**Request for Position - Area IPM Entomology Advisor (Kings/Tulare/Fresno Counties - San Joaquin Valley)**

**Position Title:** Area IPM Advisor for arthropod pests in field, row and vegetable crops – Kings/Tulare/Fresno Counties

**Position:** This position will conduct a multi-county applied research and extension education program that addresses the needs of growers and industry in insect/mite pest management, including insect-vectored diseases, for field, row and vegetable crops in the San Joaquin Valley (SJV) counties of Kings, Tulare, and Fresno. The position requires a M.S. in pest management with a concentration in insect/mite management. Experience in practical field pest management and basic knowledge of insect-vectored diseases vector is preferred. Leadership skills in coordinating widely-dispersed, sometimes multi-disciplinary projects in field, row and vegetable crops is required. This position will support and be supported by county-based Farm Advisors, by links to campus-based and local Specialists and AES scientists, will be expected to provide needed field research capabilities, and will be an essential part of Statewide IPM Program outreach.

**Location:** Kings County CE office (primary office); Access to work space as needed at Tulare County and Fresno County CE offices; Potential for office, laboratory, and field space at UC West Side Research and Extension Center.

**Justification:** In support of UC ANR’s Strategic Plan, this position will develop and deliver regional programs which benefit Californians with a more secure, healthy, nutritious food and fiber supply while protecting human health and the environment.

* Twelve of the 48 most valuable crops in California are row, field and vegetable crops, which are produced widely in the San Joaquin Valley region. These include alfalfa, wheat, field corn and various other silage crops, cotton, dry beans, processing tomatoes, onions, garlic, leafy vegetables, melons, broccoli, and bell peppers. The value of these crops in Kings, Tulare, and Fresno counties exceeded $2 billion dollars in 2016. Some these crops are vital in providing feed for the dairy industry, which is the highest value in California’s agricultural economy. Tulare, Kings and Fresno County are perennially among the top-five dairy production counties in California.
* Field, row and vegetable cropping systems vary from several month to multiple-year plantings and are important to the food, feed and fiber production of CA, the nation and the world. The Area IPM Advisor will develop and deliver area-wide pest management tactics and systems-level IPM programs in this region of highly diverse and constantly changing mix of crops. This includes addressing new pests or pest-disease complexes, shifts in endemic pest damage, and opportunities to conserve beneficial insects. Examples of current and emerging problems include Lygus bug management in cotton, dry beans and safflower; stink bug management in processing tomatoes; thrips-vectored tomato spotted wilt virus in processing and fresh market tomatoes; white fly management in late season cotton, melons and tomatoes; and sugarcane aphid in sorghum.
* IPM programs for field row and vegetable crops in the San Joaquin Valley need to be continually updated to address shifts caused by climate change, invasive pests, pesticide regulatory change, labor availability and cost, and changing production practices. Maintaining economical pest management, while protecting human health and the environment, is vital to supporting the agricultural productivity and rural economies in this historically economically-challenged region of California.
* Currently there are three Advisors addressing field and row crop entomology (Luis Espino in rice at Colusa/ Glenn/Yolo, Rachel Long at Capital Corridor MCP and Michael Rethwisch at Blythe in eastern Riverside County) and three Advisors addressing vegetable crop entomology (Amber Vinchesi at Colusa/Sutter-Yuba, Surendra Dara at San Luis Obispo/Santa Barbara/Ventura and Alejandro del Pozo at Monterey/Santa Clara/San Benito) in California. In addition, a search for an Extension Entomology Specialist in Row and Vegetable Crops at UC Davis is in process. This leaves an enormous gap in IPM/entomology for field, row and vegetable annual crops in the San Joaquin Valley, including Kings, Fresno and Tulare Counties.

**Extension Responsibilities:**

* Provide regional leadership to develop, extend and evaluate IPM programs in San Joaquin Valley field, row, and vegetable crops
* Develop, maintain and coordinate a regional team to identify opportunities for reducing risk to people and the environment through economically sound IPM practices,
* Deliver system-based IPM information using various educational approaches to learning styles, e.g. lectures, social media, experiential and individual consultations.
* Publish in outlets appropriate to the audience and situation.
* Provide IPM leadership and expertise to local CE Advisors, industry, and pest control advisers to enhance IPM systems and address developing concerns in field, row and vegetable crop production. Key stakeholders would include members of CA Tomato Research Institute, CA Cotton Growers and Ginners Association, CA Alfalfa and Forage Association, CA Safflower Growers Association, California Specialty Crop Council, CA Melon Research Board, CAPCA, Assoc. of Applied IPM Ecologists (AAIE), allied personnel working in crop protection industry.

