

UC COOPERATIVE EXTENSION NAPA COUNTY

ANNUAL REPORT

2021



UC Cooperative Extension Napa

2021

University of California Agriculture and Natural Resources (UC ANR) brings the power of UC research in agriculture, natural resources, nutrition and youth development to local communities to improve the lives of all Californians.

Our Cooperative Extension (UCCE) county-based advisors, community education specialists, and campus-based academics work as teams to bring practical, trusted, science-based solutions to our state. We are problem solvers, catalysts, collaborators, educators, and stewards of the land, living in the communities we serve.



UC Master Gardeners of Napa County work together on the Las Flores Learning Garden—a collaborative effort with the City of Napa



238

volunteers donated
26,096
hours public service
— estimated value of
\$822,285



3,575

total educational
interactions with the
public



9

peer-reviewed and
audience-requested
publications



7

activities bringing
research to policy



23

academic-led
workshops, field
days, and classes
with
1,932
participants



18

news media
programs/
mentions



397

youth in
UC 4-H Youth
Development
Program Community
Clubs



UC Master Gardener
volunteers reached

1,718

residents



UCCE Napa

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Partnering for Change

UC ANR builds partnerships based on deep and long-lasting relationships with local, state and federal governments, community-based organizations, schools, nonprofits and private industry.

- Napa County Board of Supervisors
- Napa County Departments
- Agricultural Commissioner
- Napa Valley Community Fdn.
- City of Napa Parks and Rec
- Napa Valley Grapegrowers
- Napa Valley Unified School Dist.
- Ole Health
- Napa Valley Farmworker Fdn.
- Ag 4 Youth
- City of American Canyon
- Napa Resource Conservation Dist.
- Boys & Girls Club of Napa Valley
- Spirit Horse Therapeutic Riding Ctr.
- Napa Valley Expo

UCCE Funding



\$412,570
University



\$598,713
Napa County



\$208,760
Advisor generated
(grants, gifts, other,
etc.)



\$27,300
Volunteer raised
funding to support
local programs

It is estimated that for every

\$1

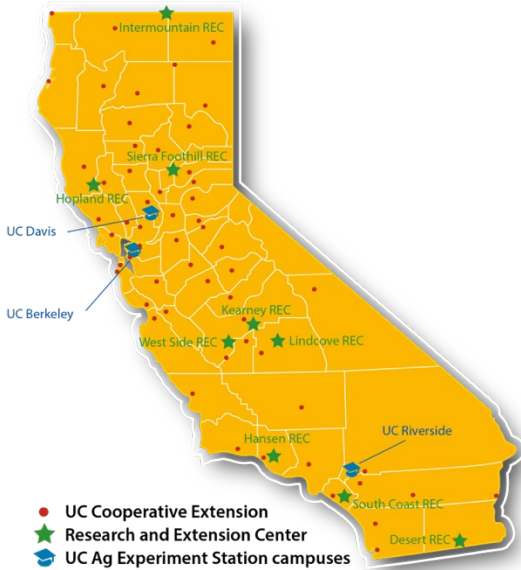
Invested in agricultural
research and extension
there is a return of

\$20

to the community.

Alston, Anderson et al (2010)

Leveraging the Power of the UC System



“That was by far the most informative and interesting IPM workshop I have attended. I look forward to more of your workshops in the future as they will be my preferred method of continued education.”

“Very informative. Excellent topics of relevance after the fires.”

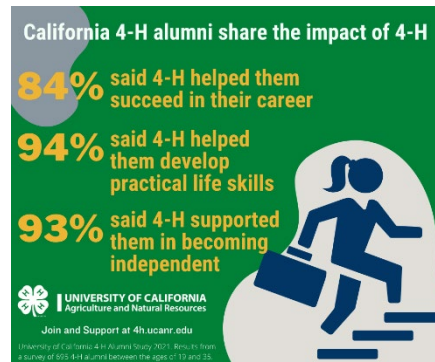
“The [4-H Animal Science] stations were all informative. I appreciate the effort made to get people out of the house and continue some sort of normalcy instead of either a virtual event or cancelling altogether.”

“Your answers, resources provided, and discussion around my question has completely changed the way I garden and address the pests I find in my garden. Thank you for opening my eyes to this new perspective.”

UCCE Napa: Our Impact on the Community

Developing a Qualified Workforce for California

UC ANR's youth and community development programs equip the next generation for college, successful careers, and to be active participants in their communities. Growers and land managers learn cutting-edge skills that increase workforce competency and advance innovation. UC ANR helps develop a qualified workforce to increase opportunities for individuals to ensure a robust and thriving state economy.



