Peek into our
Global Work

We're showcasing plants and agricultural tools from around the world that can help small-scale farmers in developing countries better grow fruits and vegetables.

Why fruits and vegetables?

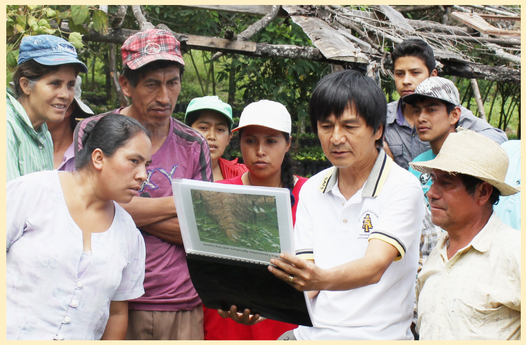
They are **nutritious** and help children and families stay healthy and happy.

They are **high-value** crops that increase farmers' incomes, providing more money to rural farming families.

What do we do here?

At this site, we demonstrate agricultural technologies that have been developed with the help of our partners around the world. Here we also test new tools and crops to learn how they can best be used in other countries. Agricultural scholars and students come to UC Davis to learn about agriculture, and we share our knowledge through on-site tours and trainings.

What do we do globally?



Our program collaborates with scientists worldwide to research solutions that can help farmers be more productive, while reducing poverty and malnutrition. The Horticulture Innovation Lab team, led by UC Davis scientists, has trained more than 32,000 individuals in 30 countries, including 9,800 farmers who have improved their farming practices.

Welcome to the Horticulture Innovation Lab Demonstration Center

Feel free to explore the different plant varieties and agricultural tools such as those used for drying, cooling and irrigating crops. We're always experimenting with new innovations and changing features in this demonstration center.

This site is made possible in part by the generous support of the American people through the U.S. Agency for International Development. The information shared here is from the Horticulture Innovation Lab team at UC Davis and does not necessarily reflect the views of the U.S. government.

This demonstration center is part of the UC Davis GATEways Project—a campus-wide initiative developed by the UC Davis Arboretum and Public Garden to showcase the academic strengths of UC Davis, inspire lifelong learning, and engage with our community.

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Household Gardens in Africa

Some important indigenous vegetables include spider plant, African nightshade and amaranth (pictured here)—all of which are grown for their nutritious leaves.

In many parts of Africa—including Kenya, Tanzania, Uganda and Zambia—household gardens are a common way to provide nutritious food for the whole family. These gardens often contain a mixture of African indigenous vegetables and vegetables more common to many Americans like cabbage, carrots and tomatoes.

The Horticulture Innovation Lab improves how farmers grow African indigenous vegetables and finds ways to get more of these nutritious foods onto plates.

These raised beds contain examples of fruits and vegetables that can be grown in household gardens in Africa. Please do not handle these plants.

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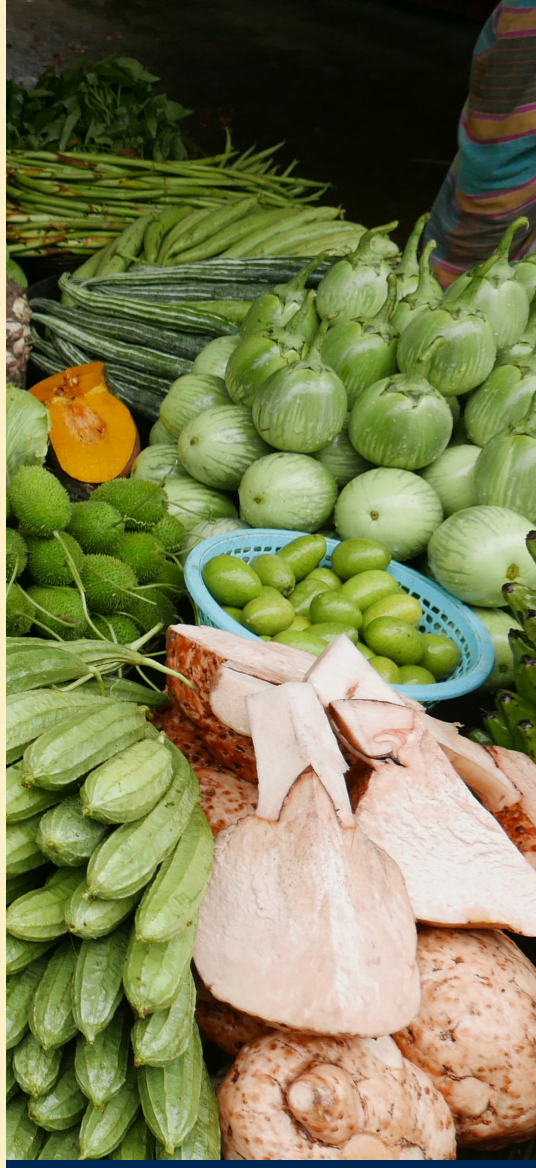
Household Gardens in

