Position Title: UCCE Specialist in the Economics of Food Supply Chains

Position: Food shortages and empty grocery shelves harm both farmers and consumers, especially the poorest among them. Small farmers lack resources to store unsalable farm production, find alternative market outlets, or endure disruptions to income, whereas low-income consumers have limited food supplies on hand and cannot afford to pay higher prices when supplies are scarce.

We propose a Specialist whose research and outreach program will focus on critical issues regarding food markets and supply chains impacting small and midscale California producers and low-income consumers. The Specialist will focus on post-harvest components of the food supply chain, including transportation, processing, distribution and wholesale, and retail; segments where 80% or more of retail food costs are generated. The position requires a Ph.D. in agricultural economics, economics, or a closely related field and will be housed in the Department of Agricultural and Resource Economics (ARE) at UC Davis. The Specialist will collaborate with colleagues in food systems statewide, including other CE Specialists and Advisors (particularly those contributing to UC ANR’s Sustainable Food Systems and Healthy Families and Communities strategic initiatives), statewide programs such as UC SAREP and NPI, AES faculty, and researchers in departments, centers, and institutes across many fields.

Justification: This position aligns closely with ANR’s Food System Resilience Network. It supports at least two of ANR’s public values: promoting economic prosperity in California and safeguarding abundant and healthy foods for all Californians. For a sustainable and prosperous future for its farmers and affordable and stable food supplies for its residents, California must have well-functioning food markets and efficient, reliable, and resilient supply chains that are inclusive and do not burden resource-limited producers or consumers. The COVID-19 pandemic has demonstrated the fragility and lack of resilience of many food supply chains, demonstrated by destruction of farm products with no market outlet and empty grocery shelves amidst rising consumer prices and falling farm prices. The CE Specialist will be the go-to person regarding food markets and supply-chain issues impacting Californians. Vital issues they will address include (1) assessment of market power of supply chain intermediaries and their ability to depress farm prices and raise consumer prices; (2) identification of supply-chain mechanisms for specialty foods such as locally grown, humanely raised, and certified sustainable; (3) identification of inefficiencies and bottlenecks in transportation and distribution networks and their impacts on prices and availability of specific foods; (4) consideration of alternatives to our present highly concentrated supply chains, and policies to promote greater supply-chain competition and opportunities for small and midscale producers; (5) analysis of policies to create and support resilient supply chains; (6) understanding the impacts of close vertical coordination on supply-chain resilience; and (7) evaluating the role of innovations such as e-commerce in supply-chain performance and resilience.

Evaluating markets and supply chains for California agricultural products is central to UC’s mission. California agriculture depends on successful access to local, national, and global markets; this CE Specialist will study supply-chain linkages across geographic levels and identify which supply chains are best suited for specific producer clientele. Production efficiency and environmental sensitivity alone will not assure a sustainable California agricultural economy and stable and affordable food supplies for all Californians. We must improve understanding of markets, supply chains, and disparities among various communities to ensure that California can compete effectively nationally and globally under changing economic and regulatory conditions.

Extension: The Specialist will provide an essential link between farmers, supply-chain intermediaries, consumers, policy makers, and UC personnel. The clientele for this position includes growers and grower organizations including marketing orders, supply-chain intermediaries, institutional and retail buyers, consumer groups, and local, state, and national governments. Extension activities will include presentations at industry conferences and events
and public forums, writing for farm industry trade press and UC scientific outlets targeted to broad audiences, including *California Agriculture* and *ARE Update*, development of web-based materials, active social media presence, and engagement with government agencies.

**Research:** The Specialist will develop an applied research program focused on agricultural supply chains, with the objective of maintaining and enhancing the competitiveness, resilience, fairness, and sustainability of California agriculture. Key research areas are listed in the position justification. Many respected scientific publication outlets will be available for this research program including *American J. Agric. Econ.* and other journals of the Agricultural and Applied Economics Association, *Food Policy, J. Agric. & Resource Econ.*, *Agric. Econ.*, *J. Marketing Research, J. Public Policy & Marketing*, and *Marketing Science*.

**ANR Network:** No Specialist covers this key area, and we face a huge void in providing crucial applied research and extension. Many opportunities exist to collaborate with researchers engaged in multi-disciplinary projects regarding competitive, sustainable, and resilient food systems. This position would solidify the strategic plan developed by UCD and UCB ARE to revitalize the UCCE network in economics. The hire would complement the programs of CE Specialists Goodrich (sustainable agriculture management), Saitone (livestock, rangelands and ecosystem management), and Bruno (quantitative policy analysis). The Specialist would also complement recent CE hires in food systems by providing the vital economic component. Several AES economists at Berkeley and Davis have expertise in supply-chain issues and will provide an effective support network for the Specialist, but they are not able to address effectively the pressing needs identified here without the leadership of a Specialist with full commitment to the economics of supply chains. This Specialist’s contributions will be enhanced by being part of a cluster of proposed hires focused on food supply chains and resilience at Davis, including proposed positions in Food Science (supply chain resilience) and Nutrition (Nutrition and Health Equity) and at Santa Cruz (resilient food-systems specialist, emphasizing sociological dimensions).

**Network External to ANR:** The Specialist will engage in research and outreach in collaboration with members of the aforementioned key stakeholder groups and others. Food scientists in industry and government engaged in issues pertaining to supply chains would draw on this Specialist as a key resource or team member. State and federal policymakers involved with issues regarding food distribution systems, food safety, and the structure of the food chain are another natural network.

**Internal Support:** UC Davis ARE will supply office and admin, IT, and staff support. The UC-ANR Giannini Foundation of Agricultural Economics will provide internal support through access to grant funding and a systemwide network of economists interested in agriculture.

**Other Support:** This Specialist will be in great demand with opportunities for substantial funding to support applied research and outreach. Specific sources include cooperative agreements with CDFA and USDA’s Economic Research Service, USDA and CDFA Specialty Crop grants, and funds from marketing orders and other industry groups.

**Location:** Location in UCD ARE enables close contact and collaboration with AES faculty, students in ARE’s top-ranked graduate program, and colleagues throughout CA&ES.

**Developed and proposed by** ARE, UC Davis. We have received feedback from AES and CE faculty, ANR program teams, and external stakeholders and policymakers regarding the importance of rebuilding ANR capacity in this area. We have consulted specifically with the following in developing this proposal: ANR Program Teams Research to Policy, California Communities, Meat Production and Food Safety, and Pomology; UCD Departments of Food Science and Technology, Animal Science, Nutrition, and Plant Science; the UC Organic Agriculture Institute, UCSC Center for Agroecology, and UC Berkeley ARE.