



ILLINOIS

ACES

College of Agricultural,  
Consumer and  
Environmental Sciences

## International Engagements

The University of Illinois at Urbana-Champaign (UIUC) is a leading land-grant institution with one of the most comprehensive agricultural colleges in the world. UIUC and its College of Agricultural, Consumer and Environmental Sciences (ACES) play a key role in research, teaching, and public engagement in areas related to food systems in developing countries. ACES is engaged in initiatives around the world with a goal of contributing to better food systems for greater food security. These initiatives include:

### International Food Security at Illinois

ACES has strength in food security work spanning and integrating biological sciences, social sciences and engineering. These activities are housed under International Food Security at Illinois (IFSI), which engages with over 40 faculty affiliates from multiple departments, all of whom conduct research on food issues in developing countries. Topics include food production, poverty, food safety, value chain development, technology adoption, agricultural and nutrition extension, and impact evaluation. (<https://intlprograms.aces.illinois.edu/food-security>)

### Extension and Advisory Services

The AgReach program, housed in the Department of Agricultural and Consumer Economics conducts research and public engagement to assess and improve extension and advisory services related to agriculture, food and nutrition in developing countries, with particular attention to gender sensitive services. AgReach programs have touched over 11 million rural people in 40 countries through sponsored projects generating over \$40 million in external funding since 2010. The program has generated dozens of publications, and trained over 800 extension officers and subject matter specialists in developing countries as well as over 150 senior government officials. (<https://agreach.illinois.edu/>)

### Tropical Soybean Value Chains

Based in the Department of ACE, the Soybean Innovation Lab (SIL) operates across the entire value chain to provide information and technology needed for successful soybean development in Africa and elsewhere in the tropics. It focuses on four key research pillars: (1) Genetic Improvement; (2) Crop Productivity and Quality; (3) Human and Animal Nutrition; and (4) Value Chains & Socio-Economic Research. SIL has also been involved in the West African Center for Crop Improvement (Ghana) for plant breeding and with a Center for Excellence in Aquaculture (Malawi) for work on feed materials. SIL is supported by a \$12 million award from USAID. (<http://soybeaninnovationlab.illinois.edu/>)

### Prevention of Post-Harvest Food Loss

The ADM Institute for the Prevention of Postharvest Loss, based in ACES, is an international information and technology hub for evaluating, creating, and disseminating economically viable technologies, practices and systems that reduce postharvest loss in staple crops. It is most active in Brazil, India and Bangladesh. Research on post-harvest loss in developing countries involves engineers, food scientists, and economists. The Institute was initially funded by \$12 million in gifts from ADM. (<http://postharvestinstitute.illinois.edu/>)

### Appropriate Scale Mechanization Consortium

The Appropriate Scale Mechanization Consortium (ASMC) housed in the Department of Agricultural and Biological Engineering works in Bangladesh, Burkina Faso, Cambodia and Ethiopia to intensify smallholder farmers' on-farm operations through appropriate-scale mechanization to improve land and labor productivity in a sustainable manner, considering the social, economic and environmental impacts with special focus on the role of women. ASMC is funded through a \$5 million award from USAID. (<https://publish.illinois.edu/appropriatescalemechanizationconsortium/mission/>)

### Rice Genetics and Production

In cooperation with the International Rice Research Institute (IRRI), the Department of Crop Sciences manages the IRRI-Lee Fellows program which provides doctoral training to developing country scholars in order to train the next generation of rice scientists. With IRRI and the IRRI-Lee fellows, Illinois faculty are conducting research on a range of issues relating to rice systems in developing countries.  
*(turn over for more)*

## **Food and Agricultural Markets and Policy in Developing Countries**

Faculty in the Department of Agricultural and Consumer Economics conduct research on markets for agricultural inputs and food products in Africa, Asia, and Central America. This research includes analysis of impact of marketing policy on food security, the effect of evolving retail systems on farmer and consumer welfare, the effectiveness of markets in addressing local food insecurity and the capacity of input markets to support improved production technologies. This work is supported by a range of research grants from multiple agencies. Illinois is currently a partner in the Bangladesh Integrated Food Policy Research Program. (<https://intlprograms.aces.illinois.edu/content/ifsi-affiliates>)

## **Big Data for Food Security and the Environment**

The Initiative on Big Data for Food Security and the Environment involves data scientists and agricultural and natural resource specialists from across the campus in efforts to use novel data sources and advanced data analytics to better understand food systems from production through consumption as a way of identifying failures that lead to poor food security or environmental outcomes. The Initiative is particularly focused on applying these methods in developing countries. Faculty from the Departments of ACE and NRES form the leadership of this effort.

(<https://publish.illinois.edu/foodsecurity/>)

## **Impact Evaluation**

Faculty in the Department of Agricultural and Consumer Economics in the International Policy and Development group and in the Department of Economics conduct research on the evaluation of the impact of a range of policies and interventions on development outcomes including poverty alleviation, peace and security, and food security. Topics for impact evaluation work include food production technologies, educational interventions, health interventions, and asset transfers.

## **Nutritional Health**

Researchers in the Department of Food Science and Human Nutrition and the Department of Human Development and Family Studies are engaged in numerous health related research projects in developing countries. Work in ACES emphasizes diets and nutritional health and includes studies of drivers of dietary choices in Mexico and in the Caribbean, and understanding metabolic and dietary causes of obesity in Mexico, and food fortification in developing countries.

## **Human Capacity Building**

Illinois has hosted numerous programs to build human capacity related to food and agriculture in developing countries. Programming includes hosting short courses in topics including impact evaluation, food policy, and food processing. We have also hosted extended programs for faculty development that have included pedagogy, research methods, and mentored research activity. Advanced degree training is available in a full suite of subjects related to food and agriculture. These activities have been funded by USDA, the World Bank, and the Fulbright Foundation, among other agencies.

## **Environmental and Food Safety Analytical Lab**

The Soybean Innovation Lab (SIL), in collaboration with the Savanna Agricultural Research Institute (SARI), developed the first testing lab in northern Ghana capable of evaluating soil and water health for local farming communities. The new Environmental and Food Safety Analytical Lab enables local testing for contaminants like coliforms and E. coli, potentially harmful bacteria that can cause several diseases and severe sickness in people and livestock. The lab is also capable of testing for potential contaminants in important export crops like fruits and vegetables. Enabling local quality control and testing allows producers to certify their crops and increase Ghanaian food exports

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