

Scaling Up Local Food

Investing in Farm & Food Systems Infrastructure in the Pioneer Valley

Community Involved in Sustaining Agriculture

Overview

Demand for local food in the Pioneer Valley is booming. Farmer-to-consumer direct sales are a path to economic sustainability for many farms, but are only one piece of an economically robust local food system. Processing facilities and other infrastructure that adds value to agricultural products need to be built— or in some cases rebuilt— if the Pioneer Valley is going to continue to be a national leader in the local food movement.

This report challenges the Pioneer Valley community to play a strong role in the creation and support of new business enterprises that fill gaps in our agricultural and food system. It summarizes our learning at Community Involved in Sustaining Agriculture (CISA) over two years of working on infrastructure projects with our community partners, and it highlights an emerging slate of opportunities for individual, government, and business investment and support.

Our research has demonstrated that community support and investment in these types of projects is essential. CISA has examined how our community could meet several local needs: processing facilities for meat, milk, and frozen produce, cold storage, and cut and wash salad greens processing for large retailers. We found that these types of projects, ones that service multiple farms and thus provide the community with more volume and diversity of local food, face a number of very similar and steep challenges such as equitable ownership structures, sufficient financing, and labor.

The progress in these areas can be frustratingly slow. Profit margins in these businesses are often very tight, and the day-to-day work required to slaughter animals or bottle milk is not appealing to everyone. In many cases, farmers feel the absence of these services most acutely, but do not have the time, energy, or financial resources to start up and run a second business. But even in the absence of significant public and private investment, farmers and local food advocates are tackling these challenges, with characteristic resourcefulness:

- Two years ago valley meat producers had to transport their animals over long distances to slaughter, but recently two medium-scale slaughterhouses and a mobile poultry processing unit have come online.
- With no local milk bottling plant, several local dairies have built on-farm processing facilities and are selling bottled milk, cheese, and yogurt. Other dairy farms have used unique marketing and delivery services to improve the bottom line while providing important services to local residents.

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- Creative financing is supporting the development of a variety of innovative infrastructure projects, including a local-only distribution company, a mobile poultry processing unit, a community food processing center, and a new loan fund that supports businesses that fill key gaps in the local agricultural infrastructure.

This report adds to the emerging national conversation among communities working to strengthen local food systems through creative investment and innovative ownership and management models.

Report Objectives

- Explore the benefits and challenges of investing in local food and agricultural infrastructure in the Pioneer Valley
- Provide case studies of ongoing local efforts to fill key infrastructure gaps
- Encourage public officials, food businesses, farmers, and the general public to support these projects

What is Infrastructure and Why is it so Important?

Infrastructure makes possible all of the steps between farms and our kitchens. It includes processing plants, transportation, storage and ordering systems, and market outlets, but may also encompass things like specialized equipment or protocols required for meeting regulatory requirements, or the tools and skills needed to cook real food in a school cafeteria. As our food system has shifted away from local and regional production and trade towards global sourcing, the infrastructure required to connect local farms with local markets has eroded. Local mills, slaughterhouses, butcher shops, and canneries are rare in the Northeast. Supermarkets are set up to receive large shipments of food at central warehouses, and school kitchens often lack knives, cutting boards, and counter space, relying instead on heat-and-serve meals.

The rising consumer demand for locally grown food has created a vibrant arena of direct sales, including farmers' markets, farmstands, pick-your-own operations, and community supported agriculture (CSA) farms. Farmers looking for new markets were able to invest in the relatively cheap infrastructure of direct to consumer sales: pick up trucks, farm stand displays, etc.. Massachusetts ranks second only to Rhode Island in the total value of farm products sold directly to consumers. Nonetheless, direct sales still account for only 8.6% of farm products sold¹. The majority of food that most people eat comes from a grocery store, school cafeteria, or convenience store². Connecting more local farmers with these market outlets—and thus connecting more consumers with fresh local food—requires additional infrastructure.

The availability of infrastructure services influences how farms get their products from their farms to our tables. Existing infrastructure can be cumbersome for local sales; requiring, for example, that produce grown in the Pioneer Valley for sale through Big Y Supermarkets travel first to a central warehouse in Connecticut, before arriving back to local stores.

Who Benefits?

While new infrastructure and services will offer benefits to all farmers, the farms that stand to benefit the most are the mid-size farms that have not yet been able to tap into the local food markets. These are the farms growing food for wholesale markets, with sufficient volume to meet the needs of large buyers. Sometimes called “agriculture of the middle,”³ these farms are essential to the effort to scale up the local food system. Successful ordering, distribution, processing, and consolidation businesses can help these farms serve the hospitals, schools, retailers, restaurants and specialty foods producers in our region.

