UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources

II. Academic Program Review Dossier Cover Page | 2024 Cycle

Name, Lived Name: **Preferred Pronoun(s):**	Ellie Andrews (she/her)
Academic Title:	Assistant Cooperative Extension Advisor
County/Program:	Sonoma, Marin, and Napa Counties – Specialty Crops
Review Type:	Merit
Current Rank/Step:	Assistant Advisor Step IV
Requested Rank/Step:	Assistant Advisor Step V
Review Time Period:	January 3, 2023 to September 30, 2024
Thematic Areas:	Theme 1: Ongoing Needs Assessment and Advising Theme 2: Sustainable Specialty Crop Production Programming Theme 3: UC Master Gardener Program of Sonoma County

UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources

UNIVERSIDAD DE CALIFORNIA
Agricultura y Recursos Naturales

Position Description
Ellie Andrews
Specialty Crops Advisor
Sonoma, Napa, Marin Counties
Service Headquarter in Sonoma County
Effective Date: January 3, 2023

PURPOSE & CLIENTELE

The Specialty Crops Advisor will develop and implement a high-quality science-based education and applied research Extension program for specialty crops. The Advisor will develop, implement, and evaluate county-based programming focused on the central needs and priorities of commercial specialty crop growers related to in-field agricultural topics to improve crop system sustainability. The Advisor will develop partnerships to increase grower knowledge and adoption of sustainable farming approaches that promote plant health, production, specialty crop system resilience and climate adaptation. This position will collaboratively develop opportunities for innovation and adaption of conventional, organic and/or niche production, focusing on crop selection, pest management, and climate adaptions. Advisor will work with local rural and peri-urban producers to expand their role and contribution in the area's food system and community.

The clientele served by this Advisor are small-scale commercial specialty crop growers located in Sonoma, Marin, and Napa counties. This includes high-value specialty crops not already covered by existing advisors in the specified counties, such as, but not limited to orchard crops, berries, mixed vegetables, etc. (excluding grapes). Other clientele includes processors, marketers, technical service providers, resource agencies and organizations that promote the long-term viability of commercial specialty crops.

The advisor will provide academic oversight to the Master Gardener program in Sonoma County, as well as administrative oversight of the Master Gardener Coordinator. Time dedicated to Master Gardener academic and administrative oversight will not exceed 20%.

This position will support the UC ANR Strategic Vision by promoting climate-adaptive crop production and sustainable management of plant health, water, soil, and integrated pest management. The advisor will support the sustainable production of local specialty crop systems and create positive community impact by delivering research-based information tailored to meet growers' diverse needs. This position will support the expansion of specialty crop growers' contribution as foundational members of the region's local food system and community. This position's headquarter location is Sonoma County and will serve Sonoma, Marin, and Napa counties.

ACADEMIC PROGRAM MAJOR RESPONSIBILITIES

The Advisor will develop and implement an effective UC ANR Cooperative Extension applied research and educational program to address the identified priorities and needs of

specialty crop growers that are consistent with UC ANR's Strategic Vision. Major responsibilities include:

Technical Competence & Impact

- *Needs Assessment:* Conduct iterative needs assessments to identify specialty crop growers' key priorities, challenges, and needs related to sustainable agricultural approaches.
- *Outreach:* Design and implement science-based educational outreach to meet specialty crop growers' needs and connect growers with relevant resources.
- *Research:* Conduct applied research designed to address locally relevant problems.
- *Evaluation:* Evaluate programs, document outcomes, and assess impacts on specialty crop growers' agricultural sustainability.
- *Professionalism:* Maintain and promote UC ANR's credibility by providing science-based knowledge and skills. Represent UC ANR locally in a professional manner.

Communication

- *Responsive:* Use Extension communication methods that are responsive to clientele needs and appropriate for the audience and context.
- *Transparent:* Report program accomplishments, results, and impacts to clientele, scientific and lay audiences.
- *Proactive:* Foster an increased understanding of UC ANR's Cooperative Extension's research and education programs in clientele, the public, and policy makers. Actively advocate for UC ANR program awareness and support.
- *Accessible:* Effectively use online communication methods and associated software programs to support research and instruction.

Collaboration, Teamwork, & Flexibility

- *Collaborations within ANR:* Develop collaborative teams with other UC ANR academics, specialists, faculty, and/or others, to identify and address priority specialty crop issues. Interact with program teams, specialists, and others within the research/Extension network to develop, strengthen, and expand program goals. Participate in UC ANR leadership through committees, work groups, and other formal or informal structures.
- *Collaborations beyond ANR:* Act as a facilitator in the public policy arena to effectively bridge divergent interests around specialty crop agricultural issues by providing science-based information. Serve the California public by participating in activities of public agencies and organizations.
- *Teamwork & Flexibility:* Be an effective listener and communicator, encourage and support others, keep commitments, take responsibility for our own actions, and cultivate support for UC ANR. Build relationships to work with diverse populations and adapt to varying circumstances.

Professional Development & Lifelong Learning

- *Self-improvement:* Maintain a program of continuous self-improvement by participating in professional trainings, seminars, workshops, work groups, processional society meetings, and other relevant opportunities.
- *Partnerships:* Collaborate with governmental agencies, non-government organizations, and others by providing independent science-based information and leadership.

AFFIRMATIVE ACTION AND DIVERSITY, EQUITY, AND INCLUSION (DEI)

- Comply with all applicable federal and state laws and regulations, and all University policies regarding affirmative action, including prohibition of discrimination on the basis of race, color, national origin, religion, sex, sexual orientation, physical or mental disability, age, veteran status, medical condition, ancestry, or marital status.
- Promote, in all ways consistent with other responsibilities of the position, accomplishment of the affirmative action goals established by UC ANR. Support individuals supervised by this position fulfill their affirmative action responsibilities.
- Develop a statement of program mission and definition of potential program clientele that embody a commitment to serve diverse ethnic and gender groups.
- Demonstrate a commitment to serve diverse clientele by planning and conducting programs in such a manner as to provide equitable service to all ethnic and gender groups that comprise the potential clientele population for the program.
- Identify any barriers to clientele participation related to ethnicity, gender, or other characteristic of concern under the University's affirmative action policies and take corrective action as needed to remove such barriers.
- Maintain demographic data identifying the ethnic and gender distribution of the potential clientele populations for the program and describing other characteristics of the population relevant to the pursuit of the Division's affirmative action goals.
- Document service to each ethnic and gender group within the clientele population served by the program, including statistical records of clientele contacts, evaluations of benefits realized by clientele, and reports of any special efforts to serve under-represented groups.

RELATIONSHIPS

The CE Advisor serves under the administrative guidance of the Sonoma County Director with input from the other UCCE County Directors in the coverage area. The Advisor will collaborate with farm advisors, county staff, volunteers, relevant Specialists across the state, members of relevant work groups and program teams.

QUALIFICATIONS

A minimum of a Master's degree in plant science, horticulture, agricultural crop science, agricultural production systems, or a closely related field is required. Desired experience includes:

- Working in multiple cropping systems, organic farming practices, small farm production systems, integrated pest management, and processing and marketing methods.
- Interest in pursuing a career in Cooperative Extension programming or community development.
- Experience in successful Cooperative Extension programming or community development.
- Demonstrated ability to effectively plan, manage teams, and implement a research program, including setting measurable goals and objectives.

- The Advisor must possess or obtain a Qualified Pesticide Applicator Certificate (QAC) or License prior to applying or supervising the application of any pesticide.

Reviewers:

redacted 5/7/2024

Academic *redacted* Date

County/REC Director or Supervisor May 7, 2024 Date

redacted

Statewide Program Director (Missy Gable) Date

Final Approver:

redacted

Dr. Daniel Obrist Date
Vice Provost of Academic Personnel

Program Summary Narrative

Introduction

I am the UCCE Specialty Crops Advisor serving Sonoma, Marin, and Napa counties. This is my first program review covering January 3, 2023 - September 30, 2024. My rank is Assistant Advisor Step IV. I am seeking to advance to Assistant Advisor Step V. My program serves a community of 200+ specialty crop growers of orchard fruits, vegetables, berries, and other high-value and niche crops. Most farms are small to mid-scale and use organic, regenerative, and/or agroecological practices. I assist and partner with local technical service providers, organizations, processors, and marketers as well as UCCE Specialists and Advisors, county staff, and agricultural professionals to promote commercial specialty crop production and the expansion of growers' contributions as key members of our local food system. In addition, I provided academic oversight to the Sonoma County Master Gardener program and administrative oversight of the Sonoma Master Gardener Coordinator. Here is my program Logic Model.

North Bay specialty crop growers are diverse in terms of demographics, crop types, needs, constraints, strengths, and goals. Some are new farmers while others are experienced, and ~50% qualify as historically underserved farmers. My program directly addresses high-priority sustainable production needs through diverse methods in outreach and advising, robust science-based education, and applied research. My program collaboratively advances climate-adaptive strategies, sustainable management of plant health, water and soil resources, and ecologically oriented Integrated Pest Management (IPM). My themes are: "Ongoing Needs Assessment and Advising," "Sustainable Specialty Crop Production Programming," and "UC Master Gardener Program of Sonoma County" to further UCANR's Public Value Statements to build climate-resilient communities and ecosystems, promote economic prosperity, and safeguard abundant and healthy food in California. My program advances the UCANR Sustainable Food Systems and Endemic and Invasive Pests and Diseases Strategic Initiatives. Program activities contribute to Pomology and Vegetable Crops Program Areas and UCANR condition changes by increasing the ecological sustainability of agriculture (40% FTE), preparedness and resilience to extreme weather and climate change (30% FTE), and agricultural efficiency and profitability (30% FTE).

Theme 1 – Ongoing Needs Assessment and Advising

Background, Clientele, Goals, Inputs: Theme 1 activities identify and address clientele's needs and goals through continuous engagement and feedback. This guides the development of effective educational and research programming (Theme 2). To meet needs in the moment, I provide science-based advising to equip growers with knowledge and skills to problem-solve and improve crop system sustainability and resilience. Cooperative activities with partners strengthen impacts and build partnerships. Growers benefit from this iterative, focused effort to understand and meet their needs to advance their specialty crop goals.

