INUTES
44th RICE CROP GERMLASM COMMITTEE MEETING

Monday, February 17, 2025
Hilton New Orleans Riverside Hotel
New Orleans, Louisiana

The 44th Rice Crop Germplasm Committee (CGC) meeting was held in a hybrid format on Monday, February 17, 2025. Members in attendance were Georgia Eizenga (Chair), Brijesh Angira, Stan De Guzman, Teresa De Leon, Yulin Jia, Jack Okamuro, Stanley (Omar) Samonte, Qiming Shao, Gretchen Zaunbrecher and Shane Zhou. Members attending virtually were Bishwo Adhikari, Trevis Huggins and Gary Kinard. Members Nick Bateman, Harold Bockelman, Neha Kothari and Ed Redoña were unable to attend. The 16 guests in attendance were John Carlin, Luis Espino, Will Eubank, Ford Frost, Dustin Harrell, Manoch Kongchum, Frank Maulana, Ann Noble, Kim Nyka Perdiguerra, Kimberly Ponce, Darlene Sanchez, Nirmal Sharma, Shyamal Talukder and Ted Wilson. Guests attending virtually were Melissa Jia and Jai Rohila.

Georgia Eizenga, Rice CGC chair, opened the meeting and noted that the minutes of the 43rd Rice CGC meeting held virtually, were approved via email on May 13, 2024. Of note, the minutes of the Rice CGC committee meetings (1984 to present) are now available at: https://www.ars-grin.gov/CGC.

**Jack Okamuro** presented the USDA/ARS Office of National Programs report for **Neha Kothari** who was hired in November 2024 but unable to attend. He gave the presentation, "The National Plant Germplasm System (NPGS): 2025 Status, Prospects and Challenges". The mission of the NPGS is to support agricultural production by acquiring, conserving, evaluating and characterizing, documenting and distributing germplasm. The NPGS contains over 621,600 accessions with 476,000 available for distribution and represents 16,737 species. Because of the value of the accessions in the NPGS and the fact that the NPGS has been operating on a flat budget when adjusted for inflation, the 2018 Farm Bill directed USDA to develop and implement an assessment to address the significant backlogs in the NPGS. The "NPGS Plan", released in late 2023, is available at https://www.ars-grin.gov/Pages/NPGS. An Infographic listing the key elements of the plan and a diagrammatic summary with a 1 to 5-year and 6 to 10-year timeline for implementing the plan also is available on the same website. To promote funding for this NPGS Plan you are encouraged to submit success stories for rice highlighting the importance of rice accessions in the NPGS. Four rice stories are currently included (https://colostate.pressbooks.pub/pgrsuccessstories/). Lastly, the NPGS encourages collaborations/ partnerships with the appropriate curator(s) to improve the quality and availability of the collections. When publishing state the "USDA National Plant Germplasm System" as the source of materials, when appropriate.

**Gary Kinard**, USDA/ARS National Germplasm Resources Laboratory (NGRL), which is comprised of three groups, the 1) Plant Exchange Office, facilitating domestic and international plant exploration and exchange; 2) Database Management Unit (DBMU), responsible for the GRIN-Global database; and 3) Plant Disease Research Unit, focused on pathogens affecting clonal crops. Of concern is the recent loss of IT specialists in the DBMU, going from seven to one IT specialist. Significant improvements and changes to GRIN-Global over the past year were: 1) the Standard Material Transfer Agreement (SMTA) acceptance is not required for non-propagative material as of Jan 1, 2025, 2) the user can exclude GEO

(genetically engineered organism) material as part of the advanced search, 3) a GEO acceptance requirement has been added prior to submitting requests for GEO material, 4) the DOI (digital object identifier) field was added at the accession level (not currently used in NPGS but widely used internationally), and 5) the user can select accessions with images as one of the parameters in a descriptor search.

