

A person wearing a light-colored shirt and a cap is driving a tractor down a dirt road. The tractor is pulling a wooden crate filled with red tomatoes. The road is flanked by rows of trees, and the background shows rolling hills under a dramatic, orange-hued sunset sky.

Harvesting Opportunity

The Power of
**Regional Food
System Investments**
to Transform Communities

Federal Reserve Bank of St. Louis

1 Federal Reserve Bank Plaza
St. Louis, MO 63102

Board of Governors of the Federal Reserve System

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ABOUT COMMUNITY DEVELOPMENT AT THE FEDERAL RESERVE

The community development (CD) function within the Federal Reserve System—consisting of individual community development departments at each of the 12 Federal Reserve banks as well as at the Board of Governors—promotes economic growth and financial stability for lower-income communities and individuals through a range of activities, including:

Convening stakeholders: The function brings together practitioners from financial institutions, nonprofits, governmental agencies, and the philanthropic and private sectors to collaborate on community and economic development initiatives and to identify both key challenges and promising practices to address them.

Conducting and sharing research: The function provides policymakers and practitioners with objective analysis on the economic challenges facing lower-income communities and attendant policy and program implications. CD research is often posted online in articles and working papers and is shared both in small group settings and at larger-scale conferences.

Identifying emerging issues: The function gathers and analyzes current information on economic and financial conditions to identify emerging issues affecting lower-income communities and individuals. For example, staff regularly conduct web-based polls or surveys of individuals and organizations to help track perceptions and provide market intelligence and sentiments around a wide range of CD issues.

For more information, please visit www.FedCommunities.org.

FOREWORD

The Federal Reserve promotes a healthy economy and financial stability. One of the important ways the Federal Reserve carries out these responsibilities is in its role as a research institution dedicated to adding to the general knowledge and understanding of the economy, including the experiences of households and communities that are low- and moderate-income (LMI), and those that have traditionally lacked access to a broad array of financial products and services. Through its community development function, the Federal Reserve conducts and helps promote research on the economic challenges and opportunities facing these communities, and highlights policy and program implications.

In 2015, the Board of Governors of the Federal Reserve System and the Federal Reserve Bank of St. Louis began conversations with the U.S. Department of Agriculture about how we could work together to better understand consumers' increasing interest in where their food comes from and how their food dollars can provide greater support for local food-related businesses and farmers. As a result of these conversations, we decided to partner on an effort to learn from other experts on this issue, and in turn take what we learned and develop a resource to help increase the public's awareness of it and the associated opportunities. This publication—a compilation of research, essays and reports by community development experts around the country—is the result of that process.

Through this work, we have learned that regional food systems represent a promising avenue for economic growth for both rural and urban communities through the creation of new or the enhancement of existing jobs and businesses. We also learned that, with appropriately targeted policies and support, the attendant opportunities can advance the economic and financial

security of LMI households and communities. What is especially interesting about this work is that the approaches that support the development of regional food systems not only contribute direct economic benefits to the community, but can also open the door for improved access to healthy food and other positive outcomes that could result in improved community health and a more productive workforce.

For LMI households and communities in both rural and urban areas to take full advantage of the opportunities that regional food systems provide, they need access to two important tools: knowledge and capital. They need access to knowledge of what the emerging opportunities are and how to take advantage of them, and they also need access to the capital required to bring those opportunities to fruition. Unfortunately, access to knowledge and capital networks is something that has historically been lacking in many LMI communities. Through our work on this project, we have become aware of organizations across the country that are working to provide LMI and underserved communities with access to these important resources. There are examples of such organizations detailed throughout this publication, although the list of examples is far from complete.

The importance of partnership and collaboration is a refrain that echoes again and again when working on community and economic development policies, including efforts to advance food systems—partnerships among the regional food enterprises themselves, the financial institutions that fund them, and the technical assistance providers that help them navigate the marketplace. Each financial partner has a different risk appetite, time horizon and type of capital to deploy—grants, debt, equity—and each regional food enterprise needs access to different types of knowledge and capital. By combining and coordinating the capital sources and technical assistance providers available, the variety of needs that exist can be addressed.

This publication is designed to highlight the prospects available in the regional food systems sector, advance efforts to provide meaningful earnings and job opportunities for LMI households and communities, and illustrate the vital partnerships needed to deploy the necessary knowledge and capital to support the sector's continued growth. On behalf of the Board of Governors of the Federal Reserve System and the Federal Reserve Bank of St. Louis, we look forward to learning how communities take the information

and examples contained in these pages and use them to continue the innovative work underway to leverage regional food systems for the benefit of LMI households and communities. ■

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CHAPTER 1

Local Food Demand in the U.S.: Evolution of the Marketplace and Future Potential

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The views expressed in this article are those of the individual author/authors and do not represent the views of or an endorsement by the Federal Reserve Bank of St. Louis, the Federal Reserve Board of Governors, the Federal Reserve System or the U.S. Department of Agriculture.

Local food is no longer just for “foodies”; it’s become a mainstream consumer preference. The past two decades have witnessed a remarkable increase in the contribution of locally grown and raised foods to the U.S. food system. According to U.S. Census of Agriculture statistics, direct sales of edible farm products for human consumption rose dramatically from \$404 million annually in 1992 to roughly 3 times that amount (\$1.2 billion) by 2007.¹ By 2012, this sales value had topped \$1.3 billion per year, representing a 223 percent increase in growth over a 20-year span and far outpacing the average rate of sales growth in the U.S. agricultural sector.²

Moreover, there is abundant evidence to suggest that this narrow focus on direct-to-consumer sales greatly understates the actual volume of locally grown food in the U.S. marketplace. In fact, recent analysis by economists with the U.S. Department of Agriculture’s Economic Research Service (ERS) suggests that the majority of local food sales in 2012 (54.8 percent) were generated by farms that marketed all of their local production through intermediaries, compared to fewer than 20 percent that used direct-to-consumer channels exclusively.³

By encompassing all forms of intermediated, hybrid and direct-to-consumer transactions in its analysis, ERS estimates that U.S. local food sales in 2012 exceeded \$6.1 billion, with nearly 8 percent of U.S. farms participating in the local food trade. The share of participating farms in local food markets trended even higher in parts of the country where smaller-scale and produce farmers predominated.⁴

Consumer interest in local food has become so pervasive, in fact, that it has emerged as a major driver of retail and restaurant offerings across the board. On the retail front, recent industry surveys indicate that nearly 75 percent of surveyed U.S. grocery shoppers report consuming local food at least once per month (with the largest plurality consuming local food three times per week).⁵ Nearly 9 out of 10 shoppers (87 percent) say the availability of local food is either “very” or “somewhat” important to their choice of a primary supermarket,⁶ and two-thirds of restaurant patrons are more likely to visit a restaurant that offers locally produced food items.⁷ In the restaurant sector, local food continues to

be a major culinary influence, with locally sourced meat and seafood topping the list of “hot” restaurant trends for 2016 reported by the National Restaurant Association (Figure 1).

Furthermore, the extent of this influence is not restricted to higher-end establishments, but ripples throughout the food service spectrum; not only do 92 percent of surveyed fine-dining restaurateurs plan to add a locally sourced item to their menus this year, but so do 73 percent of casual-dining operators, 63 percent of fast-casual operators, 50 percent of family-dining operators and 35 percent of quick-service operators.⁸ Therefore, when we speak of local food demand, we need to acknowledge that we are addressing a marketing and supply chain phenomenon that currently touches the vast majority of U.S. consumers, not just an elitist or affluent segment of the U.S. population.

Definitions: What Is Local Food Anyway?

At its very core, local food refers to food that is sold based on using its nearby source of origin as a major point of product differentiation in the marketplace.

FIGURE 1
What’s Hot: 2016 Culinary Forecast

TOP 10 FOOD TRENDS	
1	Locally sourced meats and seafood
2	Chef-driven fast-casual options
3	Locally grown produce
4	Hyper-local sourcing
5	Natural ingredients/minimally processed food
6	Environmental sustainability
7	Healthful kids’ meals
8	New cuts of meat
9	Sustainable seafood
10	House-made/artisan ice cream

Source: National Restaurant Association. Accessed Nov. 28, 2016, www.restaurant.org/News-Research/Research/What-s-Hot.

Such foods are typically marketed using the following combination of practices:

- Food products are raised, produced and processed in close proximity to the locality or region where the final products are marketed and consumed.
- Food products are transported using more direct or shorter supply chains with fewer levels of intermediation than food distributed through more conventional marketing channels.
- Participants in local food supply chains specifically identify the physical origin of the product (sometimes, along with the originating farm/farm organization) in labeling, packaging and advertising, so that buyers and consumers are able to recognize the food as a local food.

Federal definitions of local food

Despite the growing use of the term “local food” in public parlance, there is not an official consensus about the meaning of local food, as the relevant parameters for what buyers and consumers perceive to be local can vary considerably depending on geographic location, shopping, commuting and transportation patterns, and the distribution of local agricultural production and processing capacity.

Recognizing that local food supply chains are inherently diverse, both Congress and the USDA to date have adopted a broad functional definition of U.S. local food systems as it relates to federal assistance; this is designed to serve the market development needs of even the most geographically remote areas, while allowing individual localities and regions to define local food in a way that best reflects their individual situation and preferences.

A review of current legislative and programmatic language suggests that four primary themes have influenced the definitions that the federal government has used to define local food and related initiatives: geographic boundaries, market structure, product differentiation and information transparency.

In the Food, Conservation, and Energy Act of 2008 (the 2008 Farm Bill), Congress defined a “locally or regionally produced agricultural food product” as “any agricultural food product that is raised, produced, and distributed in (I) the locality or region in which the final product is marketed, so that the total distance that the product is transported is less than 400 miles from the origin of the product; or (II) the State in which the product is produced.”⁹ Five USDA grant/loan programs and two evaluation mandates are currently bound by this geographic definition:

- Rural Development’s Business & Industry Guaranteed Loan and Value-Added Producer Grant program,
- Agricultural Marketing Service’s Farmers Market Promotion Program and Local Food Promotion Program,
- Food and Nutrition Service’s Food Insecurity Nutrition Incentives,
- local food production and program evaluation, and
- valuation of local or regional crops.

In other cases, Congress and USDA have delegated authority to states or other relevant stakeholder groups to determine the exact meaning of local/regional food as it pertains to their execution of USDA-funded programs. Often the geographic scope of these programs is inherently restricted by the particular constituent group or eligible entity that is targeted for federal support, such as in the case of the Food and Nutrition Service’s Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and Senior Farmers’ Market Nutrition Program, or the National Institute of Food and Agriculture’s Community Food Projects program. In the specific case of the Food Safety Modernization Act, the legislation uses a distribution radius of 275 miles or within the same state to define certain categories of eligibility for producers and food handlers.¹⁰

Alternatively, federal school meal procurement rules leave the exact definition of local/regional geographic preferences to the discretion of local educational authorities, but require that the food products purchased under such geographic preference allowances are both unprocessed and locally grown according to the established definition of the purchasing entity.¹¹

Beyond these geographically based definitions, it is also useful to note that U.S. food policy has long enshrined the concept of supporting direct-to-consumer food marketing channels and/or shorter food supply chains as a way to create a more efficient and fair marketplace for producers and consumers, and to ensure that smaller-scale producers derive appropriate benefit from their participation in the market. As stated in the Agricultural Marketing Act of 1946:

“It is further declared to be the policy of Congress to promote through research, study, experimentation, and through cooperation among Federal and State agencies, farm organizations, and private industry a scientific approach

to the problems of marketing, transportation, and distribution of agricultural products ... to the end that:

- marketing methods and facilities may be improved,
- that distribution costs may be reduced and the price spread between the producer and consumer may be narrowed,
- that dietary and nutritional standards may be improved,
- that new and wider markets for American agricultural products may be developed, both in the United States and in other countries,
- with a view to making it possible for the full production of American farms to be disposed of usefully, economically, profitably, and in an orderly manner.”¹²

The USDA also acknowledges the importance of local food as a marketing signal and point of differentiation that appeals to buyers and consumers who wish to know the origin of their food and/or wish to support producers in their geographic area. The department considers local food systems to be those in which “all of the steps in the supply chain take place within a specific region, and where product origin is conveyed to the end consumers so that individuals can choose a local product.”

To better help producers, processors and other food supply chain partners take advantage of this expanding market sector, and to enhance consumer access to fresh local food, the USDA has incorporated local or regional food system elements or priorities into many of its existing grant and loan programs (further explored later in this chapter). Furthermore, several new information collection initiatives sponsored by the USDA—such as the Agricultural Marketing Service’s (AMS) Market News collection of price information for locally grown food (by the Specialty Crop and Livestock, Poultry and Grain Divisions) and the launch of three new national local food directories in 2014 by the AMS Local Food Research and Development Division (on community supported agriculture, local food hubs and on-farm markets)—attest to the department’s support of initiatives that are designed to provide more convenient and accurate information about existing market outlets and prices for locally produced foods.¹³

Public Support’s Critical Role in Facilitating Local Food System Development

The benefits of local food systems to the evolving farm economy

The emergence of demand for local food comes at a critical time for America’s rural economy. Smaller and midsize farms are under unprecedented threat: Between 1992 and 2007, the number of farms with sales of more than \$10,000 per year but less than \$500,000 declined by more than 150,000, or 21 percent.¹⁴ Consequently, sales of local foods—especially sales to higher-volume customers such as restaurants, retailers and food service institutions—are seen as one of the more promising avenues for the “disappearing agriculture of the middle” to maintain its economic foothold by exercising its natural competitive advantage in delivering fresh food from a trusted, known source to consumers.¹⁵

Local food markets, especially direct-to-consumer outlets such as farmers markets and community supported agriculture (CSA), also provide an affordable, low-risk and scale-appropriate point of entry for the growing number of new and transitioning farmers and entrepreneurs who are just beginning to launch their farm businesses. With the average age of the U.S. farmer now exceeding 58, the need to encourage people to consider farming as a career choice (whether as a first career, second career or part-time career) has never been greater.

Impact of federal support for local food supply chain and market infrastructure

Aided by support from a growing number of USDA grant and loan programs that target funding for local food infrastructure and supply chain development (Figures 2a, 2b), the country has seen a rapid rise in the number of market channels for local food and services designed to facilitate the distribution of local food (Figure 3). Recent changes in legislation, rulemaking and programmatic guidelines have helped to spur this growth; several sections of the 2008 and 2014 Farm Bills explicitly directed the USDA to allocate funds to local and regional food systems, while other USDA grant and loan programs incorporated support of local food systems within their existing legal authorities as a way to promote economic development and revitalization.

As a result of this concentrated focus, the USDA has invested more than \$800 million in local food systems since 2009, supporting more than 29,000 local food

FIGURE 2A
USDA Programs in the Local Food Supply Chain

KEY		LAND CONSERVATION	PRODUCTION	PROCESSING	AGGREGATION/DISTRIBUTION	MARKETS/CONSUMERS
AMS	Agricultural Marketing Service	Agricultural Conservation Easement Program	Environmental Quality Incentives Program	Business and Industry Guaranteed Loans	Business and Industry Guaranteed Loans	Community Food Projects Competitive Grants
FSA	Farm Service Agency					
FNS	Food and Nutrition Service	Conservation Resource Program	Farm Microloans	Community Facilities Loans and Grants	Community Facilities Loans and Grants	Farmers Market Promotion Program
NIFA	National Institute of Food and Agriculture	Conservation Stewardship Program	Farm Storage Facility Loans	Local Food Promotion Program	Local Food Promotion Program	Farm to School Program
NRCS	National Resources Conservation Service	Environmental Quality Incentives Program	Grass-Fed Verification	Rural Business Development Grants	Rural Business Development Grants	Senior Farmers' Market Nutrition Program
RD	Rural Development		NAP*	Value-Added Producer Grants	Specialty Crop Block Grants	Specialty Crop Block Grants
RMA	Risk Management Agency		Organic Cost Share			
			Rural Energy for America Program			WIC Farmers' Market Nutrition Program
			Whole Farm Revenue Protection			

Source: USDA. Accessed Nov. 29, 2016, www.usda.gov/documents/FoodSupplyChain_v8.pdf.

*Noninsured Crop Disaster Assistance Program

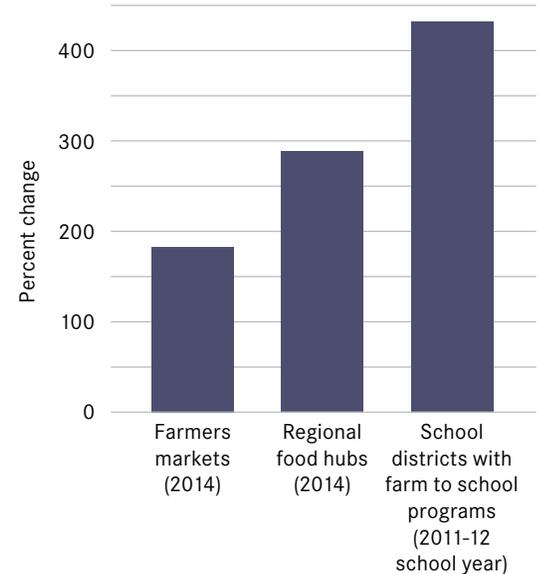
FIGURE 2B
USDA Programs in the Local Food Supply Chain

KEY	RESEARCH, EDUCATION AND TECHNICAL ASSISTANCE PROGRAMS ALONG THE SUPPLY CHAIN
<p>AMS Agricultural Marketing Service</p> <p>NIFA National Institute of Food and Agriculture</p> <p>NRCS National Resources Conservation Service</p> <p>RD Rural Development</p> <p>RMA Risk Management Agency</p>	<p>Agriculture and Food Research Initiative NIFA</p> <p>Beginning Farmer and Rancher Development Program NIFA</p> <p>Conservation Technical Assistance NRCS</p> <p>Federal State Marketing Improvement Program AMS</p> <p>Risk Management Education Program RMA</p> <p>Rural Cooperative Development Grants RD</p> <p>Small Business Innovation Research NIFA</p> <p>Specialty Crop Block Grants AMS</p> <p>Specialty Crop Research Initiative NIFA</p> <p>Sustainable Agriculture Research and Education Program NIFA</p>

Source: USDA. Accessed Nov. 29, 2016, www.usda.gov/documents/FoodSupplyChain_v8.pdf.

FIGURE 3
Growth in U.S. Local and Regional Food Marketing Channels

Since 2007, growth in...



Source: See Low et al. in endnote 3.

projects across the country. Many of these funds were spent to enhance accessible and scale-appropriate infrastructure that would facilitate the expansion of local food sales into commercial and institutional channels; between 2013 and 2014 alone, the USDA made more than 500 investments in local food infrastructure, including processing facilities, cold storage facilities and food hubs.

Federal Policies Create Significant Support for Local Food Purchasing from Nontraditional Consumers

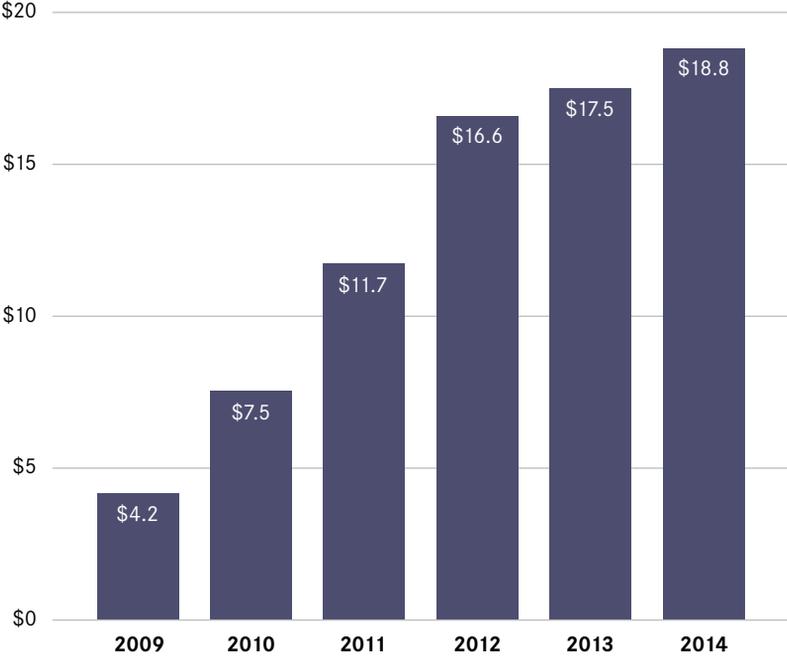
The USDA's growing embrace of local food system development and expansion in its grant, loan and technical assistance programs, and its acceptance of greater allowances for geographic preferences and product specifications in federal procurement have already set in motion substantial increases in demand for local food within federal nutrition and feeding programs. This opens up the prospect of further growth down the road at publicly funded institutions.

Two outstanding examples of recent changes in demand involve the dramatic growth in Supplemental Nutrition Assistance Program (SNAP) redemptions at farmers markets and farm stands, and the sharp rise in public schools participating in "farm to school" programs, whereby local foods are introduced to the schools—both in menus and in school-based gardens, and as part of the educational curriculum. In the case of SNAP benefits, acceptance of SNAP benefits at farmers markets and farm stands rose from approximately 900 sites in 2009 to more than 6,400 in 2014, while the value of redemptions grew from \$4 million to nearly \$19 million over a six-year period (Figure 4). This impressive growth can be attributed to a combination of parallel developments, including:

- strong, proactive outreach by USDA Food and Nutrition Service (FNS) employees to certify qualifying farmers markets and farm vendors;
- the introduction of new AMS and FNS grants or grant set-asides that covered the cost of electronic benefits transfer (EBT) equipment acquisition and installation at farmers markets and farm stands, many of which had historically not been equipped to handle electronic transactions;
- the spread of matching fund programs for SNAP recipients at farmers markets sponsored by regional and national nonprofits (e.g., Wholesome Wave, Fair Food Network and Roots of Change); and

FIGURE 4
Value of SNAP Redemptions at U.S. Farmers Markets and Farm Stands

In Millions



Source: Farmers Market Coalition. “SNAP Update: Redemptions at Farmers Markets Continue to Increase.” <https://farmersmarketcoalition.org/snap-redemption-at-markets-steadily-rises-with-continued-federal-support>.

- the introduction of mobile market operations in low-income neighborhoods to increase farmers market accessibility (funded in part by USDA grant programs such as the Farmers Market Promotion Program).

The reduction of administrative barriers to local food procurement in formal bidding procedures, along with the creation and implementation of grant and loan programs that support farm-to-school activities and the aggregation/distribution of local foods to institutional customers, has sparked a similar dramatic increase in the purchase of local foods by public schools. Since 2009, when the

number of schools participating in farm-to-school programs was estimated to be approximately 2,000 programs in 40 states, the scope of the program has grown to include more than 47,000 schools, involving more than 42 percent of all school districts in the 50 states and the District of Columbia. Annual purchases of local food by schools are now reported to exceed \$780 million in value.¹⁶

Tectonic Shifts in Consumer Preference Drive Local Food Demand Growth

Growing demand for local foods among U.S. consumers can be attributed to a confluence of shifting attitudes and behaviors regarding dietary choices, shopping patterns, trust in conventional institutions and brands, and interest in using household purchasing power to support desired social, economic and environmental goals. Specific reasons range from deeply held philosophical concerns about corporate influence over the U.S. food supply and the environmental ramifications of our current centralized food system structure, to a simple preference for food varieties that have been bred for flavor rather than tolerance for long-distance shipping. None of these issues alone are sufficient to explain the phenomenon of local food demand growth, but the combination of these influences helps explain why the phenomenon has had sustained growth over the past two decades, and why it has become such a dominant trope in U.S. popular culture.

The following influences are some of the key factors contributing to the rise and steadiness of local food demand.

Renewed interest in boosting local and regional economies

Recognition is growing that support of small/local farm businesses may keep a greater share of money recirculating in the local economy and allow farmers to retain a greater share of consumer expenditures on food. Recent studies indicate that local businesses, including small and midscale farms that cater to local consumer markets, frequently spend a greater share of their revenue buying supplies from local companies and hiring local labor than their larger-scale counterparts, enabling them to have a disproportionately positive influence on local economies in relation to their sales volume.

For example, a recent 2016 study by Shermain Hardesty at the University of California, Davis found that farmers in the Sacramento region who sold at least some of their produce directly to consumers purchased approximately 89 percent

of their inputs from local sources, compared with 45 percent by the larger, strictly wholesale-oriented farms. As a result, each dollar spent at a produce farm using some direct-to-consumer marketing channels generated 44 cents more in local economic activity than purely wholesale-oriented produce farms. Furthermore, for each \$1 million in revenue generated by produce farms in the study region, those farms that engaged in some form of direct marketing created nearly 32 local jobs, compared with only 10.5 local jobs among farms that exclusively used wholesale channels.¹⁷

Aside from the macroeconomic impacts associated with shorter food supply chains, recent case study assessments suggest that farm participants in shorter supply chains tend to receive a substantially greater portion of the final retail price than those who sell through less direct means.

On average, farmers retain only 17.2 cents of each dollar spent on food by consumers in the U.S., while fresh fruit and vegetable growers retain about 25 and 38 cents, respectively, for every dollar spent on these items at retail.¹⁸ However, according to a 2010 study by USDA's ERS, producers marketing through more direct food supply chains typically received higher shares of the final retail price than those who sold their merchandise through more mainstream supply chain arrangements.¹⁹

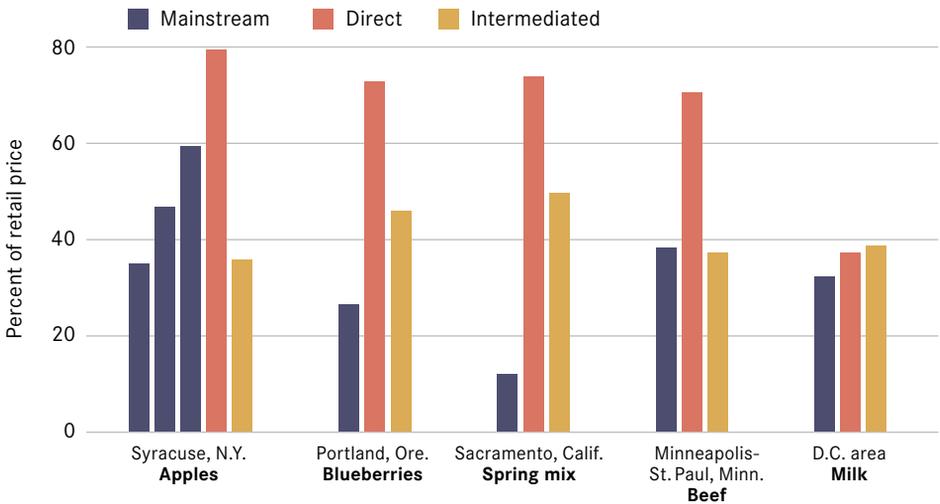
Compared to mainstream supply chains, net revenues for producers in shorter, local supply chains were 649 percent greater per unit for salad mix (Sacramento, Calif., area), 183 percent greater per unit for blueberries (Portland, Ore., area), 91 percent greater per unit for milk (Washington, D.C., area), nearly 65 percent greater per unit for beef (Minneapolis-St. Paul, Minn., area), and 50 percent greater per unit for apples (Syracuse, N.Y., area).²⁰ Similarly, studies by the USDA's AMS indicate that growers who use the services of local food aggregators (food hubs) to market their product to local wholesale/large-volume customers typically retain 60 to 85 percent of the market price paid by these clients.²¹

Perceived alignment of local food business practices with desired social values

Ion Vasi, a joint member of the sociology department and business school faculty at the University of Iowa, noted in his 2015 study that the local food market is not just a platform for economic exchange, but for relational and ideological exchange as well. He observed that the local food market is what sociologists call a "moralized market," where people combine economic activities with their social values.

FIGURE 5

Producers in Less Intermediated Food Supply Chains Retained Higher Share of Retail Price



Note: The three mainstream apple prices for the Syracuse market are based on different suppliers and packaging.

Source: USDA Economic Research Service. Comparing the Structure, Size, and Performance of Local and Mainstream Food Supply Chains, 2010.

By supporting local food businesses and having access to transparent information about their business practices, consumers believe that they have the ability to reward firms that follow desired standards when it comes to such core operating principles as sustainable production methods, animal welfare, fair wages and environmental stewardship. In apparent validation of these findings, Vasi's study further concluded that robust local food markets were more likely to develop in areas where residents had a strong commitment to civic participation, health and the environment.²²

Concerns about water use and its potential impact on domestic food production

Weather phenomena such as the prolonged drought in Western states and increased competition for water resources have raised new doubts about the

wisdom of relying on a concentrated agricultural production system for our domestic food supply and revived discussion of the potential benefits of distributing food production and processing capacity across regions and locales to enhance food security and availability nationwide.

As noted by Tom Philpott in a recent piece in the *New York Times*, farmers in coastal Monterey County, California, rely almost completely on water pumped from underground aquifers. By doing so, they extract billions of gallons of more water per year than is naturally replenished, which is then replaced by seawater seeping in from the coastal shelf. Meanwhile, in California's Central Valley, the source of nearly 25 percent of all U.S.-grown food, aquifers have been drawn down so hard for so long that in some areas they have been sinking at a rate of 11 inches per year, according to studies by the U.S. Geological Survey.²³

In contrast, by transitioning just 270,000 acres of land (equivalent to a typical Iowa county) in the Midwest from corn and soybean production to vegetables, Iowa State University economists have predicted that farmers in the relatively water-rich Midwest could supply everyone in Illinois, Indiana, Iowa, Michigan, Minnesota and Wisconsin with half of their annual tomatoes, strawberries, apples and onions, and a quarter of their kale, cucumbers and lettuce.²⁴

Declining public confidence in “big business” leads consumers to seek out alternative suppliers

Coupled with widespread media coverage of foodborne illness outbreaks linked to negligent business practices, many consumers have begun to question the nutritional quality of food products offered by the conventional food system.²⁵ In its 2016 consumer products study, the consulting arm of Deloitte LLP observed that 3 out of 4 packaged goods categories have seen a decline in “must have” brand loyalty since 2011—and almost half of U.S. consumers strongly prefer brands and products that align to characteristics such as health and wellness, safety, corporate citizenship, and transparency.²⁶

Smaller brands and private-label manufacturers have been growing considerably faster than the largest food manufacturers in recent years, at 4.9 percent and 4.0 percent annually, respectively, between 2009 and 2013, compared to only 1.0 percent annually among the 25 biggest food companies.²⁷ Another significant indicator came from a study by IRI and Boston Consulting Group, which showed that large consumer packaged goods companies lost 3 percentage

points of market share to smaller and midsize companies from 2011-2015—a steep decline in a short period for long-standing iconic brands.

As interest in and loyalty to national brands have waned, consumers have increasingly sought out alternative supply chains with more direct ties to farms, such as farmers markets, CSAs or urban farms/community gardens. We can see signs of the growth in direct-to-consumer patronage by looking at recent statistics from the USDA's National Farmers Market Directory and the 2012 Agricultural Census: The number of voluntary listings in the Farmers Market Directory rose from approximately 1,750 when it launched in 1994 to more than 8,600 in 2016, while the number of farms participating in CSAs (including multifarm CSAs) rose from two in the mid-1980s to more than 12,000 in 2012.

Recent surveys of U.S. household shoppers suggest that direct-market outlets for food such as farmers markets, along with locally controlled and natural food-oriented retailers, maintain a far greater reputation for reliability in supplying local food than their larger or more anonymous competitors (Figure 6).

The perceived connection between local food, local control and the reliability of the supplier is so deeply rooted, in fact, that a majority of consumers across the income spectrum indicate that they would be willing to pay a premium for local food, with a greater share of consumers expressing this point of view at higher income levels (Figure 7).

Growing desire for product authenticity and transparency

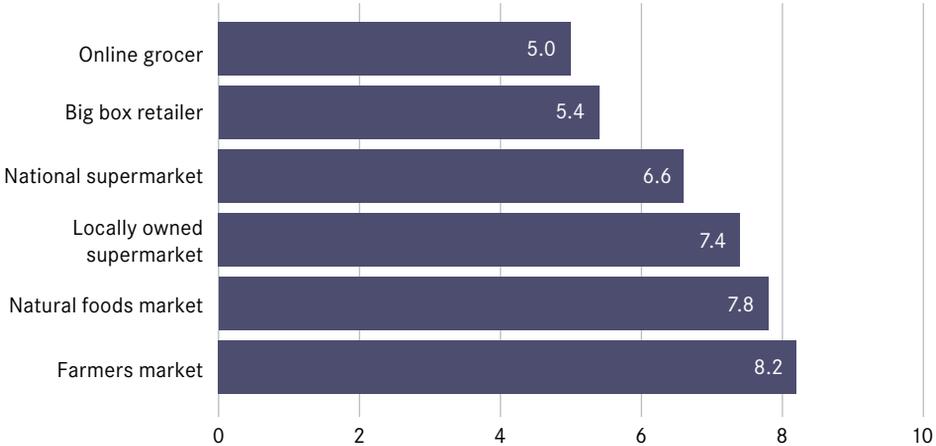
The demand for authenticity and transparency in food manufacturing and labeling is on the rise, most intensively among members of the millennial generation. In a 2016 survey of more than 400 millennials by Watershed Communications, every single respondent indicated that he or she frequently purchased food and beverage brands based on the brand's reputation for authenticity.²⁸ Factors that were most frequently attributed to creating an authentic brand included:

- “clean” ingredients—real, all natural, fresh, organic
- top shelf ingredients and great flavor
- true to mission and product claims
- culturally accurate
- transparency—food and beverage packaging should expressly state what is in the food product and why

FIGURE 6

How Much Do You Trust Each Store Format to Deliver Local Food?

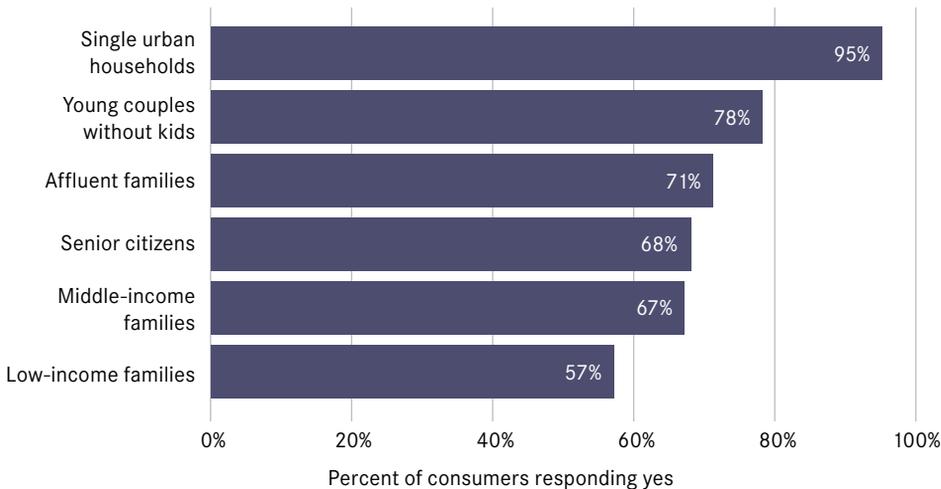
1 to 10 scale, with 10 being the most trustworthy



Source: See Rushing and Ruehle in endnote 34.

FIGURE 7

Shoppers across All Segments Are Willing to Pay More for Local Food



Source: See Rushing and Ruehle in endnote 34.

Based on its research, Watershed identified six key pillars for building an authentic brand: compassion, community, customization, co-creation, consistency and conviction. These are quality attributes and core operating principles that largely align with the business practices and competitive advantages of local food marketers.²⁹

Greater multichannel shopping: willingness to visit multiple retail outlets, including farmers markets

According to a national consumer survey of more than 1,200 U.S. residents in 2016, nearly one-third (30 percent) of respondents had shopped at a farmers market or local food stand, up from a reported 11 percent in 2014.³⁰ Even more impressively, 14 percent of respondents indicated they had purchased a prepared meal from a farmers market or local food stand within the previous year, with this share rising to 24 percent among urban residents and consumers in the highest household income category (above \$150,000 per year).³¹

The gravitation toward direct-marketing outlets is attributed to several changes in consumer shopping priorities. While cost remains the most important factor in influencing consumer purchases of groceries, the traditional importance of convenience is being challenged by growing interest in quality and selection. Furthermore, household shoppers for the first time are ranking “shopping experience/environment” among their highest priorities when making decisions about where to shop for food.³² The growing influence of the millennial generation is said to be accelerating this trend toward food retail channel diversification, as millennials are more inclined than grocery shoppers in other age cohorts to visit a greater variety of retail food outlets and to plan meals for a specific occasion rather than for an extended period of time.³³

Consumers willing to change preferred stores for better local food selection

Local food availability is enough of a lure to grocery shoppers that a large segment of surveyed U.S. grocery shoppers indicate that they will consider purchasing food elsewhere if their standard preferred store does not carry local foods. In a survey conducted in late 2012, fully 30 percent of a national representative sample of U.S. primary household grocery shoppers told consulting firm A.T. Kearney that they would consider switching their usual retail food store if their preferred store did not carry local foods. Furthermore, the majority

of respondents in this 1,300-person survey indicated that their main source for local food was still their local farmers market or farm stand, while only 5 percent indicated that they shopped primarily for local foods at “big box” retailers and 15 percent at national supermarket chains.³⁴

Therefore, far from being a niche market, a passing phenomenon or just a concern of the affluent, the very nature and features of local food squarely meet the changing demands and expectations of U.S. consumers on a variety of levels. Furthermore, when we consider that many of the current constraints to local food system expansion may well be supply rather than demand related (given the current centralized nature of our agricultural production system and the general orientation of our distribution and transport infrastructure toward serving national agricultural markets), we have every reason to believe that we have not yet seen the full potential of local food demand growth on market expansion.

In summing up the most critical marketing trends facing food retailers in 2016, Chain Store Age magazine noted that the most important aspect of attracting today’s U.S. food shopper is “authenticating the fresh foods story,” as consumers have increasingly “high expectations around freshness, convenience and transparency.”³⁵ Fortunately for the local food producer, manufacturer and distributor, two of these trends—freshness and transparency—are areas where local food suppliers have a natural competitive advantage against other food suppliers, while convenience is an amenity that purveyors of local food are increasingly able to provide through changes in product offerings and distribution mechanisms, issues that we explore more thoroughly in subsequent chapters.

Drivers on the supply side: Cultivating local food markets is connected to business stability and better negotiating power

At the same time that demand for local food among U.S. consumers is on the increase, local food producers and processors are finding additional business reasons to explore this market opportunity. The differentiation of food products on the basis of local origin and the embrace of local food items by a growing segment of U.S. consumers have benefited small and midsize producers by:

- stimulating new interest in local food supplies by wholesale buyers in the restaurant, retail and institutional trade, which enables commercial scale producers to further diversify their customer base, potentially gain access to higher-volume market channels and better stabilize their cash flow;

FIGURE 8

Market Channels for Agricultural Producers, Risks and Rewards

MAINSTREAM MARKETS	ALTERNATIVE MARKETS	
MAJOR CHANNELS	FARM-TO-FIRM MARKETING	FARM-TO-CONSUMER MARKETING
<ul style="list-style-type: none"> • Rural collection markets • Auctions • Terminal markets • National food distributors • Value-added firms (processors, repackers) • Brokers • Large-scale producer cooperatives • Federal/state procurement programs 	<p>Restaurants</p> <ul style="list-style-type: none"> • Independent • Chain <p>Grocery</p> <ul style="list-style-type: none"> • Mainstream chain • Specialty chain • Independent • Food cooperatives <p>Institutions</p> <ul style="list-style-type: none"> • Hospitals • Schools • Prisons • Casinos • Corporate cafeterias 	<ul style="list-style-type: none"> • Flea markets • Farm stands • Community supported agriculture • Farmers markets • Pick your own <div style="border: 1px solid black; border-radius: 50%; width: 150px; height: 150px; margin: 20px auto; display: flex; flex-direction: column; align-items: center; justify-content: center;"> <ul style="list-style-type: none"> • E-commerce • Buying clubs </div>
<ul style="list-style-type: none"> • Low or no producer bargaining power • Low or no preservation of product identity 	<ul style="list-style-type: none"> • Bargaining power increases • Product identity may be preserved 	<ul style="list-style-type: none"> • High producer bargaining power • Product identity preserved
OTHER PRODUCER AND CONSUMER CHARACTERISTICS		
<ul style="list-style-type: none"> • Producers are price takers • Favors larger-scale farm operations • Products are generally not differentiated • Consumers are passive buyers of product 	<ul style="list-style-type: none"> • Producers are price-makers/takers • Works well for producer groups/networks • Products might be differentiated • Consumer may be active-intentional, concerned, aware about foods 	<ul style="list-style-type: none"> • Producers are price-makers • Works well for smaller scale farms • Products are differentiated • Consumer is active-intentional, concerned, aware about foods

Source: Ben Turner, Institute for Social and Economic Development; and Jim Barham and Adam Diamond, USDA Agricultural Marketing Service. "Marketing and Sales: Risks and Opportunities for Small-Scale and Resource-Limited Producers," presented March 2009.

- allowing producers to extract more value from the sale of their agricultural merchandise by selling a differentiated product with desired attributes rather than a generic commodity; and
- providing growers and food suppliers with greater negotiating power in business transactions and enabling them to retain a greater share of consumer food expenditures than mainstream marketing channels.

Other financial considerations seem to favor the local food supplier, especially those who participate in direct-to-consumer marketing channels. According to USDA's ERS, not only did farms with direct-to-consumer sales have a higher survival rate from 2007 to 2012 than other farm product suppliers, but the difference in farm survival rates was substantial, ranging from 10 percentage points for the smallest farms to about 6 percentage points for the largest.

Direct marketing was also associated with higher farm survival rates among beginning farmers: On average, beginning farmers who marketed directly to consumers had a 54.3 percent survival rate, compared to 47.4 percent for those who marketed their goods through traditional channels. Economists with ERS speculate that this difference in financial performance exists in part because producers using direct-to-consumer marketing channels, often smaller-scale operation, frequently have a smaller debt burden than their larger counterparts, owing to the fact that they operate on small parcels of land and need fewer pieces of farm equipment. This conclusion is borne out by some circumstantial data: In 2012, farmers who marketed farm product directly to consumers owned \$20.82 worth of machinery per dollar of sales, compared with \$31.10 for those who marketed farm products through more conventional channels.³⁶

Conclusion

A favorable policy environment may have aided the growth of local food systems in recent years. However, there is abundant evidence to suggest that local food systems have serious traction and considerable staying power, and will make an increasingly important contribution to the U.S. food system, regardless of future policy direction.

Profound shifts in consumer attitudes and behavior regarding food purchases have taken place. Price no longer dominates as the primary consideration in determining product value but competes with other considerations such as

personal health, trust in suppliers and local community benefit. These shifts in consumer preference can be expected to support continued growth in demand for food that is marketed on the basis of its local origin.

Another development that favors the continued growth of local food demand relates to the growing installation and use of scale-appropriate regional processing, aggregation and distribution infrastructure. Access to this infrastructure should permit the continued expansion of local food sales to a growing number of commercial and institutional customers, which will in turn develop the consumer base for local food by exposing a greater range of consumers to local food in the places where they normally work and shop.

Beyond growing access to logistical support, producers selling to the local market also have profound financial incentives to pursue marketing opportunities in wholesale channels because of the ways in which these higher-volume transactions offer them an opportunity to extract greater income from their agricultural product sales, diversify their customer base and improve their cash flow without straining available labor resources. ■

ENDNOTES

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The Investment Continuum: Risk, Reward and Impact in Local and Regional Food Systems

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In the first chapter, we examined how shifts in U.S. consumer behavior and motivation are driving up demand for local and regionally produced foods, notably how consumers desire greater transparency in how their food is produced and, increasingly, how their purchasing decisions help support their values, contribute to the local economy and improve their quality of life.

In response to unmet needs, many of the agribusiness enterprises and service providers that have emerged to serve the local and regional food market intentionally build enterprises that appeal to consumers by implementing values-based operating principles and practices within their business models. Moving beyond the conventional business pursuits of efficiency, firm-level risk mitigation and maximized financial profitability, these enterprises often attempt to generate positive externalities in the regional economy by promoting measurable social or environmental goals, such as pesticide-free production, fair on-farm labor practices and expanded nutrition access for low-income households. By simultaneously addressing an unmet market need and a socio-economic problem, they do not easily lend themselves to traditional risk-versus-reward financial analysis by prospective funders and investors.

The primary objective of this chapter is to outline an emerging typology of food enterprises currently operating in the local/regional food marketplace and help prospective funders and investors better understand why the unique structural and operational characteristics of regional food enterprises require recalibrated criteria for investment decisions.

Regional food enterprise is defined here as a business operation focused on food and agricultural market activity within a particular local/regional geographic scope of trade. That is, the transactions between farms, food producers, buyers, retailers, consumers and institutional customers all occur within the same region. Regional food enterprises generate revenue through selling products or services that provide regionally produced food (supply) with regional food buyers (demand).

Regional food enterprises operate their businesses by innovating upon conventional food and agriculture models. In many cases, regional food and

agriculture enterprises can and do access financing through public and private capital markets or federal agency funding sources (e.g., community banks, Farm Credit, U.S. Department of Agriculture or U.S. Economic Development Administration loans). However, these kinds of traditional financing tools often do not account for the quirks of a business model designed to generate regional socio-economic benefits. In the past few years, the experiences of both capital providers and entrepreneurs have illustrated that traditional sources of capital and traditional financing tools are often not sufficient to meet the capital needs of these types of businesses at all times.

