



## SNAPSHOT: FEED THE FUTURE INNOVATION LABS

Feed the Future, the U.S. Government's global hunger and food security initiative, is pairing American ingenuity and expertise with some of the best and brightest minds across the globe through its 21 Feed the Future Innovation Labs. A unique network supported by over 40 top U.S. universities along with many partner country research and educational institutions, the Innovation Labs are using cutting edge science to research and develop effective technologies and innovations for scaling implementers to address current and future challenges posed by a changing climate and the need to feed a growing global population with safe and nutritious food. The Feed the Future Innovation Labs also provide short- and long-term training to support the sustainability of these efforts while training the next generation of scientists.

Below is a brief description of each Feed the Future Innovation Lab, with lead university and individual contact information. For more information about the Feed the Future Innovation Labs, please contact [clewin@usaid.gov](mailto:clewin@usaid.gov).

### **Feed the Future Innovation Lab for Animal Health**

*Lead University:* **Washington State University**

This Innovation Lab is developing animal health interventions, such as improved vaccines and diagnostic tests, to improve the control of East Coast Fever, a lethal, tick-borne disease of cattle in Eastern, Central and Southern Africa.

*Research Focus:* Kenya

*Director:* Thumbi Mwangi, [thumbi.mwangi@wsu.edu](mailto:thumbi.mwangi@wsu.edu)

### **Feed the Future Innovation Lab for Applied Wheat Genomics**

*Lead University:* **Kansas State University**

This Innovation Lab is developing heat-tolerant, high-yielding, farmer-accepted wheat varieties through local characterization and breeding networks, using the most advanced genomic tools.

*Research Focus:* Bangladesh, India, Nepal, Pakistan

*Director:* Jesse Poland, [jpoland@ksu.edu](mailto:jpoland@ksu.edu) · *Website:* [www.k-state.edu/wheat-innovation-lab/](http://www.k-state.edu/wheat-innovation-lab/)

### **Feed the Future Innovation Lab for Climate-Resilient Sorghum**

*Lead University:* **University of Georgia**

This Innovation Lab is using new scientific tools to develop drought- and heat-tolerant varieties of sorghum, which builds climate resilience into sorghum production systems, while also exploring new approaches to production through the development of perennial sorghum.

*Research Focus:* Ethiopia, India, Kenya, Mali, South Africa

*Director:* Andrew Paterson, [paterson@uga.edu](mailto:paterson@uga.edu) · *Website:* <http://www.caes.uga.edu/global/feed-the-future-innovation-labs/climate-resilient-sorghum-innovation-lab.html>

### **Feed the Future Innovation Lab for Climate-Resilient Wheat**

*Lead University:* **Washington State University**

This Innovation Lab is using conventional breeding approaches, improved breeding tools, and leveraging genomic resources to develop new wheat varieties that withstand heat stress in the Indo-Gangetic plains.

*Research Focus:* Bangladesh, India, Nepal

*Director:* Kulvinder Gill, [ksgill@wsu.edu](mailto:ksgill@wsu.edu) · *Website:* <https://agrilinks.org/activities/climate-resilient-wheat-innovation-lab>

### **Feed the Future Innovation Lab for Crop Improvement**

*Lead University:* **Cornell University**

This Innovation Lab serves as a support system for national, regional, and international agricultural research institutions in target regions to identify, develop, pilot, and transfer tools, technologies, and methods for crop improvement. Focus crops include roots, tubers, bananas, legumes, sorghum and millet. *Research Focus:* Burkina Faso, Costa Rica, Haiti, Kenya, Malawi, Mozambique Nepal, Niger, Senegal, Tanzania, Uganda

*Director:* Stephen Kresovich, [skresov@cornell.edu](mailto:skresov@cornell.edu)

*Website:* <https://ilci.cornell.edu>

### **Feed the Future Innovation Lab for Fish**

*Lead University:* **Mississippi State University**

This Innovation Lab is researching technologies and practices that lead to sustainable increases in fish production, reduction and mitigation of risks to fish production systems while increasing household nutrition and economic opportunities.

*Research Focus:* Bangladesh, Cambodia, Kenya, Nigeria, Zambia

*Director:* Mark Lawrence, [lawrence@cvm.msstate.edu](mailto:lawrence@cvm.msstate.edu)

*Website:* <https://www.fishinnovationlab.msstate.edu>

### **Feed the Future Innovation Lab for Food Processing and Post-Harvest Handling**

*Lead University:* **Purdue University**

This Innovation Lab is working to increase access to safe and nutritious foods along the value chain by improving the drying and storage capacity of smallholder farmers and expanding market opportunities through diversified processed products that address quality in the market and nutritional needs.

