

CGC Chairs Meeting

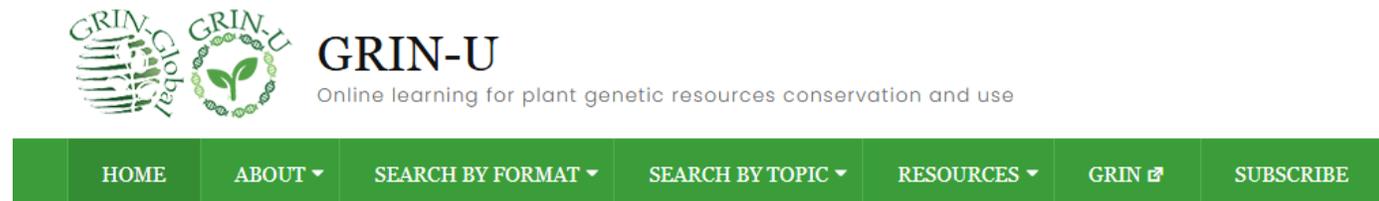
March 4, 2026

Please use chat to share name, affiliation, and CGC

Reminders and Updates

- Send CGC page content updates to Gary
- Update rosters real-time with permission
- Operation and maintenance mode for GRIN-Global public website for most of 2025

- Explore and share GRIN-U



- Welcome to newest CGC: Hemp

THE NATIONAL PLANT GERMPLASM SYSTEM

Neha Kothari, Ph.D.
National Program Leader
Neha.Kothari@usda.gov



The mission of the NPGS is to support agricultural production by:



Acquiring

acquiring crop germplasm



Conserving

conserving crop germplasm



**Evaluating
Characterizing**

evaluating and characterizing crop germplasm



Documenting

documenting crop germplasm



Distributing

distributing crop germplasm

STATUTE AND TREATY

The 1990 Farm Bill specifies that USDA should make germplasm available without charge

The U.S. is also a Contracting Party to the International Plant Treaty (ITPGRFA) ratified in December 2016 and Entry into Force: March 2017

SMITA on all international requests starting January 2024

ACQUISITION AND DISTRIBUTIONS

Acquisitions: Breeders donations from public/private/non-profits (lines, cultivars, pre-breeding germplasm, mid-evaluation germplasm, commercial germplasm);

Plant Variety Protection (PVP) registrations;

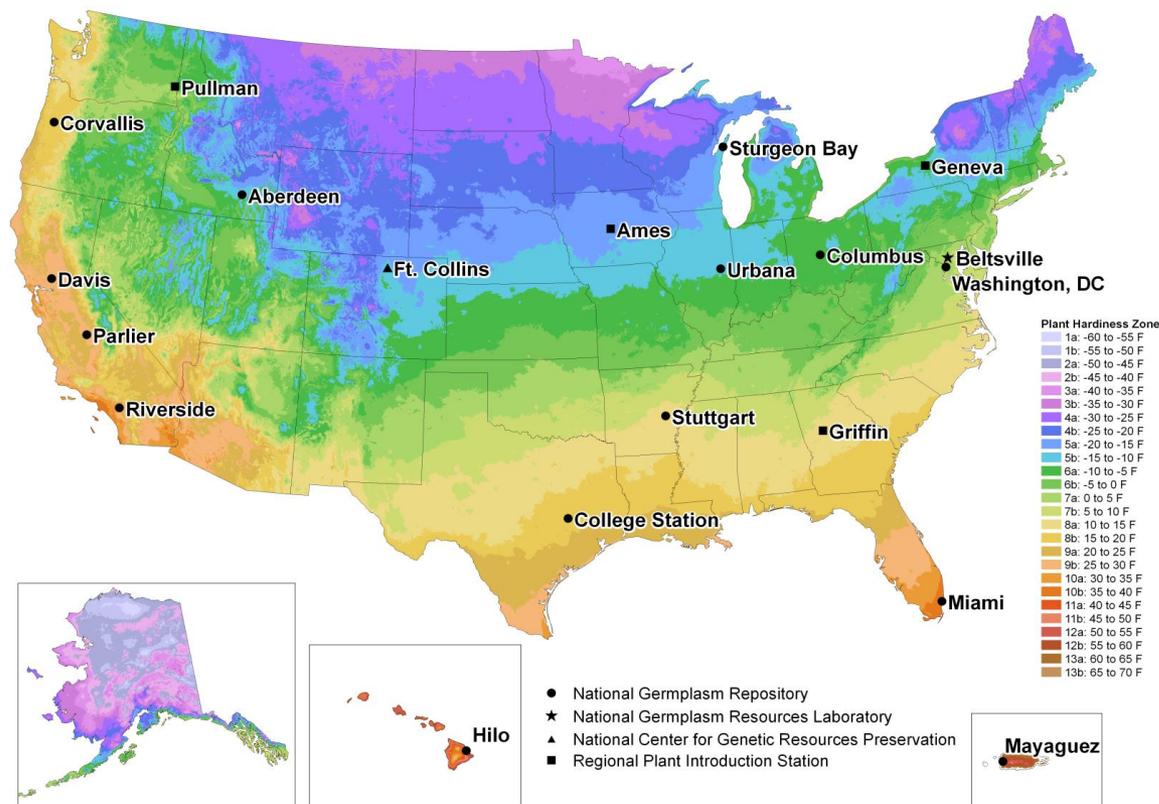
Journal of Plant Registration (JPR) requirements;

Farmers seed, historic donations, etc.

