COMMUNITIES across North America are responding to environmental, economic, and social challenges in our food and agricultural systems by creating and nurturing “place-based food systems.” Some distinguishing features of place-based, regional food systems are that:

- They are deeply connected to the environment and to caring for it in a particular place;
- There are relationships of trust within supply chains from farmers and ranchers to processors to distributors to retailers or other institutions to consumers;
- Community food security and food sovereignty are important goals and rights;
- The health of individuals and communities is paramount;
- There are infrastructures in place to support healthy place-based food systems; and

* Gail Feenstra is the deputy director and food and society coordinator at the UC Sustainable Agriculture Research and Education Program (SAREP) at the University of California, Davis. Her research and outreach focus on farm-to-school and farm-to-institution evaluation in California and nationally; regional food system distribution, including food hubs; and supporting marketing opportunities for small and medium-sized producers. She is currently exploring paths for effectively engaging with food policy councils in food system initiatives. Feenstra has a doctorate in nutrition education from Teachers College, Columbia University, with an emphasis in public health. She can be contacted at gwfeenstra@ucdavis.edu.
• All members of the food system have an opportunity to participate meaningfully in its development.

Challenges for Place-Based Food Systems
Our place-based food systems, however, operate in conjunction with—sometimes separately, sometimes integrated with—an industrial food system that may not always embody the same values. This more industrial food system emphasizes efficiency, profit, and power in ways that are more narrowly construed, sometimes at the expense of other environmental and social values. This apparent tension with place-based food systems leads to many of the challenges that follow.

Place-based food systems face particular challenges in creating sustainable infrastructure and distribution systems. First, challenges arise from our currently dominant, industrial food system. This industrial food system, with its highly efficient, consolidated, and globally organized transport system, has contributed to a long list of environmental impacts, such as contamination of air and water supplies, decreased genetic diversity, and increased greenhouse gas emissions—all affecting climate change. Related social impacts of the dominant food system include unfair risks and gains across supply chain actors, and racial and class disparities related to food access and labor opportunities in the food system. From farmers to food chain workers (including farmworkers), the current food system infrastructure and its embedded values have created poor working and living conditions as well as economic inequities. On the farmer side of the supply chain, the struggle is most evident with small and medium-sized farms. These are the farms we call “Agriculture of the Middle,” those that are generally too large to make a living by selling through direct markets, but too small to be competitive in larger commodity markets. Food system infrastructure—processing, warehousing, and distribution systems—is often not designed for their scale, and so they struggle with market access and profitability. As Stevenson et al. (2011) point out, challenges for midscale food value chains are significant. They include (1) finding appropriate value chain partners and the mechanisms for creating trusting relationships, including how to make decisions together and be transparent in business dealings; (2) determining effective strategies for differentiation, branding, and regional identity, as well as for (3) pricing products based on true costs; (4) acquiring adequate capitalization and management; (5) developing effective quality control and logistics; and (6) developing economic power for value chain negotiations.

Day-Farnsworth (2017) highlights barriers faced by both farmers and eaters related to food system infrastructure. As she and others have noted, the challenges tend to fall into one of two categories: farmers and consumers. On the farm side, challenges include production methods and appropriate technology, food safety certification, access to capital, staff capacity, supply chain and distribution infrastructure, and marketing and branding. On the eater side of the supply chain, challenges include food outlet access and food availability, affordability, lack of cultural appropriateness, lack of economic opportunity, and community viability.

Unfortunately, these two sets of challenges and potential solutions are often described separately even though they are intricately related. As Day-Farnsworth (2017) points out, producers ask, “How can we reduce barriers to market and configure supply chains so that small and midsize local and sustainable producers can make a living” (p. 66)? Consumers (eaters) ask, “How can we reconfigure food supply chains to ensure that everyone has access to fresh, healthy food” (p. 66)? The real challenge is how can we meet both sets of goals simultaneously and move from siloed thinking to systems thinking, from single issue–oriented solutions to multi-issued, cross-sectoral solutions, and from individual to community orientations?

Changing Views of Sustainable Distribution
So, what might sustainable distribution and infrastructure in a place-based food system look like?