2023 Initial Needs Assessment *Methods*: I conducted an Initial Needs Assessment in 2023 to introduce myself, identify needs, broadly learn about farms and partners, orient my program, and build positive rapport. I gathered detailed input from 109 growers by reaching out via county office lists, online resources, word of mouth, via partner organizations, and at grower meetings. I proactively cast a wide net to enhance DEI at this formative stage. I asked lot of questions and did a lot of listening, taking time to learn about many facets of growers' operations, challenges, and needs. I conducted in-depth interviews to discuss needs via 101 farm visits plus many phone/Zoom calls and emails. Local partners facilitated and participated in many discussions. I hosted 5 Meet & Greet events to learn about needs from 47 attendees. I used surveys that produced needs information from 78 growers. *Outcomes/Impacts:* These activities built positive relationships, produced critical needs information, established a participatory approach, and increased clientele's awareness and knowledge of UCCE. Many growers expressed enthusiasm to engage with my program, positive attitudes (e.g., "I love Extension!"), and several said they feel motivated by my personalized approach to my role.

2024 Ongoing Needs Assessment and Advising *Methods:* I continue conducting iterative Ongoing Needs Assessment and Advising activities to identify and address growers' and partners' emerging needs and ensure Theme 2 is responsive and impactful. Growers seek my guidance on sustainable production

topics such as plant health, IPM, soil and water management, climate adaptation strategies, diversification, crop/variety selection, equipment, etc. I keep building my clientele network. I provide science-based advising to address challenges and increase yields, resilience, and sustainability. Case-by-case advising allows me to respond thoroughly, synthesize and share information tailored to specific needs, and follow up over time. In 2024, I conducted an additional 57 farm visits to assess needs, address issues with economic impacts (e.g., "why are my crops dying?"), and evaluate land viability for future crop production. I provided in-depth advising with significant educational exchange 255 times. I problem-solve jointly with growers, UCCE Specialists and Advisors, and local partners such as Kitchen Table Advisors, Community Alliance with Family Farms, and Resource Conservation Districts. This is a creative, collaborative, and continual process.

Outcomes/Impacts: Needs-driven one-on-one advising ensures diverse growers receive effective, high-quality assistance tailored to unique constraints and contexts. This increased grower practical knowledge, skills, and motivation to use sustainable and climate-resilient practices. As a result, 16 growers reported implementing new practices such as organic IPM strategies and decision support tools to improve nutrient and water management and increase plant health and yield. This increased their ability to scale up and meet demand for local food via buyers, processors, marketers, and distributors. These activities allowed me to develop reciprocal partnerships with local organizations. Theme 1 increased engagement and advanced growers' contributions to our food system and farm economic and environmental sustainability. This promoted the condition changes: increasing the ecological sustainability of agriculture, preparedness and resilience to extreme weather and climate change, and agricultural efficiency and profitability.

Theme 2 – Sustainable Specialty Crop Production Programming

Background, Clientele, Goals, Inputs: I collaboratively deliver high-quality educational programs and conduct applied interdisciplinary research to lower key barriers of adoption of science-based sustainable practices for specialty crop growers. Theme 2 uses education and research to increase growers' capacity to implement climate-resilient, ecologically oriented and economically efficient sustainable production practices. Programming prioritizes key needs and topics relevant to many growers to advance equity. I draw from my 15 years of professional training in interdisciplinary agricultural sciences and Extension. I collaborated with UC Advisors and Specialists, scientists, local partners, growers and consultants who provided expertise in complementary areas. Many growers offered to host events, share knowledge and ideas. I use the UCCE Specialty Crops webpage, newsletters (4,931 email "opens"), Instagram (122 posts) and YouTube (14 videos) on clientele's suggestion to cast a wide net and share event invitations, content, recordings, demos, research updates, and grant opportunities to support practice implementation.

Methods: Theme #2 activities are responsive to growers' evolving needs. I hosted/co-hosted 33 educational events including field days, workshops, webinars, and focus groups that served 521 clientele (see Supporting Documentation). Partnerships allowed us to pool our areas of expertise, reach more growers, and offer well-rounded resources. I chose and planned topics, formats, locations, and timing based on growers' preferences. Many events included grower speakers. I presented at events hosted by partners too. In addition, I established/contributed to 10 creative and applied research projects to address growers' high-priority challenges. I ensured research equitably serves clientele by designing projects guided by growers' key questions with wide impacts and including growers in every stage of the process.

Outcomes/Impacts: Survey results aggregated from educational events I hosted/co-hosted showed 98% (128 count) of respondents reported events increased their knowledge of the event topic and 85% (112 count) will use knowledge gained to implement more sustainable and effective management practices. Many said they will use knowledge gained to improve ecologically oriented IPM (58 count), sustainable plant health management practices (70), agricultural efficiency and profitability (41). Growers hosting research trials expressed enthusiasm about helping generate new knowledge. All research results will be shared widely. Theme 2 contributes to the condition changes: increasing the ecological sustainability of agriculture, preparedness and resilience to extreme weather and climate change, and agricultural efficiency and profitability. The following examples illustrate my **programming trajectory** from key specialty crop grower needs (Theme 1) to high-impact Extension educational and research (Theme 2).

Program Summary Narrative

Example 1: High-impact pests - symphylans. Symphylans are the most common and economically damaging pest reported by vegetable growers; 48 growers asked for symphylan IPM assistance. *Methods:* I hosted Symphylans Focus Groups where I taught IPM and gathered growers' feedback, anecdotes, and questions. Then I hosted a webinar with entomologists and recorded a Symphylans IPM presentation with local examples (both on YouTube). I hosted an on-farm Symphylans Field Day. Growers' top questions were about relationships between symphylans and natural predators, which we know little about. To address this, Dr. Amanda Hodson (UC Davis) and I are characterizing 64 soil arthropod samples from 3 farms. *Outcomes/Impacts:* 100% (14) of respondents reported events increased knowledge of symphylan IPM which they will use to make more informed decisions. One grower said the field day was "AWESOME …we find ourselves talking and sharing w/others so often about everything we learned." Field research addresses growers' questions with new local knowledge to inform ecological IPM solutions, reduce damage and economic impacts. I use similar program trajectories for other key pests.

Example 2: Small farmer health and economic sustainability. Many small-scale vegetable growers expressed the need to balance labor-intensive hand-scale soil health practices with farmer physical health and economic efficiency. This is a key issue for many small farmers statewide. *Methods:* With support from UC Sustainable Agriculture Research and Education Program (SAREP)'s California Farm Demo Network and the North Coast Soil Hub, I established a field trial to compare no-till with strategic use of scale-appropriate tillage equipment. I evaluated labor, costs, benefits, and soil and farmer health metrics. *Outcomes/Impacts:* Results will be shared via educational events with discussions. This research will increase growers' knowledge of strategies to balance soil and farmer health, reduce the risk of grower injury, increase economic sustainability and efficiency while maintaining ecological sustainability.

Example 3: Climate-adaptive, culturally meaningful crops. Many growers want training in seed preservation, production of culturally significant crops, and diversification for climate resilience. *Methods:* Together with local partners, I co-organized a field day led by a local farmer and experienced crop breeder, Kristyn Leach, where she trained growers in seed selection to maintain and enhance culturally meaningful crops in a changing climate. *Outcomes/Impacts:* One grower said, "this event was so helpful and fun, thank you so much!!" and 90% (10 count) reported they will use knowledge gained to make more informed, sustainable and effective farm decisions. Collaborations with skilled local farmers willing to share knowledge and provide mentorship will better equip growers to effectively diversify and select crops for climate adaptation and cultural preservation. I will extend knowledge I gain widely too.

Example 4: Apple orchard disease support. Many apple orchards in our region often suffer from extreme neglect and poor management. In our coastal climate, this encourages diseases that cripple tree health, yield, and orchard longevity. *Methods:* I work with UCCE Specialist Akif Eskalen and his lab to identify and manage apple diseases. In 2023, we visited apple orchards, demonstrated IPM strategies for growers, and did a webinar on branch canker disease IPM. Diseases are widespread and pathogens often infect trees via pruning wounds, so we established local pruning wound protectant trials in apples and pears to evaluate efficacy of new biological/organic products. *Outcomes/Impacts:* Webinar attendees asked for more webinars (e.g., "really great webinar and I'd love to see more") and 100% (7 count) said they will use knowledge gained to manage diseases more sustainably. Field trial results will equip growers with more IPM strategies, reduce disease spread, and improve tree health, yield, and orchard sustainability.

Example 5: Apple industry support. Apple acreage has steadily declined for decades and in 2023, the last large apple processor announced they will move out of state. This sparked renewed interest in improving apple orchard care. Stakeholders specifically asked me for more apple orchard management webinars. *Methods:* I worked with local and UC partners to promptly deliver an educational apple webinar series covering key aspects of sustainable apple orchard management. These webinars reached 116 attendees and recordings are on YouTube (160+ views). I work with the smaller remaining apple processors and local partners to better match processing capacity with local needs. *Outcomes/Impacts:* Surveys indicated

webinars increased attendees' knowledge (100% of 35 respondents) and 97% reported they will use knowledge gained to manage apple orchards more sustainably. These events increased my clientele group, and several attendees reached out to me for advising. Together, these efforts will increase apple growers' orchard management skills, improve tree health and yield, and strengthen local apple processors.

Example 6: Dry farming for climate resilience. Extreme climate conditions and limited water access capped crop production in recent years due to severe drought stress, plant stunting, and low yield for many crops. Many growers asked for dry farming education for climate adaptation. *Methods:* I co-hosted a Dry Farming Strategies Workshop with an experienced dry farmer and UC researcher Yvonne Socolar. Yvonne, OSU Extension collaborators, and I submitted a Western SARE grant to fund a Multi-State Coastal Dry Farming Accelerator Course. *Outcomes/Impacts:* 100% (13) of survey respondents reported increased knowledge that they will use to make more informed decisions, with comments, "love the technical aspect combined w/ practical anecdotal evidence" and "excellent range of crops and topics covered." If funded, the Accelerator Course will provide more science-based education for local growers and build a farmer-to-farmer learning network to increase coastal growers' skills in climate resilience.

Example 7: Mulch trial for climate resilience. Many farms are managed as low-input systems due to the high prices of inputs like fertilizers. Prolonged drought stress and low nutrients caused severe olive tree stunting in a local orchard. *Methods:* I implemented a field trial to assess whether composted mulch can improve tree and soil health by increasing nutrient inputs and soil moisture. *Outcomes/Impacts:* This summer, mulch significantly increased soil water and reduced tree drought stress. Over time, we anticipate increased soil health, root growth, tree nutrients, and yield. Results will be widely relevant to improve plant health, ecological sustainability, agricultural efficiency, and resilience to extreme weather.