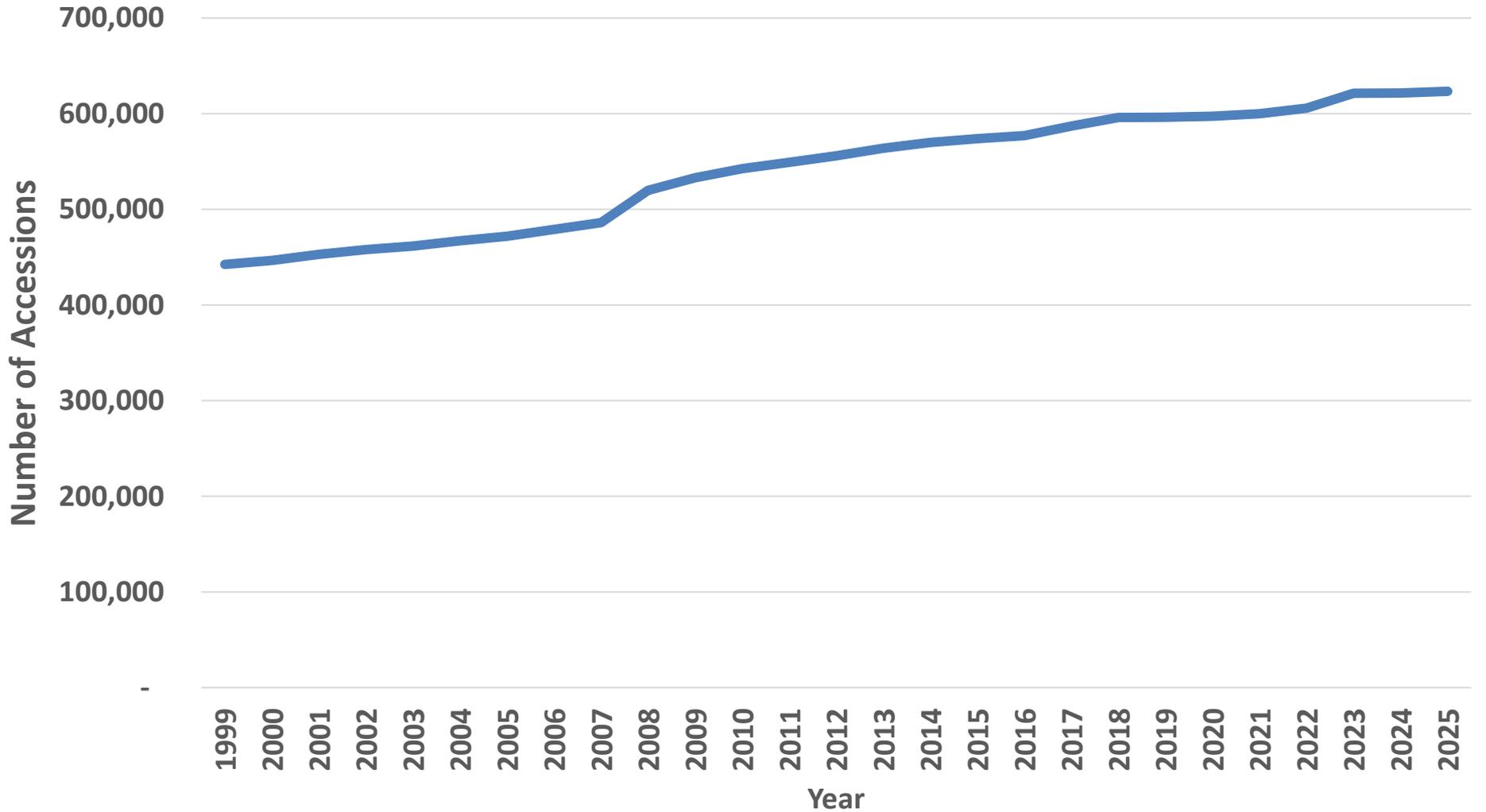
Distributions: Everything in the public domain is made available to research and education

USDA National Plant Germplasm System (NPGS)

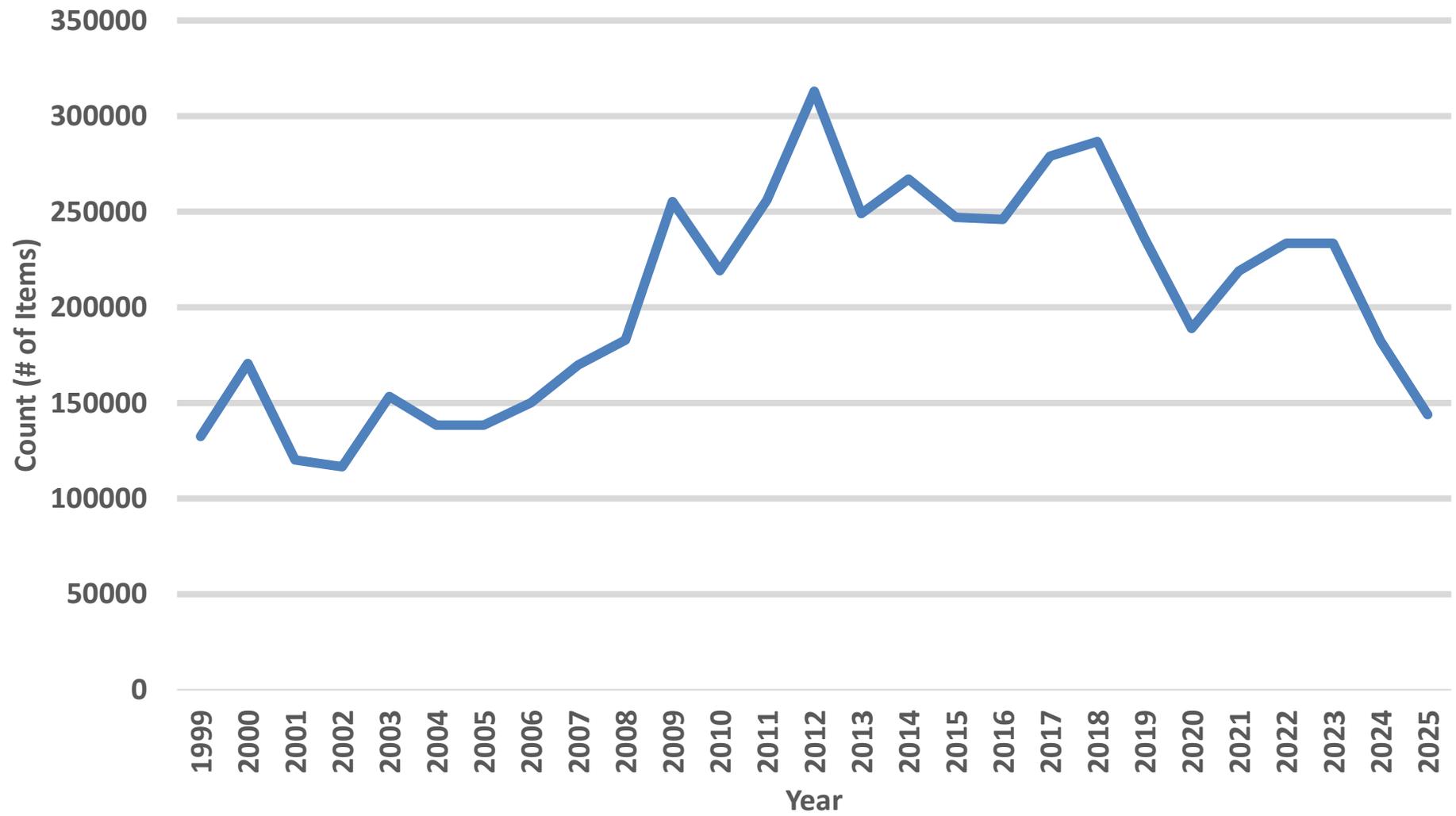
- 22 genebank units
- 200+ crops
- Living nurseries
- ~200,000 samples distributed each year for research