*Research Focus:* Kenya, Senegal

*Director:* Jacob Ricker-Gilbert, [jrickerg@purdue.edu](mailto:jrickerg@purdue.edu) · *Website:* <https://ag.purdue.edu/ipia/fpl>

### **Feed the Future Innovation Lab for Food Safety**

*Lead University:* **Purdue University**

This Innovation Lab is designing, leading, and implementing a food safety research and capacity building program that addresses food safety opportunities and challenges, serving as a resource for development partners converging on the role of food safety in inclusive economic growth, nutrition-sensitive agriculture, gender-sensitive and youth-inclusive development, and resilience.

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*Research Focus:* Bangladesh, Cambodia, Ethiopia, Kenya, Senegal, Uganda

*Director:* Haley Oliver, [hfoliver@purdue.edu](mailto:hfoliver@purdue.edu) · *Website:* <https://agpurdue.edu/food-safety-innovation-lab/fu.edu/>

### **Feed the Future Innovation Lab for Genomics to Improve Poultry**

*Lead University:* **University of California, Davis**

This Innovation Lab is working to reduce limitations to chicken production by applying advanced genetics and genomic approaches to enhance innate resistance to Newcastle disease and tolerance to heat stress in chickens in places where Newcastle disease and hot climates are prevalent.

*Research Focus:* Ghana, Tanzania

*Director:* Huaijun Zhou, [hzhou@ucdavis.edu](mailto:hzhou@ucdavis.edu) · *Website:* <http://gip.ucdavis.edu/>

### **Feed the Future Innovation Lab for Integrated Pest Management**

*Lead University:* **Virginia Polytechnic Institute and State University**

This Innovation Lab is supporting improved, environmentally sustainable yields for smallholder farmers through the implementation of participatory, integrated pest management (IPM) programs in horticultural, grain and legume crops using centers of excellence for dissemination of best IPM practices and scalable solutions.

*Research Focus:* Bangladesh, Cambodia, Ethiopia, Kenya, Nepal, Tanzania, Vietnam

*Director:* Rangaswamy “Muni” Muniappan, [rmuni@vt.edu](mailto:rmuni@vt.edu) · *Website:* <http://www.oired.vt.edu/ipmil/>

### **Feed the Future Innovation Lab for Legume Systems Research**

*Lead University:* **Michigan State University**

This Innovation Lab focuses on improving legume (cowpea, pigeon pea, common bean) systems to take advantage of (a) their nitrogen-fixing capacity which improves soil fertility, (b) provide a good source of livestock feed and fodder, (c) generate income for farmers, and (d) improve nutrition and health.

*Research Focus:* Burkina Faso, Ghana, Mali, Malawi, Mozambique, Niger, Nigeria, Senegal, Zambia

*Director:* Barry Pittendrigh, [pittendr@msu.edu](mailto:pittendr@msu.edu) · *Website:* <https://www.canr.msu.edu/legumelab/>

### **Feed the Future Innovation Lab for Livestock Systems**

*Lead University:* **University of Florida**

This Innovation Lab is working to improve livestock systems by addressing key issues of livestock value chains, including quality feed supply, disease management, food safety, market access and enabling policies that drive sustainable increases in animal source food consumption to combat undernutrition and poverty.

*Research Focus:* Burkina Faso, Cambodia, Ethiopia, Kenya, Nepal, Niger, Rwanda, Uganda

*Director:* Adegbola Adesogan, [adesogan@ufl.edu](mailto:adesogan@ufl.edu) · *Website:* <http://livestocklab.ifas.ufl.edu/>

### **Feed the Future Innovation Lab for Markets, Risk, and Resilience**

*Lead University:* **University of California, Davis**

This Innovation Lab is studying the root causes of persistent poverty and food insecurity, and how best to improve the resilience of individuals, households, communities, and systems, particularly in the face of recurrent crisis.

*Research Focus:* Bangladesh, Ethiopia, Ghana, Kenya, Mozambique, Nepal, Rwanda, Senegal, Uganda, Zambia

*Director:* Michael Carter, [mrcarter@primal.ucdavis.edu](mailto:mrcarter@primal.ucdavis.edu) · *Website:* <https://basis.ucdavis.edu>

### **Feed the Future Innovation Lab for Nutrition**

*Lead University:* **Tufts University**

This Innovation Lab is identifying ways that policy and program interventions, particularly those that involve agriculture, can most effectively achieve large-scale improvements for maternal and child nutrition.