**Bishwo Adhikari**, USDA/APHIS Plant Germplasm Quarantine Program (PGQP), Team Lead for the *Poaceae* Quarantine Program reported the purpose of the team is to ensure safe importation of rice seeds to prevent exotic fungal and bacterial pathogens from being imported and monitoring the importation of *Oryza* species identified as noxious weeds. In Bishwo's lab, the imported rice seeds are planted in the spring and released to the requestor in the fall or early winter. Tissue from all accessions being imported is sequenced using High-Throughput Sequencing (HTS) for possible pathogen detection. Three people, that were recently hired in Bishwo's group, were affected by the latest "down-sizing" efforts of the new administration. Of the 390 Heat-MAGIC lines imported from the International Rice Research Institute (IRRI) in 2024, 150 lines were grown and tested by Bishwo's team in 2024 and 145 were released to Trevis Huggins. The remaining five lines are being tested further. In 2025, Bishwo's team will plant an additional 75 rice lines in the spring of 2025 and test for any pathogens present. The remaining 75 rice lines were sent to Brandon Wodka, at the University of Arkansas Rosen Center in Fayetteville, AR for grow-out and testing. As on update on endornaviruses, there was additional validation of the RT-PCR test developed a few years ago and it was noted that the endornavirus titer is different at different growth stages. Unlike many other plants, mature rice plants have higher viral titer. To date, there has been no evidence of any plant endornaviruses being pathogenic and a study focused on the functional characterization of the viruses using infectious particles of these viruses was proposed to observe potential disease symptoms.

Shane Zhou briefly shared that the White leaf disease of rice or *Hoja blanca* disease (HBD) caused by the White leaf rice virus or the Rice *Hoja blanca* tenuivirus (RHBV), which affects the leaves of the rice plant by stunting the growth of the plant or killing it altogether was found in the rice ratoon crop in Louisiana and Texas in 2024. The RHBV is found in South America, Mexico, Central America and the Caribbean region. The short discussion focused on the fact that RHBV is seed transmitted, in the late 1950s to 1960s, RHBV was reported in Louisiana and Florida, and a killing frost during the winter months will decrease the incident of HBD.

The report prepared by **Harold Bockelman**, Curator (retired) for the National Small Grains Collection (NSGC) was presented by Trevis Huggins, USDA/ARS Dale Bumpers National Rice Research Center (DBNRRC). Harold reported there are currently 18,720 *Oryza sativa* accessions originating from 110 countries, not including the USA, available for distribution and 201 other *Oryza* species accessions. In the past year, 15 new PI assignments were made for four recently released varieties developed by Louisiana (3) and Texas (1), and 11 NERICA (New Rice for Africa) accessions imported from AfricaRice (Cote D'Ivoire). Since Feb. 1, 2024, NSGC has distributed 980 seed packets (accessions) as part of 74 separate seed requests.

**Trevis Huggins**, USDA/ARS Dale Bumpers National Rice Research Center (DBNRRC) reported that the Genetic Stocks-*Oryza* (GSOR) collection currently holds 32,177 accessions. The Nipponbare TILLING mutants of (approx. 6,000 accessions) were returned to the donor because their inventory was exhausted. The *Tropical japonica* core (TRJ Core) collection of approximately 530 accessions will be

available in late 2025. (Currently, the publication is being drafted.) Four new germplasm lines were donated to GSOR, Eclipse, a semi-dwarf, medium-grain Calrose with low amylose content and blast resistance and three lines selected from a Cybonnet x Saber RIL population with blast resistance and quality like the parents. From 2024 to present, GSOR shipped 7,688 seed packets to fulfill 82 requests with 64 being shipped to U.S. requestors.

The "Rice Crop Vulnerability" slide was shared with the committee for review. No updates were suggested at the meeting. It will be circulated again when these minutes are sent for approval. (This was done and there were a few revisions which Georgia incorporated.)

Votes regarding **committee membership** included:

1) A motion by Gretchen Zaunbrecher to have Georgia Eizenga, Omar Samonte, Qiming Shao and Shane Zhou serve another six-year term, ending in 2031, was seconded by Teresa De Leon and Stan De Guzman and supported by the committee membership.

2) A motion by Stan De Guzman to have Will Eubank, agronomist at the Mississippi State Univ. Delta Branch Experiment Station in Stoneville, MS, assume the vice Ed Redoña position on the committee for a six-year term, was seconded by Qiming Shao and supported by the committee membership.

3) A motion by Teresa De Leon for Georgia to serve a 2-year term as committee chair. This was seconded by Omar Samonte and Bishwo Adhikari which was subsequently supported by the committee membership.

A motion by Georgia to adjourn the 44$^{th}$ Rice Crop Germplasm Committee meeting. This motion was seconded by Trevis Huggins and supported by the committee membership. The meeting adjourned at 10:35 am.

