# UNITED STATES DEPARTMENT OF AGRICULTURE (USDA): OPPORTUNITIES FOR INTERNATIONAL ENGAGEMENT AND RESEARCH COOPERATION

# Programs of the Foreign Agricultural Service

# Borlaug International Science and Technology Fellowship Program

The program matches Fellows with experts in their field at U.S. host institutions. Mentors visit fellows at home institutions to continue research collaboration.

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|---|---|
| **Partners and Mentors include:** | U.S. Universities, government research facilities, and non-profit institutions. |
| **Fellowship duration:** | 10-12 weeks |
| **Mentor follow-up visit:** | 1-2 weeks, about 1 year after the fellowship |
| **Examples of FY17 priority topics:** | Agricultural Extension, Animal & Plant Health, Biotechnology, Food Safety, Rangeland Management |
| **Borlaug Special Initiatives in FY17:** | Borlaug Cocoa, Borlaug CGIAR, Global Research Alliance |

# Borlaug International Science and Technology Fellowship Program

- University designs and serves as research training provider
- Mentor works with Fellow to develop an appropriate work plan, site visits, and other arrangements to enhance the fellowship. Communication begins prior to arrival of the Fellow
- University provides logistical support for the fellowship, including arranging roundtrip flights, securing lodging with cooking facilities, etc.
- Mentor commits a significant amount of time each week for one-on-one work with the Fellow for the duration of the program. Mentor may assign other faculty members to assist with Fellow's training and research activities
- Mentor plans and coordinates with the Fellow a follow-up visit to the Fellow's home country and institution
- Typical program cost: $40,000
- Benefits of participating in the program for U.S. host institutions:
  - Increase international collaboration
  - Complementary activities
  - Further exchange opportunities
  - Joint publications

# Borlaug International Science and Technology Fellowship Program

**Global Research Alliance Fellowship**

- Reduce greenhouse gas emissions intensity in crop and livestock production systems
- Manage greenhouse gas emissions and carbon sequestration in agricultural systems
- Focus countries: Egypt, Ghana, Indonesia, Malaysia, the Philippines, Thailand, Vietnam, Colombia, Costa Rica, Honduras, Mexico, Nicaragua, Panama, and Peru

**Cocoa Borlaug Fellowship**

- Help countries become more competitive in cocoa and cocoa products
- Focus countries: Cameroon, Cote d'Ivoire, Ghana, Liberia, Nigeria, India, Indonesia, Malaysia, the Philippines, Vietnam, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, and Trinidad & Tobago

**CGIAR (formerly, Consultative Group for International Agricultural Research)**

- Collaborating with the CGIAR to promote science and increase food security worldwide by addressing food insecurity and malnutrition in developing countries or in value chains outside of traditional U.S. expertise.
- FAS partners with four CGIAR centers in Colombia, Mexico, Peru, and Jordan and WorldFish in Malaysia

# Borlaug International Science and Technology Fellowship Program

**Borlaug Fellowship Advances Women in Science**

In 2017, FAS granted fellowships to 25 women; representing a diverse group of countries from across Africa, Asia and Latin America

So far in 2018, FAS has awarded fellowships to four female scientists

**Caption:** Dr. Brant Schumaker supervises Stella Atim in tissue trimming and DNA extraction from field tissue samples for brucellosis diagnostic test development.

# U.S.-China Scientific Cooperation Exchange Program (SCEP)

SCEP is a short-term research and exchange program between the United States and China, representing a vital component of our agricultural relationship with China

USDA and China's Ministry of Agriculture (MOA) are both responsible for recruiting six teams of six participants from their countries. Six U.S. teams travel to China and are hosted by MOA. Six Chinese teams travel to the United States and are hosted by USDA

**Participating partners**: U.S. universities, government agencies, international research centers, nonprofit institutions, and the private sector

**Exchange Duration:** up to 14 days

**2018 U.S. Topics**: Agricultural Water Use Efficiency, Risk Analysis, Emerging Diseases, Plant Variety Protection, Dairy Food Processing and Value Chain, Rangeland Conservation

**2018 Chinese Topics**: Sustainable Agriculture, Agricultural Trade and Investment, Risk Assessment and Product Safety, Improving Farmer Management, Germplasm Resources Conservation, Crop Germplasm Conservation and Development

# U.S.-China Scientific Cooperation Exchange Program (SCEP)

## U.S. Organizations Organize Training Programs

- Design and schedule program itinerary for six Chinese participants
- Coordinate travel and transportation, meals and incidentals (M&IE), emergency health insurance, lodging, cultural activities, and communication
- Program Cost: Between $42,000 and $50,000


**Caption:** Oakland port tour for Chinese team on public-private partnership.

## U.S. Participants' Exchange Opportunities To China

- For the 2018 exchanges, USDA will cover international airfare to and from China
- China's MOA will cover local travel and transportation, meals, and lodging

U.S. team on rangeland management viewing simulated landscapes restoration.

# Scientific Cooperation Research Program

SCRP addresses agricultural challenges of small holder farmers by transferring scientific knowledge and technology to develop practical solutions.

SCRP funds grants to U.S. Land Grant Universities partnering with a host country university to collaborate on research, extension, and education projects.