To traditional investors, some of these creative and innovative food business models can prove unfamiliar, strange or outright uninvestable. To an emerging class of nontraditional investors, however, these creative regional food enterprises represent an exciting investment pipeline and an opportunity to model new investment frameworks that combine real financial returns with measurable social impact.

Recalibrating Investor Expectations of Regional Food Systems: The New Paradigm

Lending and investing in the mainstream U.S. food industry have tended to be highly segmented by business function. The food industry encompasses an unusually wide range of sectors—production, wholesale, distribution, processing, food service, retail and consumer packaged goods—each of which has distinct capital needs, risks, socio-economic impacts and return potential.

The variation in prospects for growth, scope of activity and capital requirements for each sector involved in the food system has historically led different segments of the investment community to focus their attention on specific sectors that matched their level of risk and return tolerance. For example:

- startup technology platforms serving the food system are often supported by venture capital;
- growth-oriented manufacturing and consumer packaged goods companies have traditionally been supported by equity growth capital and bank debt;
- large-scale infrastructure attracts government agency grants and debt; and

FOOD ENTERPRISE MODELS IN THE NEW LOCAL FOOD ECONOMY

- **Profit-driven, asset-light model:** Lean enterprises rent instead of own all of their property and equipment despite having multimillion-dollar revenue bases. Many of these enterprises are traditionally considered unbankable because they have low to no assets under ownership; however, the asset-light approach allows them to be nimble and respond to changing costs without being overburdened by the leverage that can come with accumulating assets.
- **Purpose-driven, social benefit model:** Food enterprises prioritize their mission and design their business model around achieving a specific social benefit. For example, food service operations may process regional products with unconventional local labor (e.g., people returning from prison, refugees). The decision to use unconventional labor can result in generating sales from a labor-driven brand story, but also results in a slightly higher cost of labor in order to provide a region with measurable economic value by returning citizens to the workforce. The intentionally higher cost model may result in tighter enterprise margins and delayed enterprise profitability; however, enterprises use a market-based solution to deliver a measurable socio-economic benefit. While a challenge to finance conventionally, these enterprises frequently weave together earned income with an array of grants, donations and impact investment.
- **Infrastructure model:** Enterprises develop distribution and processing capacity targeted for midsize farms, food producers and small businesses within a region. This includes both new operations and existing food distributors using conventional aggregation and distribution infrastructure, marketing activity, and their own overhead capacity to develop valuable regional infrastructure for farmers and customers. These enterprises often invest their own capital, accept smaller profit margins or absorb the expenses required to establish operations that can have larger regional economic benefits. Financed and managed alone by one company, this creates pressure on company cash flows; financed in collaboration with regional public entities, operations can have longer-term sustainability and benefit the regional economy with infrastructure that can boost regional food supply availability and diversify production capacity.
- **Technology-based model:** Technology platforms focus on coordinating transaction activity between buyers and sellers. These operations may never touch a product or assume supply chain risk, but are instead oriented to build efficiency into the infrastructure that is buying, selling and moving farm food products.

- independent agricultural production is predominately supported by debt from specialized agricultural lenders (USDA, Farm Credit) and philanthropy, though there is a growing range of crowdfunding and angel investments for new and unconventional operations.

In recent years, the investment sector has also been reassessing its approach to risk and return, and how social and/or environmental impact can be integrated into its return expectations. The 2014 G-8 Impact Investment report describes this paradigm shift from the two-dimensional investment approach of “risk/return” to a three-dimensional approach that accounts for risk, return and impact. A new asset class of “impact investments” has begun to take shape to address this three-dimensional investment approach.

The traditional two-dimensional investment approach is based upon the basic principle that risk and return are correlated: The degree of risk in an investment should have a corresponding margin of financial return. In this approach, the considerations for risk are limited to those factors of the investment that could jeopardize the preservation and return of capital. The expectations around the financial return of that investment are then related to those risks. The two-dimensional approach does not take into consideration potential nonfinancial risk/return outcomes.

Many who invest with an impact lens not only seek appropriate financial return related to risk and type of investment (grant, debt and equity), but also seek the positive nonfinancial returns of the investment opportunity: the potential socio-economic or environmental impacts of the investment. By ascribing increased importance to these impact considerations through greater weighting of the nonfinancial returns of an investment, the return of the investment is no longer limited to the financial outcomes but also becomes tethered to the positive externalities created by the investment.

Investments in food and agriculture invariably involve socio-economic and environmental impact whether implicit or explicit. As discussed previously, regional food enterprises often prioritize generating positive impacts in the interest of building up regional infrastructure, healthier communities or more balanced local economies. Therefore, any discussion of the investment continuum and the tools available must begin with the three-dimensional view of integrating risk, return and impact.

The Investment Continuum

The following *framework* is an adaptation of several different impact continuums the authors have used, but which have been adapted for the food system.

Capital Continuum

		INVESTMENT CATEGORIES		
		TRADITIONAL	IMPACT INTEGRATED	PHILANTHROPIC
Risk	Limited to factors that jeopardize the return of capital	Encompasses risks related to capital return and the positive outcomes of making the investment	Little consideration of risk as it relates to capital return; focused on the risk related to acting versus not acting	
Financial Return	Market rate returns	Can be competitive with the market	Little to no consideration	
Nonfinancial Return	Not a central consideration; may result in negative environmental or social outcomes	Priority; can require consideration of financial trade-offs	Driven by social or environmental return; often requires 100% financial trade-off	
Tools	<ul style="list-style-type: none"> • Debt • Equity 	<ul style="list-style-type: none"> • Debt • Equity • PRI/MRI* 	<ul style="list-style-type: none"> • PRI/MRI* • Grant 	
Examples	Conventional strawberry production	Foundation investment in Michigan Good Food Fund (Chapter 12); investment in a food hub	Keller Enterprises grants in central Louisiana (Chapter 16)	

* Program-related investment (PRI) and mission-related investment (MRI) are types of investments—in the form of debt, equity or grants—made largely by foundations.

The *framework* outlines a simplified range of investment approaches that are positioned to show increasing focus on impact. On the left is a traditional investment approach structured to optimize return with little or no incorporation of impact. The middle of this spectrum represents discreet and increasing focus on impact, stepping from impact-screened traditional investments all the way to impact-led specially structured investments. On the far right is traditional philanthropy, which is structured to optimize impact with little to no focus on financial return. Furthermore, each investment category has its

own range of risk tolerances that are represented by the various investment tools that can be deployed in each (i.e., debt, equity and grants).

Traditional: An investment in this category would exclusively optimize financial returns without considering positive or negative externalities, such as socio-economic benefits that could be generated as a result of that investment. The understanding of risk, expected return and the investment tools available follows conventional market structure and offerings.

Let's consider how this framework would apply to a conventional strawberry production business on the coast of California. An investment in this type of business would take into consideration the risks related to weather, crop failure and price fluctuations—factors that increase uncertainty related to the return on investment. However, there would be no consideration for outcomes such as pesticide runoff into waterways, on-farm labor practices or the deterioration of soil as a result of the agricultural practices. These negative externalities are now understood to be a decisive outcome of the conventional farming system that until recently could not be tied to the financial performance of an investment and therefore were not considered.

Impact-integrated: This category is broad and encompasses what many people consider the emerging sector of “impact investing” in which the three-dimensional approach to risk-return-impact is most applicable and where many of the regional food enterprises referred to in this publication will fit. Regional food enterprises in these categories intentionally expose themselves to additional business risks and costs in order to generate positive socio-economic or environmental gains alongside their operating margin. While these businesses bear additional risks and costs, they are often not compensated for generating valuable regional economic benefits, such as increased social cohesion, improved community nutrition, cleaner landscapes and happier working families with improved quality of life. Within this category, investors consider not only whether these investments have potential for appropriate financial returns, but also whether socio-economic and environmental outcomes will be substantially generated, resulting in a blended understanding of the investment return profile.

It is important to note that there is not always a direct trade-off between financial return and nonfinancial impact within the impact-integrated category. Many investment opportunities in regional food enterprises are investments in

CASE STUDY OF DEBT: RSF'S FOOD SYSTEM TRANSFORMATION FUND

Established in 2010, the Food System Transformation Fund (FSTF) lends directly to for-profit and nonprofit social enterprises whose businesses directly encourage the development of healthy food systems and more resilient regional economies. The fund's intent is to take risk that other lending programs cannot in order to catalyze positive social and environmental impact. Nearly all of the enterprises in the FSTF would not have qualified for a traditional loan at the time of origination; however, RSF has identified access to debt as one of the most useful investment tools for regional food enterprises to become self-sufficient.

The first loan out of the fund was to Common Market Philadelphia, a values-driven, nonprofit wholesale aggregator and distributor of local food. Common Market creates a much needed link between local farmers and the urban marketplace through institutional sales channels. Common Market's binary commitment to paying farmers fair prices for their product and selling into institutions with famously small procurement budgets meant that Common Market had to work with compressed margins, which created a longer path to profitability. In 2010, RSF provided Common Market with a line of credit from the FSTF that helped to stabilize cash flows related to paying farmers in 14 days—a core value of the business model—and waiting up to 120 days to get paid by its institutional clients.

This first loan to Common Market carried its share of risk—a small, young and not-yet profitable organization with challenging collateral to secure the loan. However, RSF recognized that the line of credit would help Common Market stabilize and grow. And, if used appropriately, it could help the company reach profitability. But it would take time, patience and some creativity. Three years after the original loan was made, Common Market's distribution work became operationally profitable. Since then, RSF has financed the purchase of its 73,000-square-foot distribution center in Philadelphia and now an Atlanta facility to replicate the model in other regions.

young, growing businesses across an array of food industries (e.g., consumer products, distribution, retail markets and technology). In some cases, a business can track a more traditional trajectory and provide reasonable returns for the types of investments made. If, however, the business is assuming additional cost and risk to generate positive socio-economic or environmental benefits, it may require more concessionary capital that will have flexible expectations around financial return and liquidity. This kind of capital can come from a

CASE STUDY OF EQUITY: RADICLE IMPACT PARTNERS AND LOCAL

Radicle Impact Partners is an early stage venture team under the TomKat Foundation umbrella that is identifying early stage companies whose financial success creates meaningful and transformational value for good food, good money and good energy. Radicle Impact's thesis hopes to demonstrate that financial success, and meaningful and transformational impact are not mutually exclusive. If this thesis proves itself to be true then these investments should arguably be able to provide market-rate returns to investors.

TomKat may be able to validate this thesis through its investment in Local, a fast-food chain focused on creating fast, high-quality and affordable meals to underserved communities. The fast-food industry can be a fast-growth, high-margin business that is easily replicated, which could make it an attractive impact investment with equity-like returns for investors. If Local can scale this business while delivering on its mission then there is a good chance that market returns can be realized alongside high impact. (For more on this investment, see Chapter 11.)

variety of public, private and philanthropic sources (e.g., USDA programs, angel investors, private donors and foundations).

Philanthropy: An investment in this category would exclusively pursue socio-economic and environmental returns with little to no regard for financial return. Many foundations are beginning to use philanthropic capital through investment tools, like program-related investments (PRIs), in order to drive different outcomes from more traditional grant programs.

Naturally, the desired outcome for any investment, including a program-related investment, is full repayment; however, as one moves further right along the capital continuum, the cost-benefit of financial return versus impact return becomes more balanced.

While each of the categories along this spectrum appears to be distinct from one another, some regional food enterprises actually move along this spectrum as they evolve. In the infancy of a regional food business, philanthropic-like capital can get the businesses started and see them through the earliest and riskiest stage of development. As these businesses gain traction in the market and prove the soundness of their business models, investments that prioritize both the financial and nonfinancial outcomes are often best suited to support

CASE STUDY OF GRANTS: KELLER ENTERPRISES AND CENTRAL LOUISIANA

Keller Enterprises is a family company based in Alexandria, La., that focuses on venture investing and venture philanthropy along with operating the largest organic farm in the state. In Central Louisiana, Keller Enterprises sees increased regional food businesses, healthy food access and education as critical to the health of the economy and its people. Two partners that are central to the work are the Food Bank of Central Louisiana and the Central Louisiana Economic Development Alliance. Keller Enterprises has made two strategic philanthropic investments in these organizations to continue their respective work educating consumers and encouraging farmer development. While neither of these sizable investments has any expectation of financial return, the ongoing work of these organizations, in concert with the other investments Keller Enterprises is making throughout the region, is critical to the emergence of a local food economy in Central Louisiana. (For more on these grants, see Chapter 16.)

CASE STUDY OF PROGRAM-RELATED INVESTMENT: MICHIGAN GOOD FOOD FUND

The Good Food Fund is a public-private partnership loan fund whose explicit mission is to provide financing and business assistance to entrepreneurs that grow, distribute and sell fresh, healthy and local food to underserved communities. The fund's use of philanthropic capital to make investments that drive targeted socio-economic outcomes prioritizes impact over financial return. (For more information, see Chapter 12.)

this next stage of growth. At the maturity stage of the business life cycle, traditional capital—either values-aligned or conventional—can often be secured and is often best suited to stabilize and grow a company. Furthermore, the various investment tools that can be deployed across each category (loans, equity, grants, etc.) often must converge to support a regional food enterprise at different points of growth.

Investing in regional food enterprises can be nuanced and is rarely straightforward. Investors should never discount skilled, incisive due diligence and underwriting. However, when coupled with a framework of sector-building

or generating assessable socio-economic regional impact, a new definition of risk-reward arises and the risk-reward-impact relationship becomes a critical investment tenet.

Conclusion

We challenge food system investors to rethink three things when approaching investment opportunities in local and regional food systems:

- **Risk-Return-Impact: Approach regional food with a 3-D investment view.** Investing in regional food enterprises requires calibrating expectations to the different business needs, risks and positive externality/impact potential of the investment. Repayment and financial return are core objectives of investment; however, other outcomes like farmland preservation, workforce development or improved community nutrition can also drive performance and can be integrated into the investment approach.
- **Rethink investment structure.** A straight loan or equity investment can work in some scenarios, but more often than not, regional food investments require a more creative structure that fits a business's needs (e.g., seasonal cash flow, unique operating risks and repayment ability). Creatively structured tools—such as lines of credit that incorporate seasonal revenue, royalty financing or credit enhancements—are necessary. Let the needs of the company drive the structure of the investment with a well-informed and realistic understanding of the business's trajectory, liquidity options and return potential.
- **Anticipate technical assistance and support.** Experienced regional food system investors find that a vast majority of regional food enterprises require some form of technical assistance or support in order to weather the investment period. The ability of the investor to provide technical assistance to support the enterprise's operations, either directly or through partnership with other entities, is an important success factor in managing the investment and supporting the business's ability to repay.

Regional food enterprises often have innovative business models that require unconventional capital to help their operations grow and allow them to generate regional socio-economic benefits. Beyond unconventional capital, these

businesses also need investors that can provide strategic governance to uphold fiduciary and impact accountability, while supporting inventive thinking around enterprise value creation. The consumer demand and supplier innovations in the local/regional food market have led to a wide variety of investment opportunities. At the same time, creative thinking that integrates risk, reward and impact is essential to building well-functioning local and regional food systems that underpin strong regional food economies. ■

Local and Regional Food Systems Driving Rural Economic Development

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In search of new opportunities to support rural communities and economies, federal and state agencies, private foundations and development organizations have set a new priority for rural America: strengthening local and regional food systems. Local and regional food systems, for example, are one of the U.S. Department of Agriculture's four pillars of agriculture and rural economic development.¹ Promoting local and regional food systems was also identified as one of the Rural Development Agency's seven strategies for economic development.² Between 2009 and 2015, the USDA invested over \$1 billion in more than 40,000 local and regional food systems projects.³ Understanding the impacts of these types of investments on rural communities and economies, however, is still nascent and relatively limited in focus.

Though much of the rationale to support funding and promotion of local and regional food systems stems from their ability to support positive rural economic development outcomes, there is now clear evidence that local food system activity has not been uniform and is concentrated in urban (or metro) places,⁴ or as Malone and Whitacre (2012) note, in places with higher population densities and median incomes. Accordingly, these systems predominantly involve rural or urban-adjacent farms and ranches selling into urban markets. In this light, local food systems have become a regional economic development strategy focused on strengthened rural-urban linkages through market interactions.

Regional Economic Development Strategies

Rural-urban linkages

Economic development focused on strengthened rural-urban linkages has a long history in the U.S. and globally. Since the 1990s, there has been a revival of research on the relationship between rural-urban linkages and economic development.⁵ Though this area of study is more developed internationally, U.S. researchers have recognized the complicated interactions and linkages that connect rural and urban. Due to transformations in the U.S. agricultural landscape over the last century, the rural and urban are intricately connected,⁶ with

traditional boundaries and borders becoming increasingly blurred.⁷ The majority of theoretical research characterizes these linkages as forms of opportunity, especially for rural areas. Porter et al. (2004), for example, note that many economic opportunities available to rural regions involve rural-urban connections.

Exchanges of goods between urban and rural areas are an essential element of rural-urban linkages; one oft-cited opportunity for adjacent rural-urban regions is strengthened market interactions. The ability of urban consumers to purchase food, feed, fiber, energy and tourism/recreational opportunities from rural areas is a crucial factor in the development of rural areas, reflecting the global trend toward market-led strategies. In this view, government investment in production, distribution and market infrastructure can be seen as a mechanism to compensate for the market imperfections that are at the root of regional disparities.⁸

Empirical research examining the distribution of economic impacts resulting from economic development initiatives on an adjacent urban or rural locale (e.g., how a proposed vegetable processing plant in an urban region impacts vegetable growers in the adjacent rural region) calls into question the ability of urban-based economic development initiatives to support adjacent rural economies.⁹ Though the studies provide clear evidence that industry linkages exist between adjacent rural and urban economies, measured economic flows from urban to adjacent rural areas are lower than flows in the reverse direction. The implications for rural development, however, are unclear. While gains may be larger in urban areas, this does not necessarily constitute a simple zero-sum game; i.e., gains in the urban areas may not come at the expense of rural regions. Instead, there may be benefits in both areas based on comparative advantages, albeit different in magnitudes, due to increased regional linkages.

Import substitution

As a regional economic development strategy, local and regional food systems also involve import substitution. Import substitution is one of the earliest tenets of economic development: the idea that by protecting certain industries (e.g., agriculture), the sector can develop workers' skills and experience, as well as expand productivity.¹⁰ In the context of local food, regions can be seen as decreasing food and agricultural imports and replacing them with locally grown, processed and distributed products.¹¹ As consumers shift their

purchasing preferences and patterns toward these regional products, they are theoretically strengthening the inter-industry linkages (business-to-business connections) within their local economy. This increase in local purchases logically comes at the expense of other purchases, which may be local or nonlocal. As local purchases increase, consumers will likely decrease their nonlocal purchases to a significant extent. Consumers are thus substituting imports with local purchases, theoretically resulting in a positive local economic impact.

Despite the long history and interest in import substitution, until recently it fell out of favor as an economic development strategy for a number of reasons. First, there is little evidence that it is effective as a policy tool in fostering economic growth and development. Second, there is little theoretical or practical understanding of how the various forms of protection should be implemented. Third, the methods and data required for effective planning, such as methods for identifying the specific industries to target and how to foster internal growth, were not adequately developed.¹²

How Might Local and Regional Food Systems Be Different?

Local and regional food systems conceived of as economic development strategies focused on strengthened rural-urban linkages and regional import substitution may have different and more positive impacts on rural communities and economies compared to other industries.¹³ Perhaps most importantly, there is strong evidence that local and regional food system strategies have followed growing consumer demand for these products.¹⁴ In this case, local food system activities have not had to focus on convincing consumers to try new products, but rather on ensuring appropriate infrastructure (e.g., food hubs) is in place to facilitate these local and regional food products reaching the market.

Part of this changing consumer demand has to do with the well-documented commitment to a broad array of values jointly held by both consumers and producers who participate in local and regional food system activities. These shared values embody the social constructs of transparency, reciprocity and trust along the entire supply chain, with respect to ecological and economic sustainability of farms and local communities and to aspirations of equity and social justice.¹⁵ In this sense, local food system development is following along the lines

CASE STUDY: SOUTHEAST NEBRASKA AND RURAL MISSOURI

In a study of producers oriented to local food systems in remote rural regions of the Midwest, Johnson et al. (2014a) found net positive effects on associated local economies. Larger economic impacts were identified in terms of sales, gross domestic product and employment of producers oriented to local food production compared with conventional agricultural systems, even though those effects were often small due to the overall development of local food systems in the study regions. Producers were motivated by pride, satisfaction with their products and the contribution that the local foods market could provide to the quality of life in their community. Rural consumers often acquired locally produced foods through their own production, family or friends, or purchased them through networks rooted in employment or social groups rather than through formal market outlets like farmers markets or supermarkets (Hendrickson et al. [2015]). Such arrangements potentially limit robust entrepreneurial opportunities for local food systems in rural areas compared to urban-adjacent areas.

conceptualized by European scholars seeking to reconnect ecology, farming and community in a new rural development paradigm. They argue that a focus on quality and the synergy between farm and food businesses in local food systems could contribute to endogenous development.¹⁶

Empirical Assessments and Evidence of Food Systems as Rural Economic Development

In 2013, the Union of Concerned Scientists and Michigan State University's Center for Regional Food Systems convened a meeting of local food economists and researchers to identify data needs and best practice methodologies to better understand the economic impact of local food system activity.¹⁷ Subsequently, the USDA's Agricultural Marketing Service assembled a group of academic researchers and local food system experts to develop a community toolkit on best practices for conducting economic impact assessments.¹⁸ The toolkit includes summaries of a number of published case studies promoted as best practice approaches.¹⁹ Collectively, these impact studies tend to show relatively small, albeit positive, short-term gains accruing to regional economies.

Other approaches to examine the economic effects of local food systems activity have utilized spatial panel data econometric approaches²⁰ whereby a measure of local foods activity (typically direct-to-consumer farm sales) is used as an explanatory variable in describing changes on income growth (typically county-level per capita income). Here the impacts of local food systems activity have been shown to be either relatively small (but commonly positive) or not statistically different from zero. However, the authors recognize data limitations in their approaches and/or the restriction of impact on a relatively narrow (financial) measure.

Farm and ranch profitability impacts

Another vein of literature looks at the farm viability or profitability effects of sales through local markets. If the viability of rural farms or ranches is improved through the availability of local and regional food system markets, it could be assumed that rural communities and economies are benefiting from these markets.

Nationwide research examining farm performance by market channel was not possible until recently due to the lack of data. Nationally representative data on sales by market channel have only been available since the 2008 USDA Agricultural Resource Management Survey (ARMS). ARMS is the primary source of farm financial information.²¹ Preliminary analysis by Vogel et al. (2016) evaluates two different measures of farm financial performance by farm revenue class to examine if local foods participation contributes to the viability of farm operations. They find that participation in local and regional markets does appear to benefit small fruit and vegetable growers (those with less than \$350,000 in gross annual revenue) who are both more likely to earn positive net farm income and have lower operating expense ratios. However, this trend reverses as farms earn more than \$350,000. Similarly, ongoing research by Thilmany McFadden et al. (2016) shows that the top performing quartile across all scales (measured by gross cash farm income) has positive return on assets (a measure used by economists to understand farm performance). These preliminary results provide evidence that local and regional food markets may offer opportunities for young, beginning and small farms and ranches (young and beginning farms are often small), which could facilitate the next generation of agriculture.

There are a few case studies that demonstrate positive impacts to farms' gross sales through local food systems participation,²² but few calculate impacts to farms' net income. Understanding net impacts is important, as there is evidence farm expenditures could be higher on a per unit of output basis as gross sales increase; in other words, it costs farmers more to sell in certain outlets, like farmers markets, where they are likely to sell and retain more of the food retail dollar.

There are two studies (one in California and one in New York) that use market channel assessment approaches to estimate the net impacts to producers of participating in direct and intermediated market channels.²³ These studies, along with one by Jablonski and Schmit (2016), show wide variability in costs associated with market channel participation, particularly due to labor requirements, and that often farms select their marketing channel mix without full appreciation of the total costs involved. King et al. (2010) provide empirical evidence that localized supply chains can enhance farm viability. They find that farms receive a greater share of retail prices in local food supply chains than in mainstream chains. They show that local food system participants often take on additional supply chain characteristics (i.e., marketing, processing and distribution), but that the additional revenue usually outweighs the costs.

Rural wealth creation

These measures, however, only tell part of the story. While short-term economic impact assessments consider changes in the stocks of various types of market-valued capital (e.g., human, natural, cultural, social, financial, built), they do not account for contributions to productivity that capital investment typically involves. Expenditures on education, information, intellectual assets and social relationships, for example, are either excluded or treated as consumption or as intermediate goods rather than investments.²⁴

To this end, the USDA has begun to actively promote (and fund) projects that consider a more encompassing measure of rural development focused on the concept of rural wealth creation that takes into account an array of community wealth or capitals.²⁵ In this context, the concept of "wealth" includes all types of community capital assets (net of liabilities) that contribute to the well-being of people and communities and are commonly categorized as social, cultural, individual, intellectual, political, physical, natural and financial

capitals.²⁶ Changes in wealth can paint a very different picture than changes in traditional measures of economic activity when it comes to evaluating outcomes and policy practices.

The rural wealth creation approach focuses more attention on the mix of assets that can make some rural areas or communities more desirable and attractive than others, acknowledging that economic drivers are not inherently levers that make particular economic development strategies successful. Flora and Flora (1993) refer to an entrepreneurial social infrastructure strategy for rural development, where strong social networks can spur economic growth. Specific to local food, Hinrichs and Charles (2012) write that “[w]hen citizen involvement is high, local food initiatives can also build social capital, empower groups and individuals, strengthen networks and encourage community action” even when spaces are small or less economically robust.

While promising, the application of the rural wealth creation approach to the evaluation of local food systems activities is limited. Indeed, Jablonski (2014) provides the first peer-reviewed discussion of this approach to a type of local food system initiative (i.e., farmers markets). Through a comprehensive literature review, the author postulates that measuring impacts vis-à-vis rural wealth creation can elicit very different results—and thus policy implications—than more traditional economic impact assessments. Most recently, Jablonski et al. (2016a) use a case study of the Greenmarkets in New York City to understand the rural wealth creation impacts of the largest farmers market network in the country. Specific to intellectual capital impacts, they find that sufficient engagement between farmers and urban consumers, along with educational programming provided by the urban local food initiative, leads to improved entrepreneurial capacity of participating farmers and promotes the diversity and increased knowledge of farming and agricultural issues by urban consumers. (For more information, see the sidebar on Page 66.)

Challenges with Existing Research

The major challenge with most of the existing research is that, with the exception of the research on farm profitability impacts and the new rural wealth creation work by Jablonski et al. (2016a), no research disentangles the rural impacts as distinct from the regional impacts of these systems. Even if the urban impacts of local and regional food system activities outweigh those that result to rural areas,

CASE STUDY: NEW YORK'S GREENMARKETS

In order to understand the rural impacts of an urban-based local food system initiative, Schmit, Jablonski, Kay and Minner combined several methodological approaches: multi-region economic impact assessment, market channel assessment and rural wealth creation. They used a case study of the Greenmarkets, the largest and most diverse outdoor urban farmers market network in the U.S. It operates 54 markets in all five boroughs of New York City and includes 240 participating farms and fishermen from six Northeastern states (New York, New Jersey, Pennsylvania, Connecticut, Vermont and Maine), farming over 30,000 acres. Though their analysis is still ongoing, based on data collection with urban consumers and interviews with participating farmers, they found that sufficient engagement between farmers and urban consumers—along with educational programming provided by the urban local food initiative—led to improved entrepreneurial capacity in rural communities and promoted the diversity and increased knowledge of farming and agricultural issues by urban consumers (Jablonski et al. [2016a]).

the implications for rural development are not clear. The gains in the urban areas may or may not be at the expense of rural regions, and there may be benefits in both areas based on comparative advantages—albeit different in magnitudes, due to increased regional linkages. Further, given the challenges in U.S. rural development, there may not be a better opportunity, e.g., one that results in more gains or has a higher return on investment.

Importantly, one needs to understand that rural places are heterogeneous and that they are likely differentially impacted by local and regional food system activities, depending on existing assets and comparative advantage. Drabenstott (2001) writes that one of the most compelling features of the U.S. rural economy is its unevenness. He cites 40 percent of rural counties as capturing nearly all rural economic growth. These “growth havens” share certain key characteristics, including urban-adjacent (proximity to input and output markets); accumulated human and physical geography; natural endowments (e.g., amenity-rich); and commerce hubs.²⁷ On the reverse side, several authors write about so-called lagging rural regions in the U.S. and European Union. These regions have particular problems such as geographical remoteness, poor infrastructure, low

population density, limited employment opportunities and poor development capacity.²⁸ Exploring how existing rural assets and structure impact the potential for local and regional food system initiatives to support positive rural economic development outcomes remains a key area for future research.

Local and regional food systems may be important for rural development in remote rural areas without easy access to metro areas, but their development potential might have to be reconceptualized. Local food systems that are understood and studied only in terms of formal market transactions (e.g., gross direct-to-consumer or intermediated local food sales) may overlook the meaningful community development and resilience outcomes at the community or regional level that intrigue scholars like Hinrichs and Charles (2012), and Green and Robinson (2011). For example, McEntee (2010) argues that many rural consumers already participate in local food systems through reciprocal relationships with family and friends, or own production through gardening, hunting or foraging—activities which have real economic and social value but that mostly go unrecorded or unstudied.²⁹

Local government policy support for food systems as a rural development strategy may also need to be re-examined, given the urban-framed concepts of food policy that dominate most discussions.³⁰ The crux of the matter is that local food systems have been studied and promoted with an urban-centered bias that is perhaps less helpful for rural development in the heterogeneous contexts described previously. While nascent, these strands of research suggest that for local food systems to support positive rural economic and community outcomes in many types of rural contexts, there may be a need to focus on a variety of socio-economic arrangements. Moreover, policy proposals may need to be created through a bottom-up approach embedded in the civil-state-market relationships that exist in rural areas.³¹

Conclusions

Local and regional food systems as an economic development strategy are built on long-standing economic development principles of strengthening rural-urban linkages and import substitution. Though these economic development strategies have not yielded particularly beneficial impacts to rural communities and economies previously, there are reasons to believe that local and regional

food system activities may be different. Though more research is needed to understand how rural communities and economies are impacted by these activities, there are a few key findings from the cited literature.

First, existing studies provide evidence of small, positive regional economic impacts resulting from local food system initiatives—even when accounting for opportunity cost. Through strengthening local inter-industry linkages, these local food systems generate a small amount of additional regional economic activity. Understanding how the impact is distributed between urban and rural regions, however, remains an important step for future research.

Second, new markets resulting from growing consumer interest in local and regional foods appear to support improved profitability outcomes for some small- and midscale producers. These producers may have a comparative advantage to produce highly differentiated products for local food markets. To the extent that one goal of rural economic development is ensuring diversity in agriculture, there is preliminary evidence that local and regional food systems provide some opportunities.

Third, using a rural wealth creation approach to understand the potential impacts of local and regional food system initiatives may prove valuable. Potential longer-term impacts—such as changes in human capital (e.g., ideas for new products)—may be difficult to measure in the short term but may prove important for rural economic development. ■

ENDNOTES

- 1 The other pillars are production agriculture, the biobased economy, and conservation and natural resources. See USDA, 2015.
- 2 USDA, Rural Development, 2014.
- 3 Vilsack, 2016.
- 4 See Jablonski, 2014; Jackson-Smith and Sharp, 2008; Lichter and Brown, 2011; Low and Vogel, 2011; and Low et al., 2015.
- 5 See Irwin et al., 2010; and Tacoli, 1998.
- 6 Irwin et al., 2010.
- 7 Lichter and Brown, 2011.
- 8 Dabson, 2007; and Tacoli, 1998.
- 9 See Waters et al., 1994; Hughes and Litz, 1996; Dabson et al., 2009; Searls, 2011; Holland et al., 2011; and Lewin et al., 2013.
- 10 Goetz and Deller, 2009.
- 11 Swenson, 2009.
- 12 Goetz and Deller, 2009.
- 13 See Johnson et al., 2014a.
- 14 Thilmany, 2012.
- 15 Feenstra, 1997; Martinez et al., 2010; and Vogel and Matteson, 2015.
- 16 Van der Ploeg et al., 2000.
- 17 O'Hara and Pirog, 2013.
- 18 Thilmany et al., 2016; and Jablonski et al., 2016b.
- 19 See Gunter and Thilmany, 2012; Hughes and Isengildina-Massa, 2015; Hughes et al., 2008; Jablonski et al., 2016b; Schmit et al., 2016; and Swenson, 2010.
- 20 See Deller et al., 2014; Brown et al., 2014.
- 21 Low and Vogel, 2011.
- 22 Jablonski et al., 2011; and Schmidt et al., 2011.
- 23 Hardesty and Leff 2010; LeRoux et al., 2010.

ENDNOTES

24 Johnson et al., 2014b.

25 Pender et al., 2012a and 2012b; and Jablonski et al., 2016a.

26 Carolan and Hale 2016; and Pender et al., 2014.

27 See Drabenstott, 2001; and Wu and Gopinath, 2008.

28 Ilbery et al., 2004.

29 Hendrickson et al., 2015.

30 Whittaker et al., 2016.

31 Ibid.

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CHAPTER 4

Advancing Food Equity through Local and Regional Food Systems

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Local and regional food systems have benefits beyond food production. Job training and education, opening access to markets, and supporting low-income and marginalized communities can increase food equity.

Food insecurity disproportionately exists in underserved communities, which often include populations that are minority, immigrant, rural and economically vulnerable. In addition to food insecurity, underserved communities experience lower incomes, degraded environmental resources, lack of land and homeownership, and exclusion from decision-making on a local, state and/or national level.

Investments in local and regional food and agriculture combat structural inequities—within both the food system and society at large—by developing pathways for these underserved communities to build and acquire capital resources. Sociologists Yuki Kato and Laura McKinney state that “researchers examining food access [should not] treat it as an isolated variable, but rather as an indicator of other social disruptions and broader injustices.”¹ Investments in food equity contribute to improved health outcomes; employment opportunities, including job training and job placement; strengthening of community ties and cultural heritage; and a greater political voice for advocacy and policy change.

These outcomes are best seen through the practices of organizations that have been working toward the goal of advancing equity through the food system. This chapter highlights five organizations—DC Central Kitchen (DCK), Nuestras Raices, Wholesome Wave, Frogtown Farms and National Women in Agriculture Association—whose work demonstrates the human, community and social capital returns on investments, as well as how these investments can advance social and food equity. Many other organizations across the country are working to further food equity through similar programs, and each of them works to expand capital resources on many levels beyond the case studies presented here. The five selected organizations provide a glimpse of the breadth of work underway to expand and enhance equity in the food system.

Job Training and Access to Markets

Many organizations involved in increasing food equity through the local and regional food systems have the added mission of providing job training to populations that may not have had access to high-quality education or training. They include people who have attended poorly performing schools, experienced homelessness or been incarcerated.

Beyond the goal of growing or providing food, these organizations enhance health and well-being while also increasing their clients' human capital, which includes the knowledge, skills, experience and training that contribute to his or her individual value and ability to contribute to society.

DCCK in Washington, D.C., is a nonprofit developer of innovative social ventures that break the cycle of hunger and poverty. The organization provides job training for unemployed, homeless and previously incarcerated individuals, and serves as a community kitchen for the Washington metro area. Through its Community Meals program, DCCK recovers otherwise wasted food from area restaurants, grocery stores and other food providers, and turns it into 5,000 healthy meals delivered every day to partner homeless shelters and other area nonprofits. Mike Curtin, the chief executive officer of DCCK, said, "The mission for the last 27 years has been to use food as a tool to strengthen bodies, empower minds and build communities."² DCCK also purchases produce, at a discounted price, from regional farms that is misshapen, bruised or otherwise unsellable to traditional outlets. Over half of the organization's total revenue of \$13.1 million comes from contract food and program service sales, such as catering and its Healthy School Food contract with low-income schools in the district; the other half comes from philanthropy.³

DCCK operates a number of social ventures including Healthy Corners, a program that provides healthy food, marketing support and technical assistance to corner stores in the district's food deserts to improve access to healthy food in those neighborhoods and help customers change their consumption patterns. The Healthy Corners program delivers fresh produce and healthy snacks to over 70 corner stores in low-income communities in the district. Curtin told the story of one DCCK graduate who delivers food to the corner stores. The graduate said he remembered these places from his days selling drugs in front of them, but now "instead of selling stuff that's poisoning and killing the community, I'm bringing in stuff that's making it healthier and better, and that's really changed my life."

DCCK's Culinary Job Training program prepares chronically unemployed adults for careers in the district's thriving hospitality industry. The program is certified by the Office of the State Superintendent of Education and recognized by the American Culinary Federation Education Foundation. The program has a 90 percent job placement rate, and the average starting wage for graduates is nearly \$4.00 per hour more than the national minimum wage.⁴ The cost of the 14-week training program is fully subsidized, and DCCK also provides two years of postgraduate support to ensure that trainees find jobs and stay on track. For participants who have been previously incarcerated, the recidivism rate is less than 6 percent, compared to national recidivism rates of up to 76 percent.⁵

DCCK recruits applicants for the job training program from homeless shelters, employment offices and prisons. The program typically receives 70 applicants per course and takes 20 to 25 students based on a qualifying five-day evaluation period, which includes assessments of punctuality, ability to focus and attitude. In 2015, DCCK graduated its 100th class of culinary trainees.

DCCK views its students, particularly those who have been previously incarcerated or who have experienced homelessness, in the same way it views the wasted food in the food system—an unrealized resource with great value. DCCK works with students to become productive, successful and engaged citizens.

“We’re not going to feed our way out of hunger,” Curtin said. “Ultimately we’re using food as a tool to break a very destructive and generational cycle of violence, addiction, incarceration, trauma, abuse, homelessness, hunger and ultimately poverty.”

Creating Opportunities for Farmers

In addition to job training opportunities, local and regional food systems are a growing business opportunity for farmers and food producers. Locally produced food sales were estimated at \$12 billion in 2014 and are expected to increase to more than \$20 billion by 2019.⁶ However, it can be difficult for small-scale, young or new farmers to access these growing markets. This difficulty in market access is compounded by language barriers faced by new immigrants and a lack of access to capital and business development support for low-income farmers.

The mission of Nuestras Raíces (Spanish for “Our Roots”) is to “create healthy environments, celebrate ‘agri-culture,’ harness collective energy, and advance the vision of a just and sustainable future.” The organization is deeply embedded in

the fabric of Holyoke, Mass., a former mill town that has seen waves of migration from Ireland, Germany, Mexico, Guatemala and Puerto Rico. The population of Holyoke is 48 percent Latino, and 30 percent of the population falls below the poverty line.⁷

Founded in 1992, *Nuestras Raices* now includes 14 community gardens, a high school program for teens to learn about agriculture and leadership, two farmers markets, a community supported agriculture program, and a 30-acre farm within the city limits.

When it began, however, *Nuestras Raices* was responding to the sudden collapse of both the tobacco farms and the paper mills in western Massachusetts in the 1960s and 1970s, which left many new migrants economically stranded. The first project was a community garden, *La Finquita*, which engaged the agricultural skills of many of the Puerto Rican migrants who had grown up on farms. Now, the 30-acre site on the edge of town serves as a production farm for young farmers to get a foothold in agriculture. They grow specific varieties of plants like sweet peppers and pumpkins that are common in Puerto Rico.

Nuestras Raices also helps develop avenues for farmers to sell their produce to regional vendors and stores. There is a high demand for these specialty crops from the large population of Latino residents in western and central Massachusetts. *Nuestras Raices* helps farmers connect to farmers markets and wholesale vendors in the area. Older farmers also work with younger farmers to help teach them both the agricultural and business skills they will need to grow a profitable business. The community agriculture center promotes enterprise development and saw grant funding and earned revenue of \$229,527 in 2015.⁸ A 2007 study by the Center for Creative Community Development found that the direct, indirect and induced economic impacts of *Nuestras Raices* contributed over \$1 million to the economy.⁹ Additionally, the study found that the economic impact of new enterprises incubated by *Nuestras Raices* contributed an additional \$1 million to the community through direct, indirect and induced effects.

Rafael Herrero, the director of agriculture and environment at *Nuestras Raices* and a recent transplant from Puerto Rico himself, said, “Our mission is to help people start businesses, sell fresh food and give them ways to [be successful].”¹⁰

Other key parts of *Nuestras Raices* are its celebration of Puerto Rican heritage and culture and the way it passes agricultural traditions on to younger generations. At the farm site, there is a large gathering area where the annual Harvest

Festival is held; the event includes a traditional pig roast as well as maduros, yucca and mashed plantain. Over 3,000 people attended the 2015 festival, which also features music and activities for families.

“We’re just trying to see how we can help [residents] find a better life for their family, through culture, food, sustainability, eating healthy, nutrition, exercise and conservation,” Herrero said. “Holyoke has the largest concentration of Puerto Ricans in the United States and is [an] impoverished community—we show them you can still have your culture and eat pork and everything in a nutritious way.”

Prescribing Food

Food inequality can be seen in the health outcomes of those who are food insecure or who live in areas of low food access. The U.S. Department of Agriculture found that from 2007 to 2010, Supplemental Nutrition Assistance Program (SNAP) participants were more likely than higher-income nonparticipants to be obese (40 percent and 30 percent, respectively).¹¹ Diabetes affects African-American populations at a rate that is 5.6 percentage points higher than white populations, while low-income populations are affected at a rate that is 4.6 percentage points greater than higher-income populations.¹²

Chronic diseases like obesity, diabetes and heart disease affect a person’s ability to work and participate in civic life. These diseases also have significant price tags, both for the individual and the government. A recent estimate suggested that the total medical costs of adult obesity in the United States amounted to almost \$150 billion per year.¹³

Based in Bridgeport, Conn., Wholesome Wave empowers underserved consumers to make healthier food choices by increasing access to affordable, fresh local and regional food. The organization, with total revenue of over \$5 million in 2014, is funded mostly through contributions and grants from a variety of funders, such as Organic Valley, Kashi Co., Food and Wine Magazine, Newman’s Own Foundation and the USDA Food Insecurity Nutrition Incentive (FINI) grant program.¹⁴

Wholesome Wave developed the Fruit and Vegetable Prescription Program (FVRx), which allows health care providers to prescribe credits for fruit and vegetable purchases to patients who are experiencing or at risk of diet-related diseases. The organization partnered with BlueCross BlueShield, Eisner Pediatric

and Family Medical Center, Target, Nic Health, and the Navajo Nation to provide the program.

The FVRx program provides a dollar a day, or \$30 per month per person, which has a significant impact on the food budget for a low-income family. The prescription, which can be redeemed at grocery stores and farmers markets, supplements other assistance programs like SNAP or the Special Supplemental Nutrition Program for Women, Infants and Children (WIC). From 2011 through 2015, the FVRx program has been used by 8,425 individuals and families in the 12 areas where Wholesome Wave operates: California, Connecticut, Georgia, Massachusetts, Maine, Minnesota, New Mexico, New York, Rhode Island, Texas, the District of Columbia and the Navajo Nation.

Michel Nischan, founder and CEO of Wholesome Wave, shared the story of one recipient's daughter who "was obese, lethargic, had serious asthma and was on steroid inhalers. Since being on the [FVRx] program, she's lost a significant amount of weight, joined a sports team at school and no longer needs the inhaler."¹⁵

Overall, 40 percent of patients drop their body mass index within a 14-week intervention on the FVRx program, according to Wholesome Wave's analysis. "Just the self-esteem, the empowerment the parent feels that they're actually putting good food on the tables for their families rather than being embarrassed or ashamed that they can't—it's like the gateway drug to exercising more, walking together instead of riding the subway, participating in sports at school," Nischan said.

Improved health outcomes can have a significant impact on the cost of health care for low-income residents, who often depend on Medicaid or other forms of government programs for care. One study found that annual health care costs are higher in families with moderate to severe food insecurity by \$455 to \$1,092, respectively.¹⁶ Investing in a low-cost intervention, such as the FVRx program, may result in significant savings for government programs like Medicaid and Medicare in the long run.

Community Development and Sovereignty

Local and regional food systems foster community development and sovereignty by focusing on community economies and creating new relationships between residents. This can help communities organize and create new policies that expand opportunities for business development, civic engagement and

educational resources. Informal interactions at farmers markets, community gardens and even sidewalks, stoops and parks give residents ownership and political capital.¹⁷ This is especially important in low-income and marginalized communities where many residents tend to rent or live in temporary public housing. These communities may also have a significant number of recent immigrants.

Developing local and regional food systems can facilitate community engagement processes that strengthen communities and break down social barriers, thus expanding community capital. One organization that developed out of strong community engagement processes is Frogtown Farms in St. Paul, Minn. Frogtown is a St. Paul neighborhood where 36 percent of residents live below the poverty line;¹⁸ it is also home to a large population of new Americans, many from Vietnam, Cambodia and Laos. Frogtown has less green space than any other neighborhood in St. Paul, so when a 13-acre plot of land went up for sale, the community worked with the city to acquire the land and develop a park.

The plan for the park, which is now called Frogtown Park and Farm, was created after a series of community engagement meetings held over the course of four years. The meetings and listening sessions were held at mosques, synagogues, churches, libraries and over kitchen tables, and resulted in a site that includes a 5.5-acre demonstration farm as well as a variety of other amenities that serve the Frogtown community. Eartha Borer Bell, executive director of Frogtown Farms, the nonprofit that manages the farm in the Frogtown Park and Farm, explained: “Our vision is to create a Frogtown that has greater food security and improved access to fresh, local, organically grown produce. That is such a bigger goal than just a farm—it really requires a systemic change, so we partner with other organizations and we recognize that we can’t do it all ourselves.”¹⁹

The farm includes an on-site market stand for neighborhood residents, a demonstration backyard garden to teach community members about small-scale growing, and a youth leadership program for high schoolers. “The biggest thing for Frogtown Farms is that we’re for the community, and we need to be transparent because the solutions come from the people that are living [here],” Bell said. “That can be a difficult, messy process, but I think that’s the only way to make resilient communities.”

