

Horticulture CRSP News



Reducing poverty, improving nutrition and health, and improving sustainability and profitability through horticulture.

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Countries Served by Horticulture CRSP Projects

Bangladesh, Benin, Bolivia, Cambodia, Chile, Costa Rica, Democratic Republic of Congo, Dominican Republic, Ecuador, El Salvador, Gabon, Ghana, Guatemala, Haiti, Honduras, India, Kenya, Laos, Malawi, Mexico, Nepal, Nicaragua, Nigeria, Panama, Peru, Rwanda, Sri Lanka, South Africa, Tanzania, Thailand, Uganda, Vietnam, Zambia, Zimbabwe

Horticulture CRSP Awards Exploratory and Pilot Projects

Fourteen New Projects!

The Horticulture Collaborative Research Support Program (CRSP), funded by USAID, will be awarding nearly \$3.1 million to support 9 one-year and 5 three-year projects to improve horticultural crop production, marketing, and postharvest in the developing world. Eight US universities will be conducting projects across 26 developing countries ranging from Bangladesh to Zimbabwe.

The Horticulture CRSP is located at the University of California, Davis and supports US and international partners to conduct research, training, and outreach to countries with the greatest need. These projects build on the success and momentum of the 15 Immediate Impact Projects Horticulture CRSP announced in early 2010. "We believe these projects will improve food security by improving horticultural seed systems, decreasing postharvest losses, and increasing smallholders' access to markets" says Ron Voss, Director of Horticulture CRSP.

At \$500,000 each, the three-year projects add a research based approach to horticultural development. Projects include creating a self-sustaining postharvest training center, developing low-cost pest exclusion technologies, evaluating new horticultural varieties, using participatory action research to enable vegetable farmers, and creating a niche market for vegetables while improving food safety.

The one-year projects explore novel GIS technology applications, indigenous seed systems, unique training strategies, urban gardening and market evaluations. Designed to test new technologies, create new partnerships, or do market assessments, these projects lay the ground-work for larger projects in the future.

Funding for these projects is made possible by the generous support of the American people through the United States Agency for International Development (USAID) under Award No. EPP-A-00-09-00004.

New Projects Funded by Horticulture CRSP

Exploratory Projects (Completion Date: October 2011)

| PI and University | Target Countries | Description |
|---|--|--|
| Bates, Rick The Pennsylvania State University | Thailand, Bangladesh, Cambodia, Laos, Vietnam | Strengthening Indigenous Informal Seed Systems in Southeast Asia |
| Boellstorff, Darcy Bridgewater State College | Malawi | Geographic Information Accessibility for Improving Horticultural-Based Income Generation in the Mzimba District of Malawi |
| Coffman, Ronnie Cornell University | Bangladesh, India | Establishing a South Asia Consortium on Food Safety to Improve Public Health, Encourage Export Opportunities, and Increase Smallholder Profits |
| Fennimore, Steve University of California, Davis | Kenya | Employing a Novel Gender-Based Extension Model to More Effectively Train and Engage Horticultural Farmers |
| Kleinhenz, Matthew The Ohio State University | Kenya, Uganda, Tanzania | Educating Smallholder Vegetable Farmers in Grafting and Microclimate Management Techniques |
| LeJeune, Jeffrey The Ohio State University | Chile, Peru, Bolivia, Ecuador, Honduras, Guatemala | Improving Extension Methods for Horticultural Outreach Among Small-Stakeholder Farmers in Latin American Countries |
| Maredia, Mywish Michigan State University | India, Sri Lanka, Nepal | Cell Phone Enabled Personalized Agro-Advisory Services for Horticultural Crops in South Asia |
| Pitchay, Dharmalingam Tennessee State University | Thailand, Cambodia, Vietnam | Training Urban and Peri-Urban Horticultural Growers in Cropping Systems, Pre and Postharvest Handling, and Marketing Techniques |
| Wien, Hans Christian Cornell University | Zimbabwe | Evaluating the Support Structure for Production and Marketing of Tomatoes and Paprika Among Smallholders in Zimbabwe |

Pilot Projects (Completion Date: October 2013)

| PI and University | Target Countries | Description |
|---|--|--|
| Barrett, Diane University of California, Davis | Rwanda, Ghana, Kenya, Tanzania, Benin, Gabon | Extension of Appropriate Postharvest Technology in Sub-Saharan Africa: A Postharvest Training and Services Center |
| Ngouajio, Mathieu Michigan State University | Benin, Kenya | Developing Low-Cost Pest Exclusion and Microclimate Modification Technologies for Small-Scale Vegetable Growers |
| Nienhuis, Jim University of Madison-Wisconsin | Honduras, Nicaragua, El Salvador, Guatemala | Developing Technology-Based Agribusinesses that Produce and Market Vegetables and Seeds of Disease-Resistant Tomatoes and Peppers |
| Scow, Kate University of California, Davis | Uganda, Democratic Republic of Congo | Increasing the Capacity of Smallholder Farmers to Produce and Market Vegetable Crops in Uganda and Democratic Republic of Congo |
| Trexler, Cary University of California, Davis | Vietnam, Cambodia | Improving Food Safety and Creating a Niche in the Market for Smallholders with Education in Production, Postharvest, Food Safety, and Marketing and Branding Produce According to Specific Food Safety Standards |

PROJECT HIGHLIGHT

SWEETPOTATO FLOUR: A “GOLDEN” OPPORTUNITY FOR GHANA

Vitamin A deficiency compromises immunity and robs sight from 250 million children in the world's poorest regions. For families in West Africa, the best sources of vitamin A are orange vegetables and leafy greens. Furthermore, growing orange-fleshed sweetpotatoes is a good bet for subsistence-level farmers because they can be grown on marginal lands and in low-input systems. West Africans can enjoy many benefits from growing and consuming more of these orange-fleshed bundles of vitamins. However, in Ghana, most of the sweetpotato varieties farmers grow have white flesh and meager amounts of vitamin A.

