

Area Plant Pathology Advisor Imperial/Riverside/San Diego

Position Description: The Plant Pathology Advisor is to address local plant disease concerns of commercial vegetable crops, field crops, seed crops, horticultural and tree crops in Imperial, Riverside, and San Diego Counties. Research, education and diagnostic programs will serve PCA's and growers, as well as provide a multi-state linkage to Arizona. The Advisor will provide leadership, information transfer, and technical assistance in diagnostics, prevention, and alleviation of plant diseases in a wide area of geographic and cropping systems. The advisor will coordinate educational and research activities with clientele, CE Advisors, Specialists, AES scientists and USDA ARS scientists working with crops in Imperial, Riverside, and San Diego. The educational and professional background requirements include: a Master's degree in plant pathology; experience is preferred. The plant pathology advisor position will be housed in Imperial County and provide a multi-county programmatic coverage that includes Riverside and San Diego Counties with multi-state linkage state to Arizona.

Justification: The Advisor will address critical and high priority core issues including invasive species, and pest management, and the medium priority core issue of biosecurity. This advisor will have disciplinary perspective and geographical location to make major contributions to local plant disease management and provide critical linkages with the National Plant Diagnostic Network to contribute to efforts regarding invasive species and biosecurity. The advisor will contribute substantially to the likelihood of early detection of an intentionally or accidentally introduced infectious pathogens / agents and would serve as a valuable resource in the development of management strategies to mitigate the economic or sociological impacts of the introduced agent (s). This position will result in increasing the responsible effective, economic and environmental management of important invasive or established infectious agents by pest control advisors, growers and other horticulturalists. This advisor will have a role in developing, or evaluating, biological, cultural and alternative chemical management strategies to contribute to integrated and sustainable pest management.

Extension: The advisor will address specific plant disease concerns of farm owners, managers, pest control advisors and other agricultural industry personnel through personal telephone conversations, office visits, and by going into the field to look at specific plant health issues. General concerns of clientele shall be addressed through meetings and articles. The extension program will provide technical information on appropriate methods of disease control to owners, operators and managers of commercial farming operations and other agricultural industry staff. The Advisor will identify crop production problems in individual commercial fields for growers, pest control advisors and other agricultural industry personnel by visiting the fields or by examining samples brought in by clientele. The Advisor will prepare written information in the form of county newsletters, news releases, and journal articles. In addition, the advisor must hold field meetings, give educational presentations, co-coordinate and participate on Fall Desert Crop Workshops, fielddays and other evenr, and provide information via the UC Imperial County internet web page to disseminate information to all clientele.

Research: The advisor will conduct needs assessments and in cooperation with producers, industry groups and University of California personnel, devise experiments to rate the performance of new and existing disease control materials and techniques. Fungicide resistance has become a problem in Imperial, Riverside, and San Diego Counties and surrounding low desert agricultural production. Fungicide resistance, such as resistance of *Podosphaera xanthii* to QoI fungicides, as well as the emergence of plant resistance-breaking races, necessitate that agricultural professionals consider many factors in making disease management decisions. Also, there are mounting restrictions and loss of

availability of long-used fungicides, and new safer replacements need to be identified and evaluated for efficacy and crop safety in the low desert. Several whitefly, thrips, leafhopper and aphid transmitted virus diseases (e.g., *Cucurbit yellow stunting disorder virus*, *Iris yellow spot virus*, *Beet curly top virus*, Cucumber mosaic virus, Potyviruses and *Tomato spotted wilt virus*) are appearing with increased frequency in vegetable crops seed crops and spice crops. They will require proactive attention and potential development of management practices for continued viability of the \$2 billion vegetable production industry in the three counties. In cooperation with professional growers and academic colleagues, the advisor will develop new cultivation practices that improve agricultural production, while reducing pesticide use, minimize pest infestations (especially via optimized cultivation practices and/or bio-control technologies), and maintain crop tolerance to pathogens.

ANR Network: Many participation opportunities exist for collaboration with local Advisors and campus Specialists. The Advisor will have the charge of identifying the priority issues through field visits and interacting with clientele; being aware of other factors influencing the local situation; and working with appropriate AES and CE scientists to provide solutions to these local issues. Currently, there are few plant pathology resources for southern California. At UCR, plant pathology resources for field and vegetable crops are limited to one AES scientist, although there is Pathology CE scientist. Because of the geographical distance, UC campus-based plant pathologists, AES and CE specialists, provide limited assistance with issues in the low desert.

Network External to ANR: The advisor will collaborate with local colleagues, UCCE specialist at UCR, community colleges, University of AZ CE Agents and /Yuma Agricultural Center scientists, USDA ARS scientists, INIFAP scientists and UABC scientists, county government and when appropriate, identify any additional networks (e.g., government agencies, policy makers, community groups, etc.) with whom the advisor will be expected to collaborate.

Support: Imperial County UCCE provides a vehicle for on the job transportation to field visits, research projects and educational activities. The advisor is provided an office, telephone, cell phone, high speed wireless internet access, storage space, furnished shared laboratory, an autoclave, clean room, sample and media refrigerators, clean bench, a dissecting and a compound and electron microscope, a camera for field photography and one camera fixed to the compound microscope, spray equipment, office supplies, clerical and administrative support.

Other support: The Advisor will get support from other plant pathology advisors in California, commodity groups, CDFA grants, USDA grants, and local vegetable crop industry in the region.

Location: The position will be housed at the Imperial County CE office and serve Imperial, Riverside, and San Diego Counties. The CE office in Imperial is located in Holtville, CA at the Desert REC. Desert REC has laboratories and facilities to conduct applied research and opportunities to collaborate with campus-based colleagues on existing and new projects at DREC. This location will enable a new advisor with immediate access opportunities for collaboration.

Developed and proposed by: The Imperial County Director is putting the position forward with consultation from the county directors in Riverside and San Diego Counties. The position is a joint effort of the recognized needs and opportunities of internal and external stakeholders. Internal stakeholders involved in the vision for this proposal include local advisors, DREC Director, and Imperial, Riverside, and San Diego County Directors. External stake holders include the Imperial County Farm Bureau, Imperial Valley Vegetable Growers Association, Imperial County Agricultural's Commissioner office, University of Baja California and the University of Arizona, county Agricultural weights and measures.