Increasing effective public leaders

Day Camp Saves Two Weeks of Summer Learning and Growth

4-H Camp provides learning experiences in nature, hiking, outdoor cooking, and many other activities. Youth are guided through hands-on, engaging activity stations led by youth teen leaders and adult volunteers. The purpose of the camp is to enjoy learning, respect and responsibility for others, the environment, and ourselves.

In response to cancellation of overnight summer camp for the second year in a row, our 4-H Camp Program made the decision to persevere and hold a 4-H Day Camp experience for youth ages 5-18. In partnership with Skyline Wilderness Park in Napa, two weeks of 4-H Day Camp were successfully held, with an emphasis on Science, Technology, Engineering, and Math (STEM) and environmental education. An intensive gathering plan was created and implemented to ensure the safety of all participants, while also providing a much-needed space for in-person and social-emotional interaction.



4-H Day Camp youth participating in hands-on STEM activities.

Improving college readiness and access

Learning About Animal Science at the Drive-Thru

The Napa 4-H Youth Development Team hosted a Youth Animal Science Drive-Thru at the Sonoma-Marin Fairgrounds. This event was designed to educate youth and their adult leaders, teachers, and mentors about livestock animal production in the areas of cattle, sheep and goats, and poultry. Each track had five interactive stations designed to highlight various topics including biosecurity, production, husbandry, ecosystem services, nutrition, food safety, and fire preparedness. Speakers included members of UC Cooperative Extension, Santa Rosa Junior College, Sonoma Marin Cattlewomen, North Bay Dairy Women, Sonoma-Marin and Napa County Young Farmers and Ranchers, Halter Project, and 4-H leaders and members.



Community partners provided engaging stations for 4-H youth at the Youth Animal Science Event.

Promoting Economic Prosperity in California

UC ANR partners with public, nonprofit, and private groups to create and extend new knowledge about agricultural and natural resource management. Participants change practices that result in increased yield and efficiency as well as reduced inputs, thus increasing economic return. UC ANR also conducts research and education leading to improvements in individual and household financial management practices. These changes improve individual and business financial stability, increasing the viability of California's economy and maintaining our role as a global leader.

The estimated annual value of adoption of the UC Integrated Pest Management Program recommendations is

\$323-500M

to California agriculture

*Giannini Foundation of
Agricultural Economics (2016)*

Increased agricultural and forestry efficiency and profitability

Integrated Pest Management Seminar Goes Online with Increased Participation and Adoption

"Odd" occurrences?

Oakville Field Station

Nodosities on
101-14 Mgt
Teleki 5C
1103 P

No tuberosities



The annual North Coast Integrated Pest Management (IPM) Seminar invites researchers to present on current wine grape pest management topics that are relevant for growers, Pest Control Advisors (PCAs) and industry personnel. Due to pandemic restrictions, our IPM Program Team converted the seminar into a virtual format delivering two days of content over Zoom. Nearly 300 participants joined in the virtual,

multi-day offering, a 30% increase in participation over the year before. Additionally, the presentations were recorded and are currently [available online](#). Results from a post-seminar survey indicated that 98% of participants agreed that they gained new knowledge about grapevine diseases and pests. Additionally, 89% of participants agreed that they plan to implement knowledge gained into their IPM programs.

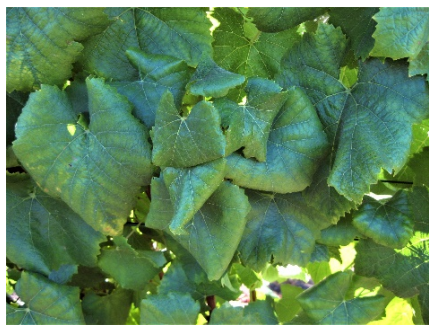
Rapid Response to Reduce Leafhopper Impacts to Napa vineyards

The leaf damage caused by Virginia creeper and variegated leafhoppers affects photosynthesis and ripening. These insects are also a nuisance to workers performing canopy management and are particularly difficult to manage organically. We experienced massive leafhopper populations in spring 2021. At bloom, the UCCE-Napa Viticulture Team initiated a monitoring and organic treatment program. By mid-summer, we had reduced leafhopper populations to below-detectable levels, preserving the canopy and ensuring even ripening of the fruit. This program shows promise to reduce economic impacts of vineyard leafhoppers in organic wine grape production.



Leafhopper feeding damage is an economic concern for Napa Valley Vineyards.

