

UC Cooperative Extension
University of California
Agriculture & Natural Resources

November 2026

Ventura County 2025 Annual & Q 1 Report 2026-27

Prepared for

Ventura County Executive Office & Board of Supervisors

COUNTY of VENTURA

UC Cooperative Extension
University of California
Agriculture & Natural Resources

Our local mission:
UCCE in Ventura County improves the lives of local residents by working with growers, families, volunteers, and partners to advance science-based solutions in agriculture, natural ecosystems, community health, and youth development.



Investigating optimal fertilizer rates in gerbera daisy production.
Photo: E Volk

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EFFORTS & OUTCOMES FROM 2025

At a glance



Ventura County 4-H member at Presentation Day

$1.0M

Value of volunteer service hours

11,800

Community education participants

1,202

Growers, land managers, and agency partners at Advisor-led workshops & trainings

373

4-H youth across 11 county 4-H clubs

2025 Impacts:

- Increased productivity and efficiency of local agriculture
- Improved water quality, water use efficiency, and soil health
- Improved community health
- Increased civic engagement and readiness for post-secondary education and careers

BACKGROUND

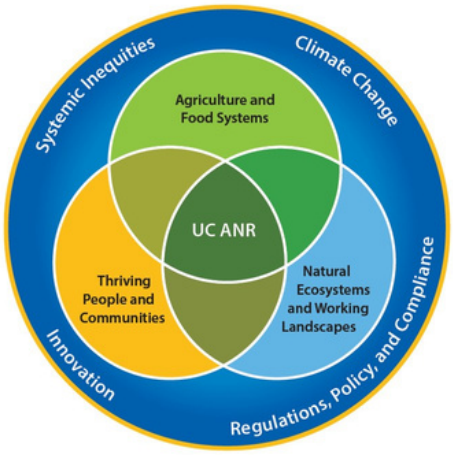
UC in Collaboration with Local Counties

UCANR priorities

Partnering with Ventura County since 1914

The University of California Cooperative Extension (UCCE) and Ventura County have been partnering for more than a century to provide educational programs to county residents in agriculture, home economics, and youth development.

UCCE is part of the UC division of Agriculture and Natural Resources (UC ANR), a statewide network of researchers and educators. In 2024, UC ANR published our 2040 Strategic Vision, a blueprint to guide our work, structure, and resource allocation to stay relevant to the challenges and opportunities across our diverse and vibrant state.



UCCE advisors, research support staff, community educators, and local volunteers work in teams to develop and extend practical, trusted, and science-based information in Ventura County. We also leverage the expertise of campus researchers across the UC system and collaborate with local, state, and federal agencies to strengthen our education and outreach efforts. While much of our funding comes from state and federal sources, we depend on cooperative support from the County of Ventura to fund operational costs and expenses for doing business in the County. This partnership ensures UC resources are expended in, relevant to, and beneficial for Ventura County.



UCCE is part of a statewide network of researchers and educators - UC ANR.

Agriculture and Food System Programs

Applied research and education in:

- Implementing safe, effective, and economical pest management
- Optimizing fertilizer application
- Improving water use efficiency
- Testing new varieties for economic and ecological resilience

Program	Clientele	Funding	Advisor
Entomology	Growers, Public	UC, grants	Hamutahl Cohen, Ph.D.
Irrigation & Water Resources	Growers, Farm Managers, Public, Agencies	UC, grants	Andre Biscaro, M.S.
Strawberry & Vegetable Crops	Growers, Pest Control & Certified Crop Advisers	UC, grants	Oleg Daugovish, Ph.D.
Soils, Water & Subtropicals	Growers, Pest Control Advisers	UC, grants	Ben Faber, Ph.D.
Production Horticulture	Growers, Pest Control Advisers, Public	UC, grants	Emma Volk, M.S.
Food Policy & Systems	Growers, food hubs, institutional food purchasers	UC	Li Schmidt, M.S.
Integrated Pest Management	Growers, Pest Control Advisers	UC, grants	Chris Greer, Ph.D.
Agricultural Economics	Ag-business	UC, grants	Etaferahu Takele, M.S. M.A.

Natural Ecosystems & Working Landscapes Programs

Applied research and education in:

- Improving land management decisions and weed suppression
- Early detection of invasive tree pests
- Improved community and food system disaster resilience

Program	Clientele	Funding	Advisor
Disaster Resiliency Planning and Policy	Public, Government, NGOs	UC	Lilian Thaoxaochay, M.A.
Prescribed burn to control invasive weeds	Rangeland Managers, Agencies	UC, grants	Staff: Maripaula Valdes-Berriz
Natural Resources, Climate Resilience & Tree Health	Agencies, Local Government, Public	UC, County, grants	Staff: Julie Clark
UC Environmental Stewards	Volunteers, Public	UC, grants	Managed by statewide program and local partners
Climate Smart Agriculture	Producers	Grants	Staff: Nicole Oliveros

