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Growing Opportunity:

Outlook for the Local Food Systems Marketplace



Farm Credit Council

Young, Beginning & Small Farmer Program

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Contents

Executive Summary.....	3
Local Food Story at a Glance.....	4
Demand.....	5
Factors Limiting Supply.....	11
Farming on the Urban Edge.....	14
Infrastructure Support for Local Food Systems	20
Finding the Capital for Local Foods Success.....	29
Public Policy.....	
Endnotes.....	

Executive Summary

Local food systems are a business idea whose time has come again. As was true decades ago, local farm entrepreneurs are finding business opportunities by producing quality goods for nearby markets. These local outlets range from farmers markets to restaurants and grocery stores, as well as institutional food services like universities, schools and hospitals. Consumer demand for locally produced food is growing, and food marketers see a competitive advantage in being able to tell the story behind the food they serve. This report looks at the local food system marketplace and highlights trends in demand, supply, infrastructure, finance and public policy.

The demand for farmers' market-type food products greatly exceeds available supply. To meet this market demand, business planning and private sector finance are needed to help entrepreneurs create the processing, storage and distribution infrastructure that is required to "shorten" the geographic distance between farm gate and dinner plate. The development of localized or regionalized supply chains will allow a multitude of small- and mid-sized farmers to profitably produce such foods for nearby market outlets. This local food niche has the potential to become a vital complement to the predominant food distribution model.

Farm Credit Council is the national trade group for the Farm Credit System—a network of 94 locally controlled, customer-owned institutions that have a mission to serve agriculture. Chartered by Congress more than 90 years ago, Farm Credit uses traditional farm finance tools to lend to eligible agricultural operations of all types and sizes. Due to its structure and institutional knowledge of agricultural production and processing systems, Farm Credit is uniquely qualified to provide the financial services necessary for local food systems to thrive.

"Growing Opportunity" builds on a 2006 Farm Credit Council report on lending activity along the "urban edge"—transitional agricultural areas located on the outskirts of metropolitan regions where farmers shift from lower-value commodity production to higher-value, direct-marketed products. Local food production is a subset of a broader urban edge farm economy. Other market segments complementing traditional production include: horticulture; equine, forestry, "agritainment;" and related farm-supply enterprises. Urban edge agriculture is the new frontier for young, beginning and small farmers. They need financial institutions that understand all facets of agriculture—from farm production to creative retail marketing. The core mission of Farm Credit loan officers is to finance agriculture as they find it—even on the edge of suburbia.

Local food systems market development is taking root in both metropolitan and rural settings. Farmland near large population centers is best suited to accommodate local food production, but it is threatened by traditional patterns of suburban development. New research articulates local, state and federal policies needed to strengthen urban edge farm economies. Some metropolitan regions have begun to carry out food assessments, or "foodshed" studies. Such initiatives will raise awareness of infrastructure capacity challenges that impede creation of robust localized supply chains. The Farm Credit System can be an effective partner in such endeavors, supplying a range of financial services to American farmers and ranchers as locally grown and processed foods reach a deeper market than is currently possible.

The Local Food Story at a Glance

The Scope of Activity

- Farmers markets nationwide have grown in number from 340 in 1970 to 4,500 today.
- HMO Kaiser Permanente has launched about 30 farmers' markets nationwide as well as a pilot to source local produce for inpatients at 19 California hospitals.
- Procuring local foods is a goal of 2,007 farm-to-school programs serving 8,377 elementary and high schools in 39 states.
- University of Minnesota-Morris procured no food locally five years ago, but next year plans to buy \$500,000 in product from nearby rural farmers.
- Metropolitan New York's annual unmet demand for locally sourced farm products is an estimated \$860 million.
- USDA is projecting a 37% increase in the consumption of vegetables, nursery, and fruit crops over the next nine years.

Issues and Attitudes

- Consumers want to know how their food is produced, where and by whom.
- Food industry principles of fast, convenient and cheap are augmented by memory, romance and trust—the memory of good taste, the romance of coming from a nearby farm and trust in the safety of what is consumed.
- An infrastructure bottleneck impedes local food market development.
- The challenge is to create localized supply chains combining large-scale efficiencies with a commitment to small- and medium-scale farmers.
- Farmers increase their returns by selling products as close to the market as possible and in a form that the market can most readily use.
- Distribution systems range from producers with on-farm retail stores to those wanting to aggregate supply for local, regional and national markets.
- Food distributor SYSCO sees the need for packing sheds where 15-25 small farmers could supply the volumes needed to fill truck loads.

The Opportunity

- Local food system development is happening everywhere and especially on the “urban edge”—transitional agricultural areas near metropolitan regions where high-value production on small tracts are readily accessible to population centers.
- The Farm Credit System (FCS) is often the only agricultural lender providing both expertise and capital to urban edge farmers and ranchers.
- FCS institutions had \$1.5 billion in outstanding loans (2005) in a sample of 15 of 916 urban edge counties nationwide where six market segments complement traditional production: local food systems, greenhouses/nurseries/sod, equine, forestry, "agri-tainment," and farm-support industries.
- The urban edge is home to many producers who are young, beginning and small farmers.

Demand

Consumer Demand Creates Value

The increased number of farmers' markets, roadside stands, pick-your-own operations and community-supported agriculture subscription programs (or CSAs) suggests that locally sourced food is no passing fad. Restaurants, grocery stores, schools, colleges, universities, hospitals, and corporate kitchens are demanding fresh local produce, pasture-raised meats, specialty breads and dairy products. The current market segment of locally sourced food is estimated at less than one percent of the \$900 billion U.S. food industry. Yet this demand spells opportunity for a wide range of food industry players—from small-market farm networks to the country's largest food distributors.ⁱ

Consumers are driving this trend by wanting to know how, where and by whom their food is produced. The most outspoken demand comes from college students, chefs, urban dwellers, and employers. Demand is being amplified by a growing body of supportive research and the advocacy of non-profit agencies.

Nutrition and safety are primary concerns. Freshly picked produce is often perceived as healthier. Knowing which farm produced the food is the essence of traceability for the consumer. But consumer support also arises from the perceived potential for reductions in fossil fuel usage and greenhouse gas emissions combined with the benefits of preserving farmland and strengthening local economies. Consumers respond positively to the “multiple appeals of locally produced foods,”ⁱⁱ including a motivation to make purchases that help keep local farmers stay in business.

Mike Buzalka, executive features editor for *Food Management* magazine—a trade publication covering the food service industry, observes:

“On most college websites, locally sourced food is viewed as a way to reduce the carbon footprint. Colleges, schools, corporations and other institutions provide large, dependable markets. Their volume commitment to farmers will be an important factor in how far the ‘local food’ movement goes. By emphasizing multiple, small, scattered, limited-volume local suppliers that wreak havoc on economies of scale, this emerging phenomenon directly conflicts with the modern distribution business efficiency model. Despite all the obstacles, it's astonishing to see how many onsite operations are willing to take them on. Perhaps most crucially, the contract management sector has now also jumped on the bandwagon, a development that—given the purchasing power and broad market presence it represents—may spur more mainline distributors to devote attention to establishing reliable and efficient local-purchase programs.”ⁱⁱⁱ

Many elements of the existing food distribution system are trying to figure out how to respond to the marketplace demand they detect. Demand for locally sourced foods now exceeds supply due to the lack of efficient supply chains that link production, sorting,

processing, storage and distribution. Ramping up supply to meet the demand requires development of efficient local food systems that will shorten the geographic distance food must travel from the farm to the table. (Regional food systems more accurately describe the geographic scope, but for the purposes of this report, the term will be local food system).

Market development for local foods may parallel the growth of the organic category, which has experienced 20% annual growth in the last 15 years and now makes up two to three percent of all food products. (Organic food sales rose from \$1 billion in 1990 to nearly \$17 billion in 2006.^{iv}) In *Organic Inc: Natural Foods and How they Grew*, Samuel Fromartz writes:

“Organic food exists because, like any industry, it fulfills a need, in this case arising from lapses in the perceived quality and safety of conventional food production, and from the desire for an alternative predicated upon personal and environmental health.”^v

Old Values in a New Proposition

Local food systems represent a form of value-added marketing, where the story of the food can be turned into economic worth in the marketplace.

Local food advocates and consumers are motivated by a set of social values involving the restoration of a healthy food and farming system that both revitalizes rural communities and brings new opportunities for small- and medium-scale farmers. This emerging market centers on growers who differentiate products based on quality, special features, or after-the-sale service—and do so close to home. The predominant “conventional agriculture” food production and distribution system need not be cast as an unpleasant option to local food systems. At their best, local food systems feed identity-preserved product into the conventional food system.

“A revolution is taking place in the food industry,” asserts Fred Kirschenmann, a North Dakota organic farmer and Distinguished Fellow at the Leopold Center for Sustainable Agriculture at Iowa State University. Kirschenmann explains further:

“For years, the food business served the premise of fast, convenient and cheap. A second market is emerging based on memory, romance and trust. Memory is when a customer eats a product and says, ‘Wow, I want that again.’ Romance is the story behind the food’s production. Trust means the days of consumers’ passive acceptance are over. People wanting to know where food comes from represents an opportunity to form a relationship between the consumer and the producer.”^{vi}

Farm Credit Response

Farm Credit Services of Western Arkansas regional vice president Ken Knies sees new market demand opening the door to new lending opportunities in the northwest corner of the state. Home to Wal-Mart headquarters, the region has undergone rapid urbanization in the last 20 years. Many Wal-Mart suppliers have moved into the area, with the resulting population growth reducing the amount of traditional agriculture.

Knies began looking into farmers' market activity last year with the thought that he would eventually need new types of business to bolster his portfolio. He discovered that his former college professor serves on the local and state farmers' market board. Dr. Richard McGuire of the University of Arkansas is convinced that the growth of farmers' markets will depend on financing, and was glad to hear from his former student. "With our knowledge of agriculture, I feel we can hit the ground running when it comes to understanding and financing these newer marketing and production channels," Knies says, noting that area Chamber of Commerce representatives are also interested in enhancing the local producer supply chain. "I envision Farm Credit becoming a player in the local food marketplace in Western Arkansas."

