

**Opportunity Title:** USDA-ARS Research Field Crop Scientist Internship

**Opportunity Reference Code:** USDA-ARS-CERCA-2023-0281

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

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**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. 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** 3/29/2024 3:00:00 PM Eastern Time Zone

**Description** \*Applications will be reviewed on a rolling-basis.

**ARS Office/Lab and Location:** A research opportunity is 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:** The vision of this project is to transform US grain farmland into a net-negative component of a circular bio-economy and reduce global greenhouse gas emissions. Research aims to create a Circular Economy that Reimagines Corn Agriculture (CERCA), converting maize to an earlier season annual crop with reduced environmental impacts through increased uptake and recycling of nitrogen and phosphorus fertilizer.

The candidate will be expected to assist with field experiments to screen diverse maize germplasm for candidate traits including germination cold tolerance, seedling cold tolerance, cold C4 photosynthesis, efficient N utilization, and low greenhouse gas emissions. The candidate will assist with design and planting of field trials, measurements of germination, development, growth, chlorophyll fluorescence, photosynthesis, nitrogen



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content, biomass, and yield.

**Learning Objectives:** The candidate will learn about biological mechanisms contributing to cold tolerance and nitrogen use efficiency. The candidate will collaborate with the USDA ARS CERCA team. The candidate will participate in CERCA meetings as well as ARS unit meetings.

**USDA-ARS Contact:** The mentor for this opportunity is Lisa Ainsworth ([lisa.ainsworth@usda.gov](mailto:lisa.ainsworth@usda.gov)). If you have questions about the nature of the research, please contact the mentor.

**Anticipated Appointment Start Date:** 2023. Start date is flexible and will depend on a variety of factors.

**Appointment Length:** The appointment will initially be for two years, but may be renewed upon recommendation of the mentor and ARS, and is contingent on the availability of funds.

**Level of Participation:** The appointment is full-time.

**Participant Stipend:** The participant(s) 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](#). If you have additional questions about the application process, please email [ORISE.ARS.CERCA@ornl.gov](mailto:ORISE.ARS.CERCA@ornl.gov) and include the reference code for this opportunity.

**Qualifications** The qualified candidate should be currently pursuing or have received a bachelor's, master's, or doctoral degree in one of the relevant fields.

Preferred Skills:

- Candidates who are familiar with field work, farm equipment, data collection and organization, agronomic analysis, and communication with a team of researchers are encouraged to apply.
- Prior experience working in a plant biology or crop sciences laboratory as well as field experience with row crop agriculture.

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- Experience with farm equipment.
- Experience measuring photosynthesis and/or leaf optical properties.
- Experience managing field trials
- Experience measuring plant biomass
- Experience working with a team to accomplish scientific goals.

- Eligibility Requirements**
- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree.
  - **Discipline(s):**
    - **Engineering** ([1](#) 👁)
    - **Environmental and Marine Sciences** ([2](#) 👁)
    - **Life Health and Medical Sciences** ([10](#) 👁)