Community Education & Youth Development Programs

Applied research and education in:

- Youth leadership, civic engagement, college & career readiness
- Home gardening, irrigation, and pest management
- Healthy eating, food and nutrition security, physical activity

Program	Clientele	Funding	Advisor
4-H Youth Development	Youth, Youth-serving professionals	UC, County, Donors	Staff: Janet Garcia Advisor: Melissa Guillen
UC Master Gardeners	Volunteers, Public	UC, County, Donors	Staff: Jill Tyler Advisor: E Volk

Applied Research & Education Support

Program	Clientele	Funding	Staff
Research Support Staff	Advisors, Director	Grants, UC	Maripaula Valdes-Berriz, Abigail Brondos, Lexi Donnelly, Cassandra Fielding, Gina Ferrari
Administrative Support - UCCE and Hansen Agricultural Research and Extension Center	Directors, Staff, Advisors	UC, County	Kathy Speer, Lindsey Torres, Brandy McCarthy
UCCE Ventura - Director	UCCE, County, Public	UC	Shannon Klisch, MPH
Hansen Agricultural Research and Extension Center - Director	UC, Region, County	UC	Annemiek Schilder, Ph.D.

Supporting avocado growers through UC research

by Hamutahl Cohen



Avocado Lace Bug Trial Insecticide Application Photo: H Cohen

Avocado lace bug (Pseudacysta perseae) is an emerging pest of California avocados, particularly in coastal production areas. Feeding by adults and nymphs causes leaf spotting and necrosis, and can lead to severe defoliation. Despite increasing impacts to growers, locally-relevant information on effective management options, particularly for organic production, remains limited. **At an avocado lace bug grower meeting organized by UCCE in March 2026, growers identified the lack of effective, research-based organic control recommendations as a priority.** In response, UCCE initiated a field trial to evaluate available organic insecticides and provide growers with locally generated efficacy data.



Feeding damage of avocado lace bug Photo: UC IPM

In August 2026, Advisor Cohen led a collaborative field trial evaluating five organic insecticidal products, two conventional comparison products, and a water control. These treatments were replicated six times for 48 experimental plots, containing 12 avocado trees each. To evaluate treatment efficacy, our research team counted live adult and juvenile avocado lace bugs in the plots before treatment and at 3, 7, 14, 21, and 28 days after application.

Research findings can help growers avoid unnecessary application of non-effective and costly insecticides.

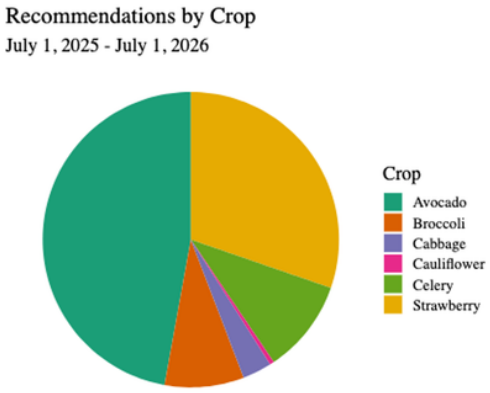
Findings were presented to local growers and published through public channels. Results show that organic production systems need much more efficient control strategies and other chemistries warrant evaluation.

Further investigation planned for 2027 will support long-term development of effective avocado lace bug management recommendations.



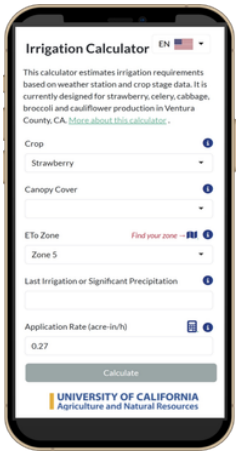
Advisor Biscaro at an irrigation field day in Oxnard

Applying too much water wastes limited resources, increases nutrient loss, and can promote diseases such as Phytophthora root rot. On the other hand, not enough water can reduce yield and quality.



Avocado accounted for the largest number of recommendations generated through the online calculator, followed by strawberry and celery.

Irrigation Calculators Expand Access to Data-Driven Irrigation



By Andre Biscaro

Online calculators specific to Ventura County are available now.

Accurately determining how long to irrigate is essential for optimizing crop yield and ensuring the sustainable use of groundwater resources. Irrigation decisions are made repeatedly throughout a growing season, ranging from approximately 5-10 events for vegetable crops to 30-40 for strawberries. One of the most accurate approaches to determining crop irrigation requirements is evapotranspiration (ET)-based irrigation scheduling. However, implementing ET-based irrigation scheduling can be labor-intensive and most growers have limited time to perform the calculations required.

