

Minutes of the Soybean Crop Germplasm Committee meeting

St. Louis, MO

21 February, 2011

Members in attendance: Vince Pantalone, Silvia Cianzio, Randy Nelson, Esther Peregrine, Jeff Thompson, John Rupe, Istvan Rajcan, Rouf Mian, Glen Bowers, Larry Purcell, Rusty Smith.

Absent: Terry Niblack, Steve Muench, Roy Scott

Guests: Gary Kinard

Call to order by Vince Pantalone, Chair, Soybean Germplasm Committee at 8:10 am.

Agenda was approved by unanimous acclamation.

Germplasm Collection Report – Ester Peregrine

As of January 1, 2011 the USDA Soybean Germplasm Collection now comprises:

18,875 *Glycine max* entries.

1, 178 *Glycine soja* entries.

1,004 Perennial *Glycine* accessions.

Collection total of 21,057 entries.

29,510 seed lots from 14,752 accessions from the USDA Soybean Germplasm Collection in response to 705 requests from 346 individuals.

This is the only collection that distributes more samples than the number of accessions in the collection. The Potato Collection is the second most active collection.

Acquisitions sub-committee – Rouf Mian

The RoundUp Ready trait is coming off patent in 2014. The question of retaining cultivars in the Collection that contain transgenes was considered. Possible options are: 1) Store transgenic cultivars only at NSSL; or 2) Store in the main collection at Urbana. Potential issues

to consider are: 1) the possibility of Adventitious Presence (AP) in non-transgenic cultivars. Suggestion was made to routinely sample the Collection for AP; and 2) although the RoundUp Ready trait comes off patent in 2014, most cultivars have utility patents that can still be enforced.

The group also discussed retaining cultivars that are coming off PVP protection. PVP protection is also extended to RoundUp Ready cultivars. There was discussion around the number of cultivars to retain in the Collection. The consensus was that the Collection exists to maintain genes and not necessarily genotypes. Concerns were also raised regarding waiving of MTA's and willingness to disclose pedigrees from private companies. The group thought that this may be possible. Randy Nelson will develop a set of criteria and ask for recommendations from private companies. Randy will also distribute to all public breeders for recommendations as well.

Efforts are continuing to secure new germplasm exchanges with Japan, Korea and China. Japan is very open to exchange, but they have predominately *G. soja* germplasm for exchange. Korea has shown no inclination to work with USDA on additional exchanges. No comments were made regarding China.

Evaluation sub-committee – Sylvia Cianzio

Several entities are actively searching for new sources of resistance and/or tolerance to: Soybean Cyst Nematode, Sudden Death Syndrome, Charcoal Rot, *Phomopsis*, Pythophthora Root Rot, Asian Soybean Rust, and various insects. Work that has been conducted in the past, but not known if currently active: Chinese Soybean Aphid, Soybean Mosaic Virus, Bean Pod Mottle Virus, and Asian Soybean Rust.

The sub-committee's priorities for Insect and Disease screening and evaluation are: 1) Frog-Eye Leaf Spot, 2) *Cercospora spp.*, 3) Southern Root-Knot Nematode, 4) Reniform Nematode, and 5) Stink bug (all species).

Priorities for abiotic stress screening are: 1) Drought, 2) Heat, 3) Chloride Salt Tolerance, 4) Flood Tolerance, 5) Ozone.

Other priorities for seed related traits are: Oil & Protein Composition and Germinability.

The committee also encourages researchers to add the identification of the genetic differences between resistance sources as a part of their research objectives.

There is adequate seed available for the 2011 General Evaluation. This committee should make this fact known to researchers. We are currently establishing priority screening needs. A question was raised regarding requesting data back from researchers regarding their germplasm work. A request for this data goes out with every seed request, but the data is seldom received.

Operations sub-committee – Ester Peregrine

SNP data is becoming available on GRIN. The plan is to move the SNP data into Soybase first and then transition over to GRIN. The same plan is in place for the Soy Hap Map. The goal is for all of these applications to link or cross-communicate with one another. The Genesis bio-diversity portal may be another option used to access the data. There are plans to link the SNP citation with each PI accession.

