UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources

II. Academic Program Review Dossier Cover Page | 2025-2026 Review Cycle

Name:	Phoebe Gordon
Academic Title:	Associate Cooperative Extension Advisor
County/Program:	Madera and Merced Counties
Review Type:	Merit
Current Rank/Step:	III
Requested Rank/Step:	IV
Review Time Period:	October 1, 2023 to September 30, 2025
Thematic Areas:	Agricultural Productivity and Sustainability

Position Description
Phoebe Gordon
Orchard Systems CE Advisor for Madera and Merced Counties
Updated 9/22/2023

PURPOSE & CLIENTELE

The Orchard Systems CE Advisor is to conduct an extension, education, and applied research program that will address clientele needs and fits with priorities in the UCANR Strategic Initiatives for Sustainable Food Systems and Endemic and Invasive Pests and Diseases. The advisor will provide science-based information and education to orchard decision makers in Madera and Merced counties which may include growers or farm managers, and industry professionals involved with pest control, crop nutrition, irrigation, and soil productivity. This position has a broad focus on all aspects of orchard production. The Advisor will work with other CE Advisors, CE Specialists, and campus-based academics where appropriate to accomplish these goals. This position is headquartered in Madera county, and the Advisor will be covering all tree crops except for citrus and walnuts. There are also cross-county responsibilities in Merced county, where the Advisor will be covering figs and pistachios. The Advisor will conduct research and education as appropriate for the major tree crop commodities of almonds, pistachios, and figs, and will answer questions on other commonly grown tree crops as appropriate.

ACADEMIC PROGRAM MAJOR RESPONSIBILITIES

- Conduct and report regular needs assessments to identify priority issues or problems relevant to the local clientele groups being served.

- Develop and implement effective UC ANR Cooperative Extension applied research and educational programs to address the identified priority needs of the clientele that are consistent with ANR's Strategic Vision.
    - Conduct applied research designed to monitor changes and solve locally relevant problems.
    - Disseminate useful, science-based information to inform clientele, using extension methods that are responsive to clientele needs and appropriate for the audience and situation.
    - Maintain and promote Cooperative Extension's credibility by providing science-based knowledge and skills independent of personal or parochial interests.
    - Evaluate programs and report accomplishments, results, and potential or actual impacts to scientific and lay audiences.
    - Develop collaborative teams with other UC ANR academics, campus-based specialists and faculty and/or others, to address priority issues for UC ANR.

- Participate in professional organizations and collaborate with federal, state and county governmental agencies, non-government organizations and others by providing independent science-based information and leadership.

- Foster an increased understanding of Cooperative Extension's research and education programs in clientele, the public and policy makers.

- Maintain a program of continuous self-improvement by participating in in-service training, seminars, workshops, work group & program team meetings, short courses, professional society meetings and other relevant opportunities.

- Participate in UC and ANR leadership, though work groups & program teams, committees, task forces and other formal or informal structures.

- Serve the California public by participating in activities of public agencies and organizations.

PROGRAM LEADERSHIP AND BUSINESS OPERATIONS DUTIES

- *Leadership*: Provide vision, inspire, and motivate others with attitude and actions; sets a high standard for excellence; innovate and foster positive change; model and support a good team working environment; and encourage and is open to exploring new ideas and innovative changes, and provide active, ongoing advocacy and support for ANR programs.

- *Local Delivery of Statewide Programs*: Represents UCCE programs locally in professional manner; ensures clientele needs are assessed, supports the development of priority program goals to successfully meet clientele needs, in alignment with ANR's statewide Strategic Vision and initiatives; oversees delivery of UC ANR statewide programs at the local level; works with staff to ensure that outcomes and impacts are measured and communicated; and interacts with UC ANR Program Teams, specialists and others within the research/extension network to develop, strengthen and expand the local delivery of statewide programs.

- *Interpersonal Relationships:* Is an effective listener and communicator; takes responsibility for her own actions; motivates others; keeps commitments; and cultivates political and industry support for UC ANR.

AFFIRMATIVE ACTION

- 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.

- Take all measures necessary to assure that any employee or volunteer workers 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.

- Plan and conduct 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.

- Collect, and keep current, 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.

- Compile and maintain documentation of service to each ethnic and gender group within the clientele population served by the program, including statistical records of clientele contacts, quantitative evaluations of benefits realized by clientele, and reports of any special efforts to serve under-represented groups.

RELATIONSHIPS

Responsible administratively to the County Director of the Fresno Madera Multi County Partnership for the conduct of the UC ANR program(s).

QUALIFICATIONS

A Master's Degree in an appropriate field [or specify] is required. Specialty and/or professional experience must demonstrate capacity or potential to accomplish team-based research and education programs consistent with the values of Cooperative Extension. Current qualified applicator certificate (QAC).

- Must demonstrate:
    - The ability to communicate and extend technical information in an understandable manner.
    - Knowledge of human relations is required including the ability to work with people with a diversity of views and values, to motivate people and adapt to changing situations.
    - Literacy in internet communications and with software to support research and education programs.

Phoebe Gordon — 10/10/23
Academic (your name and title) — Date

Karmjot Randhawa — 9/24/2023
County Director — Date

D. Ochi — 11/14/2023
Vice Provost — Date
of Cooperative Extension

III. Program Summary Narrative

Introduction

I am a 1.0 FTE Associate Advisor Step III, seeking a merit increase to Associate Step IV. I cover all tree crops excluding citrus and walnuts in Madera County. In Merced, I cover figs and pistachios. The majority of the acreage I have responsibility for is almonds (approximately 159,000 acres in Madera County) and pistachios (63,000 acres in Madera County and 20,000 acres in Merced County) and thus those crops are my research focus.

My research and extension program falls within the theme of **agricultural productivity and sustainability**, working toward the UCANR condition changes of **increased profitability of agriculture**, and **increased ecological sustainability**. I lead four multi-county research projects that seek to reduce production costs, improve profitability, and reduce nitrogen loss from agricultural fields. An additional effort within this theme is working toward **developing a more qualified California workforce** by working with growers and consultants to help them diagnose problems and better understand best management practices. One effort that I am particularly proud of is Growing the Valley, the first UCANR podcast, which has been running since 2018 and has over 290 episodes published to date. Aside from projects that I lead, I also collaborate with colleagues within UCANR and other University of California campuses to address issues in the California orchard industry.

Some program highlights:

- In 2024, my podcast cohost Luke Milliron and I won a UCANR distinguished service award for "Outstanding Team," in recognition of the podcast.
- I wrote a peer-reviewed paper that was accepted for publication that demonstrates Growing the Valley episodes result in positive learning outcomes for an extension audience. This is, to the best of my knowledge, the first paper that has demonstrated this
- Results from a project I lead – the regional almond variety trial – have inspired early adopters to plant a promising variety that can **reduce growers production costs and may improve early profits**. The early adopters are seeing great results, which is inspiring more growers to plant this variety.
- I have discovered a cause of an unwanted pistachio kernel phenotype that has been plaguing the industry for several years – these results might help growers **increase their profits**

My program priorities have been slightly different in the past few years, as I have not contributed to fig research (acreage is approximately 7,000 across both Madera and Merced Counties) in this time. One reason is that I sought to lighten my research load so that I could take a sabbatical from mid-March – mid December in 2025. Other reasons are specific to the fig industry: the board has not released an RFP since 2021. Additionally, a new invasive pest – Black Fig Fly – was found in Southern California in 2021. The fig board, which has small amounts of funding available (~$20,000 annually), has directed its resources at this pest. As it is not in the areas that I cover, my involvement has been limited. It has unfortunately been found in Merced County in late 2025, and I will be involved in fig research again in the future.

During my sabbatical, I have been working on developing skills that will advance my research efforts: learning new analytical methods and learning how to use R, a powerful statistical software package. I also wrote the article on podcast learning outcomes highlighted above. Additionally, winding down my research efforts gave me the time to write a grant and build a team to address something I have been thinking about for years: whether almond rootstocks could improve almond drought tolerance. I'm happy that this $1,600,000 grant, to be split over 10 years, was awarded by the Almond Board of California in early 2025. The findings of this project could help ensure almond production will stay profitable and sustainable in the lower-water future of California. For a more thorough accounting of my efforts during my sabbatical, I am attaching a partial sabbatical report to this package.

Solo theme: Agricultural Productivity and Sustainability

Overview: I work to improve **agricultural profitability** and increase **ecological sustainability** through **8 projects in this theme, 4 of which I am the principal investigator.** These projects involve cultivar evaluations and improving nutrient management practices in newly planted orchards. I have also uncovered factors influencing a pistachio kernel phenotype that may reduce pistachio profits and am working to better understand a disease affecting almond trees. For several projects, I built cross-county teams to help address these issues and formed a collaborative partnership with a researcher at UC Davis to help in areas that I could not address myself.

Background: Nut crops are a major part of the California agricultural landscape and have historically been very profitable. However, nut prices are lower than desired due to a combination of factors, and recently almond prices have been too low for growers to farm profitably. rchards are being replanted to something else, or even abandoned. Growers are also under a great deal of scrutiny from regulators due to their large footprint across the state. Nitrogen is a particular concern, as it is a pollutant once it escapes farmland.

Methods, Outcomes, and Impacts

Almond Variety Evaluations:

New varieties are critical to replace old ones that may have issues, such as susceptibilities to pests and diseases. I am the PI of a multi-county effort to evaluate 29 advanced selections and newly released almond cultivars, which provides non-profit breeders a testing ground and provides independent, 3rd party evaluations of varieties produced by for-profit breeders, including self-compatible ones, which will allow growers to plant one cultivar in a field rather than 2-4. Planting self fertile varieties will **improve agricultural profitability by reducing input costs** by $150-300/acre per year through fewer trips through the orchard. This also **helps mitigate climate change** by reducing fossil fuel use. One promising self-fertile and self-pollinating variety that was released by the USDA in 2022, Yorizane, also offers monetary benefits to growers: it has higher early yields than other varieties, which might further improve **grower profitability** in the early years of the orchard. It also has excellent nut removal, reducing the amount of potential habitat for pests overwintering in orchards and improving pest management.

I am starting to see impacts from this trial. My co-PIs and I have been extending the research results in many formats for years, and this has encouraged several innovative growers to plant Yorizane. In

fact, one nursery is even directly linking to a report I was the lead author on to share research data with interested customers. I reached out to the four major nurseries across the Central Valley that are selling this variety to find out how Yorizane has been doing; all reported increased sales to me compared to the last few years, and a nursery located in Madera County is even sold out for the year. Furthermore, this data is generating buzz for another just-released variety from the USDA: Parpareil. Thus, my research and extension efforts for this project have been making positive local and statewide impact.

Nutrient management:

Refining nutrient management of orchards through researching new guidelines and extending best management practices is an area of expertise that I have been developing since I was hired into the position. My main research effort in this area is a solo venture: a multi-site, multi-year project where I am researching nitrogen and phosphorus fertilization rates for non-bearing pistachio trees. I have found that pistachio trees do not need nitrogen or phosphorus fertilizer for two years after planting. This is contrary to current practices and could help growers **save money** on fertilizer. Growers adopting my findings will improve **water quality,** as nitrogen that is not taken up by crop plants leaches out of soil, where it becomes a pollutant in groundwater. This project is still ongoing, however, I am diligently working on extending the results though numerous outlets.

