

Soybean Germplasm Committee Meeting Minutes Feb. 11, 2019

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

Members present were:

Dechun Wang, Vice Chair and Public Breeder North (Michigan State University, East Lansing, MI)

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

Thomas Hoffman, Private Breeder North (Corteva, Ames, IA)

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

Anna Locke, Physiologist (USDA-ARS, Raleigh, NC)

Bob Stupar, Genomicist (University of Minnesota, Minneapolis, MN)

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

Members not present:

Zenglu Li, Public Breeder South (University of Georgia, Athens, GA)

Kelly Whiting, *ex officio* United Soybean Board representative

Lilian Miranda, Private Breeder South (BASF, Pikeville, NC)

Teresa Hughes, Pathologist (Monsanto, St. Louis, MO)

Roy Scott, *ex officio* Nation Program Staff representative

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

Visitors:

Nicole Bachleda, University of Georgia

Elroy Cober, Agriculture and Agri-Food Canada

Wei He, visiting scientist from China, currently working in Dr. Qijian Song's lab

Zixiang Wen, postdoctoral research associate, Michigan State University

The minutes from 2018 and the Soybean Germplasm Collection Report were reviewed and discussed.

There were 518 seed requests filled in 2018, with a total of 21,254 items. These were sent to 40 states and 28 countries.

Bob Stupar said that he is doing additional NIR screening on the University of Minnesota fast neutron mutants and running GBS analysis to cull contaminants. There will be approximately 400 lines to add to the Soybean Collection, selected from 20,000 lines developed in 2007. The intellectual property rights are still being worked out so that the final lines selected will not have MTAs restricting their distribution.

Since the collection was genotyped with 50K SNPS, 1400 new lines have been added. The materials to genotype these lines have been purchased. DNA extracted from plants grown in the greenhouse at Urbana are being sent to Qijian Song to genotype. Dr. Song has written a program which computes the genetic distance between accessions. Anne Brown is working to make this available on Soybase.

Qijian Song is also analyzing southern breeding lines for 6000 SNP markers. His grant funded by southern breeders, so he would need additional source of funding before testing northern lines

A research cross was found to be contaminated with the Roundup Ready gene. As a result, AP testing of the germplasm collection for the Roundup Ready gene is being conducted by the Illinois Crop Improvement Association. So far, 5,411 seed lots have been sampled, and 4 tested positive. All cooperators who received any of the contaminated seed lots were notified, and those accessions are no longer being distributed. All new accessions will be tested before being added to the active collection. The ARS procedures and best management practices for genetically engineered traits in plant germplasm and breeding lines were discussed. For most cases USDA/ARS proposes testing for a <1% AP tolerance level for GE traits in conventional germplasm accessions and breeding lines as a balance between aspiration and practicality. Kathleen Yeater, USDA statistician, suggested 20 soybean seeds as a minimum amount to sample for the collection inventory seed lots.

There is one Round Ready variety with an expired Plant Variety Protection Certificate and 4 more that will expire in 2019. USDA/ARS is still working on a protocol for handling these accessions. These will not be added to the active collection until a protocol is approved.

Final candidates for the curator vacancy left by Randy Nelson have been selected and interviews scheduled. A possible committee meeting to introduce the new curator via the internet was suggested.

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. The Crop Vulnerability Statement (CVS) for soybeans has not been updated since 2004. It is recommended that the CVS be reviewed every year, with a more comprehensive assessment of current conditions every 5 years or so. Concise one-page CVSs are now recommended. It is hoped that the new curator will draft a Crop vulnerability statements (CVS) for soybeans. This could then be discussed as a committee via email or a web meeting some time later in the year.

Several years ago, the committee agreed to make the assistant curator the recording secretary, but this had not been recorded in the By-Laws. A vote was taken to amend the By-Laws from "The vice chair shall record the proceedings of all meetings, maintain contact lists for all Committee constituent groups, coordinate annual elections, and assist the chairperson as requested." to "The assistant curator shall record the proceedings of all meetings, maintain contact lists for all Committee constituent groups, coordinate annual elections, and assist the chairperson as requested."

Thomas Hoffman was selected as a new vice chair. Committee members were asked to send Dechun Wang the date they started serving on the committee so that records could be updated. Any one whose term is expiring should be replaced with elections held in November.

Respectfully submitted,

Esther Peregrine, Assistant Soybean Curator