*Research Focus:* Bangladesh, Ethiopia, Malawi, Mozambique, Nepal, Sierra Leone, Tanzania, Uganda

*Director:* Patrick Webb, [patrick.webb@tufts.edu](mailto:patrick.webb@tufts.edu) · *Website:* <http://www.nutritioninnovationlab.org/>

### **Feed the Future Innovation Lab for Peanut**

*Lead University:* **University of Georgia**

This Innovation Lab works to alleviate hunger by helping smallholder farmers grow and profit from healthy peanut crops which includes developing new varieties, pre-and post-harvest management and processing, and research areas focused on peanut-based nutrition, gender and youth.

*Research Focus:* Burkina Faso, Ethiopia, Ghana, Malawi, Mali, Niger, Nigeria, Mozambique, Senegal, Uganda, Zambia

*Director:* Dave Hoisington, [davehois@uga.edu](mailto:davehois@uga.edu) · *Website:* <http://ftfpeanutlab.caes.uga.edu/>

### **Feed the Future Innovation Lab for Food Security Policy Research, Capacity, and Influence**

*Lead University:* **Michigan State University**

This Innovation Lab is building capacity of local agricultural policy research organizations to strengthen their capacity to carry out rigorous research on food security policy, contributing to a global research agenda, and to engage directly with their countries' policy makers, to bring insights from the research into better policy-making that improves food security.

*Research Focus:* Cambodia, Ghana, India, Laos, Mali, Mozambique, Nepal, Nigeria, Papua New Guinea, Senegal, Thailand, Timor L'este, Uganda, Zambia

*Director:* David Tschirley, [datschirle@msu.edu](mailto:datschirle@msu.edu)

*Website:* <https://www.canr.msu.edu/prci>

### **Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss**

*Lead University:* **Kansas State University**

This Innovation Lab is working to reduce post-harvest loss of stored product crops (grains, oilseeds, legumes, root crops, nuts, spices, seeds) and related processed products by enabling smallholder farmers, cooperatives, agribusinesses, NGOs and other stakeholder partners to improve moisture

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measurement, drying and storage techniques, insect and mycotoxin prevention, and market-based value chain access.

*Research Focus:* Bangladesh, Ethiopia, Ghana, Guatemala, Honduras, Nepal

*Director:* Jagger Harvey [jjharvey@ksu.edu](mailto:jjharvey@ksu.edu) · *Website:* <http://www.k-state.edu/phl/>

### **Feed the Future Innovation Lab for Small-Scale Irrigation**

*Lead University:* **Texas A&M University**

This Innovation Lab is identifying promising small-scale irrigation technologies, practices and strategies at the farm level that can improve agricultural productivity and reduce farmer risk during the dry season.

*Research Focus:* Ethiopia, Ghana, Mali, Tanzania

*Director:* Nicole Lefore, [nicole.lefore@ag.tamu.edu](mailto:nicole.lefore@ag.tamu.edu) · *Website:* <http://ilssi.tamu.edu/>

### **Feed the Future Innovation Lab for Sorghum and Millet**

*Lead University:* **Kansas State University**

This Innovation Lab is advancing biophysical and social sciences that contribute technologies and knowledge toward the enhancement of adaptation, resilience and profitability of sorghum- and millet-based production systems and value chains.

*Research Focus:* Burkina Faso, Ethiopia, Haiti, Mali, Niger, Senegal

*Director:* Timothy Dalton, [tdalton@ksu.edu](mailto:tdalton@ksu.edu) · *Website:* <http://www.k-state.edu/smil/>

### **Feed the Future Innovation Lab for Soybean Value Chain Research**

*Lead University:* **University of Illinois**

This Innovation Lab focuses on African farmers and companies for whom soybean can serve as an economic driver that reduces hunger and poverty. The team is composed of technical soybean experts that provide evidence-based innovations, tools, and technologies across the value chain to enable sustainable livelihoods through profitable soybean production and utilization.

*Research Focus:* Ethiopia, Ghana, Kenya, Malawi, Mozambique, Nigeria, Pakistan, Rwanda, Uganda, Zambia

*Director:* Peter Goldsmith, [pgoldsmi@illinois.edu](mailto:pgoldsmi@illinois.edu) · *Website:* <http://soybeaninnovationlab.illinois.edu/>

### **Feed the Future Innovation Lab for Sustainable Intensification**

*Lead University:* **Kansas State University**

This Innovation Lab focuses on integrated farming systems research and technologies to sustainably increase agricultural productivity and income that provide food security and nutrition to smallholder farmers.

*Research Focus:* Bangladesh, Burkina Faso, Cambodia, Ethiopia, Malawi, Senegal, Tanzania

*Director:* Vara Prasad, [vara@ksu.edu](mailto:vara@ksu.edu) · *Website:* [www.k-state.edu/siil](http://www.k-state.edu/siil)