Appendix I. CGC members with year term ends in parentheses (Feb. 17, 2025).

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| Dr. Georgia Eizenga, Chair (2031)<br>USDA-ARS Dale Bumpers National Rice Research Center<br>2890 Hwy 130 E<br>Stuttgart, AR 72160<br>Georgia.Eizenga@usda.gov | Dr. Brijesh Angira (2029)<br>H. Rouse Caffey Rice Research Station<br>Louisiana State University<br>1373 Caffey Road<br>Rayne, LA 70578<br>BAngira@agcenter.lsu.edu |
| Dr. Nick Bateman (2029)<br>Rice Research and Extension Center<br>University of Arkansas<br>2900 Hwy 130 E<br>Stuttgart, AR 72160<br>nbateman@uada.edu | Dr. Christian (Stan) De Guzman (2027)<br>Rice Research and Extension Center<br>University of Arkansas<br>2900 Hwy 130 E<br>Stuttgart, AR 72160<br>deguzma@uark.edu |
| Dr. Teresa De Leon (2027)<br>California Cooperative Rice Research Foundation<br>P.O. Box 306<br>955 Butte City Highway (Hwy 162)<br>Biggs, CA 95917-0306<br>Tdeleon@crrf.org | Dr. Will Eubank (2031)<br>Delta Branch Experiment Station<br>Mississippi State University<br>82 Stoneville Rd.<br>P.O. Box 197<br>Stoneville, MS 38776<br>twe34@msstate.edu |
| Dr. Stanley (Omar) Samonte (2031)<br>Texas A&M AgriLife Research Center<br>1509 Aggie Drive<br>Beaumont, TX 77713<br>stanley.samonte@ag.tamu.edu | Dr. Qiming Shao (2031)<br>Nutrien Ag Solutions<br>676 County Rd 324<br>El Campo, TX 77437<br>qiming.shao@nutrien.com |
| Dr. Gretchen Zaunbrecher (2029)<br>California Cooperative Rice Research Foundation<br>P.O. Box 306<br>955 Butte City Highway (Hwy 162)<br>Biggs, CA 95917-0306<br>gzaunbrecher@crrf.org | Dr. Xin-Gen (Shane) Zhou (2031)<br>Texas A&M AgriLife Research Center<br>1509 Aggie Drive<br>Beaumont, TX 77713<br>xzhou@aesrg.tamu.edu |
| Dr. Bishwo Adhikari, Ex-officio<br>Lead Plant Pathologist & Program Manager, Poaceae Quarantine Program<br>USDA-APHIS<br>Plant Germplasm Quarantine Program<br>Bldg. 580, BARC-East<br>Beltsville, MD 20705<br>bishwo.n.adhikari@usda.gov | Dr. Harold Bockelman, Ex-officio<br>Curator (Retired), NSGC<br>USDA-ARS<br>National Small Grains Collection<br>1691 S 2700 W<br>Aberdeen, ID 83210<br>Harold.Bockelman@usda.gov |
| Dr. Trevis D. Huggins, Ex-officio<br>Curator GSOR<br>USDA-ARS Dale Bumpers National Rice Research Center<br>2890 Hwy 130 E<br>Stuttgart, AR 72160<br>Trevis.Huggins@usda.gov | Dr. Yulin Jia, Ex-officio<br>Research Leader/Center Director<br>USDA-ARS Dale Bumpers National Rice Research Center<br>2890 Hwy 130 E<br>Stuttgart, AR 72160<br>yulin.jia@usda.gov |

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| Dr. Gary Kinard, Ex-officio<br>Research Leader<br>USDA-ARS<br>National Germplasm Resources Laboratory<br>Beltsville, MD 20705<br>Gary.Kinard@usda.gov | Dr. Neha Kothari, Ex-officio<br>USDA-ARS, NPS<br>Nat. Prog. Leader, Plant Genetic Resources, Genomics & Genetic Improvement<br>5601 Sunnyside Avenue<br>Beltsville, MD 20705-5139<br>Neha.Kothari@usda.gov |
| Dr. Jack Okamuro, Ex-officio<br>USDA-ARS, NPS<br>National Program Leader, Plant Biology<br>5601 Sunnyside Avenue<br>Beltsville, MD 20705-5139<br>Jack.Okamura@usda.gov | |