The National Plant Germplasm System: 2019 Status, Prospects, and Challenges

Peter Bretting
USDA/ARS Office of National Programs

Peter.bretting@ars.usda.gov
1.301.504.5541
USDA National Plant Germplasm System (NPGS)
NUMBER OF NPGS ACCESSIONS
2009-2018
DEMAND FOR NPGS GERMPLASM 2009-2018
ARS NATIONAL PLANT GERMPLASM SYSTEM
BUDGET
2009-2018
Some key challenges for the NPGS

• Managing and expanding the NPGS operational capacity and infrastructure to meet the increased demand for germplasm and associated information.
• Recent and upcoming NPGS personnel retirements; hiring and training new staff.
• Developing and applying cryopreservation and/or in vitro conservation methods for clonal germplasm.
• BMPs and procedures for managing accessions (and breeding stocks) with GE traits and the occurrence of adventitious presence (AP).
• Acquiring and conserving additional germplasm, especially of crop wild relatives.
Genetic Resource Management Priorities: Foundations for Crop Innovation

- Acquisition
- **Maintenance**
- Regeneration
- Documentation and Data Management
- Distribution
- Characterization
- Evaluation
- Enhancement
- Research in support of the preceding priorities
Personnel Changes

• Farewell and best wishes to John Wiersema, (ARS-Beltsville); Dave Stout, Frank Dugan, and Vicki Bradley (ARS-Pullman); and Jack Peters, (ARS-Corvallis). We mourn the passing of Phil Stinard (ARS-Urbana).

• Welcome and best wishes to Ben Gutierrez, new cold-hardy grape curator at ARS-Geneva, Joanne Labate (now permanent) vegetable curator at ARS-Geneva, Trevis Huggins, new rice curator at Stuttgart, and Vivian Bernau, a second maize curator at ARS-Ames.

• With the hiring freeze partially lifted, we hope to hire additional staff in the near future, including curators at Hilo, HI; Pullman, WA; and Urbana, IL.
Plant Genetic Resource (PGR) Management Training Initiative

• At least 1/3 of NPGS PGR managers could (likely will) retire within 5 years.

• Currently, no formal, comprehensive program exists for training new PGR managers.

• G. Volk (ARS-Ft. Collins) and P. Byrne (CSU-Ft. C.) secured a USDA/NIFA grant for a workshop at Ft. C. 24-26 April 2018 that discussed designing & developing a training program for PGR management to be delivered primarily through distance-learning.

• The workshop generated numerous insights; workshop participants are developing prototype educational materials, and have submitted a NIFA Higher Education Challenge grant proposal.
FY 19 ARS NPGS Budgetary Increases

• Coffee genetic resources ($1.9 million): Hilo, HI; Mayagüez, PR; Ft. Collins, CO; Beltsville, MD.

• Citrus genetic resources ($1 million): Riverside, CA; Ft. Collins, CO.

• Industrial hemp genetic resources ($500,000): TBD.