CRSP
COLLABORATIVE RESEARCH SUPPORT PROGRAMS

HARNESSING SCIENCE TO "FEED THE FUTURE"

The CRSP contribution to achieving food security and improving nutritional status

THEO DILLAHA /SANREM CRSP

Over the past two years, in response to emerging food crises and in an effort to avoid future ones, the U.S. Government created a new agriculture, food security, and nutrition initiative called **"Feed the Future"** (www.feedthefuture.gov). This whole-of-government effort is led by the U.S. Agency for International Development.

The USAID-funded **Collaborative Research Support Programs (CRSPs)** are well positioned to achieve FTF objectives. The CRSPs focus the best of U.S. university scientific expertise and development experience to create new knowledge, to train students, farmers, and entrepreneurs, and to tackle the thorniest of agricultural development questions. The CRSPs carry out USAID's agricultural goals in each of the Feed the Future priority countries.

OVERCOMING GENDER INEQUALITIES

In line with Feed the Future principles, CRSPs have multiplied their efforts to reduce gender inequalities that constrain agricultural development. By integrating closer attention to gender issues, CRSP activities:

- help to identify and reduce institutional barriers to gender equality;
- include women in their degree programs and short-term trainings;
- conduct research on problems faced by women as producers, processors, and traders; and,
- increase women's incomes and access to assets

The CRSPs have significantly increased women's participation in their degree and short-term training programs. From FY 2007 to 2011, the **number of women** in degree programs supported by INTSORMIL increased from 37.7% to 50%; for IPM, women have increased from 35.1% to 53.9%. AquaFish, SANREM and the Peanut CRSP have all maintained an average of about 50% women and the Pulse CRSP about 46% over the same period.[1]

♦ Women play key roles in managing pests and crops diseases. **IPM CRSP's** Gender Global Theme offers gender trainings to improve skills in participatory research and gender analysis. Each regional program has an identified gender expert.

♦ The **Horticulture CRSP** includes on their core management staff a Gender Equity Coordinator**; IPM, SANREM, and Peanut CRSPs** share the advice of the Women in International Development Program Director at Virginia Tech University.

The overarching goal of the Feed the Future (FTF) initiative is *"to sustainably reduce global hunger and poverty by tackling their root causes and employing proven strategies for achieving large scale and lasting impact."*

The key objectives of the program are to:

- accelerate inclusive agricultural sector growth, and
- improve nutritional status (especially of women and children).

USAID FROM THE AMERICAN PEOPLE

[1] *Horticulture, Livestock-Climate Change and the Global Nutrition CRSPs are too new to have data during this period*

MANUEL REYES /SANREM CRSP

Advancing the Productivity Frontier

♦ In Uganda, the **Peanut CRSP** worked with international and national research organizations to adapt peanut varieties for resistance to the groundnut rosette virus, a serious disease capable of causing total crop failure. To date, resistant varieties are planted on 30-40% of farms in the country, yields are up, and risks of yield losses are down.

♦ In Nicaragua, the **INTSORMIL CRSP,** working with Instituto Nicaraguense de Tecnologia, Texas A&M University, and the Centro Nacional de Tecnologias Agropecuarias in El Salvador, tested a new drought-tolerant variety of sorghum, INTA Segovia. It can yield up to 23% more grain than the best local variety. Farmers are now being trained to grow and sell certified seed.

♦ The **AquaFish CRSP** worked with Malian government ministries, producer associations, and community members to teach fish pond construction and techniques to improve fish productivity. In South-South exchanges, Malians traveled to Kenya and both Kenyan and Chinese specialists traveled to Mali to provide and receive instruction in new techniques.

Growing beans brings multiple benefits for smallholder farmers in Western Kenya: they improve quality, provide nutritious food, and earn money. The **Dry Grain Pulses CRSP** conducts trials with farmers to test new varieties and new cultivation techniques to increase these benefits. New varieties grown with fertilizers have increased yields between 41-71% on farmers' test plots; composting and legume planting is improving these degraded soils.

Expanding Markets and Trade

♦ In Uganda, **AquaFish CRSP** partner Auburn University supported a trade fair for fishers and fish farmers, processors, and marketers with the Walimi Fish Farmers Cooperative Society. Now a self-sustaining event, the fair attracts attendees from across the country and neighboring nations. The fair hosts seminars on entrepreneurship and technical advice, offers site visits, and promotes new equipment and markets.

♦ The **Livestock-Climate Change CRSP** is interviewing Ethiopian and Kenyan women from pastoralist households to better understand the relationship between climate change and livestock marketing. Mitigating the impact of climate change-related risks on market access and value chains is a key factor in improving livelihoods and expanding income opportunities for pastoralists.