Good Food, Good Health

The explosive growth of farmers' markets is an indicator of the sustained demand for local foods. In 1970, fresh-food enthusiasts could buy directly from farmers at 340 locales nationwide. By 1994, the number had grown to about 1,800. Today, USDA counts 4,500 farmers' markets nationwide.^{vii}

The earliest champions of farmers' markets included restaurant chefs seeking out the freshest available fruits and vegetables to incorporate into their menus. Culinary writers in newspaper food sections and myriad specialty publications have provided a steady drumbeat of publicity about locally sourced foods being fresh, tasty and nutritious.

Restaurant chefs play a unique role in promoting demand. "Even beyond their own food purchasing decisions, chefs can have an impact on the public's food choices by raising awareness about the value of supporting local farms," says Melissa Kogut, executive director of Chefs Collaborative—a Boston-based national nonprofit organization. Through educational publications, workshops, media outreach, and networking events that bring chefs, farmers and other food producers together, Kogut says Chefs Collaborative is "expanding the market for local, sustainable, delicious foods."^{viii}

The idea that good food is a building block for good health has spurred participation by the HMO giant, Kaiser Permanente. Several years ago, Kaiser's Oakland, California medical center began hosting a farmers' market for staff, members, visitors, farmers and the surrounding community. Kaiser employees have since launched about 30 farmers' markets on or near hospital/office campuses in five of its regions nationwide—Northern and Southern California, the Pacific Northwest, Hawaii and the Washington D.C. metropolitan area.^{ix}

Now Kaiser is taking the concept a step further. In partnership with the Growers Collaborative—the for-profit arm of the Community Alliance with Family Farmers—Kaiser is supplying locally sourced fruits and vegetables for patients at 19 northern California facilities. Efforts are under way to replicate this pilot program in its more extensive southern California hospital network. With its northern California farmers' markets reaching capacity, Kaiser is also experimenting with programs to serve office workers through community supported agriculture programs (CSAs), allowing “subscribers” to pay up front to receive a season’s supply of fresh vegetables.

Moving from Fad to Big Business

New York City—home to 88 outdoor, direct-to-consumer farmers’ markets—is planning a year-round wholesale farmers’ market to help meet the region’s \$860 million in annual unmet demand for locally sourced farm products. That estimate came from a 2005 study that included surveys with restaurants, retail stores, caterers, institutions, grocery stores, specialty food retailers, produce distributors, florists, garden centers and landscapers. The study also determined that a critical mass of farmers region-wide are interested in expanding operations to meet that demand. Phase II research, completed in 2007, involved site specification, market design, management and operations guidelines, and the business plan. Last April, the New York State Assembly allocated \$25 million to build the wholesale market.^x

Large metropolitan regions aren’t the only places where the local food phenomenon is taking root. It’s also catching on in rural areas. Five years ago, University of Minnesota-Morris relied entirely on national contracts to procure food needed to prepare 2,000 meals a day. All deliveries reached western Minnesota via trailer truck from the distant Minneapolis/St. Paul metropolitan area. Hearing the “eat local” rallying cry that’s spreading on college campuses nationwide, university officials directed their food contractor, Sodexo, to begin developing local supply.

Two years ago, UM-Morris sourced less than \$30,000 in local foods; this year it could reach \$300,000—although still only five percent of the university’s overall food budget. Next year, the aim is to do \$500,000. The bulk of the food is in-season produce. UM-Morris’s vice chancellor Sandy Olson-Loy calls fruits and vegetables “the easy wins. Next come meats and beans and fresh raspberries that could be frozen, and eventually flour and meats and dairy products. Within the next couple years, we’d like to source all potatoes within a radius of about 75 miles.”

Using Local Foods to Solve a Big Problem

Since 1981, obesity in the U.S. has increased 106 percent. Thirty-one percent of school age children are overweight.^{xi} A 2004 federal law required school districts participating in federally funded meal programs to develop and implement local wellness policies. As wellness programs take root in elementary school systems nationwide, the combination of nutritional education and agricultural production leads proponents to tout local foods as part of a healthy eating solution.

Today, there are 2,007 farm-to-school programs serving 8,377 elementary and high schools in 39 states.^{xii} The programs combine agriculture with nutrition education, and might include visits to farms or farmers' markets, the creation of school gardens, and invitations for farmers to talk to students. The principal aim of farm-to-school is procurement, although supplies tend to be limited due to the constraints of harvest season, rigid bidding requirements, and inefficient supply chains. Budget considerations often prevent schools from paying a premium to buy local. Food industry analyst JoAnne Berkenkamp says interested school districts have to work with distributors to “pull local foods through the system” and to foster stronger business relationships with farmers.^{xiii}

University of California Davis researchers interviewed 16 food service managers, 17 growers and 15 distributors for a forthcoming farm-to-institution study. In some institutions, demand is coming from college students. Yet, food systems analyst Gail Feenstra says: “In many cases, food service management is taking the lead in educating students about eating healthfully and locally.”

Supporting Farmers and Farmers' Markets

One factor driving the growth of farmers' markets is farmers themselves, creating new opportunity by encouraging local communities to sponsor such venues. A northern Virginia farmer has built markets for his produce, encouraging the start-up and development of farmers' markets throughout the metropolitan Washington D.C. area. The farmer is a customer of Farm Credit of the Virginias. Last fall, this local co-operative institution's marketing staff conducted an informal survey of their loan officers. They quickly estimated that at least 297 of their borrowers are involved in direct marketing of farm products.

The marketing department of Carolina Farm Credit conducted a similar survey of its network of loan officers in western North Carolina. This association identified at least 326 customers that are selling product directly at farmers' markets, restaurants and other local outlets. Carolina Farm Credit believes this number may substantially understate their customers' participation since loan officers do not necessarily inquire as to the full range of markets that their customers are serving.

Eat local movement's uphill battle

“Movement to eat food grown within 100 miles of home is gaining traction” read the page one headline in a recent edition of the *Chicago Tribune*^{xiv}. Echoing the “support your local farmer” mantra that may be shaping a new American cultural ethic, the *Tribune* reports: “Already the movement has inspired a slew of books, prompted restaurants to use local food as a selling point and established ‘locavore’ as the Word of the Year for 2007, according to the Oxford American Dictionary.”

Last January, the state of Illinois formed a local and organics food task force charged with creating policy and funding recommendations as to how the state can do a better job of feeding itself. Illinois is one of America's leading agricultural producers, yet more than 90 percent of its food is imported from outside state lines. As is true in most places nationwide, Illinois locavores have a hard time getting fed in a way that they'd like. The state-appointed task force sees an "uphill battle" in meeting demand.

"Eating local" has been a trendy media theme in the last couple years, but skepticism has begun to enter the story narrative. Press accounts suggest that the uphill battle to link supply with demand results from an insurmountable—and poorly understood—set of obstacles.

America's food system operates at maximum efficiency on a national and global scale, as a Chicago area consumer's prototypical breakfast suggests. Coffee and bananas come from central America, orange juice from Florida, raisins and strawberries from California, and cereal from various processing centers around the country. Eggs, bacon and cheeses could come from more local sources, but the food system isn't set up to deliver significant volumes of product from nearby farms.

Marketplace Confusion

Consumer demand is allowing development of new business models that couldn't have existed several years ago, says Jim Bower, executive director of Madison, Wisconsin-based Blue Planet Partners and instructor of a social entrepreneurship class at the UW-Madison Graduate School of Business. Dominating the field is a cultural ethos that misunderstands the fact that private enterprise—not philanthropy or government programs—must be the predominant method of scaling up supply to meet demand for locally sourced foods.

While thousands of local food system initiatives take root nationwide, advocates talk past each other at conferences, often unable to learn from each other's mistakes, let alone to even agree on a definition of "local" food. Bowers says there is "a lot of market confusion as many big companies are trying to figure out the depth of demand. This is a good opportunity for entrepreneurs."

Bower identifies five tiers of the food industry—ranging from community gardeners feeding themselves to multinationals dealing in highly processed products—and says Farm Credit's opportunity lies in financing businesses trying to carry the values imbedded in tier-one farmers' market-type foods into the mainstream. "We see 10 strategic directions—including land, labor and capital. This one subset could be where the lion's share of leverage is for creating profitable local food systems."

Factors Limiting Supply

Business Planning Prerequisite to Creditworthiness

Penny Brown Huber is the founding director of an outreach unit of Mid-Iowa Small Business Development Center (SBDC) called "Grow Your Small Market Farm™ Business Program." Brown Huber has put her MBA background to use, training more than 125 farm families and small agricultural businesses from 45 Iowa counties over the last seven years. She and her husband practice what she preaches, raising vegetables on their 24-acre central Iowa farm.

The search for new markets has led nearly all program participants to create small food and farm businesses catering to nearby customers. The lion's share of Iowa agriculture serves—and will continue to serve—national and global markets. Yet one-third of Iowa farms are less than 100 acres. These producers are gravitating towards markets catering to consumers who will pay a premium for locally-produced fruits, vegetables, meat, and dairy products.

Capital is needed to ramp up local food supply; also needed is a better appreciation for costs associated with running a profitable business. The difficulties many producers face reflect the lack of coordinated efforts to strengthen Iowa's small business entrepreneurial culture.

Farmers can't keep up with explosive growth in demand, Brown Huber says, citing two operators located about 25 miles from Des Moines. A small dairy has shrunk its distribution area from a 50-mile radius to 25 miles. Eventually, the dairy hopes to sell exclusively from the retail store on site. A goat cheese producer milks 15 does a day, producing 200 lbs./week of spreadable goat cheese, feta and chevre. "She is selling her products as fast as she can make them," Brown Huber says. "This farmer in her first year went from nothing to \$30,000 in sales at farmers' markets, specialty stores and food co-ops. She brought 30 pounds of cheese to Wheatfield Coop, thinking it would take a week to sell but on the first day there, one customer bought all 30 pounds."

The larger challenges are two-fold: identifying enough producers who want to supply local markets and financing. "Farm Credit needs to come to their aid," Brown Huber says. "Its loan officers have the expertise and lending knowledge to work with these types of farmers."

