

## **CE Nut Crops Advisor serving Merced County**

(21-Nov-2019 version)

### **Position:**

The Cooperative Extension (CE) advisor for nut crops will conduct a locally-based extension, education and applied research program to address high priority production issues in nuts crops (almonds, pistachios, and walnuts). The CE advisor will provide essential leadership to address critical issues facing orchard systems in Merced County, including but not limited to nematode management, irrigation efficiency, rootstock and scion screening, and pre-plant soil disinfestation. Additional duties include programmatic oversight of the UC Master Gardener Program in Merced County, which currently has about 50 active members.

**JUSTIFICATION:** Merced County is the 6<sup>th</sup> largest agriculture county in California and currently has just one farm advisor. Currently, no advisor covers nut crop research or extension in the County. Combined acreage for nut crops (almonds, pistachios, and walnuts) exceeds 114,000 acres, with a value of more than \$500 million annually. Merced County ranks 5<sup>th</sup> in almond production, providing 10% of the entire California crop value. Both almonds and pistachio acreage continues to expand in the area, especially in areas not traditionally planted to orchards, such as in saline soils, soils with high water tables, and shallow soils in the foothills. In 2017, a new species of pathogenic nematode was discovered in Merced County which threatens the almond and stonefruit industries in California. *Meloidogyne floridensis*, a newly discovered rootknot nematode species, thrives in sandy soils and appears to infest all of our commercially available rootstocks.

There are over 1200 farms in Merced County with nut production, however, there is no coverage for pomology crops. The resignation of David Doll in November 2018 has left a vacancy that was not on the original 2018 call for positions. Some coverage of phone calls is being provided by advisors Roger Duncan (Stanislaus County) and Phoebe Gordon (Madera County), but due to the large acreage and high volume of farm call requests, they are unable to provide on-farm consultations in Merced County. The Merced County UCCE office needs another advisor to justify the support given by the county board of supervisors and CEO.

This position primarily addresses the high priority initiatives of Enhancing Competitive, Sustainable Food Systems and Enhancing the Health of Californians and California's Agriculture Economy. Projects are already in place, including field trials to evaluate the long-term impact of various walnut and almond rootstocks, alternatives to pre-plant fumigation, and walnut orchard planting density. Improving orchard production in saline and alkaline soils and implementing healthy soils practices to improve orchard resiliency under rapidly changing climate conditions are also important issues. This is a high profile position with a long history of producing significant impacts and is highly ranked by the almond and pistachio nut crop industries. The position is ranked 3<sup>rd</sup> by the UC Pomology Program Team.

**EXTENSION:** The role of the Nut Crops Advisor will be to disseminate science-based information to clientele, using extension methods that are responsive to clientele needs and appropriate for the audience and situation. Research results and educational information will be disseminated through individual consultations; presentations at meetings and field days; popular, technical, and peer-reviewed publications; and through electronic tools, along with public media outlets. Programs will be developed and carried out in collaboration with other UC ANR academics and statewide efforts, including the UC ANR Pomology and Pest Management Program Teams and affiliated Workgroups, and UC IPM.

**RESEARCH:** The advisor will develop and implement an applied research program to address the needs of clientele that are consistent with ANR's Strategic Vision and Strategic Initiatives. The applied research program will be based on a needs assessment of local clientele. The advisor will collaborate with campus and county-based colleagues and will provide leadership for Cooperative Extension nut crops and perennial cropping systems. A significant portion of the tree growing acreage is on sandy soil that challenges growers with irrigation and nematode management; fumigation and fumigation alternatives present research opportunities to manage nematodes and prunus replant disease. In many other areas of the county, alkaline soil and well water is often high in chloride, research opportunities include testing alkali and salt tolerant rootstocks, salinity management, addressing water quality and quantity limitations for irrigation of orchard crops. Additional important research opportunities include evaluation of new almond and pistachio varieties and rootstocks and farming practices that reduce dust, improve soil health, and increase winter chill hour accumulation.

**ANR NETWORK:** The CE advisor will partner with other nut crops CE advisors in the Central San Joaquin Valley to address regional issues. The CE advisor will play a key role in leadership for almonds, pistachios and walnuts, working closely with other CE nut crops advisors, UC Agriculture and Natural Resources (UC ANR) program teams, CE specialists and Agricultural Experiment Station (AES) faculty involved with these commodities, pest management, irrigation, pollination and other disciplines.

**LOCATION AND SUPPORT:** The primary area of responsibility for this position is Merced County. Support for this position, including office space, travel (new pickup), communication (telephone, internet), clerical support, tools, and office supplies are provided in existing budgets from Merced County. This position is strongly supported by the almond, pistachio, and walnut industries. Grant support funds are available through these commodity boards. Other potential sources include the Department of Pesticide Regulation, (CA DPR), Western IPM and Western SARE, CDFA Healthy Soils Program, the Fertilizer Research and Extension Program (FREP), and other federal and state government granting agencies.

**Developed and Proposed by:** Scott Stoddard (County Director), with input and support by Roger Duncan, pomology and viticulture team leader, and Maxwell Norton, emeritus advisor.