Farmers are not the only ones to gain from infrastructure development, however. Agricultural infrastructure businesses bring important benefits to the community. Processing plants, for example, may open new, value-added markets for farmers, thus making new, locally-grown products available to consumers, while contributing to the strength of the local economy: paying

¹ [USDA/NASS 2007 Ag census](#)

² "[Food CPI and Expenditures: Food at Home Total Expenditures.](#)" USDA Economic Research Service (2010).

³ Kirschemann, Fred, et al. "Why Worry about the Agriculture of the Middle?" [Agriculture of the Middle](#).

local taxes, hiring local employees, and purchasing local inputs and services. New distributors, likewise, provide a pathway to market for farmers while bringing products to consumers who were previously un- or under-served. Thus, the benefits of new, successful businesses using local agricultural inputs or providing services to farmers accrue to many members of the community other than farmers.

Asking farmers to solve these problems alone ignores the ways that a resilient local and regional food system could benefit us all, and jeopardizes the success of local farms and direct markets. An important goal is to recognize this broad community benefit and use it to create, finance, and support businesses that serve local farms and communities. In some cases, whole or partial farmer ownership may be the best option, and in other cases it may not.

Sidebar: Local AND Regional Food Systems

In this article, we talk about both *local* and *regional* food systems. We do not provide a hard-and-fast definition of local, and that is because we think that both local and regional food systems are important. In some cases, it works to get our food from the farmer down the street. In other cases, regional collaboration makes a lot of sense. Some processing facilities, for example, may require regional sourcing in order to have enough product to cover their costs and meet market demand. Soil and climate requirements, the cost of land, and the size of typical farm parcels are among the factors that may determine whether we source a product from the Pioneer Valley or from more distant parts of our region, such as upstate New York or Aroostook County, Maine. These factors may change over time due to shifts in consumer demand, the price of oil, or global commodity prices.

What Do We Need to Scale Up Local Food?

The local food system in the Pioneer Valley has many assets, including:

- Excellent farmland and a variety of agricultural microclimates, include fertile bottomland, sloping orchard hills?, and upland pastures, that support a wide diversity of agricultural products;
- A steady, if small, influx of new farmers, often with good experience and training from local farms, colleges, and incubator or training programs⁴;
- Strong support for local farm products and farm issues;
- Active agricultural organizations;
- A growing number of businesses using locally grown ingredients in processed products, many of them supported by the services of a shared incubator kitchen facility;
- Community gardens and farms, youth leadership programs focused on food and agriculture, and strong farm-to-school programs;
- A growing awareness of the connections between many overlapping goals, including a strong and resilient local economy, community health and self-determination, thriving

⁴ These opportunities include Hampshire College, the Stockbridge School at UMass, CRAFT, the New England Small Farm Institute, The Farm School, and numerous formal or informal apprentice or employee training opportunities on local farms.

farms and food businesses, access to healthy food for all, and jobs that foster environmental and community well-being.

Farmers tell us that they have chosen to start farms in this region because of the strong support for local agriculture. Clearly, the reshaping of the food system has begun here. Nonetheless, rough estimates indicate that we could, at best, produce 10% of the food eaten in Massachusetts on the state's current agricultural land base⁵, and we know that fresh, locally grown food is not widely available in many of the places that we get most of our food—supermarkets, convenience stores, and cafeterias.

Much of our knowledge about our region's infrastructure needs comes from our conversations with farmers and buyers, large and small. One thing we have learned is that your perception of what is needed can depend on where you sit in the food system. Farmers, for example, often complain that they do not have adequate options for slaughter and meat processing. Existing slaughterhouses contend that they do not have enough year-round volume to assure profitability. (Our case study on meat explains how they are both right [link]). And as momentum grows around eating local, needs change rapidly. Three years ago, farmers' markets closed up for the season in October or November; now, year-round and winter markets are springing up all across the state, providing new options for selling and eating year-round, and exploring options for facilities that could house year-round markets as well as centers for wholesale distribution and co-packing. Growth in grain production means we now have a need for new grain milling facilities. In the box on the right, there is a list of examples of facilities and services that could help farmers connect with existing markets in our region.

A variety of more formal assessments of infrastructure needs are underway in the New England region. These reports will contribute to our ability to take on regional planning for food systems.

⁵ Timmons, David, Qingbinn Wang, and Daniel Lass. Local Food: Estimating Capacity, *Journal of Extension*, Vol. 46 No. 5.

Case 1: Meat Processing

Mike Austin grew up on the Belchertown dairy farm that his great-grandparents started in 1889. As a young adult, he was eager to join the family farm business, but the financials just didn't add up. By 2006, the family realized that they could no longer sustain production costs that outstripped their milk check every month, and they began to consider other options. Meat production was a good fit: Mike and his parents knew animals, and they had grown beef for friends and relatives and knew that their product was good. The family began the process of converting their operation from milk to meat, specifically beef and pork, in 2006, but faced a significant obstacle in finding options for slaughtering and processing their animals into meat cuts and package sizes familiar to consumers. After some trial and error, the family found two different slaughterhouses, each at least 2.5 hours away, for their product. "These slaughterhouses give us exactly what we and our customers want. We can rely on them, and we've built the transportation time into our business" says Mike Austin. The Austin family now has a meat CSA, sells at several farmers' markets, and provides meat to area restaurants.