Historically, low-income and underserved populations have not had their voices heard in the political process, which can affect zoning, housing availability, education investments and other issues that impact the daily lives of

residents in these communities. Local and regional food systems can help engage marginalized populations in the civic arena by creating strong communities with common goals. Sociologists Brian K. Obach and Kathleen Tobin found that “local agriculture and the associated networks of food distribution do indeed strengthen communities in a number of ways. ... Forums in which citizens in a community are brought together create awareness, identity and social bonds that facilitate still deeper engagement with one’s surroundings and the people who coexist within that environment. If we accept this, then civic agriculture... can play a crucial role in reinvigorating communities and democracy.”²⁰ If local and regional political involvement is widespread, change on a federal level is more likely.

The National Women in Agriculture Association (NWIAA) focuses on community development and political engagement through local and regional food systems. Based in Oklahoma City, NWIAA has 16 chapters, primarily in Southern states. The organization works to expand economic opportunities and increase the availability of healthy foods. Tammy Gray-Steele, the founder and director of NWIAA said, “We are ultimately trying to save lives through the industry of agriculture—mentally, physically and financially.”²¹

Gray-Steele works closely with national leaders like U.S. Sen. Debbie Stabenow, U.S. Rep. Bennie Thomas and U.S. Rep. Mike Conaway to raise the awareness of USDA programs for socially disadvantaged farmers and to encourage policymakers to create more opportunities for these farmers in federal programs. “I just met with [Rep. Conaway] in Detroit. We’re trying to get ready for the 2018 Farm Bill to make sure there is something there for organizations like ours at the grassroots level every day,” she said in June 2016.

Gray-Steele also remarked that both the Natural Resources Conservation Service and the USDA Office of Advocacy and Outreach provide annual funding to ensure that minority women have a seat at the agriculture table. NWIAA works with these agencies daily to educate the community at the heart of lower-income Oklahoma City and across the world through its online platform.

NWIAA has programs focused on youth, nutrition, minority women, veterans, disabled persons and college-attending minority women, and the group has served, educated and fed more than 58,000 people in the past year alone. The association helps its members, which number in the hundreds, to access federal

support from USDA. “I get inspired seeing all these women in all these states doing lots of things,” Gray-Steele said. “We’re bringing exposure and awareness for USDA programs that [our members] don’t even know about and get them involved.” Programs like this give a louder voice to marginalized and under-served communities, and help to strengthen the impact of local and regional food systems.

Wholesome Wave also recognized the importance of engaging in federal policy to fight hunger and food insecurity. Working with other organizations, Wholesome Wave advocated for the passage of USDA’s FINI program, which established an annual fund of \$20 million to support fruit and vegetable incentives to participants receiving SNAP benefits. The program was included in the 2014 Farm Bill.

The addition of the FINI funds for SNAP recipients has significant impacts on public health and farmers’ revenues. Farmers markets that accept SNAP saw a 30 percent increase in revenues when FINI-funded incentive programs like Wholesome Wave’s Double Value Coupon Program were in effect; this is because the program increases the purchasing power of SNAP recipients. Of those who participated in the Double Value Coupon Program, 90 percent reported increasing or greatly increasing their consumption of fresh fruits and vegetables. Nischan said, “People come to markets and pick things like kohlrabi, not knowing what it is but because it’s 79 cents per pound and they can buy a whole lot of it. We found that affordability removes or relaxes the challenge and gives the consumer the risk mitigation and enthusiasm to self-educate [about healthy eating]. ... No matter who’s running incentives, where it’s running or what we call it, incentives absolutely work in getting people struggling with poverty and who rely on SNAP benefits to spend more of their SNAP benefit on fruit and vegetables.”

Local and regional food systems can leverage strong community ties to create new policy that helps grow and support a more equitable food system. Both NWIAA and Wholesome Wave recognize the importance of taking the lessons learned from individual farmers and communities and using these stories and results to influence public policy. In this way, investments in local and regional food systems can contribute to community sovereignty and increased civic engagement.

So Much More than Food

Increasing food production will be important in the coming decades to feed the expected nine billion people on our planet, and critics of local and regional food systems often stress that such systems will not provide enough to feed the world. However, investing in local and regional food systems produces much more than food. Too many analyses compare these local food systems to large-scale agriculture in terms of yields and productivity. That lens does not acknowledge the other important aspects of the local and regional food system landscape, which are demonstrated by the five organizations featured in this chapter. Local and regional food systems create social capital through job training, market access and community development. These contributions are real, measurable and worthy of further study. ■

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The Importance of Inclusion in Local and Regional Food System Efforts

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From production to consumption, the U.S. food system greatly depends on immigrant workers and workers of color. More than 70 percent of all U.S. farmworkers who grow our crops are foreign-born.¹ Workers of color comprise almost half of all food production and processing jobs.² Approximately 40 percent of all restaurant workers identify as workers of color,³ and while the Bureau of Labor Statistics reports that 7 percent of restaurant workers are immigrants,⁴ the actual number is likely much larger due to under-reporting and the significant presence of undocumented immigrants who are not counted.⁵

Lamentably, the history of the U.S. food system has also been rife with policies and practices that have disenfranchised, exploited or altogether excluded these populations. The cases of *Pigford v. Glickman*, *Keepseagle v. Vilsack* and *Love v. Vilsack* shed light on the way that African-American, Native American, Latino and women farmers have been systematically denied farm aid, grants and loans by predominantly white county USDA offices.⁶ Immigrant and migrant farmworkers and other agricultural laborers, as well as workers in production and processing plants, face high rates of injury, low wages and labor violations and are threatened with being fired or deported when they try to improve conditions.^{7,8} Restaurant workers occupy 7 of the 10 lowest-paid jobs reported by the Bureau of Labor Statistics, and the economic position of workers of color in the restaurant industry is particularly precarious. Restaurant workers of color are primarily concentrated in lower-level positions, where earnings are lower, benefits are restricted and mobility is limited.⁹

Investing in local and regional food systems provides an opportunity to think differently about food chain workers—those who grow, produce and serve our food.¹⁰ It can also help to encourage institutions, employers and consumers to support high-quality job opportunities for traditionally underserved populations. Indeed, many local and regional food system organizations and ventures are already working to incorporate better labor practices and inclusive opportunities for disenfranchised workers along the food supply chain. The following three case studies—Los Angeles’ Good Food Purchasing Program, Cincinnati’s

Our Harvest Cooperative and Detroit’s COLORS Restaurant—demonstrate how institutional purchasing policies, innovative business models and human capital investments can help to ensure that the benefits of the growing market for local and regional food are shared by all.

Purchasing Policies Support Food Chain Workers

A number of studies have indicated that institutional and government procurement programs and policies can benefit the local economy by generating more local spending and creating jobs. One study in Oregon determined that for each job created by school districts’ purchases of local food, successive rounds of economic activity create another 1.43 jobs, for an overall increase of 2.43 jobs in Oregon.¹¹ Similarly, another study analyzing five different regions around the U.S. found that increased institutional procurement of local food created new jobs.¹²

These and other studies show that local spending increases jobs, but are they well-paying jobs and who are the people hired? Can procurement programs and policies also create well-paying jobs and improve existing jobs for traditionally underserved communities? Those are two of the goals of the Good Food Purchasing Program (GFPP), originally developed by the Los Angeles Food Policy Council (LAFPC). The LAFPC is a collective impact initiative that brings together businesses, government, nonprofits, farmers and community members to work toward making Southern California a region for “Good Food”—food that is local, sustainable, fair, humane and healthy.

The GFPP was created to be a food procurement policy that local institutions and governments can adopt to bring more good food into underserved communities and to support positive changes in the food system that embody the five values of the GFPP:

- local economies,
- environmental sustainability,
- valued workforce,
- humane treatment of animals, and
- health and nutrition.

Similar to LEED certification, each value category has a tier of standards that can be met, and suppliers and food items are evaluated to determine which tier

they meet. Based on this determination, each supplier and food item is assigned a certain number of points. The participating institution is then awarded a total number of points based on the assessment of its suppliers and the food it is buying. Participants are then awarded one to five stars based on their total score.¹³

The tiered, points-based scoring system allows participants to choose which level of commitment best suits the good-food goals of their organization and then develop a multiyear plan on how to continually increase the amount of good food that they purchase. However, each value category has a baseline standard that must be met so that institutions are not able to limit themselves to changes that are easy or skip one of the value categories. For example, Institution A serves nutritious meals to low-income children. The institution would like to make purchases that support local businesses and well-paying jobs, so it has prioritized local economies, valued workforce and nutrition, therefore receiving more points in these value categories of Local, Fair and Healthy. It is satisfied meeting the baseline standard in environmental sustainability and animal welfare and therefore receives one point each in the categories of Sustainable and Humane. (See example on [Page 98](#).)

When the LAFPC was developing the GFPP, the staff looked at other government food procurement policies around the U.S. and found that none included any labor standards. The structure of the GFPP prohibits the exclusion of labor standards.

The valued workforce category of the GFPP is intended to address the rampant violations of workers' rights, as described in the introduction of this article, and to encourage institutions to purchase food from suppliers that pay good wages and provide safe working conditions. The baseline standard of this category is that suppliers must comply with all domestic labor laws and the core standards of the International Labour Organization:

- freedom of association and the right to collective bargaining,
- elimination of all forms of forced or compulsory labor,
- abolition of child labor, and
- elimination of discrimination with respect to employment or occupation.

Tier 2 gives points to suppliers that are fair trade-certified or that have a social responsibility policy that provides for items such as union or nonpoverty wages, safe and healthy working conditions, and health care benefits. The top tier

Example of Institution A's Score



17 pts.

LOCAL

6 pts.



Creating opportunities for businesses in our community to thrive is important to us. Over 50% of our food is purchased from producers in Southern California, including very small farmers, minority-owned businesses, and businesses located in LA County.

SUSTAINABLE

1 pt.



Over 15% of our purchases are from producers with high environmental stewardship standards, including pesticide-free and organic practices and minimal use of growth hormones & antibiotics in dairy cattle.

FAIR

6 pts.



Over 10% of our food purchases come from suppliers who pay living wages and respect health & safety regulations, and many have a union contract. This is a high bar by industry standards and something we work actively with our suppliers to improve even further.

HUMANE

1 pt.



15% of our meat, poultry and dairy products are humanely produced, including 65% of our eggs being cage-free and 10% of our meat being antibiotic-free.

HEALTHY

3 pts.



We purchase whole, seasonal fruits and vegetables and minimize added sugars, sodium, and fats. Our most nutritious offerings are featured in high-visibility areas to make healthy choices easy.

Learn more about the program here: goodfoodpurchasing.org

Source: GFPP

recognizes suppliers that have a union contract with their employees, are a worker-owned cooperative or are certified by programs that have strong labor standards.

The positive effects of the GFPP can be enormous. For example, the city of Los Angeles and the Los Angeles Unified School District (LAUSD), the second largest school district in the country, adopted the GFPP in the fall of 2012. The GFPP affects 750,000 meals served daily by the LAUSD and the city of Los Angeles. More than 90 percent of LAUSD students are of color, and 76 percent are eligible for the federal free and reduced-price meal program.¹⁴

Institutional purchasing policies such as the GFPP have helped institutions like the LAUSD redirect dollars to local growers and create new, good jobs. In the years following adoption of the policy, the GFPP has seen positive results, particularly at the LAUSD—the second largest food purchaser in California. With an annual food budget nearing \$150 million, the LAUSD's participation in the GFPP has led to the redirection of at least \$10 million for produce purchases from local growers. By 2014, two years after adopting the GFPP, the district doubled the amount of locally procured food to roughly 50 percent of its annual food budget, or \$75 million.¹⁵ This change in spending led to the creation of at least 200 new, well-paying food chain jobs in Los Angeles County—on farms, in fruit and vegetable processing, and in bread manufacturing and distribution.^{16,17}

Policies like the GFPP can also assist in holding suppliers accountable to ensure that they comply with labor laws and enforce workers' rights. Leveraging the GFPP, the International Brotherhood of Teamsters held an LAUSD supplier accountable to federal labor law with respect to its employees' rights to organize and to collectively bargain. In the summer of 2015, the supplier recognized the Teamsters as its drivers' union representative. The mostly Latino workforce was able to gain higher wages, better health insurance coverage and a 401(k) retirement plan through its first collective bargaining agreement with the company.

Procurement policies like the GFPP require transparency and help create better job opportunities for underserved workers. Such policies recognize suppliers who pay workers' wages above the industry standard, help institutions track and monitor problematic suppliers, and improve institutional food supply chains by moving them toward sustainable, fair, humane, healthy and local procurement practices. The GFPP is now managed by the Center for Good Food Purchasing (CGFP), a nonprofit that provides technical assistance and

implementation support for institutions that adopt the policy. CGFP staff assesses how supplier practices stack up against GFPP standards through a rigorous verification process that includes an in-depth analysis of each supplier's production practices—such as size of operation, geographic location, label claims, third-party certifications related to any of the value categories, union contracts, and any federal, state or local labor violations over the last five years. This assessment identifies the labor records of food producers, which were never previously tracked at the participating institutions based in Los Angeles or elsewhere.

The GFPP standards also contain a section called value chain equity and innovation from which a participating institution can receive extra points to earn a higher star rating. Under this category, an institution can earn one to three extra points if it “actively supports or sponsors initiatives that directly expand access to healthy food for low-income residents or promote quality employment or business ownership opportunities for minority or disadvantaged communities.”¹⁸ The GFPP standards are currently being updated, and the CGFP is considering incorporating equity standards such as this in each of the five main value categories to highlight the need to support quality employment and business ownership by traditionally disenfranchised communities.

Institutional purchasing power can have a significant impact on how food is grown, processed, packaged and distributed. However, many of our large institutions spend billions of dollars on food each year with limited oversight on production. Equitable procurement policies like the GFPP provide opportunities for funding the production of food that is local, fair, sustainable, humane and healthy. The GFPP is also a tool for creating living-wage jobs along food supply chains, while improving the quality of existing ones.

The GFPP is now expanding beyond Los Angeles. As of Nov. 30, 2016, San Francisco Unified School District and Oakland Unified School District had adopted the GFPP. A number of departments in the city of Chicago, the Chicago Public Schools (the third largest school district in the U.S.) and Austin Independent School District are also piloting the GFPP. As more institutions participate in such a program, the collective impact offers building blocks for the larger transformative change much needed in our food system and in our economy.



TOP: Farmworkers harvesting vegetable at Bahr Farm in the College Hill neighborhood of Cincinnati. It is one of two farms operated by Our Harvest Cooperative, a worker-owned food hub.

BOTTOM: Daniel Blackwood is a driver for Gold Star Foods and a union steward at that company. Gold Star, a K-12 school food distributor based in Ontario, Calif., has boosted its purchase of local food as a result of its participation in the Good Food Purchasing Program. *Photo credit: Annie Bernstein.*

A worker-owner from Our Harvest Cooperative returns after a delivery of vegetables. Our Harvest Cooperative is a food hub that provides access to healthy, locally grown food for the Cincinnati area.



Our Harvest: A Cooperative Food Hub Prioritizing Workers

Applying a cooperative model to food hubs demonstrates how prioritizing workers is critical to building an equitable food system and a transformative business. While a food hub can be the starting point for the aggregation, distribution and marketing of locally produced food, a cooperative food hub also puts emphasis on how workers play a critical role in such an operation. One example is Our Harvest Cooperative—a worker-owned farm and food hub that provides access to healthy, locally grown food for the greater Cincinnati community. As a cooperative, it seeks to offer livable wages and recognizes the workplace as a space for fostering empowerment and practicing democracy. These are important and unique practices given that the vast majority of food workers experience poverty wages, food insecurity and high rates of sexual harassment.¹⁹

Founded by the Cincinnati Union Co-op Initiative (CUCI), Our Harvest follows a worker-owned cooperative model based on that of Mondragon, which hails from the Basque region of Spain. In the 1940s, Catholic priest Jose Maria Arizmendiarieta built a technical school in the small town of Mondragon after the Spanish Civil War left many in the region impoverished and hungry. Arizmendiarieta taught the importance of social justice advocacy and a fair distribution of wealth. The following decade, a handful of his graduates went on to start what has become the world's largest network of industrial worker-owned cooperatives. Today, the Mondragon Corp., employing over 74,000 people,²⁰ is parent company to 111 cooperatives, and it provides a sustainable response to the volatile, global economy. There is also a sense of unity among the federation of cooperatives that provides a network of support.

ABOUT THE CINCINNATI UNION CO-OP INITIATIVE

The CUCI partners with communities and organizations to build worker-owned businesses. In doing so, the CUCI seeks to address high unemployment rates by expanding access to family sustainable wages, workforce training and long-term career paths.

For example, during challenging economic times, when one cooperative saw a surplus of funds, it loaned money to a fellow cooperative in need in order to prevent closure.²¹

Mondragon's focus on what is best for the greater good provides a useful approach that is applicable to businesses in the United States. It demonstrates a foundation of success based on values such as fair pay, solidarity, transparency and shared accountability—where profit takes a back seat to people, workers are respected decision-makers in the company and business can foster social transformation.

These values have been applied to the local Cincinnati food system by the efforts of groups like Our Harvest. The cooperative was founded in 2012 to nurture a local food system that is socially and environmentally responsible. Our Harvest currently employs 12 full- and part-time staff members, including two farmer apprentices. After 12 months, an employee can become a worker-owner of the cooperative and take a position on its board of directors. Managerial wages at Our Harvest are capped at 7 times that of the lowest paid worker. And at weekly team meetings, worker-owners review and discuss the full financials and budgets as a matter of transparency.

Our Harvest chooses not to exclude people from employment based on past records of incarceration. This practice of open employment means removing barriers that often prevent marginalized populations from securing a job. Rather than requiring a clean record, the nonprofit looks at an applicant's ability and attitude to do the job. Our Harvest is intentional in where and how it posts jobs—including outreach to faith networks, job services and community partners. The aim is to inform disenfranchised communities of this opportunity of a well-paying job that is often unavailable to them.

The cooperative practice among workers extends to how they treat their land and community. Our Harvest grows produce on two farms without the use of synthetic fertilizers or pesticides. Produce is distributed as part of a weekly harvest box program (similar to a community supported agriculture program), sales to restaurants and grocers, and Harvest Day—where it partners with grassroots organizations and local institutions to deliver fresh produce to communities that lack a grocery store. Our Harvest also partners with local farms in growing, aggregating and distributing food for various projects and services.

According to Our Harvest, if only 5 percent of the billions of food dollars spent in Ohio were to shift to supporting locally produced food, 32,000 farming jobs could be created. And Our Harvest is helping to support such a shift. This includes not just job creation but also job training. A few years ago, Our Harvest partnered with Cincinnati State University's Sustainable Agricultural Management Certificate Program to become a practicum site for the university's farming students. This effort led to the founding of the Our Harvest Research and Education Institute in 2015—now known as Cultivate! Ohio Valley—that trains and pays farmer apprentices in sustainable farming techniques while they work at Our Harvest and other local farms in the greater Cincinnati area. Our Harvest pays farmer apprentices \$10.50 per hour as well as provides them with a health care stipend of \$450 per month and free tuition for three farming-related classes at Cincinnati State University. The goal is to facilitate local job development and ultimately help local farms transition from growing commodity crops to fruit and vegetable production.

Our Harvest is partnering with the CUCI on their most recent project: the Apple Street Market. This effort grows from the community need for a grocery store in Northwest Cincinnati—a mixed-income, ethnically diverse community. When the previous store closed, residents were forced to leave their neighborhood to purchase food—often depending on long bus rides that can take hours to reach the closest market. This is an unfortunate yet typical story for many communities of color and demonstrates the critical need to develop food access solutions with a racial equity lens.

The CUCI is applying the cooperative principles to the Apple Street Market to provide opportunity for the community—not just to have access to healthy, locally grown food, but also to own its own grocery store. Although it's slated to open in the fall of 2017, there are already 1,100 community owners of the Apple Street Market, 20 percent of whom are low-income. Those eligible for Supplemental Nutrition Assistance Program benefits (food stamps) or Medicaid expansion only pay 10 percent of the cost to become a cooperative owner. With ownership comes voting rights in the market's decision-making process. By engaging local churches, community partners, neighborhood councils and low-income residents directly, the CUCI is laying a foundation to deliver livable-wage jobs locally to those most in need of the 23 jobs this market plans to offer.

A healthy and sustainable food system demands the exposure and eradication of discrimination and abuse currently impacting workers, particularly workers of color. Applying cooperative models like that of Our Harvest and the Apple Street Market can help shift the food system toward equity and inclusion. These models offer tools that not only increase access to healthy food, but also provide livable wages to marginalized workers, foster a new generation of farmers and prove that taking care of land and people is a sustainable approach. At the apex are engaging and prioritizing workers in workplace development and decision-making processes, as well as the recognition that equally important to the nutritional value of our food is the health of the workers who produce it.

Leveraging Local Food Demand to Promote Workers' Rights

The demand for local food in the restaurant industry is booming. According to the National Restaurant Association's 2016 Restaurant Industry Forecast, 68 percent of consumers say they are more likely to visit a restaurant serving locally sourced items than one that does not, and over half of fast-casual, casual and fine-dining restaurateurs say they plan to add a locally sourced item to their menus in 2016.²²

With an increasing demand for “farm to table” restaurants, restaurateurs will need not only local food to serve, but servers who can speak about where the food originates and how it was sourced. Here is where restaurants that support local and regional food systems can also provide new, quality job opportunities to traditionally underserved populations.

One example is the [Restaurant Opportunities Center of Michigan \(ROC Michigan\)](#), an affiliate of the Restaurant Opportunities Centers United (ROC United) that manages COLORS Restaurant. COLORS is a fully functioning restaurant that specializes in farm-to-table cuisine using local Michigan produce. The restaurant also hosts the Colors Hospitality Opportunities for Workers Institute (CHOW Institute), a training center for low- to moderate-income residents in the Detroit area. Since opening in 2012, COLORS Detroit has trained nearly 300 Detroit area residents for server, bar back and food runner positions and placed nearly 70 percent of trainees in local restaurants within 90 days of graduating.

ABOUT THE RESTAURANT OPPORTUNITIES CENTERS UNITED

The mission of ROC United is to improve wages and working conditions for the nation's restaurant workforce.

ROC United comprises 18,000 restaurant workers, 200 high-road employers and thousands of engaged consumers united for the purpose of raising restaurant industry standards. It has chapters in New York, New Orleans, Detroit, Chicago, Miami, Los Angeles, Washington, D.C., Houston, the San Francisco Bay Area and Philadelphia.

The group's work is three-pronged and includes:

- organizing workplace justice campaigns to demonstrate public consequences for employers who take the “low road” to profitability by violating workers' legal rights;
- promoting the high road to profitability through partnerships with responsible restaurateurs, cooperative restaurant development and a workforce development program that moves low-income workers into living-wage jobs; and
- lifting standards industrywide through participatory research and policy work.

Additionally, ROC Michigan operates the COLORS Co-Op Academy, which is an intensive training program designed to cultivate new worker-owned good-food businesses. Founded in 2013, the academy teaches participants about local food systems and worker-owned cooperative business models, and helps participants develop a business plan, get one-on-one coaching and access supportive startup funding for their business.

ROC Michigan is also developing a training program for restaurant managers and owners to help them understand how earned paid sick time, higher wages and fair scheduling practices can contribute to their ability to remain a viable entity in the restaurant industry. According to Alicia Renee Farris, state director for ROC Michigan, working together with restaurant owners is key to addressing race and gender equity concerns in Detroit, where 43 percent of African-American women who work in the city's restaurants live at or below the poverty level. Many restaurant owners, food entrepreneurs and other employers have signed on as ROC Michigan's partners. They join ROC in supporting “high road” business practices and policies, such as fair wages, paid sick leave and transparent promotion opportunities.

Finally, ROC Michigan helps to create better job opportunities for restaurant workers by advocating for policies that will lead to increased wages, paid sick and parental leave, and other benefits. The group's research and advocacy work is hugely important in the context of restaurant workers, especially since tipped restaurant workers receiving the federal minimum wage use food stamps at double the rate of other workers,^{23,24} and the wages of tipped workers have been stagnant for the last 23 years.²⁵

According to Farris, ROC Michigan has witnessed a culture shift among restaurant diners in Detroit. Consumers are increasingly interested in knowing more about where the food on the menu comes from and how it is prepared. At the same time, they are also becoming more interested in learning about how servers and workers in the restaurant are being treated with regard to pay and sick time. ROC Michigan is responding to both of these issues by training Detroit workers to be well-versed in discussing menu items and farm-to-table cuisine and by training restaurant owners to employ high-road business practices in their operations. In doing so, ROC Michigan is showing that local and regional food and access to better jobs for traditionally marginalized populations go hand in hand.

Conclusion

The increasing demand for local and regional food is creating new business opportunities for traditionally underserved populations. Already, the GFPP, Our Harvest Cooperative and ROC Michigan are demonstrating how this demand can create not only new jobs for these populations, but better ones—with a commitment to higher wages, safer working conditions and opportunities for training and upward mobility.

In doing so, these examples refute the notion that investing in systems that prioritize workers is bad for business. In fact, taking the high road by creating inclusive and higher-quality business opportunities for workers can actually pay off in real terms.²⁶ For example, turnover is lower, which means that the costs of recruiting and selecting replacements are reduced and disruption to operations is minimized, thereby improving business performance.²⁷ Workers—and this is especially important for traditionally underserved populations—have higher job security; this not only leads to more economic opportunity, but also allows for the time needed to build skills, increase productivity and help to promote

a loyal customer base.²⁸ Therefore, investing in local and regional food systems that incorporate better labor practices and inclusive opportunities for disenfranchised workers along the food chain—from production to consumption—is not only good for workers and our food system, but is also important to the success of our economy and our nation. ■

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Financing Local and Regional Sustainable Food Enterprises: A Matter of National Security

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This is the right time to invest in local and regional agriculture and fishery enterprises and infrastructure, and to boost the quantity of foodstuffs produced and consumed in the United States. The national “Know Your Farmer, Know Your Food” campaign of the U.S. Department of Agriculture is gripping the nation.¹ Consumer interest in local food purchase is rising, not just for access to healthy foods, but also to support local farmers and state economies. While seafood often does not get the same attention, there are similar advocates and networks focused on the dietary value of fish and shellfish products sourced from sustainable practices worldwide.²

The resurgence of interest in local foods is driven also by studies showing how lack of access to healthy foods contributes to long-term health issues. The lack of access to quality, healthy foods leads to early childhood dietary obesity and premature deaths at later ages, particularly among children and families with low incomes.³

Various outlets to access quality foods—whether through food hubs, community supported agriculture, community supported fisheries networks or farmers markets—are evidence of a growing market.⁴ Supermarket retail chains, Walmart and members of the Independent Grocers Alliance (IGA), as well as restaurants and other institutions—including colleges, schools and hospitals—are now featuring local and even organic foods to boost their bottom line.

The U.S. agriculture system is the envy of many other countries. At the same time, it is highly dependent on energy and transportation, as well as production and distribution processes that raise serious questions not only about the environment, but also the very nature and quality of the food and delivery system on which Americans have become so dependent. Both state and federal policies, as well as engagement with the private sector, are needed to effect a transition to more robust local and regional food systems. Advocates of healthy foods concerned with issues such as nutrition and child obesity; environmentalists worried about soil loss, water resources and climate issues; local and regional food practitioners working on developing food businesses;

and community development practitioners, such as community development financial institutions (CDFIs), can all work together to more effectively promote scalable investment strategies.

This chapter covers a number of opportunities, issues and challenges related to financing the emerging food production sector, including the critical components of a business plan in accessing capital and the importance of good management for any business to succeed. It lays out how an investor underwrites a venture in which a loan or investment is considered and profiles three food enterprises that illustrate the type of financing and risk associated with various food sector projects. It introduces the role the financial intermediary—the CDFI in this case—can play in sourcing funds, analyzing projects and managing loans and investments in this growing sector. After a summary of common obstacles, it concludes with a reflection on the imperative of both private and public support of this sector as a matter of national security.

Challenges to Investing in Food Enterprises

More social investors, governmental entities and nonprofits are pursuing ways to help develop local and regional food systems. But it probably comes as no surprise—especially to the farmer, food entrepreneur and financing practitioner—that investing in food enterprises is easier said than done. The compelling goals for an alternative local and regional food system are soon challenged by the fundamentals of business, specifically whether the business model can demonstrate a “proof of concept” of feasibility. Can the business scale its production of the product and make dependable deliveries, does it have access to timely and appropriate capital, and most of all, does it have an entrepreneur and management team capable of leading the enterprise?

Perhaps the most significant factor is management capacity. One can have a great idea and all the money in the world, but if management cannot be persuasive on its ability to execute the plan, all the rest is meaningless. Investors look for strong, capable management with requisite backgrounds and experiences who can articulate the strengths and weaknesses of the business, understand competition within the market, provide a well-thought-out financial model, and understand the inherent risks involved with starting a business in the food and agriculture sector.

The flow of capital will ultimately depend on how convincing the management team is in demonstrating its expertise. There are many ways to characterize management's contribution to the success of any enterprise. This does not mean that every business leader has all the answers and is infallible. In the real estate business, the common refrain to evaluate one's investment value is *location, location, location*. In an entrepreneurial startup or expansion, the apt expression is *management, management, management*.

The Business Plan

With these challenges in mind, if asked to rank in order of importance the factors one should use to assess a business, many start with the business plan. A fundamental consideration is the feasibility of a venture—social or otherwise. Most lenders and investors will tell you—and as Karl Seidman of the Massachusetts Institute of Technology explains in his economic development finance textbook—capital “is a necessary but insufficient factor to the success of an economic entity.”⁵ Inputs such as labor, energy, transportation and facilities are part of the operational feasibility of the enterprise.

Though all entrepreneurs believe in the merits of their venture and work hard to achieve success, more often than not, success or failure comes down to one's ability to effectively communicate the vision, mission and values of their company. The outline in [Appendix 1](#) offers a picture of the major components of a business plan, which includes the description of the product or service, market research and strategy, competition, management, and the attendant financial projections for the operation. The supporting documents include the typical financial statements, budget and projections. After reading the plan, a thorough picture of the entrepreneurs' goals, products, distribution, marketing, risks and budget should be evident.⁶

Various university or nonprofit programs help businesses develop such plans. This function is typically defined as technical assistance, advising or consulting. Private vendors offer services for payment as well. A well-known source of technical support for the preparation of plans is the U.S. Small Business Administration (SBA). The agency sponsors a national network of business counselors through the Small Business Development Centers and the Women's Business Centers, an invaluable starting point for many businesses,

COASTAL ENTERPRISES INC.

This article is based on Coastal Enterprises Inc.'s (CEI) extensive experience financing and advising the food enterprises sector in Maine and other regions of rural America, and engaging in related policy and advocacy at the state, federal and private foundation level. CEI is a mission-driven lender and investor specializing in rural economic development in Maine and throughout the U.S. CEI combines financing, advising services and policy leadership to help create economically and environmentally healthy communities in which all people, especially those with low incomes, can reach their full potential.

CEI has operated a Sustainable Agriculture and Fisheries/Aquaculture Investment program for nearly 40 years. In that time, CEI has directly invested and mobilized more than \$90 million into 393 agriculture and fisheries businesses, about \$225,000 in flexible and conventional capital per enterprise. CEI does this to support local, natural resources economies in Maine; grow quality jobs; maintain working landscapes, including waterfronts and fisheries enterprises; and support food access for low-income individuals and families.

Overall, CEI has financed over 3,500 Maine enterprises and affordable housing units, participating in over \$2 billion in investment that help form the backbone of the state's primarily rural economy and many rural regions throughout the U.S.

For further information please visit CEI's website www.ceimaine.org.

including food enterprises. Business counselors work throughout various states and regions, providing support to fledgling entrepreneurs. They offer direction and support in basic business operations: putting a business plan together, developing financial packages and devising a market strategy for the entrepreneur's product.

Complementing these federal resources are several private sources, such as MasterCard International; foundations; and local and state entrepreneurship programs that foster good management and business practices. The Kaufman Foundation, for example, specifically focuses on programs in support of entrepreneurs. Its "FastTrac" education program has provided training for over 300,000 entrepreneurs.⁷

Accessing Capital

Some studies have found a majority of businesses rely on personal credit cards—often along with family and friends—to get their operations up and running. According to the Kaufmann Foundation, however, the more an enterprise relies on credit cards, the more likely it is to fail.⁸ If businesses can get past this initial startup phase, often the next stages of growth and capital requirements might be more limited. And banks may be flush with funds for conventional, secured debt—as they appear to be in the current market. But the ability of an enterprise to borrow funds under more rigorous scrutiny of risk may be less evident. Federal or state guarantees for loans—ranging from 75 to 90 percent of the loan amount—may be available, but these are largely underwritten with some degree of personal guarantees and some sort of collateral backup (e.g., one’s house).

Access to “patient capital” or even grants is limited, whether from governmental or philanthropic sources, or from a promising but still limited “impact investing” network of socially driven individuals and institutions seeking to place capital to meet a social or environmental goal. Few food enterprises offer the kind of return on investment (ROI) that attracts conventional venture capital sources. Indeed, in a 2014 report, the U.S. National Advisory Board on Impact Investing cited government programs—such as the SBA’s guarantee program and federal tax credits like the Low Income Housing Tax Credit and New Markets Tax Credit—as a fundamental factor in inducing private investment by reducing the risk of the investment.⁹

When a potential investor reviews a business venture, an oft-repeated expression in considering a loan or investment is “No Margin, No Mission!” While the social vision may be paramount and very attractive, there still remains the critical question: Is there margin? That is, are there enough revenues to cover costs of sales so that there is sufficient money left to pay indirect expenses, debt repayments and other overhead not directly associated with the actual costs of making and selling the product? In short, if successfully implemented, will the plan generate sufficient revenue to make a profit from operations?

The traditional five C’s of credit—capacity, character, collateral, capital and conditions—remain the standard analytical framework. However, the specific ways in which the considerations are applied vary, depending on stage of business, type of capital sought and the organization doing the underwriting. The

five C's are not always directly referred to, but they underpin so-called “due diligence,” and it is necessary for any entrepreneur to understand them, if for no other reason than to be strategic in their presentation for financing. The five C's are:

- **Capacity:** This describes the ability to repay and is the most critical of the five factors. Historical numbers and cash flow projections are considered, as are alternative repayment sources.
- **Character:** Sometimes this is described as the propensity to pay. It is analyzed based on the credit report and the impression that the client creates for the investor. References, background and experience of the client and employees can also be important.
- **Collateral:** This provides a secondary source of repayment to the lender. Different entities require different amounts of collateral based on internal lending policies, and they discount the value of any collateral offered based on those policies. Credit enhancements in the form of guaranties (personal, government or other) are often important.
- **Capital:** This consists of funds personally invested in the business by the entrepreneur. This is an indication of their commitment to the business. The business's overall pool of equity and debt funding can also include other sources.
- **Conditions:** These describe the intended purpose of the investment and the specific criteria under which the investment is being granted. When identifying conditions, the investor will consider local and macroeconomic conditions and the overall climate within the industry.

Appendix 2 outlines the basic contents of a typical investment memorandum, with summaries of the type of financing provided by an investor: debt, equity or combinations, each of which derives from the analysis of the business plan and appropriate financing. The investment memorandum covers a wide range of issues, such as market diversification or penetration; working capital cushion to survive seasonal fluctuations, trading cycle or risks associated with slow ramp-up periods; the supply of consistent, quality raw product; high capital needs for startup; access to timely, appropriate capital; and ability to produce at a competitive price-point.

FLEXIBLE FINANCING OF STARTUP OR EXPANDING FOOD ENTERPRISE

The following profiles are a sampling of the variety of flexible financing needed for early stage and development food enterprises.

Access to Capital Delivers Access to Land

Formed in 2014, the company is organized as a four-person limited liability company (LLC), demonstrating one of the burgeoning new arrangements in next-generation farming. Previously farming 2 acres, it was able to purchase 89 acres to increase herb, vegetable and cut flower production as well as begin livestock production just 10 miles from its primary market. A risky deal on paper, the deal was made possible by leveraging an agricultural easement, a strong business plan, a highly qualified management team, off-farm income, strong credit and an additional guarantor.

Patient Debt, Many Partners

The company is a certified organic creamery that produces whole milk and Greek yogurt, bottled raw milk, and pastured pork, poultry and beef. An ecosystem of support and a previous track record enabled a move off leased land and onto owner-occupied property. Loan proceeds were also used for equipment and cattle. Wrapping everything into a 20-year amortization allowed the cash flow to support debt service, supported one of the state's few remaining small organic dairies and transitioned active farmland to the next generation.

Specialty Lending for Research and Development (R&D)

The company focused on selling premium marine seafood in a sustainable manner, helping to feed the world's growing population while easing the demand for wild harvests. It received a National Science Foundation grant for R&D, a portion of which was reimbursable only after conclusion of the grant period; this effectively left a cash flow shortfall during the grant period itself. A mission-driven financial intermediary provided a working-capital line of credit to fill the gap under CEI's Federal Loan Grantee program.

Equity for Expansion

The company, which farms, processes and sells kelp and kelp products, needed capital to upgrade and increase its processing capacity, which had not been able to keep up with

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demand. In partnership with several social investors, sufficient equity was raised to take the next step. The expanded processing capacity will spur sales and allow the company to enter into buying contracts with kelp farmers around the state.

Filling the Gap

The company provides commercial-grade facilities for up and coming value-added food manufacturers to test, refine and market their products. But first the company needed to find a home in which to build its facility. It pursued an SBA 504 loan with a local bank and mission-driven financial intermediary that was able to provide the financing gap on equipment to complete the overall package.

Funding Growth over Time with the Right Capital

The company produces a unique specialty food product—gelato—using locally sourced ingredients. A mission-driven financial intermediary provided a small microloan in 2010 with equity investors and subsequently made an additional loan and an equity investment tied to specific, timely needs until the company became fully bankable. What began as a retail gelato shop is now a primarily wholesale operation that distributes gelato in all 50 states.

Technical Assistance in Service to Mission

The company is a women-owned natural foods market that provides access to healthy local food sourced from over 200 regional producers; the business also is a unique reuse of a closed pharmacy in a prominent downtown location. It received in-depth business technical assistance to enable this startup dream to become investment ready and obtain the financing to launch, while leveraging municipal and state support provided by a Community Development Block Grant. A high impact deal, the company is an example of how retail stores can contribute to the local food system.

With these and other factors considered, business starts and expansions are financed along a continuum of the risk spectrum. Financing can come from:

- venture capital and equity-like capital described as subordinated debt;
- “patient capital” from socially minded investors and foundations (who are not necessarily seeking a market return); and

- more traditional bank financing and guarantee programs that are essentially “collateral driven” and less risky—that is, from the lender’s perspective.

Most lenders have standard requirements that include demonstration of sufficient cash flow to service a loan; secondary sources of repayment, such as collateral; and tertiary sources of repayment, such as a personal and/or other guarantees of “friends, family or principals” to mitigate the initial risk of the loan. Venture capital investors apply a more rigorous analysis leading to a future valuation of the enterprise and opportunities for a return.

Assuming a positive initial screen, the lender then begins a due diligence process that includes testing and analyzing the business plan assumptions, financial viability, and management capabilities. In addition to credit considerations, the loan officer may also consider the social benefit generated by the loan: How will it impact the entrepreneur, employees, the community and the economy of the local community, region or state?

Financial Intermediaries

The dynamics of the market and its demand for local food products, combined with the ingenious and persistent marketing strategies of the entrepreneur to “buy local,” will ultimately determine the future of the food production sector. Support for entrepreneurs comes from a variety of private or public financing and technical sources, including what are called financial intermediaries. At both the national and local level, there are over 1,000 CDFIs at varying stages of development with professional lending, investing, technical and administrative staff on the ground making socially motivated investments.

These community-based intermediaries and various national intermediaries or trade associations—such as the Local Initiative Support Corp. in New York or Opportunity Finance Network in Philadelphia—are favored entities among foundations, banks and social investors to manage and deploy funds for affordable housing; real estate; community facilities, such as child or health care; or commercial small business ventures. As discussed in more detail in Chapter 12, many CDFIs are increasingly focused on agriculture and other natural resource industries, such as fishing, forestry and renewable energy, especially in rural areas.

Nationally, major foundations, government agencies, large banks and many community banks turn regularly to these mission-driven financial intermediaries

to deploy capital for social benefit. CDFIs aggregate capital from diverse sources, deploy and manage the capital, and play an important role in technical support for the entrepreneur, as well as advocacy on private or public policy for a sustainable food system that also benefits low-income populations.¹⁰

As managers of others' capital, intermediaries are mindful of the risks they undertake and attempt to manage these risks with analysis and judgment on overall business feasibility. And as mission-driven financial intermediaries, they are expected to follow a discipline of project review that balances risk with social impacts, such as job creation, that represent their charitable, tax-exempt missions.

A noteworthy development is that CDFI intermediaries are being rated by Aeris, which should gather more confidence among investors—especially wealth managers and advisers—as an “asset class.”¹¹ Aeris follows the traditional CAMELS¹² rating criteria applied by regulators to banks and other financial institutions. These ratings are typically on a scale of 1 to 5, with 1 essentially a “safe bet.” Given the mission purpose of CDFIs to benefit largely low-income and underserved regions and populations, Aeris also rates a CDFI on program impact as well as its engagement in public policy advocacy that strengthens the industry.

Intermediaries perform a variety of technical functions that are needed to nurture the industry—from business development and marketing support for the industry at large, to due diligence and capital management for particular investors. Intermediaries also play a strategic role in policy at all levels by raising awareness of important policy issues—such as farmland preservation; healthy ways of producing food, like organic farming; the marketing of products; and working with trade associations—and advocating on their behalf. Local, state and federal policies frequently focus on financial intermediaries to drive more capital and support to the sector.

Intermediaries vary widely in purpose and capacity, but they are all mission-driven and typically structured as charitable organizations with goals to ameliorate distress and otherwise help people and communities achieve greater self-reliance. Most states have one or more intermediaries engaged in some sort of financing activity, whether in small business, affordable housing, special needs housing, single-project focused activities or regional or state community development projects. Some are fully private nonprofits, while others may be quasi-governmental.

Common Obstacles: Lessons Learned

For any development in local and regional food systems to take place, there has to be a more proactive move by the private and public sectors to spur investment. The U.S. food marketing system links producers to consumers via a robust food manufacturing, wholesaling and retailing system comprised of food stores, co-ops, food service facilities and institutions. It is a complex system, composed of an entire infrastructure that's not easy to replicate, replace or, indeed, compete against. Investment in the sector is rightly tentative, and state and federal policy and practice intended to promote models of alternative food systems are slowly making inroads in the number and variety of grocery outlets for local products. But while making strides, overall in-state food production, processing and distribution are minimal.

Advocates for more robust local and regional food systems are challenged to unleash a flow of capital into local and regional food businesses. One estimate of this cost derives from Fresh Source Capital—a \$4.5 billion investment in the local supply chain is needed just to increase the consumption of locally produced food by 20 percent in the Northeast.^{13,14}

As we've suggested above, capital is a necessary, but insufficient ingredient in the development of food enterprises. The challenges are numerous and include: insufficient collateral, equity and/or owners' injection; untested entrepreneurs; and nascent business models that lack perfect comparisons by which to understand the business and its risks. It takes a driven entrepreneur and a patient financier or group of investors to navigate all of the hurdles to arrive at a risk balance that is acceptable to both. Often it can't be done and businesses fail, which is normal and inevitable. But when trying to catalyze investment into a sector, business failures can sour the appetite and the capacity to keep trying.

A recent article by Jennifer Goggin, food entrepreneur and adviser, adds to the list of challenges facing food industry startups: logistics, customer acquisition and time. In brief, food is physical and perishable and must be moved; food is incredibly personal and many of our habits are deeply ingrained, so change comes slowly; and everything always takes longer than anticipated.¹⁵ The obstacles faced by food businesses must in turn be faced by financiers in their due diligence process: Strategies to achieve viable solutions must be realistically and carefully explained in any business plan to give a lender or investor necessary confidence.

There are broader challenges that can impede investment into the food system. These include achieving the right mix of social impact and financial return; entrepreneurial goals (often entrepreneurs in this space do not want to grow large businesses, which limits their potential to attract investors looking for an exit or higher ROI); and the current global food system that is incredibly efficient at providing inexpensive food. All of these obstacles can be surmounted, deal by deal, with dedicated, driven entrepreneurs and a supportive eco-system of technical assistance and finance, but this system is still under construction.

CASE STUDIES IN FINANCING

These deal profiles are illustrations of venture capital, patient capital and subordinated debt.

A Venture Capital Success Story

Company A, a fish cannery featuring sustainably harvested fish and shellfish, was brought to CEI as a venture capital deal. Inc. Magazine selected the company as being among the top 35 percent of the fastest-growing small firms in the U.S., an accolade reinforced by their 208 percent sales growth between 2003 and 2006.

In a rural village disconnected from major markets, new business opportunities in this region are challenging. Therefore, when a venture emerges with promising growth, employment and economic opportunities, mission investors strive to provide adequate and favorable financing; in this case, equity capital and technical support were provided.

The owner, with the help of a financial intermediary's equity commitment and technical assistance, reshaped the company's brand and established improved marketing strategies, labeling and business goals to boost the company's economic potential. These advancements allowed the company to double employment to 26 employees in a geographic area that offers few job options.

