

Area Integrated Pest Management Advisor, San Diego County

Position Title: Area Integrated Pest Management (IPM) Advisor will address pest management issues in crop production and landscape systems in Southern California. This position will be based in San Diego County with coverage to address IPM priorities in San Diego, Orange and Los Angeles Counties. The Area IPM Advisor will also provide IPM support to assist CE Advisors in nearby counties. This position will be a member of the UC Statewide IPM Program.

Position: The Area IPM Advisor will conduct a research and extension program to address a broad range of pest management issues relevant to agriculture and ornamental production in Southern California. The Area IPM Advisor will also address invasive species and landscape IPM programs. Because the region is large with numerous crops and environmental issues, the Area IPM Advisor will focus on long-term IPM systems, reducing environmental impacts from pest management practices, and addressing changes in pest pressures resulting from climate change. The Area IPM Advisor will also identify and address high priority pest and pesticide issues by working cooperatively with other CE Advisors, Specialists, affected clientele/commodity boards, and agencies as appropriate. The Area IPM Advisor will deliver training to licensed Pest Control Advisers (PCA), pesticide applicators (QAL/QAC/PA), growers, and professional landscape managers. These trainings may be done cooperatively with other CE Advisors in the region. This position may also work with policy makers and public agencies to serve as the technical expert to deliver science-based information on issues related to invasive species, pesticide use and mitigation of pesticide risks. The Area IPM Advisor will be a member of the UC IPM Program and housed in the CE San Diego County office. The Area IPM Advisor will be programmatically guided by UC IPM and administratively through the home county CE office. In addition to developing solutions through his/her applied research program, the Area IPM Advisor will support County CE Advisors throughout southern California to address short-term problems such as pest identification, appropriate selection and use of pest management methods, and will provide pest management support for UC Master Gardeners. The Area IPM Advisor will develop and cooperate in research, training and extension programs with other local CE Advisors and CE Specialists. Research and extension programs can be conducted at South Coast REC (78 miles from CE San Diego). Research projects may also involve, when appropriate and mutually beneficial, volunteers such as UC Master Gardeners or California Naturalists.

Justification: By February 2020, there will only be one CE Academic located in San Diego County. The previous retirements of CE Advisors Jim Bethke and John Kabashima, and the planned retirement of Cheryl Wilen (Area IPM Advisor) in early 2020 will leave this region that is both densely populated and highly agriculturally productive with no CE advisor focusing on pest management systems in agriculture. The Area IPM Advisor will positively impact on the economic and environmental health of the region. Los Angeles, Orange and San Diego Counties are the three most populated counties in southern California (16.7 million people, 2017) and have an agricultural production value of \$1.06 billion from 6,310 farms (2017). In addition, there has also been an increase in small scale commercial food producers (Urban Agriculture) in the region and these growers need connection to UC ANR for pest management information in order to be profitable and contribute to the economic develop of the region. San Diego County borders on Mexico to the south and Los Angeles County has two large port facilities which makes invasive species and export protection a top priority for the region. **Currently, the top issues that need to be addressed include:** 1) invasive pests entering through trade and transport or as a result of climate change, such as South American palm weevil, shot hole bore/Fusarium wilt complex, and slugs and snails; 2) mitigating pesticide risks to human health and surface water resources; and 3) developing and implementing IPM programs for small scale urban agriculture and specialty crops.

The likelihood of significant outcomes and impact is excellent. Regulatory drivers for adopting IPM have allowed UC IPM to find an audience receptive to the message and mission of the program. Additionally, local food movements, new farmers, urban farming, and non-traditional production systems of new and specialty crops in the region require more locally based expertise for these businesses to become economically viable. This is a clientele group where appropriate use of IPM technology can have a large impact on their profitability. Without this position being filled, clientele may obtain pesticide and pest management information from dubious sources, recognition and response to new invasive pests may be delayed, and opportunities to obtain state and federal resources to address local problems will be foregone. **This position addresses the needs and priorities of external stakeholders** by interacting directly with commodity boards for identifying needs and prioritization of research projects, working with state agencies to address invasive species or pesticide use issues through policy development, and with community organizations to provide unbiased, science-based information to make decisions.