Cold storage space at for the Collection is desperately needed at Urbana, IL.

NGRL Report – Gary Kinard

Gary Kinard reported that discussions over user-fees for phytosanitary inspections have been held. The inspection costs are typically \$50,000 to \$60,000 per year. This is an expense that PEC cannot manage. The highest costs are for the international requests. Annual requests from international entities represent 30% of the total. A proposal has been made to transfer the phytosanitary costs to the international requestor. The committee agreed that this was a reasonable and fair proposal. It is not likely that Aphis would stop charging ARS because 100% of the revenue coming into Aphis is generated by these fees. Shipping costs are not trivial either. The requestor is not required to pay shipping, but can do so voluntarily. There was a concern among the committee that transferring phytosanitary and shipping costs to the requestor might reduce requests from third world nations. However, the majority of shipments do not go to those countries and there are provisions that could be made for them. The committee agreed that one outcome of these changes might be fewer total requests, but larger in size. Please refer to the attachment for the complete NGRL report.

Office of National Programs Report – Gary Kinard

The FAO Treaty (IT) for Plant Genetic Resources for Food and Agriculture is under discussion in the Senate Foreign Relations Committee (SFRC). During their last Business Meeting of the 111th Congress (30 November 2010), the SFRC voted the IT out of committee, for consideration by the full Senate. Unfortunately, the Senate adjourned on 22 December 2010 without voting on the IT. The SFRC plans to schedule new hearings on the IT during 2011, and move it to the full Senate for a vote for consent (or not) to IT ratification. It is anticipated that the treaty will be ratified. Please refer to the attachment for the complete ONPR report.

GRIN Update – Gary Kinard

GRIN is changing to GRIN GLOBAL. This is being done by a major grant from the Bill and Melinda Gates Foundation. The new system will be designed to be used internationally and will be free allowing access in poorer countries. It is expected to take four years to phase in GRIN GLOBAL. The intent is to make GRIN GLOBAL database neutral, which is a difficult thing to do. As a result, the project is six months behind and there will be no cost extension until late March 2011. The current goal is to have GRIN GLOBAL operational by the end of Q2 2011 and full deployment sometime in 2012. There is a beta version out now on the GRIN public website.

Another project to digitize all PI books from 1989 to present is near completion. These will be available as pdf files. Please refer to the attachment for the complete NGRL report.

New Business

Jason Bond was elected to succeed John Rupe as the Pathologist representative on the Committee. Jason's term will begin at the conclusion of this meeting and run for three years.

Sylvia Cianzio was elected Vice-Chair.

The committee agreed that if a member wished to change sub-committee assignments that a request should be submitted to the Chair for approval.

Discussion was held on how to enhance the activities of our committee. All agreed that the term of activity should extend beyond the annual meeting in February. Suggestions of quarterly email discussions and a mid-year teleconference were made. Also, a list of action items from our meetings should be made and progress toward completion should be monitored. It was also suggested that our committee make better use of GRIN as an archive for our activities.

John Rupe reported on the status of the Pathogen Collection. The intent of this collection is to maintain race/biotypes of the major pathogens that affect Soybean. John suggested that our committee send a letter of support to John Sherwood at APS in time for their mid-March 2011 meeting. Istvan Rajcan volunteered to send a letter of support on behalf of the Committee. John also suggested that this issue be brought to the attention of the full CSB membership.

Gary Kinard suggested that this committee review and submit an updated Crop Vulnerability Report to ARS. If the current report is four years old or greater, then it should be revised. The suggested goal for completion is February 2012.

Meeting was adjourned at 11:50 am.

Next meeting will be held on Monday, February 27, 2012 at CSB in St. Louis, MO.

Key Action Items

- 1. Randy Nelson will develop a set of criteria for retaining cultivars that come off PVP protection and submit to private companies and public breeders for recommendations.**
- 2. Istvan Rajcan will draft a letter of support for the Pathogen Collection and submit to John Sherwood.**
- 3. Jeff Thompson will notify Jason Bond of his election to the Committee.**
- 4. Jeff Thompson will develop a list of key action items for 2011 and submit to the Committee.**