Growers Adopt Leafroll Disease Management Measure in Their Vineyards



Grape leaves with symptoms of Leafroll Disease, which affects fruit ripening and vine health.

During the 2021 program year, the UCCE-Napa Viticulture Team reached 967 grape growers and crop consultants at educational events including workshops, field days and online seminars. This included sharing research and educational content critical for leafroll disease management, one of the most economically consequential viral diseases of grapevine worldwide. Grower surveys indicated that 89.6% had adopted at least one management practice for leafroll disease, with a median of 80% of all recommended best practices currently adopted. By delivering evidence-based management strategies and diverse educational opportunities, Napa grape growers have “all the resources at [their] disposal ... [and are] not really spending a lot of money on leafroll management like [they] were ten years ago”.

Getting the Timing Right to Disrupt the Spread of Red Blotch Disease

The economic impact of grapevine red blotch disease (GRBD) is estimated to be as high as \$27,740/acre in Napa County. The three-cornered alfalfa hopper (TCAH) can spread the virus that causes GRBD in the vineyard. Many vineyards till under their ground cover in the spring and being able to time this tillage to occur before TCAH adults emerge can help reduce their populations. Our IPM Program Team developed a degree-day model to determine the ideal time to till under ground cover to have the most impact on reducing TCAH populations. The model was validated in Oakville, Calistoga, Mt. Veeder, Glen Ellen, Geyserville and Healdsburg. Tillage is recommended between 1310 and 1565 °C accumulated degree-days, which is the timeframe when ~25% to ~80% of immature stages are present on the ground cover. This model is accessible on the UCIPM website, allowing growers to use a free degree-day calculator, with weather station data closest to their vineyard to calculate degree days accumulated. An educational video with a tutorial about the model is also [available here](#).



Pinot Noir leaves with Red Blotch Disease

Protecting California's Natural Resources

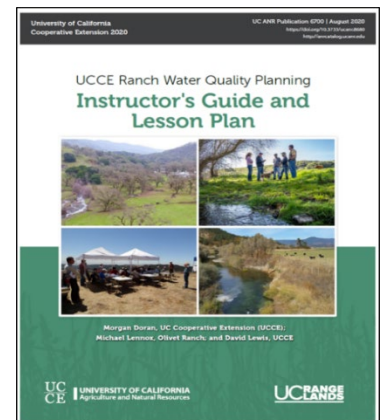
UC ANR translates research into actionable management strategies to protect our farming, ranching, forestry, and urban environments. Through outreach and education, participants learn to adopt recommended practices, such as grazing and rangeland management, sustainable use of forest and wildland resources, protection against fire, and water conservation. These measures contribute to improving air, soil, and water quality while also protecting wildlife and plant habitat. Increased ecological sustainability of agriculture, forestry, and urban landscapes helps California realize the many benefits of the state's rich and diverse natural resources.

Adoption of California Irrigation Management Information Systems (CIMIS) weather station data can save California nearly **14 billion** gallons of water annually
Zilberman, et al. (2019)

UC Master Gardener participants improved **4 million** square feet pollinator habitat statewide
UC Master Gardener Program

Improving Ranch Water Quality with New Educational Tools

The Ranch Water Quality Planning (RWQP) program has been a very successful UCCE program since 1995. This program has helped thousands of ranchers throughout the state, including Napa Valley, address water quality issues on grazing lands and comply with local water quality regulations. Our Livestock and Natural Resource Program team led an update of RWQP curriculum and materials. This included adding the most recent scientific findings, improving clientele accessibility and reaching a broader audience. The RWQP Instructor's Guide and Lesson Plan is now [available online](#), including 19 lesson plans organized into 6 learning modules. This content is complemented [with 29 video presentations](#) covering scientific topics about ranch stewardship goals, practices to enhance water quality, and instructions on how to create a Ranch Water Quality Plan. The RWQP Instructor's Guide offers a flexible platform for organizations to deploy ranch water quality programming through remote or in-person venues.



