



# FEED <sup>THE</sup> FUTURE

The U.S. Government's Global Hunger & Food Security Initiative



## FEED THE FUTURE INNOVATION LAB FOR ASSETS AND MARKET ACCESS



**USAID**  
FROM THE AMERICAN PEOPLE

**UC DAVIS**  
UNIVERSITY OF CALIFORNIA

*Building knowledge that helps empower smallholder farmers in the developing world to create a secure, self-reliant and prosperous future for their families and communities.* 🌱

## Why haven't the best agricultural technologies ended poverty in the developing world?

Today's agricultural technologies hold tremendous promise for the 800 million worldwide who are chronically undernourished. It remains important to advance agronomic innovations, but average smallholder farm yields consistently fall well below what is technologically possible. This could mean that for many of these farmers, these innovations remain out of reach.

In many ways, poor and smallholder farmers at risk of poverty have been left out of broader agricultural growth. Limited assets and credit and a lack of infrastructure in poor, rural areas are both barriers to adopting more productive technologies and practices. Imperfect and underdeveloped markets can also keep higher yields from leading to higher incomes, limiting these farmers' contributions to broader economic growth.

Risk itself—from a growing worldwide threat of drought, flood and unpredictable weather—also keeps the most productive innovations out of reach. For many farmers, each disaster carries the potential for losses that could be irreversible. As a consequence, they often protect their future food stores by using familiar but less-productive technologies and methods, choosing not to risk their limited funds on unfamiliar innovations. This struggle especially keeps many farmers from growing their way out of poverty.

# Delivering on the promise of agricultural innovations for smallholder farmers

Agricultural growth reduces poverty and hunger more than any other form of development. This impact is even greater when that growth includes small farms that are most at risk. To achieve the end of poverty and hunger worldwide requires more than improved technologies and practices alone. We must strengthen everyone's capacity throughout the food and agriculture system.

The Feed the Future Innovation Lab for Assets and Market Access at UC Davis leads research in key areas that manage risk, develop markets and encourage the adoption of transformative production technologies. Our work shows that reducing financial constraints and improving insurance models make it easier for farmers and pastoralists to take advantage of technological improvements for higher yields. Strengthening markets and increasing access can help small-scale producers—especially women—increase their profitability from production to end-market retail.

Maintaining gains in the long-term will require that we explore integrated, flexible systems that cultivate resilience and self-reliance. Our body of research on well-established risk-reducing instruments shows that pulling risk out of agricultural systems helps farmers protect their assets and make prudent investments toward a future free of the need for emergency aid.



## **Asset transfers**

Asset transfers and subsidies that may have lasting impacts for the poorest households.



## **Index insurance and risk reduction**

Managing the increasing risks of flood, drought and unpredictable weather to help households invest in higher-return activities.



## **Market access and finance**

Increasing access to credit and market linkages to ensure that farmers both adopt and benefit from improved technologies.



## **Natural resource management**

Promoting technologies and methods that keep natural resources sustainable.



## **Poverty dynamics**

Programs and policies proven to change poverty dynamics ensure a lasting impact.



## **Social safety nets**

Protecting households locally and nationally are vital to maintaining the health and livelihoods of at-risk populations.



## **Technology adoption**

Adopting technologies such as hybrid seed and inorganic fertilizer to transform yields and incomes for families and communities.



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## Numbers

21

countries that have hosted AMA Innovation Lab projects since its founding in 1996

39

active principal investigators developing and testing interventions to reduce poverty

82

technologies in development by AMA Innovation Lab researchers around the globe

36,228

trained during projects 2012-2016

96,508

research participants 2012-2016

\$21m

total AMA Innovation Lab funding 2012-2017

Visit <http://basis.ucdavis.edu> for

- Details on all our projects around the globe
- A listing of our upcoming outreach events open to participation
- A comprehensive library of policy briefs, research and additional information that can inform policy
- Opportunities to connect with all of our experts on global development and poverty

## Feed the Future Innovation Lab for Assets and Market Access

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## Selected Current Projects



### Bangladesh

Building Resilience and Assets for Food Security in Bangladesh



### Burkina Faso

Demand and Supply Constraints to Improved Sorghum Technology Adoption and their Gender-Differentiated Effects in Burkina Faso



### Haiti

Household-Level Impacts of System of Rice Intensification (SRI) in Haiti



### Kenya

Evaluating the Socio-economic Impacts of Western Seed's Hybrid Maize Program in Kenya



### Tanzania and Mozambique

Evaluating the Effect of Site-Specific Soil Information on Farmer Input Choices and the Relationship Between Poverty and Soil Quality in Tanzania



Bundling Innovative Risk Management Technologies to Improve Nutritional Outcomes of Vulnerable Agricultural Households in Tanzania and Mozambique



### Uganda and Senegal

Building Market Linkages for Smallholder Farmers in Uganda



Complementarities of Training, Technology, and Credit in Smallholder Agriculture in Senegal and Uganda

Learn more at <http://basis.ucdavis.edu>

# Ending poverty means addressing human challenges with rigorous testing to find what works

The **Feed the Future Innovation Lab for Assets and Market Access** (AMA Innovation Lab) at UC Davis conducts and supports research on policies and programs designed to help poor and smallholder farmers in the developing world to manage risk, adopt productive technologies and take an active part in economic growth.

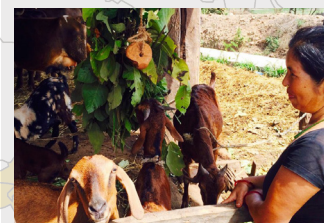
Current or previous AMA Innovation Lab research host country



## Index-Based Livestock Insurance in East Africa

This project develops and tests programs to help pastoral households in drought-afflicted areas cope with climate risks and to minimize the long-term consequences of lost livestock.

## Project spotlights



## Evaluation of the Welfare Impacts of a Livestock Transfer Program in Nepal

In partnership with Heifer International, this project evaluates how transferring physical, human and social capital impacts nutrition and wellbeing for the chronically poor.

# I4

## INDEX INSURANCE INNOVATION INITIATIVE

The AMA Innovation Lab's Index Insurance Innovation Initiative (I4) works to reduce poverty by developing and testing insurance products that minimize risk and promote economic growth for small-scale farming communities especially vulnerable to weather shocks.

I4 is a partnership with USAID, the Food and Agriculture Organization of the United Nations, the International Labour Organization and Oxfam America.

To ensure the broadest impact, we regularly host and sponsor outreach events globally and translate our research into accessible formats that integrate our findings for governments, NGOs and others working to increase prosperity worldwide. Our work is funded by USAID to support the U.S. Government's Global Hunger and Food Security Initiative. 🌱

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