NPGS ACCESSIONS



NPGS DISTRIBUTIONS



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**Evaluation
Characterization**

evaluating and characterizing crop germplasm



Documenting

documenting crop germplasm



Distributing

distributing crop germplasm

NPGS STRATEGIC PLAN 2023

The Plan is described in these 4 documents:

- [Strengthening the USDA/ARS National Plant Germplasm System to Conserve and Utilize Crop Germplasm that Sustains Us](#) -This 2 pages-long document distills the key points of the overall Plan through an infographic approach.
- [Synopsis of the National Strategic Germplasm and Cultivar Collection Assessment and Utilization Plan](#) -This 29 pages-long document provides more details about those key points of the Plan.
- [National Strategic Germplasm and Cultivar Collection Assessment and Utilization Plan: Technical Details, Analyses, and Approaches](#) -This lengthy (208 pages-long) document provides the major plant genetic resource management, programmatic, and budgetary details and data comprising the Plan.
- [National Strategic Germplasm and Cultivar Collection Assessment and Utilization Plan: Supplemental Crop and Crop Wild Relative Collections Data](#) -This 87 pages-long document provides plant genetic resource management details and data for the specific crop and crop wild relative germplasm collections included in the Plan.

CONSTRAINTS IDENTIFIED IN THE STRATEGIC PLAN

- **Regeneration backlogs: growing delays in refreshing germplasm increase risk of viability loss (varies by site and commodity)**
- **Mission Capacity Gap: current resources limit ability to conserve, evaluate, characterize, and document collections**
- **Workforce: technician and curators**
- **Programmatic and operational strain: funding pressure**

RETHINKING METRICS FOR SUCCESS AND IMPACT

Current measures emphasize: Distributions and total accession counts

Modern metrics should also track,

Collection health: losses, regeneration status/shelf life, acquisitions

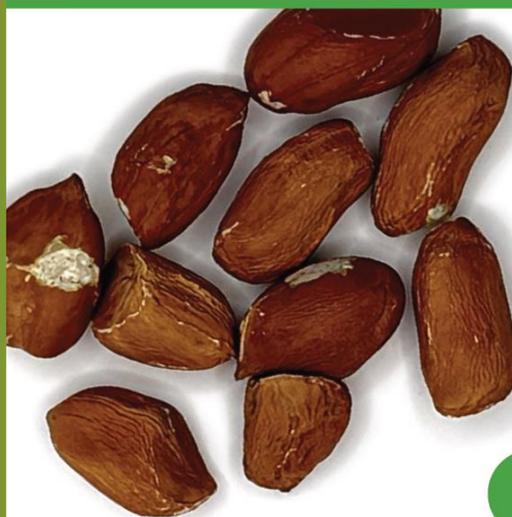
Characterization data: integration of existing characterization data in GRIN-Global

System reliability: alignment between site records and GRIN-Global

Risk: backup coordination and data

NPGS Success Stories

Disease resistant peanut
Arachis hypogaea L.
PI 203396



The NPGS maintains hundreds of thousands of diverse accessions, many of which have delivered significant value to U.S. agriculture. One example is PI 203396, a peanut from Brazil. After entering the NPGS in 1952, it has become a key source of resistance to late leaf spot, southern stem rot, and tomato spotted wilt virus—all major threats to U.S. peanut production.

PI 203396 has been used to develop disease resistant peanuts including prominent cultivars 'Georgia Browne', 'Georgia Green', and 'Southern Runner'. The economic impact of this resistance exceeds \$200 million annually, demonstrating the vital role of genetic conservation in advancing agriculture.

