

## FEED THE FUTURE RESEARCH STRATEGY

Reducing global poverty and hunger and improving nutrition are core objectives of Feed the Future, the U.S. Government's global hunger and food security initiative. A growing world population and changes in diets will require at least a 60 percent increase in global food production by 2050. Harnessing agricultural science and technology is critical to meeting the challenge of producing greater quantities of more nutritious food with fewer natural resources, while helping farmers adapt to the impacts of climate change. In May 2011, the U.S. Government released the Feed the Future research strategy, reflecting over a year of evidence-based analysis, multi-stakeholder deliberations, and external expert review led by the U.S. Agency for International Development (USAID), in close collaboration with the U.S. Department of Agriculture (USDA) and partners from U.S. universities, international research organizations and the private sector.

### A New Approach: Sustainable Intensification

Until now, agricultural growth in the developing world (especially in Sub-Saharan Africa) has been driven primarily by increasing the amount of land under cultivation. Globally, agriculture is spreading to lands ill-suited to grow crops, and water availability is becoming a major constraint. To help meet the world's food needs, Feed the Future uses **sustainable intensification** of plant and animal production systems, an approach that harnesses advanced technologies developed with a deep understanding of how they work together with local agro-ecological systems to produce more and better food without depleting natural resources. Through sustainable intensification, the Feed the Future research strategy drives agriculture-led economic growth by focusing on environmentally sustainable productivity gains, impact-oriented research and taking technology adoption to scale. This work is focused in South Asia and Sub-Saharan Africa where the poor and undernourished are concentrated. The research strategy focuses on three major objectives:

- To advance productivity, we need research to reduce production constraints and increase yield potential and climate resilience for major crops and livestock.
- To transform major production systems, we need to integrate advances in soil fertility, agronomy, new varieties and breeds, water management, market access, policies, human and institutional capacity development, and nutrition.
- To improve food safety and nutrition, we need to enhance dietary diversity, improve access to and availability of nutritious foods, and reduce post-harvest loss and contamination.

### Partners

To develop and implement the Feed the Future research strategy, we enhance existing research and draw on the expertise of multiple partners in the United States and around the world to bring complementary strengths to multi-disciplinary teams focused on major food security challenges. Our main partners include:

- **Universities** – The university-led Feed the Future Innovation Labs deliver integrated research and capacity building in target countries, drawing on the core research, extension and education strengths of the U.S. university community. Feed the Future taps into the very best scientific expertise available in the university research system, which houses many emerging technologies, unmatched training opportunities and a history of strong research collaboration.
- **International Centers** – We support the CGIAR and other international agricultural research centers whose programs encompass global breeding platforms, sustainable management of crops, animals, trees and natural resources in smallholder production systems, and policy and market development.
- **Private Sector** – Through public-private partnerships, we leverage resources, advanced facilities and expertise to advance innovative technologies and access new pathways for commercialization.
- **U.S. Government** – We integrate research, policy and capacity strengthening programs from across the U.S. Government, especially USDA, whose research programs address challenges with current or future implications for both developing country and U.S. agriculture.

## Cross-Cutting Issues

To achieve sustainable impact, and as part of Feed the Future's comprehensive approach to accelerate inclusive agriculture-led growth and improve nutrition, we integrate climate change and gender into all of our programming, including our research investments:

- **Climate Change** – Feed the Future research addresses the challenges associated with changing climatic conditions, from cutting-edge research on photosynthetic efficiency, to drought- and heat-tolerance, to small-scale irrigation and fertilizer use. Our research generates technologies, management practices and policies that help rural communities adapt to a changing climate while conserving natural resources to better ensure sustainable management of soil, water and biological diversity.
- **Gender** – To expand the participation of women as agricultural producers, our research focuses on women's access to assets, inputs and technologies, and their involvement in decision-making, particularly in research and extension institutions.



## Feed the Future Food Security Innovation Center

The *Feed the Future Food Security Innovation Center* (FSIC), housed within the Bureau for Food Security, leads USAID's implementation of the Feed the Future research strategy. Within the FSIC, projects are organized around seven key challenge areas, including sustainably transforming agricultural production systems, ensuring access to nutritious and safe foods, creating enabling and supportive policies, and addressing the emerging challenges of climate change and natural resource scarcity. The FSIC also builds capacity in agricultural research, extension and education, and leads a major effort on scaling up agricultural technologies. The FSIC enables strengthened coordination across the program areas and encourages a multi-disciplinary approach and cross-project learning. The seven program areas of the FSIC are:



- Climate-Resilient Cereals
- Legume Productivity
- Advanced Approaches to Combat Pests and Diseases
- Research on Nutritious and Safe Foods
- Markets and Policy Research
- Sustainable Intensification
- Human and Institutional Capacity Development

## Technology Scaling Agenda

To realize the full potential of innovations developed to improve nutrition and reduce global hunger and poverty, Feed the Future is intensifying efforts to scale up promising agricultural technologies to millions of farmers and other technology users throughout the value chain in commercially sustainable ways. Working through both the public and private sectors, we are bringing technologies developed through Feed the Future investments and other research programs to increasing numbers of smallholder farmers and entrepreneurs globally. To better deliver impact at scale, Feed the Future is linking scientists and other innovators with investors and technology users, wherever they may be: among developing country farmers and partners, the private sector, the donor community, and non-governmental organizations. Key partners in this effort include the G-8 New Alliance for Food Security and Nutrition and the Alliance for a Green Revolution in Africa. As we work with these partners to identify successful approaches and constraints to more rapid and sustainable dissemination of proven innovations and best practices, Feed the Future will inform global learning on the challenges and opportunities of technology scaling.