I am still working on extending results from a project that ended a few years ago where my colleagues and I demonstrated that 1st year almonds respond to phosphorus fertilization. As new almond plantings have significantly slowed due to the rough state that the almond industry is currently in, I haven't had the occasion to talk to many folks who are planting to see if they're using phosphorus. However, I have had several conversations with grower consultants who are aware of my work, and several speaking invitations on this topic in this time period, so I know that the work has been well received. I will continue to document impacts in the coming years.

Internal kernel discoloration (IKD) of pistachio:

A harmless, but alarming discoloration of pistachio kernels has recently gotten increased scrutiny from the USDA, which may regard it as a defect. This would reduce grower profitability, as growers with high rates of this discoloration would get a penalty on their processor payouts. The industry is waiting on a decision, so the impact is currently unknown. This issue was suspected to be a cultivar trait, but little else was known.

To find answers for this industry-wide issue, I developed and led a wide-ranging survey across seven counties to gather more data, which then led to follow-up research examining irrigation as a factor influencing this trait. Because it also seemed to be related to how pistachio kernels develop, I formed a collaborative partnership with a plant biology laboratory group at UC Davis to help answer some of the more basic cellular and biological questions, such as what the discoloration was (polyphenols, which are antioxidants!) and what may be causing it (the compounds strongly suggested abiotic stress). My efforts led me to find that this trait is present across all cultivars but at different rates and is increased by high irrigation. I wrapped up this project in 2024.

As both irrigation and this phenotype are touchy subjects in the industry, I wanted solid evidence before starting to extend the results, and began to do so just before I began my sabbatical. If the

USDA does decide this needs to be graded as a defect, my findings will **increase grower profitability** by reducing the rate and severity of IKD in orchards, and may even result in **water conservation**, especially if a grower has a high rate of IKD from overirrigating.

Hull rot of almonds: Hull rot is a disease of almonds. Hulls can become infected with several kinds of fungi, which may send toxins into fruiting wood, killing it and reducing future yields. Cultivars differ in their susceptibility, however not much is known in this area. I am the PI of a multi-county effort examining primary metabolites and nutrients of almond hulls across sites and cultivars with differing hull rot issues. One of my sabbatical projects is to analyze the enormous amounts of data this project generated. We hope to find clear indicators as to what makes an almond hull more or less susceptible to hull rot, which could be used by breeders. This will work toward **increasing the sustainability of agriculture**, as the most environmentally friendly way to deal with diseases is to avoid infection by using resistant or tolerant genotypes.

General extension: Much of my extension efforts are focused on creating **a more qualified workforce** through education, particularly on-demand education. I maintain an active extension program through the podcast, grower articles in two different trade magazine publications (Pacific Nut Producer and West Coast Nut) that reach thousands of in-print and online subscribers, extension talks, and several annual meetings in Madera and Merced Counties. The podcast has an average of 850 monthly downloads with an estimated audience size of close to 400 listeners. It has a rating of 4.8 stars on Apple Podcasts and 5 stars on Spotify (both out of 5 stars). The webpage also got 13,000 unique visitors during the period of review. Almost 30% of the website traffic comes from outside of the United States, including from countries that are also known for orchard production, such Australia (over 3%), and Spain (1%). My cohost and I have also had instructors at community colleges and agricultural universities tell us that they use the podcast as a teaching tool.

Meetings that I held have uniformly been positively reviewed. I gave out surveys at five meetings in 2024 and 2025 and got 95 responses to post-meeting surveys. An average of 92% of attendees learned a lot or a little from attending my workshops, and an average of 27% of these same respondents said they would adopt at least one thing that they learned from attending a meeting I organized. At a variety trial field day I co-held with the Almond Board of California, 100% of respondents (18 total) found the event to be “somewhat” or “very” valuable.

University & Public Service

I have been active in university and public service in this evaluation period. On the university side, I served in several planning and search committees, two of which were in a leadership role, and have just taken on being the chair of an interest group with a professional society. I left my position as secretary of the AAC in early 2025 in preparation for my sabbatical, however during my time there I worked on making AAC management easier. I created a listserv of executive committee members, and worked on simplifying the AAC website on the front and back end, which will make navigation and use easier for creators and users. I served as a mentor in the 2024 mentorship program and have been informally mentoring early career colleagues outside of that. In the public service realm, I have continued to help the Future Farmers of America by serving as a judge in several competitions and giving several talks to audiences that are not my clientele.

Professional Competence

In the last two years, I have worked to improve my knowledge and competency by attending several research conferences and internal UC workgroup meetings. I also had the ability to attend the Western Leadership Extension Development program, where I met and learned from extension professionals in other systems, learned general leadership theory, and developed additional skills such as the art of delegation. As part of my leadership project, I chose to develop guidelines for how to track outcomes and impacts for podcasts. I wanted to work on this because I have been approached several times by other extension academics who are interested in starting their own podcasts, and there aren't many metrics for success available. I have presented on podcasting at the 2025 American Society for Horticultural Science meeting, and I was also invited to sit on an extension methods panel at the International IPM Symposium in 2025 to discuss podcasting.

I am also frequently asked to give talks in nutrient management, an area of expertise; 8 of the talks I was invited to give during this evaluation period were on this topic.

Affirmative Action

I am actively engaged in improving the University's outreach to underserved clientele. I am part of a CDFA-funded research project that ended in June 2025 that seeks to better serve farmworkers who work in orchard crops. The project sought to establish how they want to learn and what resources would best serve them. I helped with finding farmworkers for focus groups and organizing a workshop at the end of the grant to help test some of these methods that were developed. Not only does this address underserved clientele needs, but it also works to create **a more qualified workforce**. I have also become a resource to the Punjabi grower community by being an occasional contributor on a Punjabi-language radio show.

While I have not been able to achieve parity in all of my clientele contacts, I have adequately used A.R.E. during my time to reach my clientele through online social media, posting meeting notices, my podcast and use emails to send out meeting announcements.

I have also contributed to UCANR's Principles of Community by investing in new academics through the mentorship program, and informally mentoring other early career colleagues. I am also eager to give to early career colleagues the gift that was given to me when I started: help developing my research program. I have helped early career colleagues find collaborators, and invited two early-career colleagues to work with me on the rootstock deficit irrigation trial.

Conclusion

During my term as an orchard advisor serving Madera and Merced counties, I have made it my goal to forward UCANR's mission to make California agriculture **more profitable while reducing environmental impacts, and improve the California workforce.** To do this, I have developed research projects that address both immediate and long-term issues, such as developing new fertilization guidelines, finding factors influencing an unwanted pistachio kernel phenotype, evaluating new almond varieties, and working toward helping the almond industry stay productive in a low-water future by establishing a long-term trial evaluating rootstock drought tolerance.

V. Supporting Documentation

A. Project Summary

There are many grants in my GTS-generated project summary that either have finished and are under no cost extensions, or that I was added to as a collaborator during the grant submission project and ended up not being a part of once the grant was funded (e.g. “Management Strategies for Mitigating Water Infiltration Problems in Almond and Pistachio Orchards in the Central Valley”). There are also quite a few grants under the name “Regional Research Support for UC Farm Advisors.” These grants funded four SRA positions across the central valley, including one in Madera/Fresno; the main supervisor for each position was added to all grants, but not all apply to me (my SRA is not funded by the walnut or prune boards).

The following list of projects are projects that I have directly contributed to in the years of evaluation, either as the principle investigator, by being directly involved as an active collaborator.

Project Title	Role	Collaborators	Support Amount/Duration (if applicable)	Support Source
Agricultural Productivity and Sustainability (8)				
Field Evaluation of Almond Varieties	Principle Investigator	Roger Duncan @ UC ANR, Luke Milliron @ UC ANR, Jay Mahil @ Creekside Farming	$107,158 in the evaluation period; split between me and two co-PIs 2017 - 2025	Almond Board of California
Pistachio kernel discoloration	Principal Investigator	Joe Coelho (formerly Maricopa Orchards), Ian Humrick (formerly Maricopa Orchards), Andre Tolmachoff @ Tolmachoff Farming	$113,003 in the evaluation period 2021 - 2024	California Pistachio Research Board

Project Title	Role	Collaborators	Support Amount/Duration (if applicable)	Support Source
Determining non-bearing pistachio nitrogen and phosphorus needs	Principal Investigator	Sam Doud @Nuveen, Jimmi Atwal @Atwal Brothers Farm	$131,071 2021-Ongoing	California Pistachio Research Board
Examination of hull metabolites in hull rot sensitive and tolerant cultivars	Principle investigator	Roger Duncan @ UC ANR, Mohammad Yaghmour @ UC ANR	$50, 968 2023-2024	Almond Board of California
Evaluation of the drought tolerance of commercially available almond rootstocks	Principle Investigator	@Mohammad Yaghmour @ UCANR, Tobias Oker @ UCANR, Cameron Zuber @ UCANR	$1,625,531, $728,567 awarded directly to me, remainder goes to co-PIs 2025-2035	Almond Board of California
Limited Irrigation Management and Smart Water Technologies for the Pistachio Orchard of the Future	Collaborator	Isaya Kisekka @ UC Davis, Tobias Oker @ UCANR	$21,193	CDFA SCBG via UC Davis
Nitrogen and Irrigation Initiative (Funded 2022-2024, currently under a NCE)	Collaborator	Khaled Bali @ UC ANR, Doug Parker @ UC ANR, Erik Porse @ UC ANR, Mae Culumber @ UC ANR, Mohammad Yaghmour @ UC ANR, Michael	Funds for a full time SRA; $30,000 to support research and extension needs, $30,000 to support programmatic needs 2023-ongoing	Fertilizer Industry Advisory Board (FIAB), Specialty Crop Block Grant (SCBG), and Conservation Innovation Grant (CIG).

Project Title	Role	Collaborators	Support Amount/Duration (if applicable)	Support Source
		Cahn @ UC ANR, Aparna Gazula @ UC ANR, Sat Darshan Khalsa @ UC Davis, Mark Lubell @ UC Davis, Mark Cady @ CDFA, Emad Jahanzad @ CDFA, Natalie Jacuzzi @ CDFA		
Increasing California Specialty Crop Competitiveness by Understanding and Addressing Farmworker Technical Training Priorities	Collaborator	Katherine Jarvis-Shean @ UC ANR Amanda Crump @ University of California, Christina Getz @ UC ANR, Clarissa Reyes @ UC ANR, Cameron Zuber @ UC ANR	None awarded to me	California Department of Food and Agriculture
Almond companion crop trial	Collaborator	Andreas Westphal @ UC Riverside, Robin Singh @Independent grower	None awarded to me	Almond Board of California

B. Professional Competence and Professional Activity

Professional Development and Training

Begin Date - End Date	Location	Name, Description and Occurrence of Activity
Nov 8 2024 – Nov 9 2024	Modesto, California	Fertilizer Research and Education (FREP) Conference
Feb 6, 2024 - Feb 7, 2024	Fresno, California	Plant and Soil Conference
Mar 25, 2024 - Mar 26, 2024	Davis	Pomology extension continuing conference
Jul 17, 2024 - Jul 18, 2024	Coalinga	Pistachio workgroup meeting
Sep 23, 2024 – Sep 26, 2024	San Diego	Western Extension Leadership Development program, second session
Dec 13, 2024	Davis	Almond Workgroup Meeting
Jan 19, 2025 – Jan 24, 2025	Napier, New Zealand	International Society for Horticultural Science, International Symposium on Integrating Canopy, Rootstock and Environmental Physiology in Orchard Systems
Sabbatical begins March 17, 2025		
Aug 25, 2025 - Aug 29, 2025	New Orleans	ASHS - New Orleans

Disciplinary Society or Professional Association

Disciplinary Society/Prof. Assoc Name	Membership/Meetings Attended/Activities
American Society for Horticultural Science	Member since 2014. Attended the 2025 national meeting in New Orleans, where I gave a talk on the Growing the Valley podcast.