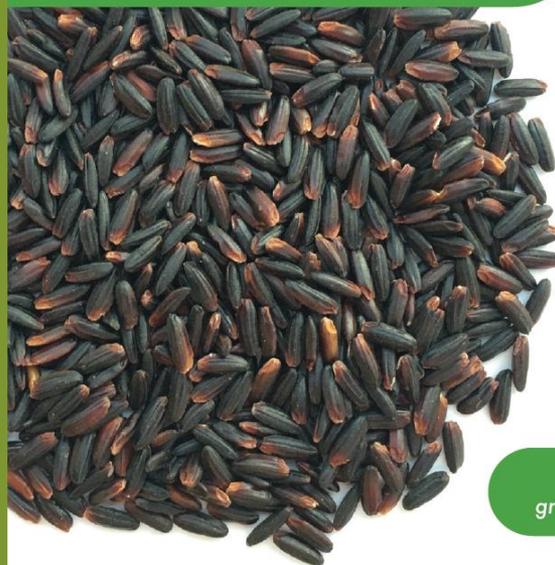
For more stories like this, visit
grin-u.org/plant-genetic-resources-success-stories



To learn more about the NPGS and other USDA-ARS genetic resources collections, visit ars-grin.gov

NPGS Success Stories

'Tiara' black rice
Oryza sativa L.
PI 699624



Aromatic rice with black or purple bran is prized for unique culinary properties and incredible health benefits. Historically it has been imported to the U.S. from Asia. Scientists at the USDA-ARS Dale Bumpers National Rice Research Center wanted to develop a variety specifically for domestic U.S. production.

Using 'IAC 600' (PI 679960), a Brazilian rice cultivar maintained by the National Plant Germplasm System, USDA scientists were able to breed the first black aromatic rice intended for large-scale U.S. production. 'Tiara' is a long grain variety that has a high yield potential and is packed with antioxidants!

For more stories like this, visit
grin-u.org/plant-genetic-resources-success-stories



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NPGS Success Stories

'Pawnee' pecan
Carya illinoensis
PI 518101



Plant breeders in the USDA-ARS Pecan Breeding Program developed 'Pawnee' pecan thanks to genes from 'Starking Hardy Giant' (PI 518128) that shortened the nut maturation period and advanced the harvest to earlier in the fall. This game-changing trait enabled growers to deliver pecans to market earlier than other cultivars that typically mature several weeks later.

Since its 1984 release, 'Pawnee' has become a global favorite, widely planted for its early yield and market advantage. Its legacy continues—'Pawnee' is now a key parent in breeding new early-harvest pecan cultivars.

For more stories like this, visit
grin-u.org/plant-genetic-resources-success-stories



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Thank you



USDA, ARS National Laboratory for Genetic Resources Preservation

Fort Collins, Colorado



Agricultural Genetic Resources Preservation Research Unit

Plant (seed, clonal) and Microbe

- Dr. Chris Richards (Lead Scientist)
- Dr. Christina Walters
- Dr. Gayle Volk (retired)
- Dr. Hannah Tetreault (*acting* Seed curator)
- Dr. Maria Jenderek

Animal (National Animal Germplasm Program)

- Dr. Harvey Blackburn (Lead Scientist)
- **Dr. Phil Purdy (*acting* Research Leader)**