Our understanding of sustainable infrastructure, particularly in respect to distribution, for place-based food systems, has changed and matured over time. In the 1970s and 1980s, during the renaissance of farmers markets, sustainable dis-
ttribution meant direct sales from farmer to consumer, typically at roadside stands or farmers markets. The idea behind direct marketing was to “shorten the supply chain” and help farmers get retail prices by selling direct to consumers, instead of trying to make ends meet by selling to wholesale markets, in which the provenance of one’s products were unknown and prices were notoriously low. Farmers markets also bring fresh, local, and seasonal produce (and now more often, meat and fish) to consumers who may not otherwise have access to it, thus supporting the local food economy and building social networks and community capacity. Farmers markets have rapidly escalated in number, almost quintupling from 1,755 in 1994 to 8,687 in 2017 (U.S. Department of Agriculture, Agricultural Marketing Service [USDA AMS], 2018). They continue to be a very popular direct distribution strategy for small and some midscale farms.

In the late 1980s, CSAs—community supported agriculture operations—came onto the scene in the United States as another form of direct sales. In the purest form of CSA, consumers could actually partner with farmers by paying upfront for the costs of production and later receiving a share of the bounty in the form of weekly boxes of fresh produce. In those early halcyon days, sales through distributors were considered to be disadvantageous for small farmers whose products would disappear into oblivion with only a very low price to account for all their hard work.

In the 1990s, researchers began to focus on the disappearance of midsized farms and ranches. The alarm was raised about the connection between these farms and rural community vitality. As Goldschmidt (1947) had shown 50 years earlier in California’s Central Valley, the community Dinuba, surrounded by small and midsized family farms, had richer and more diverse community institutions than the community Arvin, surrounded by large, agribusiness-owned farms. Yet, these midsized farms were failing across the country. Farmers markets, CSAs, and other direct-sales outlets alone could not stem this tide. So, in the early 2000s, various foundations in conjunction with sustainable agriculture institutions at several land grant universities came together as part of a task force to focus on renewing what we called “an Agriculture of the Middle.” The idea behind Ag of the Middle was for farmers and ranchers of small to midscale operations to work together strategically with other supply chain partners to distinguish their products in the marketplace, based on values such as environmental stewardship, food quality, fair trade, and regionality. Farmers and ranchers would receive a premium for their products and sell them regionally through “values-based supply chains” (VBSCs). Several case studies were created (including Red Tomato in the Northeast United States, Organic Valley based in the upper Midwest, Country Natural Beef in Oregon, and Shepherd’s Grain in eastern Washington) and provided data and strategies about how these values-based supply chains might work.

As we began to understand the dynamics of these VBSCs, it became clearer that they were not always separate entities, divorced from more conventional distributors in the food system. In fact, we began to see some conventional broadline distributors (such as Sysco and FreshPoint), and regional distributors include “local lines,” in which local farmer suppliers were identified on their availability lists such that buyers could choose specific locally grown products. Ruhf and Clancy (2010) described these supply chains as “hybrid models,” in which there are elements of values-based supply chains and of more conventional supply chains. The USDA began to document sales of farm products through both direct and what Low and Vogel (2011) call “intermediated marketing channels,” in which farmers sell to retailers, such as grocers and restaurants, regional aggregators such as food hubs, and institutions. In 2008, farm sales of farms marketing food locally—exclusively through intermediated channels—was US$2.7 billion, three times higher than the value of local foods marketed exclusively through direct-to-consumer channels (Low & Vogel, 2011). By 2012, the USDA’s Economic Research Service (ERS) estimated that local food sales through only intermediated markets was up to US$3.3 billion (Low et

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1 See http://www.agofthemiddle.org
These types of marketing channels for values-based foods are definitely expanding.

**Practical Examples of Sustainable Place-Based Food Systems**

There are thriving examples that highlight how food system infrastructures support place-based food systems and break down some of the silos we face. Two key areas include farm to school programs and food hubs.

