

Abiotic Stress - Assistant Cooperative Extension Specialist

Position Overview

Location Headquarters. University of California – Kearney Agricultural Research and Extension Center in Parlier, California

Purpose. The CE specialist in Abiotic Stress will focus on carrying out a collaborative, multifaceted research and outreach program focused on addressing challenges facing water-stressed production systems of California and deploying sorghum as a model crop for understanding drought resilience, gene discovery and value added cropping systems to supply biofuel and bioproduct markets.



The CE specialist will develop multi-disciplinary collaborations with other UC and outside researchers to address needs; and should seek out opportunities to bring private-sector partners and other stakeholders into these collaborations.

The CE specialist will be expected to develop an extramurally-funded research and extension education program production under limited water conditions; forge strong interactions with local, regional, state and national partners and clientele, as well as with UC colleagues; contribute to core research and extension goals established within ANR; and assist in establishing an innovative multi-disciplinary program in their field of expertise.

This is an exciting opportunity to have meaningful impacts throughout California. Opportunities abound for research and extension partnerships that link consumers and resource professionals with relevant science-based information and promote effective problem solving. The CE Specialist will also join a team of highly motivated UCCE colleagues who are passionate about their work, and are dedicated to making a difference within the communities and throughout California. The potential for collaborative projects within the UC ANR system is nearly limitless.

Reporting Relationship: The CE specialist is academically and administratively responsible to the Chair of UC Merced's CEE department, with input from the ANR Associate Vice President. UC ANR will oversee the merit and promotion process, consistent with other ANR CE Specialists. The position will be stationed at the UC-ANR Kearney Agricultural Research and Extension Center located in Parlier, CA. It is expected that the CE specialist in Abiotic Stress will maintain an additional 0% (uncompensated) Adjunct Professor series appointment, reporting academically and administratively to the Department Chair.

Research & Extension

All CE Specialists are expected to develop and implement applied research programs to provide science-based information addressing complex issues such as drought and its interactions with metabolic processes. This

position will focus generally on enhancing California's agricultural resilience to climate change, particularly warming and drought conditions. The initial focus will be on annual cropping systems, specifically forage and grain sorghum. Interests in the broader agricultural system are also encouraged. Specific objectives for improvements in drought resilience include:

- Breeding for drought resilience
- Conducting gene discovery for drought resilient attributes
- Phenotyping (with an emphasis on high-throughput methods)
- Understanding genetic, environmental and agronomic management (GxExM) impacts on sorghum productivity under drought stress
- Applying big data methods to improve drought resilience
- Understanding the role of root systems on drought resilience
- Understanding soil microbe interactions during drought
- Understanding the impacts of photosynthesis regulation during drought

Specific objectives for value added cropping systems to supply biofuel and bioproduct markets include:

- Understanding GxExM impacts on composition, quality and characteristics
- Collaborating with deconstruction scientists to improve and optimize sorghum use in biofuel and bioproduct applications
- Breeding sorghum for improved biofuel and bioproduct attributes
- Conducting gene discovery for improved biofuel and bioproduct attributes
- Phenotyping (with an emphasis on high-throughput methods) for improved biofuel and bioproduct attributes
- Applying big data methods to improve biofuel and bioproduct attributes

EXTENSION

The CE specialist will develop an extension education program to integrate science for better agricultural practices in California and other regions with limited water resources.

The extension and research program should evolve in collaboration with multiple and diverse stakeholders of California, including growers, regulatory agencies, resource agencies, and environmental groups. Typical outreach clientele includes growers, other researchers, environmental groups, hobby growers Department of Energy sites such as the Joint Bioenergy Institute, regulatory agencies such as the California Air Resources Board and the California Energy Commission as well as industry groups including the Sorghum Checkoff and National Sorghum Producers. The work both serves and draws upon growers, agricultural professionals such as Pest Control Advisers and Certified Crop Advisers, and public agency officials at the federal, state, and local levels.



Outreach methods include individual consultations, field days, tours, meetings, web conferences, ANR publications, peer-reviewed journal papers, and an appropriate mix of contemporary and emerging electronic tools such as online learning, web content systems and repositories, social media, impact and evaluation tools, along with specialized and public media outlets. Programs will be developed and carried out in collaboration with other ANR academics as well as scientists from related government organizations and private concerns.