- Period of Performance: not to exceed two years
- Grant Amount: Maximum $40,000
- Eligible Countries: Bangladesh, Central America Region, East Africa Region, Ghana, and Kenya

# Faculty Exchange Program

- Improve course content and teaching in agricultural economics and agricultural science
- 375 plus participants to date in groups of 4-6 at each host university
- Past Participating Countries: Afghanistan, Armenia, Bulgaria, Kazakhstan, Kyrgyzstan, Romania, Russia, Serbia, Ukraine, Uzbekistan, Iraq, Botswana, Ethiopia, Kenya, Tanzania, Ghana, Mauritius, Nigeria, Senegal, Uganda Peru and Honduras
- Current funding for –
  - agricultural economics in Ukraine
  - veterinary medicine in Africa
- One semester program with U.S mentor follow-on visits

**Caption:** Kenyan veterinarian Jesse Thuo in the lab at Iowa State University with his U.S. mentor Dr. Yuko Sato.

# Cochran Fellowship Program

- The Cochran Fellowship Program offers short-term trainings that:
  - Assist eligible countries to develop their agricultural systems to meet the food and fiber needs of their domestic populations
  - Establish and Strengthen trade linkages between overseas partners and agricultural interests in the United States
- All training must take place in the United States and must relate to agriculture, fisheries, and/or forestry
- Majority of the training priorities are recommended by FAS Offices overseas in order to support USDA-US government trade and capacity building activities and initiatives
- The Cochran Fellowship Program covers all expenses for Fellows upon arrival at the training site. The Program covers only international airfare for Fellows from the Eurasia region and those funded under special funding sources

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| **Training Providers include:** | U.S. Universities, Federal and State Government Agencies, U.S. Market Development Cooperators, and the Private Sector |
| **Fellowship Duration:** | 2-3 Weeks |
| **Examples of FY18 Training Topics:** | Overview of Agricultural Biotechnology and Biosafety, Food Safety and International Standards, Fruit and Vegetable Post Harvest Loss Prevention |

# Cochran Fellowship Program

- Universities serve as training providers and submit proposals for 2-3 week long training programs, which are based on specific training needs of participating fellows

- Trainings are typically comprised of field observations, industry visits, hands on practicums, university courses and seminars, meetings with U.S. government agencies, and trade shows

- After implementation, universities report out on fellows evaluation, learning metrics, and outcomes

- Program Cost: Between $35,000 - $50,000 (Depending on the Statement of Work)

<u>What we look for in a training provider:</u>

- Demonstrate experience in topic area and associated objective areas
- Well connected within the agricultural community
- Experience with region's and/or country's agricultural sectors
- Experience training international professionals

# Cochran Fellowship Program

From November 4-17, 2017, North Carolina State University provided Improved Adaptation to Drought and Dry Cereal Cropping training to four Fellows from Mali and one Fellow from Burkina Faso. The training program focused on developing new models for crop resilience, pesticide and irrigation practices, and building resilient food systems.

**Reasons for Approval and Selection of North Carolina State University:**

- North Carolina State University has unique and specific expertise in climate-smart agriculture
- North Carolina State University's proposal met specific needs of the Fellows
- The budget was fair, reasonable, and comprehensive
- North Carolina State University demonstrated its ability to carry out the requirements outlined in the Statement of Work

# EMP – Emerging Markets Program

- $10,000,000 annually
- EMP can fund 1) market assessments, 2) travel to and from the emerging market, and 3) technical assistance activities
- High Income countries are excluded (World Bank)
- Projects should have a focus on increasing or maintaining U.S. exports in the emerging market
- Universities should partner with agricultural exporting industries
- A contribution is required
- Applications accepted on a rolling basis for FY 18 funds.  FY 19 funding announcement expected soon

# EMP, continued

Project example:
Texas A&M University, AgriLife Extension Service was awarded $288,000 to complete an assessment study - Brazil 2040: Identification and 25-Year Outlook for U.S. Export Opportunities, Food Distribution Systems and Infrastructure in Brazil

# TASC – Technical Assistance for Specialty Crops

- $9,000,000 annually
- TASC funds projects to address trade barriers that prohibit or threaten exports of specialty crops. Types of projects may include pest and disease research, pre-clearance export protocol, study tours, labeling, quality and grading issues
- University proposals should demonstrate support from the specialty crop industry
- A contribution is recommended
- Applications accepted on a rolling basis for FY 18 funds.  FY 19 funding announcement expected soon

# TASC, continued

Project example:

- Washington State University (WSU) was granted $179,713 in TASC funds to develop a standardized export work plan training for apple and stone fruit pre-packing evaluators to ensure access of U.S. fruit for exports to Taiwan, Mexico and Canada

- Rutgers University (RU) was granted $356,559 in TASC funds to conduct field residue trials, collect additional samples from field trials, and analyze additional metabolites

- Michigan State University (MSU) was granted $265,775 in TASC funds to avoid Maximum Residue Level (MRL) exceedance in overseas markets. MSU and the apple and cherry industries carried out MRL studies in both SW and NW Michigan using appropriate insecticides