The growth of the enterprise, aided by an injection of equity capital in exchange for a percentage of the company, attracted larger venture financing institutions interested in sustainable fisheries food enterprises. The company refinanced its equity from initial investors to yield a 26 percent return. The financing process for this company—largely based on providing

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equity and market returns—shows how access to appropriate and timely capital, aligned with a clear business model and astute company management, can achieve desired results.

A Promising Opportunity for Patient Capital

Company B was an organic dairy processing and marketing venture that launched in 2009 through collaboration between private “patient capital” investors and dairy farmers. These players contributed over \$2 million in privately guaranteed bank debt, public finance and patient capital equity to finance its creation.

The enterprise, organized as a low-profit limited liability company (L3C), illustrated the importance of a robust risk analysis for business operations that depend on the availability of sufficient capital, margins and sales goals to serve a multistate regional market. Farmers and three qualified investors governed the company: a hedge fund billionaire, an entrepreneur and a nationally recognized CDFI. The initial challenges of the company, therefore, stemmed not from inexperienced management, but rather external factors, such as a remote location, cost of transportation and timely access to cash. Despite encouraging demand, these challenges prevented the company from reaching its initial production goals.

The three investors, evaluating the rapid loss of production and profitability, decided to refinance the company with sufficient capital for expanded operations and growth. The investors bought out all existing debt and restructured existing equity investors on a pro rata basis as a three percent, cumulative deferred member interest security.

Despite the refinancing and infusion of new capital, the company continued to accrue significant losses. Due to inefficiencies in the production process, a further addition of \$2 million of preferred equity also failed to stimulate profitability. Investors initially proposed the creation of an energy-efficient processing facility to increase economic potential, but ultimately decided to wind down operations. All parties lost their funds. However, the social investment did “buy time” for dairy farmers to develop other markets for their organic product.

Agriculture and the Local Food System

Company C is a fifth-generation 600-acre farm that provides fresh fruits and vegetables to consumers. The company sought a \$100,000 line of credit on top of existing debt to fund seasonal fluctuations in sales and continue its steady growth in retail and wholesale markets.

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The enterprise recently expanded to include retail distribution outlets, a presence at local farmers markets and in-town farm stands. The farm maintains several wholesale accounts and engages in socially conscious activities, such as supplying food banks and schools with healthy produce and participating in programs like Senior FarmShare and community supported agriculture.

In order to meet the projected market demand for local produce, the farm's principals resolved to finance growth with debt capital. The company had historically strong performance and is among the leading 3 percent of the region's farmers. Strategic decisions, such as the optimization of assets as well as identification and execution of market opportunities, resulted in steady 5 to 8 percent increases in revenue.

Future cash flows were modestly projected to cover new debt to expand processing operations. The principals and family have extensive real estate holdings, which carried sufficient discounted values to provide collateral protection in a second mortgage. Key ratios showed an ability to cover debt, adequate working capital to meet goals and average account receivable and sales values to meet operational costs. A loan was made with personal guarantees by the principals along with a second mortgage security interest in several properties.

A Matter of National Security

The movement to develop local and regional food systems gained prominence in the 1960s as part of the “back to the land” movement. The issues remain much the same today—food safety, access to food and costs of energy to transport food—but this time the odds seem so much greater that we will succeed measurably. Business-minded entrepreneurs and, indeed, activists are re-envisioning the very nature of our food system, its impact on climate, its supply and safety, the health of a child and family, the stewardship of land, and a land (and sea) ethic that binds people and places to their environment and community support.

Given the tremendous upheavals in the nation and the world today, farm advocates, state and federal agencies, and Congress are also viewing U.S. agriculture as a national security priority given a rising world population and what

could be America's vulnerability in food production.¹⁶ Perhaps a broader definition of issues attendant to "food security" should be considered as well.¹⁷ In July 2016, the House Agriculture Committee held hearings on the topic, which included testimonies from U.S. military officials. Rep. Mike Conaway, R-Texas, the committee's chairman, noted in his opening remarks that:

"A strong military and sound agricultural policies are pillars of our national security. The men and women of America's armed services regularly witness food insecurity around the world, and today we heard from former military leaders who shared their accounts of the tremendous instability that occurs in countries where agriculture development is not a priority."¹⁸

Mark Bittman, Michael Pollan, Ricardo Salvador and Olivier De Schutter—researchers and advocates of the U.S. food system—have argued for wholesome U.S. food policies and systems as a matter of national security.¹⁹ The prescription they set forth covers the totality of food issues, from sustainable production practices to health and nutrition among individuals, children and families disadvantaged by lack of access to good food. Low-income families can gain access through a doubling of the purchasing power of the federally funded food stamp program, now known as the Supplemental Nutrition Assistance Program (SNAP).

The road map set forth by Bittman and his colleagues to build a reliable food system should be required reading for all. They argue:

"The food system and the diet it's created have caused incalculable damage to the health of our people and our land, water and air. If a foreign power were to do such harm, we'd regard it as a threat to national security, if not an act of war, and the government would formulate a comprehensive plan and marshal resources to combat it. (The administration even named an Ebola czar to respond to a disease that threatens few Americans.) So when hundreds of thousands of annual deaths are preventable—as the deaths from the chronic diseases linked to the modern American way of eating surely are—preventing those needless deaths is a national priority."²⁰

While attention must also be paid to the sustainability, health and nutrition issues of U.S. agriculture practices and food processing, making food a top national security concern offers opportunities for the growth of local and regional food systems. The good news is there are many people working on solutions,

policies and practices, including those within state and local governments and the private sector as a whole. However, there is more work ahead in developing or redeveloping local and regional food systems, and all that comprises the national food industry's infrastructure. Fortunately, the USDA, SBA and the U.S. Department of the Treasury's CDFI Fund continue to offer invaluable resources both for technical support and for capital investment—from microfinance to large industrial guarantees, loans and tax credits—that are helping and can continue to help expand and rebuild local and regional food systems.

Perhaps lessons from the community development field are instructive. In the civil rights era of the 1960s, poor rural and urban regions of the U.S.—largely African-American, Native American and poor whites in places like Appalachia—were outside the economic mainstream. Back then, there was the question of access to capital in these underserved regions, many of them even having been “redlined”—i.e., areas where banks would not loan money.

That issue was brought to the national stage with the Community Reinvestment Act of 1977, which aimed to spur more bank lending to revitalize rural and urban communities in need of capital and to invest in communities and neighborhoods that were marginalized.²¹ Since then, according to the National Community Reinvestment Coalition, literally trillions of dollars have flowed into marginal communities.²²

The national imperative for a food policy that induces investment can help turn the corner, building on the talent and enthusiasm of the marketplace to literally “pull” new product to the consumer. But a federal policy of appropriate magnitude—complemented with state and private investment sources—is needed to stimulate a vibrant local and regional food system if it is to be imagined and realized in the U.S. Such a policy would help entrepreneurs along a path that lessens the risk for a successful outcome for people, places and a healthy food system in a world literally “hungering” for balance and equity. ■

Ron Phillips recently retired after 38 years as founder, president and CEO of Coastal Enterprises in Brunswick, Maine, a statewide and nationally known community development and financial institution that is also active throughout rural America.

Linnea Patterson and Seward Matel provided research assistance.

Business Plan Outline

I. The Business Description

What is the name of your business? Where will your business be located? Is the business full-time, part-time, seasonal, etc.? What days/hours of the week will you operate the business? What is the status of your business? (startup, expansion, etc.) Why did you or why are you starting the business? What is the rationale for the business?

II. The Marketing Plan

Products/services: What are the features of your product/service? What is unique/different about it? What are the benefits to your customers? How does your product/service satisfy your customer's needs?

Target market: Who are your customers? (geographic area, age, gender, lifestyle, taste, preferences, etc.) What is the size (statistics, if available) of this market? Is it stable/growing/shrinking? What are the local and/or national trends in this industry?

Competition: Who are your five nearest competitors? (List them.) What are their strengths and weaknesses? Who are their customers? What are their prices? Is their business steady/increasing/decreasing? Why?

Position: How will your business be positioned against your competition? Where does your business fit in? (better service, lower price, special niche, etc.)

Marketing strategies: Promotion/Advertising: How will you attract customers? How will you promote sales? How will you keep customers? How can you expand your market? How does your promotion/advertising reach your target market?

Packaging:

- For a product business: In what will your product be presented? A bag with your business name and logo? A box? (Attach if available.)
- For a service business: What will your business cards, stationery look like? (Attach if available.)

Physical distribution (if applicable): How will you get your product to your customers? Will they come to your place of business or will you offer to deliver it to them? What are the costs and benefits for this distribution method?

Pricing: What is/are the price(s) of your products and/or services? Why will your customers pay your price? If your price is higher than your competition, what special

APPENDIX 1

advantages do you offer to justify the higher price? If your price is lower than your competition, is your price profitable?

III. Operational Plan

Facilities: Where will your business be located? (home or retail/office and address) List the licenses and/or permits (sales tax, health code, city licenses, etc.) necessary for your business location.

Manufacturing plan (if applicable): Describe the manufacturing process for your product, including the time necessary for each stage of the process.

Management: What is your experience—operational and managerial—in this business? Why will you be successful in this business? Have you spoken with others in this business? What was their response? Do you have management experience in another type of business? (managing household, running a fundraiser, etc.) What professional resources will be available to you? (accountant, lawyer, other support)

Personnel (if applicable): Will you have employees now? In one year? In five years? What jobs need to be done? Who will do the jobs? Will your employees be full or part-time? Will you pay salaries or hourly wages? Will you provide fringe benefits? (health insurance, etc.) Will you train your personnel?

IV. Financial

Loan requested and uses of funds (if applicable): What are the sources and uses of funds? How much money is requested? How will the money be used? (List specific items to be purchased and extra cash as “working capital.”) How will this loan make your business profitable? Provide cash flow projections with notes. (How will the money be used monthly?)

APPENDIX 2

Investment Memorandum

An investment memorandum synthesizes the business plan and places it in the context of the market opportunity. It is a tool financial professionals use to evaluate an entrepreneur’s business plan and the underlying investment opportunity.

An investment memorandum must include information about market composition and industry analysis, including market opportunity, growth potential within the market, and historical and future trends within the market. It is important to evaluate the business’s value chain, operational effectiveness and strategic positioning.

From a financing perspective, an in-depth financial analysis of the proposed capital investment should be included. For equity deals, exit strategies should be modeled and industry experts should be consulted to validate sales multiples and valuations.

The critical components of an investment memorandum are:

EXECUTIVE SUMMARY	
<ul style="list-style-type: none">• Outlines crucial details of deal. Interest rate and valuation. Key dates and terms. Highlights distinct aspects of the business. Innovations and intellectual property.	
DEAL PROFILE/BASIC INFORMATION	
<ul style="list-style-type: none">• type of transaction (debt/equity/both)• location	<ul style="list-style-type: none">• purpose• sector
SOURCES AND USES OF FUNDS	
<ul style="list-style-type: none">• other investors/capital stack	<ul style="list-style-type: none">• indicate how business plans to use funds
BUSINESS CHARACTERISTICS	
<ul style="list-style-type: none">• legal structure• years in business	<ul style="list-style-type: none">• ownership structure
BORROWER/GUARANTOR CHARACTERISTICS	
<ul style="list-style-type: none">• credit history	<ul style="list-style-type: none">• liquidity position
JOB CREATION/RETENTION	
<ul style="list-style-type: none">• type of jobs	<ul style="list-style-type: none">• jobs at time of loan/new jobs
INDUSTRY, MARKET AND COMPETITION	
<ul style="list-style-type: none">• product niche	<ul style="list-style-type: none">• competitive landscape

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APPENDIX 2

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MANAGEMENT

- character assessment
- areas of expertise

FINANCIAL ANALYSIS

- debt service coverage
- cash flow
- debt/net worth
- current ratio
- working capital

RISK ANALYSIS

- This is the final step in underwriting an investment memorandum. The purpose of the risk analysis is to identify the risk inherent in all aspects of the company, the industry and the overall economy that could potentially impact the company's operations. It includes both internal and external evaluations, and identifies how to mitigate identified risks.
-

APPENDIX 3

Select National Financing Resources for Food System Businesses

FINANCIAL RESOURCES	TARGETED LOAN PROGRAMS
<p>Opportunity Finance Network (OFN) http://ofn.org</p>	<p>OFN is a national membership of CDFIs that provides financial, consulting and advocacy services to CDFIs on behalf of low-income and disadvantaged communities. Find your local CDFI at: http://ofn.org/cdfi-locator.</p>
<p>Rural LISC http://programs.lisc.org/rural_lisc</p>	<p>The Local Initiative Support Corp. supports community development corporations and CDFIs across the U.S. through the deployment of grants, loans and equity investments. Rural LISC is a network of some 60 rural “partners” devoted to rural development.</p>
<p>USDA Farm Service Agency (FSA) www.fsa.usda.gov</p>	<p>Provides links to agricultural and financial tools as well as various loan programs. Microloans up to \$50,000 are now available.</p>
<p>USDA Natural Resources Conservation Service (NRCS) www.nrcs.usda.gov/wps/portal/nrcs/site/national/home</p>	<p>NRCS provides a wide range of funding opportunities that include financial and technical assistance, easement procurement and EQIP Conservation Innovation Grants.</p>
<p>USDA Rural Development (RD) www.rd.usda.gov</p>	<p>RD services include over fifty financial assistance programs for lenders and borrowers in rural communities. These programs include guaranteed loan funds and grants.</p>
<p>Other Federal Agencies: Department of Health and Human Services, Treasury, SBA www.hhs.gov www.treasury.gov www.sba.gov</p>	<p>These federal agencies direct resources through intermediaries, such as CDFIs, to provide financial and business management services.</p>
<p>National Working Waterfront Network www.wateraccessus.com/financetools.cfm</p>	<p>Provides links to financing tools for fisheries and aquaculture that can be sorted by geographic location and program type.</p>
<p>Farm Credit System www.farmcreditfunding.com/ffcb_live/index.html</p>	<p>Farm Credit organizations provide loans, leases and other financial services to benefit rural and agricultural communities.</p>
<p>US Social Investment Forum (US SIF) www.ussif.org</p>	<p>US SIF advocates for sustainable investment among corporate and financial institutions and investors. The organization also advocates for “impact investing” and support for CDFIs and other community-based investing entities.</p>
<p>Commercial Banks</p>	<p>Check with your local community banks as well as any quasi-governmental lending agencies in your area. Many support food businesses.</p>

ENDNOTES

- 1 The USDA is a vital resource in support of developing local and regional agriculture food systems. The concept of “Know Your Farmer, Know Your Food” is just one example of the federal agency’s efforts.
- 2 Jain, Monica; and Garderet, Remy. 2011. Financing Fisheries Change: Learning from Case Studies. Carmel, Calif.: Manta Consulting Inc. www.conservation.org/publications/Documents/Manta-Consulting-Financing-Fisheries-Change.pdf.
- 3 Robert Wood Johnson Foundation. “Healthy Food Access.” www.rwjf.org/en/library/collections/healthy-food-access.html.
- 4 The USDA maintains a website and directory on food hubs throughout the United States. USDA. 2012. Regional Food Hub Resource Guide. www.ams.usda.gov/sites/default/files/media/Regional%20Food%20Hub%20Resource%20Guide.pdf.
- 5 Seidman, Karl F. 2005. Community Development Finance. Thousand Oaks, Calif.: Sage Publications, p.6.
- 6 The components of a business plan are largely derived from the website of the U.S. Small Business Administration, www.sba.gov. Additionally, the SBA lists advisory services available by location, www.sba.gov/tools/local-assistance/score.
- 7 Ewing Marion Kauffman Foundation. “Kauffman FastTrac.” www.kauffman.org/what-we-do/programs/entrepreneurship/kauffman-fasttrac.
- 8 Ewing Marion Kauffman Foundation. 2011. “The Use of Credit Card Debt by New Firms.” Accessed May 10, 2016. www.kauffman.org/research-and-policy/use-of-credit-card-debt-by-new-firms.aspx.
- 9 U.S. National Advisory Board on Impact Investing. 2014. Private Capital, Public Good: How Smart Federal Policy Can Galvanize Impact Investing—and Why It’s Good. http://static1.squarespace.com/static/539e71d9e4b0ccf778116f69/t/53aa1681e4b04a6c515fac31/1403655809489/Private_Capital_Public_Good.pdf.
- 10 Under Regulation D of the Social Security Act of 1933, intermediaries can also raise funds from high net worth or accredited investors. www.sec.gov/answers/accred.htm.
- 11 Aries. “Guiding Capital to Good.” www.aerisinsight.com.
- 12 CAMELS stands for Capital adequacy, Asset quality, Management and administration,

ENDNOTES

- Earnings, Liquidity, and Sensitivity to market risk. See www.federalreserve.gov/boarddocs/srletters/1996/sr9638.htm.
- 13 Fresh Food Capital. www.freshsourcecapital.com/the-local-food-opportunity.
 - 14 A multiyear effort underway in New England proposes to achieve 50-percent local production by the year 2060. See www.nefooddivison.org.
 - 15 Goggin, Jennifer. 2016. "Is Food Unwinnable for Startups?" Food+Tech Connect, Aug. 1. <http://foodtechconnect.com/2016/08/01/food-unwinnable-for-startups>.
 - 16 Former Rep. Larry Combast. 2016. "The Rising Importance of Food to America's National Security." The Hill, Jan. 21. <http://thehill.com/blogs/pundits-blog/homeland-security/266549-the-rising-importance-of-food-to-americas-national>.
 - 17 We distinguish national security from "food security" and "food insecurity," the latter bearing on households facing hunger. See USDA's definitions and updated metrics on the incidence of hunger in the U.S. www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security.aspx.
 - 18 Agriculture and National Security: On-the-Ground Experiences of Former Military Leaders, Before the House Committee on Agriculture, July 7, 2016. (Opening statement of Rep. K. Michael Conaway.) <http://agriculture.house.gov/news/documentquery.aspx?IssueID=14890>.
 - 19 Bittman, Mark; Pollan, Michael; Salvador, Ricardo; and De Schutter, Olivier. 2014. "How a National Food Policy Could Save Millions of Lives." Op-ed, Washington Post. Nov. 7. www.washingtonpost.com/opinions/how-a-national-food-policy-could-save-millions-of-american-lives/2014/11/07/89c55e16-637f-11e4-836c-83bc4f26eb67_story.html.
 - 20 Ibid.
 - 21 Board of Governors of the Federal Reserve System. "The Community Reinvestment Act." www.federalreserve.gov/communitydev/cra_about.htm.
 - 22 National Community Reinvestment Coalition. www.ncrc.org/index.php?option=com_k2&view=item&layout=item&id=1157&Itemid=272.

CHAPTER 7

The Nature of Local Food System Farm Businesses

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The views expressed in this article are those of the individual author/authors and do not represent the views of or an endorsement by the Federal Reserve Bank of St. Louis, the Federal Reserve Board of Governors or the Federal Reserve System.

The way the song goes, Old MacDonald's farm was all about what was being produced, measured by an oink-oink here and a cluck-cluck there. If New MacDonald's farm sells into a local food system, then measuring its performance centers on successful marketing. For local food farmers, *how, where* and *to whom* it is sold is much more important than *what* is produced on the farm.

Lending to a Marketing Plan

Lending to a local food farm depends on understanding the marketing plan, as contrasted with conventional commodity farms where the lender concentrates on production costs and yield. It really doesn't matter what products are grown and sold by a local food farmer since the value of the business is the earnings engine that has been developed to sell a variety of products that satisfy local food consumers. Indeed, the products grown and sold vary over the course of each season and tend to change from year to year as customer feedback and product innovation drive farmers to search for new crops and markets.

Farm businesses that primarily sell vegetables to local food markets have similarities of nature and operational characteristics that allow informative comparison. For example, local food farms that produce vegetables have fairly continuous production across the growing season, often raise numerous kinds of crops and tend to sell through multiple marketing channels. Fruit and nut producers generally get one harvest per year and hold inventory or receivables, while livestock producers have much more business model variability, depending on geographic location, feed resources, and herd or flock size. While fruit, nut and livestock producers are essential parts of local food systems, the difficulty of comparing them encourages the focus here on vegetable producers.

Expected Financial Performance

The chart on Page 143 shows expected financial performance of farm business models. It emphasizes the concept that what is produced on a farm is less important than through which marketing channel it is sold. All the farm types shown grow vegetables, but they differ in production volume, number of crops, cost structure and profitability. For the purposes of lending, evaluation of farm business models must emphasize analysis of the gross or net profit margin of the enterprise as opposed to a “productive capacity” bias—which takes a “bushels per acre” approach—carried over from making loans to commodity production farms. In other words, by selling into a local food market channel, a small producer can potentially obtain a higher net profit through selling into a niche market, as compared to a wholesale vegetable operation. That’s not to say one business model is better or worse, rather that each has risks and benefits that must be considered.

Beginning farmers who are local food producers often start as growers for farmers markets, and over time mix and match aspects of community supported agriculture (CSA), retail farm market and wholesale business models. This sort of business progression is understandable, but fairly rare; few small growers make a full transition from being part-time growers for farmers markets to wholesale producers over the course of their career.

Expansion and Transition

Two factors influence the likelihood of transition. First, many beginning farmers seek a balance between their farm operation and other family needs, in which farming at a small but profitable scale affords a lifestyle in combination with off-farm income. That a beginning farmer may start small and stay small for lifestyle purposes is amplified by Census of Agriculture data indicating that there are twice as many beginning farmers over the age of 55 as under the age of 35, meaning that, statistically, many beginning farmer startups are perhaps better characterized as wind-downs into an active retirement.

For the entrepreneurial farmer who is seeking to expand from a farmers market business via internal growth, expansion is based on the capacity to find and exploit additional direct-to-retail markets. By using the exposure of farmers market retailing to enroll CSA members as well as generate connections to

Expected Financial Performance of Local Food Business Models

	WHOLESALE VEGETABLE	RETAIL FARM MARKET	COMMUNITY SUPPORTED AGRICULTURE	FARMERS MARKET
Acreage Owned	100	100	100	100
Acreage in Production	80	40	25	15
Typical # of Customers	Fewer than 10 brokers	10,000 retail customers	750 shares	10,000 retail customers
How Products Are Sold	Wholesale, large quantities, by the box	Retail, small amounts, by the pound or piece	“Share” for a certain amount of product per week for the season	Direct-to-retail at 4 farmers markets/week
Sales Per Transaction	Several thousand of dollars	\$20-\$30	\$300-\$600	\$10-\$20
Sales	100%	100%	100%	100%
- Less Cost of Goods Sold (with hired labor)	76%	64%	60%	60%
= Gross Margin	24%	36%	40%	40%
- Less Overhead (with owner’s draw)	20%	30%	25%	30%
Net Margin	4%	6%	15%	10%
Number of Crops Grown	15-20	20-30	75-100	25-50
Working Capital Borrowed	50% of crop	15% of crop	Less than 5% of crop	25% of crop
Gross Sales	\$640,000 (\$8,000/acre gross X 80 acres)	\$1,000,000 (10,000 customers; average sale \$25, 4 times a year)	\$450,000 (750 shares at \$600)	\$150,000 (4 farmers markets a week for 25 weeks)
Net Profit	\$26,000	\$60,000	\$67,500	\$15,000
Working Capital Cost	Interest from planting through harvest	Interest for part of season; steadier cash flow	None, as shares are prepaid	Interest from early spring to late season
Inventory	None	Must maintain inventory of related products and sell seasonally	None	None

farm-to-restaurant sales, farmers can increase sales based on their own labor input. To a large degree, this is a “do more of the same” marketing approach that concentrates on direct-to-retail models that offer higher net margins.

When sales rise to a level where the farm owner-operator’s individual labor dedicated to production and management is maxed out, sales growth is most easily available by seeking wholesale markets. Managing sales to wholesale buyers takes less management time, which is the primary constraint on the farm owner-operator. Producing for and delivering to wholesale markets can be done by employees, or at least these activities represent a larger dollar amount sale that makes it worthwhile for the owner-operator to perform.

The transition into wholesale is often a strategy to maximize utilization of crops that are particularly profitable. For example, a producer growing sweet corn to sell through farmers markets, CSA shares and its own retail farm market may have enough sales volume to justify purchasing a sweet corn picking machine. The incremental cost of harvesting more sweet corn using the automated technology is slight, providing a low-risk avenue to enter wholesale markets with fairly low management input.

Downscaling

Conversely, a midsize vegetable producer primarily selling wholesale may find new and profitable markets by “downscaling” to enter direct-to-retail markets. Anecdotally, this often happens when the younger generation comes back to the farm after college and the business must produce more net income. These entrepreneurial next-generation farmers are likely familiar with the culture and mechanics of internet marketing and sales, and they may apply these skills toward finding new markets.

This downscaling strategy essentially takes farm products traditionally sold wholesale and instead sells through direct-to-retail channels that offer a higher margin. As new markets in local food systems are discovered, consumer feedback on product characteristics can lead to changes in packaging, distribution and production practices. For example, a portion of traditional vegetable production might be switched to heirloom varieties or converted to organic production methods to satisfy customer demand. This chain of events (with or without the specific circumstance of the next generation returning to the farm) has increased the availability of local food through wholesale distribution channels.

Distinctive Risks

Selling local foods directly to consumers allows midsize, small and part-time farm businesses to be profitable, yet subject to a different suite of risks in marketing and production. Marketing risk begins with the sale of perishable products in a highly competitive market. You also have the added uncertainty of “retail weather” in which rainy days can dampen customer turnout to farmers markets or farm stands, particularly on all-important weekend sales days. As for virtually all of agriculture, direct-to-retail production risk depends on weather, amplified by the challenges of simultaneous production of numerous short- and long-season crops, continuous harvesting, labor availability, and quality and appearance factors. By comparison, business models based on commodity crops have lower risks for production due to:

- integrated technologies of seed and mechanization that reduce labor costs and
- storable crops sold through well-developed futures markets to assure price stability.

Financial Viability

Understanding smaller-scale vegetable-growing businesses begins with identifying the marketing channels utilized so as to anticipate monthly cash flows. Most local food farm businesses market through more than one channel in some combination of CSA, farmers markets or retail farm stands. Balancing annual cash flows is greatly assisted by selling CSA shares early in the season to obviate the need for borrowing working capital aimed at spring planting costs. Early season sales—perhaps accelerated by season-extending technology like production in high tunnel greenhouses or row covers—can enhance front-end earnings that will cover high labor and production costs as the season ramps up. In any event, direct-to-retail sales have the unparalleled benefit of being mostly cash or cash equivalents, effectively eliminating receivables.

From a lender standpoint, there is risk in allowing a midscale producer to grow its business’s cash flow exposure without adequate contemporaneous record keeping. Many farmers are accustomed to running their business from a checkbook, spending based on a daily balance rather than planned cash flow needs over the course of a season. A line of credit can hide a lot of ignorance on

the part of the farmer caught in the frenzy of midseason production and sales activity. Without a cash flow budget to set goals and measure performance, a line of credit can be an expensive way to postpone bad news. In the end, realistic budgeting for net profit margin and owner's draw are significant measures to focus attention on operational performance.

Overhead costs can quickly eat into profitability. Small and midscale farmers are just as vulnerable to the “new paint disease” that vexes many conventional large-scale farmers, albeit at a smaller yet no less pernicious scale. Though the desire for control of productive resources through ownership rather than rent or lease is a common affliction, avoiding “new paint disease” can help keep overhead costs low.

Local food producers face other costs that are not typical for conventional commodity crop production. This includes a host of post-production expenses related to food safety regulations. Compliance costs related to infrastructure requirements for washing, water testing or cold storage, or the need for stainless steel washing and processing equipment can add up quickly. If any value-added processing is contemplated, those compliance and overhead costs increase. Beyond the expense of processing, the cost of packaging, inventory, delivery and potential payments to distributors and retailers for establishing stocking relationships can make processing a very expensive option.

Factors in Obtaining Credit

Local food producers seeking credit should be able to describe expectations in terms of business results, if only to understand the extent of their obligations and strategies for accomplishing goals. For the smallest-scale producers, loans may be made on the basis of consumer scorecard lending that relies on their personal credit score. For midscale producers, adequate demonstration of intent and uses of the loan likely means that a business plan will have to carry the burden of overcoming a loan officer's lack of familiarity with the sector.

Ironically, this burden tends to be heavier in rural areas where commodity agriculture is common and local food system business models are viewed with skepticism, if not outright hostility. In that event, the need to demonstrate a marketing plan and cash flow projections becomes essential. Where crop insurance may be a determinative factor for lending to commodity agriculture, it may be an obstacle for a local food producer. Whole Farm Revenue

Protection crop insurance is designed for growers of diversified crops, but once again the lender must understand the parameters of the product for it to be seen as effective risk management.

Looking Ahead

Continued consumer preferences for local food and the marketplace perception of it as a premium product are likely to persist. In large part this is due to the strong emotional ties created by the “shared values” that are part of the economic worth of the local food product. Unlike the anonymity of farmers and their production practices in the conventional food system, local food farmers and consumers enjoy communication about how, where and by whom the food is produced. This communication is an essential part of the economic worth of local foods, providing an information exchange between the seller and the buyer that accomplishes mutual acceptance of shared values. This information transaction is illustrated by consumer interaction directly with producers at farmers markets. However, even as local food is moved through wholesale intermediaries, “the story of the food does not fall off the truck”—information about the farm name, location, production practices and other characteristics are retained, often appearing on restaurant menus or table cards.

Local food farmers need continued access to multiple market channels that have varying degrees of ease of access, sales volume capacity, labor intensity and, ultimately, net profit margins. One of the signature features of local food markets is the low cost of entry—think of the minimal investment and risk required to grow and sell at a farmers market. The advent of food hubs, produce distributors and food service distributors that see economic value in preserving local food identity makes available wholesale markets that are consistent, timely relative to harvest frequency and that can handle larger volumes of farm production.

Consumer demand for “local” has not only increased the number of sales locations (farmers markets alone increased from 1,755 in 1994 to 8,669 in 2016, according to the U.S. Department of Agriculture)¹ but also market channels available to farmers. CSA direct delivery, farm-to-restaurant, farm-to-school and food hubs are all market channel innovations instigated by “local” as a product differentiator. It is worth noting that each of these market channel innovations has benefited from adoption of information technology that

reduces transaction costs and increases logistical efficiency, while also improving the ability to gather, retain, share and exchange product characteristics on which the “shared values” depend.

Influence of Technology

Technological improvements in the local food system will trend in three general directions, with a focus on software that can be easily adopted by many users. From a cost-benefit standpoint, first to be adopted will be software that enhances logistical efficiency in wholesale distribution and retail delivery through time and/or fuel savings; such improvements are mostly opaque to the consumer. The second area of rapid technology influence will be improvements in customer choice, such as improved CSA software or direct ordering of ingredients for a meal (such as Blue Apron), particularly as related to mobile apps. The third area will be on-farm productivity improvements, such as farm planning and crop scheduling tools integrated with accounting software. Capital investment in planting and harvesting equipment, food safety-related tracking and labeling, and seed or variety improvements will focus on increased labor-saving technology and regulatory compliance appropriate to small-scale operations.

On-farm improvements in technology are likely subject to very different rates of uptake and implementation based on an individual farmer’s culture of attention to financial performance and cost control. One would expect a difference between small producers whose income is not dependent on farm business performance and midscale commercial farm businesses balancing potential returns from technology investments that allow better management through integration of production and financial data.

In the near term, business success of midscale local food farmers will be based on the active adoption of new technology (starting with but not limited to information technology) and the aggressive search of multiple market channels. It’s all about the marketing: Producing a crop is easy compared to selling it at a profit. Finding market channels that can capture a premium for local while handling the same farm product at different prices, quantities and levels of service—and likely all at the same time—will be the key to profitability for midscale producers.

Information technology in the hands of many actors means not only faster sourcing and distribution, but faster price discovery that makes for increased

competitive pressure for farmers as suppliers. In addition, midscale local food farmers will face perils as farm producers, such as higher labor costs or potential labor shortages, Food Safety Modernization Act compliance costs and other employer-related regulatory costs. The way the song is being written, New MacDonald's midscale local food farm will grow consumer-focused information and management data alongside crops ... with a high tech here and a high tech there. ■

ENDNOTES

- 1 USDA, Agricultural Marketing Service. “National Count of Farmers Market Directory Listings.” www.ams.usda.gov/sites/default/files/media/National%20Count%20of%20Operating%20Farmers%20Markets%201994-2016.jpg.

Use It or Lose It: Local Food, Regional Processing and the Perils of Unused Capacity

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The views expressed in this article are those of the individual author/authors and do not represent the views of or an endorsement by the Federal Reserve Bank of St. Louis, the Federal Reserve Board of Governors or the Federal Reserve System.

“Processing” is a broad term that can include everything from minimal washing, cleaning and packing (e.g., spring mix) to complex manufacturing (e.g., cured meats). Freshness and seasonality are in many ways two qualities regularly associated with local food. Yet processing—turning raw ingredients into more “finished” goods—is essential to local food in several ways.

One or more processing steps are essential to some foods, such as meat, poultry, bread and yogurt. For other foods, processing allows producers to:

- extend their marketing season, e.g., through preservation (pickling, canning, freezing);
- offer consumers a wider range of products (in some cases, specialty products that command a price premium);
- access markets that are less amenable to fresh, unprocessed food (e.g., schools that lack kitchen space and staff to prep raw produce);
- convert surplus or cosmetically undesirable, but otherwise wholesome product into a revenue stream; and
- provide more year-round work for farm employees.

From the perspective of consumers, processed foods with a longer shelf life than their fresh counterparts can be more convenient and help prevent food waste. And depending on the specific processing steps and volumes processed, processing can make local food more affordable and accessible to more consumers.

The actual value added by processing—how much value it adds and for whom—depends on the specific product, process, market and so forth.

This chapter identifies key factors that influence the financial viability of regional food processing operations. We draw on the experiences of processors in a variety of product categories, including meat, poultry, produce and dairy. The processors we discuss also vary by business model, including vertically integrated, co-packing and different combinations of the two.

Varieties of Processing Arrangements

The scale and business structure of local food processing depends on multiple factors, including what is being processed and how, where it is sold, associated product qualities, and the mission of the overall enterprise.

There are two basic business models. In the first, the processor is an independent enterprise that provides services for others (co-packing or “toll” processing). For example, Lorentz Meats, in Cannon Falls, Minn., provides slaughter and processing services to independent local and regional meat brands and farmers. Some processors that handle primarily conventional, nonlocal products may also co-pack for local brands.¹ For example, Country Natural Beef, a natural beef company based in the Pacific Northwest, uses AB Foods, a meat processor that handles mostly commodity meats.

In the second model, the processing facility is one part of an integrated food enterprise that also includes some combination of farm/ranch-level production, distribution and/or marketing. For example, Stahlbush Island Farms in Corvallis, Ore., built its own on-farm facility to process pumpkin for pie companies and now also freezes other fruit and vegetables sold under its own brand.² According to Bill Stahlbush, vertical integration has been “absolutely critical” and a large part of the farm business’s success: This “tight integration of production, processing, and marketing within the operation” is its strategy for managing the inherent risks of agricultural operations.

Some processors combine both models: Iowa yogurt company Country View Dairy prioritizes production and sales of its own high-quality yogurt, which it makes with milk purchased from the owner’s farm. This is vertical coordination rather than integration: The yogurt company and farm are independent businesses. Country View is also a co-packer: To make full use of its processing capacity and cover its associated operating and overhead costs, Country View produces all-natural yogurts for other brands.

Processing cooperatives are another variation: The Island Grown Farmers Cooperative in Washington state owns and operates USDA-inspected livestock slaughter and processing on a fee for service basis for its farmer and rancher members.³ Similarly, the Virginia Milk Producers Cooperative Association bottles milk produced by member farms.⁴

The growth of the local and regional food sectors over the last decade has prompted the development of yet another type of processor designed to meet

the evolving needs of producers and buyers in this sector. These processors have explicit missions related to regional economic development around sustainable, fair and humane food production as well as making healthy, local food more affordable and accessible. To achieve this, they offer a range of processing services that include: equipment, facilities, guidance, loans to “incubate” local food businesses, co-packing services, and assembling the full supply chain needed to aggregate local product for wholesale markets at an affordable price.

These processors play a critical role in local and regional food system development because—by design—they aggregate and absorb financial and other risks for individual farmers and food businesses that otherwise could not afford to build or maintain expensive infrastructure.

For example, the Western Massachusetts Food Processing Center (FPC) rents commercial kitchen space to independent food companies; co-packs produce for farmers who market those products independently; and processes and markets its own regional brand of frozen produce—to both institutional and retail buyers—for farmers who prefer to focus on production. As discussed below, this diversity of services evolved over time to meet different farmer and buyer needs; it is also a strategy for FPC to achieve financial viability.

Factors Affecting the Financial Viability of Food Processing

Scale-appropriate processing has long been considered a critical link in local and regional food systems for the reasons described above. Producers and associated food companies that wish to offer products with qualities such as environmental stewardship, humane treatment and fair trade need the processing step to recognize, retain and transmit those values downstream to the consumer. Yet the financial viability of processing can be a significant challenge: Processing is often expensive in equipment and intensive in required knowledge and systems, with high fixed and operational costs.

How can this valuable, often necessary step for local food be financially sustainable? The following discussion of challenges and strategies is drawn from the experiences of existing processors as well as the authors’ and others’ research and observations. The points made below fall into two general categories: balancing differentiation against operating costs and constraints; and

BRIEF INTRODUCTION TO THE CASE STUDIES

We refer to a range of processors and food companies in this chapter to illustrate different points, with a particular focus on the following three case studies:

Mad River Food Hub, Waitsfield, Vt.

- Opened for business: 2011
- Products/services: licensed vegetable and USDA-inspected meat processing facility rental/technical support, business development services, cold storage, and local distribution
- Geographic reach: delivers to nearby metropolitan areas
- Customer base: It supports processing businesses and also independent businesses that need distribution.

Western Massachusetts Food Processing Center, Greenfield, Mass.

- Opened for business: 2001 (as an enterprise within the Franklin County Community Development Corp.) It added co-packing in 2005, and aggregation and sales in 2010.
- Products/services: commercial kitchen rental/technical support; co-packing (freezing, fermentation) of local fruit and vegetables; and aggregation, processing (freezing) and sale of local fruit/vegetables to institutions and retail stores under regional “Pioneer Valley” brand
- Geographic reach: New England (sourcing and sales)
- Customer base: More than 300 food businesses have used FPC; they co-pack for about 20 farmers in Massachusetts, Rhode Island and Connecticut. Sales are to institutional buyers (K-12 schools, colleges, food service and hospitals), distributors and retail stores.

Country View Dairy, Hawkeye, Iowa

- Opened for business: 2010
- Products/services: yogurt, co-processing/packing
- Geographic reach: Upper Midwest
- Customer base: institutional buyers (K-12 schools, colleges, food service and hospitals), distributors and retail stores

assuring enough throughput to keep expensive infrastructure fully utilized and generating revenue.

Balancing Differentiation against Operating Costs and Constraints

It is commonly—but wrongly—assumed that local processors should either focus on local, sustainable product or nonlocal, conventional product. Consequently, many local food processors initially set out to develop a very specific product niche within a narrow geographic region—for sourcing, selling or both. Yet too often, demand for that specific product in that specific region is not strong enough to support the business. Processors may also need to handle conventional product to keep expensive assets—workers, facilities and equipment—fully occupied and generating revenue. And processors who source ingredients only from local producers may experience supply challenges caused by production variability (e.g., from weather, disease outbreaks and other agricultural risks). For example, a small meat processor will suffer if drought conditions cause local producers who use his services to downsize and bring fewer livestock to process.

Matching a niche product with small and variable markets and a small and variable supplier base tends to create a fragile business that cannot survive when something inevitably goes wrong. Pragmatic decisions to expand the farmer base, market channels and menu of products and services need not compromise the mission, but instead can be seen as strategies to ensure the long-term viability of processing infrastructure needed for local and regional food. Two examples from Iowa illustrate the value of a “hybrid” approach.

Country View Yogurt in Hawkeye, Iowa, is now a successful and growing company, but it was too narrowly focused at the start in both product and market. Founder Dave Rapson said: “I really didn’t do a good job understanding the market for my yogurt when I started. I thought it would just sell at a price I deemed fair, but it turned out I needed a lot of help to find the right market and the right price for my product.” Rapson quickly discovered that in his local area, only a limited number of consumers were willing to buy a high-end yogurt. In order to use the entire production capacity of his small yogurt processing facility, Rapson sought out co-packing opportunities with other brands. He continues

to sell his high-end yogurt only in his local area, but this works because he also manufactures products, under his own brand and for other brands, for different market segments, price points and formulations that depend on volume and market. That is, the combination of his own low-volume/high-margin product and co-packing for high-volume/lower-margin products is the key to the viability and profitability of his business.

The Iowa Food Hub also uses a hybrid approach. Nick Mabe, general manager, explained: “When we started the Hub, we thought we were going to be supplying pastured meat from small farms to all the institutions in the area. The reality was significantly different. If we were going to fulfill our mission to support small farms in our area, we needed to be profitable. This meant that we sourced both pastured chicken killed at a small plant down the road as well as conventional local chicken from a large plant in the next town.”

Sufficient Throughput

Processing cannot be financially viable without sufficient throughput: enough volume of product, consistently over time, with processing services priced high enough per unit to cover operational and fixed costs. The actual numbers (volume, pricing, timing, etc.) for “sufficient” and “enough” depend on the scale and scope of the processing steps. The more complex the steps, the more expense is embedded in the processing enterprise, and the more volume and/or price per unit is required to keep the enterprise afloat. These expenses include a skilled workforce, costly equipment, utilities and other costs.

The meat processing industry provides a salient example of the types of operational barriers that can arise when attempting to serve the processing needs of smaller-scale local farmers and ranchers. To meet the exact specifications of their household, retail or restaurant customers, small-scale farms and ranchers will often demand an extensive set of services from their processors even if they are only bringing the processor 10 to 20 head per year; such services include customized cuts, vacuum or thermoform packaging and full-color labels with exact package weights. In contrast, most beef processing plants that offer such a sophisticated range of services typically require throughput greater than 8,000 cattle (or equivalent number of pigs, sheep, goats, etc.) per year to break even, far beyond the collective volume that small-scale farmers and ranchers are typically able to supply.⁵

Fortunately, a regional-scale meat processor can overcome the mismatch between required scale of production and individual supplier volume with thoughtful planning and management. For example, Lorentz Meats continues to serve small local producers, but clusters all of them into one or two processing days per month, requires scheduling long in advance and offers a subset of its services to limit expensive customization. “Tail-end” processing is another option: adding a small batch to the end of a larger run to avoid additional setup costs of running just that small batch alone. This scale mismatch is more pronounced for complex types of processing that require special equipment and more setup time, resulting in higher setup-to-run cost ratios for small batches.⁶ For example, small-scale meat producers would often prefer thermoform over vacuum packaging because the packages look better at retail. Yet processors may require larger batches to justify using the thermoform machine. As one processor explained, “If we only have 200 pounds of bulk product, for 5 or 6 pound packages, we won’t bother: Our machine is so large, we would waste more film than what is required for packaging.”⁷

Minimum batch sizes or higher per unit fees are additional strategies to cover the often significant fixed costs associated with simply turning on the processing equipment, not to mention overhead. The FPC’s individual quick freezing (IQF) tunnel produces very high quality frozen product, much preferred over less expensive block freezing, but it is very expensive to operate. “It can do 500 pounds per hour,” FPC’s Food Business Development Specialist Nico Lustig explained. “Ideally you want it on for at least 4 hours.” Yet rather than impose a minimum batch size that would exclude smaller producers from having the highest quality product, FPC has chosen to charge more per pound for smaller batches. The idea is that higher product quality opens up higher value market opportunities that will cover the extra unit cost.

The break-even point will be different for integrated companies that can spread the cost of different aspects of their operation over the whole enterprise versus stand-alone processors that need to be profitable for the processing step itself. But even integrated companies need to keep their infrastructure busy. Stahlbush Island Farm built its processing facility specifically for pumpkin, but that only uses 60 to 75 days per year; the business moved into other vegetables to expand its product line, starting with carrot puree and broccoli puree.



TOP: Processing equipment at Country View Dairy, a yogurt company based in Hawkeye, Iowa. Country View Dairy produces its own high quality yogurt, but it also makes all natural yogurts for other businesses so it can fully utilize the company's processing capacity.

BOTTOM: At Country View Dairy, workers pack finished product for delivery.



LEFT: A worker packages frozen broccoli at the Western Massachusetts Food Processing Center. Based in Greenfield, the center processes and markets its own brand of frozen produce, co-packs for farmers, and rents commercial kitchen space to food companies.

RIGHT: A worker slices bacon at Mad River Food Hub, a USDA inspected meat processing facility in Waitsfield, Vt. Besides being an incubator for independent businesses, the food hub provides frozen storage and distribution services to other food businesses.



Assuring sufficient throughput requires co-packers to have solid commitments from clients to purchase those services, i.e., to bring enough produce, livestock, milk, etc., to process. In turn, those co-packing clients—producers and food companies—must also have enough solid commitments from buyers. For example, Vermont Packinghouse, a USDA-inspected slaughter and processing plant in North Springfield, Vt., was built specifically because a regional food distribution company, Black River Meats, already had established relationships with buyers; Black River was so confident in its markets, it invested in building the processing plant. In a less sanguine example, a small meat processor in Lime Springs, Iowa, closed its doors only four months after it opened, citing inadequate market demand for its products, despite a plentiful supply of livestock.⁸

Aggregation—combining multiple small producers into one entity or brand—is another strategy that can help achieve sufficient volume to afford the sophisticated processing services that markets demand, at a more accessible cost than small batch, highly artisanal production. Aggregation also reduces transaction costs for processors. Sourcing from or co-packing for 10 small growers can require the same amount of time and therefore labor cost as for 10 large growers, but the processor will likely generate more revenue from the latter. Aggregation of small producers is important for processors because it reduces those transaction costs, e.g., scheduling, ordering, pickup and other communications. While aggregation may involve forming a cooperative or collaborative brand, it can also happen in simpler ways: Independent producers can ease the burden on processors by working together to coordinate scheduling, delivery of live animals and pickup of finished product.