Carolyn and John Wheeler also converted Carolyn's family dairy, Wheel-View Farm, to a diverse farm operation, specializing in beef but also offering lamb, maple syrup, flowers, and perennials. Since beginning meat sales in 2002, they have built a loyal customer base for their grass-fed meat. The family business was threatened, however, when the closest slaughterhouse, Adams Farm in Athol, MA, burned down in 2006. For several years, the Wheelers scrambled to book appointments and arrange transportation to other, more distant slaughterhouses. "It was stressful for everyone," Carolyn remembers, "the family and the animals." The Wheelers and a neighboring farm researched, with CISA's support, the feasibility of starting a new slaughterhouse themselves. Two factors halted that process: first, the strong negative reaction of neighbors to a site they were considering, and second, the recognition that adding a second business venture to their existing enterprises did not make sense for their families. When Adams Farm Slaughterhouse began operating again in 2008, the pressure eased for the Wheelers. "Adams' works for us," Carolyn reports. "There is sometimes a bottleneck on the meat cutting side, and I think that another business, doing cutting only, would be very useful. But I know that it is hard to find skilled and reliable meat cutters."

The rebuilding of Adams Farm Slaughterhouse provides an example of the potential for joint public and private support for agricultural infrastructure. Finding financing and rebuilding the slaughterhouse took two years, and required the hard work and determination of the Adams family as well as support from state and federal government, local communities, and private banks. The Massachusetts Department of Agricultural Resources, for example, provided \$625,000 in funding for the new slaughterhouse, which now provides a range of slaughter, meat-cutting, and smoking services to customers coming from throughout Massachusetts, southern New Hampshire and Vermont.

The Adams Farm example provides a good illustration of how completely the system for processing and distributing locally grown food for local markets has been dismantled, and how challenging it will be to rebuild. Adams Farm is one of only two USDA-inspected slaughterhouses in Massachusetts. It has gone a long way towards relieving the pressure once felt by the Wheelers and others, but the region still lacks sufficient slaughter and meat processing

options to offer farmers choices in services, location, price, quality, and to provide resiliency if one business closes or experiences problems. At the same time, Adams Farm and other regional slaughterhouses report that they need more volume, and are operating on the financial edge⁶. Many farmers would like additional slaughter options, but any new slaughterhouse would face an uphill climb to economic viability, and might jeopardize existing slaughterhouses in the region. Farmers, thus, face a conundrum: rising demand for their products, but limited options for getting the animals they raise from the farm to the tables of interested consumers.

Challenges to slaughterhouse survival

CISA's slaughterhouse study, completed when Adams Farm was off-line, examined options for building a small-scale facility, one that could function with a maximum of six full-time processing employees and an equivalent of approximately 1,200 animal units per year. In the context of the contemporary American meat packing industry, a small-scale slaughter facility of this size is an anomaly. The industry is dominated by large-scale facilities processing thousands of animals a day from many states, consolidated ownership of stockyards through to branded meat⁷, and reliance on industrial feed lots to provide the volume of inputs to achieve the target price for the mainstream retail market.

While there are strong arguments for a community-based small-scale slaughter/processing service, there is no simple answer as to whether a small-scale USDA-inspected slaughter and meat processing facility is a feasible model to supply the farmers of the Pioneer Valley with quality services, and the consumer market with local meat. Some of the challenges to successful slaughterhouse operation are:

- *Siting Requirements* – Slaughterhouses have a bad reputation, reinforced by poor management practices and highlighted in the news and the popular press. Even though a small facility would not have the odor or noise conjured up by large meat packing plants, neighbor relations and waste treatment are complex and important issues. Small facilities, especially on-farm options, are well-suited for composting inedible offal, but environmental permitting and community response may require paying for off-site rendering services, which are also scarce. Local opposition could prove a strong challenge to the development of a slaughter facility anywhere in the vicinity of residential properties. CISA's *Draft Siting Criteria* provides more detailed information on siting considerations.
- *Economic Viability* – Profit margins are historically low for meat processing. Large plants counter this by investing in mechanization and reducing labor costs, but this level of capital-intensity requires an economy of scale that small facilities cannot afford.
- *Seasonal Demand* – Demand for slaughter services varies considerably throughout the year, and this fluctuation is sometimes matched with shifts in the species mix coming through the slaughter house. Both shifts can be difficult for slaughterhouse businesses.

⁶ Lewis, Chelsea Bardot. An Assessment of New England's Large Animal Slaughtering and Processing Capacity. June 2010.

⁷ ConAgra, Cargill, IBP and Smithfield "process approximately 80 percent of all cattle and hogs marketed" (Shepstone, 2000).

