**Position Title: Entomology Specialist to Address Trade Barrier Arthropod Pests**

**Position:** 1) general disciplinary focus: entomology, 2) educational and professional background: Applicants must hold a Ph.D. in Entomology, Biology, Ecology, or related discipline, 3) supporting units for the position: the successful candidate will be a CE Specialist in the Department of Entomology at UC Riverside, will be housed at the UC Kearny Agricultural Research and Extension Center (KARE), Parlier, CA, and will have statewide responsibilities. This position will develop an applied research program focused on reducing the impact of insect and mite pests of export/import significance in agricultural and floricultural crops, and provide outreach to appropriate clientele to facilitate adoption of new science-based knowledge for management of these pests. Any area of biological interest will be considered; however there is an expectation that the research/extension program will lead to practical solutions for managing insects and mites of export/import significance through biological, cultural or chemical means.

**Justification:** The export market is especially important for California with export values (2010) for some of the top export crops including; almonds ($2,398 million), walnuts ($666 million), Pistachios ($682 million), table grapes ($594 million), citrus ($623 million), strawberries ($297 million), and stone fruits ($124 million) an floriculture ($87.8 million). As world trade increases, international organizations are increasingly emphasizing biosecurity and regulating export/import pathways to prevent introduction of pests and diseases. Invasive pests continue to enter California at a rapid rate and must be detected and mitigated to protect California agriculture and maintain export markets. Numerous innocuous pests in California agriculture are determined to be phytosanitary risks to other countries. In the past, these infestations were mitigated using the fumigant Methyl Bromide, however its use has become restricted worldwide. Thus, Methyl Bromide replacements either via fumigants or other technologies are critically needed. This position will provide a leadership role in developing a ‘systems approach’ of preharvest scouting and IPM in combination with innovative post harvest tools to respond to pests that create trade barriers for fresh market fruits and nuts.

**Extension:** Extension activities to be fulfilled by this position will include development and implementation of educational programs on arthropod identification, biology, monitoring and management. 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 successful 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, packinghouse managers, regulatory personnel, chemical 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, and commodity-oriented magazines.

**Research:** Areas of research interest include, but are not limited to, studying the taxonomy, biology and ecology of pest arthropods of export significance; design of robust sampling plans; evaluation of the impacts of preharvest chemical, cultural and biological methods of control, and the development of post harvest treatments such as cold temperature, chemical dips and fumigants. Opportunities for research collaboration with UC Academics, the USDA-ARS and commodity groups are numerous and encouraged. Coordination with clientele will facilitate evaluation and adoption of novel management methods.

**ANR Network:** Collaborative interactions are already in place between AES faculty and Cooperative Extension staff on various UC campuses and at KARE, as well as with county farm advisors and various grower clientele. This position complements the the Postharvest Horticultural Specialists at Kearney. These interactions will facilitate identification of critical problems and coordination of research applications, and technology transfer from campus-based researchers and county CE faculty to the agricultural industry and other clientele of the Division of Agricultural and Natural Resources who will derive the greatest benefit.

**Network External to ANR:** This position will collaborate heavily with the postharvest research group at the USDA-ARS Parlier facility who conduct fumigation studies on a number of crops. Location of the position at Kearney Research and Extension Center would facilitate that collaboration.

**Space and Support:** An office (ca. 115 ft2) and laboratory (ca. 480 ft2) will be provided at KARE in Parlier, CA as well as cold storage and postharvest facilities at Kearney REC and a postharvest fruit grading system at Lindcove REC. Limited administrative support, office supplies, computing, internet access, and telephone access will be provided at KARE (via DANR). Administrative support will be mainly though the Department of Entomology, UC Riverside. While the successful candidate is expected to support their research and extension program primarily with competitive extramural funding, additional funding may be provided via funds offered within the College of Agriculture and Natural Sciences at UCR and within the Division of Agricultural and Natural Resources.

**Other support:** Extramural funding may be procured via a variety of sources at the state (CDFA, DPR) and federal levels as well as through numerous commodity boards that support research in California (California Citrus Research Board, California Almond Board, Walnut Board, Table Grape Commission, Strawberry Board, and the Floriculture industry).

**Location:**  The position would be located in the San Joaquin Valley at the UC Kearney Agricultural Research and Extension Center (KARE), Parlier, CA. This location is advantageous for conducting because it is central to the one of the most productive agricultural areas in California and has on-site agricultural blocks in which research can be conducted. Also located at KARE are researchers and CE personnel from the campuses of UC Davis and UC Berkeley. Within one quarter mile is the USDA Agricultural Research Service San Joaquin Valley Agricultural Sciences Center, which also supports numerous scientists working on postharvest fumigation tactics. Placing this position at KARE puts it

**Developed and Proposed by:** The Department of Entomology, UC Riverside, Entomology Workgroup and the Pest Management Program Team at UCR proposed position. This position was identified as a high priority by the UC ANR Entomology Workgroup and the Pest Management Program Team during the 2015 and 2018 Strategic Initiative Conferences. Numerous commodity groups support this position as critical for protecting trade.