Disciplinary Society/Prof. Assoc Name	Membership/Meetings Attended/Activities
	Currently the chair of the Nuts Professional Interest Group
International Society for Horticultural Science	Member since 2018. Attended the Orchard Systems conference in January 2025, presented a poster of my nitrogen and phosphorus fertilization trial in non-bearing pistachios

Evidence of Professional Competency

Begin Date - End Date	Location	Name, Description and Occurrence of Award, Recognition, Professional Presentation, Office or Activity
Nov 29, 2021 (Ongoing)	Online	Serving on IoT4Ag board
Jan 17, 2024	HortScience	Peer review for HortScience
Mar 27, 2024	Online	Favorite extension methods webinar
Apr 23, 2024	Online	Off record talk with reporter
Sep 1, 2024 - Jan 31, 2025	Zoom	Regen Score committee member
Sep 23, 2024	Hawaii	Fatal flaws of experimental almond varieties and selections (ASHS - presentation done by a colleague)
Nov 19, 2024	Davis	Results from an evaluation survey of Growing the Valley Podcast
Jan 20, 2025 - Jan 24, 2025	Napier, New Zealand	[Poster] Nitrogen and phosphorus fertilization of first-year pistachio trees, presented at ISHS Orchard Systems
Mar 6, 2025	San Diego, California	IPM symposium on engaging with clientele
Sabbatical begins March 17, 2025		

Begin Date - End Date	Location	Name, Description and Occurrence of Award, Recognition, Professional Presentation, Office or Activity
Jul 31, 2025	New Orleans	Efficacy of podcasting as an educational tool

C. University Service

Begin Date - End Date	Name, Description, and Occurrence of Activity	Org Level	Your Contribution and Leadership Role
Mar 26, 2021 (Ongoing)	PECC organizing committee	Division-wide	Committee member
Jan 17, 2024 - Dec 31, 2024	UCANR mentorship program	Division-wide	Mentor
May 14, 2024	How to gain expertise (presented at the Pomology Crash Course for Pomology and Pomology Adjacent Advisors)	State	Invited speaker
May 15, 2024	Interpreting soil, plant tissue, water reports (presented at the Pomology Crash Course for Pomology and Pomology Adjacent Advisors)	State	Invited Speaker
Sep 1, 2024 - Jan 31, 2025	Regen Score committee member	State	committee member
Sep 20, 2024 - Jan 19, 2025	Committee chair for AP 24-17	Division-wide	Hiring committee chair
Sabbatical begins March 17, 2025			
Jun 1, 2025 - Oct 31, 2025	Chair for ASHS NUTS professional interest group	National	Chair

D. Public Service

Begin Date - End Date	Name, Description, and Occurrence of Activity	Org Level	Your Contribution and Leadership Role
Nov 6, 2023	Field visit for Fresno State pomology class	Region	Invited speaker
Feb 6, 2024	Poster competition judge for Future Farmers of America	State	Judge
Apr 20, 2024	FFA judge – regional orchard judge	Region	Judge
Feb 4, 2025	Cafe Scientifique	Region	Invited Speaker
Feb 14, 2025	Fresno State Graduate Student Seminar	Region	Invited Speaker
Sabbatical begins March 17, 2025			

E. Extension Activities

Meetings Organized

Begin Date - End Date	Meeting Name and Type	Topic/no. of repetitions	Role	Location(s)	Total No. of Attendees
Agricultural Productivity and Sustainability (6)					
Mar 22, 2024	Madera County Almond Day	Almond meeting covering research updates / 1	Sole organizer	Madera, California	40
Apr 9, 2024	Madera/Merced Pistachio Day	Pistachio meeting covering research updates / 1	Sole organizer	Madera	30
Jan 14, 2025	Advances in Orchard Irrigation Management Workshop	Irrigation management / 1	Sole organizer	Madera	21

Begin Date - End Date	Meeting Name and Type	Topic/no. of repetitions	Role	Location(s)	Total No. of Attendees
Feb 4, 2025	Madera County Almond Day	Almond meeting covering research updates / 1	Sole organizer	Madera	40
Mar 13, 2025	Merced/Madera Pistachio Day	Pistachio meeting covering research updates / 1	Sole organizer	Merced	30
Apr 29, 2025	Almond Variety Trial Field Day	Field Day for a long-term research project / 1	Co-organizer and speaker	Chowchilla, California	43
Sabbatical begins March 17, 2025					

Educational Presentations

Invited talks are highlighted in purple

Begin Date - End Date	Meeting Name/Event	Presentation Topic/no. of repetitions	Location(s)	No. of Attendees
Agricultural Productivity and Sustainability (15)				
Nov 8, 2023	FREP 2023 meeting	Phosphorus fertilization of newly planted almond trees / 1	Modesto, California	90
Nov 10, 2023	Fruit and Nut Expo	Phosphorus fertilization of newly planted almond trees / 1	Fresno	42
Nov 16, 2023	IKD research update	IKD research update for Maricopa Orchards / 1	Cantua Creek	7
Dec 5, 2023 - Dec 7, 2023	[Poster] Field Evaluation of Almond Varieties	Poster / 1	Sacramento, California	Unknown

Begin Date - End Date	Meeting Name/Event	Presentation Topic/no. of repetitions	Location(s)	No. of Attendees
Dec 5, 2023 - Dec 7, 2023	[Poster] Evaluation of Hull Metabolites for Hull Rot Sensitivity	Poster presentation / 1	Sacramento, California	Unknown
Jan 10, 2024	Almond nutrient summit	Soil preparation and nutrient amendments / 1	Merced, California	150
Mar 5, 2024	Irrigation management of tree crops	Irrigation management / 1	Merced, California	31
Mar 22, 2024	Regional Almond Variety Trial Update	Almond varieties / 1	Madera	40
Jun 5, 2024	Managing non-bearing orchards	Nitrogen management of non-bearing pistachios / 1	Bakersfield, California	43
Oct 13, 2024	Nitrogen and Irrigation Management of Pistachios	Nitrogen and Irrigation Management of Pistachios / 1	Anaheim, California	22
Oct 15, 2024	Continuing Education for Pest Management Professionals	Plant bug management in pistachios / 1	Merced	52
Oct 17, 2024	Merced Farm Bureau continuing education talk	Plant bug management and fertilization trials / 1	Merced	9
Dec 11, 2024	[Poster] Regional evaluation of almond varieties, 3rd generation	Presenting research results / 1	Sacramento	Unknown
Dec 11, 2024	[Poster] Evaluation of Hull Metabolites for Hull Rot Sensitivity	Presenting research results / 1	Sacramento	Unknown
Feb 3, 2025	2025 North Sac Valley Prune Day	Presented on potassium fertilization / 1	Red Bluff, CA	67

Begin Date - End Date	Meeting Name/Event	Presentation Topic/no. of repetitions	Location(s)	No. of Attendees
Feb 18, 2025 - Feb 25, 2025	Young orchard workshop	Nitrogen and phosphorus fertilization rates for 1st leaf pistachio orchards / 3	Stockton, Madera, KARE	104
Sabbatical begins March 17, 2025				

Other (including TV and/or radio interviews/programs, newspaper/trade magazine interviews)

Begin Date - End Date	Topic	Name of Media or Publication
Agricultural Productivity and Sustainability (3)		
Nov 21, 2023	Nutrition topics	Punjabi Radio USA
Jun 4, 2024	Current topics in nut crop management	Punjabi Radio USA
Nov 5, 2024	Fall orchard tasks	Punjabi Radio USA
Sabbatical begins March 17, 2025		

Bibliography

Article type	During review period	Career total
Peer-reviewed scholarly journal publications	**5**	**9**
Conference proceedings	**3**	**6**
Popular press articles	**26**	**189**
Technical reports	**8**	**29**
Published abstracts	**2**	**4**

PEER REVIEWED

B - Peer-reviewed scholarly journal publications

[Accepted for publication September 20, 2025] Gordon, Phoebe; Shellabarger, Rachel; Milliron, Luke. Listening to podcasts improves learning outcomes among California orchard growers. *HortTechnology*

Ahumada, Daisy; Johnson, Andrew; Cortez, Felipe; Gordon, Phoebe; Culumber, Mae; Rizzo, David (2025). Ganoderma adspersum, the Cause of Extensive Wood Decay of Almond Trees in California Orchards. *Plant Disease*. *109*(8), pp.1753-1759.

Trouillas, Florent; Hernandez-Rosas, Alejandro Ivan; Frias, Rosa; Maguvu, Tawanda E.; Zuber, Cameron; Gordon, Phoebe; Holtz, Brent (2025). First Report of Polystigma amygdalinum Causing Red Leaf Blotch of Almond in California. *Plant Disease*. (ja)

Maguvu, Tawanda; Frias, Rosa; Hernandez-Rosas, Alejandro; Holtz, Brent; Niederholzer, Franz; Duncan, Roger; Yaghmour, Mohammad; Culumber, Mae; Gordon, Phoebe; Vieira, Flavia; Rolshausen, Philippe; Adaskaveg, James; Burbank, Lindsay; Lindow, Lindsay; Trouillas, Florent (2024). Phylogenomic analyses and comparative genomics of Pseudomonas syringae associated with almond (Prunus dulcis) in California. *PLOS One*. *19*(4), p.e0297867

Gordon, Phoebe; Ott, Jamie, et al. (2024). Phosphorus Fertilization Can Improve Young Almond Tree Growth in Multiple Replant Settings. *HortTechnology*. 34:2. P. 161-171

Conference Proceedings

Gordon, Phoebe; Lampinen, Bruce; Milliron, Luke; Duncan, Roger; Lightle, Danielle; Connell, Joseph; Brar, Raman; Reyes, Clarissa (2024). Early results from an almond cultivar trial in Californiaâ??s Central Valley. *Acta Hortic*. 1406, 67-70. October.

Sideli, Gina; DeJong, Ted; Saa, Sebastian; Lampinen, Bruce; Milliron, Luke; Phoebe, Gordon; Duncan, Roger; Gradziel, Tom (2024). Stability analysis and relationships between traits reveal specific and general adaptability of California varieties/selections from Regional Variety Trials in almond. *Acta Hortic*. 1406, 51-58. October.

Holtz, Brent; Culumber, Mae; Zuber, Cameron; Browne, Greg; Doll, David; Jahanzad, Emad; Yaghmour, Mohammad; Niederholzer, Franz; Gordon, Phoebe; Poret-Peterson, Amisha; Gao, Sudan; Gaudin, Amelie (2024). Whole almond orchard recycling and the effect on second generation tree growth, yield, and soil fertility. *Acta Hortic*. 1406, 217-224. October.

