

## **Agenda Item C: National Plant Germplasm Coordinating Committee**

### **Lee Sommers, Chair**

**September 22, 2008**

The National Plant Germplasm Coordinating Committee (NPGCC) held a conference call on Wednesday, February 27, and met in Ft. Collins, CO on June 5, 2008 at the ARS-USDA National Center for Genetic Resource Preservation. The June meeting attendees were Peter Bretting, Lee Sommers, P.S. Benepal, Dan Upchurch, Ann Marie Thro, Eric Young, Candice Gardner, Jerry Arkin, and Mike Harrington. Also included at the end of this report is a one-pager written by Peter Bretting on "Brief History of NPGS Plant Introduction Stations".

### **National Plant Germplasm System Update – Peter Bretting**

- Static or sinking budgets
- Collection increasing, now >1/2 Million accessions
- Increase in distribution demand, average per year increased from 120,000 - >150,000 over last 4 year average, ¾ of these are domestic distributions
- APHIS now has responsibility for moving germplasm through quarantine, which is one the ARS '08 budget for NPGS decreased slightly
- APHIS also does phytosanitary certificates, but currently charges for services. ARS is discussing the possibility of eliminating these charges
- Cost of new technology is increasing rapidly, hard to balance that with increased quantity or quality of output, have to make sure the investment is worth it
- Increase in distribution is greatest in specialty crops
- Farm Bill funding for specialty crops will probably increase demand even more
- Genomic research is generating a large number of transgenic crop lines. National Plant Germplasm System is considering criteria to decide which of these to maintain long term
- Priority order of National Plant Germplasm System activities:
  1. Maintenance
  2. Regeneration, documentation, and data management
  3. Acquisition
  4. Distribution
  5. Characterization and evaluation
  6. Enhancement
- If budget differentials get too large between stations, may need to move a collection, which could be politically and operationally difficult and would have to be carefully justified
- If the National Plant Germplasm System collections were established and sited strictly on technical merit, the geographical distribution of NPGS sites would be different than at present. But, relocating sites now would be complicated because of the political and historical factors that contributed to the current NPGS organization and to the substantial, durable support for the NPGS.
- The location of collections is dependent on many factors, but there may be a few collections that should be moved
- National Plant Germplasm Coordinating Committee could oversee this decision process with technical experts and industry consultation
- There is approximately an 18 month window now to make same changes due to new Farm Bill, changes in administration, and current economic condition
- Major factors in locating a collection
  - Technical expertise of curators
  - Adaptation of crop to local environment

- Future curators have to now be trained “on the job” because there is no academic program in genetic resources curation
- There might be an opportunity to develop a curriculum in this area under Ag Idea Consortium, with classes being offered from many locations to students located near a collection so they can have hands-on experience
- GrinGlobal – Global Crop Diversity Trust awarded 3-year \$1 Million grant to USDA/ARS and Bioversity to transform Grin to GrinGlobal. ARS is putting \$900 K into this also.

### **Funding Mechanisms for NPGS**

- NRSP-5 will be funded through National Clean Plant Network after FY ‘09
- NRSP-6 – National Plant Germplasm Coordinating Committee opinion is still the same on funding, ie. national off-the-top funding for NRSP-6 and regional off-the-top for other four stations
- A one-page summary will developed on history of how the 5 introduction stations were established and how funding has changed over time. Please see below a “Brief History of NPGS Plant Introduction Stations” by Peter Bretting
- One-pager will be sent to regions with recommendation to put funding back to \$150 K for consideration at summer meetings
- There may be some potential for funding National Plant Germplasm System activities from funding in the new consolidated competitive program (AFRI) created in the Farm Bill

### **National Plant Germplasm System Video**

- New marketing initiative could choose National Plant Germplasm System activity or station for marketing piece
- CSREES Partner’s Video might consider doing a segment on National Plant Germplasm System.
- National Plant Germplasm System stations and activities have been featured on news and public interest spots due to the attention given to Svalbard opening
- Purpose for video is to gain support of general public and decision makers
- Jerry Arkin will take this idea to Marketing Initiative and the ESCOP Communications and Marketing Committee