Research: *Specific key research areas or topics:* This position is directly aligned with the Endemic and Invasive Pests and Diseases Strategic Initiative, addressing all three key priorities (Exclusion / Emerging and Re-emerging / Integrated Management of Pests and Pathogens). It also supports water quality programs through mitigation of pesticides that may be water pollutants. ***Specific areas of inquiry will include*** development of best management practices for new invasive species, evaluation and development of pest management strategies for endemic species, and mitigation of impacts of pesticide use. ***Expected peer-reviewed publication outlets:*** In addition to UC IPM publications, such as Pest Notes and Pest Management Guidelines, publications include California Agriculture and applied research journals such as Journal of Economic Entomology, Weed Technology, HortTechnology, Journal of Environmental Horticulture, Plant Disease, Plant Health Progress, and the Journal of IPM. The Area IPM Advisor will also participate in regional, national, and international pest management conferences.

ANR Network: Collectively, the 3 primary counties served by the position have 6 CE advisors working in crop production or landscape management but these are spread over 6 counties. As noted in the justification section, the recent and upcoming losses of county-based academics in San Diego will leave this region that is both densely populated and highly agriculturally productive with no CE advisor focused on agricultural pest management systems and invasive pests. ***However, the current staffing in the LA, Orange and San Diego CE offices is conducive to collaborative projects and synergism of expertise if an Area IPM Advisor is in place.*** Proximity to UC Riverside will provide linkages to members of the entomology (CE: Daugherty, Hoddle, Rivera, AES: Redak, Paine, Perring, Millar, Mauck, Stouthamer), plant pathology (CE: Putman, Vidalakis, AES: Adaskaveg, Borneman), nematology (CE: Becker, Ploeg), botany and plant sciences (CE: Bean, Arpaia, Mauk, McGiffen, Merhaut, Rolshausen), and environmental science (CE: Haghverdi, AES: Gan, Wu) departments.

Network External to ANR: Historically, this position worked closely with Cal. Dept. of Pesticide Regulation, Co. Ag Commissioners' offices, and local Indian tribes for extension programs (e.g. Pest Management Alliance, School IPM, pesticide safety) and with the Cal. Dept. of Food and Agriculture for technical advice on invasive pests. Additionally, this position networked with academics from other land-grant universities on multi-state programs and projects. There are numerous opportunities to network with trade and grower groups, water agencies, CalTrans, NRCS, USDA/NIFA, state and local parks, and non-profit organizations (e.g. California Invasive Plant Council and California Association of Pest Control Advisers).

Support: The San Diego CE office has a small number of vehicles available, a conference room, an office with phone and high-speed internet access. There is support staff to help with purchasing, meeting planning, and copying and mailing. UC IPM provides annual support funds (amount is dependent on ANR budget) generally used by the Area IPM Advisor for travel within and outside his/her home county and supplies and services to support IPM extension (often in cooperation with county CE Advisors and CE Specialists) that is consistent with the mission of UC IPM.

Other support: Research and extension support is expected to be obtained from competitive grants from UC ANR, CDFA, DPR, NIFA and commodity boards. Targeted contracts (non-competitive) may be provided by DPR, Counties, or non-profit organizations. If the Area IPM Advisor chooses, USDA IR-4 funding is available for biopesticide testing and conventional pesticide label expansion. The Area IPM Advisor can expect to easily obtain \$10-100K/year in support.

Location: San Diego has office has space and resources to support the Area IPM Advisor. San Diego currently also has an office in the north part of the county which is closer to the area where much of the ornamentals, avocados, and citrus are grown. San Diego is also often ground zero for new pests entering from Mexico. Since climate and crops in San Diego are similar to parts of LA and most of Orange County, work done at one location can be extended to other counties and vice versa. While travel to Los Angeles is more challenging, the Area IPM Advisor would be expected to develop a prioritization system based on the needs assessment.

Developed and proposed by: Jim Farrar, UC IPM Director and Cheryl Wilen, Area IPM Advisor and Interim San Diego County Director. The following stakeholders were involved in the development of this position: CAPCA chapters in San Diego and SoCal, San Diego Ag. comm. Offices; Growers Mike Mellano, Plant California Asso. (formerly California Asso. Of Nurseries and Garden Centers) Research Chair Fred Cebellos; CE Advisors and County Directors - Rachel Surls, Jose Aguilar, Janet Hartin and Darren Haver; and CDPR - Nita Davidson, Brian Leahy (Former Director). Dr. Farrar discussed with Pest Management Program Team and Endemic and Invasive Pests and Diseases Strategic Initiative panel.