NON-PEER REVIEWED

A - Popular press articles

Newsletter or magazine articles

Gordon, Phoebe (2024). December Pistachio Tasks. *Pacific Nut Producer*. December.

Gordon, Phoebe (2024). October Pistachio Tasks. *Pacific Nut Producer*. October.

Gordon, Phoebe; Browne, Greg; Ott, Jamie; Holtz, Brent (2024). Phosphorus fertilization is beneficial for newly planted almond trees. *Pacific Nut Producer*. March.

Gordon, Phoebe (2024). Early results from a fertilization trial show 1st leaf pistachios don't respond to phosphorus fertilization. *West Coast Nut*. March.

Gordon, Phoebe (2023). December Pistachio Tasks. *Pacific Nut Producer*. December.

Gordon, Phoebe (2023). October Pistachio Tasks. *Pacific Nut Producer*. October.

Growing the Valley Podcast episodes

Gaudin, Amelie; Gordon, Phoebe (2025). What is regenerative agriculture? *Growing the Valley Podcast*. August 25. https://growingthevalleypodcast.com

Fichtner, Elizabeth; Gordon, Phoebe (2025). Walnut scale. *Growing the Valley Podcast*. August 20. https://growingthevalleypodcast.com

Orozco, Jessica; Zwieniecki, Maciej; Gordon, Phoebe (2025). The effects of wildfire smoke on nut crops. *Growing the Valley Podcast*. March 4. https://growingthevalleypodcast.com

Jarvis-Shean, Katherine; Saldate, Richard; Gordon, Phoebe (2025). Walnut rest-breaking agents. *Growing the Valley Podcast*. February 19. https://growingthevalleypodcast.com

Zwieniecki, Maciej; Jarvis-Shean, Katherine; Saldate, Richard; Gordon, Phoebe (2025). Nonstructural carbohydrates, dormancy, and bloom of tree nuts. *Growing the Valley Podcast*. February 12. https://growingthevalleypodcast.com

Sandovol Solis, Sam; Saldate, Richard; Gordon, Phoebe (2025). 2025 water outlook. *Growing the Valley Podcast*. February 7. https://growingthevalleypodcast.com

Saa, Sebastian; Marino, Giulia; Ferguson, Louise; Saldate, Richard; Gordon, Phoebe (2025). Tree nut production and water use outside of the United States. *Growing the Valley Podcast*. January 29. https://growingthevalleypodcast.com

Rijal, Jhalendra; Saldate, Richard; Gordon, Phoebe (2024). Carpophilus truncatus update. *Growing the Valley Podcast*. November 12. https://growingthevalleypodcast.com

Duncan, Roger; Milliron, Luke; Gordon, Phoebe (2024). Almond variety trial 10 years in. *Growing the Valley Podcast*. October 28. https://growingthevalleypodcast.com

Amaral, Doug; Saldate, Richard; Gordon, Phoebe (2024). Nitrogen uptake of Golden Hills and Lost Hills. *Growing the Valley Podcast*. October 15. https://growingthevalleypodcast.com

Marino, Giulia; Saldate, Richard; Gordon, Phoebe (2024). Are we measuring chill incorrectly? *Growing the Valley Podcast*. October 1. https://growingthevalleypodcast.com

Kisekka, Isaya; Saldate, Richard; Gordon, Phoebe (2024). Passive plant water status measurement devices. *Growing the Valley Podcast*. September 17. https://growingthevalleypodcast.com

Wilson, Houston; Saldate, Richard; Gordon, Phoebe (2024). Sterile insect technique update. *Growing the Valley Podcast*. June 26. https://growingthevalleypodcast.com

Trouillas, Florent; Saldate, Richard; Gordon, Phoebe (2024). The 2023 aerial phytophthora outbreak in almonds. *Growing the Valley Podcast*. May 21. https://growingthevalleypodcast.com

Poret-Peterson, Amisha; Saldate, Richard; Gordon, Phoebe (2024). Soil microbiome basics. *Growing the Valley Podcast*. 249. April 16. https://growingthevalleypodcast.com

Zaccaria, Daniele; Saldate, Richard; Gordon, Phoebe (2024). Daniele Zaccaria on cover crop research in pistachios. *Growing the Valley Podcast*. March 26. growingthevalleypodcast.com

Wilson, Houston; Saldate, Richard; Gordon, Phoebe (2024). Carpophilus truncatus with Houston Wilson. *Growing the Valley Podcast*. 245. March 12. growingthevalleypodcast.com

Trouillas, Florent; Saldate, Richard; Gordon, Phoebe (2024). Florent Trouillas on the use of Orondis in Pistachios. *Growing the Valley Podcast*. 243. February 27. growingthevalleypodcast.com

Sandovol Solis, Samuel; Saldate, Richard; Gordon, Phoebe (2024). 2024 Water Outlook with Sam Sandovol Solis. *Growing the Valley Podcast*. 241. February 6. growingthevalleypodcast.com

Goodrich, Brittney; Saldate, Richard; Gordon, Phoebe (2024). 2024 Bee Outlook with Brittney Goodrich. *Growing the Valley Podcast*. 239. January 23. growingthevalleypodcast.com

D - Technical reports and other non-reviewed articles

Gordon, Phoebe; Duncan, Roger; Milliron, Luke; Arredondo, Jocelyn; Caldera, Karla; Wheeler-Dykes, Becky; Ott, Jamie; Lampinen, Bruce; Brar, Raman; Gradziel, Tom; Metcalf, Sam; Contador, Maria; Marchand, Sabrina; Marchand, Misha; Connell, Joe (2025). Field evaluation of almond varieties. *Almond research reports*.

Gordon, Phoebe; Yaghmour, Mohammad; Duncan, Roger (2025). Examination of hull metabolites in hull rot sensitive and tolerant cultivars. *Almond research reports*.

Gordon, Phoebe; Drakakaki, Georgia; Wang, Minmin (2024). Investigating the role of applied water in pistachio kernel discoloration. *Pistachio research reports*.

Gordon, Phoebe; Duncan, Roger; Milliron, Luke; Arredondo, Jocelyn; Caldera, Karla; Wheeler-Dykes, Becky; Ott, Jamie; Lampinen, Bruce; Brar, Raman; Gradziel, Tom; Metcalf, Sam; Contador, Maria; Marchand, Sabrina; Marchand, Misha; Connell, Joe (2024). Field evaluation of almond varieties. *Annual almond research reports*.

Gordon, Phoebe; Yaghmour, Mohammad; Duncan, Roger (2024). Examination of hull metabolites in hull rot sensitive and tolerant cultivars. *Almond research reports*.

Gordon, Phoebe; Amaral, Doug (2024). Determining non-bearing pistachio nitrogen and phosphorus needs, year 3. *Pistachio research reports*.

Gordon, Phoebe; Drakakaki, Georgia; Wang, Minmin; Shuxiao, Zhang; Zanfano, Marta Ines Saludes; Amaral, Doug; Fichtner, Elizabeth (2023). Determining severity of Internal Kernel Discoloration Incidence in Pistachio Cultivars, year 2. *Pistachio research reports*.

Gordon, Phoebe; Amaral, Doug (2023). Determining non-bearing pistachio nitrogen and phosphorus needs, year 2. *Pistachio research reports*.

E - Published abstracts

Gordon, Phoebe; Milliron, Luke; Shellabarger, Rachel (2025). Efficacy of podcasting as an extension format. *HortScience*. 60(7S), S260-S261.

Milliron, Luke; Gordon, Phoebe; Duncan, Roger (2025). Strengths of Tested Almond Varieties and Selections in Three California Trials (Abstr.). *HortScience*. S8.

Completed Award Transaction Report

Investigator Name: Phoebe Gordon
Period of Review: Oct 1, 2023 - Sep 30, 2025
GTS Search Period: 10/01/2021 - 10/24/2025

**A single award may have multiple rows if multiple transactions occurred during the search period. Example: An award being funded via annual amendments would have a transaction row for each amendment. Do not sum the Cumulative Awarded Amount column as it may count the same award total multiple times.*
***The Cumulative Award Amount for a project reflects the total amount of funds authorized by the sponsor to date, not the anticipated total award amount, if different. Example: Project is being funded via annual amendments and we're anticipating a 5-year award but have only been authorized years 1 and 2 to date.*
****This list of funded awards may not include all of the investigator's projects. Some examples of potential discrepancies include:*
1) Projects where the transaction authorizing the award occurred outside of the search period. Example: The initial award was issued for the full five year amount upfront and there was not a subsequent transaction during the search period.
2) Projects supported by donor/gift accounts or internal grants.
3) When GTS information on the project's Investigator tab is incomplete. Example: An Academic Coordinator was hired after the award so they may not be listed as a collaborator on the project in GTS.
4) Unfunded Collaborations where no subaward was issued to ANR.

