

## **Position Title: Subtropical Fruit Crop IPM Specialist**

**Position:** 1) The disciplinary focus is Entomology. 2) Educational requirements: are a Ph.D. in Entomology, Biology, Ecology, or related discipline. 3) Location: the position is located within the Department of Entomology at UC Riverside and the incumbent will have statewide responsibilities. Develop basic and applied research projects focused on reducing the impact of arthropod pests in subtropical crops, and provide outreach to appropriate clientele to facilitate adoption of new science-based knowledge for integrated management of these pests.

**Appointment:** 80% Cooperative Extension and Extension Research, 20% Mission Oriented Research supporting the mission of the AES.

**Justification:** The citrus (300,000 acres, \$2 billion, 24% of the nation's crop) and avocado (60,000 acres, \$400 million, 90% of the nation's crop) industries are both facing severe disease threats. In the case of citrus, the Asian citrus psyllid vectors the bacterial disease huanglongbing (citrus greening) and in avocado two species of exotic shot hole borers spread several fungi causing Fusarium dieback. Both of these threats started in southern California. The entomology specialist will use diverse research methods to manage common pests, current threats, and new pests as they arrive as part of the integrated pest management program for these crops. The candidate's work will be directly aligned with the Strategic Vision 2025: Initiative to Enhance Competitive, Sustainable Food Systems. Both the Citrus Research Board and the California Avocado Commission are strongly supportive of the position.

**Extension & Extension Research (80%):** Extension activities to be fulfilled by this position will include development and implementation of educational programs on arthropod identification, sampling, biology and management in subtropical crops. These efforts may include a variety of approaches including extension publications, newsletters, web pages, web blogging, field days, participation in farm advisor meetings, organization of specific educational conferences, and contributing to UC ANR workgroups and teams as well as UC ANR Pest Management Guidelines. Information generated by the candidate's research and the research efforts of other scientists will be extended to a variety of clientele including U.C. Cooperative Extension Advisors, pest control advisors, regulatory personnel, industry representatives, and growers. Publication outlets will include peer-reviewed entomology and ecology journals, review articles, book chapters as well as clientele-oriented literature such as California Agriculture, UC IPM manuals, UC ANR Pest Management Guidelines, Year Round IPM Programs, and commodity-oriented magazines.

**Mission Oriented Research (20%):** Areas of research interest include, studying the biology, behavior and ecology of pest and beneficial insects and mites important in subtropical crops; design of robust sampling plans; evaluation of the impacts of pesticides and application methods on pests and their natural enemies; evaluating biological control, pesticide resistance management; and developing novel and traditional IPM tactics to reduce economic damage, particularly by invasive pests and diseases. Opportunities for coordinating research projects with UC Advisors, AES faculty and other extension clientele are numerous and encouraged.

**ANR Network:** As of January 2022, there will be no ANR specialists working to control and mitigate arthropod pests of subtropical agriculture; this position is absolutely critical.

Collaborative interactions will be strong with AES faculty and Specialists at UC Riverside (Arpaia, Daugherty, Hoddle, Mauck, Mauk, Hansen, Manosalva, Perring, Rolshausen, Stouthamer, Wilson) and Cooperative Extension farm advisors in California's southern counties (Biscaro, Faber, Doan, Douhan, Gautam, Haviland, Kallsen, Rios). Collaborations *are expected* with Specialists located UC Davis, Kearney ARE, Lindcove REC, UCCE Kern, and UCCE Tulare). Additionally, the individually will likely participate heavily in the following ANR Workgroups and Program Teams: Pest Management in ANR, Subtropical Crops, and Entomology. These interactions will facilitate identification of critical problems and coordination of research applications, and technology transfer to the agricultural industry and other clientele of the Division of Agricultural and Natural Resources who will derive the greatest benefit. Rapid recruitment of a qualified individual may facilitate some knowledge transfer to the successful candidate prior to the retirement of current faculty with expertise in this field.

**Network External to ANR:** To determine research needs and priorities, the incumbent will interact with both the California Citrus Research Board and the California Avocado Commission (support letters are available). For research priorities that involve quarantines, the incumbent will coordinate with CDFA and USDA APHIS.

**Support:** An office, laboratory and administrative support will be provided by the Department of Entomology, UC Riverside. Alternatively, the position can be located with both office and lab at the Kearney Research and Extension Center. The College of Natural and Agricultural Sciences at UC Riverside will supply a portion of the start-up funds and funds for travel.

**Other support:** Extramural funding may be procured via a variety of sources at the state (CDFA Specialty Crops, Dept. of Pesticide Regulation) and federal levels (USDA NIFA) as well as through commodity boards (California Citrus Research Board, California Avocado Commission).

**Headquarters and Coverage Area:**

Position would be located in the Department of Entomology, UC Riverside. This location is advantageous for conducting work on subtropical crops because it is located close to major avocado and citrus acreage and because southern California is where invasive pests and diseases often establish first. Nonetheless, space is available at the Kearney REC, should the decision be that the position is better located in the Central Valley.

**Developed and Proposed by**

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