**Urban Agriculture Production Specialist - ESPM Department, UC Berkeley**

**Developed and proposed by:** This position was developed and proposed jointly by the Urban Agriculture and Community Gardens Program Team (UACG PT) and UC Berkeley ESPM Department, with input from the Statewide Master Gardener Program, Statewide IPM Program, South Coast REC and 15 advisors, specialists and AES faculty across the state. External stakeholders, including Resource Conservation Districts, community-based organizations and farms (CAFF, Agroecology Commons, Gill Tract Farm Coalition, Spork Food Hub), and public agencies (StopWaste, NRCS), were engaged through a stakeholder survey to gauge support and identify priority research and extension needs; all respondents rated the need for expanded UC urban agriculture capacity at the highest level.

**Position title:** Urban Agriculture Production Specialist - ESPM Department, UC Berkeley

**Headquarter location and coverage area:** The position will be based in UC Berkeley's Department of Environmental Science, Policy, and Management (ESPM), to leverage the department's world-class expertise in agroecology, hydrology, soil science, entomology, food systems, environmental and food justice, and Indigenous food sovereignty. California has the largest urban farming population in the country, driven by two of the nation's most densely populated metropolitan regions: Los Angeles and the Bay Area. Because of this massive footprint as well as other metropolitan regions in between, this position requires a statewide focus to support urban growers across the entire geography.

**Position overview**: The proposed specialist will build an applied research and extension program focused on the biophysical, ecological, and production dimensions of urban agriculture in California. A PhD in horticulture, agroecology, environmental science, soil science, entomology, agronomy, or a closely related ecology or production-focused field is required. Relevant areas of expertise could include soil health and fertility management in urban soils, soil contamination assessment and remediation, urban integrated pest management, plant ecology, water use efficiency, climate adaptation and urban heat mitigation, and urban agroforestry. This position requires expertise in urban agriculture and an understanding of the policies affecting urban farm viability, plus a proven track record of community-engaged research, extension work, and building cross-sector partnerships. The specialist will foster collaborative research and extension projects with advisors, SWPs and RECs, generating competitive grant awards, leading cutting-edge research, and expanding impactful extension opportunities that benefit all Californians.

**Justification:** The specialist will fill a critical gap in UCANR's urban agriculture capacity by developing a research and extension program in production ecology that connects and synergizes with existing strengths (such as urban farming policy, land tenure, post-harvest processing and marketing, and community engagement). Core research and extension areas will include soil health, water management, crop / variety selection, IPM, urban microclimate adaptation, and agroecosystem function. Urban agricultural production has unique challenges that need science-based guidance tailored to the heterogeneity of California's urban agriculture, from community gardens to market farms, across diverse physical and sociocultural contexts. This work will help urban agriculture thrive across California while strengthening food security, community resiliency and urban ecological function.

*Needs***:** Urban Agriculture needs assessments by UC ANR (2014) and the Community Alliance with Family Farmers (CAFF; 2026) confirm that urban agriculture plays a crucial role in enhancing local food systems, improving climate resilience, and fostering community engagement across California communities. Yet there remains a critical gap in dedicated CE infrastructure to provide these diverse, historically underserved producers with science-based, urban-specific agroecological solutions. This is why the position ranked in the top two for the UACG PT. Urban growers face acute agronomic and structural hurdles magnified by the built environment. Key production challenges include managing

small-acreage plots, appropriate crop and varietal selection for urban micro-climates, post-harvest processing, cold storage and distribution, soil contamination and remediation, IPM strategies in fragmented landscapes, and prohibitive municipal water costs –all compounded by limited access to land, capital, and markets. A recent survey of external partners echoed these priorities, identifying soil health assessment and contamination management, crop productivity and selection, pest control, and climate adaptation as the most pressing production-side needs. Conversely, urban farms offer unmatched high-impact opportunities: They foster public food literacy, host urban farmer trainings, and strengthen food sovereignty for immigrant and ethnically diverse communities requiring culturally significant crops. Ecologically, they act as vital green infrastructure mitigating urban heat island effects and stormwater runoff alongside other ecosystem services, including habitat for urban wildlife.

*Outcomes/Impact:* This position will contribute to critical challenge areas identified in ANR's Strategic Vision 2040, including *Strengthening Agriculture and Food Systems*, *Cultivating Thriving People and Communities*, *Building Climate Resilience*, and *Addressing Systemic Inequities*. UC ANR condition changes include: improved built environment, landscaping, and access to green spaces; increased community disaster preparedness and resilience to extreme weather and change in climate; improved food and nutrition security, food sovereignty, and access to culturally relevant foods; improved land stewardship; increased ecological sustainability of agriculture; improved soil health and productivity; improved water use efficiency; and increased agriculture and food system resilience to change in climate. In 20 years, the position will have supported an increase in the number, productivity and sustainability of urban farms and community gardens across California, which will improve community food security and food sovereignty, build scientific literacy in food and farming systems, mitigate urban heat island effects, and expand green infrastructure and community resilience to extreme weather.

