

**Opportunity Title:** USDA-ARS Sustainability of Irrigated Agriculture Fellowship

**Opportunity Reference Code:** USDA-ARS-2021-0010

**Organization** U.S. Department of Agriculture (USDA)

**Reference Code** USDA-ARS-2021-0010

**How to Apply** *Connect with ORISE...on the GO!* Download the new ORISE GO mobile app in the [Apple App Store](#) or [Google Play Store](#) to help you stay engaged, connected, and informed during your ORISE experience and beyond!

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

**Application Deadline** 3/26/2021 3:00:00 PM Eastern Time Zone

**Description** \*Applications may be reviewed on a rolling-basis and this posting could close before the deadline.

**ARS Office/Lab and Location:** A research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Sustainable Water Management Research Unit located in Stoneville, Mississippi.

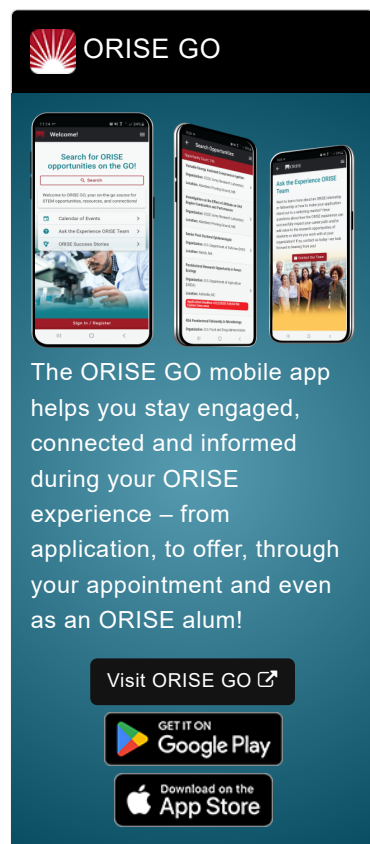
**Research Project:** This research project focuses on enhancing the sustainability of irrigated agriculture in the Lower Mississippi Delta region in Mississippi. Under the guidance of a mentor, the participant will be involved in the following activities:

1. The participant will be assigned to a mentor to carry out both a personal and team research program aimed at using field, greenhouse, and growth-chamber based studies to investigate the impacts of soil amendments, cover crops, and tillage and water-crop management on soil physical, chemical, biological, and hydraulic properties for managing soil nutrient and water availability in various row-crop systems in the Lower Mississippi River Basin (LMRB).
2. The participant will conduct environmental growth-chamber based studies to investigate physiological and production responses of crops in the LMRB to flood, drought, and extreme air temperatures under enhanced carbon dioxide concentrations in the air.
3. The participant will research impacts of soil-water-crop-air-carbon dioxide management in enhancing soil-water-air properties/qualities by reducing soil nutrient leaching and runoff water losses.

**Learning Objectives:** The participant will examine and learn about climate variability and change impacts on energy, matter, and momentum fluxes and exchanges between cropping systems and atmosphere in the LMRB.


**Mentor(s):** The mentor for this opportunity is Matt Moore ([matt.moore@usda.gov](mailto:matt.moore@usda.gov)). If you have questions about the nature of the research please contact the mentor.


**Anticipated Appointment Start Date:** Spring 2021. Start date is flexible and will depend on a




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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.

**Citizenship Requirements:** This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the [Guidelines for Non-U.S. Citizens Details page](#) of the program website for information about the valid immigration statuses that are acceptable for program participation.

**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 [USDA-ARS@ornl.gov](mailto:USDA-ARS@ornl.gov) and include the reference code for this opportunity.

**Qualifications** The qualified candidate should have received a doctoral degree in one of the relevant fields.

Preferred skills:

- Experience with growth-chambers and climate variability research
- Experience in statistically-designing experiments, implementing them in the field, collecting data, and analyzing and interpreting data for publications

- Eligibility Requirements**

- **Degree:** Doctoral Degree.
  - **Discipline(s):**
    - **Earth and Geosciences** ([20](#) )
    - **Engineering** ([1](#) )
    - **Environmental and Marine Sciences** ([2](#) )
    - **Life Health and Medical Sciences** ([6](#) )