

## Soybean Germplasm Committee Meeting September 30, 2020

The Zoom meeting was called to order by chair Thomas Hoffman.

Members present were:

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

Anna Locke, Vice-Chair and Physiologist (USDA-ARS, Raleigh, NC) (vice-chair 2020-2022, physiologist term 2020-2023)

Adam Mahan, *ex officio* Curator (USDA-ARS, Urbana, IL)

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

Roy Scott, *ex officio* Nation Program Staff representative

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

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

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

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

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

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)

Members not present:

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

Thomas welcomed Adam Mahan as the new soybean curator, and everyone introduced themselves.

From the Crop Vulnerability Statement guidelines: “Crop vulnerability statements (CVS) communicate periodic assessments of the challenges that crops face, particularly from reduced genetic diversity resulting from genetic erosion. Collections of genetic resources are key mechanism for reducing crop vulnerability resulting from genetic erosion and uniformity, and for supplying crop breeding and research programs with novel traits and underlying genes to satisfy evolving demands.”

Roy Scott said that a one-page summary was preferred to give to commodity groups. Congressmen, etc. Some crops also have a long report available for those who want more details.

The last soybean Status of Crop Vulnerability Statement was updated in 2004 and the committee members agreed that it should be brought up to date especially for current disease and insect resistance, drought and environmental vulnerability due to climate change, and protein status of U.S. soybeans versus competing countries.

Jennifer Jones stated that she could gather some statistics from USB data.

A subcommittee consisting of Adam Mahan, Jennifer Jones, Zenglu Li, and Thomas Hoffman will work on a first draft to be submitted to the rest of the committee members by the end of October.

Robert Stupar asked about the 400 genetic mutant stock accessions that are slated to be added to the soybean collection. He thought that these should be increased by the germplasm staff when needed. Roy Scott said the original agreement was only to distribute the seed and that funds were not available for the cost of increasing them. A discussion was held to discuss what types of germplasm should be kept and the need for additional funds if the collection grows larger. Robert Stupar pointed out that there is not much value to simply having the stock center distribute the materials, as the shelf life of soybean seeds is short and the materials will be lost in a couple of years. Jennifer Jones mentioned that millions of dollars were invested by the NSF to generate the soybean mutant materials, and that investment is essentially lost to the community when there is no repository for these materials. Roy Scott stated that the researchers who wrote this proposal should have first solidified a long-term storage plan before submitting and obtaining the funding. Stupar mentioned that the current situation will hinder future efforts by soybean researchers to obtain competitive grants, as other crop communities have developed an infrastructure to collect, maintain, and distribute novel genetic stocks, in addition to their "natural variation" collections. Roy Scott stated that the soy community will have to be better prepared to provide extramural funding to cover new initiatives, such as this, that fall outside of the fixed ARS appropriated budget. He gave examples of how ARS can partner with stakeholders to develop new initiatives that sometimes can add new funding to supplement the ARS appropriated budget.

Thomas Hoffman was going to email the minutes from the February meeting for the committee to approve.

Respectfully submitted,

Esther Peregrine, Assistant soybean curator