




Annual Meeting
 March 6, 2017
 Antigua, Guatemala

HORTICULTURE INNOVATION LAB

Welcome to the seventh annual meeting of the Horticulture Innovation Lab. We are excited to bring our research project leaders, international advisory board and management team to Guatemala this year to learn about horticulture in Guatemala and to advance horticultural science for the world. We are proud to share your commitment to helping smallholder farmers better grow fruits and vegetables, to increase incomes and improve diets.

Promoting climate-smart agricultural practices, advancing gender equity, strengthening horticultural science and supporting horticultural entrepreneurship have been important themes for the Horticulture Innovation Lab's work in Guatemala and Central America.

These annual events are a chance to grow and strengthen our global network, with partners from universities, government agencies, international organizations, and private companies. Exchanging information and building productive partnerships is critical to our shared success. We look forward to new collaborations and fresh ideas.

Whether you lead one of our research projects or are just learning about our program for the first time today, your partnership is a valuable part of how the Horticulture Innovation Lab works to advance horticultural science for greater global impact. Thank you.

– Elizabeth Mitcham, Director



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**HORTICULTURE
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UC DAVIS
 UNIVERSITY OF CALIFORNIA

Regional Horticulture Conference

Monday, March 6, 7:30 a.m. Registration

8:30 a.m. **Welcome and introductions** *Erin McGuire, Associate Director, Horticulture Innovation Lab*
Lic. Raúl Hernández Figueroa, Advisor, Ministry of Agriculture, Livestock and Nutrition of Guatemala
Harry Kriz, Deputy Director, USAID/Guatemala

9:00 a.m. **Importance of Horticulture in Development**
John Bowman, USAID Bureau for Food Security

9:30 a.m. **Horticulture Innovation Lab Overview**
Elizabeth Mitcham, Director, Horticulture Innovation Lab

10:00 a.m. **Break and networking**

10:30 a.m. **Opportunities and Challenges in Central America and Guatemala**
Héctor Tuy, Universidad Rafael Landívar

11:00 a.m. **Innovative work in Guatemala and Central America**
Ignacio Iviteri, Agropecuaria Popoyán LC
Ingeniero Osman Cifuentes, Instituto de Ciencia y Tecnología Agrícolas
Karen López, Semilla Nueva
Ivan Buitron, AGEXPORT

12:00 p.m. **Lunch and Horticulture Exhibition**
Buffet lunch. Beginning at 12:30, the Horticulture Exhibition will begin with booths and demonstrations from organizations working in horticulture. Please explore once you have finished lunch.

1:45 p.m. **5-Minute Lessons, Round 1**
Researchers working with the Horticulture Innovation Lab each have 5 minutes to share a useful lesson from their project, along with a very brief introduction to their project, its partners, and location. See list of speakers on p. 3 for details.

3:00 p.m. **Break and networking**

3:30 p.m. **5-Minute Lessons, Round 2**
See list of speakers on p. 3 for details.

4:30 p.m. **Poster session for follow-up with speakers**
Speakers from the 5-Minute Lessons will each host a poster, for questions and discussions related to their research. Each discussion session will last 10 minutes, so you may select up to 6 posters for follow-up discussions.

5:30 p.m. **Looking forward and working together**
Mark Bell, Horticulture Innovation Lab, UC Davis

6:00 p.m. **Evening reception**
Snacks with no-host bar. Networking after a productive day.



5-Minute Lessons from the Horticulture Innovation Lab

1:45 p.m.

Round 1 speakers

Janelle Larson, Penn State University

Empowering women through horticulture in Honduras

Jim Simon, Rutgers, The State University of New Jersey

Improving nutrition with African indigenous vegetables in Kenya and Zambia

James Nienhuis, University of Wisconsin-Madison

Expanding tomato grafting for entrepreneurship in Honduras and Guatemala

Gurbinder Gill, Agribusiness Associates

Reducing postharvest losses in Rwanda

Manuel Reyes, Kansas State University

Promoting conservation agriculture for vegetable growers in Cambodia and Nepal

Ivanna Vejarano Moreno, Panamerican Agricultural School, Zamorano

Horticulture Innovation Lab Regional Center at Zamorano in Honduras

Abraham Salomon, UC Davis (Uganda)

Developing farmer-led irrigation solutions in Uganda

Poonpipope Kasemsap, Kasetsart University

Horticulture Innovation Lab Regional Center at Kasetsart University in Thailand

Johan Van Asbrouck, Rhino Research

Scaling up drying technologies for seed in Bangladesh

3:30 p.m.

