



SNAPSHOT: FEED THE FUTURE INNOVATION LABS SEPTEMBER 2014

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 24 Feed the Future Innovation Labs. A unique network supported by over 60 top U.S. colleges and universities along with many partner country research and educational institutions, the Feed the Future Innovation Labs are on the cutting edge of efforts to research, develop, and take to scale safe and effective technologies that address current and future challenges posed by a changing climate and the need to feed a growing global population. The Feed the Future Innovation Labs also include short- and long-term training to support sustainability of these efforts.

Below is a brief description of the 24 Feed the Future Innovation Labs, with lead university and individual contact information highlighted. For more information on the Feed the Future Innovation Labs, please contact clevin@usaid.gov and visit <http://bit.ly/FeedtheFutureInnovationLabs>.

Adapting Livestock Systems to Climate Change Innovation Lab

Lead University: **Colorado State University**

This Innovation Lab works to increase resilience and help livestock producers augment their incomes in regions where agricultural systems are changing, available resources are shrinking, and climate is having an impact.

Focus Countries: Ethiopia, Kenya, Nepal, Senegal, Tanzania

Director: Richard Bowen, rbowen@rams.colostate.edu

Website: <http://lcccrsp.org/>

Applied Wheat Genomics Innovation Lab

Lead University: **Kansas State University**

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

Focus Countries: India, Mexico, Pakistan

Director: Jesse Poland, jpoland@ksu.edu

Website: <http://www.wheatgenetics.org/research/innovation-lab>

Aquaculture and Fisheries Innovation Lab

Lead University: **Oregon State University**

This Innovation Lab develops comprehensive, sustainable, ecologically compatible, and socially viable aquaculture and innovative fisheries management systems that contribute to poverty alleviation and food security.

Focus Countries: Bangladesh, Burma, Cambodia, Ghana, Kenya, Nepal, Philippines, Tanzania, Uganda, Vietnam

Director: Hillary Eгна, hillary.egna@oregonstate.edu

Website: <http://aquafishcrsp.oregonstate.edu/>

Assets and Market Access Innovation Lab

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

This Innovation Lab conducts policy-relevant research on how market function and access promotes (or hinders) asset accumulation, competitiveness, and the capacity of smallholder farmers and the rural poor to manage economic and climate-related shocks.

Focus Countries: Bangladesh, Burkina Faso, Ghana, Haiti, Kenya, Malawi, Mexico, Nepal, Tanzania, Senegal, Uganda

Director: Michael Carter, mrcarter@primal.ucdavis.edu

Website: <http://basis.ucdavis.edu/>

Climate Resilient Beans Innovation Lab

Lead University: **The Pennsylvania State University**

This Innovation Lab integrates new scientific technologies with traditional breeding approaches to develop heat- and drought-tolerant, high-yielding, farmer-accepted bean varieties.

Focus Countries: Haiti, Honduras, Malawi, Mozambique, Tanzania, Zambia

Director: Jonathan Lynch, jpl4@psu.edu

Website: <http://plantscience.psu.edu/research/labs/roots/projects/usaaid-crb>

Climate Resilient Chickpea Innovation Lab

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

This Innovation Lab brings drought and heat tolerance from wild chickpea relatives to elite chickpea lines used for production in Ethiopia while increasing the capacity of Ethiopian chickpea researchers in molecular breeding and variety characterization.

Focus Countries: Ethiopia, India, Turkey

Director: Doug Cook, drcook@ucdavis.edu

Climate Resilient Cowpea Innovation Lab

Lead University: **University of California, Riverside**

This Innovation Lab develops and applies advanced genomic tools to cowpea breeding to increase yield, drought tolerance and fungal resistance in cowpea (or black-eyed peas), a common nutritious staple in African countries.

Focus Countries: Burkina Faso, Ghana, Nigeria, Senegal

Director: Timothy Close, timothy.close@ucr.edu

Climate Resilient Millet Innovation Lab

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

This Innovation Lab is harnessing genomic and advanced molecular tools and proprietary technologies for climate resilience from U.S.-based company Arcadia Biosciences to develop heat- and drought-tolerant millet varieties for smallholder farmers.

Focus Countries: India, Mali, Nigeria

Director: Eduardo Blumwald, ebumwald@ucdavis.edu

Climate Resilient Sorghum Innovation Lab

Lead University: **University of Georgia**

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

Focus Countries: Ethiopia, India, Mali

Director: Andrew Paterson, paterson@plantbio.uga.edu

Climate Resilient Wheat Innovation Lab

Lead University: **Washington State University**

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

Focus Countries: Bangladesh, India

Director: Kulvinder Gill, ksgill@wsu.edu

Food Processing and Post-Harvest Handling Innovation Lab

Lead University: **Purdue University**

This Innovation Lab is helping enable smallholder farmers to improve drying and storage of cereal grains and grain legumes, increase crop commercialization and nutrition, and strengthen public-private partnerships to reduce post-harvest food loss.

Focus Countries: Kenya, Senegal, others to be determined.

Director: Betty Bugusu, bugusu@purdue.edu

Website: <https://ag.purdue.edu/ipia/fpl/Pages/default.aspx>

Food Security Policy Innovation Lab

Lead University: **Michigan State University**

This Innovation Lab is helping establish policies conducive to market-led, smallholder-focused, inclusive agricultural growth and food security by focusing on country-level research, capacity building, global research and support to donor food policy work.

Focus Countries: Burma, Mali, Malawi, Nigeria, Tanzania

Director: Duncan Boughton, boughton@msu.edu

Website: <http://fsg.afre.msu.edu/fsp/index.htm>

Genomics to Improve Poultry Innovation Lab

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.

