

Opportunity Title: USDA-ARS Postdoctoral Research Fellowship in Agronomy/Plant Physiology

Opportunity Reference Code: USDA-ARS-SEA-2026-0354

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-SEA-2026-0354

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 11/6/2026 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 Crop Production Systems Research Unit, U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), located in Stoneville, 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: This research is a component of ARS National Programs 305 (Crop Production) and 304 (Crop Protection & Quarantine). Throughout the course of this project, you will learn about project management by contributing to research evaluating herbicide efficacy and screening for herbicide resistance in established and newly emerging problematic weed species in the Mississippi Delta region. You will also learn to identify key differences in physiology, growth characteristics, photosynthetic capacities, adaptability, competitiveness, and responses to



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stress and other fitness criteria of wild-type versus herbicide-resistant plant biotypes. You will contribute to studies examining how environmental conditions, cropping systems, and management practices influence weed emergence, competitiveness, and long-term persistence.

The project involves collecting, managing, and analyzing data related to weed control, herbicide performance, and whole-plant physiological processes of herbicide-resistant and susceptible populations under controlled environmental and field conditions. These insights are important for predicting the ecological success of resistant populations and developing more sustainable, integrated weed management strategies. This project will also involve close collaboration with USDA-ARS scientists specializing in plant physiology, molecular biology, genomics, and herbicide resistance to advance understanding of resistance mechanisms and support the development of novel weed management solutions for problematic weeds in Mississippi cropping systems. Through participation in this research project, you will gain experience operating specialized equipment such as spray chambers and LI-COR gas-exchange systems, as well as opportunities for managing field, growth-chamber, and greenhouse studies to investigate weed control in cropping systems.

Learning Objectives: Under the guidance of a mentor, you will:

- Gain hands-on research experience in agronomy/weed science and herbicide resistance screening across multiple species;
- Learn to operate specialized equipment such as an research track sprayer, leaf area meter, root scanner, and LI-COR photosynthesis systems;
- Develop strong competencies in collecting, processing, and analyzing plant samples to characterize herbicide resistance mechanisms; and
- Build robust data analysis skills and enhance scientific writing and publishing capabilities.

Mentor(s): The mentor for this opportunity is Krishna Reddy (krishna.reddy@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.

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

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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.Southeast@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 one of the relevant fields (Plant Sciences/Agronomy/Crop Science/Weed Science/Plant Physiology/Plant Biology). Degree must have been received within the past five years or anticipated to be received by the appointment start date.

Preferred skills:

- Experience in greenhouse, field, or growth chamber research.
- Knowledge of crop production systems of major crops/weeds.
- Background in plant/weed biology, herbicide resistance research, and field/controlled environment experimentation.
- Experience with physiological measurement tools and spray chambers (e.g., LI-COR gas exchange systems, chlorophyll fluorometers, research track sprayers).
- Excellent communication and interpersonal skills, strong statistical skills (R, SAS, etc).
- Record of peer-reviewed publications preferred.

Stipend \$65,000.00 Yearly

Point of Contact [Janeen](#)

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Doctoral Degree.
 - **Discipline(s):**
 - **Life Health and Medical Sciences** ([8](#) )
 - **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).