Opportunity Title: USDA-APHIS Postdoctoral Fellowship in Quantitative Ecology
Opportunity Reference Code: USDA-APHIS-2026-0143

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-APHIS-2026-0143

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 5/22/2026 3:00:00 PM Eastern Time Zone

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

APHIS Office/Lab and Location: A research opportunity is currently available with the U.S. Department of Agriculture (USDA), Animal Plant Health Inspection Service (APHIS), located in Fort Collins, Colorado or remote.

The Animal and Plant Health Inspection Service (APHIS) is a multi-faceted Agency with a broad mission area that includes protecting and promoting U.S. agricultural health, regulating genetically engineered organisms, administering the Animal Welfare Act and carrying out wildlife damage management activities. These efforts support the overall mission of USDA, which is to protect and promote food, agriculture, natural resources and related issues. APHIS' mission also includes addressing issues such as wildlife damage and disease management; regulation of genetically engineered crops and animal welfare; and protection of public health and safety as well as natural resources that are vulnerable to invasive pests and pathogens.

The U.S. Department of Agriculture (USDA), Animal Plant Health Inspection Service (APHIS), Veterinary Services, Center for Epidemiology & Animal Health (CEAH) Domestic Animal Health and Analysis Unit (DAHA) examines all aspects of environmental factors affecting animal health and veterinary public health, including estimates of the likelihood of a damaging event and the resulting consequences. Multidisciplinary teams of specialists use information from a wide variety of sources to conduct epidemiological, ecological, economic, geospatial, and environmental analyses and other assessments of present, future, and emerging threats to animal health. After an animal or veterinary public health risk is identified and the threat

assessed, this information is communicated to other health professionals, animal producers, and decision makers for follow-up actions.

Research Project: The fellow will collaborate with veterinary medical officers, statisticians, economists and ecologists specializing in epidemiology, risk analysis, disease modeling, economic evaluation, and surveillance to learn how to operationalize, and when needed, improve analytical tools. Research activities will support rapid risk assessment, emergency preparedness, and surveillance planning for disease transmission from feral to domestic swine. The fellowship will provide opportunities for the fellow to learn about, and aid in, operationalizing analytical tools that support national scale programmatic decisions and policy.

Specific activities include:

- Operationalize, and where needed, improve Bayesian spatio-temporal feral swine abundance model allowing predictions to be generated quickly and regularly.
- Help develop machine learning techniques for feral swine abundance in data sparse environments.
- Collaborate with APHIS Wildlife Services (WS) to integrate data and model results into dashboards.
- Develop reports analyzing data uses and potential pitfalls to support informed decision-making.
- Evaluate performance of abundance models.
- Generate metrics describing changes in density of feral swine.
- Help develop approach for estimating abundance at the county scale, and for farm bill properties.

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

- Develop the ability to design, implement, and document Bayesian and machine learning models to predict abundance, prevalence, and disease risk, demonstrating understanding of model selection, assumptions, and interpretation.
- Build competence in translating analytical tools into decision-making contexts, such that agency decision makers can understand, apply, and learn from the outputs of these tools.
- Strengthen skills in incorporating stakeholder and customer feedback to ensure they align with program learning needs and priorities.
- Advance the fellow’s professional development by engaging in targeted learning opportunities that address their stated goals, with reflection and self-assessment confirming learning gains.
- Collaborate with subject matter experts and policy makers to gain experience from them.
- Participate in professional shadowing experiences or short details to enhance knowledge and skills in disease risk modeling and application to support programmatic decisions and policy.

Mentor(s): The mentor for this opportunity is John Foster (john.foster@usda.gov)

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and Ryan Miller (ryan.s.miller@usda.gov). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: July 1, 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 APHIS 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. **The anticipated stipend is $83,265 annually.**

Citizenship Requirements: This opportunity is available to U.S. citizens and Lawful Permanent Residents (LPR) 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 APHIS. Participants do not become employees of USDA, APHIS, 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-APHIS@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 the one of the relevant fields.

Preferred skills:

- Previous experience in computational ecology and statistics.
- R or Python.
- Statistical analysis tools such as NIMBLE, JAGS or STAN.
- Familiarity with data processing, quality control, and management of environmental datasets.
- Possesses the oral and written communication skills necessary to document research activities, to communicate clearly and effectively with other researchers, and present and report results.

Stipend

$83,265.00 Yearly

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (2 👁)
  - **Earth and Geosciences** (1 👁)
  - **Environmental and Marine Sciences** (14 👁)
  - **Life Health and Medical Sciences** (13 👁)
  - **Mathematics and Statistics** (3 👁)

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