Area Orchard Systems Advisor

Tehama, Butte, Glenn, Shasta

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Position: Briefly describe: The orchard systems advisor will serve the major industries of walnut, prune, almond, and olives by taking the lead in pathology research in the four-county area. These industries directly produce over a billion dollars in revenue on over 240,000 acres annually. Besides farm gate returns from production, their secondary markets are the economic engine of the area. Disease prevention is crucial to thwarting catastrophic industry losses and local UC expertise in pathology is currently lacking in the area. In addition, the advisor will be expected to address the extension needs of the major and minor horticultural crops including apple, apricot, cherry, grape, kiwifruit, citrus, peach, pecan and pistachio in Tehama and Shasta counties.

The position will be housed in the Tehama County office and provide cross county orchard systems pathology support to Glenn, Butte, and Shasta Counties. The position requires a Master's degree or higher in plant pathology, pomology, horticultural crops, or a related field. A well-rounded orchard system advisor's program incorporates the areas of horticulture, plant nutrition, pathology, entomology, irrigation, soils, vegetation management and nematology. As this position will be focused on pathology, good interpersonal and team working skills will be required to leverage the talents of surrounding advisors with backgrounds in these other areas. The advisor will be expected to reciprocate pathology research and results within and outside the program area. The ideal candidate would have a broad background knowledge, making it possible to be conversational across the disciplines required to sustainably produce orchard crops.

Justification: Tehama, Shasta, Butte, and Glenn Counties are located in the Northern Sacramento Valley where relatively high spring rainfall results in more consistent disease risk compared to other fruit and nut production areas of California. Threats are numerous and include:
Walnut: Walnut blight, botryosphaeria and phomopsis, anthracnose, deep and shallow bark canker, branch wilt, and thousand canker disease.
Almond: Almond bloom starts in early February creating needs to research frost protection, brown rot blossom and fruit infection, alternaria, anthracnose, bacterial canker, bacterial spot, rust, scab, shot hole, silver leaf, phomopsis, and botryosphaeria.
Prune: Disease research for prune includes brown rot blossom and fruit infection, bacterial canker, Cytospora canker, russet scab and rust. High rainfall and flooding in the northern counties also increases the potential for soil borne diseases such as phytophthora root and crown rot, and oak root fungus.
Olive: Olive knot and the new disease Neofabraea leaf spot
Pistachio: Botryosphaeria panicle and shoot blight, Anthracnose, Botrytis

These diseases pose a substantial risk of devastating orchard systems, which are the highest value commodity in Tehama, Butte, and Glenn Counties, significant in Shasta County, and important statewide. While the area's increased disease risk challenges sustainable crop production, it does offer an ideal location for research on disease epidemiology and management solutions that can be practically extrapolated around the state and worldwide.

Extension: The advisor would inherit a clientele eager for information and actively willing to implement UC research, making positive outcomes and impacts tangible. This makes the opportunities for a highly successful local extension program very good in terms of workshops, telephone inquiries, and farm visits. Highly attended extension meetings are currently conducted annually in Tehama, Butte, and Glenn counties in all the major horticulture commodities. There are also state and international professional horticultural society meetings that would allow the advisor to extrapolate local disease research to a broad audience.

Research: California has over 1.1 million acres in almonds, about 325,000 acres planted to walnut and roughly 50,000 acres planted to prune. The upper Sacramento Valley is a perfect location to research orchard diseases ensuring benefits to orchard management throughout the state and worldwide.
1) Excellent disease potential for research.
2) Excellent cooperators that will provide in-kind support for academic research.
3) Opportunities to reduce pesticide applications through integrated disease management.
4) Industry research funding support readily available
5) Outstanding opportunity to involve Campus and USDA scientists in "on the ground" disease management.

ANR Network: This position is situated to deliver a dynamic program with collaborative resources within the ANR network. The position will team with Sacramento Valley advisors Lightle, Milliron, Hasey, Niederholzer, Pope**,** Fulton, Symmes (IPM) and mentor opportunities from retired advisors Connell, Krueger and Buchner. Orchard systems have good campus and specialist support by disciplines. UCCE specialists include Dr. Westphal (nematology), Dr. Trouillas (plant pathology), Dr. Lampinen (almond and walnut production), Dr. Hanson (vegetation management), Dr. Baldwin (vertebrate biology). Campus support includes Dr. DeJong, S. Castro, C. Leslie, Dr. Brown, Dr. Rizzo, Dr. Neale, Dr. Shackel, Dr. Zwienecki, Dr. Volder, Dr. Bostock, and Dr. Dandekar from the UC Davis. Dr. Adaskaveg from UC Riverside, and Dr. Michailides. UC Berkeley resources include Dr. Van Steenwyk and Dr. Mills. All of these scientists have commodity funded projects that involve field-based advisors and will ensure early career success for the new advisor. The advisor will provide on the ground pathology expertise with the ability for early detection and management to prevent catastrophic industry losses, which is lacking currently.

Network External to ANR: External support includes Dr. Baumgartner, Dr. Kluepfel, Dr. Sudarshana, Dr. Browne, Dr. Burks and Dr. Scorza from the USDA, plus private sector pest control advisors and on-farm cooperators. California is the primary producer of walnut, almond, prune and olive in the United States, positioning this advisor for collaborative and leadership roles. There are numerous further opportunities to develop international contacts through the International Society for Horticulture Science.

Support: County and research support are already available for this position to become a catalyst for disease prevention in orchard systems. This includes a vehicle, fuel, office space, research equipment, storage, lab, and clerical support. County support has been very stable and excitement for this position is high.

Other support: All of the major horticulture crops have research support boards designed to fund ground breaking work in orchard systems. It is fully anticipated that the incumbent would be able to attain research and even research assistant support funding if desired.

Location: The position would be housed in the Tehama office serving Butte, Glenn, Shasta, and as needed broader areas in disease management of horticulture crops. There is currently a vacancy in Tehama County serving horticulture, which is the highest value agriculture commodity in the county.

Developed and proposed by the county directors in Tehama, Butte, Glenn and Shasta with input from Stakeholders including: the Pomology, Pathology, and Pest Management Program Teams, Plant Science Department at Davis, California Almond Board, California Walnut Board, California Dried Plum Board, California Olive Commission, almond, walnut, prune and olive workgroups and local producers of the four leading commodities plus specialty crop producers.