As a result, farmers are frustrated by scheduling constraints during the slaughterhouses' busy season in fall and early winter, while slaughterhouses face a dramatic decline in demand during late winter, spring, and summer.

- *Labor Availability & Longevity* – Small slaughter and meat processing facilities require a significant amount of skilled manual labor due to a lower tech line. These positions are often difficult to find and retain over the long term. Also, good management is key to a successful facility and a small facility may not have the scale or salary to be able to attract experienced managers and other staff. Any new, small plant would probably rely on a committed and resourceful ownership or board members in order to succeed.
- *The Regulatory Environment* - Federal, state, and local regulations all impact the slaughter and processing options available to farmers. Confusing and sometimes contradictory statutory language and differing interpretations and priorities among agencies with overlapping oversight authority can all make navigation of regulations challenging. Funding for regulatory enforcement is also an issue, and a shortage of FSIS inspectors⁸ makes it unclear whether USDA would be willing to place an inspector at a small plant that is not slaughtering full time. CISA's guide to Massachusetts slaughter regulations provides an introduction to these complex regulations.

Options and Opportunities

As the demand for locally-grown meat continues to rise farmers may have more animals that need slaughter and processing facilities and the pressure on existing slaughter options will mount. Increased volume (and cash flow) represents an opportunity for new and existing slaughter businesses to provide improved or expanded services. But farmers, unsatisfied with current slaughterhouse service, may choose not to invest more in animal production

Options for expanding and improving slaughter and meat processing services include creating new facilities, which could include:

- *New, small-scale USDA-inspected fixed site slaughter and processing facility;*
- *Mobile slaughter and processing unit with appropriately-equipped docking sites;*
- *Meat processing only (cut/wrap) facility;*
- *On-farm facilities, particularly for poultry (see sidebar on Mobile Poultry Processing)*

Short of building new facilities, however, other strategies for improvement are also possible, including:

- *Support to existing custom slaughter and meat processing facilities. These facilities are available only to the end user of the animal, such as farmers or homesteaders raising their own meat. However, upgrading facilities and improving services at custom facilities could divert some customers from USDA-inspected slaughterhouses, making room in crowded fall schedules and allowing those facilities to focus on commercial growers;*

⁸ "...USDA admitted to Congress that several hundred plants have been officially under less than daily inspection for more than 30 years... There is evidence that an equal or greater number of plants are 'unofficially' not visited daily because the agency has refused to fill long-term inspector vacancies." [Food & Water Watch](#). April 18, 2007.

- *Technical assistance to existing facilities, helping them to improve skills such as meat cutting, animal handling, quality control, customer service, and scheduling;*
- *Revision of existing regulations to clarify requirements for new and existing facilities and streamline agency oversight.*

Community support will be important to the success of any new or existing facility, and to efforts to achieve regulatory change. Neighbors who recognize that slaughter and meat processing options are essential to the long-term viability of local farms could make siting a new facility possible. Supportive local and state agencies are also important. By the same token, facilities that are responsive to farmers' needs and allow opportunities for farmer feedback and involvement will earn a customer base committed to their success.

Sidebar: Mobile Meat Processing

Lack of slaughter facilities has severely limited production of poultry for meat in Massachusetts. Most eaters do not want to receive a live, fully-feathered chicken or turkey, so selling these birds for meat requires slaughter and meat processing facilities. Governed by a complex array of federal and state regulations, these facilities are limited in Massachusetts and throughout the region. Until very recently, the only USDA-inspected poultry plant in New England was a privately owned, in-house plant that only processed birds grown on-site. Other options were on-farm processing at an approved plant, which allows farms to sell, within the state, to the end user, but not to restaurants or retailers, or custom processing, in which birds are slaughtered for, and must be consumed by, their owner or his or her family or guests

Ten years ago, the New England Small Farm Institute (NESFI) [link] in Belchertown began developing a mobile poultry slaughterhouse (known as the MPPU, for Mobile Poultry Processing Unit). NESFI director Judy Gillan and Jennifer Hashley, Director of the New Entry Sustainable Farming Project (New Entry) [link] and poultry grower [link], spent years developing a prototype unit and gaining approval from multiple state, federal, and local agencies (through “home rule,” Massachusetts grants an unusual degree of oversight to local Boards of Health, which adds a layer of complication to mobile facilities which must receive approval for siting by multiple local authorities). Although still considered a pilot project, the MPPU was used by three farmers during 2010, its third year of full operation. Read CISA’s profile of 4 poultry growers to learn more about one farm using the MPPU in our region.