Data Management

- Cullen McGovern

Technical staff

- 26+ talented staff



Long Term Preservation

Seed

- -18° C
- LN2 vapor

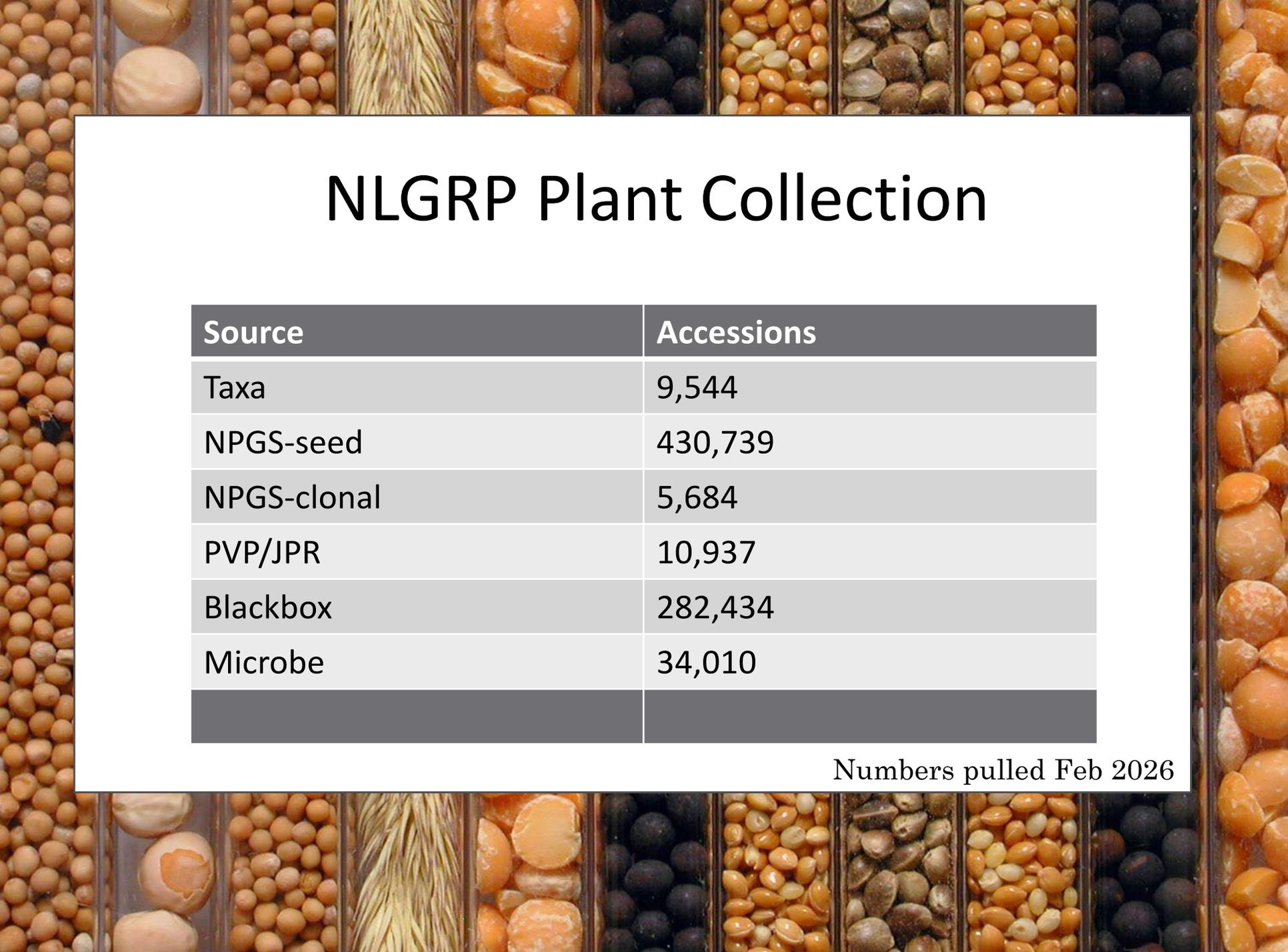
Microbes

- LN2 vapor

Clonal & Animal

- LN2 liquid