# A University's Perspective: International Collaborative Linkages and Benefits to Study Abroad Programs

M. Alvarez, C. Bonsi, Z. Senwo, S. Elavarthi, L. Marsh, S. Tubene, D. Marsh

# Purpose of Study Abroad

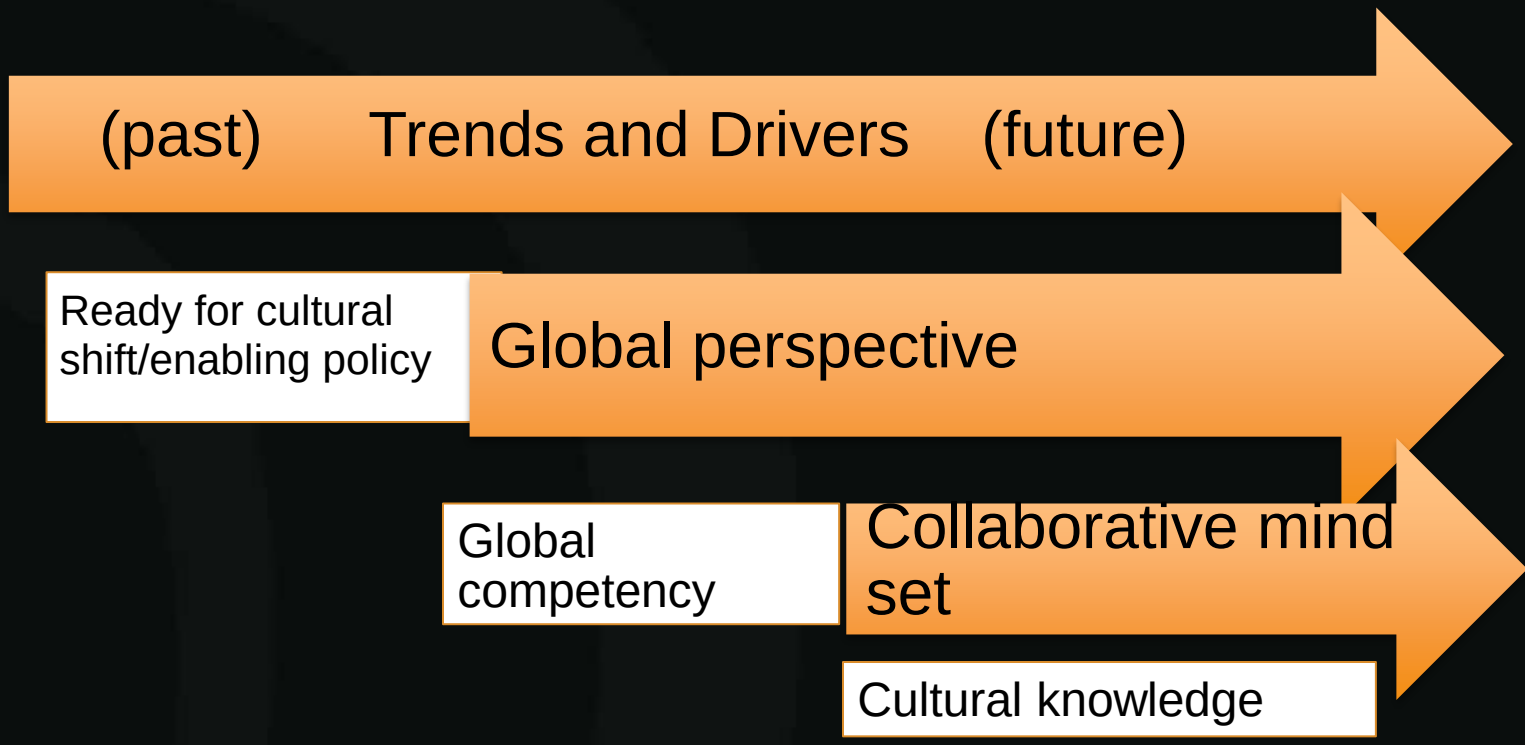
Broaden perspective to global citizenship

Increase minority participants from Agriculture & Related Sciences

Strengthen international awareness of undergraduates

Global collaboration & partnership & zonal knowledge

# Conceptual Framework of Program



# Specific Objectives

Build international educational, research and extension partnerships

Develop international scholarly enrichment & faculty exchange

Link program to strengthen capacity for student training/faculty linkages

# Multidisciplinary team approach

## Supporters

USDA/NIFA

USDA-FAS

USDA-APHIS

ARD Foundation

USAID

## Participants

- DSU/CATIE
- UMES/FAMU
- Tuskegee U
- Alabama A&M
- International partners/CATIE/EARTH/KNUST
- General Electric

## Coordination

- Student recruitment
- Mission preparation
- Host institution agreement

# West Africa ASSESS

- Provides program evaluation, capacity development in M&E, information dissemination and knowledge sharing for the USAID/West Africa's Regional Economic Growth Office (REGO) portfolio of foreign assistance.