UC ANR's online irrigation calculators provide a user-friendly solution for growers, farm managers and irrigators seeking to improve irrigation efficiency. Calculators for strawberry, celery, cabbage, broccoli, cauliflower and avocado are fully functional and currently support irrigation decisions on farms throughout Ventura County. The calculators generate science-based recommendations with just a few clicks, making data-driven irrigation decisions more accessible and practical.

UC Hansen Agricultural Research & Extension Center

By Annemiek Schilder, Ph.D.

During the first quarter, progress was made on development of HAREC infrastructure, notably the repair of the big agricultural well which had been out of commission for more than a year. A variable-speed drive (VSD) was added to the pump, which allows the motor to ramp up gradually instead of running at fixed, full-speed capacity. This reduces energy consumption by an estimated 20-50% by matching pump speed to actual flow and pressure demands.



UCCE Adviosr Faber discusses apple pruning trial at HAREC

Additional updates:

- The **Master Gardener Demonstration Garden** was expanded by MG volunteers with a pollinator garden and other educational plantings.
- The **CSU Channel Islands Apiary** is fully functional and in use for education. 20 hives are currently tended to by students and volunteer beekeepers under the direction of CSUCI Professor Ruben Alarcon.
- Initiated development of a **1.5-acre Community Education Space** which will be used used for future school field trips and other educational events led by Ag Education Specialist Mussack.
- The irrigated grass area surrounding the **weather station was expanded** to 4 acres for research by UCCE Advisors Biscaro and Faber; this link to weather station data provides automated weather data for a network of stations across the County, which helps growers make informed irrigation decisions. The HAREC weather station is the only one that has a special sensor measuring Wet Bulb Globe Temperature, an OSHA-recommended indicator of heat stress risk for farm workers.
- **Cover crops** planted on much of the acreage in the winter of 2025-2026 were mowed but the stubble left to protect the soil, which provided weed control, moisture retention and prevented wind erosion.

HAREC Research and demonstration project updates



Steam machine used to sterilize soil for control of soilborne pathogens impacting strawberries

- A local trial of steam as an **alternative to chemical fumigation in strawberries** for control of soilborne diseases was initiated by UCCE Advisor Daugovish and team. Steaming is particularly beneficial near homes and schools where offsite drift of fumigants may cause concern.
- A new avocado breeding trial by UC Riverside's Dr. Mary Lu Arpaia's was planted to expand the evaluation of **new avocado selections** in a coastal Mediterranean environment.
- A new blackberry trial from UCCE Advisors Cohen and Daugovish and a private company focusing on **biological control of spotted-wing Drosophila**, a pesky fly that lays eggs in ripening fruit.
- Cover crops in a "Gem" avocado orchard demonstrating orchard floor management options were observed for their persistence during the summer without irrigation (Director Schilder).
- An **apple trial** by UCCE Advisor Faber is examining pre-plant pruning on young trees' root development and establishment.

Activities	Progress (Full report to be provided in December)
Historical extreme weather events	A historical review of extreme weather events in Ventura County has been conducted using Ventura County Crop Reports (1923-2025) and Federal Emergency Management Agency (FEMA) reports. Events included flooding, fires, drought, high heat, freezes/frosts, etc. Special attention was paid to reported impacts on agricultural commodities. A timeline was prepared, which showed that heavy rains and floods were damaging to agricultural crops in some years spread throughout the past century. However, fires were more concentrated and impactful in the past 10 years. These reports provide insights into the kinds of damage to agricultural lands and commodities that may be expected from future extreme weather events and also whether there is a trend towards increasing frequency and severity of specific events.

Q1 Agroclimate Project

Activities	Progress (Full report to be provided in December)
Heat stress risk prediction model development for polytunnels	Environmental data collection using weather stations (Perry Weather, Inc) inside and outside polytunnels was continued for a second year in two locations in the Fillmore area. The stations also record the Wet Bulb Globe Temperature (WBGT) which is an OSHA-recommended measure of heat stress risk. Review of WBGT data collected over a 12-month period from May 2025 to May 2026 showed that the highest heat stress risk inside tunnels occurred from April to September due to the plastic coverings trapping heat, whereas outside heat stress risk was generally low. Data were analyzed with two different mathematical modeling approaches to determine if a predictive model that uses National Weather Service forecasts to predict heat stress risk in polytunnels is feasible. While there was a strong correlation between outside and inside WBGT data collected by the paired weather stations at the respective polytunnel sites, using up to 5-day Weather forecasts proved more challenging; 24-48 hour forecasts may be more realistic. Additional validation and refinement will be needed to improve the accuracy of the model before it can be made into an App for use by growers and other stakeholders.



Photo: Outreach to growers at the Agri-Tech Fair. Visitors test hand-held heat stress risk-monitoring instruments and record their feedback on the experience (photos by K. Bharambe).

UC Cooperative Extension in Ventura County

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Oak Park Gold Spotted Oak Borer Blitz and Training.
Photo: J Clark

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https://ucanr.edu/county/cooperative-extension-ventura-county/