A 2007 Leopold Center for Sustainable Agriculture study on six local market producers found that few farmers made a conscientious effort to evaluate costs associated with physically making a transaction.^{xv} The locally grown label is an attractive selling point but also a challenge because long-distance truckload shipments can be more cost-efficient than local market deliveries. Local producers often provide superior products than the typical mass-market grocery store item, but they don't necessarily price that product accordingly. Recommendations from the Leopold Center study include:

- Measure transaction or logistics costs.
- Calculate the cost to serve each customer.
- Look for economies of scale.
- Become or use a distribution specialist.
- Work with regional retailers.

Tailoring Output Hatches Profits

In 2005, an Iowa farmer wanted to increase profits without buying more farmland. Having learned that farmers who raise cage-free hens get \$1.40 per dozen eggs – the retail price for conventionally produced eggs – this Amish man drove his horse and buggy 15 miles to the office of the local banker. The farmer had acquired and repaid two \$25,000 loans from the banker in the past. This time, he sought a \$150,000 loan to build and stock two hen houses. Six thousand birds would run free, eat organic feed and receive no conventional medication. Whether due to the size of the loan or the risks associated with a new production method, the banker declined to make the loan.

The farmer spoke with another farmer who had secured financing from Farm Credit for a similar project, then contacted the local Farm Credit Services of America loan officer. The Farm Credit lender drove to the farm to meet the farmer and learn about his business plan. After consulting with the colleague who had financed the other farmer, the lender agreed to make the loan.

Today, this new Farm Credit customer operates a 6,500-hen laying facility that sells organic eggs to the nearby Farmer's Hen House. This processor works with Kalona Organics, a national distributor that shipped \$6.5 million of eggs, dairy products and tofu in 2007. Local markets include University of Iowa and Grinnell College—two of some 100 campus dining services nationwide that in recent years have eliminated or reduced the use of eggs from caged hens.

Expertise, Capacity, and Potential

Expanding local and regional markets for sustainably-grown products will entice more farmers to consider new ventures. Yet, as this Iowa organic egg producer's experience shows, the ability to make the most of an opportunity depends on availability of credit. New production, processing, and distribution businesses often lack access to debt capital because they don't have the track record needed by a financial institution to measure repayment capacity. Fortunately, Farm Credit loan officers can rely on their peers

regionally and nationally when making decisions on proposals involving unfamiliar production practices.

As a nationwide cooperative of 94 locally-controlled associations, the cooperative structure of the Farm Credit System adapts to the evolving needs of emerging markets. Every association's elected board of directors are themselves farmers and ranchers with a vested interest in pursuing policies that facilitate the extension of credit for viable markets benefiting their farm communities.

The extensive experience Farm Credit institutions have in supporting agriculture argues for greater communication with those that can benefit from the System's ability to provide the best business risk assessment for local food entrepreneurs nationwide. After all, groups and individuals who are trying to link producers with buyers need to be made aware of the pivotal role that Farm Credit loan officers can play as collaborators, consultants and, ultimately as the providers of the credit that local food systems need to grow and prosper. Farm Credit lenders have valuable knowledge of local farm production systems. Their capabilities, when joined with local food system advocates' role as public interest brokers, can facilitate the development of localized supply chains which combine large-scale efficiencies with a commitment to foster new opportunities for nearby small- and medium-scale farmers.

Farm Credit Mission Intersects with Opportunity

Because of the typically lower capital investment to start a farm business geared to selling food locally, many entrants to the field are beginning, small farmers. Farm Credit associations have specific programs in place to serve the credit and related service needs of young, beginning, and small farmers and ranchers. These programs for young, beginning, and small farmers are required of every Farm Credit association as part of their mission mandated by Congress.

Loan volume figures underscore the System's commitment to YBS farmers. In 2007, Farm Credit associations made \$6.3 billion in new loans to young farmers, \$10.4 billion in new loans to beginning farmers, and \$13.0 billion in new loans to small farmers. (There is some overlap in the three categories.)^{xvi} Almost 90% of the loans made by Farm Credit are for less than \$250,000 and half of all System loans are for less than \$50,000.^{xvii} Farm Credit loan volume to YBS farmers greatly exceeds that of USDA programs. A recent Government Accountability Office (GAO) report on USDA programs for beginning farmers put 2006 spending as \$1.1 billion, meaning Farm Credit financed approximately ten times as much loan volume as USDA for beginning farmers.^{xviii}

Farming on the Urban Edge

With a merger in the works, the Orange County, NY community bank wanted to clear all quirky loans from its books. So farmers Al and Judy Buckbee were told to take their business to a bank that understands the dairy industry. The Buckbees borrowed from their local Farm Credit System association and got on with the business of milking cows on a ninth generation farm located 50 miles northwest of Manhattan.

That was 30 years ago. Since then, First Pioneer Farm Credit has stood by the Buckbees as they've adapted their farming operation to withstand suburbanization pressures in the fast-growing town of Warwick.

In the 1990's, after their two children returned home from college with a desire to work on the farm, Al and Judy knew that they couldn't continue milking 50 cows for the wholesale market. The question of what products would sell became intertwined with uncertainty about how to protect the farm operation from urban encroachment. The New York Department of Agriculture had launched a farmland protection initiative. State dollars were funding local programs to buy conservation easements from farmers willing to receive cash in exchange for giving up their ability to capture their property's speculative value. Buckbee researched land prices in Suffolk County, NY where the first purchase of development rights (PDR) program in the nation had begun in 1974. Two decades later, demand was so high that easement-protected eastern Long Island real estate was selling for a higher price than its owners could have fetched from speculators in the mid 1970's.

The Buckbees sold their development rights to the town's new farmland preservation program, used the proceeds to buy a neighboring farm, start raising vegetables for sale to farmers markets, and open an ice cream shop. Now in its sixth year, Bellvale Creamery draws commuters, visitors to nearby Greenwood Lake and hikers on the nearby Appalachian Trail. The shop uses cream that the family buys back from a wholesaler that distributes their 50-cow operation's hormone-free milk to regional grocery chains. The Buckbees host Sunday open barns and school group trips. Several years ago, they won the Glynwood Harvest Farmer Award for developing a sustainable farming operation and effective community relationships.

Today, the Buckbees are preparing to hand over the reins to their children. The plan is to sell development rights on the last parcel of their 450-acre Bellvale Farms, and use the anticipated \$800,000 in local, state and federal easement monies to build a dairy processing creamery. The aim is to earn a larger share of the consumer's food dollar by both producing and selling cheeses, milk, yogurts and other dairy products. Raising grass-fed beef is also a consideration.

Lending Near Metro Areas

The new geography for many young, beginning, and small farmers is located along the urban-edge—the transitional agricultural areas on the outskirts of metropolitan regions nationwide. Commercial and community banks are more involved than Farm Credit in the lending that drives suburbia’s outward march through America’s farm fields. From a homebuilder’s perspective, farm fields may look like “empty space” best filled with concrete, asphalt and rooftops. But as the Buckbees’ story shows, Farm Credit institutions recognize the enduring value that can be derived from even small farm businesses. And given Farm Credit loan officers’ mission to serve agriculture as they find it—whether on vast land tracts in remote rural areas or islands of farmland in a sea of suburban sprawl—they have a critical role to play in fostering the growth of the emerging local food niche in the shadow of cities.

Recent research shows that urban-edge agriculture counties account for at least one third of total U.S. agricultural production value (with adjacent-to-urban-edge counties and rural counties each accounting for equal shares of the balance).^{xxix} An American Farmland Trust study estimated that the 16% of U.S. farmland that includes the prime ground located within 50 miles of our largest cities generates 33% of U.S. agriculture’s dollar output.^{xx}

Farm Credit Study Findings

In 2005, System institutions had \$1.5 billion in outstanding loans in a sample of 15 of 916 urban edge counties nationwide.^{xxxi} These numbers are due to both increasing land values and changing production methods. Small, part-time operations often represent agriculture’s future as new and established farmers capitalize on proximity to population centers by shifting from low-value commodity crops to higher-value, direct-marketed products. Farm Credit works with existing urban-edge farmers as they adjust their operations, as well as with new entrants as they develop successful niche markets. The study identifies six market segments that complement traditional production: local food systems, greenhouses/nurseries/sod, equine, forestry, "agri-tainment," and farm-support industries.

Farm Credit System lending represents a sturdy foundation for urban-edge agriculture. A steady rise in the underlying value of real estate collateral secures loans for borrowers who make the transition to higher-value production. A diversity of loan repayment sources provides significant risk-bearing ability for some of these farmers. Many urban-edge farmers have off-farm employment, but their circumstances vary widely. Some second- and third-generation farm family members work off the farm while contributing labor to the family operation; others work in cities or suburbs and have moved to nearby agricultural areas to start niche-market farming operations. There also are individuals who have diversified by starting value-added businesses as a part of their operation or by making investments outside of agriculture. While many of these may not fit the picture of “traditional” farmers, these urban-edge farmers are typical of the majority of people who USDA counts as “farmers.”

The study includes the following observations from Farm Credit personnel nationwide:

- Farmers increase their returns by selling products as close to the market as they can get and in a form that the market can most readily use.
- Farmers have developed markets over the years by combining farmstand sales with large supermarket chain contracts that pay a premium for local farmers to deliver big orders of fresh-picked produce such as sweet corn.
- Urban-edge products are highly differentiated. The meat processor doesn't try to compete with Tyson; perhaps they sell specialty organic chickens instead. The egg producers may sell brown eggs that have strong local markets. Dairies may bottle and home-deliver their own milk.

Participating in the 2006 Urban Edge Agriculture study alerted Farm Credit Services of South Florida CEO Don Rice to a new opportunity. "I'm so amazed by the scope of local food systems that we've decided to include marketing efforts in our new strategic plan," Rice says. "We've got a number of small fruit and vegetable producers with very limited growth prospects. Creating a more cost efficient local food system would make it easier for many other producers to get into the business of building the networks needed to provide more locally grown food for the 6.5 million residents who live in our Association's territory."

