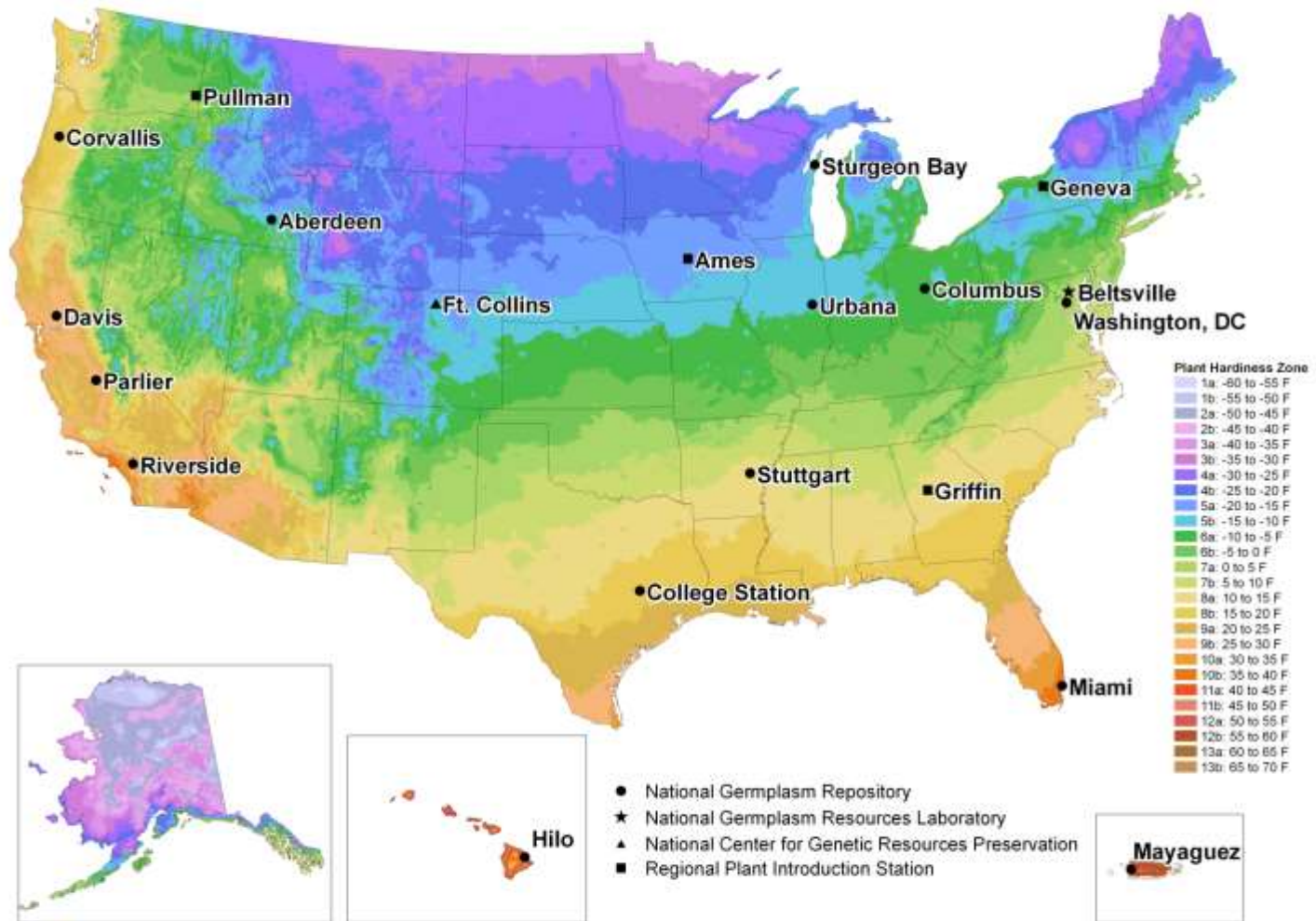


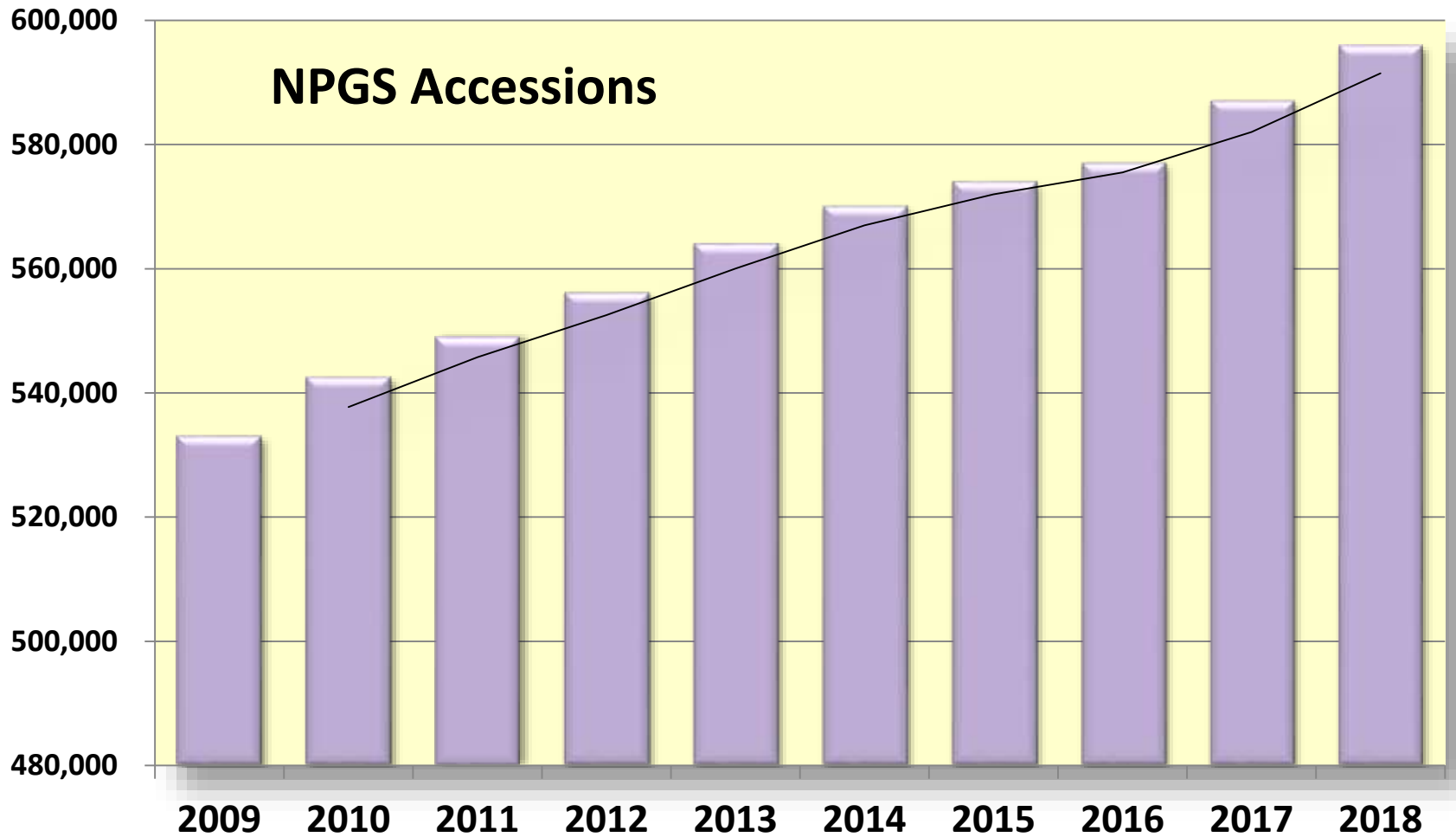
The National Plant Germplasm System: 2019 Status, Prospects, and Challenges