Asia

In countries such as Cambodia, Bangladesh, Thailand and Nepal, local diets depend on rice. Growing household gardens, with a ready supply of vegetables to add to a bowl of rice, can greatly **improve a family's diet and health**. Some families are able to sell surplus vegetables as an additional source of income.

The Horticulture Innovation Lab combines sustainable practices such as mulch and drip irrigation to improve vegetable production on small plots of land for Asian households.



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Cool It Down

At right, a vendor uses an umbrella to shade and cool fresh fruits and vegetables at a market in Tanzania.

Below, a cold room in Uganda was built to help farmers keep their produce cold and fresh for a longer period of time.

Cooling is essential to preserving fresh produce. Many developing countries are in or near the tropics, where the climate is hot and humid. **Cold storage**—like a refrigerator—is virtually non-existent. Small-scale farmers typically lose more than half of their harvest because they cannot keep their fruits and vegetables cool.

To address this challenge, the Horticulture Innovation Lab adapts and promotes low-cost cooling innovations, such as the insulated cold room in front of you and in the photo to the left, to **reduce post-harvest losses and extend shelf life**. Cooling gives farmers greater control over when to sell their nutritious fruits and vegetables to local markets.

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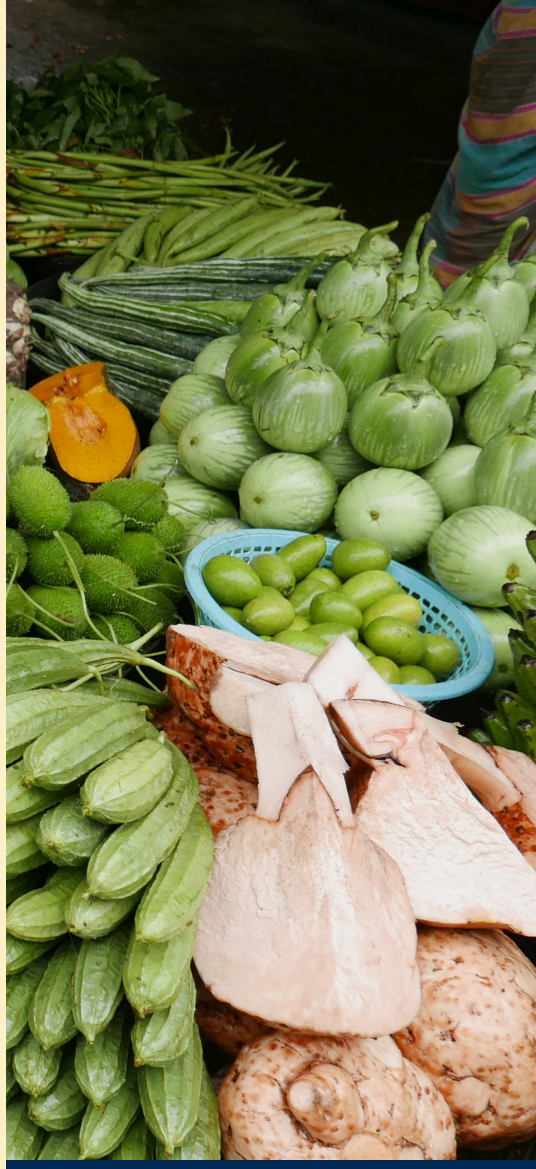
Dry It Out

Drying is the oldest method of preserving food and seeds. Quickly dehydrating foods after they are picked has many benefits such as:

- **Reducing food waste** by preventing spoilage
- **Extending shelf life** for long-term storage
- **Increasing availability** of nutritious fruits and vegetables year-round
- **Adding value** to surplus crops so farmers can sell when prices are higher



The Horticulture Innovation Lab tests and promotes solar dryers, like the one in front of you, and other tools that help small-scale farmers in developing countries save their crops to eat or sell later.

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