### **Industry Contacts and Liaisons**

- AOSCA, ASTA, Organic Seed Producers
  - ASTA is willing to assign either a staffer or a member company representative as a liaison, depending on role of that person in NPGCC
- Role of industry representative should be:
  - Represent interests of industry in National Plant Germplasm System
  - Assist in supporting funding for National Plant Germplasm System
  - Raise awareness of industry issues and concerns related to National Plant Germplasm System
  - Communicate back to industry the NPGS issues, concerns, and needs
  - Provide perspective of industry on topics and actions being considered by NPGCC, like the video
- ASTA will be invited to appoint a liaison

**ASA/CSSA ’09 Plant Germplasm Symposium Ideas** – The NPGCC discussed potential programs related to plant germplasm and they will be considered in program planning by Ann Marie Thro.

**Brief History of NPGS Plant Introduction Stations**  
**Peter Bretting, USDA/ARS**  
**June 20, 2008**

The U. S. National Plant Germplasm System (NPGS) has responsibility for conserving and encouraging the use of the Nation's plant genetic resources and associated information, which are critical to ensuring the stability and productivity of U. S. agriculture. The NPGS is funded jointly by Federal and State resources, real and in-kind. Among the most important NPGS genebanks are the four Regional Plant Introduction Stations and the Interregional Potato Station.

The U. S. National Research Council in 1943 identified the need for more organized regional plant germplasm conservation efforts. In response, the Research and Marketing Act of 1946 [Public Law 733] authorized the establishment of the National Potato Introduction Station (now NRSP-6, Sturgeon Bay, WI) and the Regional Plant Introduction Stations (RPIS) at Ames, IA (North Central Project 7), Geneva, NY (Northeastern Project 9), Griffin, GA (Southern Project 9), and Pullman, WA (Western Project 6). Subsequently, the RPIS and the National Potato Introduction Station were established under a Memorandum of Understanding between USDA and the State Agricultural Experiment Stations (SAES), their Directors Associations, and the Committee of Nine, with operations commencing between 1948 and 1952.

During more than 60 years of operation, the RPIS and the NRSP-6 have evolved into the backbone of the NPGS and now conserve 244,000 accessions, or about ½ of the total of 507,000 managed by the 20+ NPGS genebanks. At their inception, it was envisioned that the USDA/ARS and the SAES would share the cost of operating these five sites more or less equally. Currently, the USDA/ARS provides most of the funding (Table 1), and has primary responsibility for managing them and the NPGS in total. Nevertheless, the States contribute in many ways beyond the annual off-the-top funding by providing land, facilities, equipment, student workforces, etc.

Recently, the value and demand for RPIS and NRSP-6 germplasm have increased significantly as sources of genes for enhanced crop productivity, resistance to rapidly-emerging diseases and pests, and improved nutritional and product quality. In fact, SAES scientists are major users of NPGS germplasm, which is available to them free-of-charge and restriction, whereas access to other germplasm is increasingly problematic due to deteriorating natural habitats and institutional capacities, intellectual property rights, and access legislation or policies.

Table 1: FY 08 USDA/ARS and SAES Budgets for RPIS and the Potato Station

FY 08 Funding	NC-7 Ames	NE-9 Geneva	NRSP-6 Sturgeon Bay	S-9 Griffin	W-6 Pullman
NRSP or MRF SAES Funding	522,980 (20%)	176,000 (9%)	150,000 (23%)	407,208 (15%)	355,560 (14%)
ARS Funding	2,080,896 (80%)	1,770,511 (91%)	503,500 (77%)	2,180,481 (85%)	2,147,351 (86%)
Total Funding	2,603,876 (100%)	1,946,511 (100%)	653,500 (100%)	2,587,689 (100%)	2,502,911 (100%)