

**Plant Breeding Coordinating Committee comments
to the National Plant Germplasm Coordinating Committee
June 14, 2016**

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1. Thanks to NPGCC for granting liaison status to PBCC, a USDA-sponsored multistate coordinating committee, focused on the role of public plant breeding programs. Genetic resources were highlighted as one of PBCC's major objectives in the new 5-yr project.

"Promote the conservation, characterization, and utilization of plant genetic resources and access to those resources for plant breeding."

One example of this was the AAAS symposium 'Unlocking Plant Genetic Diversity for Food and Nutritional Security' on plant genetic resources in Washington in February, 2016.
2. Other objectives are:
 - **Collect, analyze, and disseminate information about the U.S. plant breeding capacity in both public and private sectors**, to include human capacity and access to enabling knowledge, technologies, germplasm, and infrastructure.
 - **Identify Best Management Practices for public sector intellectual property protection** to encourage the creation and distribution of improved crops for a broad range of needs and opportunities.
 - **Optimize opportunities for public-private collaboration in plant breeding research and education**, including continuing education for plant breeders.
 - **Foster communication among public plant breeders and federal agencies on public policy issues**, including alerts to existing and emerging threats to agricultural security that are relevant to plant breeding.
3. Commend NIFA on expanding AFRI grant programs in plant breeding over the past several years, including germplasm evaluation, pre-breeding activities, and specialty crops.
4. Response to NGRAC report:
 - Agree that co-existence between GE and non-GE production systems is an important goal, but we would emphasize that it needs to be a shared responsibility, rather than putting the burden on one side or the other.
 - Agree with recommendations re documenting and supporting development of non-GE seed supplies
 - However, there are concerns about resources required to carry out some of the recommendations; e.g., establishing a system for evaluation of organic or non-GE

germplasm under organic conditions could be costly. We wouldn't want this to reduce budgets for existing regional evaluation nurseries.

4. We'd like to see NPGS collections be made more relevant to plant breeding.

-- An important goal would be to increase the amount and consistency of evaluation data in GRIN. Many germplasm recipients do not report any data on their evaluations.

"We really struggle to use the data that is available in GRIN as it is typically poor quality, not relevant to breeding target traits, and has been recorded using so many different descriptors that you can't compare one set with another. The new GRIN Global is such an improvement on what was there before, but how can we optimize the data in it?"

-- Improve interconnectivity between different types of databases, e.g., GRIN with genome databases

-- Genomics/phenomics: The cost of genomic data has decreased dramatically and the cost of high-throughput phenotypic evaluation is poised to follow in the not too distant future. It will become feasible to genotype and phenotype the entire NPGS collection. Thus, we urge the NPGS to consider how to integrate these phenotyping platforms into their operations and how to manage the resulting data deluge.

-- How and by whom should pre-breeding be done to make the NPGS accessions more attractive germplasm sources for breeders?

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AAAS Symposium

The Plant Breeding Coordinating Committee will sponsor a symposium on the use of plant genetic resources for crop improvement at the annual meeting of the American Association for the Advancement of Science. The 90-minute symposium is entitled 'Unlocking Plant Genetic Diversity for Food and Nutritional Security' and will take place Saturday, Feb. 13 in Washington, D.C. Speakers were chosen to highlight the meeting theme of Global Science Engagement and include Paula Bramel on global efforts for crop genetic resources conservation; Chiedozie Egesi on bringing cassava breeding into the 21st century; and Walter Trevisan on increasing genetic diversity in public- and private-sector maize breeding. Paul Heisey of USDA's Economic Research Service will lead the discussion.