

Viticulture and Fruit Crops Area Advisor for Sacramento, Solano and Yolo Counties

Position: The advisor will develop and conduct a research and extension program focused on viticulture (wine grapes) and pomological (primarily pear, apple, cherry, and olive oil) crop production in Sacramento, Solano and Yolo counties. Emphasis is on developing climate adaptation strategies, pest management practices and labor-saving technological innovations. The supporting unit will be the UCCE Capitol Corridor with the position located at the Sacramento office. Qualified candidates must have a graduate degree in viticulture or a related discipline such as horticulture, plant physiology, crop science or pomology with relevant viticulture and / or pomology experience.

Justification: This position fills a regional and statewide void in viticulture and tree fruit expertise at a time when climate change, pests, water issues and labor shortages increasingly challenge farm sustainability and viability. Sacramento Co. has been without viticulture coverage since 2018 and Yolo and Solano counties since 2004. There is currently no advisor nor campus-based specialist in the state working on pears despite strong industry support. This position supports the priority of a *Food Systems Resilience Network* by supporting the production of healthy food in the region marketed through a wide diversity of channels. By providing science-based information to wine grape and tree fruit growers to increase both the economic and environmental sustainability of these systems, the advisor will address ANR Public Values of promoting economic prosperity, enhanced community economic development, increased agriculture efficiency and profitability, increased emerging food economies and markets and protecting natural resources.

Wine grape and olive crops have become tremendous contributors to our regional economy in the past decade. Wine grapes have increased 50% from 39,000 to 59,000 acres from 2010 to 2020 with a 91% value increase from \$147 million to \$282 million. Regional olive production has grown from almost zero in 2010 to 6,300 acres producing olive oil valued at \$18 million in 2020. High crop yield and quality in the region spurred significant infrastructure investments in large and small-scale wineries and olive mills, along with corresponding development in agritourism, connecting our urban centers to our rural landscapes while generating valuable economic multipliers for the region. One example is the [Seka Hills](#) olive mill (Yolo County) owned by the Yocha Dehe Wintun Nation, which processes the Nation's own olives and custom mills olives for other local growers. At the same time Sacramento County leads the state in European pear production with 5,000 acres valued at \$26 million in 2020 and supports cherries grown on 1,500 acres valued at \$7.5 million in 2020. Sustaining the explosive growth and the resultant regional economic benefits from these newer crops (wine grapes, olives) and meeting new challenges to economic backbone fruit crops (pears, cherries) requires dedicated regional research and extension. Climate change threatens these crops with warmer winters that decrease yields, and warmer, smokier summers that threaten fruit quality and increase pest pressure, but creates innovation opportunities in new varietal, growth regulators, and bio-controls. Labor shortages are increasing costs, decreasing marketed yields, and increasing food waste as critical management is neglected and crops go unharvested, but also creating opportunities for local technological innovation in automation, remote sensing and machine learning. At the same time olive trees, being more resilient to drought than traditional tree crops, present a climate smart alternative crop for the region. This position is currently ranked #1 by the ANR Viticulture Program Team and is a high priority for the Pomology Program Team.

Extension: The advisor is expected to develop an innovative and engaging extension program including direct contacts with farmers through farm visits, workshops, field days, short courses and commodity meetings, as well as a robust online / electronic presence to amplify reach. Key clientele include existing and prospective growers of focal crops, processors (wineries, packinghouses, olive mills), and associated service professionals, i.e. pest control advisors and crop management consultants. The advisor will collaborate with multiple regional wine grape groups, CA Pear Advisory Board, CA Olive Oil Council, CA Cherry Board, local Farm Bureaus, and other relevant organizations.

Research: Key areas of research include innovative crop-specific approaches to optimize resource use and environmental impact for conventional and organic production. Major areas of focus are labor-saving technologies (mechanization, plant bio-regulators, cultural practices) and related vineyard and orchard systems (spacing, training, pruning, crop load management, harvest); crop, rootstock and variety selection for the distinct soils and growing areas; cultural practices to mitigate effects of climate change on fruit quality and yield; irrigation water quality and efficiency; nutrient management; and pest and disease management.

ANR Network: The advisor will fill a critical gap in viticulture coverage impacting other UCCE academics. The advisor will become the ANR expert in pear, as well as develop important expertise in cherry and olive crops, climate adaptive strategies, and labor-reducing ag technologies. The ANR network includes the Viticulture and Pomology program teams and UCCE specialists and AES and non-AES faculty and specialists across the UC system. Close proximity to the UC Davis Mondavi Institute and Olive Center present valuable opportunities for collaborative research projects in wine grape and olive qualities.

Network External to ANR: AgStart, UC Merced AgTech Program, CSU faculty specializing in viticulture and pomology, the NC-140 multi-state rootstock research consortium, CA Dept. of Food & Agriculture, CA Dept. of Pesticide Regulation, CA Association of Pest Control Advisors.

Support: Pooled financial resources from the three counties will provide an office, a vehicle, personal mileage reimbursement, internet access, telephone, printing, clerical support, and office supplies.

Other Support: Growers in the region are eager to support the advisor through access to farms for on-farm trials and use of winery facilities for wine trials. Research funding is available from the American Vineyard Foundation, federal grants, Lodi Winegrape Commission, Western SARE, CA Pear Advisory Board, Pear Pest Management Research Fund and the pest and nutrient management industries.

Headquarters and Coverage Area: This position will be housed at the UCCE Capitol Corridor office in Sacramento. This location has necessary space and is the epicenter of several focal crops in the region. Coverage will extend to Yolo and Solano counties.

Developed and proposed by: This position was developed by UCCE Capitol Corridor Advisors and Advisory Committee with input and support from growers and Farm Bureau boards from each county, and the UC ANR Viticulture and Pomology Program Teams.