

Area Viticulture Advisor Tulare and Kings County

Position Description: Primary discipline will be Horticulture/Plant Science, with an emphasis on Viticulture- Table Grapes and a desired secondary discipline, soils and water, variety development, or entomology. Position requires a minimum of a Master's degree in an appropriate agricultural discipline, such as horticulture or plant sciences, with training, education, or appropriate experience in viticulture. Education or training in soils and/or water or other applicable secondary discipline is preferred. The supporting units are Tulare and Kings County.

****Justification:** Industry, through the California Table Grape Commission, has identified these areas of need as critical for table grapes in the southern San Joaquin Valley: Vine growth and development to include genetics, vineyard management systems, crop/fruit development, post harvest handling, and minimizing the environmental effects of production and cultural practices. Additional expertise needs were identified as irrigation and soil science and secondarily in plant physiology. Industry has indicated it is willing and ready to fund either one-half of this position or a second viticulture-table grapes position in the southern San Joaquin Valley, as well as provide research funding and ongoing participation in the identification and evaluation of program needs. The level of industry involvement makes the likelihood of significant outcomes and impact great. There has not been a viticulture position in Tulare County for 3 years, and with the recent resignation of the Kern County Advisor, there is now one full time viticulture position for the entire southern San Joaquin Valley. Tulare-Kings County has 485 farms reporting grape production on 64,700 acres with a 2010 value of \$524,916,000. Farm Advisor Beede, Kings County, previously relinquished his viticulture assignment to Bill Peacock to concentrate and specialize on nut crops. With over 400 growers, Tulare County ranks 5th in the state for grape acreage at 57,000 acres; and a farm value of \$490 Million (2010). Table grapes represent over 70%, with raisin and wine grapes representing 20% and 10%, respectively. Kings County total grape acreage is 7000 acres with a \$35 Million value (2010). Tulare County has 1 million acres of irrigated farm land and Kings County has 740,000 acres. Several thousand acres of Kings County has critical salinity problems and in Tulare County over drafted and high nitrate groundwater is a critical issue. The table, raisin, wine, and cannery grape industries in the Southern San Joaquin valley, from Madera south, have a farm gate value of over 2 billion dollars, with over 3500 growers, and over 400,000 acres farmed and a complex infrastructure of packing houses, cold storage facilities, wineries, and marketing networks. Most of the table grapes and raisins produced in the United States are produced in this area; Eighty per cent of the table grapes grown in California are produced in Tulare, Kings, and Kern Counties.

Extension: Program will provide an educational outreach to commercial viticulture with a focus on table grapes. The advisor will also lead an area educational program based on their secondary discipline, preferably in irrigation management and water quality, or other high priority area such as entomology or soil science. The extension program will be closely linked to the results of the research, as research driven educational programs promote adaptation and maintain relevance. Major clientele will be growers to include significant collaboration with industry and allied industry groups to multiply extension impacts.

Research: Future viticulture research and education needs in Tulare and Kings County will be driven by several forces, to include; the decreasing quality, reliability and increasing cost of water; decreasing availability and increasing cost of labor; consumer and industry emphasis on food safety and product quality; increasing environmental regulatory requirements for

***The "Justification" section above is the new required section that has been added to the 2012 CE Positions Template. Re-submissions must include this section in their revised proposal. New submissions must use this template.*

development of best management practices; the increasing need for early detection and control of invasive species and control through integrated pest management.

Specific projects may include:

- Table Grapes;
 - Cultural practices for both new and existing table grape cultivars; trellis design, canopy and fruit management, vine physiology including light and carbohydrate issues, growth regulators and girdling, vine capacity and crop load determinations;
 - Evaluation of post harvest issues (packaging, gassing, storage procedures);
- Raisin Grapes;
 - Development of dried-on-vine and continuous tray raisin production systems including trellis designs, canopy and fruit management, and mechanization;
 - Cultural practices for new raisin grape cultivars; canopy and fruit management, vine physiology including light and carbohydrate issues, growth regulators, vine capacity and crop load determinations, raisin quality and storage potential.
- Wine Grapes;
 - Develop cultural techniques for wine grape cultivars that improve wine quality and grower returns; trellis design, canopy and fruit management, vine physiology including light and carbohydrate issues, growth regulators, vine capacity and crop load determinations.
- Sustainability, water quality and water quantity;
 - Irrigation strategies that promote production and quality, reduce water quality issues, conserve water quantity, and manage salinity and high level constituents such as boron.
 - Sustainable irrigation management through cultivar specific regulated deficit irrigation applied at varying phenological stages;
 - Sustainable Production including IPM and floor management techniques, fertilization irrigation practices, organic farming techniques.
 - Nutrition, both macro and micro nutrients, cultivar and rootstock specific

Publication opportunities include: American Journal of Enology and Viticulture; American Society of Horticultural Science; Horticultural Science; Journal of Economic Entomology; American Society of Agronomy; California Agriculture; UCCE ANR Publications: Cost Sheets, Manuals, Web Site; Grower Newsletters; and Popular Press.

ANR Continuum: The existing team includes a viticulture advisor focusing on raisins in Fresno County, and a viticulture specialist at KAC with a focus on raisins. There are three IPM advisors at KAC (pathology, pest management, vegetation management). There are specialists at KAC in irrigation, nematology, post harvest, and plant pathology. A faculty member from UC Davis at KAC and the USDA ARS has a research center in Parlier with scientists involved in viticulture and related subjects. This position would take a leadership role in table grapes. There is a programmatic gap in Tulare, Kings, and Kern County for this program area. Industry (Table Grape Commission) has indicated there is funding to assist ANR in bridging these gaps. There is very little work being done in Table grapes at this time, however there are opportunities to collaborate with the Fresno Viticulture Advisor and the KAC Viticulture Specialist. USDA ARS has variety development projects with collaboration opportunities. This position will be the start to re-building the table grape team and should a position be funded from industry sources for Kern County or this position, there would be a collaboration opportunity based on discipline expertise. The Table Grape Commission is willing to develop a grower advisory committee to

***The "Justification" section above is the new required section that has been added to the 2012 CE Positions Template. Re-submissions must include this section in their revised proposal. New submissions must use this template.*

provide continuity in the program development. This program will contribute to the Strategic Initiatives of Sustainable Food Systems, Water Quality, Quantity, and Security, and Endemic and Invasive Pests and Diseases.

Support: There is excellent support with office space, transportation, clerical, communications, Information Technology and field support. This position will headquarter in Tulare County, and a cross county agreement will be established for services to Kings County.

Industry Support: The Table Grape industry has proposed to fund either one-half of this position or a second viticulture-table grape position; based on ANR allocating two viticulture positions to the southern San Joaquin Valley.

Other support: Research funding is available from the Table Grape Commission, and raisin and wine grape commodity groups, as well as IPM and for other issues such as nutrient management, based on relevant and high priority research. There is also the opportunity to collaborate in the wider initiative driven ANR funded research projects.

Location: Previously the advisors in Fresno/Madera and Kern were unable to serve Tulare and Kings County and maintain their program levels. The industry considers this a primary location for ANR program support. Water and soils are critical issues for both counties with decreasing supplies and increasing demands and increased regulatory requirements on water quality. The close proximity to KAC and USDA enhances the opportunities of this position. The previous viticulture advisor had an excellent program with significant impacts; therefore, there is a history of cooperators. The support is available, the need is apparent; placing a Viticulture Advisor in Tulare and Kings County is a good use of ANR funds.

***The "Justification" section above is the new required section that has been added to the 2012 CE Positions Template. Re-submissions must include this section in their revised proposal. New submissions must use this template.*