Round 2 speakers

Angelos Deltsidis, UC Davis

Examining nutrition impacts of horticultural innovations in Bangladesh

Meagan Terry, UC Davis (Guatemala)

Promoting drip irrigation and climate resilience in Guatemala

Karen LeGrand, UC Davis

Building safe vegetable value chains in Cambodia

Brent Sipes, University of Hawai'i at Mānoa

Managing nematodes and soil health in Guatemala

William Vance Baird, Michigan State University

Assessing feasibility of pest-exclusion nets in Kenya

Elyssa Lewis, UC Davis

Supporting local organizations with student agricultural expertise (Trellis Fund)

Emil van Wyk, Agrismart Zambia

Horticulture Innovation Lab Regional Center in Zambia

Peter Hirst, Purdue University

Improving practices for dried apricots in Tajikistan



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How fruit and vegetable research can impact poverty in Central America

Collaborating across borders to strengthen horticultural value chains

The Horticulture Innovation Lab has collaborated with more than 200 organizations on research projects that improve the horticultural value chain for smallholder farmers around the world — including in Guatemala and Honduras.

Our project teams include partners from U.S. universities and from organizations in developing countries, as part of the U.S. government's global hunger and food security initiative called Feed the Future.

In the program's first 5 years, these global projects improved how more than 14,000 farmers grow, process or sell horticultural crops — through adoption of new practices or technologies.



Promoting drip irrigation and climate resilience in Guatemala

The Horticulture Innovation Lab team leads the "MásRiego" project as a buy-in from USAID/Guatemala, scaling out drip equipment and conservation agriculture practices in the Western Highlands.



Managing nematodes and soil health in Guatemala

Brent Sipes of the University of Hawai'i at Mānoa leads a project on integrated pest management and soil health for managing nematodes for the needs of smallholder potato farmers.



Empowering women through horticulture in Honduras

Janelle Larson of The Pennsylvania State University, leads this Women in Agriculture Network project that is improving ways horticultural value chains support equity for women and marginalized populations.



Expanding tomato grafting in Honduras and Guatemala

James Nienhuis of the University of Wisconsin-Madison, leads this "Plántulas de Esperanza" project focused on vegetable grafting for entrepreneurship, which spins off from previous work that evaluated varieties and produced disease resistant seed.



Horticulture Innovation Lab Regional Center at Zamorano

Hosted and led by a team at the Panamerican Agricultural School, Zamorano, this regional center serves as a hub for horticulture-related activities in Central America, particularly in Honduras and Guatemala. The center is also known as *El Centro Regional de Innovación para las Hortalizas y Frutas en Zamorano*.

The center brings together key regional players to improve livelihoods of smallholder farmers, with innovative technologies that offer solutions for local horticultural needs. The center also builds capacity for fruit and vegetable research and development with regional partners and Zamorano.

Funded by USAID

The program is funded by the U.S. Agency for International Development as a Feed the Future Innovation Lab, one of 24 such programs in the United States.

Managed by UC Davis

The Horticulture Innovation Lab is managed by a team at UC Davis and directed by Elizabeth Mitcham, UC Cooperative Extension specialist in the Department of Plant Sciences.



Network of scientists

The Horticulture Innovation Lab has collaborated with exceptional researchers from 18 U.S. universities with expertise not only in horticulture, but also in plant pathology, soil science, sociology, biotechnology, agricultural education, tropical plants, resource economics, engineering and more.

We continue to further strengthen the capacity of our research network with new collaborators.



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Request for Proposals: Trellis Fund \$4,000 grants

The Horticulture Innovation Lab invites organizations in Central America, Africa, and Asia to compete for new Trellis Fund grants to extend horticultural information to local farmers and stakeholders along fruit or vegetable value chains.

These new Trellis Fund grants are for up to \$4,000 each for 6-month projects. Both new organizations and previously awarded organizations are encouraged to apply.

Project proposals may address horticultural crop production, irrigation, plant nutrition, pest management, postharvest practices or marketing issues in relation to fruits and vegetables. Once projects are selected, the Trellis Fund will connect organizations with U.S. graduate students who have related agricultural expertise for project support, providing benefits to both the student and the in-country institution.



A graduate student from North Carolina State University works with the Ecological Services Centre in Nepal on an integrated pest management field trial, during a previous Trellis Fund project.

Organizations in these countries are eligible:

- **In Latin America and the Caribbean:** Guatemala, Honduras, Haiti
- **In Africa:** Ethiopia, Ghana, Liberia, Malawi, Mozambique, Rwanda, Senegal, Tanzania, Uganda and Zambia
- **In Asia:** Bangladesh, Nepal, Cambodia, and Tajikistan

Since 2011, Trellis Fund projects have reached more than 7,396 farmers worldwide. The Trellis Fund is managed by the Horticulture Innovation Lab at UC Davis, in partnership with the University of Florida, University of Hawai'i at Mānoa, and North Carolina State University.

April 3, 2017, is the deadline to submit project proposals, for projects that will take place in 2018. For details, visit <http://horticulture.ucdavis.edu/main/trellis.html>.



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