Peter Bretting
USDA/ARS Office of National Programs
Peter.bretting@ars.usda.gov
1.301.504.5541

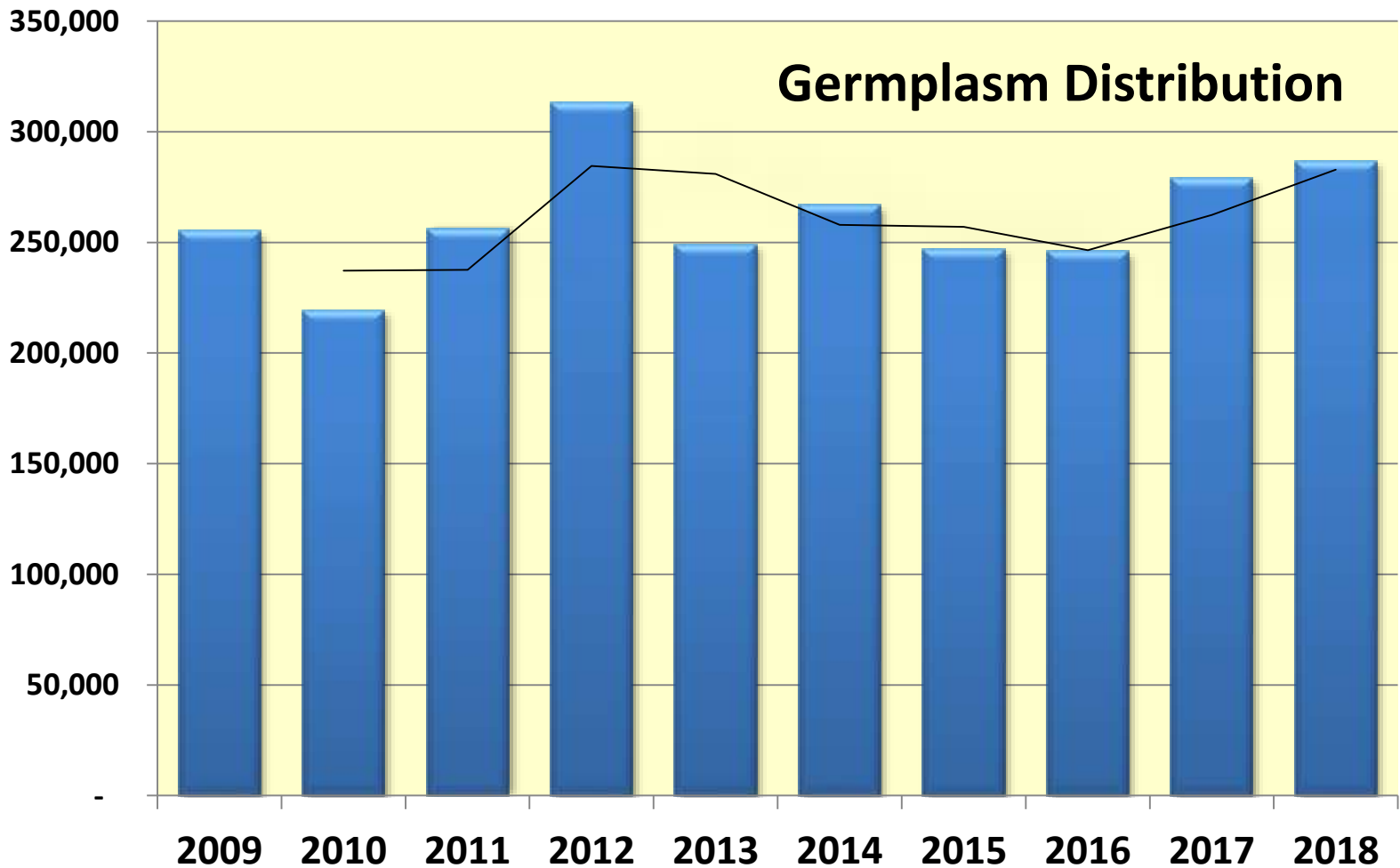
USDA National Plant Germplasm System (NPGS)