Create Demand for Your Infrastructure

Co-packing with existing processors should be the goal—and tried in every possible way—before investing in a new facility. Many small meat processors have been built because from the producers' point of view, existing facilities were too expensive, too far away and too busy during peak times of year. These are valid experiences that do affect a producer's bottom line, and yet the new facilities often struggle and fail because of insufficient demand for their services; at the same time, the existing plants may still have to lay off skilled workers in the slow times of year.

Yet it is also true that existing processors that in theory *could* co-pack are simply not willing or not set up to work with local producers, who then miss out on the benefits of processing described at the beginning of this chapter. Consumer demand for local food that requires processing goes unmet.

The FPC and Mad River Food Hub are two durable examples of regional-scale processing specifically designed to fill this gap. As incubators, they allow small farmers and food businesses to avoid the expense and significant risk of building their own expensive infrastructure. Instead, the processors are essentially aggregating demand for processing equipment, facilities and expertise from many small businesses that can utilize one set of expensive assets.

Local and regional processors that serve as incubators for local food businesses cannot predict or guarantee a business's success; yet by providing relatively low-cost access to facilities, equipment, technical assistance and even financing, they allow many different products and brands to be tested out in a low-risk environment. An idea that fails burns much less capital, which matters not only to the individual farmer or food business but to lenders and investors. An idea that succeeds in practice at the incubator stage is then a track record that is more convincing to lenders and investors than a good idea on its own.

The FPC trains food entrepreneurs and leases to them equipment and space at the facility. Over 300 food businesses have used the FPC since 2001. The FPC—the place itself and the training—helps food entrepreneurs be more financially viable at that scale. This is because, as Lustig explained, “it’s the ability to put a minimally viable product into the marketplace and test it before investing in infrastructure or equipment of their own. So if they do a prototype, a few markets, a few buyers, and realize the product won’t fly, if they’ve invested \$5K, that’s not much. Instead of investing \$50-\$100K in it and failing.”

Benefits to farmers of value-added products include season extension, improving cash flow on the farm and employee retention. A farm that makes ginger syrup at the FPC can delay its annual operating loan, saving interest payments. Another farm that grows “amazing peppers” for hot sauce does it during the farm’s off-season: “We freeze their peppers from August through November, and their crew makes the hot sauce in January and February,” Lustig said.

Over the past three years, Mad River Food Hub has graduated three food processing businesses into their own independent facilities. It also has been able to support three additional businesses that have their own food processing

infrastructure but utilized Mad River's trucking resources and networks until they could find their own mainline distributors. These success stories do not include the numerous businesses that utilize Mad River's technical assistance to speed their growth without using the incubator's physical infrastructure.

Food business incubators per se are neither new nor unique, as evidenced by the wide availability of commercial kitchens. What is new and important about these regional processors, however, is that they have gone beyond their incubator role, taking on additional links in the supply chain to connect local producers to regional buyers in a way that benefits both. At the same time, this expansion of services is critical to helping the processors fully utilize their expensive facilities, equipment and expertise, assuring their own financial viability.

The experiences of FPC and Mad River Food Hub illustrate the complex and important roles these processors play for local producers within local and regional food systems.

The FPC was built by the Franklin County (Mass.) Community Development Corp. in 2001 as an incubator and commercial kitchen space for local food entrepreneurs. Because farmers were FPC's target audience, the state agriculture department provided some of the startup capital. The FPC helped launch many successful food businesses, yet it turned out that few were farmers and few used local ingredients. In addition, rental income did not cover FPC's costs.

After consulting with local farmers about what processing services would help them connect with local markets, FPC in 2005 began to process produce for farmers on a co-packing basis, for the farmers to market through their own channels. But when only a limited number of farmers took advantage of this service, FPC did more research, reaching out to farmers less interested in direct marketing their own product. "We asked farmers if they wanted to process and sell it themselves, and they didn't, so we did," explained John Waite, Franklin County Community Development Corp. executive director. At this point, FPC also narrowed down its processing menu to specialize in freezing and fermentation for acidified foods, in compliance with federal regulations. Focusing on these activities allowed the processor to gain expertise and efficiencies needed to reduce costs for the farmers and make it more competitive.

Co-packing met the needs of direct-market farmers and added new revenue for FPC, though not yet enough for financial sustainability. In 2010, FPC shifted again to help larger produce farmers—too big for direct markets but losing

ground in commodity markets⁹—connect with regional markets that would reward sustainability practices. FPC established a regional brand of frozen produce for institutional markets. The 2014 addition of an IQF machine, funded by a U.S. Department of Agriculture grant, made FPC more competitive, but price point continues to be a struggle. FPC has since added a lower volume but higher margin retail line to balance their costs. “If we run 2,000 pounds through the IQF machine—1,500 to institutions, 500 to retail—that helps the numbers a lot,” Waite explained. Keeping the equipment busy is essential. “You wouldn’t turn the IQF on just for 500 pounds to retail.” He believes the combination will bring FPC into the black: “We’ll make a dollar margin on the retail, a penny margin on the school, and the average will make us sustainable.”

FPC has no intention of shifting entirely to retail: The low-margin/high-volume sales to institutions are part of FPC’s mission to bring high quality, sustainably raised, regional produce to audiences that might not otherwise be able to afford it—especially kids in K-12 schools. This part of the mission makes financial sustainability more difficult. In contrast, Stahlbush Island Farms focuses on markets that will pay a premium price: “We are not usually the low-cost producer,” Bill Stahlbush explained. “We seek the customer where price is not the key deciding factor.”

FPC’s experience clearly illustrates the need to keep expensive facilities busy. “Why we went into our own sales was that our rental and co-packing still leave hours when the kitchen isn’t being used,” Waite said. “We’re trying to use the expensive facility and equipment as much as we can.” In addition, FPC continues to have rental clients who may not use any local or regional ingredients but are critical to the mission because this rental income helps pay FPC’s bills and keeps the facility busy year-round.

The Mad River Food Hub provides a similar example of stacking enterprises to make local processing financially sustainable. Mad River has four revenue centers:

- incubator services/renting processing rooms to independent businesses. This helps businesses launch, though Mad River’s rental revenue drops when they succeed and graduate (this is also true for FPC);
- frozen product storage;
- distribution services for other food businesses (not incubator businesses); and
- technical assistance and other value-added services.

All four are essential to Mad River's mission, though only distribution is actually profitable; the other three break even. The fact that Mad River offers distribution services and that the clients are not the hub's incubator businesses illustrates the importance of identifying needs in the market and then adapting to them. Robin Morris, Mad River's founder and director, said that focusing on the customer—"providing solutions to customers' problems"—is the key to success. By "customer," he means not only current but potential: Morris is out in his community, listening to needs, knocking on doors, building and maintaining relationships, and, through all of this, creating markets for his infrastructure.

What Investments Are Most Needed?

In this chapter, we have discussed the value of regional processors that are large enough to provide a range of services but nimble enough to work with small, local producers. The appropriate scale for a given processor depends on product, process, market and a host of other factors. Very small processors also play a critical role in local food supply chains, helping farmers bring a variety of products to market. However, regional-scale, midsize processors can attain economies of scale necessary for the price point demanded by many wholesale markets.

A combination of public and private investment that limits the processor's debt load, especially in the vulnerable early years, can be critical. "Limit debt, especially expensive debt," Morris advises, but also "start with enough money to make it through the first few years with no profit." Mad River financed its initial build-out with grants, and the Mad River Valley Chamber of Commerce owns the equipment. Mad River only took on debt for the curing facility and delivery truck.

Targeted investments that lead to the full utilization—or even expansion in scale or services—of existing capacity are often more prudent than building new. Careful analysis of perceived bottlenecks is necessary to avoid investing in the wrong solution. For example, many small meat processors appear to need additional cold storage, but charging co-packing customers for delayed product pickup can ease that constraint. On the other hand, additional cold storage may be needed if regional distributors—key to market expansion—are unwilling to hold product; this is FPC's experience.

Also, expanding the production of certain locally or regionally grown products may sometimes require focus on other complementary products. For example,

a group of sustainable wheat producers in the Pacific Northwest has developed successful markets for their flour. Yet to sell more flour, the wheat growers need to develop value-added markets for the rotational crops that are essential to their production systems. They have plenty of flour milling capacity: instead, they need seed cleaning and storage, and oil pressing facilities to market those other crops.¹⁰

Equipment is another area for investment, not just the purchase of a specific piece of equipment but the development of appropriately scaled equipment. For example, FPC purchased the smallest IQF machine available, at 10 feet long, but cannot find companion equipment at the same scale, e.g., for cooling produce after blanching; this limits the efficiency of its whole line.

Ultimately, however, the market is almost always the primary constraint and must therefore be the primary focus. That is, any “hard asset” investment must be driven by sales: Is there a market for the product? As noted earlier, producers and others wishing to develop new food products should consider incubators or co-packers as an essential first step, a “testing ground” for their new idea. This is true even if the co-packer is far away, expensive, hard to schedule or all three. Those expenses are real but minor compared with the cost of a new facility. Investing in people to focus on market development—long before sales revenue is sufficient to cover it—is essential.¹¹ Without strong market opportunities, investments in processing—or production, for that matter—cannot create value.

Regional Collaboration as a Path Forward

Processing will continue to be expensive in terms of physical “hard” infrastructure and the “soft” infrastructure of human expertise, systems, etc. To be competitive and expand market share—in the absence of a significant societal shift regarding food price expectations—local and regional food processors need to continue to bring costs down without compromising the mission of increasing value and sharing it equitably across the supply chain. “We’re not going to nickel and dime the farmer,” John Waite said. “We’re going to pay fair wages to our labor. Distributors charge what they charge. So the only option is to tighten up our operations and find more efficiencies.”

FPC’s newest plan with two regional partners is a compelling model. FPC and several other produce processors with similar missions and goals currently share ideas and help each other solve problems. Now, FPC, Northern Girl in Maine and the Vermont Food Venture Center are combining forces to create a

regional business partnership to scale up the scope and volume of their sourcing, processing and sales. Each of the three will specialize in the types of produce and processing it does most efficiently, which will mean moving produce around the region. “If we do two or three vegetables well, and they have their specialties, and we market together, the customer gets six or eight products with the same high quality” explained FPC’s Lustig.¹² If FPC sources large volumes of green beans from large-scale mechanized farms in Maine, it can then afford to purchase more higher-priced green beans from Massachusetts farmers. “When we mix it all together, we can afford it,” Lustig said, “and we’ll have enough volume to meet wholesale market demand at a regional level.”

The partners have also recognized the value and efficiency of sharing their human capital—skills, knowledge, experience—for critical roles, including sales and marketing but also compliance with food safety and other current and evolving regulations.¹³ For each individual partner, affording this type of dedicated expertise was challenging. Together, as a regional collaborative, they will all have access to this essential expertise.

Collaboration happens at many levels: Shifting from a community of practice to an actual business partnership will have many challenges as plans roll out in practice. Yet interest in this type of collaboration for food system infrastructure may be rising. At a regional food hub gathering in Ohio, one experienced operator noted that without collaboration, most efforts will fail. “Resources are increasingly scarce, so instead of cranking out a bunch of disconnected food hubs, how do efforts work collaboratively across the region to leverage more scarce resources?”¹⁴

In our Northeast case, the planned collaboration builds on these three processors’ years developing and testing their own infrastructure, both hard and soft assets. It also speaks to their earned knowledge that keeping this expensive infrastructure—processing and otherwise—running as close to capacity as possible is critical to their profitability and persistence. If they succeed, the trio will bring the benefits of value-added processing—and local food more broadly—to more producers and consumers across their shared region, while at the same time assuring their own long-term viability. ■

ENDNOTES

- 1 See Bloom and Hinrichs, 2010, on the challenges and trade-offs of this approach.
- 2 National Research Council, 2010. The success of the Stahlbush brand has created opportunities for other farms: Stahlbush now purchases 50 percent (by weight) of the produce it processes from other farms that follow its sustainability protocols. Source: Larry Lev, Oregon State University, July 2016.
- 3 Gwin, 2012.
- 4 Hand and Clancy, 2014.
- 5 See Gwin, Thiboumery and Stillman, 2013, for the full financial analysis and a broader discussion of financial viability for local meat processing.
- 6 This mismatch is hardly specific to food processing: An electronics industry CEO we consulted explained that, “the variable margin from the small batch produced must be enough to cover the amortized capital cost and variable setup time/costs of the equipment, resulting in a higher unit price than larger batches.” Floyd Sutz, Vanguard EMS, email message.
- 7 See Gwin, McKissick and Blacklin, 2014, for more processor perspectives on packaging equipment. It is worth noting that some small-scale processors dedicated to local producers have come up with systems to run back-to-back thermoform batches for multiple producers at a time, but it requires clustering them into one run.
- 8 Fisher, 2016. Inadequate investment—not enough cash on hand to weather the inevitable storms faced by a small startup—was also a critical factor.
- 9 Farms in this situation can be described as “Agriculture of the Middle.” See <http://agofthemiddle.org> for discussion and links to research, including case studies.
- 10 Osborne et al., 2015, p. 168.
- 11 This is one of several roles within the concept of “value chain coordination.”
- 12 Berkenkamp, Mader and Kastler, 2012. IATP’s “Frozen Local” report, p. 5, identified, “the importance of focusing very strategically on suitable crops, finished products that are tailored effectively to the marketplace, and efficient processing methods. ... Enterprises that invest heavily in facilities and equipment and focus exclusively on freezing crops that are highly seasonal may struggle to cash flow their operation.”

ENDNOTES

- 13 Vermont Packinghouse is a similar example: It leveraged experience, expertise systems (everything from financial and human resource management to third-party audits), reputation, and financial capital from Lorentz Meats.
- 14 Masi, 2015, p. 13. The operator quoted was referring to hubs that include aggregation, marketing, distribution, processing and retail sales, which is what FPC has become and will continue with its partners.

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Getting the Margin to Meet the Mission: Food Hub Financial Viability

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Financial viability is essential for any business, and food hubs are no different. What is different is that food hubs are intentionally structured to produce social benefits, whether it is through increased market share for local producers, enhanced healthy food access or better environmental stewardship. As socially driven businesses aiming to have positive economic, social and environmental impacts within their communities, food hubs provide an alluring investment opportunity for impact investors. But it is also a social change model that must be built on sound financial practices in order to sustain the promised impacts. The intent of this article is to provide clarity on the food hub concept, detail investment opportunities and outline best business practices and benchmarks for food hub financial viability.

What Are Food Hubs?

USDA defines a food hub as “a business or organization that actively manages the aggregation, distribution and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail and institutional demand.”¹ Individual farmers often have too little product to satisfy large buyers such as local grocery chains and institutions, while large buyers struggle to find local producers who can provide sufficient, consistent supply for consumer demand. Food hubs offer a solution for both groups by providing aggregation, distribution and marketing services. This allows local growers to access large buyers while simultaneously coordinating efforts with distributors, processors, wholesale buyers and even consumers to allow those customers to meet the growing market demand for source-identified, locally or regionally grown products.

Along with providing these core operational functions, food hubs often provide training and assistance to producers in areas such as sustainable production, season extension, post-harvest handling and packing, branding, certification, and food safety—all of which can increase access to wholesale customers, such as food service and other institutional buyers. At the same time, food hubs often

GOOD NATURED FAMILY FARMS: COMMUNITY DEVELOPMENT FROM A FOR-PROFIT FOOD HUB

Good Natured Family Farms (GNFF) is a for-profit food hub uniting over 150 local farmers in the Kansas City area. Founded in 1999, GNFF operates out of a regional warehouse and currently sells to local grocery stores and distributors while providing local healthy food choices to vulnerable families.

Recognizing that food safety is an increasing concern for buyers and customers, GNFF helps local farmers obtain U.S. Department of Agriculture Group GAP Certification through training both the farmers and verifiers in GAP (good agricultural practices). Even if a farm is not fully GAP certified, some buyers will still conduct business as long as the farm has had a verification inspection.

GNFF's actions are twofold:

- train farmers in the composition of their own food safety plans and
- train regional verifiers to conduct inspections of the farms, sometimes with buyers participating. This practice can allow the grower to work with a larger buyer until he or she has obtained GAP certification. Through this process, GNFF has already helped 20 farms become certified, including the first Amish/Mennonite farm in the country to attain Group GAP certification.

Along with increasing sustainable farming, this group has also helped ensure that the food grown and produced by its members' farms is safe and environmentally responsible, answering the growing demand for locally produced, environmentally ethical foods.

engage directly with their community through donations, educational programs and health-awareness campaigns.

In this way, food hubs function as a link in the logistical chain to convey food products to midscale buyers who sell to the end consumer. The relationship between food hubs, buyers and farmers is illustrated in [Figure 1](#).

Food hubs are often classified by the markets they serve. As business operation models, food hubs fit into three categories:

- **Wholesale:** Under the wholesale model, food hubs provide producers with new wholesale market outlets that would be difficult for them to access individually. Wholesale buyers include food cooperatives, grocery stores, institutional food service companies and restaurants.

FIGURE 1

Types of Services Offered by a Food Hub

PRODUCER SERVICES	OPERATIONAL SERVICES	COMMUNITY SERVICES
<ul style="list-style-type: none">• Actively linking producers to markets• On-farm pickup• Production and post-harvest handling training• Business management services and guidance• Value-added product development• Food safety training• Liability insurance	<ul style="list-style-type: none">• Aggregation• Distribution• Brokering• Branding and market development• Packaging and repacking• Light processing (trimming, cutting and freezing)• Product storage	<ul style="list-style-type: none">• “Buy Local” campaigns• Distributing to “food deserts”• Food bank donations• Health screenings and cooking demonstrations• Food stamp redemptions• Educational programs• Youth and community employment opportunities

- **Direct to consumer:** This type of food hub is responsible for aggregating, distributing and marketing products directly to consumers, including multifarm community supported agriculture (CSA) enterprises, online buying clubs, food delivery companies and mobile markets.
- **Hybrid:** Under the hybrid model, food hubs sell to both wholesale buyers and directly to consumers. Combining the markets from the previous models further diversifies a food hub’s profits and sales outlets for its farmers.²

Why Invest in Food Hubs?

The foremost benefit of a food hub is its ability to make sales and achieve a profit. Economically, food hubs are showing impressive sales performance and helping to retain and create new jobs in the food and agricultural sectors. “Highest-performing hubs pay more for their labor but get even more performance for that labor, with the typical food hub full-time worker equivalent generating sales of \$387,204.”³

To varying degrees based on their business model and mission, all food hubs are also looking to leverage their economic impacts into wider social or environmental benefits for their communities. Food hubs are often at the heart of values-based food supply chains, also simply known as food value chains. These are supply chains that link agricultural producers with markets, while still maintaining the core values and mission of equitable incomes for farmers and food systems workers, ecological and environmental sustainability, and access to healthy food.

Food value chains differ from typical food supply chains in that they are intentionally structured to produce both business success and social benefit.⁴ These supply chains often have higher levels of transparency and communication, and they operate with strategic partnerships that attempt to foster win-win relationships for all participants along the chain. This research has shown that food hubs provide value to a community through more than just economic profits for producers and the food hub venture.⁵

Socially, most food hubs are providing significant production, marketing and enterprise development support to new and existing producers in an effort to increase the supply of local and regional food. In addition, quite a few food hubs make a concerted effort to expand their market reach into underserved areas where there is lack of fresh, healthy food. Food hubs often partner with community anchor institutions—like schools, hospitals and faith-based organizations—to ensure not just access and affordability, but also the cultural appropriateness of the food being offered. And finally, environmentally, most food hubs encourage their producers to use more sustainable production practices, as well as find innovative ways to reduce their energy use and waste in the distribution system.⁶

Getting the Margin

The following financial data were obtained through a study conducted by Matson Consulting in March 2016 and published in *Running a Food Hub: Assessing Financial Viability*.⁷ Sales and funding levels presented here show the minimum level needed to operate a wholesale and direct-to-consumer food hub. As many have demonstrated, including San Francisco-based Veritable Vegetable, food hubs can grow to a much larger scale beyond what is currently presented. The ability of a food hub to expand beyond this scope depends on multiple factors, including the food hub's starting point, management and ability to increase sales over time.

VERITABLE VEGETABLE: MEETING ITS MISSION THROUGH LONG-TERM VIABILITY

Veritable Vegetable (VV) is a food hub located in San Francisco that has been in operations since 1974. With the goal of bringing affordable, healthy food to the area, VV became a part of the “People’s Food System,” a series of collectives providing an alternative to the current corporate food network and promoting sustainable farming. As part of its social mission, VV was certified as a B Corporation in 2014.

VV is a majority women-owned business that maintains the mission to “work hard to actively improve the sustainable food system by supporting organic farmers, increasing access to fresh produce, strengthening communities, and cultivating a fair dynamic workplace.” The food hub has succeeded in fulfilling its original mission. In the years since its inception, the organization has helped influence demand for organic fruits and vegetables, create certification standards, and provide an increasing number of communities with fresh, healthy foods.

This operation serves multiple states in the region, covering California and parts of Arizona, Colorado, Nevada, New Mexico and Hawaii. As of 2013, the business had conducted close to \$50 million in sales and had a network of over 600 farmers and buyers, and it is continuing to grow. The business contributes over 18 percent of its annual profits to organizations and schools located in the community. In spring of 2016, VV had 135 employees, 65 percent of which are women.

Effective marketing helps VV reach its expansive customer base. Marketing efforts include an interactive website with information on its business, news stories and a blog. The site also highlights some of its partnerships and helps promote other local farms and businesses. The organization also uses warehouse tours not only to promote its business and services, but also as a way to educate the community on various industry topics, including organic standards and certification, storing and handling produce, and food systems.

Food hub startup

The startup period for a food hub is the time before entrance to the market; during this time, food hubs experience the most diversity. Almost every food hub approaches this period from a different starting perspective. The primary concerns for food hubs during startup are obtaining the funding necessary to gain infrastructure essential to operations, creating a solid sales base and meeting

obligations to their customers. These factors are often the most critical for the food hub to get off the ground.

Typically it is beneficial to find a long-term investment to maintain critical pieces of the business, such as skilled labor. This investment can also help the food hub grow to the next stage of business operations, ultimately leading to sustainability and viability. Model estimations show that, on average, \$75,000 is required for startup of a direct-to-consumer food hub and \$250,000 is required for startup of a wholesale food hub. It is possible to reduce these amounts through bootstrapping and other cost-saving activities during startup; these amounts also could be increased with the addition of other food hub functions, such as processing.

Sales for wholesale food hub

To reach a break-even level of operation, the typical wholesale food hub would be required to generate an annual sales level of around \$1.2 million. During the time between breakeven and the food hub beginning to enter an earnings level that leads to long-term financial viability, the venture would need to generate around \$1.75 million in sales in a year.

With about \$2.4 million in annual sales, a food hub would begin to earn sufficient revenue to provide longer-term viability. Even at this sales level, an unexpected expense could detrimentally affect growth and operations. It is advised for a food hub to strive to grow annual sales beyond this point to reap profits that may be needed to cover unexpected costs.

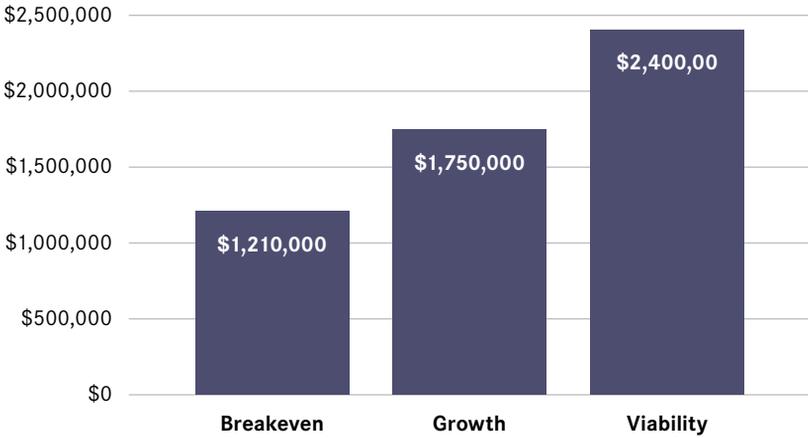
Sales for direct-to-consumer food hub

To reach a break-even level, a typical direct-to-consumer food hub needs to generate annual sales of around \$314,000. In the time between breakeven and long-term financial viability, the venture would need to generate around \$422,000 in annual sales.

With annual sales of about \$566,000, the food hub would begin to earn sufficient revenue to provide longer-term viability. It should be noted that even at this sales level, an unexpected expense could detrimentally affect the business. The food hub should strive to grow annual sales beyond this point to achieve the higher profits that could be needed to cover unexpected costs.

FIGURE 2
Needed Annual Sales Levels at a Wholesale Food Hub

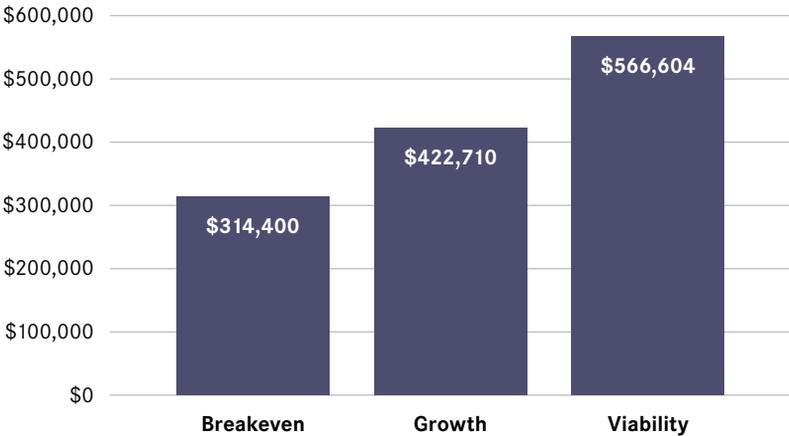
By operational period



Source: See Matson et al. in endnote 7.

FIGURE 3
Needed Annual Sales Levels at a Direct-to-Consumer Food Hub

By operational period



Source: See Matson et al. in endnote 7.

Food hub expenses

As the single largest expense for both hub operational models, payments to producers will have the greatest impact on whether a food hub can progress through the operational phases used in this analysis. Figure 4 compares the product-cost variable versus other typical expenses.

Farmers and producers require that payments they receive from the food hub cover the cost of producing the items as well as generate a profit. For example, using the wholesale food hub model, if the baseline is set at a 70/30 split—i.e., 70 percent of sales dollars collected from customers being returned to farmers and 30 percent retained by the food hub—Figure 5 shows what happens when an increase or decrease in payments to producers impacts sales needed to reach breakeven.

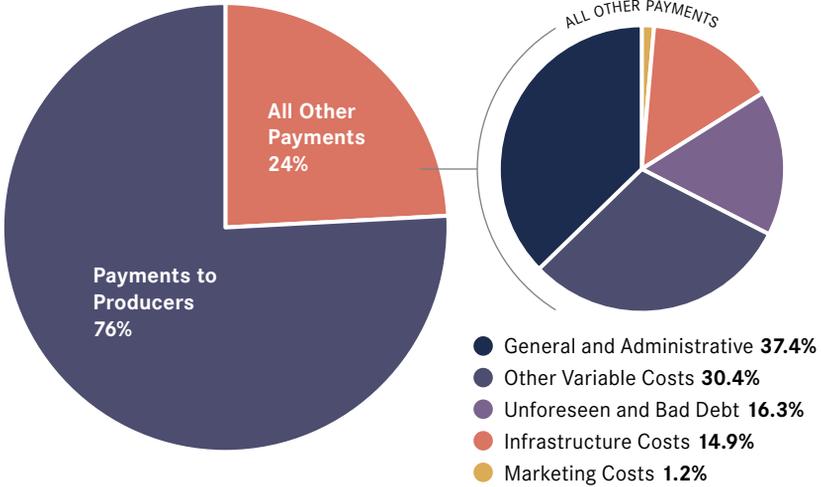
COMMON MARKET: BRINGING FRESH FOOD TO LOW ACCESS AREAS

Common Market is a mission-based nonprofit that was started in Philadelphia in 2006. It has an all-volunteer board of directors and 18 paid staff at the end of 2014. Its vision focuses on four areas: providing locally grown, nutritious food to the community, including underserved areas; maintaining a high level of food safety; investing in local farms with a commitment to diversity; and promoting sustainable farming.

Common Market operates CM Mid-Atlantic, a wholesale distributor of local farm foods in the Delaware Valley. In 2014, they distributed over \$2.4 million of sustainably grown farm food. The roughly 80 farms supplying Common Market with over 600 products are located within 200 miles, mainly from Pennsylvania, Delaware, New Jersey and Maryland. The nonprofit has also added Washington, D.C., to its distribution area.

As the organization continues to diversify its market and maximize its reach, the nonprofit has expanded into Atlanta to begin establishing a nationwide network. Known as The Common Market Georgia, this branch already offers nearly 100 local products sourced within 200 miles of the city. Choosing channels such as these are integral to its overall vision of connecting farmers with those who need access to fresh, healthy food the most, while ensuring the success of food networks in urban areas.

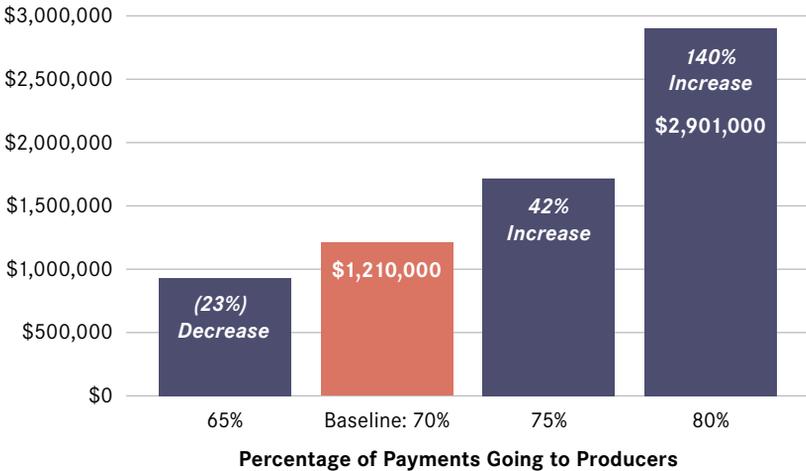
FIGURE 4
Typical Food Hub Expenses: A Comparison



Source: See Matson et al. in endnote 7.

FIGURE 5
Annual Sales Needed to Reach Breakeven

Based on producer payments



Source: See Matson et al. in endnote 7.

Food hubs can have a slight variation from the 70/30 split, but based on the scenario results presented in Figure 5, to retain 25 percent of sales revenue to cover operations, a food hub would need to obtain about \$1.72 million in sales to achieve similar Ebitda (earnings before interest, taxes, depreciation and amortization) to reach the break-even operations level.

To increase return to farmers only by 10 percentage points and continue to be financially viable, the hub would have to more than double sales. In this model, when the return to farmers increased to more than 85 percent, the food hub could not maintain enough residual revenue to cover costs and remain in operation. Correspondingly, reducing the revenue shared with producers would reduce the sales necessary to achieve breakeven, but may not be in line with the food hub's mission or be acceptable to the food hub's producers.

What Have We Learned?

In both the roles of a public servant and private consultant, we have worked either directly or indirectly with hundreds of food hubs in the U.S., providing business development and financial guidance. Through many years of engagement, we have learned a few tried-and-true good business practices for running a successful food hub operation.⁸

Lesson No. 1

This is the cornerstone of food hub financial viability that all the other lessons are predicated on. We call it the “Oxygen Mask Rule of Financial Viability.” As socially driven businesses look to secure both economic and social benefits, it is easy to lose focus of the economic bottom line in efforts to maximize the social mission. As such, it is essential for a hub to secure its own oxygen (i.e., profit margin) before assisting others with their oxygen (i.e., community benefits). As research has shown, “food hub profitability is the springboard to achieving the broader mission-related goals.”⁹

Other Lessons

2. *Don't sell commodities*

It is essential to differentiate your products from others in the marketplace. On one level, this can be accomplished by developing a strong brand that tells the farm and farmer story as well as the values behind the story. The story must

be simple, compelling and credible. Most importantly, the brand value and values reflected in the brand should speak directly to what is important to the customer audience (e.g., high quality, unusual varieties, local family farms, sustainable production practices and social equity).

3. Sweat the small stuff

The marketing and sales staff (often it's just one person) must know every intimate detail of the production and handling practices for every product sold under the hub's brand. This is necessary in order to tell an intimate and authentic story about the producers they work with and to assure their buyers that products are produced, handled and delivered in a way that minimizes food contamination. (Food safety is an ever growing concern.) Also, given the bootstrap, sweat equity nature of food hub businesses, it's a good idea to train the delivery staff (i.e., truck drivers) so they are knowledgeable about the producers and products, as well as have excellent customer relations skills. They are often the face of your business.

4. Be there all year for your customers

Strive to offer enough variety of products so that you can sustain a year-round operation, which is essential for covering fixed operating costs and helps to ensure constant communication with your buyers. This means working with suppliers on season-extension practices, offering shelf-stable and value-added products, and offering less seasonally dependent products, such as dairy and meat. Finally, be pragmatic in your approach. You may not be able to offer "local" products year-round, but you can offer fresh produce from other areas that still conform to the values espoused in the brand (e.g., sustainably grown products from small family farms).

5. Get buyer commitment

With a good brand, quality products and a reliable delivery service, food hubs have little difficulty finding and maintaining accounts, but they do struggle to get some buyers' commitment to purchase in higher volume regularly. Many food hubs have mismanaged their growth by acquiring too many accounts with a low volume of orders. Be clear with new customers on volume expectations and continually work with existing customers to increase their purchase orders, which can be done through a combination of specials, incentives, rewards and public recognition awards for being a "committed" buyer.

6. Think farmers first

Ultimately, all marketing success is dependent on the producers you work with, so they should always be treated as valued and essential partners in your business instead of interchangeable parts of a supply chain. Food hubs work hard to ensure good prices for their producers and often provide technical assistance or find partners that can provide this in such areas as sustainable production practices, production planning, season extension, packaging, branding, certification and food safety. This assistance helps build their growers' capacity and ensures a steady and reliable flow of quality products through the food hub to the buyers.

7. Make friends

Seek operational advantages by identifying partnerships with players with distribution infrastructure, such as existing distributors, producer groups, trucking companies and food banks. This requires a hub to take a critical look at their business assets to identify their core competencies and then to establish relationships with others to ensure it can meet its business and social objectives. When it comes to financing, hubs need to carefully evaluate their financial partners to find those funders who understand that the food hub business model requires patient capital with likely low rates of financial return but significant potential for high rates of social impact return.

8. Don't buy what you don't need

Infrastructure investment (e.g., a warehouse, trucks and equipment) needs to match the hubs' stage of development and marketing capacity. Infrastructure will be based on the product handling and storage needs of the food hub, but food hubs should still incorporate a long-term view of infrastructure and equipment to provide easier transitions through growth periods in the future.

9. Put food safety front and center

Food safety needs to be an integral part of the business operation, with food safety plans for producers, good agricultural and good handling practices, and traceability and recall mechanisms in place. Also, allow the needs of the food hub customers to dictate the hub's certification requirements. Whether required by customers or not, food hubs should take a long-term view by maintaining awareness of the food safety and regulatory environment in order to be prepared for future requirements.

10. Never forget “supply, supply, supply”

Without ensuring a consistent, reliable supply of quality products, you have no business running a food hub, and you will have no business. This is clearly related to the lesson “think farmers first.” At the end of the day, no product, no hub. Also, seek to source and provide a mix of products that will allow you to satisfy demand or an identified need in the market. This may include distribution of products that are not strictly “local,” but which still meets the mission of the food hub by encapsulating other qualities that are attractive to the customers, such as products from small family farms, sustainable production and health benefits.

Conclusion

The success of regional food hubs is fueled by entrepreneurial thinking and sound business practices, coupled with a desire for social impact. Food hubs represent a model for not only business profitability, but also for community development. The local food industry was facing a challenge: how to satisfy retail and institutional market demand to source from small and midsize producers. In response, food hubs have deftly come up with regionally appropriate solutions that not only result in positive economic outcomes, but also provide valuable services to producers and their wider community. Food hubs represent a food system that is increasingly demonstrating a financially sound business model that can be both market- and mission-driven. The benefits of food hubs range from their ability to make a profit and provide jobs for the community to a deeper social mission that affects all links in the value chain. ■

ENDNOTES

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Institutions: An Emerging Market for Local and Regional Foods

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In August 2016, an article published on the online food and agriculture website Civil Eats described farm-to-institution programs as a “sleeping giant” of the local and regional food movement. The article suggests the next time you talk with someone who tells you we need more farmers markets to increase access to healthy foods, you politely tell them about the role institutions play and the opportunities these markets bring to support healthy food access. This type of advice wasn’t always thought of when talking about local and regional food systems, and institutions weren’t always places to consume local foods, especially in the early days when the movement was first beginning. So how did we get here? How did farm-to-institution programs become thought of as a sleeping giant? Let’s roll up our sleeves and dig in.

Farm-to-institution programs occur when institutions such as K-12 schools, colleges, universities and hospitals purchase local foods for use in their meal, dining or patient feeding programs.¹ These programs can also include maintaining local food-producing gardens and farms, or hosting a farmers market on-site to help the particular institution incorporate local foods in meals or provide greater community access to healthier foods. Institutional purchasing can be a complex process involving a number of players. Some institutions maintain a self-operated food service program, while many institutions contract with food service management companies—such as Aramark, Compass Group or Sodexo—to help operate their meal programs, and therefore these companies are responsible for the procurement of local foods.²

As a follow-up to the 2012 Census of Agriculture, the National Agriculture Statistics Service completed in 2016 the first ever Local Food Marketing Practices survey in order to produce benchmark data about marketing practices of U.S. farmers and ranchers. The Local Food Marketing Practices survey found that in 2015 more than 167,000 farmers and ranchers sold over \$8.7 billion of local foods directly to consumers, retailers, institutions and local food intermediaries that market and sell locally branded foods, such as food hubs, distributors and wholesalers. Of this total, \$3.4 billion, or 39 percent of all local foods, were sold to institutions and other local food intermediaries.³

Because of the growing popularity of farm to institution and emerging evidence regarding the role institutions play in strengthening local and regional food systems, this chapter will outline the current state of farm to institution in the United States. This chapter will also describe a few of the opportunities, benefits and challenges that institutions face when purchasing local foods and that farmers face when selling local foods to institutions. Finally, policy and investment interventions designed to support farm to institution and implications of farm to institution for farmers and ranchers as well as consumers will be described.

Farm to School

During the mid-1990s, two small, fledgling initiatives led to the movement known as farm to school: One program introduced local fruits and vegetables to salad bars in the Santa Monica Malibu Unified School District, and the other helped local farmers connect to school meals as a new market opportunity in Florida. The National Farm to School Network, which officially began in 2007 through a grant from the W.K. Kellogg Foundation, has been a leading advocate for the development and implementation of farm-to-school programs nationally. Today, farm-to-school programs are taking place in every state and spreading to different and diverse communities, including schools situated in small towns, villages, exurban suburbs and dense urban cities.

Compared to other farm-to-institution programs, schools are the most mature or established marketplace in terms of the number of institutions currently purchasing local foods. This maturation is likely due to a variety of reasons, such as the relatively earlier emergence of K-12 schools as a market for local foods, and because most public K-12 schools in the U.S. participate in federally funded child nutrition programs such as the National School Lunch Program (NSLP). As a result of its connection to child nutrition programs, in 2010, when Congress passed the Healthy, Hunger-Free Kids Act, the U.S. Department of Agriculture was tasked with establishing the Farm to School Program. The program provides grants, training and technical assistance, and research that supports the integration of local foods into child nutrition programs. In 2015, as part of its research mandate, the USDA completed the second national Farm to School Census, which surveyed every K-12 public school district, private school

CASE STUDY: FEDERAL INVESTMENT IN FARM TO SCHOOL

Section 243 of the Healthy, Hunger-Free Kids Act of 2010 established the USDA's Farm to School Program, which encompasses research, training and technical assistance, and a national grant program that supports the integration of local foods and agriculture-based education in schools across the country. The goal of this grant program is to help operators of federal child nutrition programs—the National School Breakfast Program, the NSLP, the Child and Adult Care Food Program, and the Summer Meals Program—incorporate local and regional foods, thereby enhancing the nutritional quality of the meals, providing educational experiences for children and bolstering local and regional food economies with federal reimbursement dollars.

Since 2013, the USDA's Food and Nutrition Service has provided approximately \$20 million to 300 projects across 50 states, the District of Columbia, and the U.S. Virgin Islands. Grantees include individual schools, school districts, nonprofits, state and local agencies, and agricultural producers.⁴ The program provides funding and training support on how child nutrition program operators can find, purchase and serve local foods in federally reimbursed meals. Schools can purchase local foods from farms, distributors, food aggregators, food service management companies, farmers markets and community gardens. In turn, these entities benefit from the economic activity generated by institutional sales. According to the USDA's Farm to School Census, schools spent \$789 million on local food in school year 2013-2014.

Funded activities include training and network development, procuring and processing local foods, building and maintaining school gardens, and incorporating agriculture-based education into the curriculum. Promotional activities that raise awareness about seasonal products and where they were grown often go hand in hand with local foods; these can include harvest-of-the-month programs and general posters, fliers and menus with information about local farms. Such activities provide students and the community at large with access to information about where their food is coming from, and increase the collective knowledge base about local and regional food markets.

In addition to local food procurement, the program supports food, agriculture and nutrition education that emphasizes hands-on learning activities, such as school gardens, cooking classes and demonstrations, taste tests, and field trips to local farms. These experiential learning activities contribute to a consumer base that has been exposed to the

CONTINUED ON PAGE 194

CASE STUDY: FEDERAL INVESTMENT IN FARM TO SCHOOL

CONTINUED FROM PAGE 193

production, processing and distribution of food, and the importance of developing nutrition habits that have a positive impact on public, environmental and economic health. Within this and other national grant programs, federal funds and programmatic support are contributing to the creation of new markets as well as the robustness and sustainability of existing local food markets across the country.

Farm to School grant projects are having substantial impacts at the firm and community levels. For instance, the South Carolina Department of Agriculture, a Farm to School grantee, established a partnership between GrowFood Carolina and the South Carolina Department of Education to develop local food procurement resources for a pilot farm-to-freezer project. This partnership allowed for frozen blueberries to be available in South Carolina schools beyond the traditional summer growing season. While this project has just begun, it has already helped match blueberry farmers with schools willing to purchase their product. At the community level, Farm to School grantees are also reporting an increase in the economic impacts of local foods through greater sales to schools. In Arkansas, Fayetteville School District #1 increased the dollars spent on local food from \$8,972 in 2012 to \$74,645 in 2014. Additionally, Firstline Schools in New Orleans reported increasing the percentage of local foods purchased for school meals from 5 percent to 11 percent during the first year of its project.

and charter school participating in the NSLP. Results showed that 42 percent of schools were involved with farm to school, reaching more than 42,500 schools and impacting more than 23.6 million children. Schools reported spending nearly \$800 million annually on local foods—the most popular products purchased included local fruits and vegetables, milk and other dairy products, and baked goods.⁵ Over the past decade, formalized programs by federal, state and local governments, as well as nonprofits, have created rapid growth in this sector within the farm-to-institution movement.

Farm to College

In addition to K-12 schools, colleges and universities are purchasing local foods for their dining facilities and maintaining on-site gardens and farms producing

local food. Colleges and universities are developing farm-to-institution programs for a variety of reasons, including changing student preferences, a way of demonstrating commitment to the local community and a way to help achieve long-term sustainability goals. Similar to farm-to-school, farm-to-college programs are also taking place across the U.S., showing up at diverse institutions of higher education. For example, liberal arts schools like Oberlin College in Ohio and Warren Wilson College in North Carolina, public universities like the University of Virginia and the University of Washington, Ivy League schools like Yale and Princeton, and land grant universities like Montana State University and Iowa State University are all home to farm-to-institution programs. As of December 2016, the Sustainable Agriculture Education Association listed 55 colleges and universities with a student-run farm or garden providing local foods to dining services.

The growth and development of farm-to-college programs aren't being supported by just one or two backbone organizations or government agencies. Instead, there are a number of different groups, including many nonprofits, involved in supporting these programs. Since 2008, the Real Food Challenge has been engaging college students to work with food service dining directors and other campus stakeholders to encourage colleges and universities to purchase more "real food," including locally and regionally produced foods.⁶ The Real Food Challenge lists 40 colleges and universities that have committed to purchasing at least 20 percent of their food from local and regional farms. Their end goal is to shift \$1 billion of existing college and university food budgets toward real food, including local foods.

In addition to the Real Food Challenge, the Association for the Advancement of Sustainability in Higher Education (AASHE) has been engaged in farm-to-college development for several years. For example, AASHE releases an annual campus sustainability index, which includes ranking top-performing colleges and universities related to food and dining. Purchasing local foods for college and university dining halls is a major component of its dining index. The National Association of College and University Food Services has also been engaged in supporting colleges and universities purchasing local foods. In addition to these national organizations, several regional organizations are involved in supporting farm-to-college programs; they include Farm to Institution New England (FINE), which is based in rural Vermont and works across six New England

states, and Ecotrust, which is based in Portland, Ore., and works across the Pacific Northwest. There are many other groups and organizations supporting farm-to-college programs locally, regionally and nationally.