“We’re now building a second-generation MPPU,” says Jennifer Hashley of New Entry. “Adding a second unit will alleviate some of the logistical and transportation challenges related to using one unit across the whole state.” She also hopes that eventually some of the businesses that have gotten started by using the MPPU will grow enough to consider fixed-location or on-farm slaughter facilities, in order to avoid the scheduling and transportation requirements of the MPPU and to expand operations year-round. “It would be wonderful if the MPPU served the needs of start-up and small-scale businesses, and maturing businesses could move on to another option. But we don’t know if we can use the lessons learned from the MPPU to provide clear blueprints to farmers who want to build their own slaughter facilities. The regulatory agencies have not yet provided clear guidance to make this transition cost-effective,” says Hashley.

The MPPU experience illustrates the number of gaps that exist in the infrastructure for local food production. While the unit provides one slaughter option for some farms, it reveals the need for a next-step processing solution which will meet their needs as they get bigger, add additional markets, or add year-round production and sales.

Case 2: Dairy

Dairy farmers have been called the “anchor tenants” of New England farmland.⁹ Dairy farms are larger, on average, than other farms in our region, and keep a significant share of farmland in production. Dairy farmers’ need for services, supplies, feed, and replacement stock have helped to keep local farm supply businesses and supply chains in place. In recent decades, however, the number of dairy farmers in Massachusetts has shrunk dramatically, in response to rising input costs like feed and fuel and the unpredictable—and often very low—price of milk. Set by a complicated federal formula, the price of milk cannot be controlled by dairy farmers, and often falls below the cost of production in the Northeast. A recent study by CISA and AFT describes the place of dairy within agriculture in the Pioneer Valley.

The future of dairy farms in the region matters to all of us, and not only because it will determine whether fresh milk, cheese, and other dairy products are available to us. As the current generation of dairy farmers ages or decides to turn to another way of making a livelihood, what will happen to their land?

Marketing of branded local products is a successful strategy for returning increased income to farmers through better pricing or an increased share of the purchase price. This attractive option is not readily available to dairy farmers, however, because of the challenges of processing milk products. In order to realize an increased return for a branded fluid milk product, dairy farmers must do one of the following: 1) build an on-farm processing plant; 2) sell raw milk within the limitations of Massachusetts law; or 3) arrange for processing of their milk by an existing on- or off-farm processing plant. Processing options are limited and may not suit the needs of the dairy business for a variety of reasons.

These challenges limit the options for dairy farmers who hope to maintain a viable dairy business by producing value-added locally produced milk. Although the transition to organic production has offered the promise of higher prices, recent volatility in the price of and demand for organic milk suggests that local branding would also be of benefit to organic dairies.

A number of local dairy farmers have found solutions to these challenges, primarily by building on-farm processing that allows them to produce branded fluid milk or value-added products such as cheese. Mapleline Farm in Hadley built an on-farm processing plant that supports their successful local delivery business. Chase Hill Farm, Hillman Farm, and others have developed successful lines of cheese that are sold locally and beyond. Raw milk must be sold directly from the farm in Massachusetts, but the price is not determined by the federal milk order, and raw milk sales provide important additional revenue to a growing number of farms.

These examples of hard work and ingenuity are important and worth celebrating, but reveal an important underlying problem: most local solutions to the problem of increasing revenue on dairy farms have been created on a farm-by-farm basis. They provide wonderful local cheeses and delicious, fresh milk, but represent only a tiny portion of the dairy products purchased in our region. In addition, they require dairy farmers to learn an array of new skills in order to run

⁹ Coffin, Cris. "Conservation and Farm Groups Call on Congress to Address Dairy Crisis." [American Farmland Trust](#) (2009).

processing plants, cheese-making facilities, and marketing and distribution businesses. The next step in creating a vibrant, resilient and larger regional food system will require a greater diversity of processing options, such as regional processing plants capable of small-batch processing for several businesses, shared cheese-making or aging facilities, and incubator facilities with equipment and expertise suited to dairy products.

Start-up of new, shared-use regional dairy processing facilities shares many of the challenges faced by slaughterhouses and meat processing facilities, including financing, economic viability and cash flow, and the difficulty of finding skilled managers and reliable labor. Milk production, like meat production, has seasonal variations in both supply and demand, and milk plants need to build in a plan for “balancing” milk: transforming excess milk into additional products, or transporting and selling it to other processors, in some seasons, and obtaining additional milk at other times, in order to match market demand with local production. Trucking of raw milk from the farm to the processor is an additional cost which may change with a shift to a new processing plant, particularly if creation of a source-identified product means that milk can no longer be transported with milk from neighboring farms.

Dairy farming and the small-scale production of dairy products has been financially risky business for many years, and farmers and small processors who have built successful niche markets are often wary of new entrants to the local market. Locally-produced dairy products, however, represent only a tiny fraction of the dairy consumed in our region. Increasing this market share represents an opportunity to stem, or even reverse, the rapid loss of regional dairy farms while supporting new businesses and enjoying a wider array of local dairy products.

Case Three: Processing, Distribution, and Aggregation

In this section, we provide a brief introduction to some additional infrastructure challenges—and some local solutions.