NUMBER OF NPGS ACCESSIONS 2009-2018



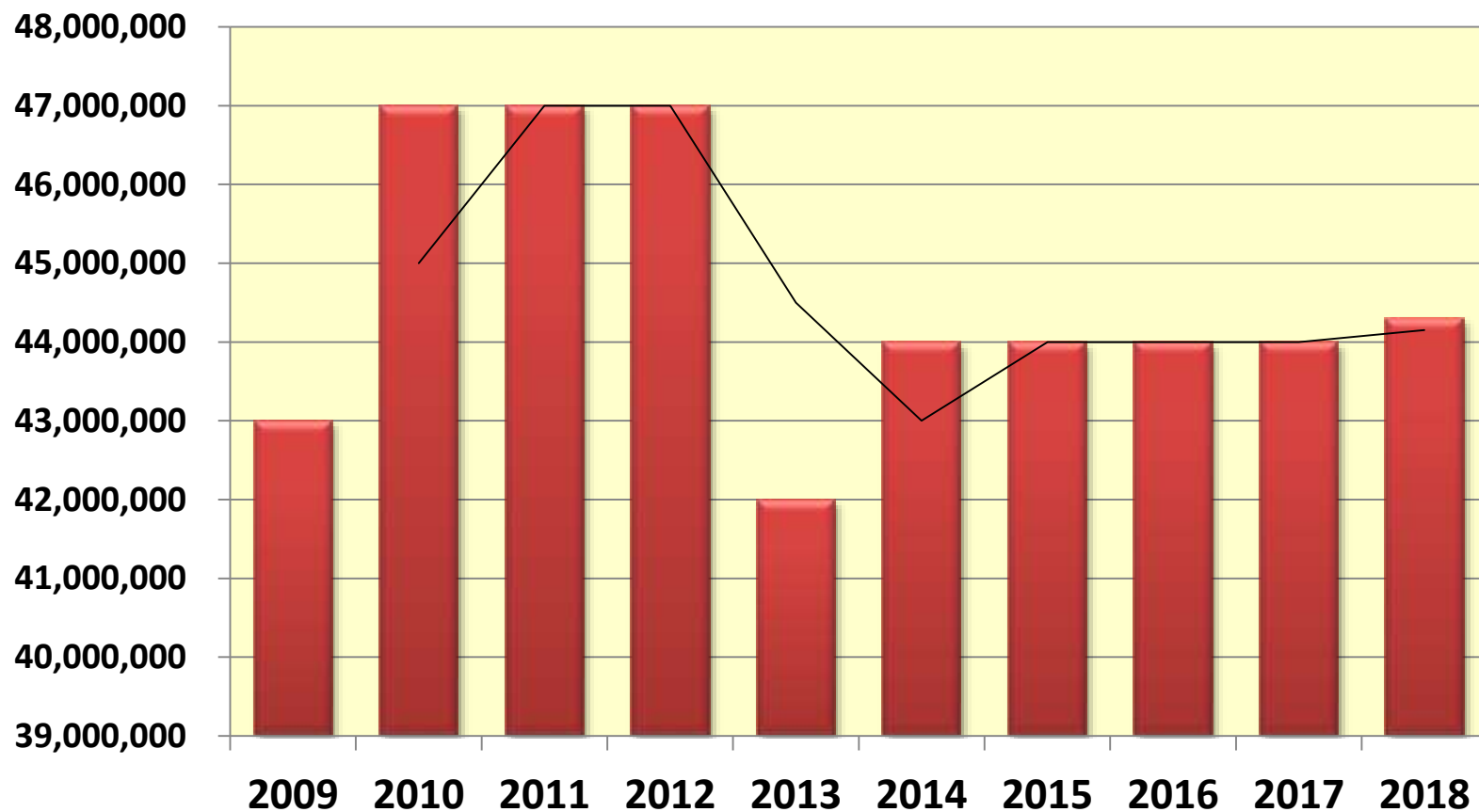
DEMAND FOR NPGS GERMPLASM 2009-2018