Farm to Hospital

Just like schools and colleges, hospitals are purchasing local foods and establishing farm-to-institution programs across the U.S. However, hospitals are likely the least mature market of the three institutional markets discussed here. Many hospitals are using local foods in meals, cafeteria serving lines and salad bars, and hosting farmers markets on-site as a way of improving the health and wellness of patients and the community. In addition, supporting local economies is also a primary motivation for purchasing local foods by hospital food service directors.⁷ Outside Detroit, the Henry Ford West Bloomfield Hospital opened a 1,500-square-foot hydroponic greenhouse from which to source healthy local food; it has also developed an educational center to help patients and the public learn about making healthy food choices.⁸

A study that explored which factors influence a hospital's decision to purchase local foods found that hospitals that prepare fewer daily meals, are located near farms participating in community supported agriculture and are located in counties in or near metropolitan areas are more likely to have a farm-to-hospital program compared to those that do not have those characteristics.⁹

One of the early adopters of farm to hospital was the University of Vermont Medical Center (UVMMC) in Burlington. In 2006, UVMMC (formerly known as Fletcher Allen Health Care) signed the Healthy Food in Health Care Pledge partly as a way of showing its commitment to provide fresh and healthy foods to patients. This pledge is an initiative of Health Care Without Harm, a nonprofit established in 1996 that works with the health sector in part to promote hospitals purchasing local foods. Today, UVMMC spends approximately 37 percent, or \$1.5 million, of its annual food budget on local foods. The medical center is accomplishing this by working with 70 different local farmers and producers throughout the region.¹⁰ In New England, 61 hospitals reported purchasing local foods in 2013.¹¹ Nationally, Health Care Without Harm is working with approximately 450 U.S. hospitals to change their food procurement practices to include more local foods in their dining programs.¹²

Farm-to-Institution Opportunities and Benefits

Institutional food purchasers—including K-12 schools, colleges and universities, and hospitals—play a significant role in creating and sustaining markets for local foods. The demand and buying power of these institutions can have a large impact on the local economy and support the development of stronger local and regional food systems. Tens of millions of Americans consume meals at institutions every day, which provides ample opportunity for U.S. farmers and ranchers to benefit from these markets. For example, Green City Growers in Cleveland is selling 75 percent of its 3 million heads of lettuce and 300,000 pounds of herbs to local hospitals and universities, in addition to other local markets.¹³

Farm-to-institution programs can also drive changes in the supply chain that have broader impacts for U.S. farmers and ranchers. Institutions provide an outlet for larger volumes of product than direct-to-consumer marketing outlets,



Milton Town School District (Vt.) showcases local items on the lunch line.

CASE STUDY: LOCAL PROTEINS MEET INSTITUTIONAL NEEDS, SUPPORT PRODUCERS

Institutional purchasers commonly cite price point as a barrier to purchasing local food, and this barrier especially applies to beef, as certain handling and processing techniques may come at a premium. But schools, colleges and hospitals that aim to provide customers with transparency in their supply chain and meet demand for specific product characteristics—like grass-fed, antibiotic-free and humane handling techniques—have managed to establish some mutually beneficial purchasing relationships with local and regional producers.

Institutions in New York and Vermont have looked to the use of culled dairy cows, mature cows that are typically sent to auction when they no longer provide value to a dairy farm and processed for the commodity rate of ground beef. If kept closer to home, culled dairy cows can be processed and sold to institutions at a more reasonable rate that poses less of a burden on tight budgets.

In addition, local sustainable seafood species like redfish, hake and dogfish are being prepared and served in school, college and hospital cafeterias throughout coastal New England states. Institutions can act as a conduit for a product that does not have a high level of consumer acceptability; this enables local producers to support sustainable production and distribution practices.

Public and private partnerships and regional steering organizations like FINE and Farm to Institution New York State (FINYS) are leveraging the power of institutions to support the local farm economy, create new markets and provide healthier options for the large segment of the population that institutions feed daily. Perhaps most notably, these practices illustrate the unique role that institutions play in providing an economic return to farmers and fisherman on a product that may not have otherwise had much value for the producer.

such as farmers markets and restaurants, and create new markets for products that may not yield much value on the commercial market. A common marker of this trend is the outlet for “B” sized apples, perfect for young school children’s lunch trays, or large volumes of lower-grade tomatoes, which are not marketable for consumer sale, but can be made into sauce in institutional kitchens. Farmers and ranchers have also noted that institutions offer a new opportunity to promote or market their farm or farm products to the greater community.¹⁴

As an emerging market for local foods, farm-to-institution programs offer a number of economic, community, social, environmental and health benefits. These benefits can be for the community as a whole or for individuals involved with the production, processing, preparation or consumption of local foods. The National Center for Appropriate Technology lists potential benefits of farm-to-institution programs for farmers and ranchers that include diversifying their customer base and creating a more stable market for their products. For communities, potential benefits of these programs include encouraging the consumption of healthier foods, strengthening local and regional economies, and increasing the engagement in and awareness of local food and agricultural production.¹⁵

A variety of studies have investigated these potential benefits and found positive results. For example, a study published in the spring of 2016 by the University of California, Davis examined the economic impact of local foods that included farm-to-school programs in the Sacramento region: It found that for every dollar of produce that local school districts purchased from Yolo County growers, \$1.82 of economic activity was generated.¹⁶ Other studies have also found farmers and ranchers earning a greater return by selling through direct and institutional markets.¹⁷

Farm-to-Institution Challenges

Even though farm-to-institution programs offer a number of opportunities and benefits, there are also challenges that exist in connecting local foods to institutional markets. From the perspective of the institutional food service director, additional agricultural production is needed to more fully support these markets with local and regional foods. Institutional markets require a large supply of product, and if the farm-to-institution market is going to grow, more agricultural production is needed.

In the 2015 Farm to School Census, schools that engaged in farm-to-school activities and those that did not both reported that their number one challenge to purchasing local foods was the ability to find year-round availability of key items (57 percent and 39 percent, respectively).¹⁸ A 2015 study completed by FINE, which explored farm-to-institution practices at New England colleges and universities, found similar results: Over 85 percent of the 105 respondents stated that a barrier to purchasing local foods was related to their availability throughout the year.¹⁹

Farmers selling local foods to institutions have stated that the barriers to accessing farm-to-institution markets include not being able to receive the price they need, not having relationships with these markets, and logistics related to delivery.^{20, 21}

From the processor and distributor perspective, a challenge to expanding farm-to-institution programs is the lack of infrastructure at local and regional levels. While the total number of local food markets has grown, including the total number of farm-to-institution programs, the infrastructure supporting local and regional food distribution to these new markets is often lacking.

A study looking at local food systems in the Pioneer Valley of Massachusetts suggests additional infrastructure is needed—such as new slaughter and processing facilities, storage facilities, and distribution and delivery systems—for improved aggregation to scale up.²² Similarly, as part of a FINE survey completed by food distributors in New England, scaling up supply, processing and packaging of local products was listed as one of the top obstacles to farm-to-institution programs.²³ Leaders in Michigan identified food system infrastructure as a priority need and, as part of the state's Good Food Charter, established a series of tiered goals for improving Michigan's local and regional food system infrastructure.²⁴ This is particularly relevant because of Michigan's high priority to strengthen farm-to-institution programs through its Cultivate Michigan initiative.

Policy restrictions are a final challenge to expanding farm-to-institution programs, particularly for schools. For example, the oftentimes higher price of local foods has been identified as a barrier by institutions. Increasing state and federal reimbursement rates for K-12 schools participating in the NSLP may allow for more schools to purchase local foods for use in their meals. Additionally, state and federal policies related to food safety, labor, and insurance and liability coverages may be barriers to expanding institutions' use of local foods.²⁵ Some of the USDA's programs may also not be fully relevant or available to local food farmers and ranchers, limiting support, market certainty and incentives.²⁶ Examining and updating federal, state or local laws and regulations to better support farm-to-institution programs may create additional market opportunities, spurring even greater economic and market impacts.

Investment and Policy Interventions Supporting Farm to Institution

As a result of farm-to-institution interest and growth, a number of different investment and policy interventions have been developed. Investment interventions range from those spearheaded by private corporations, foundations, and state and federal governments, while policy interventions vary from those at local, state and national levels. Regarding investment interventions, legislation passed by Congress (e.g., the Farm Bill) has supported federal government investing in the creation and development of local and regional food markets, including farm-to-institution programs.²⁷

As noted earlier, the USDA has a Farm to School Grant Program that invests up to \$5 million annually to support the use of local foods by K-12 schools. Other USDA grant programs include those run by the Agricultural Marketing Service (AMS), which support the scaling up of local and regional supply chains as well as the institutional procurement of local foods. These AMS grant programs vary in scope and purpose; one of the most notable for supporting farm-to-institution programs is the Local Foods Promotion Program (LFPP). LFPP grants are designed to support the development and expansion of local and regional food business enterprises to increase domestic consumption of, and access to, locally and regionally produced agricultural products, and to develop new market opportunities for farm and ranch operations serving local markets.

LFPP began in 2014, and since its inception, several of these grants have been awarded to support farm-to-institution initiatives. For example, in 2016 Ecotrust was awarded a planning grant (Establishing Markets for Local Proteins: Coordinating Supply to Meet Institutional Demand) to develop and test a framework for institution supported agriculture, a scaled-up version of community supported agriculture that is appropriate to institutions and other large-scale food buyers seeking to source local protein from regional farmers, ranchers and fishermen.²⁸

In addition to government support, many foundations have invested in groups and nonprofits working on developing farm-to-institution programs. Foundational support is often directed to a specific organization that is working on a particular aspect of farm to institution or in a particular region. In 2016, the USDA, the Appalachian Regional Commission, and the Delta

Regional Authority leveraged \$2 million from private philanthropic partners to help connect the supply of local foods from nearby farmers and ranchers with the demand for local foods in 10 urban areas. Farm-to-institution program development is a big part of this initiative and will be a key focus of the value chain coordinators hired to support this initiative.²⁹

The Sustainable Agriculture and Food Systems Funders (SAFSF) network brings together many foundations and the wider philanthropic community to work to strengthen local and regional food systems, including farm-to-institution marketplaces. Organizations that use grant-making or investment (more than \$50,000 annually) as a core strategy to fulfill their mission can become members of SAFSF; they are then eligible to participate in member-only

CASE STUDY: PRIVATE, NONPROFIT AND PUBLIC SECTOR ALIGNMENT

Corporations are also involved with supporting local and regional food systems and are seeing their investments provide benefits in expanding farm-to-institution programs. In 2015, the National Farm to School Network (NFSN) received \$1.5 million from the Walmart Foundation to start “Seed Change,” a tristate initiative that distributes mini-grants to schools, completes trainings for grant recipients, provides in-state networking opportunities and develops technical assistance programs in Kentucky, Louisiana and Pennsylvania with the goal of expanding the use of local foods in schools. The W.K. Kellogg Foundation also supported Seed Change and awarded a grant to NFSN to implement this initiative in Mississippi.³¹ As a result of the mini-grant investments, grantees leveraged an additional \$600,000 in support for farm to school.

Nearly all of Seed Change grantees reported that they felt the project had been successful or very successful at building awareness and interest in farm to school within their schools, and over 75 percent reported the same success in the community. Across Kentucky, Louisiana and Pennsylvania, schools worked with nearly 300 different farmers to purchase local foods, and 15 percent of the schools began procuring local foods for the first time. Local and state policy implementation, particularly adding farm-to-school language to school wellness policies, was also an achievement of this initiative.

meetings and receive discounted registration fees for all SAFSF events, including its Annual Forum and Policy Briefing.³⁰ Institutions themselves have even developed fundraising programs that include individual philanthropic investments, which may complement government and foundation grants, and provide financial support necessary to make systems and infrastructure changes that will enable them to purchase and incorporate more local foods into the meals they serve.

In terms of policy interventions, as of October 2014, 39 states and the District of Columbia had enacted legislation in support of farm to school. These policies, which vary by state, can include creating online statewide farm-to-school databases or directories that list participating schools, farmers and ranchers to facilitate local procurement; establishing farm-to-school coordinators in a state agency, such as a department of agriculture or department of education; and creating state funding in the form of a farm-to-school grant program, appropriations or additional school meals reimbursement.³²

Outside of K-12 schools participating in federal child nutrition programs, very few federal laws directly relate to encouraging the use of local foods by institutions. At the local level, many municipalities and groups of municipalities have set goals around local and regional foods through food policy councils, of which institutions play a key role. At the site level, many institutions themselves have set goals (i.e., passed resolutions or policies) with respect to the amount of local foods they seek to purchase for meal programs or dining services.

Conclusion

Since the 1970s, Americans have been eating more and more of their food away from home. Today, nearly 45 percent of all food purchased is consumed outside of the home.³³ Institutions are one place where much of this consumption is occurring. The total U.S. institutional food service market is estimated to reach \$72 billion annually.³⁴ As of the 2012-2013 school year, there were almost 100,000 K-12 schools and nearly 7,500 colleges and universities in the U.S., with most serving meals or having a dining services program.³⁵ Annually, more than 30 million children eat school lunches, adding up to nearly 5 billion meals served.³⁶ In 2014, the U.S. had nearly 6,000 hospitals.³⁷ The sheer number of institutions in the U.S. and the purchasing power they possess make them emerging markets for local foods.

Imagine a day when local foods are regularly served in the cafeterias of every K-12 school, college and hospital. Imagine a day when children, college students and hospital patients are able to receive daily access to local food at their school, college or hospital. Imagine a day that, because of this, thousands of new farms start up or expand. Achieving such a scenario could yield countless benefits for U.S. farmers and ranchers, individuals and households, and rural and urban communities alike. So how do we bring this vision to reality? What are the next steps and key investments that need to be made? There is obviously a lot of work to be done. Let's continue to roll up our sleeves and dig in. ■

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Investing in Innovation: Philanthropic Support of the Local Food Movement

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Introduction

Funding in the food sector has seen a dramatic transformation in recent years. From a legacy of traditional grant-making focused on hunger relief and nutrition, today's philanthropists and investors are using many innovative tools to catalyze change across the entire food system.

This is true of both large institutional foundations and smaller family foundations. The Rockefeller Foundation's new YieldWise \$130 million grant initiative aims to cut food loss and waste by half over the next seven years by engaging public, private and nonprofit participants globally to innovate solutions. Various family foundations are using investment and grant capital to test systems in regenerative soil growth and grass-fed beef production. Social entrepreneurs around the world are attempting to create new aquaculture systems, more efficient irrigation technology, alternative protein sources and valuable resources from waste products.

As the world's rapid population growth and middle-class expansion in China and India put increasing pressure on sources of nutrition and as we increasingly understand the relationship between climate change, environmental degradation and human health, there is an increasingly urgent need for coordinated efforts across policy decisions, philanthropic endeavors and investment capital.

Arabella Advisors is fortunate to work with a number of foundations and philanthropists who are committed to addressing issues in the U.S. food system. Many are focused on a local area and creating food security through the support of food hubs, organic farms and business accelerators focused on food and agriculture. Others, in partnership with corporate foundations, are investing in municipal waste policy and infrastructure. Still others are seeking to catalyze change through early stage investments in technology-based scalable solutions in agricultural technology and consumer behavior. Billions of dollars are finding their way into this sector, and billions more will be needed to effect lasting positive change. More importantly, models for success are needed to demonstrate strategies that work.

The following work provides an example of a thoughtful, coordinated group of entities working together to advance good-food strategies. This joint effort is unique. It has taken insights gained from operating a regenerative ranch and applied them to targeted grants and venture investments in order to effect change at the systems level. The trend toward approaches like TomKat's is encouraging, because providing a more sustainable, accessible and nutritious food system will require dedication from entrepreneurs, philanthropists, governments and investors.

TomKat Foundation: The Fight for Good Food

We set up TomKat Foundation with the goal to transform the critical systems that we depend on for a healthier and more prosperous population and planet. We decided to focus on the interconnected systems of money, energy and food. In the arena of what we call Good Food, we seek to work with all key stakeholders—bringing together the interests of agriculture, the environment, equity and human health—to create a sustainable food system for the next 100 years. The tools that we use include starting our own social enterprises, providing grants to nonprofits with which we partner on strategies and solutions, and investing equity capital in early stage companies through our impact investing team.

We are optimistic that lasting solutions to global climate change, the degradation of our ecosystems and feeding ample good food to all people can be achieved—but we have limited time to implement these solutions and must act quickly. Our philanthropy is focused on identifying the highest impact opportunities to drive systemwide change with our capital. Supporting regional food systems is a component of our strategy, but we've narrowed our priorities as follows:

- shift large demand toward environmentally healthy food produced in a just and resilient manner (the “big buyer” strategy);
- demonstrate the environmental and economic benefits of sustainable animal agriculture (the “making the case” strategy);
- remove obstacles to processing and distribution (the “aligned infrastructure” strategy);

- increase access to healthy and affordable food for underserved communities (a development paradigm based on equity); and
- incentivize large data and ideation collectives to crowdsource even more promising solution sets (the data, practice and ideation consortium).

Going in Whole Hog: Our Decision to Become a Producer

To experience in real time the challenges and opportunities of operating in the new economy, we decided to start our own production operation (as well as a bank). We founded TomKat Ranch Educational Foundation, which sits on a 1,800-acre working cattle ranch in Pescadero, Calif., on the San Mateo Coast, three miles inland from the Pacific Ocean. The ranch provides healthy food on working lands in a way that sustains the planet and inspires others to action. It serves as a learning laboratory for experimenting with regenerative grazing, a form of grazing that blends conservation and production ranching to optimize carbon sequestration, water quality and availability, biodiversity, nutrition, animal welfare, and profit. The ranch's beef product is sold through our social enterprise, LeftCoast GrassFed.

TomKat Ranch Educational Foundation is able to play a unique role as organizer, convener, promoter and marketer, taking advantage of financial resources that can fund experimentation, an ideal location close to consumers and producers, and a broad network of collaborators and thought partners. We aim to de-risk the trial and adoption of promising practices, and launch new agriculture-related information services that distribute economic and decision-making power. What the ranch has experienced at the local level in Pescadero has informed TomKat Foundation as it looks to make targeted, strategic grants to effect change at the state, national and systems levels. The ranch's learnings have also influenced our investing, which is done through Radicle Impact Partners.

Grants to Key Partners

As the ranch's small team learns by doing, we turn those lessons into a road-map for identifying issues that can be addressed and resolved through targeted,

strategic philanthropy to aligned nonprofit partners. The following are three examples of where we have done so:

Point Blue Conservation Science and the Rangeland Monitoring Network

From the start of the ranch management, we decided to partner with a conservation science organization in order to improve the scientific rigor behind our decision-making at TomKat Ranch. We knew we wanted to measure the health of the ecosystem and social equity to inform our decision-making. With this in mind, TomKat Foundation engaged Point Blue Conservation Science to provide an ecologist based at TomKat Ranch and, more recently, to collaboratively launch the Rangeland Monitoring Network. Eventually, we hope this will serve to broaden the value proposition of regenerative grazing by making the environmental case for sustainable animal agriculture in a way that can help generate payments to producers for the environmental benefits they provide.

Point Blue's Rangeland Monitoring Network seeks to preserve the ecological value of rangelands and to recommend conservation actions that enhance their function for people and wildlife. To accomplish this, it seeks to understand and measure the ecological function of rangelands and to increase communication and collaboration among managers across California. Point Blue provides standardized yet flexible ways to capture key components of ecological function and it offers landowners data and scientific guidance they can use to make management decisions.

Open to anyone managing or working on rangelands, the network published a handbook of methods and developed an online data entry system. Many of the monitored sites are working rangelands where conservation practices are being implemented by private landowners through the Natural Resources Conservation Service's Conservation Planning process as part of Point Blue's Rangeland Watershed Initiative.

Farm to school: from the community of Pescadero to the state of California

Another lesson learned from the TomKat Ranch Educational Foundation came via our ongoing efforts at being a thoughtful, caring member of the Pescadero community. An early ranch project assisted the local school district in transforming its school meal program from one that was expensive,

outsourced and unhealthy to one serving food that is healthy and fresh, and supports the local economy. From this work, TomKat Foundation saw a path to help schools and other large public institutions shift their buying toward local and regional food.

Given the magnitude of school food procurement in California, we engaged the Center for Ecoliteracy—which had been a primary consultant to the initial Pescadero school food work—as a grantee and thought partner in shifting large public demand toward environmentally healthy food produced in a just and resilient manner, while at the same time providing healthier meals to children eligible for free or reduced-cost lunch.

TomKat Foundation’s engagement with the Center for Ecoliteracy’s California Food for California Kids (CFCK) initiative works at multiple levels of scale: locally, regionally, nationally and internationally. We intend that this work provides ideas and inspiration for communities seeking to incorporate fresh, seasonal food in school meals, preserve the environment, promote local and regional economies and agriculture, and teach children where their food comes from and how it reaches their tables.

To date, the initiative has included three California-wide conferences, engagement with individual districts and networks of districts, strategic consultations, and the creation of a variety of resources. Resources that have been developed through this initiative include *Cooking with California Food in K–12 Schools*, the acclaimed cookbook and professional development guide; *School Meals Featuring California Foods*, which is a book of recipes scaled and tested for reimbursable school meals; and *California Tastes Amazing*, which is a book of CFCK recipes in family-size portions designed for cooking with children at home.

This work has also led to the launch of California Thursdays, a collaboration between the Center for Ecoliteracy and participating school districts to serve healthy, freshly prepared school meals made from California-grown food. At this writing, the network includes 58 school districts, which together serve over 283 million meals annually and represent nearly a third of the school meals served in California each year.

Equity Investing for Radical Impact

TomKat Foundation further amplifies its mission through Radicle Impact Partners, our early stage impact venture team. Radicle Impact invests equity

capital in young companies that promote a regenerative, accessible and nutritious food system, clean energy, and fair and transparent financial services. Part of our theory of change is that the fabric of business needs to change for widespread change in our food system. So while Radicle Impact is “impact first,” we seek to identify opportunities where the financial success of the business creates positive social and environmental outcomes. We measure outcomes that include improved resource efficiency, increased accessibility of food and better incomes for small farmers.

Given the growing consumer demand for food that drives these outcomes, we’ve found there are good business cases for impact-oriented companies. Through Radicle Impact, we seek to demonstrate that you can achieve or beat market rate returns while generating positive social and environmental outcomes. If we can show that you don’t need to trade off impact and returns, we believe we can be part of a movement to help catalyze more capital to enter the impact investing space.

Radicle Impact is a small team, but it leverages relationships with TomKat Ranch and TomKat Foundation, as well as other impact investors, food investors and foundations to identify and track food markets, understand technology trends, and source deals. Most of our investments are in syndicates that include other impact investors; many also include traditional venture capitalists as well. Deals are typically structured as preferred equity or convertible notes.

Our portfolio includes companies in which our key impact priorities intersect with viable, scalable business models. In the following examples, we show how we identified businesses that can support the following three priorities that we set out earlier in this chapter: aligned infrastructure, a development paradigm based on equity, and the big buyer.

The first two examples, Local Bushel and LocoL, illustrate the potential for venture investments to support regional food systems. Our third example, Ripple, is not a regional food investment, but illustrates how it is possible to engage with industrial supply chains if you can manage to engineer for better outcomes.

Local Bushel and aligned infrastructure

Our first example is a company called Local Bushel, based in New York City. Founded by Yusha Hu in January 2014, Local Bushel is an e-commerce platform

that helps restaurants buy fresh produce from local farms by handling all logistics, including delivery and quality control. Local Bushel removes a key obstacle for New York farmers in distribution, offering them turnkey logistics for direct access to New York City restaurants.

We were attracted to the company because of its impact potential to bolster local producers while broadening access to high-quality local food at a price and convenience on par with commercially distributed food. The company is also committed to supply chain transparency, which we believe is an important ingredient in changing the way people think about food. The founder's vision is to have her company be a tool in the fight against climate change: By making it easy for chefs to source locally, you can reduce their reliance on commercial farms that may have negative environmental consequences like pesticide use and soil degradation. For Yusha, it's about climate change.

From a business perspective, Local Bushel has the potential to be a large and impactful business. You have the right ingredients: an impatient and practical entrepreneur solving a true pain point in a big market with attractive economics. The initial customers are midsize restaurants in New York, where the annual fresh food purchase volume is over \$1 billion. In its pilot, the company had shown promising traction, margins and retention.

Once the model is solidified in New York, where Local Bushel is currently sourcing from 60 farms and selling to 100 food service operations, it can be replicated in other markets. We're excited about Local Bushel's potential to produce a win-win: access to high-quality food for chefs, increased sales for small farmers and positive environmental outcomes.

LocoL and a development paradigm based on equity

Our second example is a company called LocoL, based in Los Angeles. LocoL was founded in 2015 to be a scaled alternative to the fast-food market, focused on creating high-quality fast food with high-road labor practices at prices that compete with McDonald's and Burger King.

The vision is to improve on almost every aspect of the fast-food experience—the healthiness and taste of the menu, the sustainability of the supply chain, the in-store customer experience, and the wages, working conditions and career development options for all employees—while keeping the pricing at \$4 for a burger and \$7.50 for a full meal.

We were attracted to LocoL for its potential to address one of our key impact priorities: Increase access to healthy and affordable food for underserved communities. We know the difficulties in pairing this priority with food that is healthy and good for the planet. If the company is successful, it will improve the healthiness of American diets and kick-start long-awaited equitable development with critically underserved communities, all the while creating a nonindustrial fast-food supply chain that is sustainable and local. We also hope it counters the cynicism of those incumbent voices asserting that an equitable, sustainable food system is not feasible and therefore should be abandoned. For the founders, the idea of “local” is about both sourcing local food and building a business in a distributive and just manner that fits the local context.

From a business perspective, LocoL also has the potential to be a large and impactful business. The founders combine zeal, community credibility and practicality in award-winning chefs Roy Choi and Daniel Patterson, and food and real estate entrepreneur Hanson Li. For the fast-food sector, the key metrics we look for are sales per square foot and the cash-on-cash return of an investment in a store (which points to margins, payback period and same-store growth). Because we were investing at an early stage, however, we didn't have all of these numbers, so we needed to develop a thesis on why the economics could pencil out. Our thesis rests on building an establishment, together with a community, that focuses on improving quality relative to peers while maintaining control of operating costs. While certain costs may be higher (sourcing costs, higher wages), real estate costs have the potential to be lower in LocoL's target neighborhoods, and technology (such as ordering iPads) can be applied to improve efficiencies.

The first LocoL restaurant opened in January 2016 in Watts. Because it was the first sit-down restaurant in a community of 50,000, we thought there was a good case for high-volume traffic. We also were impressed by the amount of effort the founders dedicated to building community support: 1,500 people showed up for opening day. LocoL is now open in Oakland as well, and the management team is busy perfecting the model in preparation for expansion and more widespread national impact.

Ripple and the big buyer strategy

Our third example is Ripple Foods, based in Emeryville, Calif. Founded by Method Products co-founder Adam Lowry and clean technology executive Neil

Renninger, Ripple has created a nondairy milk based on pea protein isolate that closely resembles low-fat milk in appearance, mouthfeel and protein content. The TomKat Foundation's priority impact area that Ripple addresses is to shift large demand toward environmentally healthy food produced in a just and resilient manner. Ripple milk was designed to be healthier—with 1.5 times as much calcium as milk and 8 times as much effective omega-3 as conventional low-fat milk with the same protein content. Its environmental footprint is superior to both dairy and almond milk, the latter of which represents two-thirds of the alternative dairy market.

Yellow peas, from which Ripple milk is made, also offer environmental benefits. Yellow peas are frequently grown without irrigation and have yields comparable to almonds; they take 85 percent less water to grow than almonds and emit 69 percent fewer greenhouse gases. Relative to dairy, Ripple's milk uses 95 percent less water and emits 76 percent fewer greenhouse gases. We are monitoring for any unintended consequences—like pernicious practices associated with monocrops—that may threaten to emerge as the supply chain scales up.

From a business perspective, we are excited about Ripple's potential to create a large and impactful business because of the attractive market dynamics, seasoned leadership and promising initial traction. Ripple's first market is the rapidly growing alternative dairy market. (Estimated at \$2 billion in the U.S., this market is expected to climb more than 15 percent per year through 2019.) Ripple's experienced leadership team has historically demonstrated an ability to develop new processes, implement them at scale, build brands and win in the market space for consumer packaged goods. Ripple was one of the first companies to secure national contracts with both Whole Foods and Target before it had a ready-to-go product.

While the impact in Ripple's case is not about supporting regional food systems immediately—the pea protein isolate is currently sourced from France—we believe that the company provides a viable path to shift the industrial supply chain for the better. More broadly, if we're going to fix the food system, we can't ignore the levers that we have in the industrial supply chain. If Ripple is successful in creating a strong brand, it has potential to shift consumption to food that is healthier for people and the planet.

Making Stone Soup

In Julia's introduction, she reminded us that enabling a more sustainable, accessible and nutritious food system will require dedication from many—entrepreneurs, philanthropists, governments and investors. Like the travelers in the old fable of Stone Soup, we only have so much we can bring to the pot by ourselves. One of the biggest benefits of our partnerships at TomKat has been the opportunity they have afforded us to learn from and work with others. We've been inspired by the producers, foundations, investors, technology providers, chefs, civil servants and many others with whom we've sat in the barn and ruminated on the future of food systems.

As we laid out previously, we have been clear in our five key strategies and intentional about the way we learn and earn a seat at the table. Our overarching approach has been to build an ecosystem. We know that we're better together; as we work with nongovernmental organizations, entrepreneurs and other funders, we're hopeful that the result will transform our work into a nourishing meal for all. Out of this spirit of collaboration and the belief that the challenges we face are much greater than any one of us alone can address, we hope you will join us as we make our way onward! ■

Proving the Opportunity: Community Development Financial Institutions and Food Systems Financing

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In 2001, public health advocates in Philadelphia identified a lack of grocery stores in low-income communities with a higher prevalence of obesity and diet-related chronic diseases.¹ In an effort to address the newly described public health crisis, advocates, grocers, policymakers and Reinvestment Fund, a community development financial institution (CDFI), came together to understand the market conditions and other barriers that deterred grocery store development in Philadelphia neighborhoods. It quickly became evident that flexible sources of capital were needed to meet the unique financing needs of supermarket operators who wanted to operate in low-income communities, where credit needs are often unmet by conventional lending institutions. Long known for financing high-impact projects that meet community needs, create new jobs and leverage public investment, Reinvestment Fund was tasked by the commonwealth of Pennsylvania to create a financing program designed to increase the number of supermarkets and grocery stores in underserved communities across the state.

Since then, federal, state and local healthy food financing initiatives—often called HFFI—have been having a big impact on the equity of the nation’s food systems across the country. Since 2011, the federal government has distributed \$168 million in grants to 81 CDFIs and community development corporations located in 30 states, leveraging private capital and financing a diversity of projects in rural and urban low-income communities: full-service supermarkets, food hubs, mobile farmers markets, urban farms and food business incubators. In 10 states and four cities, local healthy food financing programs are up and running, and advocates are successfully appealing to state legislators across the country to authorize and fund similar programs in their communities.

At first, the HFFI movement largely focused on retail investments due to the extraordinary success of the Pennsylvania initiative, which quickly became the model for similar financing programs across the country. However, CDFIs soon realized that economic development opportunities for low-income communities and healthy food access went beyond just grocery stores and supermarkets. It is also about the set of interconnected activities or sectors that grow, manufacture,

transport, sell, prepare and dispose of food. This food system represents a great variety of enterprises with varying capacities and financing needs.

In markets with active local and regional food ecologies, a handful of CDFIs have long taken the broader approach. For example, food systems financing has been part of Coastal Enterprises Inc.'s (CEI) lending from its inception in 1977. Its very first deal was a fish processing cooperative on the waterfront in Boothbay Harbor, Maine. Many others have entered the fold in recent years after starting out with food retail financing. Just as CDFIs responded to the challenge of food access, knowing that fractured food systems impact low-income communities, more CDFIs are now delivering capital to build strong and robust food systems. CDFIs are expanding both their thinking and activities to address capital gaps along the food system—from providing working capital to farms to financing healthy food retail. And with each opportunity, CDFIs are doing what they do best, matching the right capital and related technical assistance to the enterprise.

CDFI interventions emphasize food enterprises that support access to affordable and healthy food for all, including low-income families. They serve as a resource for viable food systems enterprises that are overlooked by traditional capital sources. Increasingly, targeted CDFI-managed capital funds like the Michigan Good Food Fund are also focusing on the breadth of the food system. By offering both capital and technical support, these efforts give food systems enterprises the opportunity to develop, grow and successfully contribute to the local economy.

CASE STUDY: MICHIGAN GOOD FOOD FUND

The state of Michigan continues to rank as the second most agriculturally diverse state in the country; food and agriculture contribute \$101.2 billion annually to the state's economy, a nearly 15 percent increase from 2010 to 2014.² Despite this, more than 1.8 million Michigan residents—including 300,000 children—live in lower-income communities with limited access to nutritious fruits and vegetables. More than 30 percent of Michiganders are obese³—the second-highest rate of obesity in the Midwest⁴—costing the state an estimated \$3 billion annually in related medical costs.

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CASE STUDY: MICHIGAN GOOD FOOD FUND

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The Michigan Good Food Fund is a public-private partnership loan fund created to fuel entrepreneurship that grows, processes, distributes and sells healthy food by providing financing and business assistance to “good food” enterprises that reach low-income and underserved communities. Initiated in 2013 with a \$3 million federal HFFI award to Capital Impact Partners, the fund received additional investments from The Kresge Foundation, the Max M. & Majorie S. Fisher Foundation, Northern Trust, the W.K. Kellogg Foundation and Capital Impact Partners. Support from diverse investors allows the fund to provide business assistance and grants in the form of catalytic investment awards to larger-scale investments and financeable activity within a near-term horizon.

The fund aims to support Michigan’s entire good-food chain to finance good-food entrepreneurs across the regional food supply chain. Over 100 inquiries received by the fund in its first year represent all areas of the food system—from processing to retailing. It is also intended to leverage unique Michigan assets, including innovations such as Michigan’s Supplemental Nutrition Assistance Program (SNAP) incentive program, Double Up Food Bucks and the goals of the larger Michigan Good Food Charter. Finally, the fund brings a serious commitment to advancing racial and social equity in terms of both access to capital and the benefits its investments generate.

The fund’s core partners include Capital Impact Partners as fund manager; Fair Food Network, which leads outreach and communications and provides business assistance as well as pipeline development retail and small-batch processing projects; and Michigan State University Center for Regional Food Systems, which leads business assistance and pipeline development for agricultural production, processing, aggregation and distribution projects. W.K. Kellogg Foundation is the fund’s lead supporter and investor.

The fund provides a variety of financing products from direct loans to New Markets Tax Credits (NMTC). It also supports an intermediary lending program, allowing smaller CDFIs to receive capital to fund smaller loans ranging from \$2,500 to \$250,000. The fund bolsters lending with targeted business assistance to help entrepreneurs grow their ventures and build a pipeline of investment-ready enterprises to jump-start good-food projects. Business assistance coordinated by the fund’s partners includes one-on-one consulting, workshops and collaborative offerings with partners. The fund also connects enterprises with additional resources through its referral network.

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CASE STUDY: MICHIGAN GOOD FOOD FUND

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The fund aims to increase access to healthy food, improve the health of children and families across Michigan, and spark economic development and job creation in the communities that need it the most. Central to its goals are racially and socially equitable access to food, jobs, ownership and flexible investment capital; environmental stewardship to encourage sustainable practices; and an emphasis on sourcing and supplying locally grown and regionally produced foods. A third-party firm has begun a two-year evaluation effort to measure progress toward these goals. Among outcomes to be quantified include determining if:

- residents experience easier access to fresh and affordable foods,
- residents change the type or quality of food purchased,
- residents have access to more quality jobs, and
- investments contribute to the local tax revenue and real estate values of the area.

For many CDFIs, the groundwork laid by healthy-food retail financing efforts has provided a ready foundation to build upon. CDFIs already working in the food systems sector, and those who are looking to expand their efforts are collaborating to share knowledge and best practices and are coming together to co-lend. Reinvestment Fund's ReFresh network is one such example that has brought together 19 CDFIs committed to improving healthy food access. CDFIs are also combining efforts to advocate for increased CDFI involvement in the food systems sector and continued public sector support to strengthen local food economies. These partnerships and networks are helping to maximize access to capital to address the need for financing and technical assistance.

Challenges

Capital needs across the food system are as diverse as the food system itself. Farmers primarily need access to land and farm equipment. Processors and manufacturers, depending on their sector, need access to commercial real estate and processing equipment. Distributors often need more cold storage and trucks. Each sector needs more working capital.

For early stage businesses with high margins or businesses with significant growth rates, raising equity capital is an option. However, early stage businesses with modest margin potential and entrepreneurs who lack business planning skills have more trouble accessing capital. Although these businesses may find innovative ways to contribute to the food systems economy, they are usually not in the position to take on conventional financing, especially if their leadership team lacks strong financial skills. The lack of entrepreneur development and business discipline is among the biggest challenges food systems enterprises face.

For many smaller operations, the lack of entrepreneurs with strong business skills is a serious impediment to attracting debt capital. As result, many are unable to effectively communicate how the addition of debt capital will significantly improve their cash flow in a way that enables them to easily pay off the loan. The reality is that most entrepreneurs in the food systems space manage small operations. For example, it is estimated that of the 2.1 million farms currently operating in the U.S., 98 percent are family-owned and 89 percent have gross cash farm income of less than \$350,000.⁵

CASE STUDY: GARCIA BROTHERS FARM

The Garcia Brothers Farm in Salinas, Calif., produces a variety of certified organic vegetables, including kale, chard, tomatoes and strawberries. The farm began in 2009 when Octavio Garcia invited his younger brother to join him in starting a farm. Octavio was only 16 years old, and their mother signed their first land lease at farm business incubator Agriculture and Land-Based Training Association (ALBA). When Octavio learned about the program, there was no looking back.

The brothers' experiences as farmworkers prepared them for the demands of tending crops requiring many long hours. In their second year of operations, the need for capital became evident if the brothers wanted to continue to sustain and grow their farm. Octavio and Francisco turned to California FarmLink, a CDFI. Given his age and limited business record, Octavio knew he needed a lender who could be flexible and offer technical support. California FarmLink provided operating capital starting at \$10,000 and helped the Garcia Brothers build a strong repayment history.

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CASE STUDY: GARCIA BROTHERS FARM
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One of the more lucrative crops in the region, strawberries, is both capital-intensive and risky. The cost of establishing a strawberry field is about \$10,000 per acre. This is done in late autumn, several months before sales begin in the spring, depending on the weather. With loans that offer interest-only payments until sales began, Garcia Brothers Farm eventually grew its borrowing to \$100,000 annually. During this time, Octavio also invested in his education, getting a degree in crop production management from Fresno State, while his brother Francisco managed day-to-day operations and helped grow the farm from 1.5 acres to 8 acres over four years.

Octavio and Francisco knew that one day they would need to find new land. Octavio started by obtaining assistance from California FarmLink in preparing cash flow projections and loan applications and, eventually, in seeking land and negotiating a land lease. Soon he was working with program staff to review land listings and working with a partner, Kitchen Table Advisors, to receive additional in-depth business technical assistance. Given the risks involved, another partner, Northern California Community Loan Fund, began participating in making larger loans to Garcia Brothers.

Today, Octavio and Francisco own a strong business that has created and retained 11 jobs. They are growing healthy food in environmentally responsible ways, a source of pride for them. The Garcia brothers also join the many Latinos who are reshaping California agriculture. California FarmLink helped them find and get established on new ground, and they now operate on 15 acres. With a solid lending relationship, FarmLink had the confidence to deepen its investment in helping to relocate their operation. Relocating a farm operation poses challenges, and it is difficult to anticipate exactly how production and operations will be affected. FarmLink continues to work with Octavio and Francisco, alongside Kitchen Table Advisors, to help them overcome the challenges associated with relocation and ultimately achieve business stability.

Another considerable challenge is the incredible variety of models of food systems enterprises, many with unconventional distribution channels and alternative retail outlets. Consequently, there are few comparable enterprises for lenders to look at, making it difficult to understand the financial metrics and operations of the business. These constraints make it harder for businesses to get the credit they need even if other attributes are in place, like a strong management team,

collateral, etc. Other challenges include the seasonality associated with production; in some regions, language and cultural barriers also exist. Additionally, many of the credit needs that exist in the food sector are for small amounts that are less efficient for traditional lenders to underwrite. A 2012 survey by Reinvestment Fund of 25 food system lenders and investors throughout the Northeast revealed that the average transaction size for 21 of the 25 was less than \$200,000, and 10 of those reported an average transaction size of less than \$50,000.

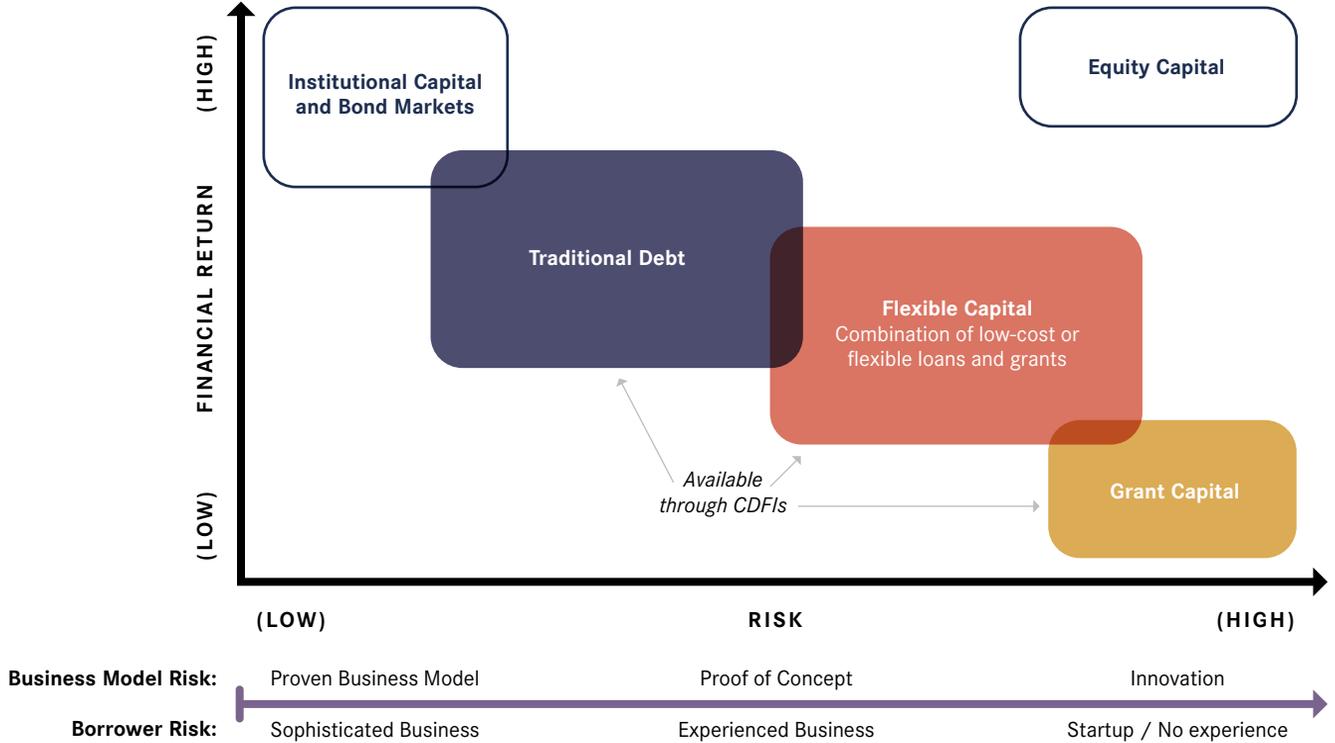
Access to capital is dependent on an enterprise's business model and the borrower's experience, as depicted in [Chart 1](#). For example, Honor Capital is a veteran-owned business that is working to build communities by improving access to healthy food. While it was pursuing a proven retail business model, given that the borrower was a startup, the business was turned down multiple times by traditional lenders when it sought to finance its first grocery store. Honor Capital then approached a CDFI, South Carolina Community Loan Fund (SCCLF), which extended to the startup company with no operating history a \$600,000 loan to open its first grocery store, located in a food desert in Columbia, S.C. The store celebrated its first anniversary in May 2016, and Honor Capital has since gone on to open three new grocery stores, including two in Kansas using CDFI financing.

While [Chart 1](#) captures the risk associated with the evidence of the business model and borrower's experience, many additional factors—such as management strength and location—can also factor into an enterprise's ability to access capital. Notably, a project's impact on the local community, economy or environment is not easily captured within this frame. Businesses can have high impacts regardless of the caliber of the model or experience.

CDFI financing is dictated mainly by the type of capital, tools and capacity they have at the time. CDFIs are adept at raising specialized capital that can support entrepreneurs along the business continuum, from startups to sophisticated business models. For startup or early stage enterprises, CDFI financing can include grants, flexible capital (a combination of low-cost debt and grants) and traditional debt.

As new models of food access and food system companies arise, grant capital can be crucial for the incubation stage. As enterprises establish a track record and prove their concept or model, they are able to access debt to support their business growth. CDFIs excel at engaging with these transitional businesses and can

CHART 1
Capital and Risk



be a source of low-cost debt. In most instances, these financial products are combined with rigorous technical assistance aimed at ensuring that potential borrowers can prudently manage the debt they need to grow their business. As CDFIs build the sector's capacity for debt, they deepen their knowledge of the sector's unique capital needs and, through experience, how to lend to them.