UCCE Ranch Water Quality Planning Instructor's Guide and Lesson Plan by Morgan Doran & David Lewis, UCCE; and Michael Lennox, Olivet Ranch. [Available for download now.](#)

Virtual Gardening Education Increases Home Garden Sustainability



Tree Walks are one of the many educational events provided by the UC Master Gardeners to the Napa Community

UC Master Gardeners of Napa County shifted their four times per month workshops from in-person to an online zoom format. The 32 zoom sessions, on a diversity of home gardening topics were offered through preregistration. The sessions were recorded and added to the online repository of content posted on the [UC Master Gardeners of Napa County workshop webpage](#). These programs, combined with four outdoor guided tree walks, reached over 900 people. The UC Master Gardeners' Help Desk similarly shifted from in-person staffing three days a week to remote access by phone and email. This was extremely successful providing faster responses to home gardening questions and better service overall. The Help Desk team of volunteers provided in-depth answers to 347 customers' home gardening questions. Program participants, responding to follow up surveys, indicated high adoption of recommendations to improve their sustainable gardening, including less water and pesticide use and increases in gardening for food and pollinators.

Building Climate-Resilient Communities and Ecosystems

UC ANR conducts research to understand and develop solutions to increase the resilience of agriculture, communities, and natural ecosystems to extreme weather and climate change. Our programs assist communities, farmers, and ranchers in implementing climate-smart soil and water management practices, reducing greenhouse gas emissions in forested and working landscapes, and expanding public awareness of climate risks and effective adaptation strategies. As a result, communities are better prepared and able to deal with the growing risk of fire, droughts, and flood hazards. Our work leads to a safer, more climate-resilient California.

UC Climate Smart
Agriculture Educators
helped growers statewide reduce
greenhouse gas emissions
equivalent
to removing
7,000
cars from the road
Based on CDFA calculators
(SWEEP and HSP)

Increased preparedness and resilience to extreme weather and climate change

Responding to Wildfires, Land Manager Assistance and Coordination



A top priority for our department immediately after the LNU Fire was delivery of the webinar, *After the LNU Fire: What to Do on the Land, and What to Avoid*. The aim for this webinar was for affected landowners to understand what they should and should not do on the land after the fire. Our Livestock and Natural Resource Program Team, collaborating with eleven organizations, coordinated and moderated this webinar. More than 260 people participated in the event and the recording [available online](#) has subsequently had 639 views.

In addition to the webinar, our team conducted post fire assessments to determine the value of livestock, forage and ranch infrastructure losses. The estimated losses were requested by the Napa County Agricultural Commissioner to include in reports to state and federal agencies for disaster recovery programs. Lastly, members of our team collaborated with the Napa County Agricultural Commissioner's Office to develop an Ag Pass program for Napa agricultural operations.

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This Certificate of Special Congressional Recognition was awarded to UC Cooperative Extension in 2021 thanks to Morgan's work with disaster recovery programs.

Developing an Inclusive and Equitable Society

UC ANR is committed to reaching all segments of the state's population. UC ANR academics live and work in all California communities, building trust and credibility to solve local problems together. UC ANR builds cultural competency skills, implements community-centered programs, and develops proactive policies to increase diversity and inclusiveness. UC ANR is recognized as a nationwide leader in researching and addressing inclusion and diversity in youth-serving programs. Through these efforts, Californians experience greater access to social and economic opportunity and advancement.

19,000+

volunteers statewide
donated time
to local UC programs.

UC ANR led efforts to
increase inclusiveness,
which is shown to
increase volunteer
commitment to programs.

Studer and von Schnurbein (2013)

Improved living and working conditions for California's food system and farm workers

Tools and Resources for a Positive Work Environment

The success and productivity of any business and its teams and units is directly related to the satisfaction of its individual employees and members. With this understanding, our UCCE Napa Viticulture Team has expanded its Agricultural Job Satisfaction Survey Tools into a combination of resources and services that support agricultural employers and employees to implement positive labor strategies that are also beneficial for company outcomes.

Publications on overall vineyard [employee satisfaction](#) and the prevalence and strategies to address [sexual harassment in the agricultural work place](#) provide needed understanding and solutions. These published findings are complemented by the availability of the [Agricultural Job Satisfaction Survey \(AJSS\) Tool](#) for managers to use as a starting place for engaging employees around work place satisfaction and strategies to improve it.



Current UCCE Staff Members:

County Director: David Lewis

Viticulture Advisor: Monica Cooper

Staff Services Analyst: Jessica Sandoval

Office Assistant II: Alia Urrutia

Vit Team Research Associates: Sarah MacDonald, Malcolm Hobbs, Selena Vengco, Jennifer Rohrs, Hannah

Fendell-Hummel

4-H Program Coordinator: Suzanne Amaral

4-H Youth Development Advisor: Steven Worker

Master Gardener Program Coordinator: Yvonne Rasmussen

Livestock and Natural Resources Advisor: Morgan Doran

North Bay Food Systems Advisor: Julia Van Soelen Kim

North Coast IPM Advisor: Cindy Kron

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