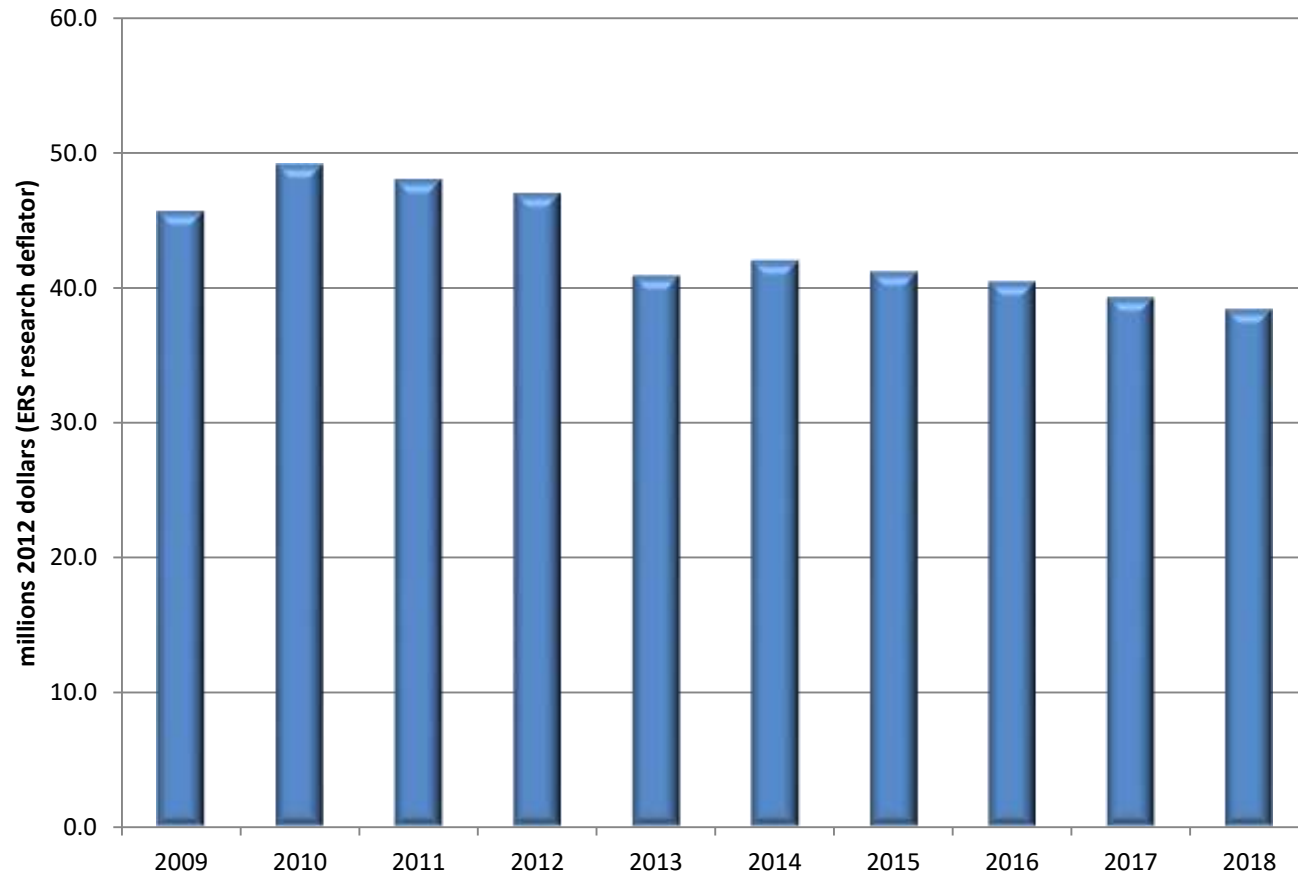
ARS NATIONAL PLANT GERMPLASM SYSTEM

BUDGET

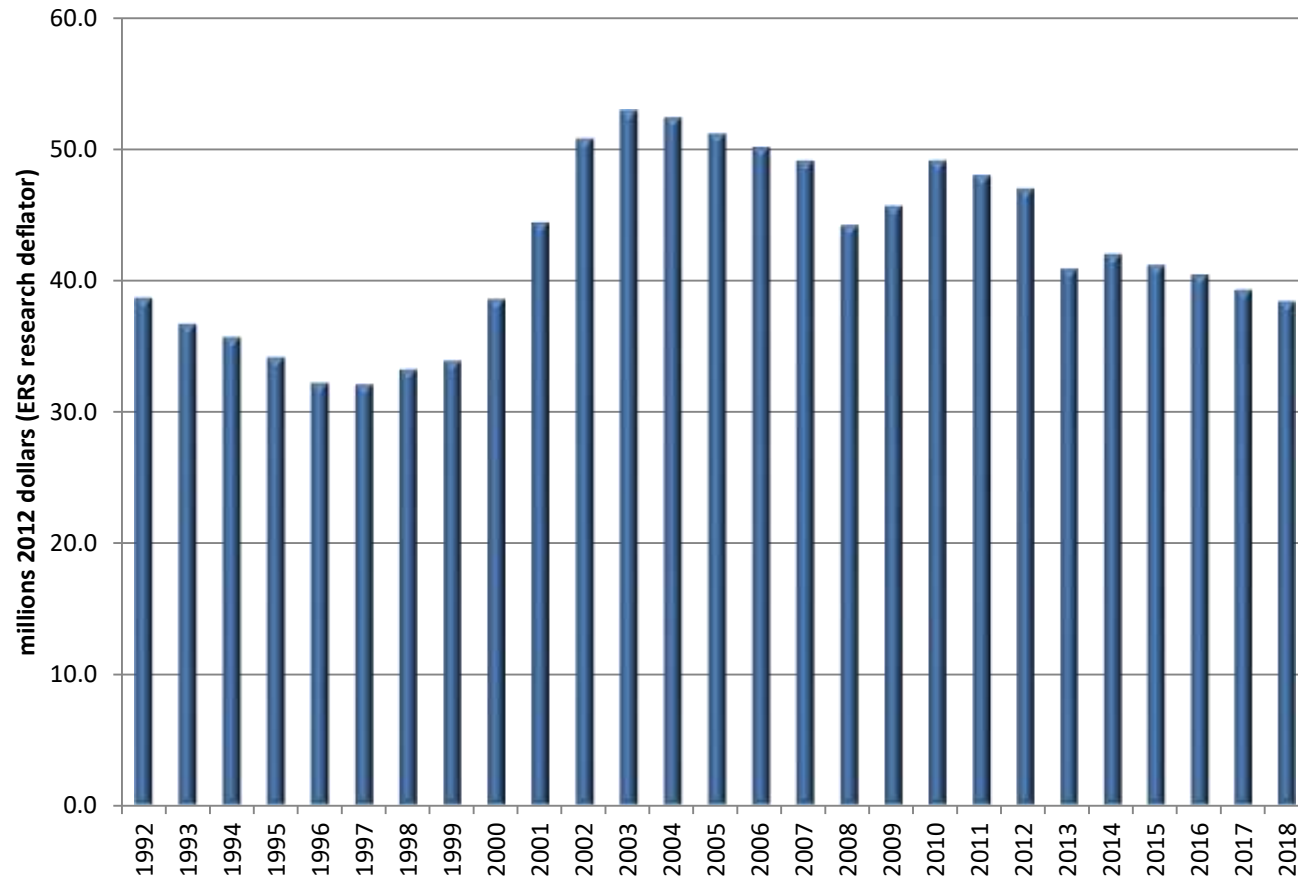
2009-2018



ARS NPGS real (deflated) budget, 2009-2018



ARS NPGS real (deflated) budget, 1992-2018



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.**