Example 8: Collaborative implementation for climate smart practices. Specialty crop growers need one-on-one Technical Assistance to access funding for climate smart practices tailored to diverse needs. *Methods:* Through the USDA-funded Sonoma-Marin Agriculture and County Climate Coalition, I worked with many local partners to advance climate smart practices by serving on the Crop Implementation Technical Advisory Committee, advising partners on best practices to serve specialty crop growers, and connecting growers with funding opportunities to increase climate smart practice implementation. *Outcomes/Impacts:* I improved awareness and access to funding for my underserved clientele to implement climate smart practices, and helped local partners start building relationships with clientele.

Theme 3 – UC Master Gardener Program of Sonoma County

Background, Clientele, Goals, Inputs: The UC Master Gardener Program of Sonoma County provides science-based information to cultivate environmental stewardship for backyard gardeners via 220 active volunteers. It is managed by a Program Coordinator, guided by a volunteer Board, and supported by an Administrative Assistant. This is a well-established, respected program with a long history of successful local partnerships and public engagement. I provided administrative oversight of the Sonoma Master Gardener Coordinator and academic oversight for the Sonoma Master Gardener Program based on needs assessment. Theme 3 activities benefit the UC, local Master Gardener program, and the public served.

Methods: The Coordinator, County Director, Statewide Program Director and I identified the following needs where I provide support. Administrative oversight includes quarterly report review, periodic attendance at Board meetings and volunteer recognition events, review of newspaper articles (17 count), and ongoing communications and updates with the Coordinator about needs. Academic responsibilities provide input and training as needed, including Information Desk support (28 educational exchanges) and logs review. Based on needs, I taught Fruit Tree Management for the 2024 class and Soil Testing for a continuing education meeting. I share content and advise the Fruit Tree Study Group to address local apple needs. I invited an experienced Master Gardener to collaboratively co-design/co-teach a workshop on apple tree care. I invite Master Gardeners to relevant events on topics where our programs overlap.

Program Summary Narrative

Outcomes/Impacts: These activities increased the Master Gardeners' knowledge and skills and help address local backyard growers' needs, increase outreach, and improve plant health, sustainability, and climate resilience. Master Gardeners provided positive feedback about events with a mix of commercial and backyard content and panelists, such as The Codling Moth IPM Webinar; they "learned a lot that will be useful" and "Ellie did a great job running the webinar." Extending and adapting commercial specialty crops programming to backyard growers through the Master Gardeners will have regional benefits for both commercial and noncommercial growers, such as improved pest management. I ensured their outputs have a UC-approved science lens and continually build my own awareness and understanding of the Master Gardener program. Theme 3 contributes to condition changes: increasing the ecological sustainability of agriculture, and preparedness and resilience to extreme weather and climate change.

Professional Competence and Activity – I am a member of 4 Work Groups and the Vegetable Crops, Pomology, and Small Farms Program Teams. I am a member the American Society for Horticultural Science and the National Association of County Agriculture Agents. I attended 13 UC trainings, 8 other trainings, and watched 4 UCANR recorded professional development trainings. County Directors provide valuable feedback and mentorship that has greatly supported my program's success. I served as a mentee in the UCANR Mentorship Program and the Women in Soil Ecology Mentorship Program. I guest lectured at Santa Rosa Junior College and UC Davis. I served as a Technical Advisor for key local partners. I wrote letters of support for clientele pursuing funding and recognition. I presented at Advisors' events and Program Team Meetings. I served as an internal reviewer for a peer-review manuscript.

Service – *University:* I served on the Project Scientist hiring committee for the California Farm Demonstration Network (CFDN) via UC SAREP. I serve on the CFDN Soil Health Committee. I mentored early career agricultural professionals and UC students exploring UCANR as a career path. I contribute to county reports for UCCE offices. I gave 2 presentations to Master Gardeners outside of Sonoma County. I served on the hiring committee for the local UCCE Sonoma County Field Technician and provide mentorship and training. I continually update and curate the UCCE Sonoma Specialty Crops website. *Public:* I provided advising and outreach for local Resource Conservation Districts and Natural Resource Conservation Service to support their grants and connect them with underserved growers. I co-presented on backyard apple tree care to the public to increase their knowledge and skills. To support Community Alliance with Family Farmers (CAFF) and small farmers statewide, I served on their 2024 Small Farms Conference Steering Committee, and I advised for their 2025 Small Farms Conference.

Affirmative Action & Contributions to DEI – I am committed to DEI in all aspects of my program. I proactively serve all clientele equally in quantity and quality of benefits and services. I collect race, ethnicity and gender data to assess program reach and ensure compliance. I defined baselines via surveys and personal knowledge. I often work with culturally focused growers and organizations. I work closely with local partners who serve historically underrepresented and Spanish-speaking growers. I took Spanish lessons, translate content, and work with interpreters. I continually gather, evaluate, and implement DEI feedback. I promoted peer-to-peer mentorship, networking, and community-building. I created inclusive environments to build good rapport, enhance collaborations, set a positive tone, and celebrate diversity.

Closing Summary – In this first term, I established a strong, multi-disciplinary program to serve clientele needs and set a foundation for a positive trajectory. I will continue to collaboratively implement a robust and impactful specialty crops program based on iterative needs assessments and in-depth advising in collaboration with partners. I will support our excellent Sonoma Master Gardener program based on needs and opportunities. I will keep enhancing my skill set via professional development. I appreciate the openness, talent, innovation, and collaborative spirit of local growers and partners. I am grateful to use my skill set every day to serve clientele, work for positive change, and advance UCANR's condition changes. I am excited to keep building strong partnerships that advance North Bay specialty crops growers as critical members of our local food system and leaders in sustainable agriculture.

Supporting Documentation

A. Projects Summary

Applied Research and Creative Activity

All Applied Research and Creative Activity falls within Theme 2: Sustainable Specialty Crops Production Programming.

- "*Diplodia bulgarica* Pathogenicity Apple Orchard Field Trial," Sonoma County, May – July 2023, my role was Grower Liaison and Collaborator with:
    - A. Eskalen, K. Elfar (UC Davis): PI, Collaborators, Funders
    - J. Kolling (Solana Gold Orchard): Grower Host/Collaborator

- "Multi-State Coastal Dry Farming Research and Education Project," Sonoma, Marin, and Napa Counties, since March 2023 and ongoing, my role is Collaborator and Co-PI with:
    - E. Smith (Oregon State Extension): PI, Collaborator
    - L. Nebert (Dry Farming Institute, Oregon State Extension): Co-PI, Collaborator
    - Y. Socolar (UC Berkeley): Co-PI, Collaborator
    - Arron Wilder (Table Top Farm): Grower Host/Collaborator
    - *Funding Pending*: applied for Western Sustainable Agriculture Research and Education (SARE) Local Education and Demonstration Grant, November 2024

- "Pruning Wound Protectant Field Trials in Apples & Pears," Sonoma County, 2024 and ongoing, my role is Grower Liaison and Collaborator with:
    - A. Eskalen, K. Elfar, C. Gonzalez Chavez (UC Davis): PI, Collaborators, Funders
    - E. Cavalli and S. Heath (Tilted Shed Orchard): Grower Host/Collaborator

- "Sonoma Marin Agriculture and County Climate Coalition," Sonoma & Marin Counties, 2023-2028, my role is Collaborator & Technical Advisor for specialty crops to advance implementation and creative adaptation of science-based climate smart practices with:
    - Local Partner Organizations: Sonoma County, Marin Agricultural Land Trust, Agricultural Institute of Marin, Marin Climate Action Network (CAN), Sonoma County Farm Bureau, Sonoma County Farm Trails, UCCE Marin, UCCE Sonoma, Marin Resource Conservation District, Sonoma Resource Conservation District, Gold Ridge Resource Conservation District, Carbon Cycle Institute, USDA Natural Resources Conservation Service
    - 6 Grower Collaborators on the Technical Assistance Committee for Specialty Crops
    - Funding: USDA Partnerships for Climate-Smart Commodities Program, $10,000,000

- "Truffle Research and Production Initiative (TRAPI) Project," Sonoma, Marin, and Napa Counties within a multi-state and international project, since 2023 and ongoing, my role is Collaborator and Co-author with:
    - M. Coleman (University of Idaho): Lead PI
    - Collaborators: S. Cook (University of Idaho), G. Bonito (Michigan State University), J. Davis (North Carolina State University), R.G. Orijel (Universidad Nacional Autónoma de México), G. Guevara (Tecnológico Nacional de México), P. Hazenbuehler (University of Idaho), R. Heinse (University of Idaho), G. Kernaghan (Mount Saint Vincent University), C. McIntosh (University of Idaho), I. Meadows (North Carolina State University), J. Sharma (Texas Tech University), M.E. Smith (University of Florida), M.E. Smith

(University of Florida), S. Oneto (UCCE), D. Strawn (University of Idaho), C. Ureta (Universidad Nacional Autónoma de México),
    - *Funding Pending*: NIFA Specialty Crops Research Initiative grant proposal submitted October 2024

- "Tillage Field Trial on Diversified Vegetable Farm," Sonoma County, 2024 and ongoing, my role is Principal Investigator and Collaborator with:
    - R. Yagi (Yagi Sisters Farm): Grower Host/Collaborator
    - V. Wauters & S. Brodt (California Farm Demonstration Network, UC Sustainable Agriculture Research and Education Program): Grant PIs ($2 million from the UC Office of the President), Funders ($1500 for this field trial)
    - E. Winfield (Resource Conservation District's North Coast Soil Hub)

- "Composted Mulch Field Trial in Stunted Olive Orchard," Sonoma County, 2024 and ongoing, my role is Principal Investigator and Collaborator with:
    - B. Young (Jordan Winery): Grower Host/Collaborator, Funder
    - P. Solari: Sonoma County UCCE field technician

- "Soil Arthropod Characterization" 2024 and ongoing, Sonoma and Napa Counties, my role is Principal Investigator and Collaborator with:
    - E. Kaiser (Singing Frogs Farm): Grower Host/Collaborator
    - R. Kohn Obut (Culinary Institute of America, Copia Garden): Grower Host/Collaborator
    - A. Tibbetts (Fledgling Farm): Grower Host/Collaborator
    - A. Hodson (UC Davis): Collaborator, Funder, entomologist & soil ecologist