Focus Countries: Ghana, Tanzania

Director: David Bunn, dabunn@ucdavis.edu

Website: http://news.ucdavis.edu/search/news_detail.lasso?id=10759

Grain Legumes Innovation Lab

Lead University: **Michigan State University**

This Innovation Lab is developing improved grain legume varieties that are resistant to climatic stresses and disease and insect threats, enhancing soil and pest management practices, and boosting the nutritional and health status of women and young children by supporting improved access to grain legumes.

Focus Countries: Benin, Burkina Faso, Ghana, Guatemala, Haiti, Honduras, Malawi, Mozambique, Niger, Senegal, Tanzania, Uganda, Zambia

Director: Irvin Widders, widders@anr.msu.edu

Website: <http://legumelab.msu.edu/>

Horticulture Innovation Lab

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

This Innovation Lab is improving smallholder farmers' abilities to grow and sell high-value vegetable crops by targeting innovative technologies, increasing research capacity, improving information and market access, and ensuring gender equity.

Focus Countries: Bangladesh, Benin, Cambodia, Costa Rica, Democratic Republic of Congo, El Salvador, Ethiopia, Ghana, Guatemala, Honduras, Kenya, Mexico, Nepal, Nicaragua, Panama, Rwanda, Tanzania, Thailand, Uganda, Vietnam, Zambia

Director: Elizabeth Mitcham, ejmitcham@ucdavis.edu

Website: <http://horticulture.ucdavis.edu/>

Integrated Pest Management Innovation Lab

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

To support improved yields for smallholder farmers, this Innovation Lab is implementing innovative, participatory, integrated pest management programs involving research, training, and information exchange for adoption in horticultural and other food production systems.

Focus Countries: Bangladesh, Cambodia, Ecuador, Ethiopia, Ghana, Guatemala, Honduras, India, Indonesia, Kenya, Mali, Nepal, the Philippines, Senegal, Tajikistan, Tanzania, Uganda

Director: Muni Muniappan, rmuni@vt.edu

Website: <http://www.oired.vt.edu/ipmcrsp/>

Nutrition Innovation Labs: Africa and Asia

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.

Focus Countries: India, Malawi, Nepal, Uganda

Directors: Jeffrey Griffiths, jeffrey.griffiths@tufts.edu (Africa); Patrick Webb, patrick.webb@tufts.edu (Asia)

Website: <http://www.nutritioninnovationlab.org/>

Peanut Production and Mycotoxin Innovation Lab

Lead University: **University of Georgia**

This Innovation Lab is contributing to increased productivity and profitability of peanut production and improving food safety by mitigating the negative impacts of contamination of peanut and other crops from toxins produced by soil-borne fungal pathogens (known as “mycotoxins”).

Focus Countries: Ghana, Haiti, Malawi, Mozambique, Zambia

Director: Dave Hoisington, davehois@uga.edu

Website: <http://pmil.caes.uga.edu/>

Reduction of Post-Harvest Loss Innovation Lab

Lead University: **Kansas State University**

This Innovation Lab is improving access to safe and nutritious foods along the value chain for smallholder farmers, cooperatives, agribusinesses, NGOs, and other stakeholder partners by helping reduce post-harvest loss in staple crops and related processed products.

Focus Countries: Bangladesh, Ethiopia, Ghana, Guatemala

Director: Dirk Maier, dmaier@k-state.edu

Website: www.reducePHL.org

Rift Valley Fever Control in Agriculture Innovation Lab

Lead University: **University of Texas, El Paso**

To help boost livestock productivity, this Innovation Lab is developing a vaccine against Rift Valley Fever, a highly infectious and deadly cattle disease, fine-tuning a novel, needle-free injection device to deliver the vaccine. The Lab is also designing a diagnostic test to help people differentiate between infected and vaccinated animals—information that is critical for exports and trade.

Focus Country: Tanzania

Director: George Bettinger, gebettinger@utep.edu

Small-Scale Irrigation Innovation Lab

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.

Focus Countries: Ethiopia, Ghana, Tanzania

Director: Neville Clark, n-clarke@tamu.edu

Website: <http://borlaug.tamu.edu/projects-by-region/sub-saharan-africa/feed-the-future-innovation-lab-for-small-scale-irrigation/>

Sorghum and Millet Innovation Lab

Lead University: **Kansas State University**

This 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.

Focus Countries: Ethiopia, Niger, Senegal

Director: Timothy Dalton, tdalton@ksu.edu

Website: <http://www.k-state.edu/smil/>

Soybean Value Chain Research Innovation Lab

Lead University: **University of Illinois**

This Innovation Lab is contributing to increased productivity of smallholder soy farmers by advancing improved varieties, supporting local best production practices, enhancing processing technologies, and promoting development of the soy value chain.

Focus Countries: Ethiopia, Ghana, Malawi, Mozambique, Zambia

Director: Peter Goldsmith, pgoldsmi@illinois.edu

Website: <http://soybeaninnovationlab.illinois.edu/>

Sustainable Agriculture and Natural Resources Management Innovation Lab

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

This Innovation Lab is advancing the discovery, dissemination, and adoption of sustainable agriculture and natural resource management practices and the promotion of sustainable resource-based local enterprises in national, regional and global markets.

Focus Countries: Cambodia, Ecuador, Ghana, Haiti, India, Kenya, Lesotho, Mali, Mozambique, Nepal, Philippines, Uganda

Director: Adrian Ares, aresa@vt.edu

Website: <http://www.oired.vt.edu/sanremcrsp/>