GTS Number	PI Last Name	PI First Name	Unit Name	Sponsor Name	Prime Sponsor Name	Title	Award Numbe	Project Type	Description	Free Text Description	Final Project Start Date	Final Project End Date	Transaction Total	Cumulative Awarded Amoun	Process Date
Y24-7274	Gordon	Phoebe	UCCE Madera County	ALMOND BOARD OF CALIFORNIA	ALMOND BOARD OF CALIFORNIA	Evaluation of the drought tolerance of commercially available almond rootstocks	INSH10	Applied Research	New		4/30/2025	7/31/2034	$1,625,531.00	$1,625,531.00	5/29/2025
Y24-7435	Gordon	Phoebe	UCCE Fresno Madera MCP	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Determining non-bearing pistachio nitrogen and phosphorus needs, year 4	HAA-2025-25	Applied Research	New		2/21/2025	2/20/2026	$67,500.89	$67,500.89	2/24/2025
Y21-5467	Bali	Khaled	Kearney REC	CAL DEPT OF FOOD AND AGRICULTURE (CDFA)	CAL DEPT OF FOOD AND AGRICULTURE (CDFA)	Management Strategies for Mitigating Water Infiltration Problems in Almond and Pistachio Orchards in the Central Valley	21-0001-039-SF	Applied Research	New		11/1/2021	4/30/2024	$444,283.00	$444,283.00	12/13/2021
Y21-5467	Bali	Khaled	Kearney REC	CAL DEPT OF FOOD AND AGRICULTURE (CDFA)	CAL DEPT OF FOOD AND AGRICULTURE (CDFA)	Management Strategies for Mitigating Water Infiltration Problems in Almond and Pistachio Orchards in the Central Valley	21-0001-039-SF	Applied Research	Prior Approval	LISR1	11/1/2021	4/30/2024	$0.00	$444,283.00	8/20/2024
Y20-5192	Milliron	Luke	UCCE Butte County	UC DAVIS	ALMOND BOARD OF CALIFORNIA	Field Evaluation of Almond Varieties 2019-22 (Butte County)	A20-0833-S005	Applied Research	Change in Time and Money	AMD 3	8/1/2019	12/31/2022	$17,165.00	$50,010.00	2/22/2022
Y21-5584	Randhawa	Karmjot	UCCE Fresno County	CALIFORNIA PRUNE BOARD	CALIFORNIA PRUNE BOARD	Regional Research Support for UC Farm Advisors- Prune Board	Y21-5584	Applied Research	Change in Time and Money	Amd 1 and 2	8/1/2021	7/31/2024	$23,110.00	$69,697.00	9/11/2022
Y21-5584	Randhawa	Karmjot	UCCE Fresno County	CALIFORNIA PRUNE BOARD	CALIFORNIA PRUNE BOARD	Regional Research Support for UC Farm Advisors- Prune Board	Y21-5584	Applied Research	Change in Time and Money	Amd 3	8/1/2021	7/31/2024	$20,283.00	$69,697.00	11/8/2023
Y21-5617	Randhawa	Karmjot	UCCE Fresno County	ALMOND BOARD OF CALIFORNIA	ALMOND BOARD OF CALIFORNIA	Regional Research Support for UC Farm Advisors-Almond Board	Y21-5617	Applied Research	Change in Time and Money	Amd 1 and 2	8/1/2021	7/31/2024	$134,809.00	$408,376.00	9/11/2022
Y21-5617	Randhawa	Karmjot	UCCE Fresno County	ALMOND BOARD OF CALIFORNIA	ALMOND BOARD OF CALIFORNIA	Regional Research Support for UC Farm Advisors-Almond Board	Y21-5617	Applied Research	Change in Time and Money	Amd 3	8/1/2021	7/31/2024	$120,338.00	$408,376.00	11/8/2023
Y21-5618	Randhawa	Karmjot	UCCE Fresno County	CALIFORNIA WALNUT BOARD	CALIFORNIA WALNUT BOARD	Regional Research Support for UC Farm Advisors-Walnut Board	Y21-5618	Applied Research	Change in Time and Money	Amd 1 and 2	8/1/2021	7/31/2024	$129,138.00	$370,572.00	9/11/2022
Y21-5618	Randhawa	Karmjot	UCCE Fresno County	CALIFORNIA WALNUT BOARD	CALIFORNIA WALNUT BOARD	Regional Research Support for UC Farm Advisors-Walnut Board	Y21-5618	Applied Research	Change in Time and Money	Amd 3	8/1/2021	7/31/2024	$94,612.00	$370,572.00	11/8/2023
Y21-5619	Randhawa	Karmjot	UCCE Fresno County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Regional Research Support for UC Farm Advisors-Pistachio Research Board	Y21-5619	Applied Research	Change in Time and Money	Amd 1 and 2	8/1/2021	7/31/2024	$99,164.00	$296,377.00	9/11/2022
Y21-5619	Randhawa	Karmjot	UCCE Fresno County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Regional Research Support for UC Farm Advisors-Pistachio Research Board	Y21-5619	Applied Research	Change in Time and Money	Amd 3	8/1/2021	7/31/2024	$84,534.00	$296,377.00	11/8/2023
Y24-7381	Randhawa	Karmjot	UCCE Fresno County	ALMOND BOARD OF CALIFORNIA	ALMOND BOARD OF CALIFORNIA	Regional Research Support for UC Farm Advisors-Almond Board - 24/25	Y24-7381	Applied Research	New		8/1/2024	7/31/2025	$152,636.00	$152,636.00	1/20/2025
Y24-7381	Randhawa	Karmjot	UCCE Fresno County	ALMOND BOARD OF CALIFORNIA	ALMOND BOARD OF CALIFORNIA	Regional Research Support for UC Farm Advisors-Almond Board - 24/25	Y24-7381	Applied Research	Advance Account	Adv Account - Almond	8/1/2024	7/31/2025	$0.00	$152,636.00	11/8/2024
Y24-7382	Randhawa	Karmjot	UCCE Fresno Madera MCP	CALIFORNIA WALNUT BOARD	CALIFORNIA WALNUT BOARD	Regional Research Support for UC Farm Advisors-Walnut Board - 24/25	Y24-7382	Applied Research	New		8/1/2024	7/31/2025	$137,040.00	$137,040.00	1/20/2025
Y24-7382	Randhawa	Karmjot	UCCE Fresno Madera MCP	CALIFORNIA WALNUT BOARD	CALIFORNIA WALNUT BOARD	Regional Research Support for UC Farm Advisors-Walnut Board - 24/25	Y24-7382	Applied Research	Advance Account	Adv Account - Walnut	8/1/2024	7/31/2025	$0.00	$137,040.00	11/8/2024
Y24-7383	Randhawa	Karmjot	UCCE Fresno County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Regional Research Support for UC Farm Advisors-Pistachio Research Board - 24/25	Y24-7383	Applied Research	New		8/1/2024	7/31/2025	$120,684.00	$120,684.00	1/20/2025
Y24-7383	Randhawa	Karmjot	UCCE Fresno County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Regional Research Support for UC Farm Advisors-Pistachio Research Board - 24/25	Y24-7383	Applied Research	Advance Account	Adv Account - Pistachio	8/1/2024	7/31/2025	$0.00	$120,684.00	11/8/2024
Y24-7384	Randhawa	Karmjot	UCCE Fresno County	CALIFORNIA PRUNE BOARD	CALIFORNIA PRUNE BOARD	Regional Research Support for UC Farm Advisors- Prune Board - 24/25	Y24-7384	Applied Research	New		8/1/2024	7/31/2025	$17,897.00	$17,897.00	1/20/2025
Y24-7384	Randhawa	Karmjot	UCCE Fresno County	CALIFORNIA PRUNE BOARD	CALIFORNIA PRUNE BOARD	Regional Research Support for UC Farm Advisors- Prune Board - 24/25	Y24-7384	Applied Research	Advance Account	Adv Account - Prune	8/1/2024	7/31/2025	$0.00	$17,897.00	11/8/2024
Y25-7753	Wheeler-Dykes	Becky	UCCE Glenn County	ALMOND BOARD OF CALIFORNIA	ALMOND BOARD OF CALIFORNIA	Regional Research Support for UC Farm Advisors - Almond Board - FY 25/26	Y25-7753	Applied Research	Advance Account	New	8/1/2025	7/31/2026	$0.00	$74,482.00	7/30/2025
Y25-7753	Wheeler-Dykes	Becky	UCCE Glenn County	ALMOND BOARD OF CALIFORNIA	ALMOND BOARD OF CALIFORNIA	Regional Research Support for UC Farm Advisors - Almond Board - FY 25/26	Y25-7753	Applied Research	New		8/1/2025	7/31/2026	$74,482.00	$74,482.00	9/3/2025
Y25-7755	Wheeler-Dykes	Becky	UCCE Glenn County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Regional Research Support for UC Farm Advisors - Pistachio Board - FY 25/26	Y25-7755	Applied Research	Advance Account	New	8/1/2025	7/31/2026	$0.00	$99,816.00	7/30/2025
Y25-7755	Wheeler-Dykes	Becky	UCCE Glenn County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Regional Research Support for UC Farm Advisors - Pistachio Board - FY 25/26	Y25-7755	Applied Research	New		8/1/2025	7/31/2026	$99,816.00	$99,816.00	9/3/2025
Y19-4766	Yaghmour	Mohammad	UCCE Kern County	ALMOND BOARD OF CALIFORNIA	ALMOND BOARD OF CALIFORNIA	Investigation of Aspergillus niger Causing Hull Rot, and Conditions Conducive to Disease Development in Kern County - 2019-2021	PATH18	Applied Research	Change in Money	Deobligation	8/1/2019	9/30/2023	($3,222.00)	$33,004.00	12/2/2021
Y19-4766	Yaghmour	Mohammad	UCCE Kern County	ALMOND BOARD OF CALIFORNIA	ALMOND BOARD OF CALIFORNIA	Investigation of Aspergillus niger Causing Hull Rot, and Conditions Conducive to Disease Development in Kern County - 2019-2021	PATH18	Applied Research	Change in Money	A02 - Year 3 Funds Approved	8/1/2019	9/30/2023	$3,222.00	$33,004.00	6/21/2023
Y19-4930	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Evaluation of Salinity, Boron, and Soil Hypoxia on Pistachio Tree Growth	HA-2020-17	Applied Research	Change in Time	NCTE 2	3/1/2020	12/31/2025	$0.00	$69,124.00	1/21/2022
Y19-4930	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Evaluation of Salinity, Boron, and Soil Hypoxia on Pistachio Tree Growth	HA-2020-17	Applied Research	Change in Time	NCTE 4	3/1/2020	12/31/2025	$0.00	$69,124.00	3/4/2025
Y19-4930	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Evaluation of Salinity, Boron, and Soil Hypoxia on Pistachio Tree Growth	HA-2020-17	Applied Research	Change in Time	NCTE 3	3/1/2020	12/31/2025	$0.00	$69,124.00	3/20/2023
Y20-5171	Gordon	Phoebe	UCCE Madera County	**UC DAVIS (Revised - originally listed as Almond Board**	ALMOND BOARD OF CALIFORNIA	Regional Almond Variety Trial	A20-0833-S002-Amendment 2	Applied Research	Change in Time and Money	AMD 3	8/1/2019	12/31/2022	$17,645.00	$51,485.00	2/22/2022
Y21-5870	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Determining non-bearing pistachio nitrogen and phosphorus needs	HA-2022-20	Applied Research	New		3/1/2022	2/28/2025	$68,485.00	$68,485.00	2/28/2022
Y21-5870	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Determining non-bearing pistachio nitrogen and phosphorus needs	HA-2022-20	Applied Research	Change in Time	NCTE to 022825	3/1/2022	2/28/2025	$0.00	$68,485.00	2/21/2024
Y21-5870	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Determining non-bearing pistachio nitrogen and phosphorus needs	HA-2022-20	Applied Research	Change in Time	NCTE	3/1/2022	2/28/2025	$0.00	$68,485.00	2/21/2023
Y21-5877	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Evaluating commercially available passive plant water status measurement devices	HA-2022-21	Applied Research	New	New	3/1/2022	2/28/2025	$33,969.00	$33,969.00	2/28/2022
Y21-5877	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Evaluating commercially available passive plant water status measurement devices	HA-2022-21	Applied Research	Change in Time	NCTE to 02/28/2025	3/1/2022	2/28/2025	$0.00	$33,969.00	2/23/2024
Y21-5877	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Evaluating commercially available passive plant water status measurement devices	HA-2022-21	Applied Research	Change in Time	No Cost Time Extension 1	3/1/2022	2/28/2025	$0.00	$33,969.00	2/21/2023
Y21-5882	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Evaluation of salinity, boron, and soil hypoxia on pistachio tree growth, year 3	HA-2022-22	Applied Research	New	New	3/1/2022	12/31/2025	$57,020.00	$57,020.00	2/28/2022
Y21-5882	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Evaluation of salinity, boron, and soil hypoxia on pistachio tree growth, year 3	HA-2022-22	Applied Research	Change in Time	NCTE #3	3/1/2022	12/31/2025	$0.00	$57,020.00	3/4/2025
Y21-5882	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Evaluation of salinity, boron, and soil hypoxia on pistachio tree growth, year 3	HA-2022-22	Applied Research	Change in Time	NCTE to 02/28/2025	3/1/2022	12/31/2025	$0.00	$57,020.00	2/23/2024
Y21-5882	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Evaluation of salinity, boron, and soil hypoxia on pistachio tree growth, year 3	HA-2022-22	Applied Research	Change in Time	NCTE 1	3/1/2022	12/31/2025	$0.00	$57,020.00	2/21/2023
Y22-5988	Gordon	Phoebe	UCCE Madera County	ALMOND BOARD OF CALIFORNIA	ALMOND BOARD OF CALIFORNIA	Examination of hull metabolites in hull rot sensitive and resistant almond cultivars	PEST03	Applied Research	New	New	4/24/2023	12/31/2025	$50,968.80	$50,968.80	5/16/2023
Y22-5988	Gordon	Phoebe	UCCE Madera County	ALMOND BOARD OF CALIFORNIA	ALMOND BOARD OF CALIFORNIA	Examination of hull metabolites in hull rot sensitive and resistant almond cultivars	PEST03	Applied Research	Change in Time	NCTE	4/24/2023	12/31/2025	$0.00	$50,968.80	2/10/2025
Y22-6046	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Determining severity of Internal Kernel Discoloration Incidence in Pistachio Cultivars	Y22-6046	Applied Research	New	New	3/1/2022	2/29/2024	$22,175.00	$22,175.00	5/31/2022
Y22-6046	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Determining severity of Internal Kernel Discoloration Incidence in Pistachio Cultivars	Y22-6046	Applied Research	Change in Time	NCTE 1	3/1/2022	2/29/2024	$0.00	$22,175.00	2/21/2023
Y22-6302	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Determining non-bearing pistachio nitrogen and phosphorus needs	HA-2023-16	Applied Research	New	New	2/22/2023	2/28/2025	$26,547.33	$26,547.33	4/9/2023
Y22-6302	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Determining non-bearing pistachio nitrogen and phosphorus needs	HA-2023-16	Applied Research	Change in Time	NCTE to 022825	2/22/2023	2/28/2025	$0.00	$26,547.33	2/22/2024
Y22-6316	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Determining severity of Internal Kernel Discoloration Incidence in Pistachio Cultivars, year 2	HP-2023-34	Applied Research	Change in Time	Correcting project dates	12/1/2022	2/28/2025	$0.00	$61,822.10	5/16/2023