- "Peer-Networking Group Survey: Napa Farmers Guild & Napa UCCE," Napa County, September 2024 and ongoing, my role is Grower Liaison and Collaborator with:
    - M. Cooper, M. Hobbs (UCCE Napa): Collaborators, Funders
    - R. Kohn Obut and other Napa Farmers Guild members: Grower Collaborators

- "DIY Water Sensors: Build it! Do-it-yourself, real time and low-cost sensors for enhanced water management in small-scale agroecological farms," 2024 and ongoing, my role is Collaborator with:
    - C. Leauthaud (UCCE Specialist): PI, Collaborator
    - L. Diekmann (UCCE): Collaborator
    - S. Worker (UCCE): Collaborator
    - T. Otey (Front Porch Farm): Grower Host/Collaborator
    - *Funding Pending*: Agriculture and Food Research Initiative (AFRI) Grant Proposal submitted August 2024

B. Professional Competence and Professional Activity

Professional Development and Training via UC

- UCANR Virtual Orientation, 2023-1-23
- UCANR Mentorship Program: I was a mentee, 2 meetings in Davis and 6 virtual meetings with mentor Louise Ferguson, 2023-3-6 to 2023-11-7
- UCANR Pomology Program Team Annual Meeting, UC Davis, 2023-3-27
- Learning Spanish via professional development funds: weekly virtual 1-hour sessions with Spanish tutor, 2023-4-6 to 2024-6-20
- UCANR Statewide Conference, Fresno, 2023-4-24 to 2023-4-27

- Eskalen Lab Field Day: plant pathology training, UC Davis, 2023-7-31
- UC Master Gardener Adviser Orientation Meetings with Missy Gable, virtual meetings and reading materials, 2023-10-23, 2023-11-2, 2023-11-13
- UCANR Vegetable Program Team Meeting, Salinas, 2023-12-12, 2023-12-13
- Participatory Extension Training, UC SAREP California Farm Demonstration Network, virtual, 2024-2-26
- UCANR Pomology Program Team Meeting, UC Davis, 2024-3-27
- UCANR Regional Meeting Area 5, UC Santa Cruz, 2024-6-10 to 2024-6-11
- Meeting with Kit Alviz and Christina Becker, training & feedback on event evaluation surveys and Project Board, virtual, 2024-7-17
- UCANR Learning & Development Webinar Recordings
    - "Improve your understanding of condition changes," 2024-8-8
    - "Communicating science, building trust," 2024-8-8
    - "Five Functions of a Successful Team," 2024-8-19
    - "Empowering Your Professional Growth," 2024-8-28
- Vegetable Disease Field Day with UCCE Specialist Cassandra Swett, UC Davis, 2024-8-20
- UCANR Project Board Annual Training, 2024-9-9

Professional Development and Training via Partners and Industry

- Olive Oil Commission of California Meeting, Sacramento, 2023-1-5
- EcoFarm Conference, ecological farming training, Monterey, 2023-1-19 & 2023-1-20
- Olive Oil Day, Olive Oil Commission of California, Stockton, 2023-3-21
- Women in Soil Ecology Mentorship Program Meeting: I was a mentee, virtual meetings, 2023-3-28, 2023-6-6, 2023-10-2, 2023-12-7
- North Coast Olive Webinar: current topics in olive management, virtual, 2023-3-30
- Clear as Mud: Soil Health Technical Assistance for Ag Professionals taught by the North Coast Soil Hub, Santa Rosa Junior College Shone Farm, Forestville, 2023-5-23
- International Society for Horticultural Science Olive Symposium, UC Davis Olive Center, 2023-9-12 to 2023-9-13
- Women's Leadership in Food Symposium, Green Valley Farm, Sebastopol, 2023-11-11
- Dry Farming Winter Convening, Oregon State Extension, virtual, 2024-2-7

Disciplinary Society or Professional Associations

- Member of the American Society for Horticultural Science (ASHS)
- Member of the National Association of County Agriculture Agents (NACAA)

Evidence of Professional Competence – Technical Advisor

- UCCE North Bay Specialty Crops Liaison for Community Alliance with Family Farmers (CAFF), local grower organization I work closely with serving clientele, ongoing since 2023-2-24
- UCCE North Bay Specialty Crops Liaison for Kitchen Table Advisors (KTA), a local organization providing small farm business advising; I provide referrals, we partner and provide collaborative technical assistance together, ongoing since 2023-8-30
- Carbon Farm Plan Collaborative Meetings with the Marin Resource Conservation District: I provide technical assistance for Green Gulch Farm, ongoing since 2023-8-22
- Wrote Letter of Support for specialty crop grower applying for Leopold Conservation Award for recognition for exceptional work and leadership in local farming community, 2023-7-18
- Wrote Letter of Support for Marin vegetable grower's Measure A FARE Grant application for a food hub feasibility study, 2023-12-7

Evidence of Professional Competence – Speaking Engagements Outside of Clientele

- Presented "North Bay Specialty Crops Program" at UCANR Vegetable Program Team Meeting, Salinas, 2023-12-12
- Guest Lecturer "Integrated Pest Management" for community college sustainable crop production course, Santa Rosa Junior College's Shone Farm, Forestville, 2023-6-28
- Presented "Using almond hulls & shells as organic matter amendments" presentation about my doctoral research results and introduced the new "North Bay Specialty Crops" program at the 2024 UC ANR Pomology Program Team Meeting, UC Davis, 2024-3-27
- Guest Presenter "Symphylans ID and IPM Training" for UCCE Advisor Eddie Tanner's vegetable farmer clientele at Organic Ag Field Day in collaboration with UCCE Organic Agriculture Specialist Joji Muramoto, Deep Seeded Community Farm, Arcata, 2024-8-7
- UCCE North Bay Specialty Crops Program Table & Presentation for UCANR Administration, UCCE Sonoma county office, 2024-8-9

Evidence of Professional Competence – Peer Review

- Provided internal review for manuscript, "Phenotypic and physiological characteristics of pistachio bushy top syndrome-affected trees" for UCCE Advisor E. Fichtner et al., 2024-9-23

C. University Service

Sonoma County

- Served on Hiring Committee for Sonoma County Field Technician: reviewed applications, called references, attended meetings, candidate selection, etc., 2023-1-10 to 2023-1-23
    - Benefits: we hired a skilled and highly effective field technician based at UCCE Sonoma serving UCCE Advisors

- Managing the UCCE Sonoma County Specialty Crops Webpage: maintenance, content curation, updates, event advertisements, grant opportunities, etc. since 2023-4-4
    - Benefits: outreach, programmatic information, opportunities that reach a wide audience

- Mentoring Sonoma County Field Technician by providing training tailored to field technician's expressed interests, since 2023-5-9
    - Benefits: increased skill set of county field technician and professional development

Region

- Contributing to UCCE Sonoma, Marin, and Napa County Reports: contributing Specialty Crops program information and updates, 2024-1-17, 2024-2-6, 2024-3-18
    - Benefits: increased awareness of UCCE North Bay Specialty Crops programming

- Taught "Organic Matter Amendments for the Home Garden" for the Marin Master Gardeners, Novato, 2023-5-11
    - Benefits: increased knowledge of soil health building practices for Marin Master Gardeners

- Taught "Napa Small Farms" for the Napa Master Gardeners, Napa, 2023-6-29
    - Benefits: increased knowledge and awareness of local small farm operations and production practices for Napa Master Gardeners

Statewide

- UCANR, Land Acknowledgement Subgroup Virtual Meetings, UC ANR Native Partnerships Workgroup: writing, editing, content development for drafting new UC ANR Land Acknowledgement, 2023-6-27, 2023-9-29, 2024-2-23
    - Benefits: contributed to the UC ANR Land Acknowledgement under development

- UCANR, mentoring early career agricultural professionals and UC graduate students interested in applying for UC ANR jobs: answering questions and providing practical guidance, 2023-8-28, 2024-3-19, 2024-4-19, 2024-7-7
    - Benefits: supported qualified applicant pool and promoted general interest in UCANR, representing UCCE as a welcoming and fulfilling career path for early career agricultural professionals interested in applying

- UC, Served on Hiring Committee for California Farm Demonstration Network Project (CFDN) Scientist via UC Sustainable Agriculture Research and Education Program (SAREP): reviewed candidate applications, virtual hiring committee meetings, conducted interviews and evaluated candidates, 2023-10-16 to 2023-11-20
    - Benefits: highly qualified Project Scientist was hired who is now a research collaborator

- UC, Member of the Soil Health Committee for CFDN via UC SAREP, since 2024-5-14
    - Benefits: contributions to this state-wide UC effort to support soil health programming

D. Public Service

- Local & Statewide Levels, 2024 Small Farms Conference Steering Committee for Community Alliance with Family Farmers (CAFF): attended 4 virtual committee meetings, rated 108 individual workshop applications using CAFF scoring criteria, 2023-5-24 to 2023-12-14
    - Benefits: contributions to conference programmatic development that served thousands of small farmers across California

- Local Level, periodic advising and outreach for the local Resource Conservation Districts (RCDs) and Natural Resources Conservation Service (NRCS) grant opportunities to support their programs, including the Sonoma Marin Agriculture and County Climate Coalition where I serve on the Crops Technical Assistance Committee, since 2023-2-16
    - Benefits: local governmental-based organizations and other partners gain increased access to and understanding of the needs of historically underserved growers

- Local Level, Gravenstein Apple Fair: co-presented about Backyard Apple Tree Care to the public with Sonoma Master Gardener, 2024-8-10
    - Benefits: 78 members of the public learned about the basics of backyard apple tree care and about UCCE Sonoma at this popular community event focused on local apples

- Local Level, provided advising for the Community Alliance with Family Farmers to support their 2025 Small Farms Conference In-Person Event, 2024-9-30 and ongoing
    - Benefits: strengthening programming for conference that will serve a broad audience

E. Extension Activities

Meetings Organized and Co-Organized

Here is a link to meetings I organized and co-organized:
https://cesonoma.ucanr.edu/SpecialtyCrops/Current_Events/
Note: most virtual events included my clientele from multiple counties.

The following Meetings fall under Theme #1: Ongoing Needs Assessment and Advising.