ASSESS
ANALYTICAL SUPPORT
SERVICES AND EVALUATIONS
FOR SUSTAINABLE SYSTEMS
USAID
Study Abroad Program
DelawareState University


1890
WELLNESS
WALK

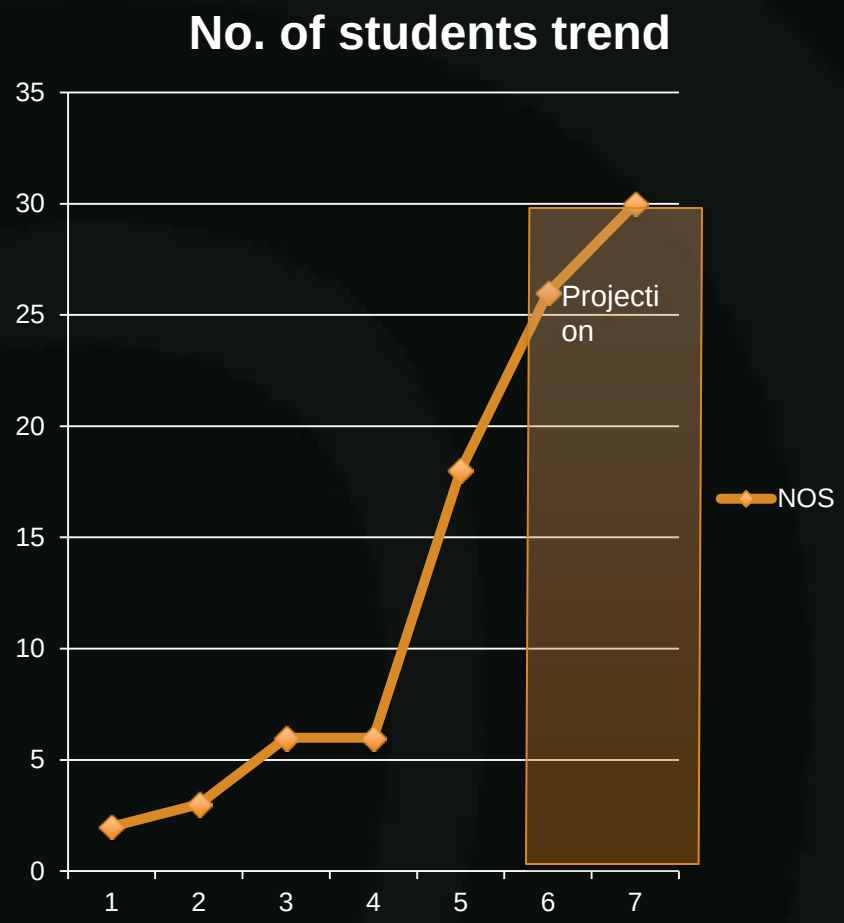
**Universities**
**Ministries**
**Private enterprise**
**Cultural Centers**
**Farmers**
**Community leaders**

# Public & Private Sector Partners

## Range of topics covered

- USAID West Africa Regional Office, Accra
- Universities Ag. Research (CATIE/EARTH)
- Model Village/Community site
- Cocoa/Coffee Research Centers
- Historic Culture Sites

# Experience & Accomplishments




# Lessons Learned & Impact

- Culture orientation enriching
- Broaden horizon/Personal Development
- Learning multidimensional perspectives
- Ideas for future plans
- NIFA selected project as an exemplary model
- USDA-FAS & APHIS in collaboration with ARD Foundation scaling up

## Improvement ideas

- More hands-on activity
- Extend the time
- Incorporate policy discussions
- Shadowing professors/ students based on research interest

# Thank you

# National Institute of Food and Agriculture, Center for International Programs

Otto Gonzalez
Director, Center for International Programs, USDA/NIFA

Patty Fulton
National Program Leader, Center for International Programs, USDA/NIFA

# USDA/NIFA's mission –

**Invest in and advance agricultural research, education and extension to solve societal challenges**

Focus is domestic, but some opportunities for global engagement; must advance domestic mission





# Why should USDA/NIFA be globally engaged?

To efficiently solve problems here we may need information and cooperation from beyond our borders

***And in an increasingly interconnected world –***

Solutions we develop for problems in the United States could benefit other parts of the world

# 3 Steps toward including an International activity:

Step 1 - See
If it fits within a
NIFA grant program

Step 3 – Identify potential collaborators, institutions, or locations

Step 2 – Determine how it helps you accomplish your research, education or extension objective

# There are opportunities to include international activities in your

- NIFA **Capacity** grants (mainly land grant institutions)
- NIFA **Competitive** grants (all eligible institutions)

Note:
Any international activity must advance U.S. agricultural goals
Only U.S. institutions are eligible to apply for NIFA awards

# NIFA's largest competitive grant program – Agriculture and Food Research Initiative (AFRI)

## Global Engagement language for RFAs

"NIFA supports global engagement that advances U.S. agricultural goals. To attain the agency's goals for U.S. agriculture, promotion of global competence of our nation's future agricultural workforce, and safe and nutritious food security in a growing world, NIFA recognizes that collaboration with international partners can contribute to advances for U.S. agriculture

Thus, applications in response to this program's RFA may include collaborations with international partners, but may only be submitted by eligible U.S. institutions. Such applications may include subcontracts to international partners or other institutions. Applications must clearly demonstrate benefits to the United States"

# https://nifa.usda.gov/opportunities-global-engagement





## Grant Opportunities for Global Engagement

Over the years, the Center for International Programs has provided guidance to others within NIFA to include global engagement opportunities for U.S. institutions in NIFA's grant programs. The table below provides a comprehensive list of RFAs and their associated international offerings in a simple format for potential applicants to peruse. The list of opportunities within RFAs has grown and will continue to grow as we strive to bring awareness of international issues to the agency.

