

Soybean Germplasm Committee Meeting March 2, 2020

The meeting was called to order by chair Dechun Wang and those present introduced themselves.

Members present were:

Dechun Wang, Chair and Public Breeder North (Michigan State University, East Lansing, MI) (chair term 2019-2020, public breeder term 2016-2022)

Zenglu Li, Public Breeder South (University of Georgia, Athens, GA) (term 2016-2022)

Jennifer Jones, *ex officio* SmithBucklin/United Soybean Board representative (Chesterfield, MO)

Esther Peregrine, *ex officio* Assistant Curator (USDA-ARS, Urbana, IL)

Rusty Smith, *ex officio*, Associate Curator (USDA-ARS, Stoneville, MS)

Thomas Hoffman, Vice-Chair and Private Breeder North (Corteva, Johnston, IA) (vice-chair 2019-2020, private breeding term 2016-2022)

Qijian Song, Molecular geneticist, genomicist (USDA-ARS, Beltsville, MD) (term 2020-2023)

Anna Locke, Physiologist (USDA-ARS, Raleigh, NC) (term 2020-2023)

Krystal Navarro, Pathologist (Corteva, Johnston, IA) (term 2020-2023)

Attended via call-in video conference:

Bob Stupar, Genomicist (University of Minnesota, Minneapolis, MN) (term 2020-2023)

Louise O'Donoghue, Canadian Breeder (CEROM, Saint-Mathieu-de-Beloeil, Quebec) (term 2015-2021)

Lilian Miranda, Private Breeder South (BASF, Pikeville, NC) (term 2016-2022)

Leon Sun, Pathologist (BASF) (2020-2023)

Gary Kinard, NGRL (USDA-ARS, Beltsville, MD)

Members not present:

Roy Scott, *ex officio* Nation Program Staff representative

The minutes from 2019 were reviewed. Thomas Hoffman corrected his address.

The Soybean Germplasm Collection Report were reviewed and discussed.

Louise O'Donoghue asked which maturity groups had been screened for SNC by Prakash Arelli.

Zenglu Li asked about testing GE traits in addition to the Roundup Ready I and II. At the moment, the Roundup trait is the one being tested since contamination has already been found for it. Additional traits might be tested in the future. Thomas Hoffman pointed out that when plants are sampled in a plot, any that test positive need roguing before flowering to prevent possible cross-pollination.

Qijian Song is genotyping 1,349 lines with the Illumina 50K SNP that were not including in prior testing. This data will be added to Soybase. A suggestion was made to ask Soybase to send an email announcement when this is done. David Hyten has also started a USB project to sequence the accessions with low sequence coverage.

It was suggested that a list of new accessions received be posted online each year. Esther said that this could be added as an appendix to the Soybean Germplasm Collection Annual Report.

Bob Stupar reported that he has 400 genetic mutants ready to add to the collection. Esther Peregrine commented that it was her understanding that the lines would be distributed until the seed was gone. Bob thought that the lines were supposed to be maintained and seed regenerated as needed, so Roy Scott will be consulted about what the agreement entails and also to clarify that no MTA are attached to the lines.

Gary Kinard presented the annual National Germplasm Resources Laboratory (NGRL) report. Highlights from His report:

Quinn Sinnott retired as the GRIN Database Administrator and Benjamin Haag was hired as a new IT specialist. There are 4 vacant positions in the NGRL with plans to fill them this year.

The deadline for submitting proposals for explorations or exchanges to be conducted in FY 2021 is July 24, 2020

Crop Germplasm Committees:

- The CGC section in GRIN (<https://www.ars-grin.gov/CGC>) was revised when the GRIN platform was migrated to the Microsoft Azure cloud in September 2019.
- Please send updates to the individual crop committees of the CGC page on GRIN (<https://www.ars-grin.gov/CGC>) to Gary Kinard.
- Most committees continue to meet regularly and are active. Committees are particularly urged to update their Crop Vulnerability Statements and several CGCs recently completed new versions.
- A virtual meeting/web conference was held for CGC Chairs on March 25, 2019. Updates were provided from ARS and the NPGS including on international issues related to plant genetic resource exploration and exchange, GRIN-Global, and the activities of the CGCs.
- NGRL has a WebEx conferencing account that is available to the CGCs to host virtual meetings (teleconference and/or webinar).

The GRIN-Global plant database included the following:

596,132 active accessions representing 13,481 species and 2,497 genera

3,353,167 inventory records

2,050,371 germination records

8,414,832 characteristic/evaluation records

469,116 digitized images

The entire GRIN platform (all databases and informational pages) were migrated from in-house servers to the Microsoft Azure cloud in September 2019. At that time, the GRIN home page (www.ars-grin.gov) was totally redesigned with new navigation for the ARS genetic resource collection informational pages, the Crop Germplasm Committee pages and the content for the National Genetic Resources Advisory Council.

A new version of the GRIN-Global (accession search, accession detail, germplasm requests, etc.) public website is anticipated to be released in spring 2020.

Current information about the project, including user documentation and release notes from each version of the software, can be found on the project website at <https://www.grin-global.org/>.

Key NGRL Contacts

Research Leader

Gary Kinard (gary.kinard@usda.gov, 301-504-5951)

Plant Exchange Office

Melanie Schori (melanie.schori@usda.gov, 301-504-8895)

Karen Williams (karen.williams@usda.gov, 301-504-5421)

GRIN Data Management and Reporting

Benjamin Haag (benjamin.haag@usda.gov, 301-504-3441)

Crop Germplasm Committees

Gary Kinard (gary.kinard@usda.gov, 301-504-5951)

Plant Disease Research Unit

Ruhui Li (ruhui.li@usda.gov, 301-504-7653)

Dimitre Mollov (dimitre.mollov@usda.gov, 301-504-8624)

Candidates for soybean curator has been interviewed and it is hoped that a new person will be hired soon. It was suggested that the committee meet via a teleconference to introduce themselves to the new curator. One of the tasks to be done is to create a soybean Crop Vulnerability Statement to be posted on the CGC web site.

Dechun Wang will be rotating off as committee chair and vice-chair Thomas Hoffman will become chair. Anna Locke, whose term expired in 2020, volunteered to continue in her position as physiologist from 2020 to 2023 and also become vice-chair. Dechun was thanked for his time as committee chair.

Respectfully submitted,

Esther Peregrine, Assistant soybean curator