Photo: J Garcia

UC Cooperative Extension
University of California
Agriculture & Natural Resources

November 2025

Ventura County Quarter 1 Report 2025-26

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.

Photo: O Daugovish

Contents

EFFORTS & OUTCOMES FROM 2024

At a glance

Irrigation training. Photo: E Volk

$1.0M

Value of volunteer service hours

7,088

Community education participants

1,202

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

324

Youth across 11 county 4-H clubs

2024 Impacts:

Increased productivity, efficiency, and profitability 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

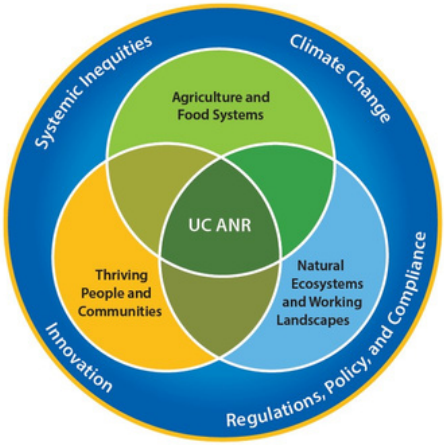
BACKGROUND

UC in Collaboration with Local Counties

Partnering with Ventura County since 1914

UCANR priorities

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	TBD - new position	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	TBD - new position	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 in recruitment
UC Master Gardeners	Volunteers, Public	UC, County, Donors	Staff: Jill Tyler Advisor: E Volk
CalFresh Healthy Living, UCCE	Low-income communities	Grants	Staff: Carrie Hildebrand Academic: Melissa Guillen, M.S.

Applied Research & Education Support

Program	Clientele	Funding	Staff
Research Support Staff	Advisors, Director	Grants, UC	Maripaula Valdes-Berriz, Siomara Zendejas, Abigail Brondos, 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.

Prescribed burning applied at Ventura River Steelhead Preserve research plots.
Photo: M Valdes-Berriz

Since the spring of 2023, UCCE Ventura's Maripaula Valdes-Berriz has conducted research on prescribed burning to control yellow star thistle. Yellow star thistle is considered by Cal-IPC (California Invasive Plant Council) to be "one of the most serious rangeland weeds" in California and it is **estimated to cost CA growers, ranchers, government agencies, and local conservation organizations more than $250 million annually for control efforts** (DiTomaso et al., 2006). Establishing prescribed fire as an effective control would support cost-effective decision making by rangeland managers and local agencies. This project is a collaboration with Ojai Valley Land Conservancy and Ventura County Resource Conservation District.

The use of prescribed fire for native plant restoration and invasive species control has gained traction in California in the last few decades. Yellow star thistle (Centaurea solstitialis) is a winter annual weed prevalent in Ventura County in open hills, fields, grasslands, rangelands, and roadsides. Previous research supports the use of consecutive burning to control yellow star thistle, but more evidence is needed to establish if this technique can be successfully implemented in Ventura County as a reliable, accessible, and cost-effective method to eradicate this and other noxious weeds widespread in the county. Results from this multi-year trial will be published and presented in the Ventura County UCCE Newsletter, social media channels, Cal-IPC conference, and other outreach events in the County.

UC ANR Public Value: Increased ecological sustainability of working landscapes and natural ecosystems.

DiTomaso, J.M., G.B. Kyser, and M.J. Pitcairn. (2006). Yellow Star Thistle Management Guide. Cal-IPC Publication 2006-03. California Invasive Plant Council: Berkeley, CA. 78pp. http://www.cal-ipc.org/

Luna UCR Avocado looks a lot like Hass.
Photo: M L Arapaia

"This recognition of 'Luna UCR' attests to the over 100 years of plant exploration, selection, and vision of UC's avocado researchers," - Mary Lu Arpaia, UC Cooperative Extension horticulturist based at UC Riverside and Luna UCR co-inventor

Digger bee, avocado pollinator
Photo: B Faber

Supporting local agricultural productivity, efficiency, and profitability

UCCE Advisor Ben Faber celebrated 35 years of service to UC in May

After decades of research, UC scientists have developed a new variety of avocado, the Luna UCR, selected by TIME magazine as one of 2023's best inventions. The Luna has a nutty flavor and smooth texture and is attractive to growers due to its small tree size, good for denser planting and minimal pruning, and B flower type that complements the Hass. The first Luna was grown in Camarillo. UCCE Ventura Subtropical Crops Advisor, Ben Faber, conducts local avocado and citrus trials and field days to test and demonstrate how new varieties perform locally.

Dr. Faber currently has ongoing and collaborative trials for citrus, avocado, and other subtropicals related to salinity and disease tolerance, high density planting, pollination, irrigation, leafroller management, fruitfly and Argentine Ant control, and many others. In addition, he provides regular workshops and field days for growers and pest control advisers on avocado pruning, irrigation, root rot, pollination, pest management, citrus diseases, and cover crops.