### NIFA RFAS OFFERING OPPORTUNITIES FOR GLOBAL ENGAGEMENT

| RFAs | What's Offered |
|---|---|
| Agriculture and Food Research Initiative - Foundational Program | *International Partnerships or Engagement* |
| Agriculture and Food Research Initiative - Childhood Obesity Prevention Challenge Area | *International Partnerships or Engagement* |
| Agriculture and Food Research Initiative - Agriculture and Natural Resources Science for Climate Variability and Change Challenge Area | *International Partnerships or Engagement* |

| | |
|---|---|
| Agriculture and Food Research Initiative - NSF/NIFA Plant Biotic Interactions Program | *International Collaboration* |
| Biotechnology Risk Assessment Research Grants Program (BRAG) | *International Collaboration* |
| Citrus Disease Research and Extension (CDRE) | *International Partnerships, Linkages, and Exchanges* |
| Develop Breakthrough Ideas and Enabling Technologies to Advance Crop Breeding | *International Partnerships or Engagement* |
| 1890 Institution Teaching, Research and Extension Capacity Building Grants (CBG) Program | *International Partnerships, Exchanges, Student International Experiences, Sabbaticals, Training, Travel, Research Opportunities, Extension, and Education* |
| Food and Agricultural Sciences National Needs Graduate and Postgraduate Fellowship (NNF) Grants Program | *International Experiential Learning, Special International Study, or Thesis/Dissertation Research Travel* |
| Higher Education Challenge (HEC) Grants Program | *International Education and Research* |
| Higher Education Multicultural Scholars Program (MSP) | *International Partnerships or Engagement, Research, Study Abroad, Exchanges, Training, Trips, Faculty International Experiences* |
| Hispanic-Serving Institutions Education Grants Program (HSI) | *Student Experiential Learning, Expanding Domestic and International Markets, and International Experiential Learning* |
| Organic Agriculture Research and Extension Initiative | *Exploring International Trade Opportunities and International Partnerships, Linkages, and Exchanges* |

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|---|---|
| Secondary Education, Two-Year Postsecondary Education, and Agriculture in the K-12 Classroom Challenge Grants Program (SPECA) | *International Education/Research (enhancement of US programs)* |
| Small Business Innovation Research Program - Phase I | *Developing New Market Strategies* |
| Small Business Innovation Research Program - Phase II | *Potential Global Commercial Outcome* |
| Special Research Grants Program - Aquaculture Research | *International Partnerships and Engagement* |
| Specialty Crop Research Initiative (SCRI) | *International Partnerships, Linkages, and Exchanges* |
| Women and Minorities in Science, Technology, Engineering, and Mathematics Fields Program (WAMS) | *International Experiential Learning* |

- Collecting crop data twice a year rather than once by including southern hemisphere sites
- testing root stock in a wider range of climatic and ecological site conditions
- acquisition of genetic material from diverse crop cultivars or foreign livestock
- developing or learning new techniques at a foreign laboratory
- researching emerging and re-emerging plant and animal diseases in their origin countries
- testing new technologies in a wider variety of settings
- comparing the effectiveness of extension and technology transfer methods in different populations
- addressing food safety issues in international trade
- improving U.S. producer ability to compete in foreign markets
- providing experiential learning opportunities to U.S. students
- collaborating with researchers and foreign institutions with strong complementary expertise, or international recognition in a particular area

USDA

United States Department of Agriculture

NIFA

# Advancing U.S Agriculture through Global Engagement

National Institute of Food of Agriculture (NIFA) grantees are including international activities as an effective way to help achieve research, education, and extension objectives important to U.S. agriculture. Only U.S. institutions can receive NIFA grants, and any international activities must advance U.S. agriculture. The NIFA-funded projects described here are examples of how U.S. researchers and faculty through international collaborations and activities are achieving results valuable to the U.S. and the world. These projects help promote U.S. agriculture, advance trade, serve U.S. food security and food safety needs, and foster collaboration to address mutual interests within the global agricultural science community.

### Entomological Studies of Zika Virus Transmission in Haiti

Zika Virus (ZIKV) has emerged in the Americas where susceptible populations of new vectors of transmission may arise and the disease may spread more rapidly. To fully understand the range of mosquito species capable of transmitting ZIKV in the Americas, University of Florida researchers studied ZIKV transmission in Haiti, with an objective to determine the frequency of Zika infection in wild-caught mosquitoes, and in mosquitoes stored from previous collection. What was learned in Haiti could be applicable to Florida and other southern states of the U.S. due to the similarity of mosquito species. **AFRI grant**

### Broadening Students Experiences and Expanding their Career Competencies through International Experiential Learning Opportunities

Faculty at Texas A&M University (TAMU) and Prairie View A&M University (PVAMU) teamed to broaden their students' academic experiences and career competencies through a faculty-led study abroad program in Namibia, partnering with the University of Namibia and Namibia-based research centers. Recruiting students traditionally underrepresented in study abroad programs was an important objective. Faculty included Namibians' knowledge of community-based natural resource management strategies, and how to use these strategies to address food security issues. TAMU and PVAMU faculty with colleagues in Namibia developed course materials, and aimed to integrate learning from the study abroad experience into courses back at their universities. **HEC grant**