Urban Core Farming

Sizeable quantities of underutilized real estate are also located in central cities. An urban gardening movement is taking root in inner-city areas where decades of disinvestment have left many neighborhoods without full-service grocery stores selling fruits, vegetables, and meats. Small garden plots are cropping up on vacant lots, under railroad tracks and power lines, and on rooftops. Gardening has become a cornerstone of community development strategy, and a means to reinvigorate underutilized land in inner-city areas where low-income residents have notoriously poor access to affordable, healthy food. Advocates say this trend "evolved out of the basic need that every person has to know their food, and to have some sense of control over its safety and security."^{xxii}

The potential for economic sustainability is evident in a widely discussed model involving a sliver of land next to two city of Philadelphia water towers. Several years ago, an urban farming advocate teamed up with Canadian entrepreneurs to create a demonstration farm that uses relay planting patterns to raise yields, reduce pest pressure, and build soil fertility. They call this SPIN Farming—for S-mall P-lot IN-tensive. In its fourth year of operation, Philadelphia's Somerton Tank Farms generated over \$68,000 in gross sales growing high value vegetables on a half-acre. An attraction of the SPIN farming model, which is applicable in urban areas, small towns, and rural areas, is the reduction of two barriers to entry to farming—land and capital. "To establish robust local food systems we are going to need new farmers—and lots of them," says Roxanne Christensen, the farm's project manager and co-author of the SPIN-Farming concept. "SPIN is hopefully a tool that can be used toward that end."^{xxiii}

Protected Farmland, Local Foods, and Agricultural Development

Community redevelopment efforts, such as those advocated by a national coalition called Smart Growth America, “encourage and attract investment in existing communities.” The “existing communities” in question refer to cities and suburbs and the policy remedies include programs that preserve open space and farmland to direct growth into existing communities.^{xxiv} An emerging body of research (to be discussed in this report’s last chapter) outlines a public policy framework that can enhance investment in another “existing community”—urban edge agricultural areas.

Integrating agriculture into the urban-edge economic-development mix would enhance the effectiveness of decades-old efforts to protect the land base. Twenty-four states and at least 56 local governments operate independently financed programs that have bought development rights through conservation easements on approximately two million acres nationwide.^{xxv} These pockets of preserved farmland could become the permanent foundation for local food system production.

An outstanding loan on a real estate parcel can complicate the sale of easements to public agencies and private land trusts. Despite the fact that easement-protected land tends to retain its value, commercial banks are often reluctant to allow a borrower to forego the speculative opportunity to turn farmland into housing or a strip mall. Farm Credit has a reputation for supporting the wishes of such borrowers who must enter into agreements to subordinate debt as a condition for selling development rights. For example, Farm Credit of the Virginias loan officers have subordinated debt on 19,928 acres of easement-protected land.

“The private banking industry is lined up behind suburban expansion,” says Deborah Bowers, who has published the Farmland Preservation Report newsletter since 1990. “It’s great that there’s a financial institution which support agricultural development.”

Newspaper real estate sections feed the conventional wisdom that “progress” means paving over farmland. The U.S. political economy views urban edge farmland as undeveloped property whose “highest and best use” is to become new low-density suburbs, scattered across a landscape built under the assumption that the price of gasoline shall remain forever low. Growing demand for ethanol production has fueled competition for agricultural land for food crop purposes—and begun to prove that farmland has enduring value and shouldn’t be treated as a limitless resource.

Rising energy costs will likely enhance the development of local food systems. The Philadelphia-based Delaware Valley Regional Planning Commission (DVRPC) predicts “a major change in the global energy regime will soon impact the economy...there will be great economic opportunities to exploit...therefore, as our primary objective,

economic development strategists should start shifting resources into initiatives to steer the region through this transition.”^{xxvi}

“Food spending is largely non-discretionary, which means food enterprises could have a stabilizing effect on local economies,” says Amalie Lipstreu, program manager for the Ohio Department of Agriculture’s Food Policy Advisory Council. “Eat local” marketing campaigns garner support from Chambers of Commerce and newspaper food sections. But the connection has yet to be drawn between local food demand and those geographic locales where this agricultural development is most likely to occur. Urban edge agricultural counties have land and proximity to large numbers of consumers.

State and local governments are beginning to incorporate urban-edge agriculture issues into business retention strategies. Yet, there is nearly universal exclusion of agriculture from local government economic development programs. Such programs tend to focus on attracting new industry, and not on retooling an existing industry like agriculture. Economic development professionals often concentrate on looking for green industries—those light industries that cause little environmental harm—rather than promoting the green environmental benefits that agricultural operations provide.

Although Farm Credit has congressional restrictions on its ability to lend to every player in local food systems, its commitment as a nationwide network of agriculturally-focused financial institutions could help transform urban-edge agriculture into an enduring industry. So says Ohio State University professor Jeff Sharp who is completing a survey of farm leaders in 620 urban edge farm counties or, as he calls it, “the rural-urban interface.” Prof. Sharp hasn’t done systematic data analysis on agricultural finance. Yet, based on anecdotal observation, he contends: “Farm Credit engagement with non-farmer clientele in local food system development would be a strong substantive and symbolic step toward linking agriculture to other aspects of the community. “Farm Credit support for local foods initiatives would likely catch the attention of the economic development professionals and the community development corporations, and likely leverage even further support.”

Taking the Next Step in Loudoun County, VA:

Located about 50 miles northwest of Washington D.C., Loudoun County is one of few counties to actively embrace its urban edge agriculture opportunity. In 1997, the county board enacted a plan to incorporate “high value agriculture” into its industry cluster recruitment strategy. The goal was to grow the rural economy 100 percent in 10 years. This month, the board released its decade-later report showing a 154 percent increase.^{xxvii}

A dedicated fund tied to a tourism tax finances this agricultural initiative through its economic development office. There are marketing efforts to support local farmers, and a grant program patterned after one developed by the state of Massachusetts providing farmers with funds to retain expertise to develop more profitable businesses. Farmers apply for grants, but the Loudoun County review committee set high standards and turned

down so many applications for lack of sound business potential that the program was scrapped.

Warren Howell, Loudoun County's Innovative Economic Development manager, says capacity building efforts are needed to help local farming reach the next level of profitability. Loudoun County's foresight has established a large supply of permanently protected farmland. Landowners who sell conservation easements to local land trusts should be encouraged to provide long-term leases for beginning farmers who can't afford to buy land. Growing the capacity for food production will require training and mentoring for farmers interested in moving from the artisan level to become a profitable business.

As a Farm Credit of the Virginias' loan officer, Carroll Laycock had a keen interest in helping Loudoun County farm operations on small farm tracts. "A lot of people think we're mainly involved in row crops, but the largest portion of our Loudoun County portfolio involves hay production and horses." (Laycock's Loudoun County experience has propelled him into association-wide responsibilities in its agribusiness and capital markets division as a relationship manager specializing in the greenhouse/ nursery field.)

Loudoun County's Howell sees value in working with Farm Credit. "The local food phenomenon will have trouble expanding without infrastructure," he says. "Urban-edge farmers want to sell their goods to local folks but many do not have the time, interest or ability to get the goods to the people. An appropriate food distribution system would expedite the process. Farm Credit authority to lend and assist these start-ups would make the job much easier."

Infrastructure Support for Local Food Systems

Linking Buyers and Sellers

Grocery chains and food service companies want to ramp up supply in Michigan where the variety of farm products is second only to California. Many Michigan farmers have the needed product and/or the willingness to produce it, but traditional brokers and wholesalers haven't been making the connection between Michigan and Chicago retailers interested in buying more local fresh produce and Michigan growers interested in serving these markets.

The need to bridge this gap inspired a collaboration by three local food advocacy organizations—Michigan Food and Farming Systems (MIFFS), FamilyFarmed.org, and the Association of Family Farms. The result was a "Meet the Midwest Buyers Reception" at the annual Great Lakes Fruit, Vegetable and Farm Market Expo. Sixty farmers took advantage of the chance to meet representatives from food service giants SYSCO and Sodexo, the Whole Foods Market and Meijer grocery chains, as well as Chicago-based organic sourcer and supplier, Goodness Greeness, and a number of other Michigan produce buyers.

Another sponsor was GreenStone Farm Credit Services, the largest provider of agricultural finance in Michigan and northeastern Wisconsin. GreenStone posted information about the reception on its website and provided some funding. Marketing VP Jim Nowak says: "It was a unique event that showed some creative thinking on the part of the organizers."

Deals between producers and buyers were initiated on the spot. Others are likely to follow as a result of new relationships forged that evening in Grand Rapids. Joe Colyn of Originz, LLC, an event sponsor and MIFFS Council member, says: "We achieved an important first step in bringing buyers and sellers together in a market-focused setting."

Marketing Chestnuts

One beneficiary of the "Meet the Midwest Buyers Reception" is Chestnut Growers Inc. (CGI)—a Michigan-based marketing cooperative consisting of 41 growers nationwide who see value-added products as the best way to tap a market niche dominated by imports. In 2006, CGI approached a commercial bank seeking credit to pay for market research. The bank handled the cooperative's deposits and checking accounts, and would have financed an equipment purchase. But the cooperative already had the only commercial chestnut peeler in America. Now it needed to buy expert help in finding a market for an anticipated doubling of chestnut output.

The next call was to GreenStone Farm Credit. The loan officer didn't know anything about the chestnut business but did the research necessary to feel comfortable about extending a line of credit for an uncertain venture. Those funds, combined with a Michigan Ag Department grant, helped CGI determine the feasibility of partnering with a

processor and creating dehydrated chestnut chips for sale to high-end restaurants nationwide.

The “Meet the Buyer” event gave CGI an opportunity to meet buyers for a regional grocery chain. That same week, the co-op sold fresh chestnuts to Meijer grocery stores. It’s currently in dialogue to expand and grow 2008 sales with Meijer and other regional customers.

Using the Internet

GreenStone Farm Credit also is a sponsor for another marketing innovation designed to develop local food systems. MarketMaker is an online tool that brings together producers, buyers, sellers, and distributors in a one-stop shop for marketing information.

