Opportunity Title: USDA ARS Data Analytics and Plant Genetics Fellowship
Opportunity Reference Code: USDA-ARS-MWA-2026-0388

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-MWA-2026-0388

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 12/4/2026 3:00:00 PM Eastern Time Zone

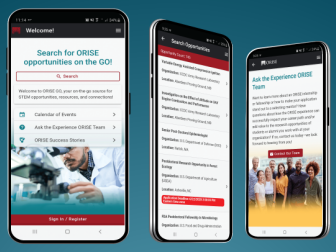
Description ***Applications are reviewed on a rolling-basis.**

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 Urbana, Illinois.

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 fellowship supports research focused on identifying the genetic and physiological mechanisms that drive weediness evolution, crop stress tolerance, and breeding improvement. You will help analyze genomic, transcriptomic, phenomic, and physiological datasets from corn, snap bean, soybean, and waterhemp to identify genes involved in herbicide sensitivity and abiotic-stress resilience. This include hands-on experimentation, data processing, and collaborative research with ARS scientists and university partners. Through this appointment, you will develop advanced experience in plant genomics, quantitative genetics, and

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stress-response biology. Image-based analytical techniques using satellite and UAV platforms will be integrated to enhance phenotyping and support research and development efforts.

Learning Objectives: Under the guidance of a mentor, you will have the opportunity to learn to:

- Detail how genetic and physiological mechanisms contribute to weediness evolution, crop stress tolerance, and crop-improvement breeding.
- Analyze genomic, transcriptomic, phenomic, and physiological datasets from corn, snap bean, soybean, and waterhemp.
- Identify genes and genetic pathways associated with herbicide sensitivity and abiotic-stress resilience.
- Advance knowledge in plant genomics, quantitative genetics, and plant stress-response biology.
- Conduct experiments, data processing, and interpretation of plant-performance results.
- Apply image-based phenotyping techniques, including satellite and unmanned aerial vehicle (UAV) platforms.

Mentor(s): The mentor for this opportunity is Zhanyou Xu (zhanyou.xu@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: December 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 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.Midwest@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should be currently pursuing or have received a

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master's or 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 1/31/2027.

Preferred skills:

- Image-based analytical techniques using satellite and UAV platforms
- R and python Shiny Application development
- Mobile app development experience

Stipend $70,000.00 – $90,000.00 Yearly

Point of Contact Michele

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (17)
  - **Engineering** (1)
  - **Life Health and Medical Sciences** (51)
  - **Mathematics and Statistics** (11)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).