### Expanding US Market Access in China's Evolving Agricultural and Trade Policy Environment

To gain an understanding of China's agricultural trade policies and promote U.S. market access to China, a team from Virginia Polytechnic Institute (Virginia Tech) researched U.S. market access under China's evolving agricultural and trade policies. Working with Chinese collaborators, they traveled to China to interview both Chinese and U.S. leaders in agribusinesses, government agencies, and universities to determine trade constraints, regulations and other impediments to U.S. agricultural exports. This research will provide U.S. agribusinesses and agricultural exporters with knowledge to evaluate potential risks and opportunities caused by differential agricultural and trade policies and help U.S. agribusinesses expand market access into China. **AFRI grant**

### Development of Woody Landscape Cultivars

People love ornamental plants that exhibit drought tolerance, provide environmental and ecological benefits, and have low maintenance requirements. Asian countries, especially China, have rich resources of ornamental plants. Plant breeders at the University of Georgia to strengthen the ornamental industry are developing new woody ornamental plant cultivars that thrive in drought and other environmental conditions. Their research includes collecting germplasm from plant species growing under extreme conditions. Two *Ilex* (holly) species growing under extreme conditions were collected from China and germinated. The Georgia researchers will test both species for their performance under drought and flooded conditions and use them for breeding lines. **HATCH grant**

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Advancing U.S. Agriculture through Global Engagement

### Engage Students and Faculty in Latin American Agriculture as a Model for Global Involvement and Career Development

### Biology and Management of Plant-Associated Viruses and Endophytic Fungi in New Mexico

Locoweeds (found globally) are toxic to grazing animals due to an alkaloid produced by fungi inside the locoweed plants. ...te University are working with locoweed endophytes in China ...estern United States. Fungal plants will be characterized By better understanding the ...h their plant hosts, New Mexico ...pe to develop options to help ... or control the problem of ...ed. **HATCH grant**

### ...t and Eradication of ...S. Production of Potato

... industry depends upon the ... quick, economical, and ... to invasive agricultural pests ... the genus *Globodera*. The ... consortium of researchers, ...ucators from three land-grant ...egon State University, Cornell ...ural Research Service, and ...s Hutton Institute, Scotland; ...nd Agri-Food Canada). The ...apacity of the U.S. to respond ...n potato production because ... non-grain food crop in the ...

### ...Microbe Interactions in Soil to ...able Agriculture

... destructive disease caused ...ohlioe) that causes lettuce ...e soil surface. The University ...boration from the California ... and Bayer Crop Sciences in ...v certain soils are able to ... other diseases caused by ...ed a metagenomics, high- ...approach to identify the soil- ...e *Verticillium* wilt symptoms ...'s Salinas Valley. Ultimately, ...e development of strategies ...roughout the w...

### Developing the Tools and Germplasm for Hybrid Wheat

Wheat yields will need to increase to feed a larger global population with increasing dietary needs. To improve wheat production, faculty from the University of Nebraska-Lincoln, with collaboration from the International Maize and Wheat Improvement Center (CIMMYT) in Mexico, Texas A&M University, the University of Hohenheim (Germany), Kansas State University, and Genetics and Crop Plant Research – IPK (Germany), conducted research to develop the necessary knowledge-base, germplasm, and heterotic pools to support the development of hybrid wheat. This project, a part of the NIFA's participation in the International Wheat Yield Partnership (IWYP) is expected to help create the scientific and germplasm foundations for successfully launching the hybrid wheat industry in the United States. **AFRI grant**

### Strengthening U.S. Agriculture with Multidisciplinary International Undergraduate Research and Extension Experiences

The University of Tennessee is bringing together 14 undergraduate students and 10 mentors in a 3-year experiential research and extension project to investigate smallholder farms practicing conservation adjacent to the Vaca Forest Reserve in Belize. They will conduct projects on crop production and soils; social and economic systems; and wildlife, forestry, and ecosystem services. An agro-ecological approach will be used to foster systems-level thinking and develop transdisciplinary skills. Their goal is to develop leaders in agriculture and natural resources research and extension who can synthesize the complexity of agricultural systems to keep U.S. agriculture at the forefront of addressing sustainable global food security. **AFRI grant**

### U.S.-U.K. Collaborative Research: Host Resistance to Avian Pathogenic *E. coli*

Avian colibacillosis, a disease caused by the bacterium *Escherichia coli* (Avian Pathogenic *E. coli* - APEC) is responsible for much mortality in poultry flocks. Scientists from Iowa State University and the Roslin Institute, University of Edinburgh (United Kingdom) formed a collaborative research team, leveraging their respective expertise in poultry immunology, genomics, and microbiology. The goal was to reduce the impact of APEC on the poultry industry in the United States and the United Kingdom through development of complementary veterinary and breeding control strategies based on a thorough understanding of host functional response to E. coli infection. **AFRI grant**

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...rough Global Engagement

### U.S.-U.K. Collab: Mycobacterial Transm... Dynamics in Agricultural Systems: Inte... Phylogenetics, Epidemiology, Ecology, ... Economics

...esearchers at Cornell University formed a collab... ...ith scientists in the United Kingdom (U.K.) to inv... ...ycobacterial transmission in agricultural system... ...bjective was to develop a quantitative methodo... ...corporating whole genome sequence data into b... ...ansmission models for infectious diseases, inte... ...ology, economics, molecular biology, and epider... ...ue to their valuable collections of data and isolates ...S. and the U.K., with experts across multiple s... ...elds, the team was able to apply these metho... ...odels to better understand the principles and d... ...overning transmission of mycobacterial infectio... ...rant