CASE STUDY: OCEAN APPROVED

With the exception of lobsters and scallops, most other fisheries' landings in Maine have declined or have experienced full closures due to very low fish and shellfish stock levels. As a result, small fishing-dependent communities have struggled with maintaining household earnings from full-time fishing.

On the other hand, marine aquaculture is an expanding food production sector for Maine and presents alternative opportunities to families whose intention is to make a living from working waterfronts. For perspective, a current annual dockside value for farmed Maine salmon, oysters and mussels is estimated at about \$130 million. The recent advent of techniques to farm new species, including edible marine plants, has stimulated investment in nascent companies that are pioneering the production, aggregation, processing and distribution of sea vegetables. Kelps are the largest and fastest growing of these plants; with the successful transition to cultivation, they are becoming highly nutritious ingredients in salads, slaws, soups and beverages.

Ocean Approved LLC is a Portland, Maine-based company that was first to develop inexpensive hatchery techniques for settling kelp spores on rope, to grow kelp successfully as a wintertime crop in nearshore coastal waters and to refine blanching, cutting and freezing techniques that enhance the appearance of a natural green color to the food. It was helped by grants from the Maine Technology Institute, National Oceanic and Atmospheric Administration's Small Business Innovation Research Program, and the U.S. Department of Energy's Advanced Research Projects Agency-Energy, and with three rounds of financing from CEI, which in part leveraged commitments from private investors.

In the developmental stages, Ocean Approved needed an operating loan to perfect the farming of kelp. When it realized that optimal growth would come from ready-to-eat product forms, the company adopted a strategy to develop new food products with its own

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branding. To transition from a research and development sea farm to a fully integrated food producer takes capital. CEI provided a \$40,000 operating loan in 2012 and another loan of \$150,000 for equipment and operations in early 2014. In that time, the company attracted the interest of four private investors; with significant cash contributions, they purchased about half the shares of the company.

After market trials, Ocean Approved settled on three products for which sizable demand was identified: kelp slaw, kelp salad and kelp cubes as ingredients for smoothies. In May 2016, CEI was the lead investor in a \$500,000 equity purchase of 25 percent of the company stock. Together with the Maine Venture Fund and Island Institute, CEI provided patient capital for the business to expand and automate production, and hire a sales force to distribute the line of Ocean Approved products nationally.

Over the course of four years, CEI was a stable and dependable financing partner for Ocean Approved, first providing a microloan, then a sizeable term loan and finally leading an investor team in a placement of patient equity. These investments encouraged the development of kelp hatchery and farming techniques as well as the purchase and operation of seaweed processing equipment, which expanded production and lowered unit costs of labor while maintaining consistency and quality in the brand. Having sector specialists aboard enables CEI to recognize and address the critical bottlenecks of local food systems growth.

By the end of 2018, Ocean Approved will increase its sales tenfold while cutting production costs to nearly half of the former level. It will expand distribution to 20 national buyers and distributors, increase in-house employment by 10 people, and contract with an additional 5 to 10 sea farm suppliers of fresh kelp, which represents a net gain of about 20 seasonal working waterfront jobs. The innovations demonstrated by this company drive the diversification of Maine's seafood sector from natural harvest to responsible farming.

Opportunities

In many ways, the CDFI financing model that combines capital with technical assistance is an ideal match for food systems enterprises. CDFIs excel at collaborating with emerging enterprises, often working closely with potential borrowers to help them ready their business operations to take on investment.

Potential borrowers connect with CDFIs at different points in their search for capital. For those who are more financially savvy, CDFIs are often a critical source of gap financing. The enterprise may have secured investments from a traditional lender and/or have personal capital to invest; however, there may be a gap in funding that keeps the project from moving forward. CDFIs can offer flexible financing that can often be subordinated to senior debt and have a high loan-to-value ratio. In such instances, the potential borrower often accesses CDFI financing after unsuccessful attempts to fill the gap with traditional lenders as described in the earlier example of Honor Capital.

In some regions, where CDFIs have established reputations as agricultural lenders, potential borrowers connect with CDFIs first as they begin planning their capital projects. For example, CEI and California FarmLink are well regarded in their trade areas for their expertise in lending to local farms and other food systems enterprises. CEI even occasionally supports projects coordinated in-house, such as bringing specialized scallop technology to Maine from Japan or developing new markets for Maine farmers through culturally appropriate crops. This commitment to being a trusted resource has cemented their status as respected lenders and makes them a frequent first contact for potential borrowers.

While CDFIs may encounter a wide range of food systems enterprises, viable deals are identified using a broad range of methods:

- **Local outreach:** CDFIs are typically deeply engaged with local communities, and the relationships that they establish from their work become an important referral source for viable deals. This engagement often includes stakeholders, such as local governments, universities, hospital systems, economic development councils, healthy food advocacy groups and community development corporations.
- **Referral networks:** Beyond local communities, CDFIs actively build referral networks that are sector specific. For food systems projects, these referral networks include partners such as the U.S. Department of Agriculture, Opportunity Finance Network and other CDFI networks, wholesalers, and retailers (who refer their vendors).
- **Technical assistance:** Most CDFIs invest time, in the form of technical assistance, to get potential borrowers to a point where they are ready to manage

debt. Such technical assistance can be in the form of one-to-one support or workshops that bring together multiple participants. Some CDFIs go a step further with formal programs designed to nurture and strengthen viable projects. For example, SCCLF offers a robust technical assistance program for healthy food entrepreneurs called Feeding Innovation. Feeding Innovation consists of 8 to 10 weeks of courses offered through an entrepreneurial training program, followed by a live pitch to a panel of judges. A \$12,500 seed capital award is made to the healthy food project that best meets the mission of the program and has a viable plan.

- **Expertise and smart data:** With a track record of working with smaller, independent entrepreneurs, CDFIs have built their expertise in understanding traditional and alternative markets. They have also established the capacity to understand unique borrower profiles and developed specialized types of tools to understand viability and make good loans. One such example is Reinvestment Fund's Supply Chain Matrix (SCM), which uses data to identify the gaps and bottlenecks that exist within food systems.

CASE STUDY: SUPPLY CHAIN MATRIX

Data-driven decision-making is at the heart of Reinvestment Fund lending activity and informs strategic deployment of capital across our diverse loan portfolios. In the same way that Reinvestment Fund's Market Value Analyses inform investments in affordable housing and commercial real estate development, information about local food systems informs investments at different points in the farm-to-table network. Understanding where gaps and bottlenecks exist within food systems provides critical insight for CDFIs committed to bringing efficiency and sustainability to local food systems.

In 2013, Reinvestment Fund initially developed the SCM to better understand the meat supply chain in Southeastern Pennsylvania. The meat supply chain starts at the farm but can travel through multiple pathways on the way to consumers. The SCM focuses on relationships between cattle producers and processors. Producers (i.e., farms and feedlots) sell live animals to first-stage processors (i.e., slaughterhouses and meatpackers). Slaughterhouses

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CASE STUDY: SUPPLY CHAIN MATRIX

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and meatpackers sell dressed animals to second-stage processors (i.e., post-slaughter processing facilities) that create value-added meat products.

The SCM is a theoretical model that represents buying and selling relationships between cattle producers and processors to explore challenges and opportunities within the food production system. A normative assumption that guides the SCM is that farmers prefer to sell their cattle to processors who are as close to their farms as possible and that processors prefer to satisfy their demand from farms or other processors that are as close as possible.

Using industry data detailing sales for cattle producers and meat processors, the SCM estimates the most efficient—i.e., the shortest distance—relationships between producers and first- and second-stage meat processors. The results of the SCM represent an optimized network of cattle producer and processor relationships that minimizes the distance cattle must travel from farm to first- and second-stage processors.

Building on the findings from the initial 2013 study, Reinvestment Fund is currently working with meat suppliers in Maine to develop another SCM for all of New England, with a particular focus on Maine. The results of the New England SCM highlight considerable bottlenecks between producers and first-stage processors throughout the region.

In consultation with local stakeholders in the meat industry, the current study is developing a set of scenarios to address observed gaps in the New England meat supply chain. By inserting hypothetical meat processors into the SCM in strategic locations, the SCM can provide insight into the amount of additional investments necessary to ensure that locally raised cattle are not shipped thousands of miles to processors outside the region.

For CDFIs making investments in food systems, the SCM can provide critical insight into the type and size of investments that will have the greatest impact on the efficiency of a local supply chain. Whether CDFIs are investing in meat supply chains or another agricultural network, using the SCM can help CDFIs understand how to maximize the impact of their lending to bring greater efficiency to local supply chains.

The technical assistance offered by CDFIs can run from assistance with the intricacies of business planning and real estate development to loan packaging and financial education. Most potential borrowers who approach CDFIs have insufficient personal capital or limited credit history, difficulty articulating the strength of their experience, no business plan, or no acceptable financial modeling.

CDFIs that have developed expertise in specific food systems enterprises can also provide specialized technical assistance. For example, a CDFI with expertise in agricultural businesses can provide support around land access and tenure, which would include finding land as well as negotiating leases and purchase agreements. It can include production assistance and ongoing support, particularly for beginning farmers as they deepen their understanding of their businesses and the many factors that influence success. Some programs also help build the larger infrastructure (such as provision of access to crop insurance) for farm viability. In instances when the CDFI may not have specific expertise, it may connect a potential borrower to other resources on topics such as credit repair, entity formation or crop planning. CDFIs fund their technical assistance programs through a variety of sources, including grants and USDA programs that target beginning and socially disadvantaged farmers.

In addition to client-oriented technical assistance, CDFIs engage in sector building activities that often include business-to-business technical assistance that extend to stakeholders, such as local governments, philanthropies or other capital providers that may have less knowledge of the industry. Examples include training CDFIs through the U.S. Department of the Treasury's CDFI Fund's Capacity Building Initiative on Financing Healthy Food Options, educating the USDA's Farm Service Agency on CDFI work in the food space, educating urban CDFIs on the needs of farmers, sharing knowledge through the ReFresh network and working with local governments that want to support food enterprises and minority-owned businesses but don't have knowledge or relationships with farmers. CDFIs are also working together to expand access to capital for farmers of color through an initiative of the University of Michigan Center for Regional Food Systems.

Over the years, CDFIs have developed a toolkit of financial products that leverage their existing capital and are designed to fulfill the need and demand for food systems enterprises as indicated in [Appendix 1](#). CDFI financing often leverages a range of public sector programs, which have the ability to change the risk profile of small and growing food systems enterprises. These programs include:

- **U.S. Small Business Administration (SBA) 7(a) Program:** This loan program serves for-profit businesses that meet the SBA definition for a small business and do not have the resources (business or personal) to finance

operations. It can be used to finance needs for real estate, equipment, working capital, inventory, eligible franchises, business acquisition, etc.

- **U.S. SBA 504 Program:** Also targeting for-profit businesses, the 504 loan program helps businesses purchase equipment and commercial real estate while retaining working capital. The SBA 504 program puts long-term, low, fixed interest rate financing within reach for small businesses.
- **USDA Business and Industry Loan Program:** The B & I loan program offers guarantees to lenders who make loans to businesses in rural communities. Eligible uses of loan proceeds include real estate, equipment and working capital. Under certain conditions, refinancing of existing debt is allowed.
- **USDA Intermediary Relending Program:** The IRP provides loans to local organizations (intermediaries) for the establishment of revolving loan funds. These revolving loan funds are used to assist with financing business and economic development activities that create or retain jobs in disadvantaged and remote communities.
- **U.S. Department of Health and Human Services Community Economic Development Grants:** The CED program provides grants to nonprofit community development corporations to support sustainable business development and employment opportunities in low-income communities. Eligible uses include capital expenditures, such as the purchase of equipment or real property, allowable operating expenses, loans, and equity investments.
- **New Markets Tax Credit:** Run by the U.S. Department of the Treasury's CDFI Fund, the NMTC program aims to spur investments in operating businesses and real estate projects located in low-income communities. The program is more suited to larger-scale projects.

CASE STUDY: EASTERN CAROLINA ORGANICS

Eastern Carolina Organics (ECO) is a female-led, farmer- and staff-owned wholesale produce distributor cooperative that markets organic fruits and vegetables from local farms

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CASE STUDY: EASTERN CAROLINA ORGANICS

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to restaurants, retailers and other food businesses in North Carolina and up and down the East Coast. Started as a pilot project of the Carolina Farm Stewardship Association in 2004, ECO was initially funded with a \$48,000 grant from the Tobacco Trust Fund to help organic tobacco farmers transition to organic vegetable production.

From 2004 through 2012, ECO was located in Pittsboro, N.C. By 2012, it had outgrown that footprint and needed more space with increased cool storage capacity to meet growth demand. Self-Help, a CDFI, lent ECO \$1 million to purchase a warehouse on a brownfield in East Durham, a location in closer proximity to ECO's customers and farmers. The new warehouse includes more than 5,000 square feet of cold storage, increased office space, three loading docks and light industrial amenities like pallet jacks and forklifts. ECO shares this equipment with other social-values-based businesses in the hub that would not be able to afford them on their own, and in return they help pay the mortgage.

Self-Help lends to entrepreneurs who are working to improve the way food is produced, distributed and consumed. The cooperatively owned distributor model of ECO fits within Self-Help's mission as a CDFI to create and protect economic opportunity for all. ECO also offered a unique opportunity to expand its knowledge of the financial and operational challenges of midstream food system operations; this would inform future credit analysis as well as the development of loan products to support Self-Help's food systems lending. ECO's choice to site the warehouse on a brownfield in East Durham, recruit from the surrounding neighborhood and pay fair wages also aligned with Self-Help's vision for a sustainable food system. Self-Help used NMTCs because the warehouse is located in a high-distress neighborhood, with a 42 percent poverty rate and a median household income equal to 30 percent of the area median household income. The CDFI also waived its typical loan-to-value requirements and structured the amortization schedule to ensure that ECO would not be over-leveraged. The Natural Capital Investment Fund, another CDFI, provided subordinate debt to finance equipment, as did Whole Foods Market. In addition to the financing, Self-Help provided critical technical assistance in guiding ECO through the project delivery process, from understanding how to select and contract with a general contractor to constructing a comprehensive project budget.

Since moving into the larger warehouse in late 2012, ECO has paid out over \$9.5 million to its farmer owners (and more than \$20 million since 2004). ECO has also onboarded 21 new organic farms and brought on 80 new customers per year, with over \$12.5 million in sales.

CDFIs have long been at the forefront of pushing markets forward by providing flexible financing to help a sector grow and build. This track record makes CDFIs uniquely attuned to matching the right type of capital and business assistance to a project given its risk factors. As CDFIs increasingly serve food systems enterprises, they will not only build their own capacity as a field but also stimulate opportunities within the sector. Over time, through their financing and technical assistance, CDFIs can help prove out models and build the sector's capacity for growth, ultimately replicating the success they have had and continue to have in the food access space. ■

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APPENDIX 1

The following matrix provides an overview of the various segments within food systems that CDFIs address and the products developed to support enterprises within those categories.

CATEGORY	PROFILE AND CHALLENGES	NEEDS	CDFI PRODUCTS	PUBLIC AND PRIVATE RESOURCES LEVERAGED BY CDFIS
Production: agriculture, aquaculture, ranches	Small and medium-sized independent entrepreneurs, no or limited credit history, limited history as entrepreneurs, limited traditional collateral, language or cultural barriers, tight cash flow businesses, nontraditional marketing and business models	Capital for seeds, livestock, production systems, land, equipment Typically, small loan sizes required	Leasehold financing, equipment financing, working capital, acquisition and construction financing, bridge financing	USDA B&I loan program, HHS CED Grants, SBA 7(a) loan program, SBA 504 loan program
Processing: commercial kitchens, fresh-cut fruit and vegetable operations, food canning and freezing facilities, dairies, meat processing facilities, composting enterprises, seed companies	Small and medium-sized independent entrepreneurs, no or limited credit history, limited history as entrepreneurs, tight cash flow businesses	Wide range of financing needs, from micro-loans to larger loans; access to commercial real estate and processing equipment	Leasehold financing, equipment financing, working capital, acquisition and construction financing, bridge financing	USDA B&I loan program, HHS CED Grants, SBA 7(a) loan program, SBA 504 loan program, USDA Value Added Agricultural Production Grants, USDA IRP

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CATEGORY	PROFILE AND CHALLENGES	NEEDS	CDFI PRODUCTS	PUBLIC AND PRIVATE RESOURCES LEVERAGED BY CDFIS
<p>Distribution: warehouses, internet-based local food sales platforms, food processing/distribution cooperatives, local food aggregators/distributors, food hubs</p>	<p>Innovative business structures include for-profit/nonprofit hybrid entities. Cooperative and food hub models typically involve independent entrepreneurs with little or no credit history, and limited experience.</p>	<p>Capital needs can range from financing to renovate and fit out warehouses to financing for cold storage and trucks.</p>	<p>Leasehold financing, equipment financing, working capital, acquisition and construction financing, bridge financing</p>	<p>USDA B&I loan program, HHS CED Grants, SBA 7(a) loan program, SBA 504 loan program, USDA Value Added Agricultural Production Grants, USDA IRP</p>
<p>Retail: corner stores, grocery stores, supermarkets, specialty supermarkets, food co-ops, farmers markets, mobile (truck-based) markets, community supported agriculture operations, buying clubs, farm stands</p>	<p>CDFIs typically serve independent entrepreneurs with limited credit history. Retail projects are also expensive to implement in low-income urban areas given perceived risk. Also, land acquisition, development and workforce training costs can be higher in urban markets.</p>	<p>Capital needs to purchase property or expand operations. Needs also extend to workforce training, inventory, security and equipment costs.</p>	<p>Leasehold financing, equipment financing, working capital, acquisition and construction financing, bridge financing</p>	<p>NMTCs, HHS CED Grants</p>
<p>Waste: waste collection programs, gleaning programs, food donation programs, central composting, value-added processing</p>	<p>An emerging segment of food systems with efforts to prevent, recover or recycle food waste. Entrepreneurs can run the breadth of food systems enterprises, from farmers to consumer-facing businesses.</p>	<p>Capital needs in this sector can range from construction and fit-out to equipment and working capital.</p>	<p>Leasehold financing, equipment financing, working capital, acquisition and construction financing, bridge financing</p>	<p>Varied, as enterprises may fall within various segments of food systems</p>

Insured Depository Institutions and Local and Regional Food Enterprises: Lending and Investing

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The views expressed in this article are those of the individual author/authors and do not represent the views of or an endorsement by the Federal Reserve Bank of St. Louis, the Federal Reserve Board of Governors or the Federal Reserve System.

Financing for regional food enterprises is an important focus for many financial institutions. The delivery systems and infrastructure are constantly expanding and requiring capital reinvestment. Banks are an essential component in providing for the system's capital needs. The definition and scope of regional food enterprises can likely be sliced into multiple categories, but for purposes of this article I have broken them into supply (agriculture, food processing and distribution); retail (grocery and other markets); and social service (food banks, soup kitchens and social service organizations). Banks support all of these components, but each has unique capital needs and underwriting challenges. The opportunity at hand is to continue to identify partners and programs targeted to addressing the underwriting challenges, and to expand the capital resources available for each component in order to best serve the needs of areas lacking access to regional food enterprises.

Capital Challenges for Regional Food Enterprises

Supply: Agriculture, food processing and distribution networks are extremely capital intensive. The capital intensive nature of these businesses requires a range of financial products, including long-term financing for machinery and equipment, real property, and leasehold improvements. Shorter-term and revolving credit facilities are also needed to manage long inventory cycles and customer receivables. Company operating margins are often narrow, but volume and market demand are typically more constant than in retail industries. Underwriting these industries includes extensive analysis of how the company uses leverage to support revenue and grow assets. Working with the company's principals, financial institutions evaluate balance sheet management and utilization of liquidity to offer a mix of financing products, from cash management and lines of credit to equipment financing and term loans.

Retail: The retail components of the regional food system are materially less capital intensive. Successful retail food enterprises rely on strong cash management and customer retention. Grocery is generally a low-margin business with

profit margins averaging less than 2 percent in most markets.¹ Customers pay cash while many suppliers offer payment terms, resulting in a very short or even negative operating cycle (where the enterprise is receiving cash from customers before it has to pay suppliers). This cash cycle reduces the need for conventional operating lines of credit from banks, but grocers still require equipment and real property financing for their facilities. Narrow operating margins cause the need for large sales volume and maintenance of the customer base. A failure to maintain customers and sales can quickly erode cash flow needed to service debt. Financing discussions are focused on how to maintain or grow sales to pay existing debt and plan for future borrowing needs.

Social service: Food banks, soup kitchens and similar social service organizations focused on access to food and alleviation of hunger provide essential sustenance for many communities. Financial support for operations is typically derived from government contracts, philanthropic support and corporate donations. Regional food supply and retail participants often represent a major portion of food donations to these nonprofits. Donated inventory and supplies are combined with philanthropic support, government grants and volunteer efforts to maintain operations. Financing needs are generally targeted to capital investments to expand capacity in order to serve disadvantaged populations. Expansion efforts are frequently supported by capital campaigns, which typically need to be bridged by a lender to provide the nonprofit with the capital needed to move forward with the investment. Capital campaign bridge loans are often underwritten by reviewing the actual pledges and pledgers to determine loan amount and repayment terms.

Financial Institution Support for Food Enterprise Financing Needs

Commercial banks are often organized into several financing groups that focus on different customer profiles. At a high level, it is not uncommon for large banks to be grouped by investment banking, commercial, retail and consumer banking. Apart from these is typically a philanthropic division or foundation of the firm. The various groups within a bank focus to serve the unique needs of customers, while also maintaining the ability to offer the institution's full financial services capacity.

The components of the regional food system described previously face dramatically different capital challenges and are thus often served by various groups within a bank. For example, agriculture, food processing and distribution companies are often served by the investment bank or commercial team within a financial institution. Grocers would typically be clients of the commercial division, unless they are a large public company (investment bank), or neighborhood grocery or farmers market (retail team). Food banks and local social service organizations, meanwhile, are often customers of a nonprofit lending team within retail or commercial lending, depending on the organization's size. Each financing group brings the experience and product offerings necessary to underwrite and meet the unique financing needs of the particular food enterprise.

Within the commercial division at Chase, there is a team focused on regional and local grocers. Its target market includes grocers that have between five and 20 stores throughout a specific region. Many of these grocers serve a target market, such as specific ethnic groups and cuisines, or regional dietary preferences. By targeting a specific demographic, these midsize grocers are able to establish a market niche, as they might otherwise be challenged to compete with large national groceries in a mass market arena. The banking team within Chase has strong relationships with these customers and understands their business models, which is essential to meeting their financing needs.

Current Developments in Supporting Regional Food Enterprises

Efforts to increase reinvestment in urban neighborhood groceries and support of fresh foods have greatly expanded in the past five to 10 years. As previously mentioned, a central challenge for many food retailers is achieving customer and sales volume in a relatively narrow margin business.

In Detroit and New Orleans, Chase had the opportunity to participate in financing new developments that support the arrival of Whole Foods to each urban core. The stores are in low-income census tracts and serve the nearby community with access to both fresh food and local jobs. Each urban store has a slightly smaller footprint than a typical Whole Foods and includes a mix of fresh foods at various price points to meet the needs of the local community. Chase was able to support each developer's financing needs with a variety of financing

tools, including the New Markets Tax Credit (NMTC), to leverage other public and private dollars in support of the development.

In Carrizo Springs and Gonzalez, both distressed rural areas in Texas, Chase was able to support an aggregate \$19 million investment in two grocery stores with regional NMTC partners. Each financing allowed a regional grocery store to expand, offering a much larger variety of fresh food items as well as an in-store pharmacy and additional frozen and warehouse space. The grocery expansion in these areas was a significant investment to support food access for the area's low-income residents.

Social service organizations serving the very low-income population with access to fresh foods are highly dependent on philanthropic support and multi-layered financing structures to support the capital investment needed to expand their services.

In Texas, the Houston Food Bank and Central Texas Food Bank in Austin were each able to nearly double their capacity by moving to new facilities and investing in warehouse supply systems to better organize and automate their distribution approach. The Houston Food Bank and its partners provide nearly 79 million nutritious meals throughout the greater southeast region of Texas,² while the Central Texas Food Bank delivers more than 33 million pounds of food to serve a 21 county region of central Texas.³ The extreme need to increase capacity is partially a result of the large population growth throughout the state. Between 2000 and 2010, Texas grew by 4.3 million people, the highest numeric growth in population of any state.⁴ Chase was able to support each food bank's expansion through a combination of financing products, including capital campaign bridge loans, equipment financing, NMTC allocation and investment, and philanthropic support from the Chase Foundation.

Partnerships with CDFIs and Community Partners

Underwriting of retail and social service regional food enterprises is frequently dependent on evaluating narrow margins in a highly competitive industry or analyzing government and philanthropic support from multiple sources. Community development financial institutions (CDFIs) have a mission and focus of serving low- and moderate-income communities and are experienced in aggregating non-traditional sources of investment to increase access to capital for those areas. Many CDFIs dedicate resources to fulfilling that mission through expanding access to

fresh food for underserved communities. Chase and other financial institutions have recognized that CDFIs can serve as a strategic partner in reaching further to meet the financing needs of these industries.

Chase was the inaugural funder of the ReFresh network coordinated by the Reinvestment Fund to research, develop and deliver capital resources and partnerships to address the challenges of access to fresh food in underserved and Low Supermarket Area (LSA) communities. The ReFresh program is designed to continue to support additional capital investment and participation through a continued expansion of funders, financial institutions, CDFIs and partner institutions.

In California, Chase partnered with Capital Impact Partners (CIP) and the California Endowment to develop the California Healthy Food Financing Initiative, which comprised nearly \$200 million of aggregate support through a multilayered capital fund targeting community grocery stores throughout California. CIP served as the lead agent and underwriter for the facility. In partnership with community groups throughout California, CIP was able to offer favorable financing terms and conditions to community grocers that were otherwise challenged in obtaining traditional financing. CIP leveraged that experience to develop a similar fund structure to serve the state of Michigan. An expanded component of the Michigan Good Food Fund was the inclusion of strengthening Michigan's food systems, including processing and distribution, in addition to retail.

Coordination with Affordable Housing and Other Community Priorities

Whether at the national, state or local level, financial institutions are part of the community and need to be responsive to community needs. Public priorities for affordable housing or community assets require support and participation from multiple stakeholders. Coordinated community efforts typically include urban plans supporting access to public transportation, services, retail and healthy foods. Municipal agencies can lead the efforts of community plans by directing subsidies to specific projects that will stimulate additional private investment.

In Chicago, Chase was able to support the development of a residential and commercial development that offered affordable and market rates in an area formerly occupied by the Madden Wells public housing development. The project

is part of the city's master plan to redevelop the area with a mix of affordable and market-rate homes supported by neighborhood retail and services for local residents. The residential component of the project is comprised of 70 rental housing units, including federal low-income housing tax credits (LIHTC) affordable units as well as market-rate rental units. The ground floor commercial space includes several retail bays anchored by a Walmart Neighborhood Market grocery store. The project was able to attract some conventional commercial debt, but the debt and available developer equity was significantly short of the total project costs due to the project's limited capacity to service debt and low appraised value. Chase was able to work with the developer, the city and community groups to coordinate a multilayered capital investment that included developer equity, conventional debt, local tax-increment financing, a federal NMTC allocation from the city and federal LIHTC support from the city and state. This multilayered stack of financing subsidies was necessary to fill the financing gaps to move the project forward.

In southern Alabama, Chase was approached by a small rural community to support the development of the Coastal Alabama Farmer's and Fisherman's Market (CAFFM). CAFFM was developed in response to the severe impact to local farmers and fisherman caused by the 2010 Gulf of Mexico oil spill and the regional drought of 2010 to 2013. The city felt the market would not only support local agriculture and residents seeking fresh foods, but that it would also offer a regional attraction for tourists and vacationers visiting southern Alabama. The city's public facilities cooperative provided nearly \$6 million of debt financing, which was combined with nearly \$2 million of federal NMTC subsidy to support the development of a public market as well as a regional warehouse and distribution center for wholesale trade. Today the market is among the top attractions for the region and has been catalytic in encouraging additional investment in the community.

Looking Forward

Future support for regional food enterprises looks promising. In December 2015, the federal NMTC program was reauthorized by Congress for five years, through 2019. Many of the CDFI participants in the NMTC industry are focused on advancing the progress achieved to date in eliminating food deserts and LSAs so that all communities can gain access to fresh foods. Although the

NMTC program can be used to support nearly any type of commercial investment serving a low-income community, a sizeable portion of the industry is directing resources and NMTC allocations to food enterprise projects.

Additional financing products and capital funds continue to be developed in support of the goal to eliminate obstacles to healthy food access. Many city planning departments, community organizations and their nonprofit and for-profit partners continue to recognize the connection between healthy food access and healthy communities. These priorities will likely continue to support the formation of capital funds to fill the financing gaps of fresh food projects.

Market developments also contain promising hope of increasing access to healthy food. Smaller-footprint grocery retail that can be supported in urban centers, such as the newer Whole Foods and Walmart Neighborhood Market examples described previously, offer new approaches to historical challenges of space and sales per square foot experienced by urban grocery.

Home delivery of fresh grocery in some markets, such as Fresh Direct in New York and Peapod in Chicago, offers solutions to challenges for multiple communities, such as eliminating challenges of proximity to grocery, constraints on childcare or time to shop during store hours, and mobility limitations of elderly or physically disabled persons.

An opportunity exists in continuing to support the advancement of eliminating food deserts in urban areas, while concurrently protecting aging suburban and rural areas that are increasingly facing the headwinds of income decline, commercial vacancies and loss of their regional food enterprises. The suburban and rural challenges may prove to be even greater than those facing urban areas because lower population densities and lack of access to public transit are significant obstacles for these areas.

Community supported agriculture, farmers markets and the increasing awareness of food miles are positive developments for both agriculture and the communities they serve. Technology and communication advances have greatly increased connections between consumer and producer to reduce inefficiencies and connect market participants. Further social network connections have the potential to continue to expand coordination in this arena and erode barriers that stand in the way of access to locally grown foods.

A healthy and robust regional food system is essential for the success of healthy communities. Marketplace developments and technology changes will

continue, but financial institutions, community partners, CDFIs and other funders should continue working together to develop solutions to support investment by regional food enterprises in underserved communities. ■

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CHAPTER 14

Investing in the Next Generation of Farmers

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The views expressed in this article are those of the individual author/authors and do not represent the views of or an endorsement by the Federal Reserve Bank of St. Louis, the Federal Reserve Board of Governors, the Federal Reserve System or the U.S. Department of Agriculture.

Vibrant local and regional food systems depend upon people all along the supply chain. The supply chain starts with the farmer or rancher who produces the food, and those producers are aging. The average age of the principal operator of a U.S. farm rose from 52 in 1987 to over 58 in 2012,¹ and will probably be even higher in the next agricultural census. Fortunately, local and regional food systems are attracting new groups of people to farming and ranching, often for many of the same social benefits that are attracting new consumers: a desire to foster personal connections and community well-being while also making a living from an expanding market opportunity.

These new entrants face significant barriers, particularly access to land and capital, along with a need for technical knowledge and skills. While government programs at the U.S. Department of Agriculture and other federal agencies are helping to address these needs, there are significant opportunities for complementary support from the private sector.

Most USDA programs consider a beginning farmer to be one who has 10 or fewer years of experience operating a farm. Larger farms are more likely than smaller farms to have multiple operators and to have a younger farmer working alongside an older farmer,² a fairly traditional route into farming. Beginning farmers who run their own operations tend to be younger, more diverse, more likely to have a college education and more likely to have smaller operations than other farmers; nevertheless, the majority are non-Latino white males, ages 35 to 54, with only a high school education.³

While data supporting the idea that beginning farmers are more likely to start farms that market locally are limited, we do know that smaller farms (both new and established) are more likely to be involved in local marketing than larger farms. Furthermore, farmers who market directly to consumers are more likely to stay in business.⁴ Local markets are certainly more feasible and rewarding for a new farmer who does not have the scale of land, equipment or capital that comes from being part of a traditional family operation. These new farmers include recent immigrants, young people, second-career folks and military

veterans. Local markets are also attracting interest from organizations working with socially disadvantaged audiences who may come from a farming background and have access to land, but are interested in higher-value markets and community benefits of local and regional food systems.

While hard data are limited, the experiences of organizations that foster new farmer education and assistance provide considerable anecdotal evidence of the interest of new farmers in local and regional food systems. Much of this experience comes from projects funded by the Beginning Farmer and Rancher Development Program (BFRDP), a program of USDA's National Institute of Food and Agriculture.

BFRDP funds organizations to provide education, mentoring and technical assistance to new farmers and ranchers. From 2009 through 2016, the program made 256 awards totaling more than \$126 million. The typical project identifies an audience of new or aspiring farmers or ranchers; works with them to determine their educational and technical assistance needs (typically spanning production, marketing, business planning, financial management and land access); offers workshops, mentoring and other assistance to meet the identified needs; and tracks results, from knowledge gained to actions taken to start or improve farming and ranching success. Most projects include experiential learning, such as hands-on workshops, apprenticeships and "incubator farms," where advanced students can gain experience farming in a supportive environment before launching out on their own.

The projects funded by BFRDP address a wide range of crop and livestock production and marketing systems, but a good number of them involve production and marketing for local and regional markets. The USDA map of projects on the "Know Your Farmer, Know Your Food" website (www.usda.gov/knowyourfarmer) includes 56 projects funded from 2009 to 2012 (about 40 percent of the projects funded during that period) that were identified as most relevant to local and regional food systems.

Some projects engage a fairly wide audience of potential new farmers or ranchers, from those exploring the idea of farming to those who are more serious. A staged approach is particularly valuable for people who are intrigued by the idea of farming, but have little exposure to the actual work involved. Introductory seminars and weekend workshops help people explore the possibilities with minimal expense and risk. Even at the introductory level, hands-on experiences

and opportunities to interact with experienced farmers are as important as classroom instruction, but the latter setting can address the critical topics of business planning, financial management, land access and legal issues. Online modules and tools are increasingly available and often best used in combination with in-classroom training and one-on-one assistance.

FARM FINANCIAL MANAGEMENT TRAINING FOR NEW FARMERS

Most groups that assist new farmers and ranchers know that understanding financial management is as important to their success as knowledge of production or marketing. But many organizations, particularly smaller ones, lack the specialized knowledge to provide such training. To fill that gap, a group of organizations led by the Farm Credit Council formed a network of trainers providing business and financial management education and assistance to new farmers and ranchers. It began mainly in the Southeast, with support from a BFRDP grant (cleverly dubbed “Evaluating and Improving Educational Instruments and Outreach,” or E-I-E-I-O), but has grown to over 70 members across the U.S. and Puerto Rico. Its website, <http://farmbiztrainer.com>, includes a comprehensive Trainers’ Resource Guide, trainer-to-trainer networking and other information. While the BFRDP grant that started the network has concluded, the group continues to operate with support from the Farm Credit Council.

Beyond the exploratory stage, more intensive programs give a year-round experience. Agriculture is inherently seasonal, typically requiring a full year to experience the stages of planning, producing, harvesting and marketing, whether crops or livestock. For serious startups, education and assistance in understanding, applying for and meeting the requirements of federal programs are essential. In recent years, the USDA has adapted its programs to be more accessible to new and smaller farmers, such as “micro-loans” requiring less complex documentation than larger loans. The department has also made its many programs more understandable to the novice and to organizations working with novices through the website <https://newfarmers.usda.gov>. Before this website existed, it was virtually impossible to find all the pockets of relevant information buried

deep in the structure of the department. In addition, the Farm Service Agency of the USDA has begun a new “Bridges to Opportunity” program to enhance producer assistance in some states and counties.⁵

More serious students often look for immersion experiences, such as apprenticeships or incubator farms. An effective apprenticeship program requires careful design and management so that the benefits and responsibilities are clear for both the apprentice and the host/mentor farmer, and labor laws are not violated. The Dairy Grazing Apprenticeship is a star example of an effective program. In 2016, BFRDP funded a team, led by Tufts University, to gather and share best practices among new farmer mentoring programs nationwide.

DAIRY GRAZING APPRENTICESHIP

While the number of dairy farmers in the U.S. has been declining for decades, demand for organic products, plus broader interest in sustainable agriculture, has stimulated growth in managed grazing systems for dairy and other livestock. In managed grazing, cows are rotated through a series of pastures, giving each pasture time to rest and regrow between grazings. Learning to manage such a system, plus milking and other aspects of a dairy operation, is a complex business. The Dairy Grazing Apprenticeship, an independent non-profit, worked with Wisconsin higher-education institutions and other partners to develop an in-depth apprenticeship program and gain accreditation from the U.S. Department of Labor. As of August 2016, it has 76 approved master dairy graziers, mainly in Wisconsin and Minnesota, and is expanding into other states in the Midwest and Northeast. It has 28 active master-apprentice pairs, 11 journey-level graziers and 80 apprentice candidates seeking to be hired. See www.dga-national.org.

For some audiences, particularly socially disadvantaged audiences such as immigrants, an opportunity to get started on an incubator farm can provide land, shared equipment and sometimes marketing assistance for a few years before launching out alone. A challenge for incubator farms is helping their clients “graduate” to make room for newer operators on the incubator, particularly in areas where land access is difficult.

Men and women who serve in the military often develop skills that are invaluable in running a farm, and for some veterans the farm or ranch provides a favorable setting for working outdoors and being one's own boss. Therefore, programs that help veterans explore or enter farming are increasingly popular.

AGRICULTURE AND LAND-BASED TRAINING ASSOCIATION (ALBA)

California's Salinas Valley produces \$3 billion of vegetables each year: lettuce, broccoli, cauliflower, celery, spinach and much more. Much of it is with the help of Latino farmworkers. In 1985, the Rural Development Center began a "farmworker to farmer" program, which has grown into a suite of services for small-scale minority farmers run by ALBA. Programs include a yearlong Farmer Education Course, twice-weekly evening/weekend sessions that allow students to learn while keeping a day job. Students then may move onto a small plot on the Organic Farm Incubator, with subsidized access to land and equipment. As they progress over several more years, they typically get more land and less subsidy from the incubator; eventually, they move out on their own, making room for other students. A sister organization, ALBA Organics, provides marketing education and sales opportunities, one way they continue to assist the new farmers. See www.albafarmers.org.

ARCADIA'S VETERAN FARMER PROGRAM

Many military veterans have leadership skills, the ability to work long and hard to overcome obstacles, and other abilities that are a good fit with managing a farm or ranch. The Arcadia Center for Sustainable Food and Agriculture in Northern Virginia, just outside of Washington, D.C., developed a program to help veterans enter farming, with different options for veterans at different stages of interest. The Veteran Farmer Reserve Program allows vets to explore agriculture without committing to a full-time program. Similar to the military reserves, participants meet one weekend a month, plus another 80 hours of hands-on farm work during the year. The Veteran Farm Fellowship Program is a one-year, intensive program of on-farm training plus a second year of full-time paid training, which includes working with chefs and retailers in Arcadia's local food marketing program. Arcadia also works with partners to help the vets in the fellowship program find land to farm. See <http://arcadiafood.org/veteran-farmer-program>.

The private sector plays several crucial roles that complement the public investments by the USDA and others. Private for-profit and nonprofit entities are often partners in education and mentoring programs such as those funded by BFRDP; they lend their expertise and often provide matching resources. BFRDP requires 25 percent matching of federal funds with nonfederal resources, either in-kind or cash. Such contributions from philanthropic sources, community organizations and private businesses not only provide the required match, but also embed the programs and their beneficiaries in supportive communities and networks.

Private financing is also important to the startup of individual farms. While many turn to the USDA's Farm Service Agency for funding, others are funded by private lenders, such as those in the Farm Credit System or other commercial banks. Some new farmers turn to family, friends and, more recently, internet-based crowdsourcing approaches, such as Slow Money and Kiva. Microenterprise revolving funds run by state or local governments are also an emerging trend. Individual development accounts for agricultural startups have been piloted in several places around the nation, with a nationwide program authorized but not yet funded by Congress.⁶

Information on financing options for new farmers and ranchers, along with production, marketing, legal and other technical information, has been gathered in a national clearinghouse, Farm Answers (<https://farmanswers.org>). It has a digital library of over 4,700 publications, videos, computer apps and more on a comprehensive list of business management, marketing, people, production, taxes and legal topics. It also has information on more than 300 new farmer and rancher programs, plus agricultural news, blogs and more—a one-stop shop for new farmers and ranchers, and for people and organizations who want to learn more and help them. ■

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Bringing Businesses to Life through Competitions, Incubators and Accelerators

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Entrepreneurs are often seen as inventors who create new products or services, but many are innovators who create a new twist on an existing product and improve it. Entrepreneur Albert Wilde used his experience in sheep production at Wild Valley Farms to create an innovative fertilizer. Wilde works as a sixth-generation sheep and cattle producer in Croydon, Utah. He was looking for new ways to generate revenue for his farm and saw the waste wool generated through his operation as a possible solution. He partnered with a friend who had a pellet business that developed fertilizer. Wilde decided to take his waste wool, high in nitrogen, to his friend's shop and create pelletized wool that could be used as fertilizer for commercial greenhouse growers and home gardeners. He developed strong business and marketing plans but still faces a major obstacle to starting his new business. "The biggest challenge we face right now is capital. Capital to be able to hire employees and buy material," Wilde said.

Nonprofits across the country are trying to help entrepreneurs like Wilde gain access to capital and other resources needed to grow their businesses. These organizations have developed innovative programs to connect entrepreneurs with capital, including business competitions, farm incubators, and food incubators and accelerators. Each program offers a level of risk and return for the organizations, as well as opportunities and challenges for entrepreneurs. We will explore three types of programs, starting with the program that Wilde is participating in to access capital—the business plan competition.

Business Plan Competitions

Business plan competitions offer prize money to entrepreneurs with the strongest applications. Applications usually include components of a business plan, such as a value proposition for the product or service, information about the target audience and financial projections. Competition prize money is often the lure for entrepreneurs who may not have the collateral and employment history to apply for bank loans to acquire startup capital. Prize money

in competitions can range from \$5,000 for regional programs to \$100,000 for international programs.

Competitions can be a useful way for organizations to foster entrepreneurship within targeted communities, such as rural residents, women, at-risk youth and native populations. Wilde applied to a national business competition called the Farm Bureau Rural Entrepreneurship Challenge, a competition that targets rural entrepreneurs with agriculture and food ideas. The American Farm Bureau Federation developed the Challenge as a way to foster economic development in rural communities.¹

Cartier also developed a business competition to help foster entrepreneurship within a targeted community.² Cartier created the Women's Initiative Awards, an international business competition that helps identify, support and encourage women entrepreneurs. Winners receive \$100,000 in startup funds, mentorship, admittance to an intensive entrepreneurship program, media visibility and networking opportunities. Winning agriculture and food business ideas include organic baby food, products developed from aquatic weeds, organic pest control and healthy Filipino foods.

CASE STUDY: THE FARM BUREAU RURAL ENTREPRENEURSHIP CHALLENGE

The American Farm Bureau Federation developed the Farm Bureau Rural Entrepreneurship Challenge, a national business competition that provides \$145,000 to rural agriculture and food entrepreneurs. Over the last three years, applications for the Challenge have more than tripled from 95 applications to 355 applications.

2015 Challenge winner Paul Greive of Pasturebird LLC thinks the prize money is a huge draw. "As current farmers and entrepreneurs, we don't have a lot of extra funds lying around to commit to ventures or ideas, no matter how big we think they might become," Greive said. He found that the Challenge provided more than just startup funds. "Being a Challenge finalist really makes you think hard about all of your assumptions. In order to present that quick four-minute overview to the judges, there were countless hours of field testing, refining, number crunching and further research that went into our project," Greive said.

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CASE STUDY: THE FARM BUREAU RURAL ENTREPRENEURSHIP CHALLENGE
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In 2016, American Farm Bureau promoted the Challenge to entrepreneurs through a social media campaign involving Facebook, Twitter and Instagram. “The social media push made a huge difference in getting the word out to people with startup businesses, especially young entrepreneurs still in college,” said Julie Anna Potts, American Farm Bureau Federation executive vice president and treasurer.

A business competition was a new venture for American Farm Bureau. What would Potts recommend for other organizations interested in starting a business competition? “Align your competition with your organization’s mission,” she said. “We focused on agriculture and food businesses in rural communities. The tight focus helped us with promotion, identifying partners and sponsors, and telling the story of our impact effectively.” Learn more at www.StrongRuralAmerica.com.



Paul Greive presents his pitch at the American Farm Bureau Federation’s 96th Annual Convention and IDEAg Trade Show in 2015.

Competitions can also help organizations address their mission. The Mahi’ai Match-Up Gala helps its sponsoring organizations address their mission of creating a more food-secure Hawaii.³ “Mahi’ai” is Hawaiian for “farmer” and the competition aims to match local farmers with fertile agricultural land and startup funds to help them produce food for the state. The Pauahi Foundation and Kamehameha Schools created the competition, which awards Hawaiian farmers with \$35,000 in prize money and a five-year, rent-free land agreement on agricultural lands in O’ahu and Hawai’i Island owned by the Kamehameha

Schools. The competition helps local farmers gain access to expensive and fertile agricultural land that would likely be financially out of their reach.

