

Horticulture Innovation Lab

Broad Goals for Phase II

Beth Mitcham, Director

We build international partnerships for fruit and vegetable research to improve livelihoods in developing countries.



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**HORTICULTURE
INNOVATION LAB**

UCDAVIS
UNIVERSITY OF CALIFORNIA

Introductions

- ▶ Management Entity
- ▶ International Advisory Board
- ▶ Project PIs and collaborators
 - As projects are introduced

Focal Areas – Phase II

- ▶ Horticultural value chain research
- ▶ Innovation and scaling
- ▶ Capacity building
- ▶ Nutrition sensitive horticulture
- ▶ Empowering women and the most vulnerable
- ▶ Sharing information



Horticulture Innovation Lab Countries

- ▶ Africa: *Kenya, Tanzania, Uganda, and Zambia*
- ▶ Central America and the Caribbean: *Guatemala and Honduras*
- ▶ Asia: *Bangladesh, Cambodia, Nepal, Thailand*

Phase II

▶ Project plans:

- 3 long-term research projects on gender, nutrition and postharvest
- Spin-off/Scaling projects (5)
- USAID Mission service projects (5)
- Additional Projects (years 3–5)
 - Mixed animal-horticulture systems, value chains, food safety, and capacity building



New projects (with introductions)

- ▶ Developing small-scale irrigation solutions (Uganda) – **Kate Scow, UC Davis**
- ▶ Expanding tomato grafting for entrepreneurship (Honduras & Guatemala) – **Jim Nienhuis, Univ. Wisconsin**
- ▶ Incentives and markets for vegetable smallholders to practice labor, water and soil saving technologies (Nepal & Cambodia) – **Manuel Reyes, North Carolina A&T**

New projects (with introductions)

- ▶ Empowering women through horticulture (Honduras) – **Janelle Larson, Penn State Univ.**
- ▶ Improving nutrition with African Indigenous Vegetables (Kenya & Zambia) – **Jim Simon, Rutgers Univ.**
- ▶ Trellis Fund – 14 projects in 2015

Leveraged projects (with introductions)

- ▶ Nutrition, aquaculture and horticulture project (Bangladesh) – Associate Award with Tufts University
- ▶ Innovative potato storage for smallholder farmers in Bangladesh – Associate Award with CIP – **Ron Voss & Michael Reid, UC Davis**
- ▶ MasRiego (Guatemala) – Associate Award – **Manuel Reyes at North Carolina A&T** and iDE Honduras, Zamorano, Universidad Rafael Landivar

Scaling Projects

- ▶ Two technologies selected for scaling project
 - Drying beads
 - Agro-nets
- ▶ Engaged Richard Kohl to assist with scaling plan development
- ▶ Meeting at UC Davis in fall
- ▶ Traveled to country with project leaders to meet with stakeholders and refine scaling plan

Drying beads



- ▶ High humidity reduces seed viability and encourages aflatoxin development and insect activity
- ▶ Drying beads
 - Made of special type of zeolite clay that absorbs water
 - Can be reused indefinitely
 - Can be used for seeds and food products
- ▶ Can dry products to very low moisture content
- ▶ Increased yield and germination/no aflatoxin or insect damage

Various Application Methods



- 1.6 liter DryBox
- 8.0 liter DryBox
- 16.0 liter DryBox
- 50 liter DrumDry
- 100 liter DrumDry



Pest exclusion nets

- ▶ Insects reduce crop yield
- ▶ Pest exclusion nets
 - Create a barrier that protects vegetables against pests
 - Improve ambient conditions
 - Can be locally made and reused
- ▶ Farmers are able to implement nets into an Integrated Pest Management program that relies less on pesticides



QUICK TECHNOLOGY EVALUATION SHEET

This sheet is designed to help development practitioners assess the viability and potential range application for a technology. The objectives of the this evaluation sheet are:

1. Clarify who is the audience for the technology and the problem being solved
2. Articulate the requirements and benefits of the technology
3. Identify where the technology could be successful

Audiences and needs	
Who are the target audience(s)?	
What problem does it solve? (and does the target audience really care?)	
How many people will benefit?	
Solution – What are the benefits?	
Brief explanation of technology	
What type of benefit does the technology provide and what percent benefit is expected compared to the conventional technology?	Yield <input type="checkbox"/> Yes, Percent _____ Labor <input type="checkbox"/> Yes, Percent _____ Other Inputs <input type="checkbox"/> Yes, Percent _____ Price <input type="checkbox"/> Yes, Percent _____ Other Specify _____ <input type="checkbox"/> Yes, Percent _____
Is benefit obvious to other farmers?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Maybe

Regional Centers

- ▶ Build connections between regional horticultural players
- ▶ Established in recognized regional institutions
- ▶ Regional foci for Horticulture Innovation Lab activities
 - Training
 - Research
 - Outreach
 - Information



Regional Centers (with Introductions)

- ▶ Central America
 - Zamorano University, Honduras
- ▶ Southeast Asia Center
 - Kasetsart University, Thailand
- ▶ Africa Center
 - Under development

We were innovation
before innovation
was cool!



Information to Remember

- ▶ Please use the logo block on all signage, reports, brochures, etc.
- ▶ Please do not abbreviate our name shorter than Horticulture Innovation Lab (especially not HIL or Hort IL)
- ▶ Please share project photos and summaries with Brenda Dawson



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Thank you!

For your contributions to the success
of the Horticulture Innovation Lab

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