- "Meet & Greets" 5 in-person events, 2023-8-21, 2023-10-24, 2023-11-14, 2023-11-28, 2023-12-5
    - My Roles: Event Coordinator, Host, Presenter, Discussion Facilitator, Event Funder
    - Collaborators: grower hosts, UCCE county staff, the Napa Farmers Guild
    - Locations:
        - UCCE Sonoma Office in Santa Rosa (Sonoma County)
        - Toby's Feed Barn in Point Reyes Station (Marin County)
        - Shone Farm in Forestville (Sonoma County)
        - Star Route Farm in Bolinas (Marin County)
        - Culinary Institute of America at Copia in Napa (Napa County)
    - 47 attendees

The following Meetings fall under Theme #2: Sustainable Specialty Crop Production Programming.

- "Symphylans Focus Groups," 2 virtual meetings, 2023-10-16 & 2023-10-26
    - My Roles: Coordinator, Host, Presenter, Discussion Facilitator
    - Collaborators: Margaret Lloyd (UCCE), Jim Leap (UCSC), Rex Dufour (ATTRA)
    - 11 attendees

- "Soil Testing for Organic Workshop," Stony Point Strawberry Farm, Petaluma (Sonoma County), 2023-11-15
    - My Roles: Event Coordinator, Co-Host, Co-Presenter, Discussion Facilitator
    - Collaborators: Krista Marshall (UC ANR Organic Agriculture Institute, Event Funder); Keith Abeles, Kelsey Brewer, Emilie Winfield (local Resource Conservation Districts); Lily Schneider (Kitchen Table Advisors); Paolo Solari and Kerry McGrath (UCCE Sonoma County staff); farmer host Koy Saechao and 2 local vegetable grower speakers who have experience soil testing; and a Spanish interpreter
    - 23 attendees

- "Dry Farming Listening Session," virtual meeting, 2023-11-21
    - My Roles: Co-Coordinator, Co-Facilitator
    - Collaborators: Evie Smith and Lucas Nebert (Oregon State Extension Dry Farming Institute)
    - 9 attendees

- "Apple Branch Canker Webinar," virtual, 2023-12-7
    - My Roles: Coordinator, Co-Host, Co-Presenter, Discussion Facilitator
    - Collaborator: researcher Karina Elfar (Eskalen Lab, UC Davis)
    - 14 attendees

- "Organic IPM for Fusarium Focus Group," virtual, 2024-1-25
    - My Roles: Coordinator, Co-Host, Co-Presenter, Discussion Facilitator
    - Collaborator: researcher Gabriel Sacher (USDA-Salinas)
    - 4 attendees

- "Organic IPM for Rodents: Webinar & Panel Discussion," 2024-2-13
    - My Roles: Coordinator, Host, Panel Discussion Facilitator

    - Collaborators: Roger Baldwin (UCCE), Breanna Martinico (UCCE), and panel of experienced local organic growers and agriculture professionals
    - 30 attendees

- "Fire Blight IPM Webinar," 2024-3-14
    - My Roles: Coordinator, Host, Discussion and Facilitator
    - Collaborators: Jim Adaskaveg (UC Riverside), Broc Zoller (experienced local Pest Control Advisor)
    - 34 attendees

- "North Bay Specialty Crops Production Webinar," 2024-3-27
    - My Roles: Coordinator, Host
    - Collaborators: Cindy Kron (UCCE), Patricia Lazicki (UCCE), Margaret Lloyd (UCCE), Evie Smith (OSU Extension)
    - 21 attendees

- "Save Water: Napa Valley Water Conservation Workshop," UCCE Napa office & virtual option (hybrid), 2024-4-12
    - My Roles: Co-Coordinator, Presenter
    - Event led by Qicheng Tang (UCCE, Event Funder)
    - Collaborator: Helen Dahlke (UC Davis)
    - 14 attendees

- "Soil Arthropod Identification Webinar: Symphylans & Their Predators," 2024-4-10
    - My Roles: Coordinator, Host, Discussion Facilitator
    - Collaborators: entomologists Amanda Hodson (UC Davis) and Kelton Welch (Ecdysis Institute)
    - 15 attendees

- "UCCE Organic Crops Day," Sonoma County Farm Bureau, Santa Rosa (Sonoma County), 2024-4-26
    - My Roles: Co-Coordinator, Co-Host, Presenter, Panel Discussion Facilitator
    - Collaborators: Joji Muramoto (UCCE, Event Funder), Chris Chen (UCCE), Cindy Kron (UCCE), Brittany Goodrich (UC Davis), Nall Moonilal (UC Davis), Matt Naftaly (SGM Technical Assistance Program) and a panel of local organic growers
    - 45 attendees

- "Codling Moth IPM Webinar," virtual, 2024-5-6
    - My Roles: Coordinator, Host, Presenter, Discussion Facilitator
    - Collaborators: Jhalendra Rijal (UCCE), experienced local apple growers and agricultural consultants
    - 40 attendees

- "Napa Symphylan Field Meeting," Long Meadow Ranch, St. Helena (Napa County), 2024-5-14
    - My Roles: Coordinator, Co-Host, Presenter, Discussion Facilitator
    - Collaborators: Jim Leap (UC Santa Cruz), farmer host Jess Arnsteen, Layla Aguilar (Community Alliance with Family Farmers, Event Funder)
    - 30 attendees

- “Dry Farming Strategies Workshop,” Table Top Farm, Point Reyes Station (Marin County), 2024-5-21
    - My Roles: Coordinator, Co-Host, Presenter, Discussion Facilitator, Funder
    - Collaborators: Yvonne Socolar (UC Berkeley), farmer host Arron Wilder
    - 22 attendees

- “Apple Orchard Irrigation Webinar,” virtual, 2024-5-23
    - My Roles: Coordinator, Host, Presenter, Discussion Facilitator
    - 12 attendees

- “Western SARE Grant Writing Group for Specialty Crop Growers” 4 virtual meetings, 2024-5-30, 2024-6-20, 2024-7-1, 2024-9-26
    - My Roles: Event Coordinator, Host, Presenter, Discussion Facilitator
    - Collaborators: local farmer Caiti Hachmyer who received the grant twice previously, WSARE representative Miranda Kersten
    - 11 attendees

- “Soil Sampling Field Day,” Dolcini Red Hill Ranch (Marin County), 2024-6-3
    - My Roles: Co-Coordinator, Co-Presenter, Discussion Facilitator
    - Collaborators: Randi Black (UCCE), Amanda Charles (UCCE), farmer hosts, Spanish interpreter Martha Martinez (UCCE), Kerry McGrath (UCCE), Sonoma Marin Agriculture and County Climate Coalition (Event Funder), California Coastal Conservancy (Event Funder)
    - 18 attendees

- “Apple Orchard Nutrient Management Webinar,” virtual, 2024-6-6
    - My Roles: Coordinator, Host, Presenter, Discussion Facilitator
    - 11 attendees

- “Soil Carbon Workshop,” Shone Farm, Forestville (Sonoma County), 2024-6-12
    - My Roles: Co-Coordinator, Co-Host, Co-Presenter, Discussion Facilitator
    - Collaborator: Chris Chen (UCCE, Event Funder)
    - 15 attendees

- “Cucumber Beetle IPM Focus Groups / Grupo de Enfoque: IPM para el Escarabajo del Pepino,” 3 virtual focus groups, 2024-7-24, 2024-8-1, 2024-9-20
    - My Roles: Coordinator, Host, Co-Presenter, Discussion Facilitator
    - Collaborators: Ian Grettenberger (UCCE) and Margaret Lloyd (UCCE) during English language groups, and Jasmin Ramirez-Strain (UCCE) who delivered programming in Spanish
    - 34 attendees

- “North Coast Olive Field Day,” Long Meadow Ranch Olive Orchard, St. Helena (Napa County), 2024-7-30
    - My Roles: Coordination Assistance for Event Leader Cindy Kron (UCCE)
    - Collaborators: Louise Ferguson (UCCE), Bob VanSteenwyk (UCCE), Melissa Thayer (UC Riverside), Elizabeth Fitchner (UCCE), Florent Trouillas (UCCE), Giulia Marino (UCCE), Olive Oil Commission of California (Event Funder)
    - 78 attendees

- "Seed Saving 2.0 Workshop," Second Generation Seeds Farm, Sebastopol (Sonoma County), 2024-9-12
    - My Roles: Coordinator, Co-Host, Discussion Facilitator
    - Collaborator: farmer host and crop breeder Kristyn Leach, Layla Aguilar (Community Alliance with Family Farmers, Event Funder)
    - 15 attendees

Educational Presentations

Theme #1: Ongoing Needs Assessment and Advising.

- "UCCE North Bay Specialty Crops – Intro & Needs" 5 Meet & Greet events, 47 attendees, 2023-8-21, 2023-10-24, 2023-11-14, 2023-11-28, 2023-12-5

Theme #2: Sustainable Specialty Crop Production Programming.

- "North Bay Specialty Crops Program" 2023 Small Farms Conference with Community Alliance with Family Farmers, Shone Farm, Forestville, 45 attendees, 2023-3-3
- "Olive Fruit Fly" presentation at UCCE Napa Field Day, 22 attendees, 2023-6-7
- "Organic Nutrient Management in Olive Orchards" and "Plant Ecology in Olive Orchards" presentations at the UC Davis Olive Center Organic Course, 68 attendees, 2023-7-21
- 6 On-Farm Demonstrations for Soil Sampling and/or Leaf Sampling for Nutrient Analysis and Interpretation, 16 attendees, 2023-7-21 and ongoing
- "Introduction to Symphylans IPM" at 2 virtual Symphylans Focus Groups, 11 attendees, 2023-10-16 & 2023-10-26
- "Introduction to Soil Testing" at Soil Testing for Organic Workshop, Stony Point Strawberry Farm, Petaluma, 23 attendees, 2023-11-15
- "North Bay Specialty Crops Program – Needs Assessment Findings" presentation and discussion group facilitation at Community Alliance with Family Farmers Sonoma Chapter Annual Meeting, Sebastopol, 44 attendees, 2024-1-9
- "North Bay Specialty Crops Program" presentation at Hop Alliance Meeting, Santa Rosa, 15 attendees, 2024-1-17
- "Introduction to IPM for Soil Borne Diseases" at Organic IPM for Fusarium Focus Group, virtual, 4 attendees, 2024-1-25
- "Soil Testing" presentation at the in-person day of the 2024 Small Farms Conference with Community Alliance with Family Farmers, Shone Farm, Forestville, 38 attendees, 2024-2-29
- "Dry Farming Strategies" at Save Water: Napa Valley Water Conservation Workshop, UCCE Napa office & virtual option (hybrid), 14 attendees, 2024-4-12
- "Organic Vegetable IPM" at UCCE Organic Crops Day, Sonoma County Farm Bureau, Santa Rosa, 45 attendees, 2024-4-26
- "Codling Moth IPM Anecdotes from Sonoma County" at Codling Moth IPM Webinar, virtual, 40 attendees, 2024-5-6
- "Introduction to Dry Farming Strategies" at Dry Farming Strategies Workshop, Table Top Farm, Point Reyes Station, 22 attendees, 2024-5-21
- "Apple Orchard Irrigation" at Apple Orchard Irrigation Webinar, virtual, 12 attendees, 2024-5-23
- "Soil Testing" at Soil Sampling Field Day, Dolcini Red Hill Ranch, 18 attendees, 2024-6-3
- "Apple Orchard Nutrient Management" at Apple Orchard Nutrient Management Webinar, virtual, 11 attendees, 2024-6-6
- "Symphylans ID and IPM Training" for farm workers, Singing Frogs Farm, Sebastopol, 7 attendees, 2024-6-7

