

## The facts: UC's Global Food Initiative has deep California roots

### SERVING CALIFORNIA

The University of California Global Food Initiative builds on UC's strengths as a public research university, leveraging its impact in California to work toward putting the world on a path to sustainably and nutritiously feed itself.

UC's 10 campuses, agricultural division and labs are equipped to tackle the food challenge across multiple disciplines through teaching, research, operations, policy and service.

For starters, UC research has played a key part in helping California become the nation's leading agricultural state. Our agricultural experts are in every county in California, helping farmers, ranchers and others cope with tough issues like drought. But our leadership goes beyond agriculture. Students, faculty and staff have turned our campuses into living laboratories for sustainable food practices. Also, we are on the frontlines of addressing issues of food inequality and health. We teach healthy eating in California's K-12 schools; work to address issues of food insecurity in poor, urban areas; and help shape policy in efforts to ensure that all Californians have access to healthy, sustainable food choices.

### DEEP ROOTS

UC is deeply rooted in food and agriculture. Founded in 1868 as California's land-grant university, UC has provided farmers with practical, trusted, science-based solutions to help them compete.

- In the late 1800s, UC research showed how to remove salts from the alkali soils in the Central Valley, turning what was once barren land into one of the world's most productive farming regions.
- In the early 1900s, UC extended its agricultural reach with the founding of University Farm, which went on to become UC Davis, and the Citrus Experiment Station, which went on to become UC Riverside.
- When Cooperative Extension was established a century ago, UC developed a network of advisors who bring research-based knowledge from campus to the community. Today, UC Cooperative Extension has programs in every county in California.

### AGRICULTURE AND NATURAL RESOURCES (ANR)

UC's Division of Agriculture and Natural Resources turns science into solutions, spanning the state to promote healthy food systems, healthy environments, healthy communities and healthy Californians.

- Deploys 320 UC Cooperative Extension academics engaged in research and extension projects.
- Operates nine research and extension centers with more than 11,000 acres being used for studies on food, the environment and nutrition.
- Partners with approximately 700 campus-based Agricultural Experiment Station faculty at UC Berkeley, UC Davis and UC Riverside.
- 5,400 UC-trained Master Gardener volunteers work in 50 California counties to extend research-based gardening techniques that minimize the use of pesticides and artificial fertilizers. UC Master Gardeners also maintain more than 1,200 community, school and demonstration gardens in California.

- UC Cooperative Extension's CalFresh Nutrition Education Program and its Expanded Food and Nutrition Education Program provide nutrition education to more than 220,000 Californians a year.
- UC ANR's urban agriculture online portal <http://ucanr.edu/urbanag> offers a one-stop shop for anyone in California looking for expert advice about urban agriculture.

### BROAD EXPERTISE

From teaching to research to policy, UC is a go-to source across the food spectrum. UC Davis has the world's top-ranked agricultural research and training institution; UC Riverside is a hub for citrus and invasive pest expertise; UC Santa Cruz is recognized as the original modern authority on organic and sustainable agriculture.

- Food centers: UC Davis alone hosts 27 centers that focus on food and agriculture, including the World Food Center, UC Agricultural Issues Center and Agricultural Sustainability Institute. Others include the UC Berkeley Food Institute, UCLA Seed Institute, UC San Diego Center for Food and Fuel for the 21<sup>st</sup> Century, and UC Santa Cruz Center for Agroecology & Sustainable Food Systems. UC Riverside will open an agricultural institute this summer. ANR formed a Nutrition Policy Institute earlier this year.
- Collections: UC Riverside Citrus Variety Collection, UC Davis Tomato Genetics Resource Center.
- Water: UC researchers have been sharing their knowledge widely on the drought and water-related issues, hosting briefings and workshops, posting information online, and conducting media interviews to help educate the public and inform policy. On the farm, UC research has helped spread the use of drip and pivot irrigation, and promoted monitoring and management techniques that minimize water use.
- Sustainability: In an example of multidisciplinary collaboration, the UC Irvine Salton Sea Initiative seeks to harness Irvine's research, teaching and service resources to address sustainability challenges facing the Salton Sea region.

### CURRICULUM

UC campuses offer dozens of food-related courses, covering everything from anthropology to environmental science, journalism to law. Examples include:

- UC Berkeley: More than 90 food courses are offered each year at undergraduate and graduate levels, with degree programs ranging from agricultural economics to public health and nutrition. A minor in food systems is being added. More than 150 faculty and staff teach and conduct research on food topics.
- UC Davis: More than 335 faculty are focused on food issues, and more than 6,000 undergraduates and 1,000 graduate students are enrolled in agricultural, environmental and food-related degree programs. In 2011, UC Davis added a sustainable agriculture and food systems major.
- UC Santa Cruz: More than 30 undergraduate food-related classes are offered. A minor in sustainability studies is being added. The nearly 1,500 graduates of its Apprenticeship in Ecological Horticulture have carried hands-on experience into teaching, farming and advocacy positions for more than 45 years.

### CAMPUS OPERATIONS

Sustainability has long been a priority for UC, and recent initiatives from President Janet Napolitano have sharpened that focus. She has set goals for the UC system to become carbon neutral by 2025 and to reduce per-capita potable water use by 20 percent by 2020. UC's Policy on Sustainable Practices guides campuses in nine areas: green building, clean energy, sustainable transportation, climate protection, sustainable operations, waste

reduction and recycling, environmentally preferable purchasing, sustainable food service, and sustainable water systems.

UC campuses have led efforts to serve healthier food, buy locally and reduce waste. For example, UC Merced dining's zero-waste take-out system uses recyclable plastic containers. UC San Francisco's Living Green efforts run the gamut from replacing toxic cleaners with certified Green Seal products to serving organic food in its medical center. UCLA launched its Healthy Campus Initiative in 2013 to promote the health and wellness of students, faculty and staff, and to develop best practices that may help other communities with the same objective.

Campuses host several farmers markets and have numerous community gardens, with UC Berkeley's Student Organic Garden established in 1971 and student farms founded at UC Santa Cruz in 1971 and UC Davis in 1977. Also, students have stepped up to help feed those in need, whether it's serving fellow students at food pantries or donating meals to the broader community through Swipes for the Homeless, a program founded at UCLA with chapters at UC Berkeley, UC San Diego and UC Santa Barbara.

#### **CROP IMPACT**

California produces more than 400 commodities, including nearly half of the nation's fruits, nuts and vegetables. UC contributions include:

- Strawberries: About 65 percent of the strawberries produced in California and about 40 percent of the world's strawberries are from UC-developed varieties.
- Citrus: UC Riverside researchers have bred more than 40 citrus varieties.
- Almonds: UC research has helped California almond growers cut water usage and nearly double yields.
- Dairy: UC Davis has helped to make California the nation's largest dairy state, contributing to better sanitation procedures, improvements in raw milk handling and quality, and innovations that have reduced the environmental impact of livestock waste.
- Tomatoes: UC Davis developed the tomato harvester in the 1940s, revolutionizing the processing tomato industry in California and the world, cutting harvesting costs in half. In the last two decades, UC research has helped processing tomato growers cut water usage by 25 percent while increasing yields.
- Rice: UC Davis and UC Riverside geneticists have helped developed flood-tolerant rice, benefiting rice farmers in flood-prone countries. More than 10 million farmers today have and grow Sub1 rice in their flood-prone fields. UC researchers also are making progress toward developing drought-tolerant crops.