Originally conceived to help small livestock producers, the University of Illinois Extension’s Initiative for the Development of Entrepreneurs in Agriculture (IDEA) launched MarketMaker in 2003. IDEA’s intent was to facilitate efforts by Illinois farmers to meet consumer demand. Other states quickly joined. Today, MarketMaker contains nearly 350,000 profiles of farmers and other food related enterprises in Illinois, Indiana, Iowa, Georgia, Mississippi, Nebraska, Kentucky, Michigan and New York. Ohio, Colorado, South Carolina and Washington DC are expected to have live sites by the end of the summer of 2008..^{xxviii}

Addressing an Infrastructure Bottleneck

Identifying growers and buyers is getting easier. What remains hard is cost-effective delivery of large volumes of products from farms to nearby end users. There is significant demand for local foods and substantial supply but only a narrow passage connecting the two. The proliferation of farmers’ markets has fed demand for a local food system to augment the existing conventional food system. But there are too few supply chain enterprises linking growers with nearby establishments.

An upcoming University of California study (which is being conducted in collaboration with California Alliance with Family Farmers) is focusing on the infrastructure bottleneck that impedes development of California’s farm-to-institution market. Preliminary findings identify the limited capacity of a new type of farm-to-institution distributor that bear additional transaction costs (i.e. new ordering and delivery arrangements and negotiations).

“There’s a big disconnect between the established infrastructure serving large-scale food systems and the infrastructure serving small guys,” says Jim Slama, executive director of FamilyFarmed.org, a Chicago-based organization promoting local foods and farms. Consolidation of farms and processing facilities has left the “ag of the middle” without a geographically diverse distribution and marketing network. “The challenge,” Slama says, “is to create a system that facilitates mid-sized farmers’ entry into differentiated markets.”

Leading a Horse with a Carrot, Not a Stick

The missing pieces of local food system infrastructure were evident in a recent *New York Times* article chronicling beginning efforts to systematically source local foods in the New York City public schools. This school system serves 850,000 meals a day.^{xxix}

Through one of many state-led efforts to promote local food products, the New York Agriculture Department works with growers and school districts. Several years ago, the NYC school system hired a food industry consultant to devise and begin to implement a local food procurement strategy. They'd been buying apples from local farmers, but now wanted to come up with a more systematic approach. Each year, the New York schools buy about 280,000 pounds of bagged baby carrots which are shipped from across the country. The consultant, Karp Resources, designed a plan to replace these carrots with a locally grown product. The premise was that locally grown carrots would be fresher, tastier and take less fuel to ship and children even might eat more of them.

New York farmers raise about 2,000 acres of carrots. Those varieties are suited for processing, so a new fresh variety was identified. An apple processor was interested in developing a new business line and a farmer was found who was willing to plant the new carrot variety on a patch of land 150 miles north of New York City. But the soils didn't yield a tasty vegetable and grinding down full-sized carrots resulted in 70 percent waste.

Eventually, the apple processor came up with a solution of crinkle-cut sliced carrots, which were processed out of state for a six-school test. The carrots were a hit, but before the farmer could begin planting and the processor could invest in new equipment, they needed some assurance of market stability. The trouble was the school contracting system isn't designed to support local foods. The district buys food from four approved distributors, who are required by federal and local laws to seek out the least expensive product that will meet its specifications. School districts that spend federal money on food cannot give preferential treatment to local products.

In the end, New York carrot snack packs were made price competitive. They hit schools citywide in January 2008 to great acclaim, fueling expectations that more farmers will get involved, processing capability will grow, and home-grown veggie snacks will be more readily available in more New York state school districts. Farmer Richard Ball's efforts developing the new carrot product for New York's farm-to-school market was an exercise in leading a horse to water. Yet he reportedly added, "If we don't start talking, it's never going to happen. We spent the last 40 years getting out of the local food business so I figure it's going to take a few years to turn that around."

Philanthropic Funding & the Learning Curve

Building the channel between upstate New York carrot farms and New York City school lunch tables began with a multi-agency effort—the SchoolFood Plus Initiative—underwritten by the W.K. Kellogg Foundation. Established by the Battle Creek,

Michigan cereal maker in 1930, the \$7.8 billion endowment gave away \$335 million in 2006-2007. About 20 percent of those funds went to groups trying to create “a safe, wholesome food supply worldwide.”^{xxx}

This one philanthropy has largely underwritten the rise of the local food system movement by funding academic studies (e.g. the California farm-to-institution report cited above), advocacy, and public interest brokerage (e.g. groups involved in the Michigan “Meet the Buyer” reception.) These investments have helped to both build demand and foster a better understanding of local food system dynamics. In recent years, the foundation has tried taking the next step—supporting creation of local food business networks or “value chains” designed to benefit small- and mid-sized farms/ranches.

But now Kellogg is changing its giving strategy. The Food Systems and Rural Development program has stopped making new grants. Kellogg’s new focus will be to improve the future of vulnerable children.

“Kellogg Foundation’s Food and Society program has made a positive impact,” observes Joe Colyn, an agronomist by training who started the Originz LLC consultancy following an 18-year career in various positions at Kellogg Co. “If local food system advocates are to meet their goal of regionally sourced foods becoming 10 percent of the consumer dollar, they’re going to have to transition the movement into a market.”

Farm-to-School – Supply and Infrastructure Needs to Match Demand

In 2000, USDA’s Initiative for Future Agriculture and Food Systems funded farm-to-school projects in several states. Efforts to get local food into schools were soon cropping up nationwide. In 2007, the Center for Food & Justice (an affiliate of Los Angeles-based Occidental College) and the Community Food Security Coalition (CFSC) secured Kellogg funding to engage farm-to-school organizations from 35 states in a planning process. A national network was established, focusing on policy advocacy, marketing the benefits of locally sourced foods, providing technical assistance and sharing information.

With organizations nationwide hitting the wall of inadequate supply chains, CFSC secured a grant from the UPS Foundation to help four groups (in urban New York City and Los Angeles as well as rural New Mexico and North Carolina) to create replicable business models for expanding distribution capacity.

Seasonality is a limiting factor, although greater use of greenhouses and high tunnels will extend growing seasons. Yet even in California’s temperate climate, the 85 farm-to-school distribution systems encounter significant hurdles.

One of the oldest is in Santa Monica Malibu Unified School District. Cafeteria salad bars are supplied by twice weekly buys from farmers markets. Advance orders are made to

farmers who pack produce for pick up. School employees bring it to the central kitchen for sorting and then deliver it to each site. On average, students choose the salad bar over hot lunch one-third of the time.

The Santa Monica director moved to a different district that wants to expand a program that provides salad bars in eight schools. Small producers supply reliable and consistent product from small producer suppliers, but the district lacks trucks, a centralized hub and coolers. Shrinkage and spoilage are problems. The district is seeking grants to pay for equipment and aim to be economically self-supporting by the end of the grant cycle.

School districts often partner with intermediaries. The California Alliance with Family Farmers (CAFF) is a three-decade-old not-for-profit agency that manages a for-profit LLC called the Growers' Collaborative. GC is a marketing/distribution company linking small- and medium-sized family-owned producers to institutional end users (such as the Kaiser Permanente hospital pilot). Participating farmers can use organic or conventional farming techniques, but must demonstrate high standards for treatment of workers and land stewardship.

GC has four locations, two of which are still subsidized. One of the facilities that's on the road to profitability has two drivers and two refrigerated trucks. They get orders online, pick up 50 percent of the produce, stage it at its facility (source-verifying produce with their own labels in the boxes) and deliver to buyers. There are 18 growers and 35 active buyers on a weekly basis. In 2007, this facility generated about \$300,000 in sales which equals almost \$200,000 in revenue for area farmers. In the first six months of 2008, this location had generated over \$250,000 in sales. Increasing customer base and order size are the goals. Supply is not a problem.

A Minnesota Effort

Supply is but part of the problem for the St. Paul, Minnesota public school system. SPPS, which serves 30,000 lunches a day, 14,000 breakfasts and a few thousand snacks, would make better use of locally sourced foods if efficient distribution channels existed.

In 2005, the SPPS nutrition services department began purchasing locally grown sugar snap peas and kohlrabi sticks. Local apples and winter squash were added to the 2006 menu. Last fall, they arranged through a CSA to have local farmers supply fresh winter melon and Chinese mustard greens. But as harvest season approached, SPPS learned the growers hadn't planted the requested products. "These farmers were used to selling only at farmers markets and restaurants, and didn't like the added pressure of growing product under contract," SPPS purchasing analyst Jim Groskopf explains. "The CSA leadership plans to provide these farmers with business education."

Another challenge is devising a system that gets local produce into a form school districts can use. "We need cleaned cubed fresh potatoes and zucchini sticks," Groskopf says. "One way to accomplish this is to match local growers with local produce suppliers but

again this takes time and resources. Also local produce processors need to be willing to cost effectively participate in this endeavor.”

Meeting Food Service Industry Needs

Bon Appétit Management Company, a northern California-based food service company, began operations in 1987 with a made-from-scratch food philosophy. Through an internal program called “Farm to Fork,” executive chefs in all 400 cafes in 28 states connect with local farmers. They prefer to buy directly from the farm source. When they do go through a middleman, they use some type of marketing cooperative such as the Grower Collaborative described above. More typically, farmers deliver food to café sites; chefs pick up produce at farmers market, or, in some cases, farmers make deliveries to a single café for distribution to other sites via Bon Appetit catering trucks.

In 2006, the company spent \$55 million on local foods or about 30% of their total food budget. Hindering the growth of locally sourced portion of the budget is the requirement for large volumes.

“The food service business model is very dependent on centralized purchasing with a reliance on large one-stop-shop suppliers and value added products,” says Marc Zammit, Bon Appetit’s director of culinary support and development. “The only farming sector that can meet both the local/sustainable criteria and volume and other purchase requirements are the American mid-size family farms. Unfortunately, they are disappearing at a fast rate. Changes throughout our entire food supply chain will have to take place at a fast and furious pace, if we are going to save that valuable resource and support local economies.”

Building Supplier Networks

In 2002, Pittsburgh-based Eat’n Park Hospitality Group’s contract management unit began getting inquiries from colleges and retirement homes. The corporate purchasing department discovered that none of its distributors were buying from local farmers.

Jamie Moore, director of sourcing and sustainability, began the search for suppliers by becoming the first corporate member of the Pennsylvania Association for Sustainable Agriculture.

