

Coffee and Cacao Crop Germplasm Committee

11 November 2021 Meeting Minutes

3:00-4:30 (PR); 2-3:30 PM (Eastern); 1-2:30 PM (Central & Costa Rica); 12-1:30 PM (Mountain); 11 AM-12:30 PM (Pacific); 9-10:30 AM (Hawaii)

Attendees:

Dominique Dessauw, Kimo Falconer, Sarada Krishnan, Vern Long, Juan Medrano, Chifumi Nagai, Ray Schnell, Ed Seguine, Suzanne Shriner,

Ex-officio: Tomas Ayala Silva, Peter Bretting, Ricardo Goenaga, Osman Gutierrez. Gary Kinard, Tracie Matsumoto, Lyndel Meinhardt,

Absent:

Eduardo Cortes, Rolando Cerda Bustillo, Mark Gultinan, Felipe Ozonas, Path Umaharan, Fernando Vega

Ex-officio: Stephanie Greene, Tim Rinehart, Gayle Volk, Christina Walters, Dapeng Zhang

• Welcome & roll call

Sarada Krishnan, chair of the committee welcomed everyone and did a roll call to capture attendance.

• Approval of November 18, 2020 meeting minutes

Juan Medrano moved and Ed Seguine seconded the approval of the minutes and they were approved.

• USDA NIFA Coffee Leaf Rust Research Grant

Suzanne Shriner provided an overview of the \$6.07 million grant received from USDA NIFA. The grant was awarded to Synergistic Hawaii Ag Council which is a consortium of Hawaii Coffee Association, Hawaii Papaya Industry Association and Hawaii Floriculture and Nursery Association with a mission to unite their members' resources and support the growth of Hawaii agriculture. They also seek to remove economic barriers, expand markets and promote trade for their producers. The NIFA Specialty Crop Research Initiative (SCRI) grant proposal includes nine consortium members representing Hawaii and Puerto Rico. Grant period is for four years from January 2022 to December 2025. The five main objectives of the grant include:

1. Varieties:
 - a. field trial of resistant varieties
 - b. clonal propagation of varieties
 - c. root-knot nematode resistance testing
2. Survey and Environmental Monitoring:
 - a. incidence and severity monitoring in non-resistant farms
3. Field management:
 - a. fungicides – systemic, contact and biocontrols
 - b. biological control surveys and evaluations
 - c. optimizing field health in non-resistant trees
4. Pathogen and host characterization:

- a. genome assembly at Aime Lab, Purdue
 - b. understanding resistance to CLR
- 5. Economics:
 - a. cost benefit analysis by Michigan State

- **Cacao and coffee germplasm update and hiring**

Tracie Matsumoto gave an update on coffee germplasm, genotyping of coffee and World Coffee Research International Multi-Location Variety Trial (IMLVT). The tentative offer for the Research Geneticist position has been accepted. Coffee plants from HARC, University of Hawaii and grower fields have been sent to Dapeng Zhang, ARS Beltsville for genotyping. Seeds have been germinated in Hilo in the greenhouse for planting. IMLVT varieties arrived on September 4, 2020 and are in propagation in tissue culture in quarantine. Of the varieties, nine of them are susceptible to CLR and 21 are tolerant/resistant. Trials will be conducted in Kauai, Oahu, Maui and Kona.

- **Cacao Characterization and Evaluation**

Tomas Ayala Silva gave an update on the characterization and evaluation project that received funding from the NPGS. Evaluation and characterization was done on the remaining old collection, Ecuador and Criollo clones. Data was collected on number of pods, weight, length, number of seeds, color of pod and seed. Evaluation was done on black pod and other diseases of importance. All passport data and images (except for five Criollos) have been entered in GRIN. Organoleptic characterization was done through fermentation process. Chronology of various field maintenance activities was provided. Trees are looking very healthy. Will have to see if there are viruses. Sending samples of every tree to Judy Brown to test for Cacao Mild Mosaic Virus (CAMMV).

- **2021 NPGS Briefing**

Peter Bretting provided an update of the National Plant Germplasm System – 2021 Status, Prospects and Challenges. The presentation has been distributed to everyone.

- **WCR update on the Medium Density SNP panel and breeding program**

Vern Long mentioned that a meeting about this program will be hosted next week. The WCR breeding network will be launching next year. The crosses that have been made in Central America is yielding bumper crops. Seeds can be shipped in Q4 of 2022.

- **2022 meetings**

We will have one meeting each for the Coffee and Cacao subcommittees respectively and a meeting of the entire committee toward the end of the year. Sarada will send out meeting dates.

- **Other business**

- Plant exploration funds – Gary Kinard said that decision will be made end of the year or early next year.
- GRIN – improvement to the public website will be made by end of the year.
- Christina Walters could not attend the meeting and sent updates via email:
 - NP301 (ARS's national program for genetic resources) has just begun its 5-year cycle planning. This begins with every unit writing their broad research objectives for the next 5 years, need for research, anticipated products, etc. We need to discuss representation of coffee and cacao GR in those plans and how this CGC can help.

- NLGRP Fort Collins: we're at very early planning stage. There is some coffee seed research, and probably some coffee clonal research for preservation. With seeds, we're interested in the preservation, but also with identifying specific genetic lines to preserve & distribute and how that process may look (this in collaboration with Dapeng and World Coffee Research and associated colleagues).

The meeting adjourned at 3:30 pm ET.