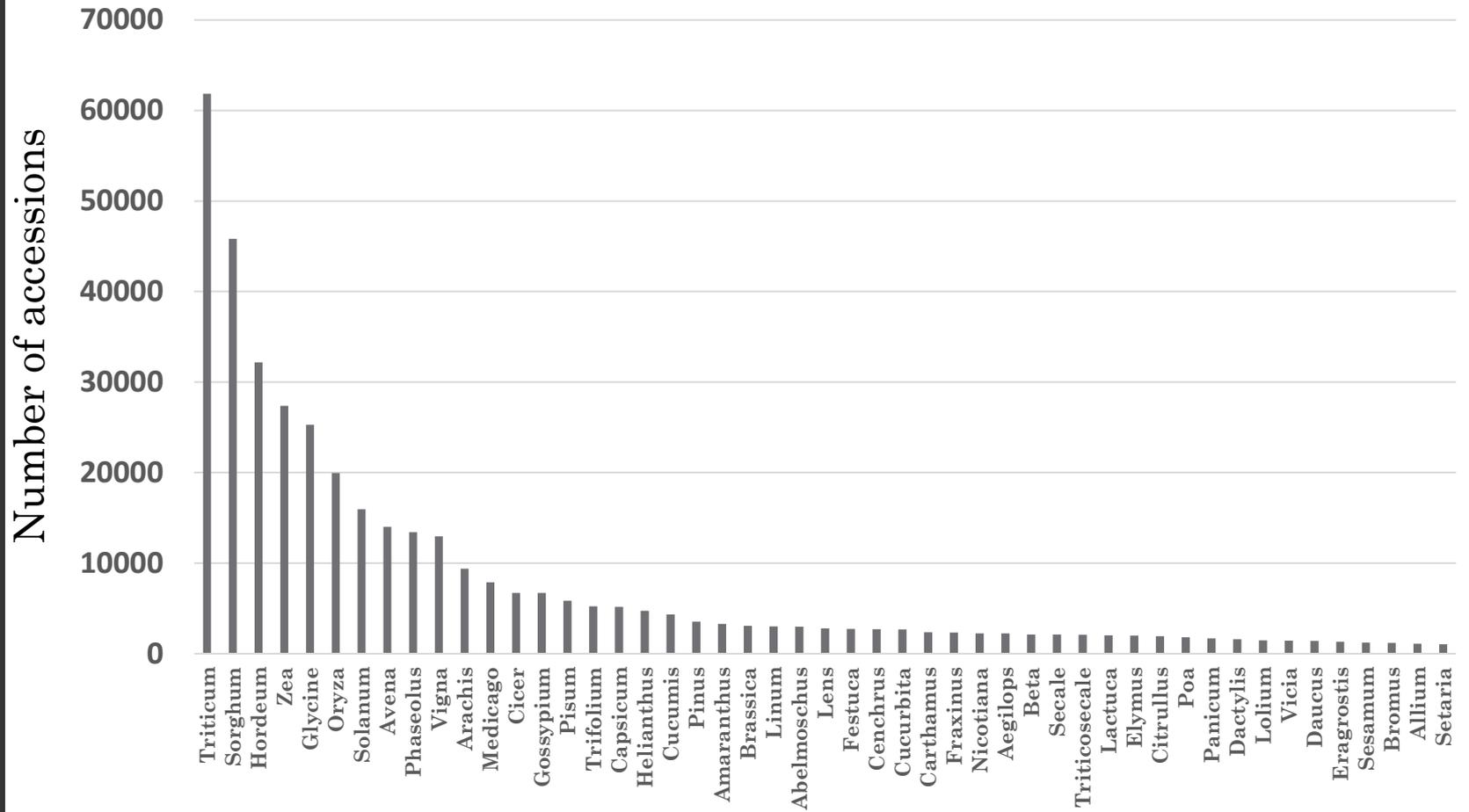


NLGRP Plant Collection

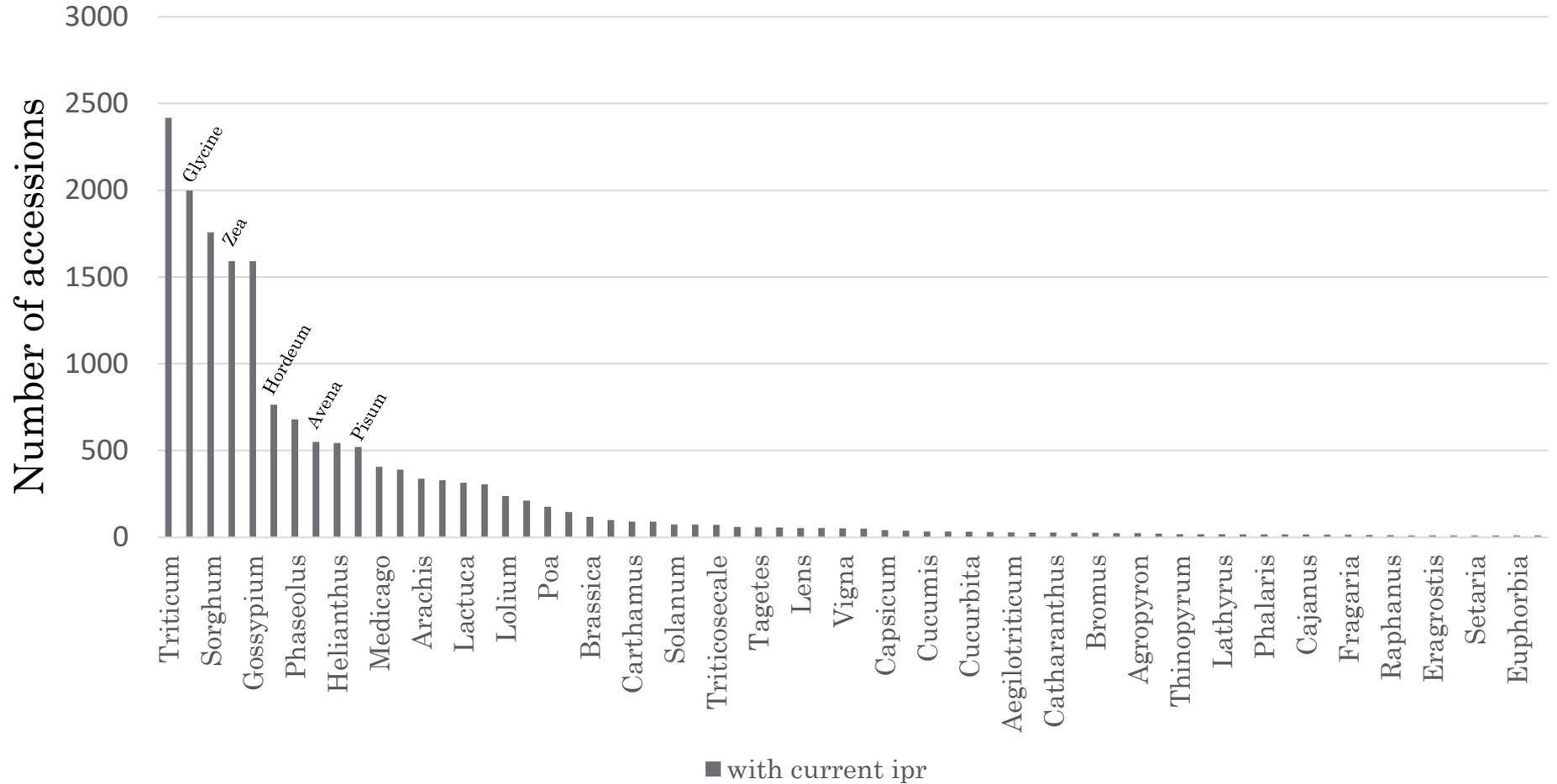
Source	Accessions
Taxa	9,544
NPGS-seed	430,739
NPGS-clonal	5,684
PVP/JPR	10,937
Blackbox	282,434
Microbe	34,010

