

MINUTES
28TH RICE CROP GERMPLASM COMMITTEE MEETING
Monday 18 February 2008
San Diego, California

The 28th meeting of the Rice Crop Germplasm Committee was held Monday 18 February 2008 in San Diego, California. Members in attendance were James Gibbons (Chair), Karen Moldenhauer, Farmin Jodari, Dwight Kanter, Jim Oard, Billie Woodruff, M.O. Way, Georgia Eizenga, Harold Bockelman, Clarissa Maroon-Lango, and Anna McClung. Members absent were James Correll, Robert Fjellstrom, Kay Simmons and Mark Bohning.

The minutes of the 27th Rice Crop Germplasm Committee held 14 February 2007 in Memphis, Tennessee were read and approved by a motion from Karen Moldenhauer and seconded by Dwight Kanter.

A report on the status of the rice collection given by Harold Bockelman stated PI assignments for 263 accessions ranging from PI 642943-PI 652774 had been made. Since 2006 about 200 accessions were removed from quarantine, received PI numbers and all the descriptors were added. A majority of the material introduced included the introductions from Japan, described below by Clarissa Maroon-Lango. Varieties which were patented or had a PVP (utility patent) are included in the list. These accessions can be registered in the *Journal of Plant Registrations* (formerly these were in *Crop Science*) and the developer distributes the seed for the first five years, after this period the variety is placed in the germplasm collection and distributed from the collection. The software for GRIN is being rewritten so that it will accommodate molecular marker data with the new version. This will allow accessions to be fingerprinted.

Clarissa Maroon-Lango provided a written report on the activities at APHIS Plant Germplasm Quarantine Program related to rice quarantine. During 2007, 460 rice introductions were processed with assistance from John Guerber at the University of Arkansas. In summary, of the 58 introductions from Japan, 55 were released from quarantine and sent to the National Small Grains Collection. This completes the grow-out of the Japanese introductions. Of the 411 introductions from Indonesia only 39 introductions were released from quarantine and sent to NSGC, highlighting the very low viability of the Indonesian introductions. Clarissa questioned whether the remaining 500 Indonesian introductions brought in 20 years ago still need to be a priority. The decision was to prioritize the Indonesian introductions.

A procedure for introducing clonal wild *Oryza* species introductions was adapted from procedures used for other grass species and bud sticks from tree species. Ten wild species imported from IRRI underwent the first round by testing this fall and after the second round of testing spring 2008, these introductions may be released in late spring or summer to the requestor. Through collaborations with IRRI, CIAT, YARI (Korea), serological tests for rice tungro bacilliform virus, rice tungro spherical virus and rice hoja blanca virus were developed. ELISA techniques are under development for rice grassy stunt virus and rice ragged stunt virus. Future introduction of clonal material needs to be in quarantine for two seasons, this could be spring to fall but must be coordinated with Clarissa. (The hot water treatment will not be eliminated because of the white tip nematode.) Also, Clarissa and the "Poaceae Team" visited

the Dale Bumpers National Rice Research Center on June 14, 2007, besides meeting people and facilities, ideas for making the quarantine and indexing program less labor intensive were shared.

Harold Bockelman discussed the International Treaty on Plant Genetic Resources for Food and Agriculture, referred to in several MTAs including the SMTA (standard MTA) which all the International Agricultural Research Centers of the Consultative Group on International Agricultural Research (CGIAR) including IRRI and CIAT now use. The State Department has approved the agreement and it is now in the senate for approval. Also, Harold mentioned the Svalbard global seed vault which is being built near the North Pole and is to be a permanent seed vault to preserve the world's germplasm. It is time to think about the next question of prioritizing what seed will go into the vault.

Fleet Lee, rice pathologist, mentioned that the "Compendium of Rice Diseases" is being updated and the editors are looking for persons to write the sections.

Wengui Yan, who coordinates rice germplasm evaluation, requested discussion relating to the following descriptors in GRIN. Groups providing descriptor information include the NSGC at Aberdeen, ID which provides endosperm type (based on amylose data), hull color and cover, rough rice weight and sterile lemma color. Resources at the DB NRRC are committed for ASV, amylose, brown rice weight, protein, days to flowering, lodging, plant height, plant type, awn type, bran color, kernel length, kernel width, L/W ratio, and panicle type. It was clarified the protein descriptor is done on brown rice not milled rice and the definition in GRIN should reflect this. Changing the descriptor "kernel weight-milled" to "kernel weight-brown" to reflect other kernel measurements and avoid the variation due do milling, was approved. Descriptors which require substantial time/resources are blast, sheath blight, straighthead, aromatic, parboil loss, allelopathy and salt tolerance thus, there is limited data. It was noted that for the core collection, Fleet Lee has evaluated 500-600 accessions per year for blast and sheath blight in the field. Drought stress in the field affects the blast evaluations. In the greenhouse Fleet evaluates for seven blast races.

Dr. Yan stated that the entire rice collection has about 20,000 accessions at the present time from 116 different countries. This past year 2,288 accessions were regenerated with 730 kg of seed produced. Long season accessions were grown in Puerto Rico. For the core collection, 48 SSR markers were completed and an additional 27 SSRs were added that will be completed spring 2008, with both genome-wide and targeted markers. In summary, the core is characterized for 30 morphological traits and there will be fingerprints of the core collection with markers about every 30 cM. Subsequently, these data will be subjected to an association mapping analysis.