Freezing Produce: Frozen produce has a logical place in the array of locally-grown foods available. Freezing makes summer-harvested fruits and vegetables available in the winter, and provides food in a format that works for cafeterias and other large kitchens as well as for home cooks who do not want or are unable to freeze their own fruits or vegetables. Challenges to freezing produce include a lack of processing and freezing equipment, such as that used to prep vegetables, and “instant quick freeze” equipment that freezes food quickly and results in a product that is loose in the package. The Western Massachusetts Food Processing Center, with support from CISA, conducted a pilot freezing project in 2010 in response to demand from buyers and growers. They froze broccoli and green beans for the Holyoke Public Schools, and additional products for two growers who planned to offer frozen produce as part of a winter CSA share. In addition to the challenges presented by lack of equipment, questions to resolve before expanding the program are related to sourcing and aggregation of product, ownership and marketing of the frozen produce, storage options for frozen produce (on the farm, at markets of all types, and/or at centrally-located facilities, and finding a price that works for everyone—grower, processor, and buyer. Initial response from buyers (and the schoolchildren they serve!) has been very positive.

Cold storage: The expanding year-round market for locally grown food has led to an increased need for cold storage for crops that are harvested in the fall but can be sold all winter. Individual farms are building and renovating cold storage facilities, but large buyers such as hospitals and retailers are also interested in cold storage options that serve their needs. Information is needed about the range of storage conditions that can work for different products; energy-efficient storage facility design; and successful models for shared operation and use of storage facilities.

Grain production and processing: Several farms in our region are growing grains for sale to bakeries and other processing businesses, retailers, and individual consumers. Grains are available at some farmers’ markets, through a grain and dry bean CSA share, from farm stores, and in bread at local bakeries. Farmers and bakeries have invested in small-scale milling equipment, which is sometimes shared or available for rent. Much of the demand for grains has been driven by bakers; a small-scale malting business is now following their example and encouraging growers to grow barley and other grains for malting. Grains are a relatively low-value crop and farmland in our region is expensive, but grains can fit into crop rotation schedules, thus providing some income while building soil fertility. As the volume of production grows, additional milling options will be necessary.

Distribution/Aggregation:

Food distribution includes transportation, storage and handling (such as refrigeration), and logistics. Aggregation allows a distributor to consolidate product from several sources in order to meet the needs of a buyer. The distribution and aggregation needs of different markets can be quite different: supermarkets, for example, may receive full tractor trailer loads of one vegetable at their central warehouse, while restaurants need a diverse array of products. Ordering systems

(on-line vs. phone or fax, for example), delivery frequency, and communication and customer service are all important to buyers. Some distributors sign contracts with their buyers or have a minimum order size, making it harder for buyers to receive products through other channels, such as direct from farmers. Likewise, some farmers who also provide distribution services buy in product from other growers or other regions to supplement their own product during all or part of the year, allowing them to provide a wider range of products to their buyers. Some distributors also provide basic processing services, such as peeling or chopping.

More and more distributors identify the source of the product by name, location, or distance. Distributors can support local growers in a variety of other ways, including highlighting what is in season on their order sheets, providing clear information to growers about packing and grading requirements, and working to identify and adhere to prices that ensure an adequate return to the growers.

The entry of new distribution and aggregation businesses, particularly those that prioritize local and regionally grown products, can open up new markets for farmers and bring fresh locally grown food to more people. Athol-based Organic Renaissance promises to offer on-line sales and invoicing coupled with delivery charges tied to “food miles,” and could make entry into Boston markets much easier for Pioneer Valley growers.

Value-added Processing: The Western Massachusetts Food Processing Center (FPC), operated in Greenfield by the Franklin County Community Development Corporation, is a business incubator and shared commercial kitchen that has provided services to 200 food businesses since opening in October 2001. The Food Processing Center Manager assists with recipe development and scaling up production, and the CDC’s Business Development and Lending programs can help with business plans and start-up loans when needed. Although the FPC was originally envisioned as a place where farmers could turn excess product into value-added products such as jams or salsas, fewer farmers than anticipated used the FPC in its early years. Over time, however, the FPC has proved important in the development of a number of local-foods-based businesses, and the power of the FPC to test possible product niches and processes is still emerging (see section on freezing produce). In some cases, the FPC provides co-packing services, allowing farmers to supply ingredients and obtain a finished product for sale without providing the labor or recipe development. The FPC also provides important opportunities for business operators to share information about using local ingredients and sourcing from local farms. Real Pickles, a FPC graduate, offers a valuable case study of a business dedicated to use of locally grown, organic ingredients, despite some inherent challenges related to seasonal sourcing and year-round storage.