Numbers pulled Feb 2026

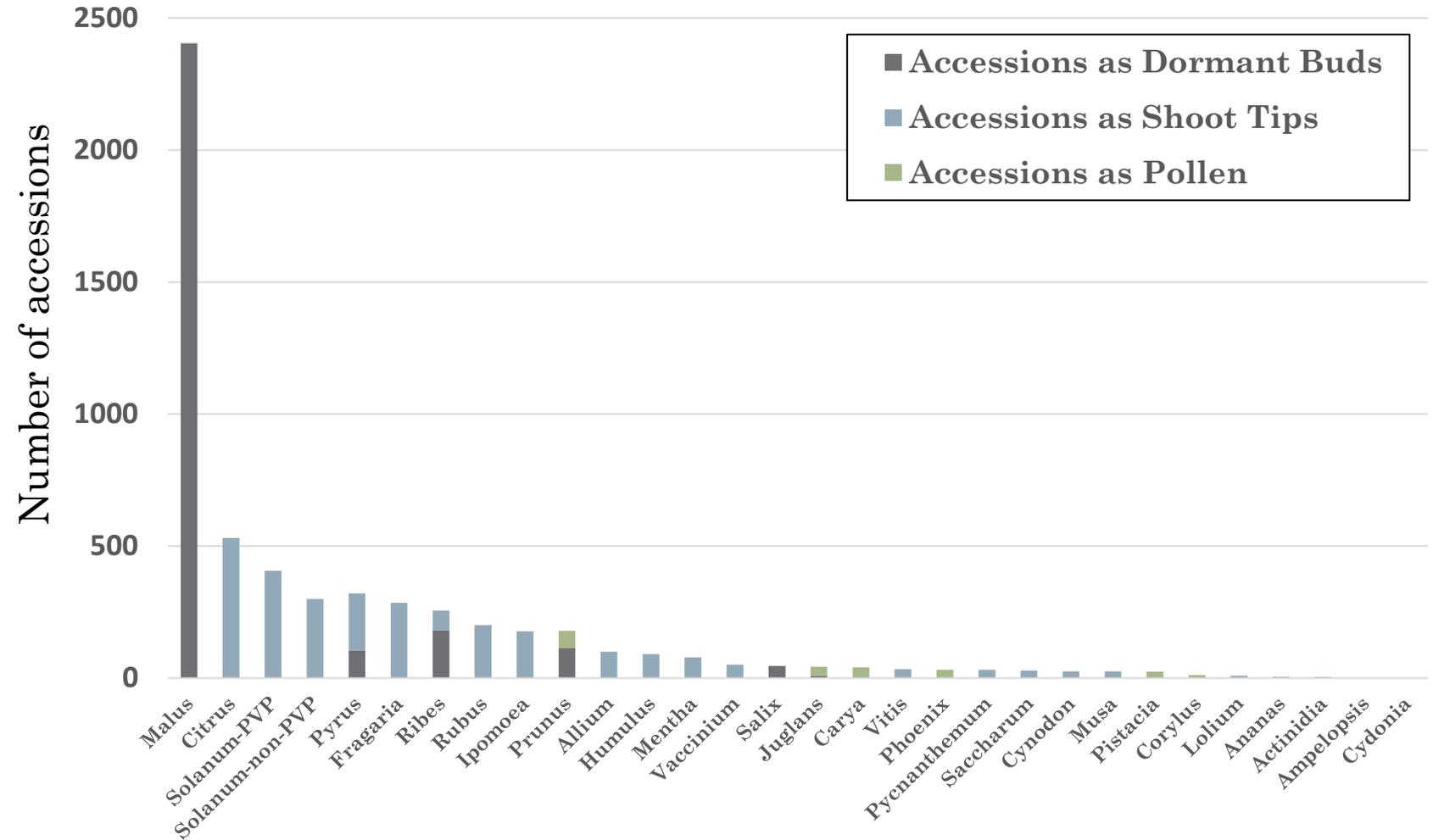
Genera with > 1000 accessions- seeds



Seed accessions with IPR

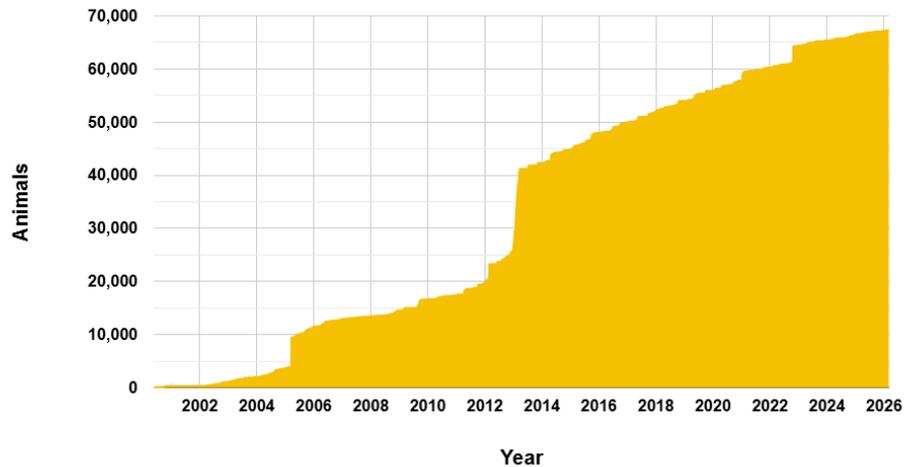
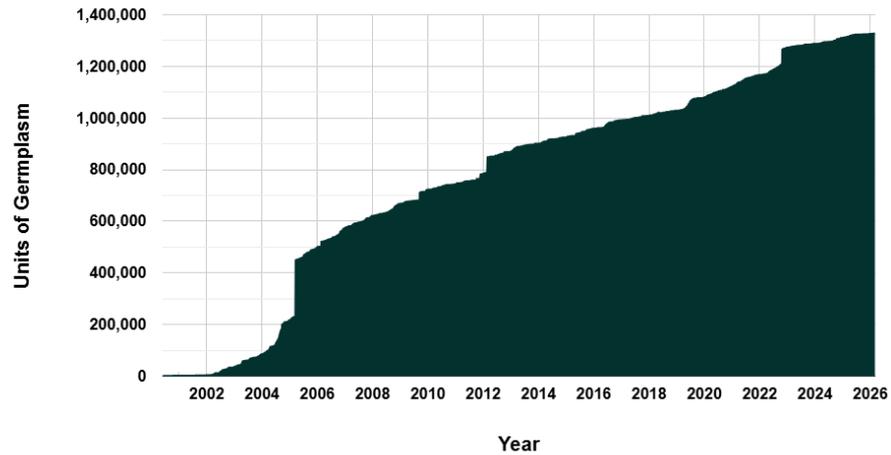


Clonal accessions at NLGRP



Numbers provided by G. Volk Feb 2026

Animal Germplasm Composition



Seed Crops

Received 15,361 seed samples

Check-in (GRIN Global)

- Incoming seed
- Data entry
- Labels, barcodes

Seed Moisture
Equilibration

- 5°C, 24% RH
- Moisture test

Quality Assessment

- Species ID
- Viability testing
- Physical assessment

Packaging

- Seed count
- Foil laminate/cryo tubes

Storage

- Conventional
- Cryo-storage

Monitoring

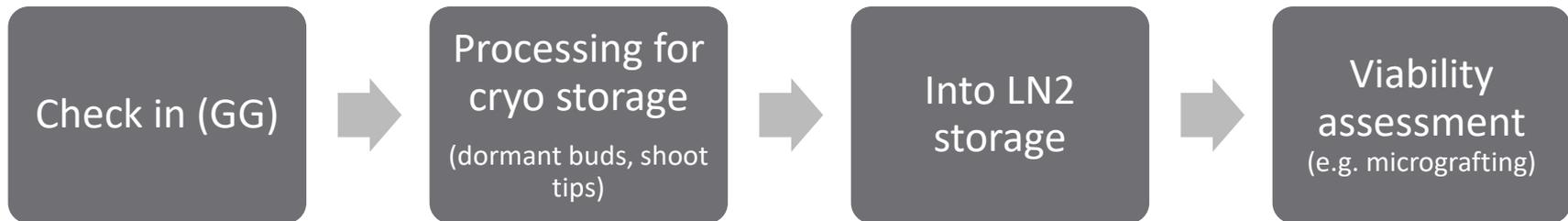
- Interval testing 10-20 years

Tested 12,930 incoming and monitors





Clonal Crops



Svalbard Global Seed Vault

- NLGRP coordinates NPGS deposits
- 156,950 samples; 2,183 species
- Last deposit: September 2023