Y22-6316	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Determining severity of Internal Kernel Discoloration Incidence in Pistachio Cultivars, year 2	HP-2023-34	Applied Research	Change in Time	NCTE to 022825	12/1/2022	2/28/2025	$0.00	$61,822.10	2/21/2024
Y22-6316	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Determining severity of Internal Kernel Discoloration Incidence in Pistachio Cultivars, year 2	HP-2023-34	Applied Research	New	New	12/1/2022	2/28/2025	$61,822.10	$61,822.10	4/3/2023
Y23-6360	Gordon	Phoebe	UCCE Madera County	UC DAVIS	CAL DEPT OF FOOD AND AGRICULTURE (CDFA)	Limited Irrigation Management and Smart Water Technologies for the Pistachio Orchard of the Future	A24-0159-S001 HORT2 Amendment 2 -	Applied Research	New	New Award	11/1/2023	6/30/2026	$21,193.23	$21,193.23	5/31/2024
Y23-6415	Gordon	Phoebe	UCCE Madera County	ALMOND BOARD OF CALIFORNIA	ALMOND BOARD OF CALIFORNIA	Regional Almond Variety Trial	UC ANR	Research	New	New Award	8/1/2019	12/31/2025	$107,158.27	$107,158.27	3/21/2023
Y23-6852	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Determining non-bearing pistachio nitrogen and phosphorus needs, year 3	HA-2024-25	Applied Research	Change in Time	NCTE 1	3/1/2024	12/31/2025	$0.00	$63,571.00	12/17/2024
Y23-6852	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Determining non-bearing pistachio nitrogen and phosphorus needs, year 3	HA-2024-25	Applied Research	New	New Award	3/1/2024	12/31/2025	$63,571.00	$63,571.00	2/27/2024
Y23-6870	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Investigating the role of applied water in Internal Kernel Discoloration	HA-2024-24	Applied Research	Change in Time	NCTE	3/1/2024	12/31/2025	$0.00	$51,181.00	12/17/2024
Y23-6870	Gordon	Phoebe	UCCE Madera County	CALIFORNIA PISTACHIO RESEARCH BOARD	CALIFORNIA PISTACHIO RESEARCH BOARD	Investigating the role of applied water in Internal Kernel Discoloration	HA-2024-24	Applied Research	New		3/1/2024	12/31/2025	$51,181.00	$51,181.00	2/27/2024
Y18-4401	Mashiri	Fadzayi	UCCE Mariposa County	MONTANA STATE UNIVERSITY (INCL WESTERN SARE)	USDA NATIONAL INSTITUTE OF FOOD AND AGRICULTURE (NIFA)	Quantifying the effects of rangeland conversion on ecosystem functions: Linking land use systems to enhance farm profitability	G255-19-W7500	Applied Research	Change in Time	Amd 2	7/1/2019	2/28/2023	$0.00	$349,327.00	3/2/2022
Y18-4401	Mashiri	Fadzayi	UCCE Mariposa County	MONTANA STATE UNIVERSITY (INCL WESTERN SARE)	USDA NATIONAL INSTITUTE OF FOOD AND AGRICULTURE (NIFA)	Quantifying the effects of rangeland conversion on ecosystem functions: Linking land use systems to enhance farm profitability	G255-19-W7500	Applied Research	Change in Time	Amend 3	7/1/2019	2/28/2023	$0.00	$349,327.00	1/17/2023
Y20-5175	Duncan	Roger	UCCE Stanislaus County	UC DAVIS	ALMOND BOARD OF CALIFORNIA	Field Evaluation of Almond Varieties 2019-20	A20-0833-S004	Applied Research	Change in Time and Money	AMD 3	8/1/2019	12/31/2022	$17,165.00	$50,010.00	2/22/2022
Y20-5175	Duncan	Roger	UCCE Stanislaus County	UC DAVIS	ALMOND BOARD OF CALIFORNIA	Field Evaluation of Almond Varieties 2019-20	A20-0833-S004	Applied Research	Other	Additional funds and time and PI Change and moved to Y23-6403	8/1/2019	12/31/2022	$0.00	$50,010.00	4/11/2023
Y22-6013	Niederholzer	Franz	UCCE Sutter and Yuba County	CALIFORNIA PRUNE BOARD	CALIFORNIA PRUNE BOARD	Heat at bloom risk_2022	PN 21-20	Applied Research	New	ATF Proposal with Award	4/1/2022	3/31/2024	$14,000.00	$14,000.00	4/26/2022
Y22-6013	Niederholzer	Franz	UCCE Sutter and Yuba County	CALIFORNIA PRUNE BOARD	CALIFORNIA PRUNE BOARD	Heat at bloom risk_2022	PN 21-20	Applied Research	Change in Time	Amd 1 NCTE	4/1/2022	3/31/2024	$0.00	$14,000.00	4/29/2023
Y22-6134	Jarvis-Shean	Katherine	UCCE Yolo County	CAL DEPT OF FOOD AND AGRICULTURE (CDFA)	USDA AGRICULTURAL MARKETING SERVICE	Increasing California Specialty Crop Competitiveness by Understanding and Addressing Farmworker Technical Training Priorities	22-0001-013-SF	Applied Research	New		11/1/2022	6/30/2025	$487,064.00	$487,064.00	12/13/2022
Y22-6134	Jarvis-Shean	Katherine	UCCE Yolo County	CAL DEPT OF FOOD AND AGRICULTURE (CDFA)	USDA AGRICULTURAL MARKETING SERVICE	Increasing California Specialty Crop Competitiveness by Understanding and Addressing Farmworker Technical Training Priorities	22-0001-013-SF	Applied Research	Prior Approval	SOW revision + new subaward (no LISR)	11/1/2022	6/30/2025	$0.00	$487,064.00	2/21/2024
Y22-6134	Jarvis-Shean	Katherine	UCCE Yolo County	CAL DEPT OF FOOD AND AGRICULTURE (CDFA)	USDA AGRICULTURAL MARKETING SERVICE	Increasing California Specialty Crop Competitiveness by Understanding and Addressing Farmworker Technical Training Priorities	22-0001-013-SF	Applied Research	Prior Approval	LISR	11/1/2022	6/30/2025	$0.00	$487,064.00	1/17/2025
Y22-6134	Jarvis-Shean	Katherine	UCCE Yolo County	CAL DEPT OF FOOD AND AGRICULTURE (CDFA)	USDA AGRICULTURAL MARKETING SERVICE	Increasing California Specialty Crop Competitiveness by Understanding and Addressing Farmworker Technical Training Priorities	22-0001-013-SF	Applied Research	Prior Approval	SOW change & Rebudget	11/1/2022	6/30/2025	$0.00	$487,064.00	3/3/2025

SABBATICAL LEAVE PROPOSAL

Date Requested: 10/02/2024

Name: Phoebe Gordon

Title/Rank: Associate Advisor III

Proposed Leave Dates: 3/17/2025 – 12/14/2025

I. Describe Sabbatical Project *(including a brief history and any preparation work completed to date):*

I would like to take a sabbatical to enhance my statistical skills and to wrap up three projects by analyzing the final results and submitting articles to referred journals. I have concluded that taking a sabbatical to complete these projects is necessary because my existing duties make it nearly impossible to reserve even a few days in a row to devote to cognitively demanding tasks that require long periods of uninterrupted concentration. I actually tried to start to learn R at the beginning of 2023 and had to abandon the task because the fractured time that I had available made it impossible to complete.

I have two goals that I would like to achieve in improving my statistical skills: learning R, and learning two advanced statistical analytical procedures: Generalized Linear Mixed Models and Partial Least Squares regression. These analytical methods allows for more complex analyses than the methods typically taught in graduate schools. I plan to use both of these to analyze data for two projects: a survey I conducted in 2022 and 2023, as well as a variety trial that will be ending in 2025. I feel the need to learn to use R rather than utilizing other statistical software packages as R is better able to handle complex analyses than other, more user-friendly programs, hence linking the two in my sabbatical leave plan.

In addition to the almond variety trial, I will be wrapping up three other long-term research projects in 2024 that have large datasets, and would like to have dedicated time to preparing manuscripts for refereed journals. I am eager to wrap up these projects and get the manuscripts submitted as soon as possible, as the longer one waits between completing a project and analyzing and writing up the results, the harder it is to do well!

My specific list of goals:

1) Learn how to do the basics of data visualization, sanitation, and simple statistical analyses for existing research projects in R
2) Learn the theory of generalized linear mixed models while learning how to program this analysis in R. I will be using this analysis method to analyze 10 years of data for the

regional almond variety trial, and perhaps for a salinity and boron research project that wrapped in 2024. While the variety trial will not be ending until 2025, I intend to figure out how to program it with my dataset and have something ready to go for when the project officially ends.

3) Learn the theory of partial least squares regression while learning how to program this analysis in R. I will be using this to analyze survey data for a project examining kernel discoloration in pistachios.
4) Analyze and write up the results of a project examining the connection between almond hull metabolytes and nutrients to a disease called hull rot
5) Prepare a manuscript to share the results of a salinity and boron interaction trial in pistachios
6) Prepare a manuscript to share the results of the pistachio internal kernel discoloration survey and irrigation trial (I may actually be able to get two manuscripts from this very large dataset)

In order to prepare for this work, I have said no to nearly all collaboration requests from colleagues this year, put off submitting grants, and wrapped up my existing research projects as much as possible to minimize distractions during my proposed sabbatical. I have also been collecting resources for learning R, GLMM, and PLS. There is an institute at UC Davis, the Data Lab, that offers brief bootcamps on R and intermediate and advanced statistical analytical methods. Additionally, since R is an open-source statistical software package, there are an extremely large number of high-quality online textbooks, websites, instructional videos, and forums that I can turn to.