IRV WIDDERS /DRY GRAIN PULSES CRSP

Increasing Economic Resilience in Vulnerable Rural Communities

♦ The **BASIS AMA CRSP** researches and tests policy options to help communities weather economic shocks. In Ghana, researchers investigate ways to expand access to financial services for the poor. In Washington, D.C. the results of this and other work were highlighted in a forum on "Building Resilience and Assets for Food Security: Evidence and Implications for Feed the Future." Leading edge researchers and policy analysts explained tools such as index insurance products and financial programs, and discussed different interventions, such as conditional cash transfers, and policy options.

♦ In Southern Africa, the **SANREM CRSP** used biophysical and social science research to test and optimize a private enterprise economic model known as Community Markets for Conservation (COMACO). This model links improvements in food security and rural livelihoods to sustainable agriculture and natural resource management practices. The economic analyses identified potential opportunities to derive profit from soil sequestration and reforestation associated with conservation farming activities.

FTF Objective II:

IMPROVING NUTRITIONAL STATUS (ESPECIALLY OF WOMEN AND CHILDREN)

CRSP research has contributed greatly to enhancing the nutritional status of people in the developing world. The **Global Nutrition CRSP,** operating in Uganda and Nepal, will focus on identifying the best policy mechanism for achieving large scale improvements in child nutrition. This CRSP research will expand an historical orientation on the biological way to improve human nutrition to emphasize research that will help to identify and explain what works operationally, on the ground, to encourage the behavior changes that result in better nutritional status, and how these changes can be scaled up.

In addition to the **Global Nutrition CRSP,** nearly every CRSP also has nutrition-oriented activities.

Building on observational studies from the **Human Nutrition CRSP** in the 1980s, findings from the former **Global Livestock CRSP** research in Kenya showed that adding small amounts of animal source foods to children's diets improved their nutritional status and cognitive development. A community-based nutrition education and microfinance activity in Ghana built on this research. Women in the micro-credit groups started or expanded businesses and used the funds to purchase animal source foods for their households. The project has continued under the leadership of local rural banks.

SUSAN JOHNSON /GLOBAL LIVESTOCK CRSP

♦ In Uganda and Rwanda, the **Dry Grain Pulses CRSP** is studying alternative methods for post-harvest storage and processing of beans that can enhance their nutritional value. Some options being tested are improving the nutrient quality of bean flour, developing recipes to increase consumption, and improving storage and transport containers to promote cleanliness and freshness of the harvested product. Drawing on the CRSP results, an article published on scidev.net reported that the techniques of "solar powered heaters to kill pests, simple, airtight containers and other storage technologies" were dramatically improving bean storage.

♦ The **Global Nutrition CRSP** will be working in FTF countries: Nepal and Uganda. It will focus on answering the "how" and "why" of successful nutrition interventions, seeking to overcome widespread maternal and child malnutrition, even in countries demonstrating agricultural growth and poverty reduction. To date, limited empirical evidence exists to determine how to bring and sustain the greatest improvements on the largest scale. The CRSP will clarify the impact pathways by which evidence-based interventions can be most effectively moved from community-level pilots to national programs and policies.

CAROLYN FONSECA/PEANUT CRSP

♦ Recognizing the nutritional and health values of peanuts, the **Peanut CRSP** established a school feeding program in Guyana based on peanut butter produced by cooperatives using locally grown peanuts. The initiative has grown from a village to national program and established a new cottage industry employing local women in the production of the peanut-based snack.

For more information on the CRSPs and Feed the Future, visit our website at:

WWW.CRSPS.NET

CRSPs in Feed the Future focus countries 2011 - 2012

	AquaFish	BASIS AMA	Horticulture	IPM	INTSORMIL	Livestock -Climate Change	Global Nutrition	Peanut	Dry Grain Pulses	SANREM
Africa										
Ethiopia				•		•				
Ghana	•		•	•	•			•		•
Kenya	•	•	•	•	•	•		•	•	•
Liberia		•								
Malawi		•	•							
Mali				•	•	•		•	•	•
Mozambique					•				•	•
Rwanda			•						•	
Senegal				•	•	•			•	
Tanzania	•		•	•	•	•			•	
Uganda	•	•	•	•	•		•	•	•	•
Zambia			•		•				•	
Asia										
Bangladesh	•		•	•						
Cambodia	•		•	•						•
Nepal	•		•	•		•	•			•
Tajikistan			•	•		•				
Latin America and Caribbean										
Guatemala		•	•	•	•				•	
Haiti			•		•			•	•	•
Honduras			•	•					•	
Nicaragua	•	•	•		•				•	

Key: *AQUAFISH: Aquaculture and Fisheries; BASIS AMA: Broadening Access to Input Market Systems/Assets and Market Access; INTSORMIL: Sorghum, Millet and other Grains; IPM: Integrated Pest Management; SANREM: Sustainable Agriculture and Natural Resource Management*
Source: *Individual Annual Reports for FY 2010 and 2011; personal communication with CRSP Directors.*

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Initiated by Title XII of the Foreign Assistance Act, **Collaborative Research Support Programs** mobilize the capacities of land-grant universities to address issues of food security, human health, agricultural growth, trade expansion, and sustainable use of natural resources in the developing world.

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