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

FEED THE FUTURE RESEARCH STRATEGY

Reversing global trends of poverty, hunger, and undernutrition are core objectives of Feed the Future, the U.S. Government's global hunger and food security initiative. A clear focus on harnessing agricultural science and technology is key to reaching these objectives, particularly considering that providing sufficient food to the world's growing population will require a 60 percent increase in agricultural production by 2050. Agricultural research is central to meeting the challenge of producing more food with less land and water, improving nutrition, and helping farmers adapt to climate change. In May 2011, the U.S. Government released a new research strategy informed by a consultative, multi-stakeholder process led by the U.S. Agency for International Development, in close collaboration with the U.S. Department of Agriculture (USDA) and university partners. To meet the global food security imperative, we will implement the Feed the Future research strategy with a broad base of public and private partners, leveraging diverse resources and the latest scientific advances and innovations.

A New Approach: Sustainable Intensification

The research strategy pioneers a new model for agriculture-led economic growth: sustainable intensification. We will stimulate broad-based economic growth by focusing on environmentally sustainable productivity gains, impact-oriented research, and dissemination of research outputs through extension, education, and feedback at the country level. We will integrate long-term global research breakthroughs with innovative packages of improved practices, technologies, and policies. The research strategy focuses on three major areas to meet global food security goals while enhancing environmental and social outcomes:

- To advance productivity, we need research to reduce production constraints, increase yield potential for major crops and livestock, and improve practices for aquaculture and fisheries management.
- To transform production systems where poverty and undernutrition are concentrated, we need to integrate advances in soil fertility, agronomy, water management, market access, policies, 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.

Aligning Our Research Investments

Our investments range from longer-term research to address major global challenges to applied and adaptive research guided by host-country priorities for nearer-term impact. On-the-ground sustainable intensification work focuses on four major production systems in South Asia and sub-Saharan Africa where the poor and undernourished are concentrated. Research is carried out in partnership with U.S. agencies, the Consultative Group on International Agricultural Research (CGIAR), U.S. university-led programs including the Collaborative Research Support Programs (CRSPs), developing country universities and national research systems, private companies, and other donor and multilateral research organizations.

Major Research Goals

Develop high-yielding, climate-resilient cereals: We are investing heavily in heat- and drought-tolerant, climate-adapted cereals to increase productivity on the tens of millions of hectares affected annually by drought, and to help farmers adapt to higher temperatures that are already impacting the yields of staples such as wheat, rice, and maize. Leveraging partnerships with the private sector is critical to success in this area.

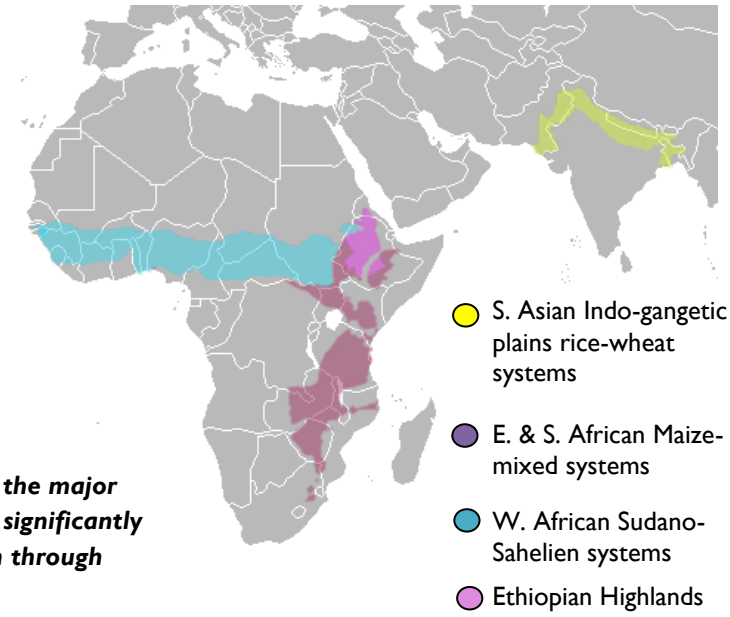
Address animal and plant diseases: We are applying advanced technology solutions to address animal and plant diseases that constrain production of nutritious staple foods. Investments will help to protect the 26 million cattle at risk from East Coast Fever in Africa, improve productivity of small ruminants, and avert catastrophic yield losses in under-researched crops including cassava, potato, and bananas. U.S. scientific leadership in biotechnology will be invaluable to addressing these constraints.

Improve legume productivity: We are investing in research to improve pest resistance and heat and drought tolerance in legumes, which are essential to increasing system productivity and ensuring household nutrition and women's incomes. Feed the Future is supporting research programs led by U.S. universities, the CGIAR, national agricultural research systems, and USDA to increase legume yields, which have lagged behind progress made in other crops due to underinvestment.

Transforming Agricultural Systems

We are focusing our work in four production systems where agricultural development has the potential to address high rates of poverty and undernutrition. Our approach integrates resource-conserving technologies, new climate-resilient cereals, improved policies, and integrated pest, soil, and water management, and emphasizes diversification with legumes, animals, and horticulture on smallholder farms.

We are building on the success of ongoing programs in South Asia to develop three new sustainable intensification programs in sub-Saharan Africa that will directly complement value chain investments in Feed the Future focus countries. These new investments will link CRSPs, other U.S. university-led capacity building efforts, the CGIAR, and the private sector with national, regional, and donor partners to pursue country-led research strategies.



The four shaded regions represent the major agricultural systems where we can significantly impact poverty and undernutrition through transformative research.

Applied Research for Productivity, Profitability, and Resilience

We are also supporting geographically-focused, problem-driven research to improve policy environments, address nutrition, and increase availability of and access to nutritious foods. This includes research on:

- Policy issues such as biosafety and food security, financial systems, and market access;
- Behavioral change and family decision-making around food, nutrition, and technology adoption;
- Increasing the production of horticulture, animal-sourced foods, and legumes; and
- Food safety, biofortification, dietary diversity, and contaminant control.