I will be carving out some exemptions for my sabbatical to ensure my research program still runs smoothly and to pursue opportunities that will enhance unique aspects of my research and extension program:

1) I will be continuing two research projects – a fertilization project in pistachios, and the last year of the regional almond variety trial. For the most part this will be managing employees. I will also likely need to participate in harvests directly in late August and September, though this will be infrequent. I have discussed my leave with both commodity board funding agencies and have agreed to their small requests (to speak at a field day for an almond project and to have an in-field meeting at a pistachio project)
2) I agreed to serve on the Sustainable Food Systems panel from January 2025 through December 2026, which is a once-a-month engagement. This unique leadership opportunity does not happen often (at least in the early stages of my career) and allow me to contribute to the University and greater mission of UCANR. Continuing this duty while on sabbatical is important to me.
3) I intend to attend professional society meetings, particularly an International Society of Horticultural Science meeting on orchard systems in January and the American Society of Horticultural Science meeting in the summer/fall
4) I have submitted grants for a long-term almond rootstock trial, and if funded, will likely expend some effort on administrative tasks (primarily securing an irrigation system). I

did not want to wait until my sabbatical was over to submit this grant, since it takes so long to get a new orchard established!

II. List begin and expected completion dates for the project:

There is no specific timeline for this project as it is at my own schedule. I intend to start to learn R before the sabbatical starts to analyze data for annual reports due in December. This will allow me to start with statistical procedures that are very familiar to me. After I get more comfortable with R, I anticipate moving on to GLMMs and PLS, and to begin writing journal articles towards the middle of my sabbatical. I plan to have one article submitted to a referee journal by the end of my sabbatical, but truly hope to have three.

III. Name(s) of the location(s) or institution(s) where the project will be completed:

I do not intend to travel anywhere, aside from UC Davis if the Data Lab offers a course of interest to me.

IV. Assurances of Cooperation:

I will be taking any and all "R" educational opportunities from the UC Davis Data Lab and from the UCANR IGIS group.

Additionally, I will be working with Roger Duncan (UCCE Stanislaus, Emeritus) and Mohammad Yaghmour (UCCE Kern) to get a paper ready for publication. I will likely also work with Roger Duncan and Luke Milliron (UCCE Butte, Glenn, and Tehama Counties) to prepare some parts of a peer-review publication on a project that will end in 2025.

V. Financial Support:

I have a research and extension account as well as a salary savings account. I request the use of these funds to cover hotel stays to attend any Data Lab course held at UC Davis (the courses themselves are free).

Additionally, I will be considering attending the American Society for Horticultural Science meeting in July in New Orleans, Louisiana. I am requesting the use of advisor support funds to attend this research conference, which is important for networking and educational opportunities, as well as presenting ongoing research to colleagues and receiving critiques and feedback.

VI. Program Coverage:

Madera County pistachios will be covered by Mae Culumber. Cameron Zuber will cover pistachios in Merced. They will split almonds and fruit crops in Madera. Irrigation-specific farm calls may also be covered by Khaled Bali.

VII. Additional Information:

None.

Partial Sabbatical report

March 17, 2025 through September 30, 2025

Phoebe Gordon, Madera and Merced Counties

Goal: My overarching goal for my sabbatical was to wrap up projects that had completed (including some fairly old projects that were finished but not published), and to learn new statistical skills – mixed models and how to use R - to better analyze this research. I was specifically interested in learning R because it is free, has fantastic data visualization tools, and is better set up to handle complicated models than user friendly statistical software packages.

Because I am goal-oriented, I created an admittedly ambitious list of objectives to tackle:

1) Learn how to do the basics of data visualization, data sanitation, and simple statistical analyses for existing research projects in R

2) Learn the theory of generalized mixed models (GMMs) while learning how to program this analysis in R. GLMMs are applicable to nearly all of my research projects, yet they can be tricky to use and and many easy to use statistical software packages either can't run this model, or can't do it well.

3) Learn the theory of partial least squares regression (PLSR) while learning how to program this analysis in R.

4) Analyze and write up the results of a project examining the connection between almond hull metabolites and nutrients to a disease called hull rot

5) Prepare a manuscript to share the results of a salinity and boron interaction trial in pistachios

6) Prepare a manuscript to share the results of the pistachio internal kernel discoloration survey and irrigation trial

Activities: Most of my sabbatical was spent in front of my computer. I spent several months reading everything I could find on GLMMs, including a textbook specific to agricultural science. I didn't want to just learn how to do these models, I wanted to learn how to do them well and make informed decisions on how to run an analysis, check a model for fit, and report the findings. I also spent a few months stumbling through R and R coding. I watched recordings of classes offered through UC Davis Datalab, found several

textbooks that teach statistics alongside the R coding, and went through manuals that teach how to use ggplot2 (a package in R that can be used to put together absolutely amazing infographics). After a few months I felt comfortable enough to start analyzing data and writing papers.

I also maintained two long-term research projects through my sabbatical. While it was hard to extract myself from regular activities in the first few months, overall I found maintaining some research to be beneficial. I personally can only sit in front of a computer for so long, and it was nice to have the option to collect data for a day when I needed a break from my sabbatical projects.

I also was able to attend the American Society for Horticultural Science conference in New Orleans in July to present results from a manuscript I was preparing.

Outcomes: Something that I was not expecting was that the slowdown in my research program before my sabbatical allowed me the time to think about other tasks that I had put off for when I had more time. One of those tasks was writing up the results from a podcast evaluation survey – I had passively been collecting data for years to use for program evaluation purposes, but I had never analyzed them. When I realized I could demonstrate that the podcast resulted in listeners gaining knowledge and gave them the intention to adopt new practices, I worked with a colleague to get the results analyzed and written into a paper during the sabbatical. The paper was accepted for publication with HortTechnology with minor revisions on September 30.

As for my specific goals:

1) Learning R: I feel very comfortable with basic analyses, data sanitation, and creating graphics. Critically, I also feel confident that I can teach myself how to use new packages and analyses
2) Learn GLMMs: I feel very comfortable with GLMMs, and have even made plans to teach a colleague how to use them for his program
3) Learn PLSR: After reading into it, I concluded that principle component analysis is a better fit for the project I wanted to use PLSR for. So, completed but not needed!
4) Analyze hull rot project: At the time of this report, this goal has not been achieved, but it has been started on. The project generated massive amounts of data, and I underestimated how much time it would take for me to parse it.
5) Prepare a publication on a salinity and boron project: At the time of this report, the goal has not been achieved, but I've started on it
6) Prepare an article on the pistachio kernel quality issue: The first draft of an article has been sent to coauthors and is waiting their review

Future plans

While my sabbatical has not been completed, I anticipate using R and GLMMs frequently for the rest of my career. It's unclear if I will complete objectives 4 and 5 by the time my sabbatical is complete, but I am confident that I will have made more progress by the time I resume regular duties.

From:	horttech@msubmit.net
To:	Phoebe E Gordon
Subject:	HortTechnology manuscript 05765 accepted for publication subject to minor revisions
Date:	Tuesday, September 30, 2025 10:20:19 AM
Attachments:	Reviewer 1 Review Attachment 1

September 29, 2025

Dear Dr. Phoebe Elizabeth Gordon:

The review team for your manuscript titled "Listening to podcasts improves learning outcomes among California orchard growers" has completed the peer review. Please scroll down to the end of this letter to view the reviewers' comments. Revise your paper accordingly and submit a revised manuscript within **30 days** of the date given at the top of this letter.

Please upload your revised manuscript to the HortTechnology online peer review system by logging into the system using the same login name and password that you used when you submitted the paper originally. You will see a red arrow next to the manuscript. Clicking on the arrow allows you to upload the revised manuscript file(s).

Thank you for selecting HortTechnology as the journal of choice in which to publish your work. Please consider ASHS for your future work as well.

Sincerely,

Paul Bosland
Editor-in-Chief
HortTechnology
pbosland@nmsu.edu

cc: Review Team

Reviewer #1's Review for 05765:

Ready for Direct Application:
Yes

Accurate Index Words:
Yes

Clear summary:
Yes

Clear Relevant Objectives:

ANNUAL EVALUATION

To be used by all Academics in all titles not seeking an advancement.
For the Period October 1, 2024– September 30, 2025

The annual evaluation process provides an academic and their supervisor an opportunity to discuss the academic's annual activities, progress towards realizing goals and objectives, and future directions. For guidance in completing the Annual Evaluation, see "Guidelines for Preparing Annual Evaluations" at http://ucanr.edu/aeguidelines. Delete italicized text, save your Annual Evaluation as one PDF document, and upload to Project Board.

Name:	Phoebe Gordon
Academic Title:	Associate Cooperative Extension Advisor
County/Program:	Madera and Merced Counties
Current Rank/Step:	III

I. Position Description

a) *Upload your most current position description to Project Board.*
b) *If you are a new hire and your position description is under development, upload your PVA (position vacancy announcement) in Project Board.*
c) *Please name your PDF file: [YearOfAction]_[LastName]_PositionDescription.pdf (e.g., 2024_Doe_PositionDescription.pdf).*

II. Progress Towards Last Year's Goals and Objectives: October 1, 2024– September 30, 2025

Copy your goals and objectives table from your previous annual evaluation or program review dossier. Add a fourth column (green) to describe progress towards your goals and objectives, including new collaborators; or outcomes and impacts.

Specific Goals and Objectives	**Anticipated Collaborators**	**Anticipated Outcomes and Impacts**	**Progress** (including any new collaborators or outcomes/impacts)
Research			
Continue work on my non-bearing pistachio nitrogen and phosphorus research	None	Growers will better understand how much nitrogen and phosphorus to apply to non-bearing pistachio trees	Still moving forward! Wrapping up one site, but continuing at other sites
Continue work on Almond Variety Trial	Roger Duncan, Luke Milliron	**This will be the last year of this trial!** We have eliminated many poor performing varieties, some well	At the time of writing this, we've finished the last harvest and are currently processing

		performing ones are being "moved" to the next generation, and I will be summarizing the work and making conclusions in 2025/2026	nuts from our sites. Summary and conclusion will be worked on in late December/January
Get a rootstock trial funded (funding agencies that I'm targeting: Almond Board of California and CDFA)	Cameron Zuber, Tobias Oker, Mohammad Yaghmour	No one has evaluated almond rootstocks used here for drought tolerance. I want to see if there are rootstocks that are better adapted to water stressed conditions. This will help growers make informed decisions in a low-water future	Funded :) Working on getting the new orchard planted
Extension			
Keep writing short extension articles	Unknown, coauthors may be selected depending on need	Growers will be better able to make management decisions based on what I write about	I wrote one article summarizing research work, but I was busier than I thought I would be leading up to sabbatical
Continue the in-person almond and pistachio extension meetings	None	Growers will learn better management practices	I successfully held meetings before starting my sabbatical
Turn fig nutrition chapter into extension article	None	Growers will learn better fertilization practices	Still hasn't happened, maybe some day
Hold an almond variety trial field day	The Almond Board of California	Growers will get to see research trials in person, which can help with conceptualizing the results	Held it! Well recieved
General/Other			
Attend the 2025 orchard conference in New Zealand	None	Networking/professional development opportunity – I'll learn and make better research and extension decisions	Attended, met Australian almond researchers, took copious notes on doing

			deficit irrigation research
Take a sabbatical	None	I need to take some time to learn a new statistical analysis method and R. This will help me analyze the results from the regional almond variety trial as well as future research. Additionally, I will have wrapped up several research projects and will need the time to write peer reviewed articles, and catch up on extension writing that I simply have not had the time to do with my heavy research load.	Still on it. I'm comfortable with R, and done a lot of things with it (analyses, graphing, writing simple functions). I took the time to really learn generalized mixed models, and I got one paper accepted for publication and another is in the hands of coauthors for edits. I won't have time to do extension writing though – I was a bit too ambitious!
Think about how to build a sustainable research load and how to maintain a program with limited personnel	All of my colleagues – I have been informally chatting with folks and will continue to do so	I need employees but seem to always be stuck doing field work because I'm short handed.	I'm going to try a more limited research load and invest more in a smaller number of employees. Hopefully this will work!!