**Extension:** The specialist will build a solutions-focused extension program that delivers field-tested, scalable ecological practices to urban growers facing climate and resource constraints. Core extension activities will include statewide on-farm demonstration networks utilizing UC Berkeley's Gill and Oxford Tracts, South Coast and other Research and Extension Centers (RECs), and other UC campuses; workshops, field days, and farmer-to-farmer learning exchanges; webinars and accessible web-based education; and applied production guides, fact sheets, and decision-support tools tailored to urban contexts. The specialist will collaborate with county-based UCCE advisors to facilitate cross-regional knowledge exchange, and partner with REC-based ag technology advisors to ground extension programming in REC infrastructure. Key clientele groups and partners include urban farmers and community gardeners, community-based organizations and urban farmer training programs (e.g., Center for Land-Based Learning, UCSC Center for Agroecology, Agroecology Commons, CalPoly Pomona, The Ecology Center - San Juan Capistrano, Seeds@City Urban Farm–San Diego City College, tribes and tribal-serving organizations, and food policy councils). The specialist will leverage their own expertise alongside that of other UC academics to improve productive capacity, landscape connectivity, and climate resilience in California's urban centers.

**Research**: The Urban Agriculture Production specialist will investigate the biophysical and ecological foundations of urban food production in California, with particular attention to how on-farm practices and surrounding urban landscapes shape productivity, ecosystem services, and resilience for urban farms and the communities they serve. This position could involve research on agroecological practices in fragmented production systems, the biological and physical dimensions of urban soil health and contamination, the role of landscape connectivity and green infrastructure in supporting pollination and pest regulation, crop varietal assessment, or adaptation strategies for heat, drought, and water-constrained urban environments. This could include research on how diversified urban production systems can meet diverse and culturally appropriate nutritional needs while delivering essential co-

benefits, such as carbon sequestration, stormwater management, and urban cooling. Their work would benefit the people of the state by simultaneously addressing challenges related to climate resilience, land and water pressures, food and nutrition security, and the well-being of urban communities. Potential publication outlets include *Agriculture, Ecosystems & Environment*, *Landscape and Urban Planning*, and *California Agriculture*, alongside ANR peer-reviewed Extension products.

**UC ANR network:** UC ANR currently lacks a critical anchor in the biophysical, ecological, and production sciences of urban agricultural systems. This position will complement the strong foundations already established at the specialist level by Sowerwine (food systems/food sovereignty) and Pires (livestock/food safety). The specialist will partner closely with the UACG PT, RECs, and Statewide Programs and Institutes (e.g., SAREP, MG, MFP, IPM, IGIS), as well as specialists and advisors working in urban agriculture, small farms, IPM, food systems, watershed resilience, soil health, agroecology, urban forestry, urban and small-farm ag technology, and BIPOC community development (e.g., Das, Diekmann, Hooper, Johnson, Lacan, Leauthaud, Levy, Lofton, Middleton, Mukherjee, Murillo-Barrick, Robinson, Schmidt, M. Singh, P. Singh). Collaboration opportunities with AES faculty across UC include, among others: UCB (Bowles, Iles, Pallud, Hutchins, DeMaster), UCM (Garcia, Ryals), UCSC (Philpott), UCR (Hoddle), and UCD (Kiers, Napawan, Schlickman, Jegede), spanning agroecology, policy, urban soil science, green infrastructure, entomology, and urban design. Rich opportunities for collaboration across the UCB campus include the Climate Equity and Environmental Justice Initiative, Berkeley Food Institute, College of Environmental Design, and Berkeley Climate Change Network.

**Network external to UC ANR:** The specialist will partner with a broad external network. Collaboration on grant- and contract- funded projects with CDFA, NRCS, FSA, and RCDs will help urban farmers access CDFA's food system infrastructure (e.g., the Farm to School Incubator Grant Program) and climate-smart agriculture programs (e.g., Healthy Soils Program). Partnerships with RCDs and CAFF will help deliver technical assistance and facilitate farmer-to-farmer knowledge sharing, with RCDs also serving as a bridge to NRCS and FSA conservation programs for urban farmers. The specialist will work with Cal-EPA, Certified Unified Program Agencies, and local Environmental Health Departments to design scalable, low-cost frameworks for soil remediation and heavy metal testing. CAFF, the California Food and Farming Network, California food policy councils, and allied nonprofits can elevate urban agriculture production needs identified through the specialist's research to state and local policymakers. The specialist will be encouraged to pursue partnerships with urban Native American tribes and tribal-serving organizations, urban watershed organizations, and municipal parks, recreation, and sanitation departments that engage in urban agriculture programs.

**Support:** Required office space and lab facilities will be provided by ESPM. Campus-based administrative services and ANR Program Support Unit will also provide resources to support research and extension programming. Field research and extension facilities at the UC Gill and Oxford Tracts offer a rare asset for this position as field research facilities embedded in the urban East Bay with extensive but underutilized facilities for field trials, demonstration, and farmer-facing extension. UC Research and Extension Centers will also be available. The candidate will receive space and a start-up package to build their program at a level similar to other CE Specialists in the department.

**Other support:** Funding opportunities include state and federal agencies (e.g., USDA-NIFA, AMS, WSARE, CDFA, NRCS, CNRA, DWR, and EPA), non-profits like the Foundation for Food and Agriculture Research (FFAR), and private foundations. The Berkeley Food Institute and UCOP MRPI also offer seed funding for new collaborative climate justice and agrifood system projects.