

Opportunity Title: USDA-ARS Plant Genetic Resources Management and Characterization Training

Opportunity Reference Code: USDA-ARS-PWA-2026-0307

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-PWA-2026-0307

How to Apply *To submit your application, scroll to the bottom of this opportunity and click **APPLY**.*

A complete application consists of:

- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. Click [here](#) for detailed information about acceptable transcripts.
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- Two educational or professional recommendations

All documents must be in English or include an official English translation.

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Application Deadline 10/9/2026 3:00:00 PM Eastern Time Zone

Description ***Applications are reviewed on a rolling-basis.**

ARS Office/Lab and Location: A research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), located in Pullman, Washington.

The Agricultural Research Service (ARS) is the U.S. Department of Agriculture's chief scientific in-house research agency with a mission to find solutions to agricultural problems that affect Americans every day from field to table. ARS will deliver cutting-edge, scientific tools and innovative solutions for American farmers, producers, industry, and communities to support the nourishment and well-being of all people; sustain our nation's agroecosystems and natural resources; and ensure the economic competitiveness and excellence of our agriculture. The vision of the agency is to provide global leadership in agricultural discoveries through scientific excellence.

Research Project: The Plant Genetic Resources (PGR) that are maintained in the USDA ARS National Plant Germplasm System (NPGS) genebank in Pullman, WA (called the Plant Germplasm Introduction and Testing Research Unit, PGITRU) represent the raw genetic diversity used to create new varieties of crop plants for US farmers. The PGITRU has over 100,000 accessions of beans, horticultural crops, grasses, pulses, and forages. Training and research into the best protocols to store and regenerate these accessions to ensure they are genetically pure and disease free, and how to genetically and phenotypically characterize them,



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are the main objectives of this training opportunity. The crops and native species maintained in the PGITRU are those of economic and ecologically importance to the Western US.

Objective: Research seed viability testing, regeneration protocols including breaking dormancy of crop wild relative species, and more efficient long-term seed storage conditions. Learn and apply high-throughput genomics and phenomics tools to characterize PGITRU accessions. Learn and apply methods to test for and remove disease organisms in genebank accessions. Learn about data collected, including storage and retrieval.

Approach: You will collaborate closely with USDA ARS crop plant curators and PGITRU unit members while learning and conducting research. Specific research projects will depend on the interests of the participants but will include research on the bean (*Phaseolus*) and horticultural species collections (including garlic, lettuce, or sugarbeets) that are generally researched on in the greenhouse. Genotyping activities will be outsourced, and data receipt and initial quality assessment will be coordinated with the genotyping service institution. You can learn to handle and analyze genotypic data including filtering, storage, querying and analyzing to answer questions about genetic identity, relationships, and diversity. Pathology tools such as ELISA or PCR to determine the presence of pathogens and high-throughput analyses of agronomic traits and seed nutritional traits can be learned by the participant. You will interact with unit collaborators to upload genotypic and phenotypic data directly into the GRIN-Global database or to link all data via an external public platform for access. The program has office, laboratory, greenhouse, field space, equipment, and supplies for planned experiments. Staff, collaborators, and lead scientists will support you in technical aspects of project.

Expected Results: Data that curators can use to develop new protocols to ensure the most efficient maintenance of genetically pure, disease-free accessions; genetic and phenotypic characterization data that curators can use to improve collection management and promote its efficient use. Genetically and phenotypically characterized PGR collections can be used to identify the best accessions for in-house and stakeholder breeding efforts. This will allow US breeders to create new varieties that are more nutritious, require fewer chemical or irrigation inputs, and be more resistant to new insect, disease, or environmental threats, thus increasing farmer profits.

Learning Objectives: As a result of this opportunity, you will gain experience in:

- The role gene banks play in preserving genetic diversity for crop improvement and agricultural sustainability,
- How to measure, analyze, and use the genetic diversity in the USDA National Plant Germplasm System collections,
- The use of phenomics and phenotyping approaches in greenhouse and field experiments,

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- Genotype plant species,
- The maintenance of PGR in in-situ collections, and;
- Communication skills (writing, presenting, etc.), collaboration and in conducting scientific research.

These skills and experiences will be gained as part of a Master's project, and you will be a graduate student at Washington State University, where the PGITRU is co-located. Learn about plant genetic resources (PGR) conservation and management within the USDA ARS National Plant Germplasm System (NPGS).

Mentor(s): The mentor for this opportunity is

Marilyn Warburton (marilyn.warburton@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: August 17, 2026. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for one year, but may be renewed upon recommendation of ARS and is contingent on the availability of funds.

Level of Participation: The appointment is part time.

Citizenship Requirements: This opportunity is available to U.S. citizens only.

ORISE Information: This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and ARS. Participants do not become employees of USDA, ARS, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

Questions: Please visit our [Program Website](#). After reading, if you have additional questions about the application process, please email ORISE.ARS.PacificWest@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should be currently pursuing or have received a bachelor's degree in the one of the relevant fields.

Preferred skills:

- We seek a person interested in learning about plant genetic resources, their maintenance, characterization and use.
- We prefer someone with a large capacity for curiosity, excitement, and teamwork, with the willingness and ability to learn and seek answers to questions.
- Willing to take on a master's degree program and project at Washington

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State University.

Stipend \$2,530.00 – \$2,534.00 Monthly

Point of Contact [Janeen](#)

- Eligibility**
- Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Bachelor's Degree.
 - **Discipline(s):**
 - **Life Health and Medical Sciences** ([8](#) )