III. Barriers or Obstacles in Accomplishing your Goals and Objectives ***(narrative)***
Nothing really, I was probably too ambitious with my sabbatical plan but I feel recharged and ready to get back to action!

IV. Project Board Reporting <u>due by December 8, 2025</u> ***(check boxes)***
These are required for annual organizational reporting in Project Board by the noted due date. Please indicate you have submitted required annual organizational reporting (check):

[ ] program outcomes and impacts (reported in Project Board – Themes)
[ ] Extension activities and All Reasonable Efforts (reported in Project Board – Activities)
[ ] review and update clientele group(s) baseline (updated in Project Board – Clientele)
[ ] clientele contacts (reported in Project Board – Activities)
[ ] publications (reported in ANR Portal Profile – Bibliography). Include publications developed during the time period covered in this annual evaluation year.

V. Goals and Objectives for the Coming Year: October 1, 2024 - September 30, 2025
Include 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 goals and objectives addressing the advancement criteria for your title series. Academic Human Resources recommends that academics and supervisors have a conversation about goals and objectives in the fall; there is not firm deadline set by ANR.

Part 1. Goals and Objectives for the Coming Year

Specific Goals and Objectives	Anticipated Collaborators	Anticipated Outcomes and Impacts
Research		
Continue work on my non-bearing pistachio nitrogen and phosphorus research	None	Growers will better understand how much nitrogen and phosphorus to apply to non-bearing pistachio trees
Get the rootstock trial in the ground	Cameron Zuber, Tobias Oker, Mohammad Yaghmour	No one has evaluated almond rootstocks used here for drought tolerance. I want to see if there are rootstocks that are better adapted to water stressed conditions. This will help growers make informed decisions in a low-water future
Start a project examining humic acids and biostimulants in pistachio – pending funding	None	Growers are being sold biostimulants. They sometimes work in lab/greenhouse settings, but there is very little research in the field. This is a classic extension project of testing products – growers will find out if they are worth their money
Start a project to try to finally figure out a pistachio baseline stem water potential – pending funding	Mae Culumber	Growers will improve pistachio irrigation management by getting the last piece of the irrigation puzzle – guidelines for when pistachios are stressed
Extension		
Keep writing short extension articles	Unknown, coauthors may be selected depending on need	Growers will be better able to make management decisions based on what I write about
Continue the in-person almond and pistachio extension meetings	None	Growers will learn better management practices
General/Other		

None – planning to go on maternity leave so no planned meetings		

Part 2. Anticipated Barriers or Obstacles in Accomplishing Your Goals and Objectives
I will be taking maternity leave, if everything goes well, in the spring and early summer. As such, I am intentionally keeping my plans for next year light by continuing long-term projects, and ensuring that I have enough grant funding to keep employees paid.

Part 3. Support from Supervisor(s)
I don't anticipate needing any, aside from getting help with signing off on timesheets

VI. Sabbatical Leave Plan and Report
My sabbatical is not yet over, however I have a partial sabbatical report that is attached to my review package.

VII. Work Plan or Performance Improvement Plan ***(if applicable)***

Signatures

Academic Phoebe Gordon	Date 12/4/2025
Supervisor Karmjot Randhawa	Date 12/4/25

ANNUAL EVALUATION

To be used by all Academics in all titles not seeking an advancement.
For the Period October 1, 2024– September 30, 2025

The annual evaluation process provides an academic and their supervisor an opportunity to discuss the academic's annual activities, progress towards realizing goals and objectives, and future directions. For guidance in completing the Annual Evaluation, see "Guidelines for Preparing Annual Evaluations" at http://ucanr.edu/aeguidelines. Delete italicized text, save your Annual Evaluation as one PDF document, and upload to Project Board.

Name:	Phoebe Gordon
Academic Title:	Associate Cooperative Extension Advisor
County/Program:	Madera and Merced Counties
Current Rank/Step:	III

I. Position Description

a) *Upload your most current position description to Project Board.*
b) *If you are a new hire and your position description is under development, upload your PVA (position vacancy announcement) in Project Board.*
c) *Please name your PDF file: [YearOfAction]_[LastName]_PositionDescription.pdf (e.g., 2024_Doe_PositionDescription.pdf).*

II. Progress Towards Last Year's Goals and Objectives: October 1, 2024– September 30, 2025

Copy your goals and objectives table from your previous annual evaluation or program review dossier. Add a fourth column (green) to describe progress towards your goals and objectives, including new collaborators; or outcomes and impacts.

Specific Goals and Objectives	**Anticipated Collaborators**	**Anticipated Outcomes and Impacts**	**Progress** (including any new collaborators or outcomes/impacts)
Research			
Continue work on my non-bearing pistachio nitrogen and phosphorus research	None	Growers will better understand how much nitrogen and phosphorus to apply to non-bearing pistachio trees	Still moving forward! Wrapping up one site, but continuing at other sites
Continue work on Almond Variety Trial	Roger Duncan, Luke Milliron	**This will be the last year of this trial!** We have eliminated many poor performing varieties, some well	At the time of writing this, we've finished the last harvest and are currently processing

		performing ones are being "moved" to the next generation, and I will be summarizing the work and making conclusions in 2025/2026	nuts from our sites. Summary and conclusion will be worked on in late December/January
Get a rootstock trial funded (funding agencies that I'm targeting: Almond Board of California and CDFA)	Cameron Zuber, Tobias Oker, Mohammad Yaghmour	No one has evaluated almond rootstocks used here for drought tolerance. I want to see if there are rootstocks that are better adapted to water stressed conditions. This will help growers make informed decisions in a low-water future	Funded :) Working on getting the new orchard planted
Extension			
Keep writing short extension articles	Unknown, coauthors may be selected depending on need	Growers will be better able to make management decisions based on what I write about	I wrote one article summarizing research work, but I was busier than I thought I would be leading up to sabbatical
Continue the in-person almond and pistachio extension meetings	None	Growers will learn better management practices	I successfully held meetings before starting my sabbatical
Turn fig nutrition chapter into extension article	None	Growers will learn better fertilization practices	Still hasn't happened, maybe some day
Hold an almond variety trial field day	The Almond Board of California	Growers will get to see research trials in person, which can help with conceptualizing the results	Held it! Well recieved
General/Other			
Attend the 2025 orchard conference in New Zealand	None	Networking/professional development opportunity – I'll learn and make better research and extension decisions	Attended, met Australian almond researchers, took copious notes on doing

			deficit irrigation research
Take a sabbatical	None	I need to take some time to learn a new statistical analysis method and R. This will help me analyze the results from the regional almond variety trial as well as future research. Additionally, I will have wrapped up several research projects and will need the time to write peer reviewed articles, and catch up on extension writing that I simply have not had the time to do with my heavy research load.	Still on it. I'm comfortable with R, and done a lot of things with it (analyses, graphing, writing simple functions). I took the time to really learn generalized mixed models, and I got one paper accepted for publication and another is in the hands of coauthors for edits. I won't have time to do extension writing though – I was a bit too ambitious!
Think about how to build a sustainable research load and how to maintain a program with limited personnel	All of my colleagues – I have been informally chatting with folks and will continue to do so	I need employees but seem to always be stuck doing field work because I'm short handed.	I'm going to try a more limited research load and invest more in a smaller number of employees. Hopefully this will work!!

III. Barriers or Obstacles in Accomplishing your Goals and Objectives ***(narrative)***
Nothing really, I was probably too ambitious with my sabbatical plan but I feel recharged and ready to get back to action!

IV. Project Board Reporting <u>due by December 8, 2025</u> ***(check boxes)***
These are required for annual organizational reporting in Project Board by the noted due date. Please indicate you have submitted required annual organizational reporting (check):

[ ] program outcomes and impacts (reported in Project Board – Themes)
[ ] Extension activities and All Reasonable Efforts (reported in Project Board – Activities)
[ ] review and update clientele group(s) baseline (updated in Project Board – Clientele)
[ ] clientele contacts (reported in Project Board – Activities)
[ ] publications (reported in ANR Portal Profile – Bibliography). Include publications developed during the time period covered in this annual evaluation year.

V. Goals and Objectives for the Coming Year: October 1, 2024 - September 30, 2025
Include 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 goals and objectives addressing the advancement criteria for your title series. Academic Human Resources recommends that academics and supervisors have a conversation about goals and objectives in the fall; there is not firm deadline set by ANR.

Part 1. Goals and Objectives for the Coming Year

Specific Goals and Objectives	Anticipated Collaborators	Anticipated Outcomes and Impacts
Research		
Continue work on my non-bearing pistachio nitrogen and phosphorus research	None	Growers will better understand how much nitrogen and phosphorus to apply to non-bearing pistachio trees
Get the rootstock trial in the ground	Cameron Zuber, Tobias Oker, Mohammad Yaghmour	No one has evaluated almond rootstocks used here for drought tolerance. I want to see if there are rootstocks that are better adapted to water stressed conditions. This will help growers make informed decisions in a low-water future
Start a project examining humic acids and biostimulants in pistachio – pending funding	None	Growers are being sold biostimulants. They sometimes work in lab/greenhouse settings, but there is very little research in the field. This is a classic extension project of testing products – growers will find out if they are worth their money
Start a project to try to finally figure out a pistachio baseline stem water potential – pending funding	Mae Culumber	Growers will improve pistachio irrigation management by getting the last piece of the irrigation puzzle – guidelines for when pistachios are stressed
Extension		
Keep writing short extension articles	Unknown, coauthors may be selected depending on need	Growers will be better able to make management decisions based on what I write about
Continue the in-person almond and pistachio extension meetings	None	Growers will learn better management practices
General/Other		

None – planning to go on maternity leave so no planned meetings		

Part 2. Anticipated Barriers or Obstacles in Accomplishing Your Goals and Objectives
I will be taking maternity leave, if everything goes well, in the spring and early summer. As such, I am intentionally keeping my plans for next year light by continuing long-term projects, and ensuring that I have enough grant funding to keep employees paid.

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Signatures

Academic Phoebe Gordon	Date 12/4/2025
Supervisor Karmjot Randhawa	Date 12/4/25