Agroclimate Project

Progress report through October 2025

Contract Activities	Progress to date
1. An online survey and detailed literature review to assess climate impacts on important crops in Ventura County	An extensive literature search was conducted to document crop seasonality, environmental requirements and sensitivities at different crop growth stages for important high-value crops (strawberries, avocados, lemons, raspberries, and celery) in Ventura County. Crop-specific thresholds will be used to develop agroclimatic indicators of climate change and to estimate future risks based on climate change projections. Results of the literature search will be presented at the Climate and Agriculture Workshop in January 2026. The information is also being distilled into a manuscript for submission to a scientific journal. A project initiation meeting with the UCCE Advisory Board was held on Sept 22, 2025, to provide an overview of the project's objectives, approach, timeline, and to understand the data and information needs of stakeholders. (In attendance: County Agricultural Commissioner, Farm Bureau, commercial growers, project PIs and researcher, UCCE and Hansen REC Director) An online questionnaire draft was developed to assess grower perceptions of climate change and associated risks. The survey will be shared with stakeholders as an online survey in November 2025. A previous statewide survey conducted by Dr. Pathak to assess grower perceptions of climate change is being analyzed for answers pertaining specifically to Ventura County.

PRINCIPAL INVESTIGATORS

Annemiek Schilder, Ph.D.

Hansen Agricultural Research and Extension Center Director

Tapan Pathak, Ph.D.

UC Merced, Assoc Professor of CE

RESEARCH SCIENTIST

Khagendra Bharambe, Ph.D.

COMMUNITY EDUCATORS

Jill Santos, Julie Clark

FUTURE PLANS

DEC 2025

GROWER WORKSHOPS ON HEAT & STRESS MANAGEMENT

JAN 2026

PRESENTATION OF FINDINGS AND RECOMMENDATIONS AT CLIMATE & AGRICULTURE WORKSHOP

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Progress report through October 2025

Activities	Progress to date
2. Analyzing important historical weather data and downscaled climate projection data to generate data-driven information about the state of the climate in VC	A statistically downscaled and bias-corrected dataset generated from multiple Global Climate Models (GCMs) of CMIP5 (Coupled Model Intercomparison Project Phase 5) archived from Cal-Adapt (https://cal-adapt.org/) has been analyzed to preliminarily understand the climatic trends and changes in Ventura County based on historical data (1961-1990) and future (midcentury: 2035-64 and end-century: 2070-99) predictions. Four prevailing climate models were used (CanESM2, CNRM-CM5, HadGEM2-ES and MIROC5). Spatial maps and temporal graphs were plotted to compare the changes over time. The following variables were analyzed and mapped: annual precipitation, maximum temperature, minimum temperature, number of extreme heat days and number of warm nights. The results will be presented at the Climate and Agriculture Workshop in January 2026, and will be incorporated in the State of the Climate Report.
3. Translating Weather and climate information into meaningful agroclimatic indicators and decision support tools to assist growers in making strategic decisions	Linking environmental conditions and heat stress risk in poly-tunnels to facilitate heat stress management for farm managers and workers: • May 2025 - installed 4 weather stations, 2 inside and 2 outside polytunnels in Fillmore, CA. • Participating growers receive real time weather data via a computer web page and mobile app. Automated text messages or push notifications alert users in real time when heat stress thresholds have been exceeded. • Hand-held Wet Bulb Globe Temperature devices measuring heat stress risk are also being tested for accuracy and ease of use as on-farm decision-making tools. • Data from the weather stations are being subjected to correlation and regression analyses in order to develop a model that can predict potential heat stress conditions in tunnels 3-5 days in advance based on weather forecasts. • UCCE Farm Advisors Andre Biscaro and Ben Faber have installed new weather stations in Ventura County through the Western Weather Group (https://ucanrventura.westernweathergroup.com/) for monitoring environmental and evapotranspiration (ETo) data to aid growers in making informed irrigation decisions. One weather station was installed at the Hansen Agricultural Research and Extension Center in Camarillo and the other at Southland Sod in Oxnard. Weather data from an additional station in Somis are also available to users. Advisors Biscaro and Faber are looking for collaborators to host additional weather stations in different microclimatic zones in the County. In addition to the weather stations in Fillmore, we used the Hansen REC weather station for evaluation of the accuracy of hand-held heat stress risk instruments. Solar radiation data from the Somis station are being used for correlation analyses of temperature data in the tunnels.
4. Working with I-GIS to develop an open-access web resource	This will be done towards the end of the project.

Activities	Progress to date
5. Developing educational resources such as factsheets and a newsletter specific to VC crops and develop a robust outreach program on climate change and climate adaptation in VC	Educational factsheets were developed on estimating heat stress risk and shared at the Agri-Tech Fair organized by the Farm Bureau of Ventura County in Oxnard in September 2024 and September 2025. Hand-held heat stress instruments were also demonstrated. A Climate and Agriculture workshop for stakeholders, policymakers and the public will be held in January 2026. At this meeting, we will present the State of the Climate report for Ventura County, regional climate trends, and information on available resources and tools to enhance climate change preparedness and resilience. In addition, we started a collaboration with the Western Center for Agricultural Health and Safety (UC Davis) (https://aghealth.ucdavis.edu/) for development of outreach materials on heat stress management in fields and tunnels. Two workshops (in Spanish and in English) on improving heat stress management are planned for Ventura County in November/December 2025.

Portable heat-stress measuring instruments for testing & education. Photo: K Bharambe

Installation of weather monitoring station at Bardsdale Ranch. Photo: K Bharambe

UC Cooperative Extension in Ventura County

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UCCE Community Educator, Julie Clark, at the 2025 Oxnard Insect Festival
Photo: D Strong

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