Six years later, Moore has created a network of 100 farmers. Several regional food distributors are actively tapping local food supplies. This new sourcing capability accounts for about half of Eat’n Park’s new institutional customers. The company is supplying local food to over 100 colleges, businesses, hospitals and retirement homes. During harvest season, the Eat’n Park restaurant chain puts signs bearing the name of local farms supplying vegetables at the salad bar.

Impediments to market development begin with the lack of farmers. Then there’s the problem of rigid specifications that require growers to change production and packaging

methods and food service buyers to realize the value in offering tasty tomatoes rather than perfectly-shaped ones.

As for local meat, Eat'n Park customers only use certain cuts. Moore would like to form relationships with retail grocery stores for help in moving the entire animal. "By utilizing a retail provider, we expect to be able to pull together the volume necessary to make a local beef offering a reality."

Getting to the Meat of It

One of the fastest growing segments of U.S. food sales is "alternative" meats (e.g. local, organic, grass-fed, and natural.) Local market figures aren't tracked, but organic meat demand rose 55 percent in 2006, placing total sales at \$300 million.^{xxxii} Hindering expansion of local meats in the U.S. is the inadequacy of small-scale meat processing facilities. Existing small- or mid-sized plants often lack capacity, equipment, appropriate inspection status, and human/financial capital to upgrade or expand.

Individuals from 20 states have formed the Niche Meat Processors Assistance Network (NMPAN) with the aim of strengthening this supply chain link. The working group consists of specialists in rural development, cooperative extension, state agriculture departments, non-profit agencies, food safety and processing, and livestock producers. NMPAN is reaching out to niche meat processing experts in trade associations, government agencies, universities, NGOs, and elsewhere. The aim is to create a network with affiliates in each state who will make themselves available to assist the development of local processing efforts.

The working group has identified five "critical needs" to improve the viability of existing processing facilities and help planned facilities get off the ground:

- 1) Business skills: Management, business, and financial planning;
- 2) Regulations: Understanding preventive approaches to food safety (Hazard Analysis and Critical Control Points or HACCP) particularly at the USDA level;
- 3) Labor: Finding, training and retaining capable employees;
- 4) Communication skills: with customers (marketing), and with regulators;
- 5) Accessing financial capital.

NMPAN's co-coordinators are Arion Thiboumery of the North Central Regional Center for Rural Development at Iowa State University and Lauren Gwin of Oregon State University. The network has earned acceptance as an "eXtension community of practice"—that is an Internet-based collaborative environment where land grant university content providers exchange objective, research-based knowledge to solve real challenges in real time. NMPAN is launching a website at www.nichemeatprocessing.org.

Taking Local National

Houston-based SYSCO is a \$35 billion company that procures food globally for North American distribution to restaurants and institutions. In the late 1990s, Sysco noticed the marketing trend where independent restaurants were competing against chains by offering unique ingredients, special plate presentations and local foods. Around the same time, SYSCO CEO Rick Schnieders made contact with the leadership of Iowa State University's Leopold Center for Sustainable Agriculture. This led to the involvement of SYSCO's Craig Watson with the Association of Family Farms and ongoing efforts to foster new markets for small- and mid-sized farms.

"Farmers get frustrated because they tell us what products they have to sell," says Watson, who is SYSCO's Vice President of Quality Assurance & Agricultural Sustainability. "What they may not appreciate is that we only sell products that our customers are asking for."

SYSCO operating companies are structured as locally controlled businesses that operate with great autonomy in their market territories. Today, 20 operating companies see market demand from customers for locally sourced foods.

In SYSCO's view, bringing local foods to market requires aggregation. It's difficult for a buyer to do business directly with an individual farmer. It's done in certain areas for seasonal products, but for the most part SYSCO sees a need to foster development of aggregated sources of supply.

Its Minnesota operating unit established the concept of pooling the supply of 15-25 farmers with as little as 10 acres of production. To make this model work best requires a key infrastructure investment of about \$400,000 in a packing shed where field products would be collected, sorted and put it in a box so that it can be picked up by a SYSCO truck.

Can big companies go local?

Technological innovations like the Market Maker (MM) Internet platform are fueling corporate efforts to participate in local food procurement programs. But it's unclear how large-scale operators might fit into the value chain designed to work on a small-scale.

University of Illinois Champaign Extension's Dar Knipe, who helped launch the Market Maker (MM) initiative, has had several meetings with Wal-Mart and plans more with SYSCO. "Wal-Mart seems enamored with MM and we've already trained many of their buyers in its use but we still don't know if this will result in relationships that will be compelling to the local producers," she explains. "There is still a lot of daylight between the needs and expectations of parties on both sides of this proposition. Wal-Mart assures me they have a new found sensitivity to the local farmer but we don't know if that will translate to a reasonable return to the small and mid sized grower. The discussions are encouraging but we will have to see how it all plays out."

“Demand is growing exponentially but with rising food prices, I have to wonder if the consumer will be willing to pay the prices necessary to entice a reasonable number of producers to sell in to these markets, especially since commodities have never looked better,” Knipe observes. “There is a wealthy niche that has driven the local food movement so far but if the Wal-Marts and SYSCO’s of the world are seeking local food sources they are hearing that mainstream markets are wanting the same. How does the marketplace resolve this? Farmers will expect an economic return on par with commodity growing alternatives, complex market systems will want a higher level of accountability in regards to food safety and traceability and more consumers want more local food but many if not most will not be willing to pay enough of a premium for it. Tim Woods of the University of Kentucky has looked at the impact of rising fuel costs on produce prices and it doesn’t sound as if the savings on freight for shorter hauls will be enough to entirely offset the increased costs for local and regional food systems. Local and regional food systems will have to operate at masterful levels of efficiency in order to reasonably reward farmers while not passing off the full impact of increased costs to the producer. I’m convinced it can be done but it will take a lot of smart people working together to work it out.”

Finding the Capital for Local Foods Success

Community Gets Educated and Demands Local Food

Community leaders in Knox County, Ohio want area farmers to supply a larger share of the \$130 million that consumers and businesses spend on food each year. Agriculture accounts for about 70% of the land use in this central Ohio county. Corn and soybean fields predominate, but many of the county's 1,100 farmers are finding local markets.

Responding to the “eat local” clamor rising on college and university campuses nationwide, Kenyon College became the first Knox County institution to begin tapping local food suppliers. That was 2004. Four years later, the college dining service is sourcing 30 percent of its 2,500 daily meals from nearby producers—three times greater than what many elsewhere in the U.S. view as a lofty benchmark.

Kenyon's Center for Rural Life has taken the lead on countywide efforts to help farmers tailor products for local consumption—including individuals as well institutional buyers like schools, hospitals, restaurants, grocery stores, and caterers. Called “Food for Thought,” this Knox County collaborative is researching all the supply chain issues, including production, processing, distribution, and quality control.

Financing and capital have emerged as a big hurdle. Food for Thought's new community dining center is designed to accommodate local suppliers, but a \$65,000 flash freezer is needed to store produce. Some area corn and soybean growers might agree to diversify into vegetable production but greenhouses cost \$10,000 apiece. An organic dairy farmer could supply milk but doesn't have a refrigerated truck. A nearby historic warehouse is available to be leased for free and converted into a year-round local-food repository, but the renovation could cost as much as \$500,000.^{xxxii}

Delivering the Goods

Inadequate capitalization impedes California's farm-to-institution market, according to Gail Feenstra—a food systems analyst in the U-Cal Davis Sustainable Agriculture Research & Education Program. Co-author of a forthcoming study on new distributors serving California's college market, Feenstra explains: “They tend to be small enterprises, often associated with non-profit agencies with supplemental grant funds. Their main purpose is to expand regional markets for small to mid-scale farmers and ensure farmers adequate prices for their products. As capitalization improves, these new distributors can move increasing volumes of local product.”

The same problem is surfacing on the East Coast where the emerging supply chain depends on small to mid-size distributors that are more nimble but significantly less capitalized than their national counterparts. “They operate with a complicated set of logistics, relationships, and—when it comes to produce they sell through a competitive

bid system—very tight margins,” says Shayna Cohen of Karp Resources. “They are often the critically overlooked link in the food chain when it comes to subsidies or grant support. One New York City-based distributor told us, ‘if the State or City offered a fuel tax or payroll tax credit to keep our trucks within state borders, we’d look hard to develop new sources supply of local foods.’”

Who Will Fill the Credit Void?

Local food system initiatives cannot ramp up supply without financing. Private capital will be required to fulfill these emerging markets’ value chain demands. Some unlikely players have stepped forward.

Whole Foods Markets created a local producer loan program to help expand the availability of quality, local, differentiated products. The company website posted a statement from John Mackey, co-founder and CEO, who said Whole Foods’ “...intention is to support local agriculture all over the United States. We are going to 'walk our talk' with financial support for farmers and other producers in close proximity to our stores. We believe this financial assistance of \$10 million a year can make a very significant difference in helping local agriculture grow and flourish across the United States.”

A \$10 million a year fund won’t go far. As further indication of the need, even *Food and Wine* Magazine plans to launch a foundation to help small farmers produce local food.

“Financing is an absolutely critical piece of the puzzle,” says Emily Jackson, farm-to-school program director for Asheville, NC-based Appalachian Sustainable Agriculture Project. Marion Kalb, who directs the National Farm to School Program for the Community Food Security Coalition, says there are not enough farmers and not enough production” to supply the need of institutional buyers. Kalb adds: “The ability to effectively deliver products is a key factor. So is the financing for refrigerated trucks and warehouses and storage capacity. I suspect there’s a step in between that will get us into that way of thinking.”

Risk in Local Food System Expansion

As experts in the financing of agricultural production/food systems, Farm Credit loan officers understand the issues that determine the profitability of a farming enterprise. The dynamics driving the development of this marketplace reflect the underlying principles of economics.

The explosive growth of farmers’ markets amounts to local foods’ “entry level” phase since it’s relatively affordable for both producer and consumer. The challenge now is to extend that growth curve by integrating local food into groceries and institutions. Moving to the next phase requires more capital to build the necessary infrastructure, and more

risk for both grower and food distributor. The grower's risk involves capital investment, crop production risk, and the "labor risk" of finding, managing, and keeping the seasonal labor necessary to harvest crops. The food distributor's risk is also capital investment, along with increased competition from bringing new local food wholesalers into the marketplace.