The Crop Research Institute (CRI) recently released several varieties of the orange-fleshed sweetpotato that contain significantly higher amounts of vitamin A. Collaborative effort among researchers at the University of Ghana and Tuskegee University has shown that sweetpotato products are easily incorporated in local dishes, and Ghanaians are willing to pay more for bread made of orange-fleshed sweetpotato flour.

The USAID funded Horticulture CRSP has teamed up with Tuskegee University, CRI and the University of Ghana to implement an orange-fleshed sweetpotato project in Ghana. This collaborative effort increases the consumption of orange-fleshed sweetpotato in Ghana through a three-pronged approach that addresses production, postharvest processing and markets.

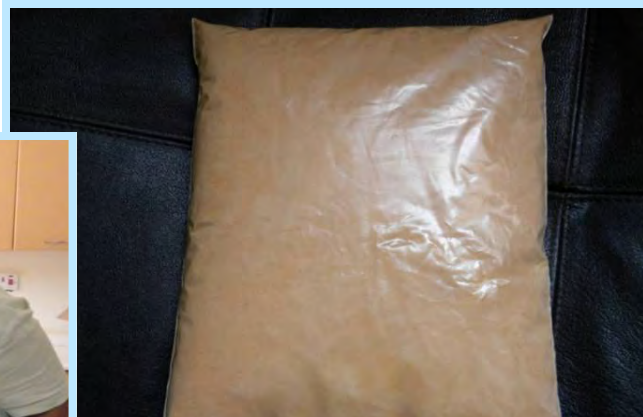
The production phase of the project provides farmers with improved orange-fleshed sweetpotato varieties and trains them in best management practices. The disease-free planting material is propagated in greenhouses and delivered to participant farmers who are trained in land-preparation, and planting and multiplication

techniques that are specific to these sweetpotato varieties.

In the postharvest processing phase, small-scale women bakers are taught to process the orange-fleshed sweetpotato into flour, puree and dehydrated chips. The bakers are being trained in village-level grading, curing, packaging, and storage methods. This project is also providing them with basic processing equipment and training in safe production of puree, flour and bread.

The markets phase of the project analyzes the market potential for orange-fleshed sweetpotato products. Project leaders are conducting base-line studies of current sweetpotato consumption in Ghana and the commercial viability of increased orange-fleshed sweetpotato production and marketing. The analysis includes a feasibility study of a pilot processing plant and an evaluation of the economic effects of the inclusion of orange-fleshed sweetpotato in the form of bread, puree and flour in the Ghanaian diet.

The beneficiaries of this project are producing, consuming and marketing a “golden” vegetable product that better meets their specific dietary needs and are finding it to be a tasty addition to their traditional diets. This “golden” opportunity is a perfect example of how improved horticultural techniques can add value and nutrition to existing crops and help malnourished families escape the vicious cycle of poverty and hunger. One participant of this project has proclaimed, “This sweetpotato is gold to me. I can make money and at the same time feed my family with this sweetpotato for them to be healthy. Now, any food I cook will have this sweetpotato flour used in it and my family will never know until they start getting stronger and healthier before I tell them it is the “gold” the Americans trained me on.”-----Peter Shapland, Eunice Bonsi, and Mark Bell



Orange-fleshed sweetpotatoes are being processed into flour for use in bread and other dishes.

Global Horticulture Knowledge Bank

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Horticulture for Development. This Knowledge Bank provides practical horticulture information - to help extension and development workers - improve the lives of people in lesser developed countries. Use the links below.



Diagnose crop problems

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This site

- is developed to provide people working on Horticulture in lesser developed countries with practical information.
- links to existing materials and develops new materials as needed.
- is a project of International Programs of the College of Agricultural and Environmental Sciences at UC Davis.

Global Horticulture Knowledge Bank

Meet the latest tool for horticulture - the Global Horticulture Knowledge Bank.

Spearheaded by Mark Bell of Horticulture CRSP and International Programs in the College of Agricultural and Environmental Sciences at the University of California-Davis, the knowledge bank builds off the success of similar, problem-solving, internet-based tools like IRRI's Rice Doctor. The knowledge bank provides practical crop information to help extension and development workers improve the lives of people in lesser developed countries. The website is demand driven and aimed at intermediary practitioners working in developing countries. It adds value to and builds off existing credible information and it focuses on practical "how to" information in all horticultural topics including diagnostics, energy, GIS, and markets.

Visit the Global Horticulture Knowledge Bank at <http://hortkb.weebly.com>.