

Request for Applications

The United States Department of Agriculture (USDA)

Foreign Agricultural Service (FAS)

Scientific Exchanges Fellowship Program

The University of Missouri has extended the deadline for accepting applications, now through February 3, 2020, for a pilot program funded by the Scientific Exchanges Fellowship Program, within the United States Department of Agriculture's Foreign Agricultural Service. This program will fund up to eight fellows to complete research training with a mentor at the University of Missouri for up to 11 weeks on research related to sanitary and phytosanitary (SPS) and technical barriers to trade (TBT) topics to support agricultural trade in the eligible countries. The U.S. mentor will later visit the fellow's home institution to continue collaboration. The training is projected to be 11 weeks between the dates of August 30, 2020 and November 15, 2020.

These programs are expected to contribute to the strategic goals and objectives of the fellow through a hands-on experience in a "real-world" agricultural research scenario, providing opportunity for application of research agendas where they can have a direct impact on international trade, food security, and economic growth in an emerging economy. It is hoped that fellows will share the knowledge gained through the program in their classroom, laboratory, inspection site, extension work, or other sites of work, research and/or education. Also, it is hoped the fellows will continue to maintain professional contacts with their mentors after their departure from the United States

The application deadline is now extended to February 3, 2020.

Eligible Countries: Kenya, Morocco, Tanzania and Tunisia (approximately two fellows will be accepted from each of the eligible countries).

Objectives:

- Provide early-to-midcareer agricultural research scientists, faculty, policymakers and others with individual training opportunities in SPS and TBT research. This includes the areas of food safety and the protection of animals and plants and the corresponding agricultural products derived from plants and animals.
 - SPS research can include the following broad topic areas.
 - Protection of human or animal life from risks arising from additives, contaminants, toxins, or disease-causing organisms in their food;
 - Protection of human life from plant- or animal-carried diseases;
 - Protection of animal or plant life from pest, diseases, or disease-causing organisms;
 - Prevention or limitation of other damage to a country from the entry, establishment, or spread of pests.
 - TBT research can include the following broad topic areas as related to agriculture.

- Measures such as labelling requirements, standards on technical specifications and quality standards, and other measures protecting the environment;
- All conformity-assessment measures related to technical requirements, such as certification, testing and inspection;
- Ingredient or identity standards; shelf-life restrictions; and import testing and certification procedures.
- Provide practical experience and exposure to new perspectives and/or technologies that can be applied in their home institutions;
- Foster increased collaboration and networking to improve agricultural productivity and trade;
- Facilitate the transfer of new scientific and agricultural technologies to strengthen agricultural practices to promote human, animal, and plant health;
- Address obstacles to the adoption of technology such as ineffectual policies and regulations.

Applicants will propose a research topic in the area of SPS or TBT that can be accomplished during the 11-week fellowship at the University of Missouri.

Research training topics should focus on research that has a direct impact on liberalizing international trade in the areas of sanitary and phytosanitary (SPS) and technical barriers to trade (TBT). SPS is broadly defined as efforts and standards to manage plant and animal pests and diseases and ensure food is safe and wholesome. This work seeks to protect agriculture from transboundary animal and plant pests and diseases, and thus support agricultural plant and animal health. TBT is broadly defined as measures that include technical regulations, standards, or conformity assessment procedures for a product. Efforts to reduce TBTs seek to ensure these measures are non-discriminatory and do not create unnecessary obstacles to trade.

All selected applicants will be mentored by faculty members at the University of Missouri (MU), in the departments of Food Sciences, Animal Sciences, Veterinary Medicine, and/or Plant Sciences. Priority will be given to research topics that fit well within the expertise and research areas of these faculty. **In particular, the following are some of the capacity areas available at the University of Missouri.**

Animal Sciences, Veterinary Medicine

- Infectious disease epidemiology
- Disease diagnosis and surveillance
- Disease pathogenesis and immunity
- Antimicrobial resistance
- Vector borne diseases
- Food safety
- Regulatory requirements for livestock movement and trade
- Livestock reproduction and genomics
- Biosecurity
- Farmer education and extension training