The economic risk of moving to the next phase is being concentrated on new, start-up, niche-oriented food wholesalers who may have difficulty finding the financing to build such businesses. Farm Credit is the appropriate lender because of its deep knowledge of agricultural production and marketing businesses, and its mission interest in providing economic opportunity for farmer-customers who produce the food and benefit from increased market demand.

Commercial banks would likely view financing local food system distributors and processors as risky start-ups tied to a passing fad. By contrast, many System institutions view such businesses as logical extensions of the widespread lending Farm Credit already does to the growers who now supply farmers' markets.

Practical Evaluation of Costs

Local Farm Credit institutions could help determine how to create an efficient delivery system by putting all supply chain components on the table, then analyzing each link. The first outcome of such an evaluation will be a more accurate view of costs—an issue largely ignored by studies justifying local food system development.

Among the exceptions was a 2004 study on distribution barriers. Referring to small fruit and vegetable growers, the authors wrote: "Physical types of infrastructure can involve considerable outlays of capital. Attention will need to be given to cost-benefit analyses. Several local food advocates named financial constraints and a shortage of resources as barriers to advancing local food systems. Without careful planning, limited resources can quickly be used up on infrastructure that may not achieve desired results."^{xxxiii}

"Understanding the gap between demand and supply" is crucial, a 2007 study observes.^{xxxiv} There's huge potential to increase local consumption of food and farm products. However, "if transaction costs rise at the same rate as total revenues, the gain to the farmer of selling to local markets would be lost."

Yet, many studies have made cost assumptions that cast doubt on potential benefits. There can be a steep learning curve for local food system advocates—the universities and non-profits that have been incubating demand. The engagement of financial expertise is key to ensuring creation of economically sustainable local food systems.

Public Interest Brokers

Michigan Land Use Institute (MLUI) uses research, advocacy and communication tools

to facilitate local food and farm networks. Founded in 1995 to promote natural resources-based sustainable development practices in northwest Michigan, MLUI was one of the first smart growth groups to realize farmland protection policies alone cannot be an effective check against suburban sprawl. Its “entrepreneurial agriculture” program, launched in 2002, set out to support local food and farm businesses. The focus has been to expand market outlets by re-creating a network of smaller independent processors, wholesalers, and distributors.

In 2006, MLUI and Michigan State University’s C.S. Mott Group collaborated on a study showing how to increase profits for the state’s fruit and vegetable growers through more direct and wholesale marketing of fresh produce and less reliance on sales of bulk raw fruits and vegetables to processors of canned, frozen, and other products.^{xxxv} The study built on the findings from a 2004 state-funded pilot marketing program that helped produce growers increase fresh produce sales by 8.6 percent to two grocery chains in Grand Rapids and Detroit. That year, Michigan farmers generated approximately \$41 million in direct market revenue—a tiny fraction of the \$1.9 billion that the state’s consumers spend annually on fruits and vegetables. Meanwhile, Michigan farmers sold 74 percent of fruit and 44 percent of vegetables at much lower commodity prices to processors. Between 2002 and 2005, the state’s 350 asparagus farmers expanded their fresh marketing (direct and wholesale fresh) business from 5 percent to 25 percent. Increased sales helped farmers net a 20 percent premium. A corresponding decline in the asparagus supply contributed to commodity processors upping their purchase price by 30 percent.

Tripling the sale of fresh produce to direct and wholesale markets in Michigan would result in up to \$64 million in new net farm income for Michigan farmers and nearly 1,900 jobs as farmers spent that new income. The report’s authors say they took a conservative number because their economic models didn’t take into account the added benefits of higher farm profits attracting entrepreneurs and stimulating innovation. However, they conceded a lack of expertise to estimate the cost or potential new jobs involved in new fresh market-oriented packing, processing and distribution infrastructure.

Farm Credit’s potential to become an invaluable business planning partner is clear to Patty Cantrell, MLUI’s entrepreneurial ag program director and the study’s co-author. She has sought Farm Credit help on a Grand Traverse County-sponsored study exploring potential community benefits from building out the local food marketing chain. The region’s economic development agencies are helping to research projected sales, storage and processing needs. GreenStone Farm Credit Services has agreed to review this concept and possibly connect the group to others who have formed successful marketing cooperatives elsewhere.

“Greenstone is glad to assist in this way,” executive vice president Dave Armstrong says. “There is no immediate need for money but they are exploring some promising concepts to better link local growers to processors, wholesale and retail buyers, and ultimately consumers. Locally grown and processed foods are a rapidly growing niche within the food industry and represent a great opportunity for local producers.”

Infrastructure Ownership Affects Access to Capital

Farm Credit associations are reluctant to lend their savvy to discussions where legislative constraints can limit their ability to be an effective partner. Strict farmer ownership requirements make many local food system efforts ineligible for Farm Credit financing. As many Farm Credit loan officers have found out, it's not a pleasant experience helping an entrepreneur figure a path to success—and then having to explain that he or she must go somewhere else for financing.

A 37-year-old federal law—the 1971 Farm Credit Act—determines that farm-related businesses must be majority farmer-owned to qualify for Farm Credit loans. At one time farmer-owned cooperatives (which qualify for Farm Credit loans) were a more prevalent ownership structure for businesses primarily engaged in buying products directly from farmers or selling crop inputs directly to farmers. Now farmers and others are joining together through limited liability companies forming farm-related business structures that buy and sell farm inputs and products.

Farm-related businesses will become essential components in regional networks linking production, processing, storage and distribution of foods to nearby markets. The 2007 Leopold Center small-market farmers study stated the importance of building supply-chain partnerships with non-farm providers. The study didn't look at who owns those farm-related businesses. However, in a subsequent interview, study co-author Iowa State logistics professor Dr. Clyde Walter said he doubts individual farmers would have the capital necessary for supply chain components like distributors, packing plants, and motor carriers.

Emerging partnerships are embracing “‘small ‘c’ collaborative approaches (versus the traditional commodity cooperative, or ‘Big C’ approach) to sharing information, abiding by standards, and branding their products,” MLUI's Cantrell says. “The ‘small c’ stuff is in the realm of all fruits and vegetables (from asparagus to zucchini), where we have many producers of varying volumes needing to work together, including finding and/or funding infrastructure, but not wanting to be joined at the hip.”

The “Big C” approach was a dominant business model when Congress last updated Farm Credit's lending authorities during the Nixon Administration. New models of cooperation—not direct farmer ownership—will likely drive 21st century farm-to-fork initiatives, i.e. “value chains” in which producers, processors, and distributors join as strategic partners in assuring integrity (of farm story, product quality etc.) Many small-scale businesses may not qualify for Farm Credit financing and, thus, will have to deal with seasonal and perishable farm products without the help of a knowledgeable, experienced agricultural lender.

Member-owned food co-ops

Building ties to local farmers has become a guiding principle of member-owned food co-ops which are emerging as a new tier of regional food distribution nationwide .^{xxxvi} Yet, unlike farmer-coops, food-coops are consumer-owned and, thus, ineligible for Farm Credit financing.

Minneapolis, MN-based Wedge Natural Foods Co-op—the largest, single store, consumer-owned natural food co-op in the U.S.—has a warehouse operation that distributes certified organic produce from a five-state area. Much of the produce is grown within a 100-mile radius. To ensure that a retiring supplier’s land remains in farming, the Wedge purchased a nearby 97-acre organic farm. Under the Wedge’s ownership the well-known “Gardens of Eagan” will continue generating good food as well as become an educational entity that helps people from the Twin Cities region better understand where food comes from.

Before buying the farm, Wedge management turned to Farm Credit. The prosperous co-op didn’t need a loan, but it did need advice about the farm’s cash-flow. Wedge general manager Lindy Bannister was delighted with help provided by a loan officer from AgStar Financial Services. The association would have been eligible to finance the farm but is ineligible to assist this grocery cooperative’s other ventures. Bannister says she’d like to partner with Farm Credit on future efforts “to supply our chain because they understand the people who smell the dirt.”

Local Food Systems Require Local Commitment

The demand-driven local food market is clouded by unknowns. Farmers who haven’t sold to groceries or institutions are reluctant to take on a value-added endeavor because they’re afraid the market will dry up. Meanwhile, farm-to-school networkers fear that the scaling up process will attract schools and hospitals that might abandon the project if contracts for local foods can’t be fulfilled.

But it may be that the opposite occurs now that demand greatly exceeds supply. So says Warren King, a former Cargill executive who now applies his expertise to the logistical challenges of local and organic foods through his consulting firm Wellspring Management. “The current drive is to build local and regional food systems that will be less industrial and incorporate a set of ‘values’ that go beyond price, quantity and shipment into the supply chain,” King explains. “If this doesn’t get done in three to five years, the opportunity will be greatly diminished because large food producers and processors will likely fill this niche.”

Organic Inc. author Samuel Fromartz is skeptical. “I think local food systems are inherently challenging for bigger companies, because of the logistics of sourcing from so many local operators. So I believe this niche will have time to grow, with local control.”

That large food concerns could wind up meeting the demand isn't what advocates had in mind. John Fisk is director of the Wallace Center at Winrock International Institute for Agricultural Development. Winrock is currently in the middle of a \$5 million, three-year initiative to "enhance sustainable community-based food systems movement." Various efforts include dispersing funds to regional groups and developing a national "Good Food Network" that supports these groups and others to be more successful at scaling up supply. Fisk sees private capital as crucial, noting greater availability of credit would "help locally based food enterprises which are best positioned to provide benefits to their community."

Public Policy

(This chapter will focus on the impact of the new federal farm bill as well as the emerging body of research describing a public policy framework that can help foster agricultural development on the outskirts of metropolitan regions.)

ⁱ The 1% of food industry figure comes from *Newsday*, August 14, 2006, “Local farms delivering freshness” by Becky Aikman. In June 2007, market research publisher Packaged Facts released a study “Local and Fresh Foods” which found that locally grown food sales are “expected to jump from approximately \$4 billion in 2002 to \$5 billion in 2007...Based on the exponential growth of farmers’ markets, as well as retail and foodservice initiatives to add more local products to their merchandise mix and menus, Packaged Facts estimates that locally grown foods could turn into a \$7 billion business by 2011.” <http://www.packagedfacts.com/Local-Fresh-Foods-1421831>.

