Opportunity Title: USDA-ARS Soil-Plant-Microbe Interaction and Response to Abiotic and Biotic Stresses
Opportunity Reference Code: USDA-ARS-NEA-2026-0029

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-NEA-2026-0029

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 6/5/2026 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 Beltsville, Maryland.

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.

The Adaptive Cropping System Laboratory (ACSL) at USDA-ARS Beltsville Agricultural Research Center (BARC) in Beltsville, MD conducts a combination of modeling and experimental research focused on crop and soil response to abiotic factors and agroecosystems management.

Research Project: The post-doctoral fellowship plays a role in helping advance research in the interaction between soil function and cropping practices – a key component to improve soil and crop production models. The research helps addresses American farmers need for innovative

agricultural technologies and management systems to enhance crop resilience and soil function, improving farm profitability. This research aims to bridge cutting-edge science with practical solutions to support production of nutritious foods across the United States and secure a healthy future. You will be part of a research team responsible for experimental design, data collection from greenhouse, growth chamber, and field experiments, laboratory analysis of collected samples, and systems analysis.

You will contribute to experimental designs from development through completion as part of on-going research utilizing resources available at BARC. Specifically, the research will focus on the growth of cover crops (collection of plant growth data) and their impact on soil health (physical, chemical, and biological properties). Experiments will be conducted at various scales for controlled environments (growth chambers and greenhouses) and under field conditions. You will collaborate with scientific staff in implementing experiments and assessing data for potential integration into existing crop production models. Data collection will include field measurements of plant development, soil sample collection and laboratory assessment, as well as use of automated sensor data.

Learning Objectives: During the appointment, you will learn about:

- Mastering laboratory techniques and interpretation of results for soil physical, chemical, and biological analysis
- Understanding linkages between soil properties, plant physiology, microbial populations, and crop production
- Understanding physiological and agronomic factors influencing plant and soil performance and interactions
- Designing and implementing experimental designs across various scales (growth chambers, greenhouse, field plots) to address current research goals
- Communicating research findings to stakeholders and fellow scientific investigators

Mentor(s): The mentor for this opportunity is Lisa Fultz (lisa.fultz@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: As soon as possible, 2026. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for seven months, 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 range is $63,940 - $68,202 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 email ORISE.ARS.Northeast@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should be currently pursuing or have received a doctoral degree in the one of the relevant fields. Degree must have been received within the past five years or is anticipated to be received by 5/29/2026.

Preferred ability/knowledge of:

- Data collection from plant and/or soil systems, preferably related to agricultural production
- Basic laboratory safety and procedures related to biochemical assays, specifics can be taught as needed
- Follow standard operating procedures for various methods with some instruction as needed
- Experience in soil biochemistry and crop production.

Additional preferred skills or willingness to learn:

- Use of python or other programing language for automated data collection

Stipend $63,940.00 – $68,202.00 Yearly

Point of Contact Janeen

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 5/29/2026 12:00:00 AM.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (1 👁)
  - **Earth and Geosciences** (1 👁)
  - **Environmental and Marine Sciences** (3 👁)
  - **Life Health and Medical Sciences** (7 👁)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).