Anna McClung suggested the SSR marker data on the core could be correlated with any trait of interest and used for mining that trait. Shannon Pinson, in collaboration with David Salt, Purdue University, will evaluate mineral content of the grain for the core collection. There is a collaboration with China to look at about 100 accessions for out-crossing based on stigma behavior, probably this will focus on a particular region.

M.O. Way, a member of the APHIS committee for the rice panicle mite, stated that APHIS is not pushing the methyl bromide treatment of greenhouses where the panicle mite has been identified.

The plant pathology group suggested a formal letter to APHIS from the germplasm committee regarding the direction APHIS plans to take in dealing with the panicle mite. M.O. Way stated that Brian Kopper is the chair of the APHIS group, thus the letter should be addressed to him. After more discussion, it was decided that the letter would help but it would be better to wait and see if the panicle mite is found in fields this summer. It was noted that the panicle mite is definitely in Puerto Rico but has not been found at the University of Mayaguez station where the University and USDA rice winter nursery is located. M.O. stated that the mite has been found in a commercial field in Louisiana and if it is found in other fields then APHIS will assume the mite cannot be contained. Natalie Hummel from LSU, is tasked with research on rice panicle mite.

The update of the committee membership concluded the meeting. Alan Stoner has retired and his position has not been filled thus, this Ex-Officio position on the committee will not be filled at this time. James Gibbons nominated Farmin Jodari for another 6 year term, motion was seconded by Dwight Kanter and approved. Dwight Kanter nominated Xueyan Sha to replace Robert Fjellstrom for a 6 year term, motion was seconded by Karen Moldenhauer and approved. Karen Moldenhauer nominated Georgia Eizenga for a two year term as the committee chairman, motion was seconded by Dwight Kanter and approved. Motion to adjourn the meeting was made by Karen Moldenhauer and seconded by Dwight Kanter.

Appendix I. CGC members as of Feb 18, 2008 with year term ends in parentheses.

<p>Dr. Georgia Eizenga, Chair (2012) USDA-ARS Dale Bumpers National Rice Research Center 2890 Hwy 130 E Stuttgart, AR 72160 Georgia.Eizenga@ars.usda.gov</p>	<p>Dr. Farmin Jodari (2014) Calif. Coop. Rice Res. Foundation P.O. Box 306 Biggs, CA 95917-0306 fjodari@crf.org</p>
<p>Dr. Dwight Kanter (2010) MAFES Delta Branch Experiment Station P.O. Box 197 Stoneville, MS 38776 dgkanter@drec.msstate.edu</p>	<p>Dr. Jim Oard (2010) Louisiana State University M.B. Sturgis Hall Department Of Agronomy Baton Rouge, LA 70803 Joard@agcenter.lsu.edu</p>
<p>Dr. Billie Woodruff (2012) RiceTec, Inc. PO Box 17396 Jonesboro, AR 72403 bwoodruff@ricetec.com</p>	<p>Dr. M.O. Way (2010) Texas Ag Exp. Station 1509 Aggie Drive Beaumont, TX 77713 moway@aesrg.tamu.edu</p>
<p>Dr. James Correll (2012) Plant Pathology Dept. University of Arkansas Fayetteville, AR 72701 jcorrell@uark.edu</p>	<p>Dr. James Gibbons (2012) Rice Research and Extension Center University of Arkansas 2900 Hwy 130 E Stuttgart, AR 72160 jgibbon@uark.edu</p>
<p>Dr. Karen Moldenhauer (2010) Rice Research and Extension Center University of Arkansas 2900 Hwy 130 E Stuttgart, AR 72160 kmolden@uark.edu</p>	<p>Dr. Xueyan Sha (2014) Rice Research Station LSU Ag Center 1373 Caffey Road Rayne, LA 70578 XSha@agcenter.lsu.edu</p>
<p>Dr. Harold Bockelman, Ex-officio USDA-ARS National Small Grains Collection 1691 S 2700 W Aberdeen, ID 83210 Harold.Bockelman@ars.usda.gov</p>	<p>Dr. Anna M. McClung, Ex-officio USDA-ARS Dale Bumpers National Rice Research Center 2890 Hwy 130 E Stuttgart, AR 72160 Anna.Mcclung@ars.usda.gov</p>
<p>Mr. Mark A. Bohning, Ex-officio CGC Facilitator USDA-ARS National Germplasm Resources Room 400 10300 Baltimore Ave. Bldg. 003, BARC-West Beltsville, MD 20705-2350 Mark.Bohning@ars.usda.gov</p>	<p>Dr. Clarissa J. Maroon-Lango, Ex-officio Lead Plant Pathologist USDA, APHIS, PPQ, PHP, PSPI Plant Germplasm Quarantine Program (PGQP) Bldg. 580, BARC-East, Powder Mill Road Beltsville, MD 20705 Clarissa.J.Maroon-Lango@aphis.usda.gov</p>
<p>Dr. Kay Simmons, Ex-officio USDA-ARS, NPS, Nat. Prog. Leader, Plant Genetics & Grain Crops. 5601 Sunnyside Avenue Beltsville, MD 20705-5139 Kay.Simmons@ars.usda.gov</p>	