ⁱⁱ “An Analysis of Food-Chain Demand for Differentiated Farm Commodities: Implications for the Farm Sector” was written by Dr. Kathleen Painter of Washington State University’s Center for Sustaining Ag and Natural Resources.

ⁱⁱⁱ See “How to Buy from the Little Guy”--Food Management Magazine’s cover story in October 2006. <http://www.food-management.com/archive.php?Y=2006>. In an interview 15 months later, Buzalka says the local food trend “continues to occur with increasing frequency, especially at colleges.”

^{iv} Organic Trade Association data reported in July 6, 2008 *Chicago Tribune* “Support your local farmer.”

^v Fromartz’s Organic Inc. was published by Harcourt Books in 2006.

^{vi} Kirschenmann made these remarks at the March 2007 FamilyFarmed.org Expo in the Chicago Cultural Center. Event organizer Jim Slama introduced Kirschenmann as the “pre-eminent organic philosopher.”

6 Historical data about the number of farmers markets came from [Organic, Inc.: Natural Foods and How They Grew](#). USDA’s 2006 numbers can be found at <http://www.ams.usda.gov/news/281-06.htm>. In June 2008, Debra Tropp, Branch Chief of Farmers Market and Direct Marketing Research for USDA Agricultural Marketing Service, informed us that USDA will release new figures in August 2008.

^{viii} <http://chefscollaborative.org/>

^{ix} Elisa Wong is community health specialist in the Kaiser Permanente Community Benefit program Office and **supports the farmers market network** at its Oakland headquarters. In an interview, she said the original driving force behind Kaiser’s involvement in local foods is Dr. Preston Maring. The associate physician-in-chief at the Kaiser Permanente Medical Center in Oakland, he’s responsible for tertiary care services planning and development for Oakland’s 200,000 health plan members as well as members from around the Northern California region. Dr. Maring is also an avid chef.

^x The New York State Department of Agriculture and Markets—with support from the USDA’s Agricultural Markets Services—retained Market Ventures, Inc. and Karp Resources to conduct the studies. <http://wholesalefarmersmarketnyc.com/>

^{xi} Obesity statistics and farm-to-school program numbers come from the National Farm to School Network website-- www.farmtoschool.org

^{xii} Ibid.

^{xiii} Berkenkamp is the author of various studies on local food systems, including “Making the Farm/School Connection: Opportunity and Barriers to Greater Use of Locally Grown Produce in Public Schools.” This report was prepared for the University of Minnesota’s Dept of Applied Economics in January 2006. Berkenkamp is now local foods program director for the Minneapolis-based Institute for Agriculture and Trade Policy.

^{xiv} Reporter Gerry Smith’s article—“Support your local farmer: Movement to eat food grown within 100 miles of home is gaining traction”—appeared in the July 6, 2008 edition of the Chicago *Tribune*.

¹² “Transaction cost case studies for six Iowa food producers” was released by ISU’s Leopold Center in July 2007. Co-authors were Clyde Walter, Prof. of Logistics and Supply Chain Management at College of Business and Randy Boeckstedt of Center for Transportation Research and Education.

^{xvi} Farm Credit System’s new loan volumes in 2006 can be found at: http://www.fca.gov/FCA-Web/fca%20new%20site/Download/2006_fcs_ybs_report.pdf .

^{xvii} The number of FCS loans by size can be found at: (<http://www.farmcredit-fcb.com/farmcredit/financials/statement.jsp>)

^{xviii} GAO Report to the Chairman, Committee on Agriculture, Nutrition, and Forestry, U.S. Senate, September 2007, Publication # GAO-07-1130.

^{xix} See “21st Century Rural America: New Horizons for U.S. Agriculture.” Farm Credit Council released this report in January 2006.

^{xx} In the July 2001, *Ag Lender* article “Resourceful Farming: Producing Environmental Commodities,” Robert Heuer explored the mounting public scrutiny of the federal farm legislative process leading up to the 2002 bill Farm Bill. Drawing on data from American Farmland Trust, Heuer wrote that urban-edge farming “represents America’s food security blanket, producing 30% of our grain, 45% of our livestock, and 80% of our domestic fruit, vegetables and dairy products. Yet, farm policy barely acknowledges a federal role in cultivating local farm economies...”

^{xxi} The April 2006 Farm Credit Council study --“Urban Edge Agriculture: A Farm Credit System Perspective” was written by public policy/marketing consultant Robert Heuer.

^{xxii} Remarks by Michael Ableman, keynote speaker at the winter 2008 Urban Agriculture conference in Milwaukee. Ableman—a farmer, educator, photographer and writer—is founder and executive director emeritus of the [Center for Urban Agriculture at Fairview Gardens](#), a non profit organization based on one of the oldest and most diverse organic farms in southern California, where he farmed from 1981 to 2001. The farm has become an important community and education center and a national model for small scale and urban agriculture, hosting as many as 5000 people per year for tours, classes, festivals, and apprenticeships.

^{xxiii} Christensen attended the first meeting of the steering committee for the Delaware Valley Regional Planning Commission’s Greater Philadelphia food assessment on June 5, 2008. What struck her at the meeting was someone’s observation that: “Saving farms and saving farming are two different things.”

She explains: “I know Pennsylvania’s farmland preservation program is among the most effective in the country; but saving small, independent farm businesses remains a challenge. Farming has to be ‘right-sized’ to be compatible with high population density. This is more easily accomplished with vegetable farming than livestock and dairy farming. Commercial vegetable farming can be down-sized and moved closer to consumers, thus reducing the land base needed for farming, minimizing transportation costs and increasing food security. And that is, effectively, what Somerton Tanks Farm serves as the model for, and

what SPIN-style farming accomplishes. And by being a “franchise-ready” farming system, SPIN enables lots more people - whether they are just starting out, or are the mid-life career changers or retirees - to farm.

“I might not have a clear perspective since I am in the thick of it, but what I see every day are more and more entrepreneurial first generation farmers from all over this country and Canada using SPIN’s sub-acre commercial system as an entry point into the farming profession. There are now over 200 members in the SPIN farmers email group throughout the U.S. and Canada. They are using front lawns and backyards and neighborhood lots as their land base. People are literally taking into their own hands the task of re-localizing food production. This is happening without significant policy changes or government supports. It is entirely entrepreneurially-driven.”

^{xxiv} Smart Growth America website, (<http://www.smartgrowthamerica.org/openspace.html>), states the group’s position on farmland preservation based on an American Farmland Trust report released in 2002. “Farming on the Edge: Sprawling Development Threatens America's Best Farmland” found that between 1992 and 1997, the U.S. paved over more than 6 million acres of farmland, an area approximately the size of Maryland. Americans developed twice as much farmland in the 1990s as in the 1980s, and we are losing high quality farmland –the land best suited for growing food – the fastest.

^{xxv} This data comes from American Farmland Trust’s (AFT) Farmland Information Center—a clearinghouse for information about farm and ranchland protection, conservation practices, and programs and policies that support the business of farming. The two million acres of permanently protected farmland have been through public programs. AFT’s Anita Zurbrugg says that they don’t tally the additional protected acreage through private land trusts.

^{xxvi} Pg. 34, “Farming in Philadelphia: Feasibility Analysis and Next Steps;” Institute for Innovations in Local Farming by Urban Partners;
www.spinfarming.com/common/pdfs/STF_inst_for_innovations_dec07.pdf

^{xxvii} Between 1992 and 1997, Loudoun’s annual ag output actually declined from \$26.7 million to \$25.9 million. However, the active promotion of urban-edge market segments helped Loudoun County generate \$67.9 million in gross sales last year. In the “Report on the Outcome of the 200,000 Acres Solution,” which was presented to the Loudoun County Board on July 15, 2008, the rural economic development office found that the “re-invention of the rural economy...emerged from this merger of forces (that) includes crops and animals (as well as) greater production of consumer-oriented foods, B&Bs, restaurants, special events facilities and a growing corps of entrepreneurs focused on introducing modern business practices to agriculture.” <http://www.loudounfarms.org/>

^{xxviii} Access all states through national portal <http://national.marketmaker.uiuc.edu>.

^{xxix} The October 17, 2007 *New York Times* article “Local Carrots With a Side of Red Tape” was written by Kim Severson.

^{xxx} To learn more about [W.K. Kellogg Foundation](http://www.wkcf.org)’s efforts to build “the capacity of individuals, communities, and institutions to solve their own problems, see www.wkcf.org

^{xxxi} See *San Francisco Chronicle* “Back to the Ranch: Consumers are going to the source for pastured beef, pork, poultry and eggs.” (Sept. 20, 2006) and various stories at such websites as meatprocess.com; americancowman.com; and foodnavigator-USA.com.

^{xxxii} Howard Sacks, Rural Life Center director at Kenyon College, provided cost estimates.

^{xxxiii} “A Marketing Systems Approach to Removing Distribution Barriers Confronting Small-Volume Fruit and Vegetable Growers” appeared in the August 2004 Southern Cooperative Series Bulletin Report. The co-authors were University of Tennessee’s David Eastwood, John Brooker and Charles Hall; North Carolina State University’s Ed Estes; University of Kentucky’s Tim Woods; and University of Georgia’s James Epperson and Forrest Stegelin.

^{xxxiv} See “Growing Local: Expanding the Western North Carolina Food and Farm Economy.” The 2007 study—written by Laura D. Kirby, Charlie Jackson, and Allison Perrett—results from the Appalachian Sustainable Agriculture Project’s multi-year evaluation of the potential for increasing local consumption of Western North Carolina-grown food and farm products.

^{xxxv} “Eat Fresh and Grow Jobs, Michigan” was released in September 2006. Co-authors were MLUI’s Patty Cantrell; Michigan State’s David Conner and Michael Hamm, and Upjohn Institute’s George Erickcek.

^{xxxvi} Organic Valley of Wisconsin’s Cecil Wright speaks of food cooperatives as being at “the nexus of local food system development.”