (6) Seed quality and rejuvenation of USDA/ARS germplasm accessions - Bob Dilday.
 - (a) A total of 216,000 characteristics in rice were evaluated between 1986-90.

- (b) Approximately 11,000 accessions were rejuvenated in 1988-90 and seeds of these accessions were returned to the working collection at Aberdeen, ID.
 - (c) About 3,000 accessions will be rejuvenated in 1991.
- (7) Evaluation of IRRI accessions and other accessions of unknown origin - Jim Stroike.
- (a) About 1,100 accessions of unknown origin were grown at Alvin, TX (RiceTec) and data of 10 descriptors per accession were recorded.
 - (b) Hank Beachell evaluated the material and he thought that the germplasm may have originated from China, Philippines, U.S.A. and Africa. Beachell's recommendation was that only a small number of the accessions should be combined. This recommendation was based on the descriptor information that was taken in the field at RiceTec.
- (8) IRRI Germplasm Collection - T.T. Chang
- (a) Currently there are about 84,000 accessions in the IRRI rice germplasm collection.
 - (b) Previously IRRI received about 1,000 accessions/year from China but presently they receive essentially no rice germplasm from China.
 - (c) There are about 40,000 rice accessions from IRRI at the National Seed Storage Laboratory at Fort Collins, CO. About 4,600 accessions are in the GRIN System.
- (9) Rice Germplasm Collection Trips - Duncan Vaughn
- (a) Recently wild relatives of rice have been collected in Asia (except China).
 - (b) Germplasm needs to be collected from Brazil, Central America, Peru and Bolivia.
 - (c) Rice germplasm was collected in 1989-90 from Cambodia and Laos but the material needs to be reviewed to determine if additional collection trips are needed.
 - (d) All of the IRRI collection trip reports are in the IRRI library and Robert Reed (IBPGR) registers each collection trip.

Minutes taken by John Bernhardt and submitted by the Chairman of the Rice CAC.