**Entomology Area Advisor, Ventura County, Los Angeles County**

**Position Description:** The Entomology Area Advisor will serve as an expert for issues related to integrated management of arthropod (insect and mite) pests in agricultural and natural ecosystems in Ventura and Los Angeles Counties. Working with CE advisors, specialists, other University academics and staff as well as industry partners and agencies in the nonprofit sector, the entomologist will provide leadership in research, extension and education focused on integrated pest management (IPM). The Entomology Advisor will conduct applied field and lab research designed to manage pests with practices that protect the environment as well as farm workers and consumers. The Advisor will also assist in identification of arthropods and conduct research on beneficial insects, including pollinators. Key to the success of this position will be research and extension outreach stimulating adoption of new practices that reduce economic damage from pests and minimize environmental impact, including on pollinators. The Advisor will assist growers, pest control advisors (PCAs), natural resource/land stewards, and county residents in managing pests in an environmentally sustainable manner. The Entomology Advisor will serve as both a leader and key collaborator with research and extension colleagues to solve pest management issues that require multidisciplinary and area-wide approaches. The Advisor will engage with non-agricultural audiences to educate them on the complexities of managing pests while maintaining food security and safety. A Master’s degree in Entomology or closely related discipline is required.

**Justification:** Ventura County is a unique environment where diverse agriculture (>60 crops, a $2.5 billion industry) interfaces with urban (>0.9 million inhabitants) and natural areas. While Los Angeles County is mostly urban, there is significant agricultural and horticultural production along the Santa Clara River Valley. Also, over 200 wine grape vineyards have been established in the Santa Monica Mountains in the last 20 years. IPM systems in this region are dynamic and require continual review due to changes in production practices, new control products, and increased regulations. Both counties experience threats to agricultural and natural ecosystems due to invasive and endemic arthropod pests. These issues are exacerbated by climate change, including higher temperatures and drought conditions.

Recent invasive pests include the Asian Citrus Psyllid, which vectors the deadly Huanglongbing disease in citrus, and the avocado leaf roller, avocado lace bug, black fig fly, and goldspotted oak borer. Invasive shot hole borers are a major threat to trees in natural environments, landscapes and agriculture. Endemic pests like Lygus bug, mites, and Drosophila fruit flies routinely threaten Ventura County’s top crop, strawberry, and other soft fruit. The Diamondback moth, a serious pest of cruciferous crops, has developed widespread resistance to all modes of insecticidal action in Ventura and neighboring counties. It can cause 100% crop loss and control costs of over $3,000 per acre are common. Additionally there have been serious periodic outbreaks of greenhouse whiteflies and Bagrada bug in recent years. Whiteflies and aphids can also be vectors of devastating virus diseases and have required destruction of multiple tomato fields last year. Arthropod pests are particularly problematic in organic production due to the limited control options. When infestations occur in wildland, urban, or riparian areas, conventional chemical treatments are also limited.

Ventura County also has a port and a military base, both of which could provide ingress of exotic pests. Unlike other counties, the Ventura County Agricultural Commissioner’s office does not have an entomologist on staff. UCCE Los Angeles County does have an Urban IPM Area Advisor focused on structural entomology but no one to cover agricultural pests. In an effort to advance nonchemical approaches to control, there may be opportunities to capitalize on Ventura County’s century-long history of biological control by local insectaries. The position aligns with ANR Strategic Initiatives in Endemic and Invasive Pests and Diseases, Sustainable Food Systems, and Sustainable Natural Ecosystems. Continuing to improve IPM practices for invasive and endemic pests will allow sustainable food production while protecting natural ecosystems.
**Extension:** The Entomology Advisor is expected to develop and deliver programs using existing knowledge, and new knowledge derived from an active applied research program. A needs assessment will be required to identify clientele, key issues and prioritize research projects. The extension program is expected to provide content that meets clientele needs through targeted outputs in print, popular media, social networks, public presentations, field days, and web-based products. ANR’s UC IPM Pest Management Guidelines are a primary CE outreach tool and the Entomology Advisor will be closely involved in developing and reviewing content. The primary multipliers of pest management information are PCAs, crop consultants, and farmers. The Entomology Advisor will provide programmatic training and educational support to the existing network of county-based Farm Advisors to support their programs. Other client groups include crop protection personnel, commodity group leaders, governmental agencies and natural resource managers.

**Research:** The Entomology Advisor will be expected to conduct independent and collaborative applied research at research centers (RECs) and individual farms. This research will be issue-based, directed toward developing pragmatic solutions to insect pest problems. Whenever possible, the Entomology Advisor is encouraged to use field research opportunities for hands-on training of students and stakeholders. Outputs from research will include peer-reviewed journal articles, popular articles, technical reports, articles for newsletters, special publications such as identification and pictorial guides, and web-site postings, journals, and blogs.

**ANR Continuum:** The Entomology Advisor will work closely with the UC IPM Program staff to develop, review, update, and revise educational and technical material to implement IPM. The Advisor will act as strong link between field issues and needs, other local county Farm Advisors and campus-based Specialists or faculty in matters related to Entomology. The Entomology Advisor is expected to contribute to workgroups, program teams and Strategic Initiative activities, including EIPD, but also Sustainable Food Systems, Sustainable Natural Systems, and others as appropriate.

**Network External to ANR:** The Entomology Advisor will network with AES faculty and state and federal agencies, such as the California Department Food and Agriculture, California Department of Pesticide Regulation, California EPA, EPA, and USDA. The IPM Advisor will network with commodity groups, the county agricultural commissioner, California Association of Pest Control Advisors, and the Pesticide Applicators Professional Association.

**Support:** The Ventura County office will provide administrative support, office, phone line, internet access, and a vehicle.

**Other support:** Financial support is competitively available from federal, state, and regional IPM grants, commodity boards, CDPR, CAL FIRE, and CDFA grants, statewide legislative appropriations, USDA-Forest Health Protection, and gifts in support of research and extension. Other sources of research funding are crop protection companies, the Thelma Hansen Fund and Ventura County as part of the 2020-2040 General Plan implementation.

**Location:** Ventura County. The CE Advisor will be administratively responsible to the UCCE Ventura County director; programmatically, the CE Advisor will be responsible to the Ventura and Los Angeles County directors.

**Developed and proposed by:** The position was developed by UCCE Ventura County academic staff and Director, and the Los Angeles County Director. This position was ranked as a high need (within the top five statewide) by the Pest Management Program Team, and is strongly supported by the Ventura County Agricultural Commissioner, the Ventura County Farm Bureau, the Vegetable Crops Program Team, and the UC IPM Statewide Program.