Sidebar: The Regulatory Environment

Regulatory requirements impact many aspects of growing and marketing local food. Regulations serve important goals such as food and worker health and safety, but may also influence which products, from which businesses, make it to market. The interplay of local, state, and federal regulation means that requirements vary from state to state and even, in some cases, from town to town. Here are a few examples of how the regulatory environment can impact farm and food businesses:

- In Massachusetts, “home rule” ensures that broad powers are reserved for local boards of health. One town, for example, may require farms selling meat at a farmers’ market to have a plug-in freezer, while in another town, coolers and regular temperature checks are considered sufficient. Likewise, regulations governing businesses, farmers’ markets, or shared infrastructure activities like mobile slaughter may vary from town to town.
- Food safety scares have led large buyers to require an alphabet soup of food safety certifications and third-party audits. Since these requirements are market-based, not mandated by government, it can be harder to figure out what is required, and many existing plans for compliance were developed for large-scale growing, washing and packing facilities that bear little resemblance to diverse Northeastern farms. These requirements have made it particularly challenging for producers of pre-washed salad greens to access larger buyers like supermarkets.
- Recent federal legislation gives the Food and Drug Administration greater oversight of farms and processors, including basic processing like washing, peeling, and chopping. Although very small operations selling primarily to direct markets may be exempt from some requirements, this legislation could add significant new requirements for medium and large farms. Until regulations are written and the appropriations process is complete, it is difficult to know the impact of these new requirements.

How Does a Community Invest in Infrastructure?

If scaling up the production and availability of local food is dependant on the development of new infrastructure, what can we do in the Pioneer Valley to accelerate the process? It is tempting to look to farmers to launch the businesses that would expand their markets, but, as the case studies in this report demonstrate, most farmers have neither the time nor the money to take on that added risk. Some of the most creative new food ventures involve substantial risk, although they also promise significant community benefits if successful.

Many local food economies around the US are recently seeing an increase in “[community food enterprises](#),” which can be either for profit or not-for-profit ventures that fill these gaps in the local food system infrastructure. These ventures are typically led by entrepreneurs who care just as much about community and environmental improvement as they do about making a profit. And because of that commitment, they are able to attract the support of a diverse and unconventional range of investors ranging from banks to local governments to policy-makers and regulators to the general public.

This section describes how and where these community investment strategies are emerging in the Pioneer Valley and provides some insights into the opportunities for additional community investment.¹⁰

1. Planning for Local Food

Investment does not only take the form of dollars. Here are just a few examples of ways the broader community is helping pave the way for infrastructure development in the Pioneer Valley:

1. Strategic Food-Systems Planning

- The Pioneer Valley Planning Commission places food and farming squarely at the center of its plans to “Develop a Green Regional Economy”¹¹ and has identified natural resource-based businesses, such as farms, as a key area of growth.
- *Community Food System Assessments* (inventories of the needs and assets of a particular food system) are becoming commonplace among Valley towns, such as [Shelburne Falls](#) and [Northampton](#). A logical next step would be a valley-wide food system assessment, one outcome of which would be a thorough analysis of the gaps in our food system infrastructure and recommendations for filling them.
- The [PVGrows network](#) regularly convenes diverse stakeholders-- from agricultural producers and food processors to distributors, emergency food providers, farmland protection groups, marketers, shoppers, and eaters—to articulate a vision for the future of the Pioneer Valley food system.

2. Local governments can create policies that benefit the local food economy and attract new businesses.

¹⁰ These headings are adapted from: Michigan Land Institute [Report](#) and [Vermont Farm to Plate Report](#) (to be released in January 2011).

¹¹ [Pioneer Valley Plan for Progress: 2009 Annual CEDS Report and Five-Year Update](#) (Pioneer Valley Planning Commission and Economic Development District), Page 101

- Towns across the Valley, including the city of Springfield, have committed public outdoors spaces for booming farmers' markets, and are now offering heated indoor spaces for nascent winter markets.
- Residents of the town of Wendell voted to explore hiring a town food production and gardening coordinator who would focus on finding a way to grow and produce all the food the town's residents need.

3. Institutions use their purchasing power and public profile to shine a light on local food infrastructure.

- The Holyoe Public Schools Food Service, managed by Chartwell's, contracted with the Western Massachusetts Food Processing Center to freeze locally grown vegetables for winter use;
- Institutional buyers, such as Baystate Health Systems and the University of Massachusetts, are interested in pre-cut or peeled vegetables. As farmers or distributors add this capacity, it can allow expansion into other markets, such as frozen vegetables;
- Non-profit preschools in Springfield, with support from Live Well Springfield and the Massachusetts Farm to School Program, are contracting with local growers to deliver healthy locally grown food.

2. Improving the Business Environment

Public Policy & Regulation

Because Massachusetts is no longer a fundamentally agricultural state, it is difficult to find policy makers, even local ones, who consider farm and food businesses a potentially substantial economic driver in the region. As a result, economic development programs are often out of touch with agricultural technical assistance providers and regulators.¹² In addition, farm and food jobs are typically not included in the proliferating "green jobs" development programs, despite the centrality of food systems within the new green economy. As noted in the sidebar on the Regulatory Environment, consumer recognition of the importance of local farm and food businesses can help to create change in these important arenas.