Qualifications and Skills Required

Required Qualifications

Education A minimum of a Ph.D. is required in plant breeding, agronomy, agroecology, agricultural engineering, irrigation management, environmental science/studies, soil science, or other closely related disciplines. Applicants must be within 12 months of completing their degree in order to be considered for the position. Excellent written, oral and interpersonal communication skills are required. A demonstrated ability in applied agricultural research and extension of information is desirable. Experience in securing and managing extramural grants, carrying out field-based research, and publishing multi-disciplinary research is desirable.



Additional Expectations

All UC ANR CE specialists are responsible for performance in the areas of 1) applied research and creative activity, 2) extending knowledge and information, 3) professional competence and activity and 4) University and public service.

Skills Required

The CE specialist will interact with UC ANR program teams, UC Merced faculty, CE advisors, other CE specialists, and others within the research/extension network and advisory groups to develop, strengthen and expand the delivery of statewide products.

Technical competence

- Conduct and report needs assessments to identify priority issues or problems relevant to the local clientele groups being served.
- Develop and implement effective UC ANR Cooperative Extension applied research and educational programs to address the identified priority needs of the clientele that are consistent with ANR's Strategic Vision and ANR initiatives;
- Conduct applied research designed to monitor changes and solve statewide and locally relevant problems related to water quantity and quality in crop production;

Communication

- Disseminate appropriate, science-based information to inform clientele, using extension methods that are responsive to clientele needs and appropriate for the audience and situation;
- Maintain and promote UC ANR Cooperative Extension's credibility by providing science-based knowledge;
- Evaluate programs and report accomplishments, results, and potential or actual impacts to scientific and lay audiences through a variety of outreach methods e.g., peer-reviewed publications, internet, workshops, newsletters;
- Collaborate closely with the advisory committee.

Collaboration & Teamwork

- Interact with their campus academic colleagues, thereby creating synergies that will advance the programmatic goals of both the UC Merced Department of Civil & Environmental Engineering (CEE) and of UC ANR;
- Engage with campus faculty and staff on design and construction, research, educational outreach associated with the UC Merced Experimental Smart Farm, which is currently under development;

- Interact with UC Merced CEE undergraduate students and graduate students in Environmental Systems and other relevant graduate programs via occasional lectures and other academic functions (such as serving on dissertation committees, oral exams, etc.) as appropriate. In accordance with UC Academic Personnel Policy 334, Specialist in Cooperative Extension Series, the teaching of regular undergraduate or graduate courses will not be a primary responsibility of the position;
- Engage in campus faculty meetings, campus faculty committee service, and other activities of the UC Merced faculty as appropriate.
- Maintain close contact and working relationships with sorghum industry groups including the Sorghum Checkoff and National Sorghum Producers.

Lifelong Learning

Demonstrated commitment to ongoing self-improvement - both professionally and as a person.

Learn more about Skills and Areas of Programmatic Review All UC ANR CE specialists are responsible for performance in the areas of 1) applied research and creative activity, 2) extending knowledge and information, 3) professional competence and activity and 4) University and public service (with awareness and impact in relation to Affirmative Action and DEI). Learn more at: <https://ucanr.edu/sites/anrstaff/files/319460.pdf>

About UC ANR and UC Merced

The University of California, Division of Agriculture and Natural Resources (UC ANR) consists of a network of scientists and educators working in partnership across the California. We are committed to developing and supporting healthy food systems, healthy environments, healthy communities, and healthy Californians. UC ANR administers UC Cooperative Extension (UCCE), which is responsible for program development and delivery in the counties throughout the state of California.

Opened in 2005 as the newest campus of the University of California, UC Merced continually strives for excellence in carrying out the university's mission of teaching, research, and public service, benefiting society by discovering and transmitting new knowledge and functioning as an active repository of organized knowledge (<https://www.ucmerced.edu/ucmerced-mission>). The Department of Civil & Environmental Engineering (CEE) includes about 20 faculty whose teaching and research spans water quality and quantity management, sustainable agriculture, ecosystem climate mitigation, lifecycle analysis, ecological engineering, and more. The CEE faculty advise graduate students within the interdisciplinary Environmental Systems program (<https://es.ucmerced.edu/>) while supporting two undergraduate majors, environmental engineering and a new civil engineering major starting in Fall 2021.