...arn More About NIFA's Opportunities for Global ...gagement

...FA's Center for International Programs est... ...nnections between NIFA and other organizations, ...d U.S. Agency for International Development (USAID ...d Agriculture Organization of the United Nations ...AR system of international agricultural research ...d the World Bank; and with agricultural research ... ...other countries to globally advance the resu... ...perience of NIFA and the institutions it serves, and ...as important to U.S. agriculture. To find out mor... ...FA's international collaborations and opportunitie... ...ferent NIFA grant programs visit us on the web: ...ps://nifa.usda.gov/program/global-engagement-progra...

- Global Engagement Programs
- Enhancing NIFA's Effectiveness for Global Engagement
- Grant Opportunities for Global Engagement
- Developing Global Partnerships

...ontact: Otto Gonzalez, Director, Center for Interna... ...rograms, otto.gonzalez@nifa.usda.gov

https://nifa.usda.gov/resource/advancing-us-agriculture-through-global-engagement

# USDA/NIFA is currently partnering with –

- Biotechnology and Biological Sciences Research Council of the United Kingdom (BBSRC)
- International Wheat Yield Partnership (IWYP)
- U.S.-Israel Binational Agricultural Research and Development Fund (BARD)
- Food and Agriculture Research Initiative with Ireland & Northern Ireland
- USAID Partnerships for Enhanced Engagement in Research (PEER)
- CATIE - Tropical Agricultural Research and Higher Education Center (Centro Agronomico Tropical de Investigacion y Ensenanza)
- CGIAR Collaboration

**BARD**

- Water
- Food Safety

Israeli scientists seek funding from BARD to collaborate with interested U.S. scientists funded through NIFA/AFRI

(U.S. scientists participate through regular NIFA RFAs).

**PEER** Variety of research topics in USAID assisted countries in Africa, Asia, Middle East, and Latin America

(Developing country scientists apply to USAID to work with U.S. scientists who already have U.S. gov't. grants)

**Ireland and Northern Ireland**

- Pests and Beneficial Species in Agricultural Production Systems
- Animal Nutrition, Growth, and Lactation
- Animal Health and Disease
- Animal Breeding, Genetics and Genomics
- Animal Well-Being
- Understanding Antimicrobial Resistance
- Food Manufacturing Technologies

(U.S. scientists participate through regular NIFA RFAs)

**CATIE** (Centro Agronómico Tropical de Investigación y Enseñanza – Tropical Agricultural Research and Higher Education Center) with residential campus in Costa Rica, is interested in hosting

- faculty-led student study/research abroad
- collaborative research with visiting faculty
- post-docs and doctoral students
- sabbaticals

and other activities consistent with USDA's MOU with CATIE.
(U.S. researchers/educators can propose to include in their USDA/NIFA grants)

**CGIAR Collaboration**

USDA/NIFA and the CGIAR global system of 15 research centers are exploring:

- Opportunities for USDA/NIFA-supported researchers to spend time undertaking research at CGIAR centers; and
- Opportunities to share information and propose and participate in collaborative research that can improve food and nutritional security, improve resources and ecosystem services.

CGIAR

(U.S. researchers/educators can propose to include in their USDA/NIFA grants)

# Collaborations being developed with European Joint Programming Initiatives – "JPIs"




USDA United States Department of Agriculture | National Institute of Food and Agriculture

# NIFA's GLOBAL ENGAGEMENT OPPORTUNITIES

NIFA is committed to strengthening American agriculture through global engagement. NIFA continues to develop international partnerships and activities that promote U.S. agriculture, advance trade, serve food security and U.S. food safety needs, and foster collaboration to address mutual interests within the global agricultural science community.

Applicants to NIFA programs have opportunities to include international collaborations or activities within their proposals. Applications must be from U.S. institutions, and the proposed international collaborations or activities must advance U.S agricultural goals.

### *Step 1: See if your interest fits within a NIFA Competitive or Capacity grant program*

**Agriculture and Food Research Initiative (AFRI),** NIFA's flagship and largest competitive grant program has global engagement opportunities. NIFA supports global engagement that advances U.S. agricultural goals. Applicants to AFRI Requests for Application (RFAs) may include collaborations with international partners, but applications may only be submitted by eligible U.S. institutions. Such applications may include subcontracts to international partners or other institutions and must clearly demonstrate benefits to the United States. Additional information is provided on the AFRI International Partnerships webpage: https://nifa.usda.gov/resource/afri-international-partnerships

**Other competitive grant programs with opportunities for international activities include:** 1890 Institution Teaching, Research, and Extension Capacity Grants; Higher Education Challenge Grants (HEC); Biotechnology Risk Assessment Grants (BRAG); Citrus Disease Research and Extension (CDRE); Food and Agricultural Sciences National Needs Fellowships (NNF); Higher Education Multicultural Scholars Program (MSP); Hispanic Serving Institutions Grants (HSI); Innovations at the Nexus of Food, Energy, and Water Systems (INFEWS); Organic Agriculture Research and Extension Initiative (ORCI); Small Business Innovation Research (SBIR); Specialty Crop Research Initiative (SCRI); and Women and Minorities in STEM (WAMS). For details, see https://nifa.usda.gov/opportunities-global-engagement

**For Capacity programs (primarily land-grant institutions),** talk with your State Experiment Station Director or Extension Director. Many NIFA awardees have included international collaborations or activities in their capacity grants.