- Bovine mastitis and milk quality
- Beef/Pork/Dairy Quality Assurance and Animal Welfare standards

Plant Sciences

- Diagnostics of viral, bacterial, fungal, and nematode plant pathogens
- Field inspections for pests (including pheromone traps, sticky traps, black light traps, sweep nets, beet cloths) and scouting for pathogens
- Field tracking of invasive insect dispersal and habitat preference (including protein and fluorescent markers)
- State wide trapping and reporting network for insect pest species
- Laboratory identification for insect pest species and select pathogens
- Training modules on invasive species identification, biology, and management
- Integrated pest management for fungal and nematode pathogens
- Grower education/extension
- Development of phytosanitary regulatory procedures

Food Sciences

- Hazard Analysis and Critical Control Point (HACCP)
- Food Safety Modernization Act (FSMA) approaches
- Preventive Controls Rules for Human Food
- Foreign Supplier Verification Program (FSVP) Rule
- Microbiology, chemical and other contaminants
- To enhance public health through research of appropriate risk-based regulations that safeguard the food chain
- Adoption and application of international standards in testing of meat and dairy products
- Post-harvest processing of fruits, vegetables, nuts and ancient grains
- Value addition to food loss/food waste
- Fortification of foods; Nutritional labeling
- Identifying new agro-forestry products and processing for medicinal applications
- Acidified and Low Acid Canned Foods
- Good Manufacturing Practices (GMPs) and Sanitation Standard Operating Procedures (SSOPs)

Cross-cutting Themes

- Genomic sequencing for pathogens
- Public health protection; Food defense and biosecurity; Food recalls
- Development of SPS protocols, regulations, risk management
- Green nanotechnology
- Agricultural and trade policies

Eligibility

To be considered for the Scientific Exchanges Fellowship Program, candidates must:

- Be citizens of an eligible country
- Be fluent in English
- Have completed a Master's or higher degree
- Be in the early or middle stage of their career, with at least two (but not more than 10) years of practical experience
- Be employed by a university, government agency or research entity in their home country
- Demonstrate their intention to continue working in their home country after completing the fellowship.
- Must be able to pass a security review.
- Must not have previously participated in a USDA Borlaug Fellowship program.

The program will select candidates based on their academic and professional research interests and achievements, level of scientific competence, aptitude for scientific research, leadership potential, likelihood of bringing back new ideas to their home institution, and flexibility and aptitude for success in a cross-cultural environment. Consideration is also given to the feasibility of the proposed research within the timeframe and lab capacities at the University of Missouri, and the relevance of the applicant's research area to the research topics highlighted in the application announcement and to global food security and trade.

Application Requirements

Candidates must apply via completing a PDF application and emailing it to cip@missouri.edu. The following information will be required:

- Completed application form that includes a written 2-3 page program research proposal and action plan
- Signed approval from applicant's home institution
- Two letters of recommendation
- Official copy of transcript for college/university degree(s) received
- Copy of passport identification page

Contact

Questions can be directed to cip@missouri.edu.

Review Process

Proposal deadline is extended to February 3, 2020 at 5 pm GMT

Proposals will be reviewed for completeness (all questions must be answered). Complete proposals will then be reviewed for project feasibility and appropriateness, and applicant capacity. Selections will be made by the University of Missouri and the USDA-FAS. After a security review is completed, all applicants will be notified on the status of their proposal by a projected target date of February 15, 2020. Applicants accepted into the Fellows Program will

have 30 days after this notification to make arrangements with their home institutions for their participation and to accept their fellowships.

Scientific Exchanges Fellowship Program Implementation

Each fellow will be assigned a mentor at the university according to his or her chosen area of focus (Food Safety, Animal Protection, Livestock, Plants, etc.). The fellow will work in both group settings with the other fellows on topics that span the breadth of SPS and TBT topic areas, and will work individually on chosen research topics with their mentor.

Program dates

All fellows should plan for the fellowship to be 11 weeks from August 30, 2020 until November 15, 2020.