- "Soil Carbon Fundamentals in Agricultural Systems" at Soil Carbon Workshop, Shone Farm, Forestville CA, 15 attendees, 2024-6-12
- "Introduction to Cucumber Beetle IPM" at 2 virtual Cucumber Beetle IPM Focus Groups, 30 attendees, 2024-7-24, 2024-8-1, 2024-9-20
- "Introduction to Symphylan IPM" and an in-field bait demonstration at Napa Symphylan Field Meeting, Long Meadow Ranch, St. Helena, 30 attendees, 2024-5-14
- "Marin Specialty Crops" presentation for Marin County Agriculture Commissioner's Office, Marin County Agriculture Commissioner / UCCE Marin Office, Novato, 14 attendees, 2024-9-25

Theme #3: UC Master Gardener Program Leadership

- "Fruit Tree Management" 4-hour virtual presentation for the new Sonoma Master Gardener cohort, 30 attendees, 2024-2-15
- "Soil Testing" virtual presentation for the Sonoma Master Gardeners Continuing Education Meeting, 58 attendees, 2024-5-15

Other Extension Activities

Theme #2: Sustainable Specialty Crops Production Programming.

- I manage and periodically update the UCCE Sonoma Specialty Crops webpage with educational content, upcoming events and grant opportunities https://cesonoma.ucanr.edu/SpecialtyCrops/ started 2023-4-4
- Attendance at 6 grower-led farm tours with the North Bay Farmers Group and the Napa Farmers Guild, started 2023-June
- Advised Sonoma County Ag & Open Space: UC resources on economic viability, 2023-6-23
- I manage and periodically update a professional Instagram account with educational content, upcoming events, and grant opportunities for specialty crop growers (327 followers, 123 posts) @specialtycrops, started 2023-July
- Interview with AgAlert about North Bay Specialty Crop Growers, 2023-7-21
- Policy Listening Session & Discussion with Community Alliance with Family Farmers, FEED Cooperative, Petaluma, 2023-10-4
- Napa County Seed Library Lecture & Discussion, St. Helena, 2023-10-10
- Interview with America Heartland PBS: North Bay Farmers, 2023-12-18
- I wrote and distributed 7 Monthly Newsletters to advertise educational events and grant funding opportunities, 4,931 newsletter email "opens" total, 2024-3-1 to 2024-9-1
- AgAlert interview about dry farming, 2024-1-17
- Sonoma-Marin Agricultural Lands Emergency Response Team (ALERT) Meeting: drought response and resiliency, 2024-1-18
- Meeting with Sonoma County about Climate Resiliency Master Action Plan, 2024-1-31
- Tour of FEED Sonoma Cooperative Aggregator & Distributor and Needs Meeting, 2024-2-5
- Trained UCCE Climate Smart Agriculture Staff in Sonoma County: soil fertility test interpretation, 2024-2-15
- Meeting with the local Natural Resources Conservation Service and Farm Service Agency, UCCE Sonoma office, 2024-4-3
- Provided feedback for local newspaper article in Sonoma County Gazette about water management, 2024-4-4
- 2 Meetings with the Southwest Regional Food Business Center, 2024-5-15 & 2024-9-16
- 3 Meetings with Sonoma County Economic Development and partners to address local apple processing needs, 2024-5-7 to 2024-9-16
- 4 Meetings with the First-Generation Farming Book Club organized by local growers and TA providers, 2024-5-16 to 2024-8-13

- Meeting with Sonoma County Agriculture Commissioner to support grower, 2024-6-12
- Advised Sonoma County on Agricultural Policy Updated Housing Guidelines, 2024-7-16
- Advised Marin Independent Journal on cover crop practices, 2024-7-26

Theme #3: UC Master Gardener Program Leadership

- Attended Sonoma Master Gardener Board Meetings, 2023-1-3, 2024-7-3
- Attended Sonoma Master Gardener Volunteer Recognition Event, 2024-7-17
- Review of 17 newspaper articles for the Sonoma Master Gardeners, since 2024-4-18
- Advising and support for Sonoma Master Gardener Info Desk (28 educational exchanges) and monthly review of desk logs, since 2023-12-5
- Provided advising for Sonoma Master Gardener Fruit Tree Study Group, since 2024-9-6

Publications

Peer-Reviewed

B. Peer-Reviewed Scholarly Journal Publications

Note: two publications published during this review period were from my recent dissertation, two were published by co-authors/collaborators about research findings related to my doctoral work, and two were a direct result of my work as UCCE Specialty Crops Advisor. Here is a link to my complete Bibliography.

- Andrews, E.M., Tabassum, M., et al. (2024). Almond hull and shell organic matter amendments increase microbial biomass and multifunctionality in orchard soil and the undisturbed organic layer. *Applied Soil Ecology Journal*, *197*:105321. https://doi.org/10.1016/j.apsoil.2024.105321
    - My contribution: conceptualization, funding acquisition, data curation, formal analysis, investigation, methodology, resources, validation, visualization, writing original draft, review & editing. This was my doctoral research.

- Coleman, M.D., Berch, S., et al. (2024). Status of truffle science and cultivation in North America. *Plant Soil*. https://doi.org/10.1007/s11104-024-06822-4
    - My contribution: review & editing orchard management sections. This collaboration was in support of local truffle growers in Sonoma county who connected me with researchers.

- Hartman, L.W., Andrews, E.M., et al. (2024). Evaluation of almond hull and shell amendments across organic matter management of orchard soils. *Soil Systems Journal, 8*(2). https://doi.org/10.3390/soilsystems8020051
    - My contribution: conceptualization, funding acquisition, experimental design, investigation, editing. This was related to my doctoral research.

- Kisekka, I., Peddinti, S.R., et al. (2024). Organic soil amendment effects on soil hydrology in an almond orchard evaluated using time-lapse electrical resistivity tomography. *Agricultural Water Management. 302*:108979. https://doi.org/10.1016/j.agwat.2024.108979
    - My contribution: conceptualization, visualization, investigation, writing review & editing. This was related to my doctoral research.

- Andrews, E.M., Rivers, D.J., et al. (2024). In a nutshell: almond hull and shell organic matter amendments increase soil and tree potassium status. *Plant and Soil*, 1-24. https://doi.org/10.1007/s11104-023-06361-4

    - My contribution: conceptualization, funding acquisition, experimental design, investigation, data analysis and visualization, writing & editing. This was my doctoral research.

- Elfar, K.; Carachure, C., et al. (2023). First report of *Diplodia bulgarica* causing black canker on apple in California. *Plant Disease, 108*(2). American Phytopathological Society. https://doi.org/10.1094/PDIS-10-23-2031-PDN
    - My contribution: Sonoma County orchard grower trial host liaison and trial facilitator. This collaboration was in support of local apple growers who asked for assistance with disease diagnosis and IPM.

C. Other peer-reviewed publications.

- Andrews, E. and Fichtner, E (2024). Pre-bloom foliar boron application on olive may improve yield. Nut, Olive and Prune Programmatic News. ANR Blogs. January 26. https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=58830
    - My contribution: conceptualization, writing & editing.

