

Opportunity Title: Postdoctoral Opportunity in Land-Atmosphere Interactions in an Integrated Dairy System

Opportunity Reference Code: ARS-USDFRC-2018-555-0008-02

Organization U.S. Department of Agriculture (USDA)

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How to Apply A complete application consists of:

- An application
- Transcripts – [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 references

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

If you have questions, send an email to USDA-ARS@orau.org. Please include the reference code for this opportunity in your email.

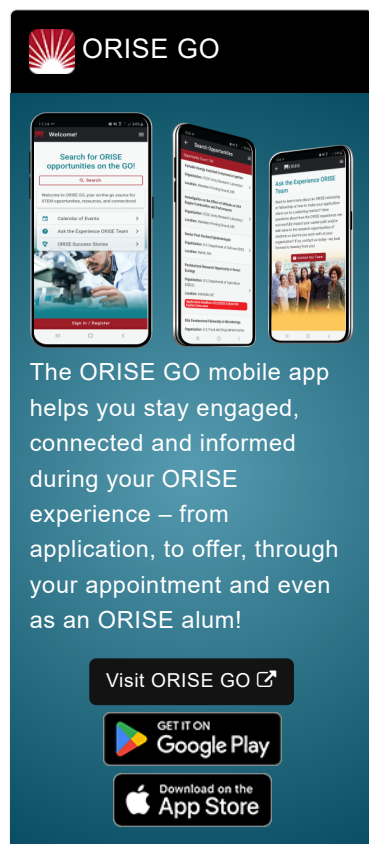
Description A postdoctoral research opportunity is available with the the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), U.S. Dairy Forage Research Center (US DFRC) in Madison, Wisconsin.

The U.S. Dairy Forage Research Center (US DFRC) is seeking a postdoctoral participant to join our FarmLab research initiative. FarmLab is a farm-scale research platform that facilitates exploration of agricultural production and ecosystem services trade-offs associated with land cover and land management practices. The participant will assist with integrating newly established eddy covariance observations in the development of the farm carbon budget, and explore how land use decisions affect farm energy balances and nutrient cycling.

The participant will:

- Help develop processes for integrating landscape flux data with field and barn research
- Collaborate with US DFRC scientists to link a farm carbon model with research exploring farm nutrient dynamics, particularly investigations related to the nitrogen cycle
- Conduct research with an interdisciplinary team to inform a whole-farm carbon model, including measures of farm-scale carbon pools and fluxes
- Collaborate with US DFRC and University of Wisconsin scientists to investigate carbon flux dynamics in a field-scale project involving conversion of annual crop production into perennial cropland (i.e., Kernza - intermediate wheatgrass)

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. The initial appointment is for one year, but may be renewed upon recommendation of ARS and is contingent on the availability of funds. The participant will receive a monthly stipend



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commensurate with educational level and experience. Proof of health insurance is required for participation in this program. The appointment is full-time in the Madison, Wisconsin area. Participants do not become employees of USDA, ARS, DOE or the program administrator, and there are no employment-related benefits.

While participants will not enter into an employment relationship with ARS, this position requires a pre-appointment check and a full background investigation.







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.

For more information about the ARS Research Participation Program, please visit the [Program Website](#).

Qualifications Applicants must have a Ph.D. in Earth Science, Atmospheric and Oceanic Sciences, Ecology, Agroecology, or a related field. Professional experience and proficiency in terrestrial carbon cycling and statistical data analysis is high preferred. Successful candidates must have a demonstrated ability to publish peer-reviewed papers, present at national scientific conferences, and maintain a commitment to working in an interdisciplinary research environment.

Experience working in agricultural systems is preferred but not required. Prior exposure to eddy covariance flux measurement systems, flux data processing workflows (e.g., EddyPro, Eddy4R, REddyProc), ecosystem modeling (e.g., AgrolBIS, Biocro), land surface remote sensing, scientific programming languages (e.g., Python, R, Matlab, IDL), and Linux-based computing environments is desirable but not essential.

- Eligibility Requirements**

- **Degree:** Doctoral Degree.
 - **Discipline(s):**
 - **Communications and Graphics Design** ([1](#) )
 - **Computer, Information, and Data Sciences** ([16](#) )
 - **Earth and Geosciences** ([2](#) )
 - **Environmental and Marine Sciences** ([3](#) )
 - **Life Health and Medical Sciences** ([1](#) )
 - **Physics** ([1](#) )