Farm to school programs “enrich the connections that communities have with fresh, healthy food and local food producers by changing food purchasing and education practices at schools and early care settings” (National Farm to School Network, n.d.). Children gain access to healthy, local foods in their cafeterias, gardens, cooking lessons, and farm field trips. Farm to school empowers children and families to make informed food choices while strengthening the local economy. From just a handful of farm to school programs in the late 1990s, they have grown to more than 5,200 school districts and 42,500 schools in the U.S. (USDA Food and Nutrition Service [USDA FNS], n.d.). More than 23 million students are developing healthy eating habits and learning where their food comes from as a result of farm to school programming (USDA FNS, n.d.). Furthermore, almost US$790 million have been invested in local communities (USDA FNS, n.d.), mostly through school cafeterias purchasing food from regional farmers. Oakland Unified School District (OUSD) in California is a stellar example of one that has methodically improved its infrastructure and distribution to support more regional farmers. For example, since 2014 OUSD has partnered with the Center for Good Food Purchasing to evaluate its procurement practices. Between 2012 and 2017, it improved its rating (from 2 to 4 stars, out of 5 possible stars) by increasing purchases of foods that are local, humane, sustainable, fair, and nutritious (Center for Good Food Purchasing, 2016).

Another strategy for supporting partners all along a supply chain is a food hub—a business or organization that manages source-identified food products. These businesses are helping small and midscale producers scale up through various models involving socially conscious business decisions. According to the 2017 Food Hub Survey done by Michigan State University (Colasanti, Hardy, Farbman, Pirog, Fisk, & Hamm, 2018), food hubs are continuing to grow in number. Overall, results show that they are creating new jobs (almost 1,900 paid staff of the 119 responding food hubs) and that they are sourcing from an average of 78 producers and suppliers per hub and marketing to four customer types (restaurants, direct-to-consumer, colleges and universities, and grocery stores). Over half of a hub’s producers (suppliers) are considered beginning farmers or businesses, and about 89% source mostly from small and midsized farms and ranches. More than two-thirds of those surveyed are breaking even or better, and more are becoming profitable over time. Older hubs seem to be scaling up to supply larger customers. They continue to be challenged, however, to balance supply and demand.

One food hub in California that is building a place-based food system is Mandela Foods Distribution in Oakland. Mandela Foods Distribution is a program under Mandela Partners, a nonprofit that works with local residents, family farmers, and community businesses to increase wealth and build assets through local food enterprises in low-income communities. Mandela Foods Distribution supports local, under-resourced farmers by establishing an alternative distribution network that links them to an emerging urban retail base and passes on wholesale prices to community retailers and institutions. Forty percent of the produce purchased by Mandela comes directly from local family farms using sustainable practices on the Central Coast, Capay, and Central Valleys of California. Some of the buyers for this local food include the Mandela Foods Cooperative as well as other retailers in their Healthy Retail program and Zella’s Soulful Kitchen.

**Reflections**

So, what have we learned from reflecting on the challenges we face and the opportunities we see in building the capacity and infrastructure of a...
sustainable food system? Let me share three observations:

1. Although we’ve developed alternative distribution strategies that are working to meet multiple food systems goals, it has taken time—decades even—to go from conceptual models to realities that actually work in communities over time. We continue to need a combination of research and on-the-ground implementation by food system businesses along the supply chain to reflect together on what works and what doesn’t, and figure out how to move forward. The Ag of the Middle research and outreach group is one good example of how this could happen.

2. We need diversity in the system as we take the next steps. That means that we need to respect, listen to, and include different ways of knowing (knowledge systems), different ways of communicating, and different strategies for achieving goals we can all agree on. Sustainability by its very nature is multidisciplinary and multifaceted. We absolutely need all views and perspectives at the table together. Food policy councils are potentially a fertile ground for practicing how we model diversity.

3. Finally, we need to continue to be mindful of power dynamics in the food system and continue to expose and attempt to improve areas that do not support justice, food sovereignty, and participation by all.

With these things in mind, where do we need to concentrate our efforts in the immediate future? I think there are three places we might begin.

The first is to pay attention to giving voice to people of color and those who are disadvantaged in the current food system. To claim social and environmental justice, we have to start walking the talk at all levels. Looking more closely at food system labor may be a place to start. Another is education. I learned this summer how my colleagues in colleges and universities across the country (led by Molly Anderson) are including classes for their undergraduates on becoming more aware of the social and racial injustices in our food system, and how we need to start by examining our own biases.

Second, we need to pay attention to developing the next generation of leaders that take these issues seriously and know how to collaborate to build long-lasting strategies that are not grant dependent, bringing together food security and midscale producers and distributors successfully.

Finally, we need to keep talking, networking, and ramping up communication, outreach, education and organizing among all parts of the supply chain and beyond. We need massive commitment from all of us if we hope to get to a sustainable future.

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