Non-Peer Reviewed

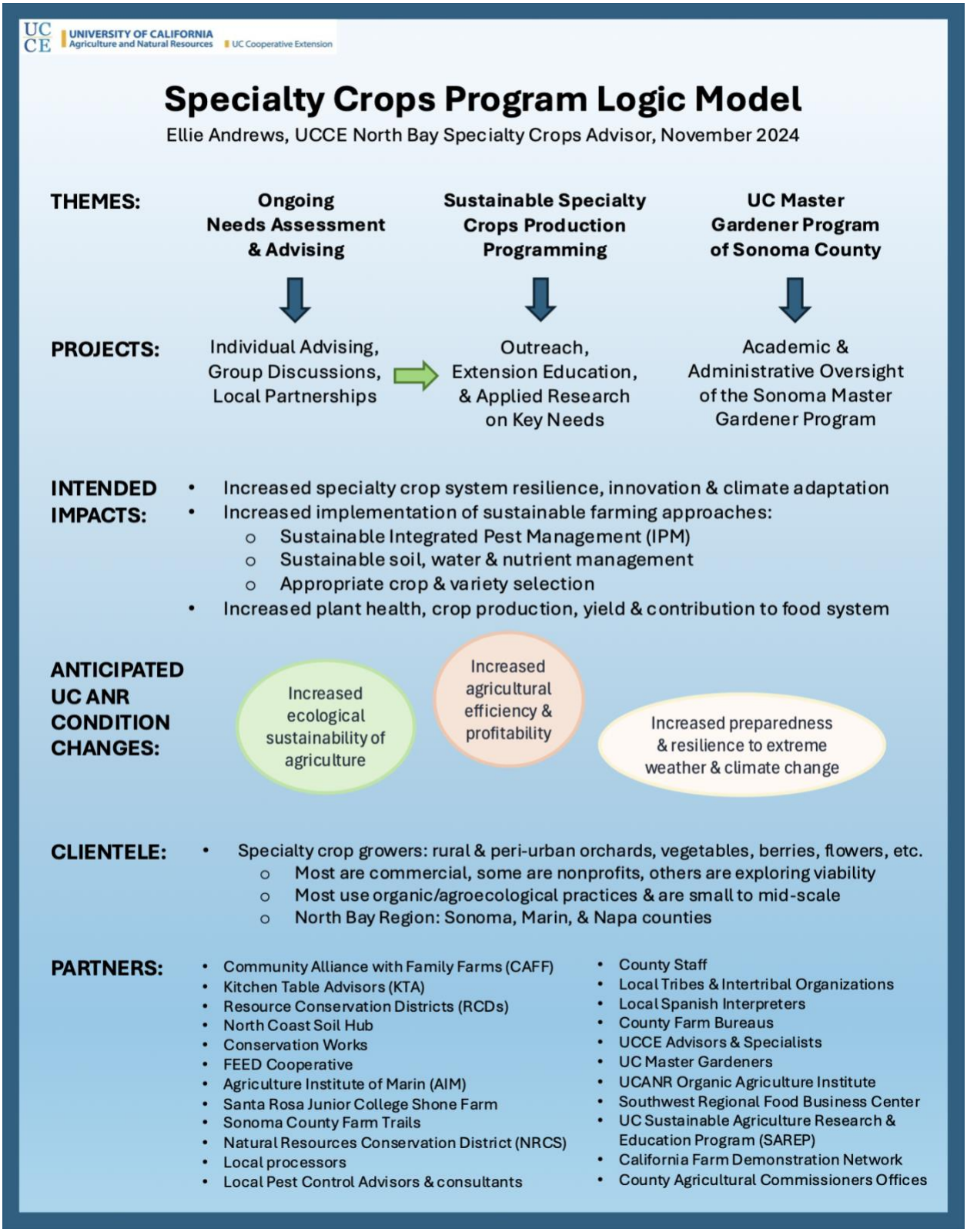
A. Popular press articles

- Andrews, Ellie (2023). Introducing Ellie Andrews. Newsletter article in Sonoma-Marin Farm News. Farm Bureaus. February 1.
- Andrews, Ellie (2023). Ellie Andrews – UCCE Specialty Crops Advisor. 2022 Napa County Agricultural Crop Report.
- Andrews, E. (2023). Gophers - Integrated Pest Management Options Handout. UCCE Sonoma Specialty Crops Website. August 7. https://ucanr.edu/sites/SoCo/files/390688.pdf
- Andrews, Ellie (2023). Gopher Integrated Pest Management. Newsletter article in Sonoma-Marin Farm News. Farm Bureaus. November 1.
- Andrews, E. and Eskalen, A. (2023). Apple Branch Canker Disease Handout. UCCE Sonoma Specialty Crops Website. https://ucanr.edu/sites/SoCo/files/391266.pdf
- Andrews, Ellie (2024). Fruit Tree Management Series. YouTube recorded presentations. February 15.
    - Introduction https://www.youtube.com/watch?v=PklBKqebin0&t=6s
    - Part 1: Types of Fruit Trees https://www.youtube.com/watch?v=dRYej5Ti3JI&t=9s
    - Part 2: Pruning & Protection https://www.youtube.com/watch?v=m1f_XLORS7Y&t=9s
    - Part 3: Nutrient & Water Management https://www.youtube.com/watch?v=rDR_fdkrAz4&t=2212s
    - Part 4: Integrated Pest Management (IPM) https://www.youtube.com/watch?v=J1Ji17rd1UQ&t=8s
- Andrews, E. (2024). Symphylans IPM. YouTube recorded presentation. April 8. https://www.youtube.com/watch?v=JdhbXp6hcTM&t=327s
- Andrews, E. (2024). Symphylans IPM 1-Page Handout. UCCE Sonoma Specialty Crops Website. May 13. https://ucanr.edu/sites/SoCo/files/403626.pdf
- Andrews, E. (2024). Soil Testing & Soil Health. Newsletter article for the UCCE Organic and Small Farms Digest curated by Margaret Lloyd (UCCE). September 9.
- Andrews, E. (2024). Cucumber Beetle IPM Strategies 1-Page Handout. UCCE Sonoma Specialty Crops Event Invitation & Website. July 5. https://ucanr.edu/sites/SoCo/files/403630.pdf
- Andrews, E. and Ramirez-Strain, J. (2024). Estrategias de IPM para el Escarabajo del Pepino. UCCE Sonoma Specialty Crops Event Invitation & IPM 1-Page Handout. September 9. https://ucanr.edu/sites/SoCo/files/403631.pdf

D. Technical reports and other non-reviewed articles

- Ag & Open Space Sonoma County, UCCE Sonoma, Sustainable Agriculture Education (2023) Land Access and Land Tenure for Limited Resources Farmers: Assessment of Conditions and Opportunities in Sonoma County. I wrote Appendix A, pages 62-69. https://www.sonomaopenspace.org/wp-content/uploads/Land-Access-Study_ENGL.pdf
- Andrews, E. (2023). Olive Fruit Fly Life Cycle Diagram Handout. UCCE Sonoma Specialty Crops Website. June 22. https://ucanr.edu/sites/SoCo/files/386890.pdf
- Andrews, E. (2023). Olive Fruit Fly Integrated Pest Management Options Handout. UCCE Sonoma Specialty Crops Website. August 4. https://ucanr.edu/sites/SoCo/files/386891.pdf
- Andrews, E. and Kron, C. (2023). Asian Citrus Psyllid Quarantine Expanded Update. UCCE Sonoma Specialty Crops Website. December 13. https://ucanr.edu/sites/SoCo/files/392567.pdf
- Andrews, E. (2023). Soil Health Overview Worksheet Handout. UCCE Sonoma Specialty Crops Website. November 14. https://ucanr.edu/sites/SoCo/files/390664.pdf
- Andrews, E. (2023). Planning Soil Sampling Worksheet Handout. UCCE Sonoma Specialty Crops Website. November 14. https://ucanr.edu/sites/SoCo/files/390665.pdf
- Andrews, E. (2023). Soil Fertility Interpretation Guide. UCCE Sonoma Specialty Crops Website. October 23. https://ucanr.edu/sites/SoCo/files/390669.pdf
- Andrews, E. (2024). Symphylans ID and IPM Outline. UCCE Sonoma Specialty Crops Website. March 12. https://ucanr.edu/sites/SoCo/files/403627.pdf

Program Logic Model



Descriptive Feedback

From Clientele about outreach, advising, educational events, and research:

- "In multiple conversations with local farmers I have heard people express lots of appreciation/gratitude/excitement that you are our extension agent."
- "Thanks for your passion!! I really appreciate you and all you're bringing to our community."
- "Thank you so much for providing these valuable resources and insights. We really appreciate your thoroughness and assistance in tackling this issue."
- "Thank you so much for the comprehensive input. This really is Extension at its best."
- "Thank you so much! We are all kinda floored by your incredible commitment and gifts you have given our farm and by extension our community. Your follow through and thoughtfulness for folks you just met is unique and amazing. We feel so supported by your work and how you share it with us. It is one thing to respond with appropriate links. We would be so grateful for just that but your synthesis and communication efforts are second to none. It's fun to imagine what this world could be like if everyone brought the level of care and thoughtfulness to their jobs and lives the way you do."
- **"**Just wanted to thank you again for being such an awesome resource. It is the first time we have engaged with the UC ANR, and we couldn't be more happy or impressed with your help, and all of the really great info you present so well! And thank you so much for sharing the additional feedback you've received from other growers re: this issue. Being a small rural farm, we can tend be isolated from some of the more broadly shared information. It is so helpful to feel in the loop!**"**
- "Thanks for the comprehensive reply Ellie! This data is really useful for knowing where that sufficient amount actually is and start to dial in our fertility budget. I ordered a copy of Efficient Nutrient Management, thank you so much for sleuthing that out! "
- "Really happy to know we've got you to call on!! Feels good to have a scientist on our side :)"
- "Thanks for all your advice, resources, and everything you do for farmers in three counties!! "
- "Ellie, we're sending in another set of tissue samples along with soil samples from the same fields today. Your enthusiasm has inspired us to look at this more thoroughly. "
- "Thank you so much Ellie! This was super informative and awesome. I so enjoyed it and can't wait for more."
- "My co-worker and I attended your soil science lecture during the Small Farms Conference this past February at Shone Farm and loved it. Thank you for presenting such complex information in a truly digestible and interesting way. We both learned a lot!"
- "I appreciate all the energy you are bringing to our community!"
- "I love the way you're jumping and providing valuable and accessible info!"
- "I decided to try a new organic fungicide after the Fire Blight webinar after I saw Jim Adaskaveg's table of active ingredients and their efficacy."
- "Loved the codling moth webinar yesterday. You really lined up a nice list of speakers with different perspectives. Thanks so much for organizing this Ellie! And all the speakers for sharing knowledge!"
- "My name is -- and my partner, --, and I met you at your AWESOME Symphylan Field Meeting at Long Meadow Ranch! A slight aside, but want to let you know that we find ourselves talking and sharing w/others so often about everything we learned from the day in St.Helena with you! So many thanks again for bringing such deep & passionate knowledge to such an important topic, and all that you do!"
- "We can't thank you enough for all of the amazing help you provide, and the so incredibly insightful & educational gatherings you are bringing to our area & farming community!"
- "I love how active you have been on social media sharing your work with other farms and the research you have been working on. I love Extension!"

- “After we read the UC strawberry resource you sent us, we adjusted our irrigation approach and doubled our strawberry yields. Thank you!”