**Research Opportunities:**

* Improve monitoring, assessment and integrated management of invertebrate pests which can cause major economic losses many years, for example:
  + Plant bugs, stink bugs (cotton, tomato, pepper, beans, alfalfa seed) – example, lygus as the dominant pest in multiple crops.
  + Whitefly and aphid potential to cause degraded fiber quality and major economic impacts in cotton; sugar cane aphid in sorghum, mites in corn.
  + Pest impacts on economic yields and quality in seed production in multiple field and vegetable crops.
  + Leaf hopper and thrips vectors of serious virus diseases in tomato, alfalfa, melons, peppers – example, opportunities for cooperative research with UCCE Pathologists, Advisors (Swett, Gilbertson, Turini).
  + Armyworm and other lepidopterans pests (cotton, alfalfa, tomatoes) – yield loss and quality degradation.
  + Soil-borne insects in tomatoes, melons, and leafy greens (corn root worm, wireworms, and garden symphlyans).
* Respond to endemic and invasive threats by developing immediate and long-term programs, (for example, the endemic brown stink bug, the invasive brown marmorated stink bug and Bagrada bugs) which represent significant economic threats to multiple crops.
* Demonstration research to showcase new chemical, non-chemical controls, integrated control approaches.
* Collaborate with existing research/extension teams for specific commodities, or develop new ones.

**ANR and External Network Support**:

* IPM: Statewide Program – Formal MOU with UC IPM Program
  + Professional staff of writers, editors, web developers (Martin, Lam)
  + Area IPM Advisors in other regions
* Arthropod Pest Management
  + UCD – new Extension Entomologist position – search in process
  + UCB – Daane
  + UCR – Trumble, Millar
  + SJV – Haviland, Rijal, Tollerup (these Advisors are focused mainly on perennial crops)
  + Entomologists in other regions - del Pozo, Dara, Long, Vinchesi, Rethwich, Espino
* Field, Row and Vegetable Crops Production or Plant Pathology
  + UCD – Putnam, Hutmacher, Dahlberg, Kaffka, Swett, Gilbertson, McRoberts
  + SJV – Mueller, Sanden, Munk, Turini, Dahlquist-Willard, Clark, Stapleton, Stoddard. Sosnoskie
* Industry: CA Tomato Research Institute, CA Melon Research Board, CA Cotton Growers and Ginners Association, CA Alfalfa and Forage Association, California Specialty Crop Council, CAPCA, Assoc. of Applied IPM Ecologists, Crop Protection Industry, CA Garlic and Onion Research Advisory Board
* Public: County Ag Commissioners, CA Department of Pesticide Regulation, CA Department of Food and Agriculture, USDA- ARS Parlier, USDA NRCS Hanford and other offices

**Support:** UC IPM Program support for operations, travel; County for office, phone, internet, clerical support

**Other support**: Commodity and industry grants, CDPR Pest Management Alliance/IPM program, CDFA Specialty Block Grant, Western IPM and Western SARE grant opportunities. Current problems with lack of adequate personnel for coverage of research and extension needs for field and row crops in this region should result in significant opportunities for support from individuals who can develop a program and field research capabilities.

**Developed and proposed by**: Kevin Day, Shannon Mueller (UCCE County Directors); Bob Hutmacher (Director West Side REC and CE Specialist UC Davis Plant Sci Dept); Peter Goodell (UC IPM Program, Emeritus); Jim Farrar (Director, UC IPM Program). Position discussed, highly ranked by Vegetable Crops, Pest Management Program Teams, Entomology, Integrated Management of Soilborne Pests, Cotton Workgroups, and supported by Agronomy Program Team. Position highly supported by CA Cotton Growers and Ginners Assoc., CA Safflower Growers Assoc., CA Tomato Research Initiative, CA Garlic and Onion Research Advisory Board, CA Melon Research Board, with good history of financial support for research addressing key industry issues.