Success Stories

- Raises awareness and continues support for PGR

Overview

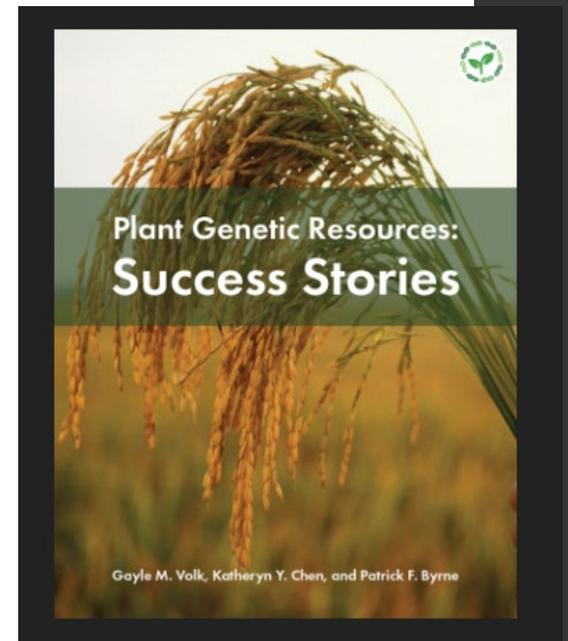
Crop Germplasm Committees (CGC) serve as subject matter experts to guide curatorial staff on best practices, including the priorities and techniques for characterizing the collections. They also help review proposals that fund plant explorations and evaluation grants for scientific rigor.

There are currently [44 CGCs](#) representing almost all major and minor crops of economic importance in the U.S. Each committee includes a chair and members from government agencies, universities, and commercial interests who volunteer their time and expertise to support the NPGS.

Documents

Document title	Description
Roles and Responsibilities	Additional information about CGC organization and function.
Crop Vulnerability Statement Outline	A guide to the format and content of Crop Vulnerability Statements.
Success Story Template	A template for sharing a Success Story resulting from the utilization of Plant Genetic Resources.

<https://www.ars-grin.gov/CGC#overview>



Email: PGRSuccesses@gmail.com

Questions and comments may be directed to Dr. Pat Byrne and Dr. Gayle Volk



Questions?

hannah.tetreault@usda.gov

Crop Germplasm Committees

Crop Vulnerability Statements

- Update regularly
- Send to Gary to upload on the web

Maintain committee rosters (Google Drive)

- Please update with new members
- Add Neha Kothari and Anne Frances as ex officio members

New: Digitized CGC documentation from the 1980s to present.
Available upon request.

National Germplasm Resources Laboratory Plant Exchange Office

Anne Frances

Melanie Schori

Jennifer Friedman

Karen Williams (Contractor)

Crop Germplasm Committee Chairs Meeting
March 4, 2026

Plant Exchange Office

- NPGS Plant Exploration & Exchange Program
- International Distributions (with USDA-APHIS)
- GRIN Taxonomy



Vitis ripara,
Hedrick and
Booth 1908

NPGS Plant Exploration & Exchange Program



Anne Frances
Plant Exchange Office
National Germplasm Resources Laboratory
Beltsville, Maryland
anne.frances@usda.gov

NPGS Plant Explorations FY 2025

Species

Phaseolus acutifolius, *P. filiformis*

Magnolia spp.

Lonicera spp.

Location

New Mexico, U.S.

Puerto Rico, southeast U.S.

Minnesota, U.S.

NPGS International Distributions

Jennifer Friedman
Jennifer.friedman@usda.gov

National Cotton Germplasm Collection (COT)	Woody Landscape Repository (NA)
Griffin Plant Introduction Station (S9)	Potato Germplasm Introduction Station (NR6)
National Small Grains Collection (NSGC)	Ornamental Plant Germplasm Center (OPGC)
Western Regional Plant Introduction Station (W6)	U.S. Nicotiana Germplasm Collection (TOB)
National Arid Land Plant Genetic Resources Unit (Parlier)	North Central Regional Plant Introduction Station (NC7)
Plant Genetic Resources Unit, Geneva*	

*Occasional

In 2025, 231 orders containing ~14,000 samples were shipped from the Beltsville Plant Inspection Station to individuals in 45 countries.

GRIN Taxonomy

Search Taxonomy Data in GRIN-Global

Note: Use the Shift key + b, f, g, s, r or d to navigate between tabs.
Results of 5000 or more will be returned without links.

Browse	Family	Genus	Species	Results	Distribution
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Genus or species name

Specific or infraspecific name

GRIN Taxonomy ▾

GRIN ▾

- Search Taxonomy
- Crop Wild Relative Data
- Nodulation Data
- Regulations
- World Economic Plants
- About GRIN Taxonomy

Melanie Schori
Plant Exchange Office
National Germplasm Resources Laboratory
Beltsville, Maryland
Melanie.Schori@usda.gov

Taxonomy Queries & Assistance

- Adding scientific names
- Updating taxonomic classifications
- Adding literature sources and citations
- Citation formatting questions
- Shipping regulated material



Thank you!
Questions?

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Jennifer Friedman
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