From Local Partners:

“It has been amazing having Ellie in the North Bay farming community. She brings essential support in fertility and pest management that growers lacked until now. Farms that sell through the food hub have expressed their delight in having Ellie’s expertise to address their needs. Beyond technical support, Ellie has shown a real commitment to proactively building community—not only through hosting and attending events, but also by getting to know growers on a personal level. I’m excited to continue working with Ellie to strengthen the North Bay farming community and support our local producers.” - Dylan Stein, FEED Cooperative, a local produce aggregator and distributor working closely with most of my clientele

“I have seen first hand the positive impact that Ellie has had on growers in the region in her short time in her role. She has supported one of my clients (who has limited English language skills) in learning about pest management on their farm as well as practices to build soil fertility. Without Ellie I don't know who they would have been able to turn to for support. Ellie has taken the time to get to know growers in the region, and by thoughtfully listening to their challenges and where they would like to improve, she has built a great amount of trust and credibility. The workshops she has put on have been very well received and I look forward to seeing what Ellie has planned in the future!” -Lily Schneider, Kitchen Table Advisors (KTA), a local small farm business advising organization

“Collaborating with Ellie to bring relevant TA to farmers in our region has been such a pleasure. She is thoughtful and informed, curating events and resources that address the needs of specialty growers in the North Bay. This comes from her dedication to build trusting relationships with growers and genuinely listening to their concerns. Ellie is clearly respected by the demographic she serves and shows up in our community enthusiastically. As a former farmer in the region, it is refreshing to witness an extension agent that is so hands-on and willing to engage at all levels with producers that are seeking assistance.” - Layla Aguilar, Community Alliance with Family Farmers (CAFF), a key local organization my clientele rely on for technical assistance, support, and networking

“Ellie moved into her farm advisor position and immediately started providing valuable assistance to the specialty crop growers in our area. After having relatively few places to turn to for help the last several years, local growers of specialty crops now have someone to go to for questions on production and services that support them. She has been especially helpful in providing knowledge and resources about soil health and testing, often helping growers get it done at their farm. Small scale and specialty crop growers are in now in a better position to succeed with Ellie’s assistance.” -Keith Abeles, Sonoma Resource Conservation District (RCD), one of several local RCDs providing Technical Assistance for my clientele to advance on-farm conservation practices

"I had the pleasure of working with Ellie Marie Andrews during the planning and implementation of our Nitrogen & Water Efficiency Field Day at Star Route Farms in Marin. Ellie was a skilled coordinator, bringing together many of the leading researchers and TA representatives in the industry to present on this subject. The unique and successful format of the event, which involved participants rotating from table to table learning from each instructor, was a creative and engaging approach created by Ellie. I was impressed by the facilitation and leadership skills Ellie demonstrated during the planning stage and during the event. I would jump on the opportunity to work with Ellie again and I appreciate the collaborative relationship we have formed." -Sarah Keiser, Senior Grant Manager, Conservation Works

Summary of Publication Examples

Andrews, E. (2024). Fruit Tree Management Series. YouTube recorded presentations. February 15.

- Introduction https://www.youtube.com/watch?v=PklBKqebin0&t=6s
- Part 1: Types of Fruit Trees https://www.youtube.com/watch?v=dRYej5Ti3JI&t=9s
- Part 2: Pruning & Protection https://www.youtube.com/watch?v=m1f_XLORS7Y&t=9s
- Part 3: Nutrient & Water Management https://www.youtube.com/watch?v=rDR_fdkrAz4&t=2212s
- Part 4: Integrated Pest Management (IPM) https://www.youtube.com/watch?v=J1Ji17rd1UQ&t=8s

Description: This is the Fruit Tree Management course I designed and delivered for the Sonoma Master Gardener training class in 2024. While this content is geared toward backyard (noncommercial) growers, I have shared these videos widely with orchard growers who would like to become commercial, and commercial growers who ask for introductory-level orchard management guidance on many of these topics. Splitting this content into discrete parts allows me to share specific videos based on need, or the whole series if appropriate. When I delivered this content to the new Sonoma Master Gardener cohort, they expressed appreciation that I broke this content into sections with breaks, time for questions and answers, and small breakout group discussions. I received a lot of positive feedback in the moment and in the following weeks that Master Gardeners learned a lot from the content, appreciated the use of many orchard photos to illustrate points, and enjoyed interactive conversation time over Zoom. Since then, I have used and built on this content to serve commercial and noncommercial growers, shared the PowerPoints and individual slides as needed to help advise and teach growers about orchard management.

Andrews, E. and Fichtner, E (2024). Pre-bloom foliar boron application on olive may improve yield. Nut, Olive and Prune Programmatic News. ANR Blogs. January 26. https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=58830

Description: While we were discussing nutrient management, a local olive grower asked me about foliar boron sprays. We talked about how easy it is to over-apply boron and damage foliage. At the International Society for Horticultural Science Olive Symposium at UC Davis, I mentioned this conversation to UCCE Advisor Elizabeth Fichtner who works with olive growers in the Central Valley. This sparked a conversation about the need for growers to understand appropriate boron fertilization and foliar application use, and prevent damage caused by over-applications. So, we collaborated to write this blog post together to clarify some questions around timing, sources, rates, yield effects, etc. and provide application guidance. I shared this with the local grower who asked the original question to help inform her boron application approach to promote olive tree health and yield. I have received questions about this topic from other olive growers too and shared this resource with them.

Andrews, E.M., Rivers, D.J., et al. (2024). In a nutshell: almond hull and shell organic matter amendments increase soil and tree potassium status. *Plant and Soil*, 1-24. https://doi.org/10.1007/s11104-023-06361-4

Description: This paper presents novel findings from my doctoral research focused on using almond hull and shell organic matter amendments applied on orchard soil to provide potassium. In collaboration with advisors (professors), other graduate students and undergraduates I spearheaded this work at three commercial almond orchard field trials. We found that these organic amendments rapidly released potassium under irrigation/rainfall, significantly increased soil exchangeable potassium, and increased tree leaf potassium status while maintaining almond yield. Almond hull and shell amendments can address crop byproduct utilization issues, recycle potassium, and reduce reliance on fertilizers. Through this work, I gained research training in agricultural sciences allowing me to assess the effects of organic nutrient management practices on soil and plant health. I used the skills I developed through this work to help guide the olive orchard mulch trial here in Sonoma County to improve soil and tree health.

Goals and Objectives for the Coming Year:
For the Period October 1, 2024 - September 30, 2025

Due by deadline set by your supervisor. Upload by **December 9, 2024** if this is your assigned action

Include goals and objectives you intend to accomplish in the coming year, anticipated collaborators, and anticipated outcomes and impacts. It is recommended that you organize your objectives according to the themes you are going to use in your program review dossier. Remember to include objectives addressing the advancement criteria for your title series. Academic HR recommends that academics and supervisors have a conversation about goals and objectives in the fall; there is not firm deadline set by ANR.

Name:	Ellie Andrews
Academic Title:	Assistant/Associate/Full Cooperative Extension Advisor
County/Program:	Specialty Crops – Sonoma, Marin, Napa Counties
Current Rank/Step:	Assistant IV

Part 1. Goals and Objectives for the Coming Year (October 1, 2024 - September 30, 2025)

Specific Goals	Anticipated Collaborators	Anticipated Outcomes and Impacts
Theme 1: Ongoing Needs Assessment and Advising		
Objective A: Continue assessing and addressing specialty crop growers' needs and goals through continuous needs engagement and feedback. **Objective B:** Provide science-based case-by-case advising on sustainable production topics such as plant health, IPM, soil and irrigation management, climate adaptation strategies, diversification, crop and variety selection, appropriate equipment, etc. Continue documenting feedback and impacts.	UCCE Advisors, Specialists, county staff, local organizations, grower partners, and agricultural professionals	• Increase growers' practical knowledge and skills to problem-solve and increase yields, crop system sustainability and climate resilience. • Ensure diverse growers receive effective, high-quality assistance that is tailored to unique constraints and opportunities. • Advance growers' contributions to our food system and environmental and economic farm sustainability. • Contribute to the condition changes: increasing the ecological sustainability of agriculture, preparedness and resilience to extreme weather and climate change, and agricultural efficiency and profitability.

Theme 2: Sustainable Specialty Crops Production Programming		
Objective A: Continue <u>outreach</u> focused on needs identified in Theme 1 via the UCCE Sonoma Specialty Crops webpage, Newsletters, the professional Instagram and YouTube.	UCCE Advisors, Specialists, county staff, local organizations, grower partners, and agricultural professionals	• Increased engagement: cast a broad net and share educational event invitations, content, recordings, demonstrations, research updates, and grant opportunities to support implementation of sustainable practices.
Objective B: Deliver high-quality <u>educational programs</u> focused on needs identified in Theme 1.		• Increased implementation: lower key barriers of adoption of science-based sustainable practices. • Continue assessing educational impacts: knowledge gained, changes in decision-making, implementation, etc.
Objective C: Conduct <u>applied interdisciplinary research</u> focused on high priority challenges and needs identified in Theme 1.		• Increased implementation: share research results from all projects widely and ask growers for feedback.
		• All Objectives will increase growers' capacity to implement climate-resilient, ecologically oriented and economically efficient sustainable production practices. • All Objectives contribute to the condition changes: increasing the ecological sustainability of agriculture, preparedness and resilience to extreme weather and climate change, and agricultural efficiency and profitability.
Theme 3: UC Master Gardener Leadership		
Objective A: Provide academic oversight to the Sonoma Master Gardener program.	UC Sonoma Master Gardener Program Coordinator, Statewide Program Director, and Sonoma County/Area Director	• Provide beneficial academic and administrative services to the local Master Gardener program, the UC, and the public served. • Assist the Master Gardeners in addressing local backyard growers' needs, improve plant health, sustainability, & climate resilience. • Theme 3 contributes to the condition changes: increasing the ecological sustainability of agriculture, and preparedness and resilience to extreme weather and climate change.
Objective B: Provide administrative oversight of the Sonoma Master Gardener Coordinator.		

Part 2. Anticipated Barriers or Obstacles in Accomplishing Your Goals and Objectives

Specialty crop growers in Sonoma, Marin, and Napa counties are demographically diverse and have diverse needs, goals, constraints, and opportunities. I work with a wide variety of crops with different scales and approaches to farming. I have a diverse clientele with many different needs and preferences. Each crop has its own pests and production requirements. Considering this, it is important for me to keep using a variety of different outreach and educational communication strategies and formats to engage this diverse audience. One-on-one advising is key for tailoring educational content to growers' specific needs. In addition, I focus on key needs that are common across many crop systems to promote equity and develop effective and timely programming. This approach provides program cohesion and helps provide something for everyone.

Most of my clientele use organic, agroecological and/or regenerative practices, which offer unique opportunities and pose unique challenges compared to conventional agriculture. I will continue developing organic/regenerative/agroecological content together with partners to serve clientele needs.

In addition, I will continue offering Spanish translation and interpretation whenever possible to help engage Spanish-speaking clientele. I will continue working with local partners (such as Kitchen Table Advisors and Community Alliance with Family Farms) who also offer Spanish services and work closely with Spanish speaking specialty crop growers. These collaborations will promote positive relationship building and advance DEI.

Part 3. Support from Supervisor(s)

Program support from county directors continues to be very helpful for the success of my program and I appreciate everyone's guidance. Going forward, it would be helpful to continue learning about UC ANR procedures as needs arise and see PR packets as examples from experienced Specialty Crops Advisors with well-established programs. This could provide helpful food for thought as I plan future directions for my program.