### *Step 2: Determine how an international collaboration or activity is important in helping you to accomplish your research, education, or extension objectives*

Some examples from past NIFA awardees include: Collecting crop data twice a year rather than once by including southern hemisphere sites; testing root stock in a wider range of climatic and ecological site conditions; acquisition of genetic material from diverse crop cultivars or foreign livestock; developing or learning new techniques at a foreign laboratory; researching emerging and re-emerging plant and animal diseases in their origin countries; testing new technologies in a wider variety of settings; comparing the effectiveness of extension and technology transfer methods in different populations; addressing food safety issues in international trade; improving U.S. producer ability to compete in foreign markets; providing experiential learning opportunities to U.S. students; and collaborating with researchers and foreign institutions with strong complementary expertise, or international recognition in a particular area.

For more information please visit our website at https://nifa.usda.gov/program/global-engagement-programs or contact Otto Gonzalez, the Director of the Center for International Programs, at Otto.Gonzalez@nifa.usda.gov

### *Step 3: Identify potential collaborators, institutions, or locations*

...lcome to identify potential collaborators or foreign ...ilizing your own networks and professional contacts ...e in your NIFA proposals as appropriate. You may also ...ilize partnerships NIFA has developed with foreign ...s and international organizations with whom NIFA has ...eas of mutual interest. These partnerships enable ...ees to collaborate with foreign researchers that have ...om their own organizations, or help NIFA awardees ...eign collaborators they may want to write into their ...rts.

**...bal Partnerships**

...ently partnering with U.S.-Israel Binational Agricultural ...h and Development Fund (BARD) to jointly fund water ...ent and food safety projects; United Kingdom's ...logy and Biological Sciences Research Council (BBSRC) ...support animal disease research; Ireland and Northern ... address agricultural pests and beneficial species; ...rition and growth, and animal health and disease; and ...tropical agricultural research and teaching center with ...campus in Costa Rica, interested in hosting faculty-led ...tudy/research abroad, collaborative research with ...culty, post-docs and doctoral students, sabbaticals, and ...rities as identified in CATIE's Memorandum of Under... with USDA. IUN scientists could propose to support such ...with CATIE under their NIFA award).

...information on these and other NIFA global partner... ...se visit our website: ...g.usda.gov/developing-global-partnerships .

**...rtnerships for Enhanced Engagement in Research ...ogram** – PEER is a competitive grant program that ...ientists in developing countries to apply to the U.S. ...r International Development (USAID) for funds to ...esearch and capacity-building activities that will be ...d in partnership with U.S. Government-funded scien... developing country scientists seek out active NIFA ...ll USAID PEER funding goes to the developing country ...to support their collaboration with the NIFA grantee.

...information about this program and to see the current ...ocus areas and PEER-eligible countries, please visit the ...Academies of Sciences, Engineering, and Medicine ...r PEER at: ...nationalacademies.org/nga/peer/index.htm .

...e currently-active NIFA grantee, and you know of a ...one of the eligible countries and would like to collabo... may want to encourage that scientist with your ...to develop a pre-proposal to PEER.

### Examples of NIFA Projects that include Global Engagement

Using **competitive and capacity funding**, NIFA is providing support for global engagement in many projects. Examples include:

- Scientists at the **University of California-Riverside** collaborating with colleagues in Israel to develop a regional water reuse decision-support model that can evaluate the impacts of using treated agricultural drainage waters and treated wastewater on agricultural sustainability and water supply reliability.
- Faculty at the **University of Arkansas, Texas A&M University, and Texas Tech University** are collaborating on a project that reaches graduate students in food and agricultural sciences by globalizing the curricula in the areas of Global Horticulture, Sustainable International Development, and Human Health and Nutrition.



Researchers at Iowa State University collaborated with researchers at the Roslin Institute of the University of Edinburgh in Scotland to better-understand resistance to Avian Pathogenic E. coli in poultry



Researchers at Kansas State University collaborated with researchers at the University of Glasgow in Scotland on how to better prepare to protect cattle from bunyaviruses transmitted by mosquitoes

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https://nifa.usda.gov/resource/global-engagement-opportunities

# USDA/NIFA's

**Center for International Programs** works to:

- Enhance global engagement of NIFA and the institutions it serves
- Develop global partnerships
- Build capacity at home and abroad

*Sign up for our NIFA **International Programs listserv** – get announcements of USDA/FAS opportunities and info on USDA/NIFA opportunities*

Contact: Otto.Gonzalez@nifa.usda.gov
Rose Gregory at rgregory@nifa.usda.gov
Patty Fulton at pfulton@nifa.usda.gov

For info on NIFA global engagement opportunities
**https://nifa.usda.gov/program/global-engagement-programs**

# For more information, contact:

FAS Programs:
Jim Suits
jim.suits@usda.gov
+1 202 720 6328

NIFA Programs:
Rose Gregory
rgregory@nifa.usda.gov
+1 202 701 3484