Every program has trade-offs. What are the opportunities and drawbacks of business competitions for the sponsoring organizations and entrepreneurs? Chief among the benefits for entrepreneurs is free seed money, often awarded without restrictions on use. Even if the entrepreneurs do not win, completing the application can be beneficial in helping them develop stronger business plans. Some competitions also provide judges' feedback for the entrepreneurs on their applications. The feedback can help entrepreneurs identify holes in their business plans or uncover hidden opportunities. Organizations often conduct promotional campaigns highlighting the competition finalists and winners. This publicity can be invaluable for an entrepreneur trying to build a brand for his or her new company. The publicity can also attract venture capital managers and other investors to the businesses.⁴

For organizations, competitions are a good way to identify innovative entrepreneurs who may be under the radar. Startup businesses are growing up across the country, but many startups fail to attract attention outside of their region or state. Competitions provide an effective strategy to surface these dynamic businesses and the entrepreneurs behind them. Competitions also provide organizations with positive media attention. Promoting entrepreneurship, especially within at-risk communities, is a great story for organizations to tell. They can work with the media to generate human interest stories about the local entrepreneurs they've funded.

The primary drawback for entrepreneurs and organizations is that competitions offer limited business development training. Competitions are short-term events, usually lasting less than six months. Competition facilitators and judges often have limited interaction with the applicants. Applications are often submitted online and reviewed online with no face-to-face interaction between the judges and applicants. Few competitions can offer continued education or support for applicants after the awards are issued. Applicants who are awarded prizes gain the bulk of the benefits, including capital, networking and visibility. The majority of the applicants who do not win the awards receive limited benefits for their participation in the competition. As a result, it can be difficult for sponsoring organizations to track the impact of their competitions on the long-term success of the businesses.

Farm Incubators

Starting a new farm often requires large capital investments to purchase or rent farmland, access farm equipment, and set up storage facilities. Beginning farmers can expect to invest more than \$800,000 in their farms in the first few years.⁵ On average, it takes about five to seven years for farms to become profitable.⁶ In the meantime, beginning farmers are often saddled with massive debt. They are trying to meet large loan payments and working on the farm as well as an off-farm job to make ends meet. Farm incubators are one way for beginning farmers to learn how to start a successful farm operation and gain access to farmland and farm equipment without a massive initial capital investment.

In the U.S., there are approximately 119 farm incubators developed by non-profits, foundations and universities that teach beginning farmers how to develop successful farm operations and provide plots of land to start farming.⁷ Often this farmland is a small parcel, ranging anywhere from a tenth of an acre to 2 acres, within a larger farm operation.⁸ Incubators provide the participants with the assorted resources needed to start a farm operation, including production training, business plan development, and access to farm equipment, water and power. Incubators are often long-term programs that have participants for three to five years.

Many incubators charge participants a nominal fee to rent the farmland and access utilities. Annual rental fees range from \$100 to \$2,000 per acre, usually well below the market rate. Some rental fees work on a sliding scale, with fees increasing over time as participants gain more experience and increase their level of production and sales. The Headwaters Farm Incubator Program in Oregon charges participants in their first year a rental payment of 25 percent of the market rate for the land. The rental payment steadily increases each year until it reaches 100 percent of the market rate in the fourth year.

A group of incubators has emerged in the U.S. that supports immigrant and refugee farmers.⁹ These incubators serve immigrants and refugees with farming backgrounds, and those who are new to farming. The programs teach participants how to grow crops that are native to the U.S. and also provide the resources to help participants grow crops native to their homeland. Incubators can also provide benefits to the participants beyond learning agriculture, including improving their English language skills, offering steady employment and increasing their networks in the local community beyond their immigrant communities.

The Refugee Empowerment Agricultural Program (REAP) is an incubator that serves refugees living in Cleveland.¹⁰ REAP operates the Ohio City Farm and provides education, language training and agricultural employment to refugees from Nepal, Bhutan, Somalia and Burma. They also sell the produce grown through their community supported agriculture (CSA) program. Similarly, the Big River Farms Training Program in Minneapolis provides immigrant and minority farmers with training on organic vegetable production and organic certification.¹¹ The program accepts 10 farmers per year and each participant sells produce at the farm's market and in their CSA.

The Main Street Project developed a farm incubator that provides support for Latino farmers living in Minnesota.¹² The incubator is an intensive business program that teaches the participants how to manage a poultry operation. Participants for the incubator must first complete an introductory level production and management course called the Agripreneur Training Program. Participants in the incubator are also offered a loan of approximately \$9,000 to cover the cost of purchasing a flock of 1,000 birds, and the loan can be repaid in chickens.

What are the challenges and benefits of farm incubators? The main advantage for farmers is that incubators provide access to free or inexpensive farmland, equipment, storage facilities, and utilities (e.g., water and power). Incubators also provide a protected environment for participants to nurture new farms without some of the market influences that can lead to quick failures. Participants do not have to meet minimum production or sales levels to remain viable when their land and equipment costs are subsidized by the program and below the market rate. Participation in incubators can also help farmers secure markets and reach reliable and sustained production over time. From the organizations' perspective, farm incubators can provide meaningful, long-term impacts in the lives of the participants, especially for populations like immigrants who may be in critical need of employment.

The largest drawback to farm incubators is that the incubator model takes away the incentives of farmers to quickly grow their business and become economically solvent.¹³ The participants are insulated from market influences and therefore can remain inefficient in terms of production or their business model for a longer time compared to other farmers. Participants are able to operate at a loss for much longer than other farmers. As a result, some participants become

CASE STUDY: THE MAIN STREET PROJECT

The Main Street Project in Minnesota developed a farm incubator that teaches Latino farmers how to successfully manage a poultry operation. The incubator provides a production unit to participants for a nominal rent (\$100 per flock) that includes a paddock, coop and farming equipment. Participants are also offered an operating loan that covers the chicks, feed, bedding, utilities and grain. Typically, loans are \$9,000 for a flock of 1,000 birds. Participants repay the loan in chicken.

The loan is a key part of the program, because many participants have little credit history and face challenges in getting a bank loan. “Without the loan, nearly all of our low-income participants would likely not have entered production,” said Bob Kell, Main Street Project training director and manager of the incubator program. The Main Street Project also handles the storage, marketing and distribution of the birds. Kell hopes that over time the participants will be able to take over more of the responsibility for running the business. The primary benefit offered by the program is creating a safe environment for the Latino farmers to learn the business of poultry farming so they can start their own farm operation one day.

What advice does Kell have for other organizations interested in starting an incubator farm? “The challenge is to provide an experience that is realistic in its demands,” Kell said. “Support is necessary for the learning process. Too much support may create a dependency that leaves too many lessons unlearned.” Learn more at <http://MainStreetProject.org>.

dependent on the incubator and are reluctant to leave the program. Some incubators have alleviated this dependency by using sliding-scale rents to remove some of the financial benefits of participating in the program and by developing transition programs that help participants start their own farms after completing the program.

Another drawback is that incubators usually serve a small number of people, often fewer than 10 farmers, and require large amounts of funding and staff time to be successful. Many incubators are operated by nonprofits with limited funds and staff members. In many cases, this can result in staff members working long hours for little pay to keep the incubator viable. It also can mean that nonprofits have to devote staff time to seeking outside funding for the program through grants and sponsorships.

Food Incubators and Accelerators

In the U.S., there are approximately 135 food incubators, also known as kitchen incubators.¹⁴ Food incubators have many of the same characteristics as farm incubators—they help entrepreneurs create viable food businesses. Many states require that food which is sold to the general public be produced in a commercial kitchen that meets the requirements of the state. For entrepreneurs starting out, creating a commercial kitchen from scratch can cost upward of \$100,000.¹⁵ Food incubators provide commercial kitchen space that can be rented hourly or monthly. Food incubators also provide access to commercial-grade equipment; storage facilities (i.e., freezers, coolers and dry pallet storage); and packaging equipment. Participants can purchase additional services—such as marketing, lab testing and distribution—for additional fees. Rental fees are charged hourly, with costs ranging from \$10 per hour to \$40 per hour. Food incubators also offer monthly memberships ranging from \$95 per month to \$4,000 per month, depending on the additional services provided. Incubators are long-term programs that can last from one to five years.

Food incubators are often developed by nonprofits that aim to help the local economy thrive. The New Orleans Food & Farm Network developed Edible Enterprises, a food incubator that helps the local food economy in the New Orleans region. Edible Enterprises offers commercial kitchens, packaging equipment, storage space and lab testing services. The rental rate for participants is \$20 per hour, with a four-hour minimum.¹⁶

Union Kitchen offers similar services to food entrepreneurs in Washington, D.C., and the surrounding metro area. Union Kitchen builds successful businesses by offering memberships to entrepreneurs and businesses who want access to a commercially licensed kitchen facility.¹⁷ In addition, Union Kitchen offers extensive distribution channels for their members' products in over 177 retail outlets. It has helped food producers distribute over 340 local and regional products through retail outlets, including over 100 different products to Whole Foods. Each month, the incubator adds eight to 10 new retailers and an average of seven new brands distributed through retailers. Union Kitchen has also opened a corner store that sells members' products called the Union Kitchen Grocery. Union Kitchen's distribution company is the fastest growing aspect of the Union Kitchen family of businesses. Over the past year, Union Kitchen's distribution service has grown 7 times as large.

Food accelerators are a specialized type of incubator that focuses on intensive training that leads to rapid growth for the businesses. Accelerators are often short-term, lasting for three months or less. They involve rigorous product development, business plan development, mentoring, workshops and networking. Accelerators often take a small group of entrepreneurs through the training program together, operating as a cohort group. The training program often culminates in a public pitch event or demo day that allows the entrepreneurs to pitch their idea to investors. They tend to focus on high-growth business sectors such as agricultural technology, new food product development and organic food production. Most accelerators are privately owned and exchange investments for equity stakes in the businesses. Investments and equity stakes in early stage business range from \$50,000 to \$100,000 for 8 percent to 10 percent equity.

FamilyFarmed's Good Food Business Accelerator is a food accelerator based in Chicago.¹⁸ The accelerator targets food entrepreneurs and farmers who want to develop organic food products. The program started in 2014 and had nine businesses in its first cohort group. The accelerator offers financing plans, business plan development, mentoring, polished investor pitches and introduction

CASE STUDY: UNION KITCHEN

Union Kitchen grew out of the struggle of two entrepreneurs trying to develop their own food business. In 2012, Jonas Singer and Cullen Gilchrist opened Blind Dog Café in Washington, D.C. The growing demand for their award-winning chocolate chip cookies led them to search for a commercial kitchen space that could meet their increased production needs. They found a commercial kitchen, but it was a huge 7,500-square-foot warehouse—more space than they needed. Jonas and Cullen decided to create an incubator that allowed other food entrepreneurs to share the space and amenities they had developed. Union Kitchen was born as a membership-based incubator to support food entrepreneurs in Washington, D.C., and surrounding areas in Virginia and Maryland. “The goal of Union Kitchen is to build wealth, diversity and vibrancy in the local community by growing

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CASE STUDY: UNION KITCHEN
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successful food businesses,” co-founder Gilchrist said. Union Kitchen provides members the means for production through a well-maintained and compliant kitchen space, as well as cold and dry storage areas, space for hosting tastings, and a collaborative co-working space.

What sets Union Kitchen apart is that it also provides members with an extensive network of business vendor contacts and connections that provide discounted rates and opportunities for member businesses in packaging, hiring, staffing, marketing and funding, among other valuable resources for entrepreneurs. Another key benefit of membership is distribution. Union Kitchen has established extensive relationships with regional and national outlets, including Whole Foods and Mom’s Organic Market. “Distribution is everything,” said Gilchrist. “We help new producers navigate through the process of distributing their products to large grocery chains. We also help them develop their packaging and labeling to meet grocery store standards.” He explained that without the support of Union Kitchen, many new producers are stuck trying to learn the distribution system themselves through trial and error, which can be costly.

Gilchrist recommends for other organizations interested in developing a food incubator to incorporate good business principles into the development of the program. “Make sure you’re a business first,” said Gilchrist. “It’s tempting for nonprofit organizations to focus on helping producers first and neglect the business side of the incubator. When your incubator is running smoothly and profitably then you will be able to help producers more effectively.” Learn more at <http://UnionKitchenDC.com>.



to wholesale buyers. The accelerator is different than other types of accelerator programs in that it does not offer cash investments for the businesses but rather the opportunity to pitch to investors. Selected members of the cohort group pitch their business plans to investors at the Good Food Financing and Innovation Conference held each year.

What are the benefits and challenges involved in food incubators and accelerators? The benefit of food incubators to entrepreneurs is inexpensive access to commercial-grade kitchens and equipment. They also can receive ongoing assistance and consulting in specialized fields, such as distribution, marketing and food safety. Participation in the program can also help the businesses secure investments.

The benefit of accelerators is that they tend to speed up the life cycle of a business, leading to quicker growth.¹⁹ Participants receive intensive training from a wide range of experts who are motivated to help the business overcome obstacles quickly. In addition, the cohort system within accelerators leads to strong relationships among the entrepreneurs who can support each other after the program is complete.

Unfortunately, food incubators and accelerators present some challenges. Food incubators collect rent from the participants. Incubator managers may also encourage slow growth because they want to continue to receive rent payments. Entrepreneurs involved in incubators often see slow growth and may stay longer than would be helpful for their businesses. Entrepreneurs may also develop a dependency on the incubator and not seek out other resources or expert advice.

A drawback of accelerators is the competition to become a participant. Accelerators often accept as few as 1 percent of applicants. As previously mentioned, accelerators speed up the life cycle of businesses, which can lead to the failure or death of the business in some cases. Some experts argue that this quickening to death may be a benefit because it allows the entrepreneur to move to the next venture, thereby freeing up valuable resources and time that could be wasted on a losing venture.

Finding a Fit

Entrepreneurs wear multiple hats in their businesses, often juggling the roles of CEO, marketing manager and product developer. They have limited time and resources to use in building their businesses. How do entrepreneurs decide

which programs are worthwhile and will help their businesses? Here are some things for entrepreneurs to think about as they consider participating in business competitions, farm incubators, and food incubators and accelerators.²⁰

- **Business development stage.** Are you still thinking through your business idea? A competition may be a good fit to allow you to flesh out a business plan and get initial feedback from judges. Have you already developed your business and have some initial sales? An accelerator program may be more your speed. If you have a good foundation, an accelerator may help you to dig deeper into issues of marketing or distribution.
- **Program duration.** Do you have the time or interest to be involved in a program that lasts multiple years? If so, maybe an incubator is a good fit. Are you interested in an intensive, short-term program? An accelerator may be a better fit. Just want to try out an idea with little commitment to a program? A competition may offer you just what you need.
- **Meeting program requirements.** There's nothing more frustrating than spending hours on an application and then realizing you don't qualify for the competition or program. Contact the program lead to make sure you and your business meet the eligibility requirements before you spend time on the application.
- **Resources provided.** Be sure you understand the benefits that come with participating in the program. Does the program offer you capital or just access to people in their network who are potential sources of capital? What costs are associated with the program? Is there a flat fee for everything or are there separate fees for each service?
- **Networking opportunities.** Many programs and competitions include mentoring. Mentoring is only valuable if you are being connected to people who have the expertise and experience that you lack. Check out the program website to learn more about the mentors and their areas of expertise. Be sure to ask the program manager how you will be matched with a mentor.
- **Graduation policies.** Find out how graduation works within the program. Does the program last for a set amount of time and then you graduate? Are there certain requirements you need to graduate? Is the program ongoing without a formal graduation? Also, check out what program graduates are

up to now. Review the program website to see how graduates have used what they learned in the program to be successful.

Ultimately, the value of a program is in how well it can advance the entrepreneur's business goals. Entrepreneurs can benefit from learning more about the programs being offered in their state or region. To learn more about the opportunities for business development, visit the Small Business Development Center (SBDC) website, <http://americassbdc.org>. The SBDC has workshops and offers one-on-one counseling in every state, and its officers often have good information about programs taking place in their states. For food and agricultural entrepreneurs, connecting with the Cooperative Extension Service can be beneficial. Extension agents often know about resources and programs that are focused on agriculture and value-added production. They offer courses and workshops on food safety and accessing food incubators and shared-use kitchens. ■

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Organic: A Solid, Beneficial and Sustainable Investment

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Organic agriculture has long been proven to yield important benefits to our soil and to our environment. In the spring of 2016, the Organic Trade Association (OTA) released research findings that show organic agriculture can also transform and lift our rural areas and communities by providing real and potentially long-lasting economic benefits to struggling parts of our country.

The white paper, *U.S. Organic Hotspots and their Benefit to Local Economies*, is based on three related research papers of Edward Jaenicke of Penn State University and co-authored by Julia Marasteanu. It finds that counties within “organic hotspots”—counties with a high concentration of organic agricultural activity that have neighboring counties which also have high organic activity—have lower poverty rates and higher median annual household incomes.

For the first time, the hotspots research links economic health at the county level to organic agriculture and shows that organic food and crop production—and the business activities accompanying organic agriculture—leads to meaningful regional economic improvements. It finds that, on average, county poverty rates drop by 1.3 percentage points, and median household income rises by over \$2,000 in organic hotspots. Organic hotspots also were found to lower the unemployment rate at the county level by 0.22 percentage point and raise per capita income by \$899.

The same beneficial results are not found for general agricultural hotspots. General agricultural hotspots were found to lower the county poverty rate by 0.17 percentage point and raise the median household income by just \$75, while increasing the unemployment rate by 0.06 percentage point and lowering per capita income by \$1,076.

“We know that organic agriculture benefits our health and our environment,” said Laura Batcha, CEO and executive director of the OTA. “This significant research shows organic can also benefit our livelihoods and help secure our financial future.”

“Organic agriculture can be used as an effective economic development tool, especially in our rural areas,” she said. “We’ve always had an intuitive sense that organic is good for communities, and studies show that organic’s price premiums and the employment that organic provides have a positive impact. But this is the first study that puts it altogether in a rigorous set of research.”

Organic is one of the fastest-growing sectors of the American food industry. In 2015, U.S. organic food sales jumped by 11 percent to almost \$40 billion, far outstripping the 3 percent growth rate for the overall food market, according to the OTA’s 2016 Industry Survey. Nearly 5 percent of the food sold in the United States is now organic; in the produce aisle, that percentage is more than double, with almost 13 percent of all fruits and vegetables sold in this country grown organically.

While much of the growth in organic is being driven by the nation’s 75 million millennials (individuals aged 18 to 34 in 2015), organic products are sought by all ages. More than 8 in 10 U.S. families now buy organic at least sometimes, and the number of families never buying organic has steadily decreased, going from almost 30 percent in 2009 to just 18 percent today.

Organic agriculture is governed by a strict set of federal regulations and guidelines that prohibit the use of synthetic pesticides and fertilizers, genetic engineering, antibiotics, growth hormones, and artificial preservatives and colors, as well as require the use of farming methods that promote ecological balance and foster on-farm biodiversity.

Organic crops command a significant price premium over conventionally grown crops because of the strong demand and relatively tight supply of organic products. As a result, farmers’ interest in organic production has grown, and more organic businesses are sprouting.

But many more farmers are interested in organic than are taking the actual step of transitioning. Farmers and communities throughout the country are missing out on organic agriculture’s proven economic benefits. What is the role of the investment community in this still hugely untapped sector? How can the investment community help more growers switch to organic and invest in organic agriculture in ways that benefit both investor and local communities?

The Virtuous—and Profitable—Cycle of Organic Investment

The investment fund Farmland LP has developed a successful model of investing in and fostering organic agriculture to produce returns for investors, create healthier soils and expand money-making opportunities for producers.

Farmland LP Managing Partner Craig Wichner calls this a “virtuous cycle.” Using sustainable agricultural practices to convert farmland to organic allows farmers to scale up and sell higher value crops; this increases their incomes and enables them to spend more money in their local communities, stimulating the local economy and all the while supporting the conversion of more land to organic.

Farmland LP, based in San Francisco, was launched in 2009. It buys conventional farmland, converts it to organic using a pasture and crop rotation, and then manages the farmland to deliver environmental, societal and financial returns. The company bought its first property—the 150-acre Fern Road Farm in the Willamette Valley—in 2010. Farmland LP now manages a \$120 million portfolio of farmland, including 13,000 acres in Northern California and Oregon’s Willamette Valley. More than 2,000 acres of Farmland LP’s portfolio have been certified organic, with several thousand more in the process of being converted into organic.

“We provide the opportunity for investors to invest in sustainably managed farmland and gain exposure to both real assets and the organic sector,” Wichner said. “Farmland has historically been overlooked as an asset class, yet its track record of superior, risk-adjusted returns makes it a good fit in a diversified investment portfolio.”

The transition of conventionally farmed land to certified organic is a rigorous three-year process, as prescribed by the U.S. Department of Agriculture’s National Organic Program. During the three-year transition process, farmers cannot use any chemicals or pesticides prohibited under organic regulations, are forbidden from using genetically modified organisms (GMOs), and must follow all other rules governing organic agriculture. They have to develop a detailed farm plan system for their operation, keep meticulous records that will eventually be closely scrutinized by their organic certifier and, during the conversion period, are not allowed to sell their products as certified organic.

BABIES ARE CRYING FOR MORE ORGANIC BUTTERNUT SQUASH!

Fern Road Farm in Oregon's Willamette Valley was the first land that the investment fund Farmland LP purchased. In 2010, the company bought the 150-acre farm, which was growing conventional commodity seed and grain crops.

Farmland LP took the farm through the three-year conversion process to organic, bringing in livestock, pasture, cover crops and specialty crops, including butternut squash. In just the first year of transition, the company calculates it avoided using about 19,600 pounds of synthetic nitrogen fertilizers and 595 pounds of pesticides on the farm, while boosting its revenue by some 40 percent.

Fern Road Farm's organic butternut squash—in high demand by organic baby food makers—has been almost flying out of the fields! Since the acquisition, the farm's revenue has increased fourfold.

Many farmers cite the transition process as the biggest hurdle to converting to organic. As a result, less than one percent of the farmland in the United States is certified organic.

Farmland LP addresses the transition hurdle by raising the capital to purchase high-quality farmland and infrastructure, managing the organic conversion process, and leasing the organic land to farmers and ranchers, thereby removing the capital barriers of going into organic for producers.

Farmland LP prefers to concentrate its holdings in specific regions to create economies of scale for farmers and ranchers leasing its land. Within these regions, a diverse set of farmers and ranchers rotate across fields to grow their crops or pasture their livestock. The number of farmer and rancher tenants operating across Farmland LP's holdings varies by season but currently is between 10 and 20.

The company's integrated model of livestock and crop rotation improves the health of the soil, manages weed pressure and breaks pest cycles. It also generates more revenue than conventional monocropping practices.

Farmland LP sees firsthand the "tremendous multiplier effect" of organic agriculture and organic hotspots.

The more diverse organic farming practices of Farmland LP's holdings not only increase revenue, but also require a greater amount of year-round work,

which creates more permanent local jobs, according to Wichner. Greater farmer profits and consistent employment all result in increased economic activity in the local community and help create the economic benefits of organic hotspots.

Helping Alleviate Rural Poverty

The OTA's white paper identifies 225 counties across the United States as organic hotspots. Organic hotspots reflect the diversity of the organic industry and the various kinds of organic agriculture and related business activities: crop production, livestock production, organic processing and organic handling. Along the West Coast, organic hotspots are often areas of high organic fruit and vegetable production. In the Pacific Northwest, organic grain production comes into play. In the Midwest, organic dairy production dominates most organic hotspots, and in the Northeast, organic vegetable and organic dairy production are prevalent.

Organic hotspots are found throughout the country in 22 states—from Tulare and Fresno counties in California's Central Valley to Piscataquis County in Maine's Highland Region. Organic hotspots are particularly strong on the West Coast, with smaller areas of hotspots in the northern Midwest, New England and the northern Mid-Atlantic states, plus a few other isolated areas in the rest of the country.

The Southern U.S. has noticeably few organic hotspots of any kind, even if you also look at "outlier hotspots"—a county of high organic activity surrounded by counties of low activity, or a county of low organic concentration in the midst of heavy organic counties.

With the exception of Broward County in southern Florida, there are no full-fledged organic hotspots in the Southern U.S. and very few outlier counties. The dearth of economy-boosting hotspots in the American South—where rural poverty is a significant and widespread problem—is a telling statistic.

A recent report published by the USDA's Economic Research Service shows that 1 in every 4 children in rural areas was living in poverty in 2014, compared with 1 in every 5 urban-dwelling children. The report also shows that there were 43 counties with child poverty rates of 50 percent or higher, with 31 of these counties in the South.

"There's a tendency for some folks to think of poverty as an urban issue, but it's a serious rural issue," then Agriculture Secretary Tom Vilsack said at the OTA's

Annual Policy Conference in May 2016. “We obviously want to expand those (organic) hotspots. We want to make sure that unemployment comes down in those rural areas; that the poverty rate comes down.”

“The outlier counties, especially in the American South, offer real promise for rural development,” Batcha said. “Now we need to figure out how to have a steady investment into organic, and remove the access to capital and to loans and to other barriers that block organic from moving forward. Organic has been proven to have broad economic benefits for local communities, and now we can work to craft beneficial policies for all.”

Changing Lives in Central Louisiana through Careful Organic Investment

Big changes most often start in small ways. In Rapides Parish in Central Louisiana, a single organic farm is transforming the lives of thousands in the local population. Inglewood Farm, in just five years, has become the largest certified organic farm in Louisiana. It has helped create a new awareness and interest in healthy diets, it has spurred the attention of consumers and local farmers alike to organic, and it has helped foster new jobs and entrepreneur opportunities for many.

Rapides Parish is considered an outlier organic hotspot—in this case, a county of high organic activity in the middle of counties of low organic activity.



But as Inglewood Farm so clearly demonstrates, the benefits that organic activity brings even in outlier hotspots are significant:

- six farmers markets in six rural communities where there were none before;
- 22 year-round employees where there were just five or so seasonal workers;
- Saturday get-togethers drawing local families, with plate lunches featuring garden-fresh treats, live music and fresh-produce tasting tests for the kids on a farm dedicated to the health of its soil and of its neighbors; and
- a successful and community-engaged organic farm growing produce, grains and pecans, and raising grass-fed livestock where a conventional commodity farm had existed for decades.

“The effects of Inglewood are like yeast fermenting; they are growing and spreading—from the farmers markets to community gardens to new restaurants opening in town that want to source locally,” said Elisabeth Keller, president of Inglewood Farm. “Plus when the farm makes money, other farmers see this. We hope Inglewood is setting the stage for more farmers getting into organic.”

Inglewood Farm dates back to the 1800s, and the Keller family has owned it since 1926. After decades of farming mostly cotton, corn and soybeans conventionally on the land, the family began to convert it to organic five years ago. The farm now boasts almost 400 acres of certified organic vegetables, pecans, corn, soybeans and wheat, with another 40 acres of vegetables in transition to organic and almost 700 acres of cover crops and pasture being converted to organic.

In 2015, Inglewood Farm grossed around \$600,000 in revenue from its organic operations. It is now the anchor vendor in six farmers markets in Central Louisiana that didn't exist a few years ago, providing a new market for young entrepreneurs raising and butchering their own livestock, soap makers, woodworkers and other local artisans. It's become the go-to place on Saturday for local families to buy organic produce, see cooking demonstrations and sit down to a home-cooked, healthy lunch. It's the spot for aspiring organic farmers to get the latest and best information on organic.

Inglewood Farm is the operating business of Keller Enterprises, a family company focusing on venture investing, venture philanthropy and venture farming. Founded in 1998 by Caroline Keller Winter, the company is headquartered in Alexandria, La., and has a successful track record of philanthropic investing in Central Louisiana. It has become a major force in providing opportunities to

the citizens of the struggling rural areas of Louisiana, creating greater access to locally produced foods and educating the local community about healthy eating habits and the local farmers about organic.

“We’re not the Rockefeller or the Ford Foundation,” said Caroline Davis, president of Keller Enterprises. “But in a smaller community, the dollars we can bring to bear and the impact we can have in a local area like Central Louisiana are significant.”

In 2011, in partnership with the Central Louisiana Community Foundation and the Food Bank of Central Louisiana, Keller Enterprises designed the Good Food Project (GFP) to create greater access to local foods through a network of community gardens, to educate the community about the importance of healthy eating habits, to sponsor related community enrichment programs and to encourage others to invest in Central Louisiana.

The board of directors of Keller Enterprises also approved a gift of \$1.1 million to the Central Louisiana Community Foundation to fund the GFP, which the food bank would manage and staff. Two committees were established to oversee the activities of the GFP: a finance committee made up of representatives from the community foundation, the food bank and Keller Enterprises, and a community advisory committee consisting of food bank board and GFP staff members, food bank clients, GFP volunteers, and community partners.

“We wanted to ensure that there was broad community ownership of the GFP. We knew that for the project to be a success, we needed to foster buy-in and engagement among everyone invested in the work of the GFP,” Davis said.

Has the Keller investment been successful? “It’s been a tremendous success in every way,” she said. Some highlights: More than 9,000 pounds of fresh local foods have been made available to local low-income families, 46 community gardens in nine parishes and 24 schools across Central Louisiana are now in active production and almost \$200,000 in cash has been raised to put back into the GFP.

Plus, one good investment leads to another. In 2014, following philanthropic investments made in 2011 by the Blue Cross Blue Shield of Louisiana Foundation and the Rapides Foundation, Keller Enterprises invested \$500,000 in the Central Louisiana Local Foods Initiative. From the beginning, the Local Foods Initiative was partnered with the food bank and the GFP, with money from the grants going to support work at the Food Bank and the GFP. Keller Enterprises had followed the work of the Local Foods Initiative closely and knew



TOP: Children learn to garden as the result of efforts by the Good Food Project. The Louisiana based project helps schools, nonprofits, neighborhoods and others to establish and maintain food gardens.

BOTTOM: A school garden being developed with the help of the Good Food Project, a partnership between the Central Louisiana Community Foundation, the Food Bank of Central Louisiana and Keller Enterprises.

how critical its work was to the local food economy. Since the Blue Cross Blue Shield investment was going to sunset, Keller Enterprises knew it had to make sure that work continued.

As one of the projects of the Central Louisiana Economic Development Alliance (CLEDA), the Local Foods Initiative's goals are to increase access to and production of locally grown produce and create a vibrant regional food economy. Strengthened by the resources of the CLEDA, the Local Foods Initiative has become the driving force behind the burgeoning food movement in Central Louisiana.

"We consider ourselves organic pioneers in this area," Davis said. "Through our investment in organic, in Inglewood and in our local food projects, we can see other efforts springing up and ideas spreading. It's changing how the community thinks about food. That's the good return for our investment. Everyone is benefiting."

USDA JOINS FORCES IN CENTRAL LOUISIANA TO GROW LOCAL FOOD ECONOMY

Hard work, commitment, collective engagement. Taken together, these three things usually produce results and so it has been the case with the Central Louisiana Local Foods Initiative. Initially funded by Blue Cross Blue Shield of Louisiana and the Rapides Foundation, the initiative has been supported, in part, by a philanthropic investment made in 2014 by Keller Enterprises.

The project is a community effort that aims to strengthen Central Louisiana's local foods economy while increasing access to fresh foods for local residents. It's one of the activities of the CLEDA. The project has been so successful that the USDA has taken note and wants to make it even better.

At the kickoff of National Farmers Market Week (which took place at the Keller Enterprise's Inglewood Farm) in August 2016, the USDA and the CLEDA signed a memorandum of agreement to signify their commitment to work together to further strengthen Central Louisiana's local food economy. The CLEDA and the USDA want to host more workshops and events together to identify program and funding opportunities for beginning and small farmers across Central Louisiana.

Creating More Organic Hotspots

Why are some counties organic hotspots and others not? The white paper identified what factors create organic hotspots, and highlighted outreach and knowledge transfer as essential in the formation of organic hotspots.

Outreach and knowledge transfer come in many forms for the local farmer aspiring to convert to organic or the young person wanting to get into organic farming. The white paper found that in areas with an organic certifier actively involved in the local agriculture, the chances of the county being an organic hotspot increases significantly. The presence of agricultural extension agents who are schooled in organic also boosts the chances for more organic activity. And outreach and educational efforts and close ties to the farming and local community by organic operations like Inglewood Farm and organic experts like Farmland LP go a long way in advancing organic at the local level.

The organic sector has always been unique in its response to and need for outreach and networking. For more than 75 years, conventional agriculture has enjoyed an infrastructure of county agricultural extension agents, university agronomists, commodity marketing experts, a host of supportive government programs and even knowledgeable farmer neighbors at the local elevator or coffee shop. That hasn't existed for organic producers. The farmer who's converting to organic is often on his or her own.

In converting Inglewood Farm to organic, the Keller family found that they, too, were often without established resources to turn to for organic advice. According to Elisabeth Keller, the local agriculture extension agents "were interested in organic, but didn't know much about it. The advice we got came from other farmers." Connecting with the Southern Sustainable Agricultural Working Group and its farmer members, making farm visits and picking the brains of other farmer experts in organic helped them navigate the organic learning curve.

Successful, forward-thinking organic operations like Inglewood Farm and Farmland LP view educating others about organic as a critical part of being a good organic steward.

"The findings of this research show that organic certifiers and the transfer of knowledge and information play a critical role in developing organic," OTA's Batcha said. "Outreach, technical assistance and the ability to have a network are vital in creating organic hotspots."

“This research is an important reminder that we need to be looking at the state and county levels to create policies at these local levels to truly maximize the beneficial effects of the organic hotspot,” she said. “Organic has come a long way on its own, but this research proves that if we invest in organic, the returns will be high for everyone, including the investor. Organic is good for the environment, good for us and good for our communities.” ■

Reflecting on Past Progress, Looking Forward to the Future

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Food impacts each of us every day. It is not just the sustenance that keeps us alive but also a deeply ingrained part of our culture—an important part of our family, local, regional and national identities. Even so, until recently many of us probably didn't give much thought to where our food came from. We view the stickers on our peppers and butternut squash as an annoyance to be removed; we see the twist tie displaying the country of origin as something to be simply undone and discarded before we wash our leafy greens.

But in recent years, our relationship to food has started to change. Consumers are increasingly seeing their food purchases, like the purchases in other aspects of their lives, as a way to effect the change they would like to see in the world and to have a positive impact with every dollar they spend. While price remains an extremely important factor, especially for low-income households and individuals, consumers are increasingly concerned with whether their food purchases support the local economy, contribute to environmental sustainability and provide adequate benefits to all components of the supply chain.

A parallel process has been taking place among those who study, make policy for and invest in the food system. These systems-level actors are also increasingly interested in pursuing multiple goals with their policies and investments: the national security implications of shorter, more resilient supply chains; the local economic benefits of recirculating the food dollar in the local economy rather than sending it away; and the potential to provide earning opportunities in the community, including for traditionally marginalized populations, that are sufficient to support an individual or family. These potential benefits and so many more are top-of-mind for the authors of this book and the many others working on these issues for whom they attempt to speak.

In taking on this project, we endeavored to highlight a sample of the work that is under way to support local and regional food systems, provide an opportunity for those working on these issues to make their case regarding the importance and potential impact of investing in regional food systems, and illuminate the many partnership and investment opportunities that exist in this sector. Our goal was to help pave the way for supportive policies and investments by contributing to the

understanding of policymakers and investors who may be interested in advancing these efforts, but need help knowing how best to do so.

This chapter summarizes some of the key lessons that we personally learned in helping to make this book a reality. However, there are many more that can be gleaned from the chapters of this book. We encourage anyone reading this to thumb through the remainder of the book if you haven't already done so. We believe that you will come away with a greater understanding and appreciation of the work being done to support regional food systems and its potential to positively impact our local communities, regions, the nation and the world.

Much Has Been Learned

Demand for regionally sourced food products is substantial, and it comes from multiple sources

There would be little impetus for creating this book had consumer desire for locally sourced food products not been substantial and increasing over the past two decades. In fact, in Chapter 1, Debra Tropp and Malini Ram Moraghan highlighted this phenomenon: Farmers made \$1.3 billion in direct-to-consumer sales in 2012, a marked increase from the \$404 million of sales in 1992 and far outpacing the growth rate of the U.S. agricultural sector overall. Moreover, counting all forms of sales—including to intermediaries like processors and food hubs—local food sales in 2012 topped \$6.1 billion.

We learned that this increase in demand is coming from both individuals, who are buying for themselves and their families, as well as institutional purchasers, whose large orders can drive and absorb a lot of the supply in a local community or region. Sasha Feldstein, Joann Lo and Christina Spach, the authors of Chapter 5, discussed how institutions—such as school districts, hospitals and large employers—can leverage their potent purchasing power to support not just local and regional farmers but also enterprises all along the food supply chain that promote sustainable, fair, humane and health-oriented work practices.

The regional food system is an extension and diversification of the existing agricultural system, as well as an opportunity for new entrants

We learned that both existing and new food enterprises are entering the local and regional food market to meet the increase in demand for products grown and

raised nearby. For existing producers, this is being done by adding new market channels and product types to their existing operations. For new farmers, including recent immigrants, they are learning what it takes to operate their own farm and food enterprises to supply their products to this market. In Chapter 14, Jill Auburn described how the U. S. Department of Agriculture funds organizations to educate, mentor and provide technical assistance to new farmers and ranchers through its Beginning Farmer and Rancher Development Program. And in Chapter 4, Ariel Kagan and Kathleen Merrigan explored the important role that organizations like Nuestras Raices and Frogtown Farms play in training and empowering new immigrants to succeed in farming and develop entrepreneurial skills.

While farmers play a key role in feeding the regional food system, processors, distributors and large institutions also fill critical links along the regional food supply chain. In many cases, these enterprises find that they must maintain a presence in both the regional and traditional food systems in order to remain financially viable. For instance, as discussed by Lauren Gwin and Nick McCann in Chapter 8, some local and regional food-oriented processors are co-packing nonregional food to keep expensive processing equipment fully utilized so they can generate the revenue needed to cover overhead. Distributors too are employing similar strategies. In Chapter 9, James Barham and James Matson described the central role that food hubs play in a local food supply chain but professed the need for these food aggregators to adhere to the “Oxygen Mask Rule of Financial Viability,” which states that food hubs and other distributors must maintain an appropriate profit margin before pursuing their social (and local) mission. And institutions, many of which have long contracted for food services with little regard to origin, are increasingly doing their part to energize the local food system by driving demand for food grown in their region. Matthew Benson and Danielle Fleury, in Chapter 10, detailed the many farm-to-institution arrangements that are growing in popularity across the country, including how K-12 schools, hospitals and universities are leveraging their buying power to bolster this market.

Partnerships are critical to success

Along the food chain, going it alone is almost a blueprint for failure, if not an impossibility. We learned that sustained success is much more likely when enterprises work with each other. This is true for both the financial service providers that capitalize businesses along the food chain (e.g., philanthropies, community

development financial institutions [CDFIs], insured depositories, government agencies) and the regional food enterprises themselves (e.g., producers, processors, food hubs, retailers). In Chapter 12, Donna Leuchten Nuccio provided some salient examples of how CDFIs, foundations, financial institutions, higher education institutions, government agencies and other partners have come together to create financing and technical assistance solutions to address challenges to expanding regional food systems. And Barham and Matson, in Chapter 9, drive home the point that food hubs need to work with just about everyone along the supply chain in order to succeed. They offer 10 essential lessons for food hub success, and nearly half of them require collaboration with businesses on either end of the food chain spectrum.

Partnerships often involve technical assistance (TA), a critically important function that endows aspiring food entrepreneurs with the know-how to successfully operate their enterprises. This TA can take the form of back-office business and financial management, such as developing a realistic business plan, or it can be actual operational training, such as learning effective techniques to increase production yields. In Chapter 15, Lisa Benson described how farm incubators are effective resources for aspiring farmers to successfully learn how to operate a farm of their own and to gain access to land and equipment without significant upfront capital expenditures. And in Chapter 12, Nuccio explained how some CDFIs have developed expertise in specific food system enterprises that allows them to provide not only standard business practice TA, but also TA for sector-specific issues, such as those related to land access and tenure.

There are investable opportunities up and down the supply chain

Monetary investments always require some weighting of risk versus return; in the local and regional food sphere, this calculation often takes on the added variable of social impact, as some food enterprises pursue mission-based objectives. In Chapter 2, Malini Ram Moraghan, Kate Danaher and Gray Harris broke down the investment continuum in the local and regional food system by explaining the different types of food enterprises that make up this ecology and how prospective funders—philanthropic organizations, CDFIs and regulated financial institutions, among others—should recalibrate their criteria for investment decisions. In Chapter 11, Kat Taylor and Julia Sze described how the TomKat Foundation invests in healthy and sustainable food infrastructure by

operating its own food enterprises and learning from its experiences. The risk in these investments is higher, but the social and environmental benefits are paramount to the foundation's funding strategies. In Chapter 12, Nuccio explained the critical role that CDFIs play in providing capital to viable and much needed food enterprises that traditional financial institutions often overlook. Typically, these are businesses that will eventually become established enough to attract loans from regulated financial institutions, but currently require more flexible or patient capital than traditional institutions are prepared to provide. And in Chapter 13, Kevin Goldsmith discussed how regulated financial institutions are working with food enterprises along the supply chain to meet their capital needs.

The benefits of investing in regional food systems extend beyond food yields

While fresher food and the potential for economic development are benefits that quickly come to mind when thinking about the outcomes of a strong local and regional food system, there are also other salutary byproducts that are frequently built into these efforts, such as community building and the advancement of worker equity.

We learned about models that bring traditionally underserved populations into the local and regional food sector and that consciously work to ensure the benefits of this system are distributed in a way that helps make progress on food, environmental, social and economic equity goals while meeting a real consumer demand. Kagan and Merrigan discussed some of these efforts in Chapter 4, such as the work being done by the DC Central Kitchen. The DC Central Kitchen operates a number of programs that seek to reinvest in the people and in the local and regional food economy in the Washington, D.C., area. For instance, it provides training for unemployed, homeless and previously incarcerated individuals while also serving as a food bank and distribution hub for the Washington metro area. Similarly, in Chapter 5, Feldstein, Lo and Spach highlighted the work being done by Our Harvest Cooperative, which has incorporated a number of practices—such as paying a livable wage—that promote worker empowerment.

Avenues for Continued Progress

While this book contains many examples of lessons we have learned about the progress that has been made in this sector in recent years, as detailed in the

previous section, it also identifies gaps in our understanding of the impact of regional food systems, as well as areas where our work still has room to improve.

While positive case studies abound, appropriately nuanced but still generalizable findings on the economic development impacts of regional food systems remain elusive

As discussed by Becca Jablonski, Mary Hendrickson, Stephen Vogel and Todd Schmit in Chapter 3, our knowledge of the scale and distribution of the economic benefits of fostering regional food systems remains less robust than we would like. Although there are examples and research that reveal positive effects at a regional- and community-level, like the impact of organic hotspots highlighted by Maggie McNeil and Edward Jaenicke in Chapter 16, much of the research that has been done to date are case studies based in local contexts and are difficult to generalize.

If we intend to continue promoting regional food systems, we must better understand the distribution of the economic benefits these systems create, and which types of investments generate the largest and most widely distributed benefits, so that policymakers can weigh this information as they develop relevant policies. Such policies should try to ensure that all parts of a region that participate in regional food systems and all populations within the region (including those who have been traditionally marginalized) accrue appropriate benefits and are included in discussions of local food system priorities so that regional food systems do not become another vehicle for exacerbating historical inequities. Further research on the economic impacts of regional food systems could help us answer some of these questions and arrive at even better informed policymaking and investment.

Existing partnerships could be strengthened, and there needs to be more of them

While there is great work being done to foster partnerships among regional food system stakeholders, examples of which are discussed above, opportunities exist for further education and partnership-building among all types of entities, including financial service providers, philanthropies, universities, nonprofits and government agencies. These efforts continue to be necessary to increase access to an appropriate combination of credit products for regional food system enterprises at all stages of development, which remains a barrier to the full achievement of the sector's potential.

In Chapter 7, Gary Matteson described one of the continuing barriers to accessing appropriate credit products: a continuing lack of familiarity with the sector among loan officers at financial institutions. As such, efforts to help educate financial institution staff on differences in the business models of regional food enterprises relative to more traditional agricultural businesses may help to expand access to credit for this sector, especially in certain communities with a rich history in agriculture.

The risk characteristics of certain regional food enterprises may not be compatible with the risk appetite of regulated depository institutions. In such cases, partnerships between mission-related organizations (e.g., CDFIs) and financial institutions—like those described by Nuccio in Chapter 12 and Goldsmith in Chapter 13—can help fill the gap. Additionally, multisector partnerships like the Michigan Good Food Fund—which brings together CDFIs, foundations, universities, the nonprofit community and others—have the potential to make a meaningful impact on the advancement of the sector.

Stubborn barriers remain to the efficient, effective deployment of capital to the sector

As pointed out by Nuccio in Chapter 12, the sheer variety of regional food enterprise models being developed, combined with small loan amounts and entrepreneurs with limited experience operating a business, creates barriers to the efficient and sustainable provision of credit to some components of the regional food sector. As discussed by Ron Phillips and Daniel Wallace in Chapter 6 and reiterated in the previous section on lessons learned, focused technical assistance and the support of mission-driven lenders can help overcome some of these barriers. The continued refinement and proving of business models, many of which are discussed throughout this book, will also improve the ability of lenders and investors to understand and underwrite enterprises operating in this sector.

The Future Looks Bright

As we discussed at the beginning of the chapter, with this book we aspired to help pave the way for supportive policies and investments for regional food systems by contributing to the knowledge base of relevant policymakers and investors. Through the course of bringing this publication to fruition, we learned a great deal about the sector and the impactful work that is being undertaken by

innovative organizations operating up and down the supply chain, and by the partners that support them. We hope that our readers also come away equipped with new knowledge on how to support the sector and with the same level of energy and optimism that we felt when reviewing the stories contained through-out the book. That energy and optimism derived from the three things that were abundantly clear to us in reading those stories: Much has been accomplished, there is much still to be done, and more can be achieved if we continue to work together. ■