Learn more about

- UC ANR at <https://UCANR.edu>
- UC Merced <https://es.ucmerced.edu/>
- Our UC ANR Strategic Initiatives <http://ucanr.edu/sites/StrategicInitiatives/>
- Our UC ANR Public Value statements at [https://ucanr.edu/sites/anrstaff/2016-2020 Strategic Plan/Goal 5 Prioritize programs and services/Public values statement/](https://ucanr.edu/sites/anrstaff/2016-2020%20Strategic%20Plan/Goal%205%20Prioritize%20programs%20and%20services/Public%20values%20statement/)
- **DEI:** Further to the above, CE Specialists are expected to share and exhibit UC ANR's commitment to Diversity, Equity and Inclusion [https://ucanr.edu/sites/Professional Development/Office - Team Management/Diversity Equity Inclusion Belonging/](https://ucanr.edu/sites/Professional%20Development/Office%20-%20Team%20Management/Diversity%20Equity%20Inclusion%20Belonging/)

- **Affirmative Action:** Further to the above, CE Specialists are expected to share and exhibit UC ANR's commitment to affirmative action. Learn more of UC ANR Affirmative Action policy: http://ucanr.edu/sites/anrstaff/Diversity/Affirmative_Action/

Salary & Benefits

Salary: Beginning salary will be in the Assistant Cooperative Extension Specialist Series and commensurate with applicable experience and professional qualifications. This is a definite-term, fiscal year, non-career track position that is not eligible for indefinite status. This position is co-funded for five years with the possibility of renewal based on performance and availability of funding.

All other provisions of UC Academic Personnel Policy 334, Specialist in Cooperative Extension Series apply. For information regarding the Cooperative Extension Specialist salary scale, please refer to <https://www.ucop.edu/academic-personnel-programs/files/2022/july-2021-scales/t29.pdf>

If the successful candidate is currently a UCCE specialist with indefinite status, the candidate will be offered the position commensurate with applicable experience and professional qualifications with eligibility to retain such indefinite status.

Benefits: The University of California offers comprehensive benefits including two days per month paid vacation, one day per month paid sick leave, and approximately thirteen paid holidays per year. This position is eligible for sabbatical leave privileges as per the terms of University policy.

For more information, refer to the UC Benefits website at:

<https://ucnet.universityofcalifornia.edu/compensation-and-benefits/index.html>

How to Apply

If interested in this position, please visit: <https://recruit.ucanr.edu/> and choose "applicants" (refer to position #21-11)

Closing Date: To assure full consideration, application packets must be received by **September 7, 2021**, or open until filled.

Interview information:

A search committee will review all applications, interview candidates, and recommend individuals most suitable for the position.

Approximately 2 to 3 weeks after the submission deadline, applicants with appropriate and applicable education and experience will be invited to participate in a preliminary, remote interview.

The formal in-person interviews will take place approximately 2 to 3 weeks after the preliminary interviews for those applicants selected to proceed.

Questions?

Contact Tatiana Avoce; email: tavoce@ucanr.edu

Applicants may wish to explore the UC Davis Services for International Students and Scholars web page at <https://siss.ucdavis.edu/> as a resource.

University of California Cooperative Extension

Please note the UC Policy on COVID vaccination and working for UC: For the safety and well-being of the entire university community, the policy will require, with few exceptions, that all students, faculty and staff be vaccinated against the COVID-19 virus before they will be allowed on campus or in a facility or office." Please visit <https://ucnet.universityofcalifornia.edu/news/2021/07/ucs-covid-19-vaccine-policy.html> for more information.

The University of California is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age, protected veteran status or other protected categories covered by the UC nondiscrimination policy.

As of January 1, 2014, ANR is a smoke- and tobacco-free environment in which smoking, the use of smokeless tobacco products, and the use of unregulated nicotine products (e-cigarettes), is strictly prohibited.