Opportunity Title: USDA-ARS Postdoctoral Fellowship in Plant Phenotyping
Opportunity Reference Code: USDA-ARS-SEA-2026-0034

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-SEA-2026-0034

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 3/27/2026 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 Mississippi State, Mississippi.

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 primary objective of this project is to develop an automated or semi-automated processing pipeline capable of analyzing high-throughput plant phenotyping and soil-sensing data to extract key phenotypic traits. Advancing crop productivity within sustainable cropping systems will depend on creating regional- and site-specific agronomic practices, as well as breeding hybrids with improved drought and disease resistance. Achieving these goals requires comprehensive plant phenomic data to better understand the complex Genotype–Environment–Phenotype interactions that drive crop performance.

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The postdoctoral research fellow will be stationed with the USDA-ARS Genetics and Sustainable Agriculture Research Unit in Mississippi State, MS. In this fellowship, the fellow will collaborate with USDA-ARS scientists on research initiatives centered on high-throughput plant phenotyping. This opportunity contributes directly to two ARS National Programs: NP216 (Sustainable Agricultural Systems) and NP301 (Plant Genetic Resources, Genomics, and Genetic Improvement).

Learning Objectives: Under the guidance of a mentor, the participant will be involved in the following activities:

- Gain expertise in advanced imaging technologies—including RGB, multispectral, and hyperspectral systems—for plant phenotyping using both drone-based and ground based sensing platforms.
- Learn artificial intelligence and machine learning techniques to analyze image and geospatial data from diverse sources for crop monitoring and geospatial assessment.
- Gain knowledge and contribute to the design and implementation of a data processing pipeline for high throughput plant phenotyping and soil sensing, enabling extraction of key phenotypic traits.
- Strengthening scientific communication skills through conference presentations and publication of research findings in peer reviewed journals.

Mentor(s): The mentor for this opportunity is Haibo Yao (haibo.yao@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: 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 full time.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. **The anticipated stipend is $74,678 annually.**

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

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email ORISE.ARS.Southeast@orau.org and include the reference code for this opportunity.

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

Stipend $74,678.00 Yearly

Point of Contact Sara Beth

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Engineering** (12 👁)
  - **Environmental and Marine Sciences** (6 👁)
  - **Life Health and Medical Sciences** (10 👁)
  - **Mathematics and Statistics** (11 👁)