Public Support

Just as "buy local" campaigns, farmers' markets, and community-supported farms have moved from the fringes to the mainstream in the past decade, the need for local food infrastructure needs to become a part of the public consciousness. Currently, at the sound of words like "food processing," "livestock" or "slaughterhouse," many people's minds conjure up images of the massive operations used in the global industrial food system, and a "not-in-my backyard" attitude can result. Community support can blossom however, when neighbors realize the reduced impact of facilities which are the appropriate scale for local and regional needs.

Each of our Pioneer Valley communities has its own rich history of small, community-scale food infrastructure: country stores selling local produce, mills and bakeries, and home-scale cold storage powered by door-to-door ice deliveries. Springfield was home to the nation's first meat-

¹² Vermont Farm to Plate Report (to be released in January 2011). Chapter 3, Section 10, Vermont's Financing Landscape

packing operation, a preserved pork warehouse owned by William Pynchon in the 1800s. Every community used to have dozens of food-related businesses, almost all of which have withered away as the global food industry consolidated.

A growing number of communities are reclaiming their food history and taking pride in the resurgence of old-fashioned ingenuity and self-sufficiency (mixed with a dose of modern technology and smart financing). For example, the tiny, depressed town of Hardwick, Vermont¹³ in 2007 made a commitment to becoming the “local food hub” for northern Vermont. In 2011 Hardwick will complete construction on the Vermont Food Venture Center, a shared-use kitchen incubator for value-added and specialty food producers who can rent the kitchen on an hourly basis or arrange for co-packing at the facility. This is just one of dozens of new food enterprises now thriving in Hardwick.¹⁴

3. Growing Entrepreneurs: Options for Ownership and Support

Ownership of agricultural infrastructure businesses by farmers has considerable appeal. At best, farmer ownership of infrastructure businesses should ensure that farmers receive a greater share of the consumer food or farm products dollar. In addition, farmer ownership should help to ensure that infrastructure businesses serve the needs of local agricultural producers by, for example, using locally grown raw ingredients rather than purchasing these through the global marketplace. Farmers, however, already have at least one business to manage, and may not want to add another one. The capital that farmers can bring to a new business is often backed by the land that they own, and mortgaging that land may represent an unreasonable degree of risk if the existing family business, residence, and history are all tied to that land. In addition, farmers may or may not possess the business and financial management skills needed to run a new business.

Creative new business and ownership models achieve some of the same goals of community accountability without relying on farmers to launch new enterprises. Consider, for example, the recent application of the farm CSA model to non-farm businesses, such as restaurants, distribution services, and even slaughter services.

Whether or not they operate farm businesses, entrepreneurs are a key to the development of new or expanded infrastructure businesses, and need support at all phases of business development. Many organizations in the Pioneer Valley provide business planning and technical assistance to small businesses. This support can help business owners write a business plan, understand options for financing, evaluate their product mix, or navigate the challenges of running a family business. Few small business support agencies, however, have extensive experience with the new business models being tested in the new food economy, nor are they familiar with the regulatory challenges faced by food businesses or the logistical hurdles represented by seasonal sourcing. Training and resource sharing on the specific needs of local food & farm enterprises could ensure that business owners find supportive and knowledgeable staff at small business support agencies throughout the Pioneer Valley.

¹³ Hewitt, Ben. *The Town that Food Saved: How One Community found Vitality in Local Food*. Emmaus, Pennsylvania: Rodale, 2009.

¹⁴ For updates on Hardwick, see: www.hardwickagriculture.org

Networking among business owners is another important avenue for learning and expansion. Providing technical assistance in settings that allow for networking and peer-to-peer learning can help entrepreneurs learn from each other.

4. Financing for Infrastructure

Anyone starting or expanding a business needs to get financing from somewhere, whether it's family members, credit cards, local banks, or community-based lenders like Community Development Corporations (CDCs). Financing allows a business to cover start-up and operational costs until revenues begin flowing in. To be eligible for financing, a business needs to prove to lenders that it is likely to succeed, and often must provide the lender with collateral (to protect against borrower default) or equity (a partial ownership stake in the business). Riskier business models need to find lenders who accept a higher level of risk.

Community food enterprises, particularly if they are start-ups, are likely to be “higher risk” borrowers, because they

- Are bucking the trend of consolidation of food systems;
- May be perceived as entering a non-growth industry (example: Side Hill Farm Yoghurt's Paul Lacinski saying: “Nobody starts a dairy farm”¹⁵);
- May need community investment in order to achieve profitability;
- May rely on unconventional business or ownership models.

The Pioneer Valley is home to a wide range of financing resources. But how suited are these resources to the particular needs of community food enterprises? The figure below shows how the higher risk investments, which are so essential to start-ups and to ambitious projects, are only available to entrepreneurs who have access to personal networks or who can win highly competitive grants.

¹⁵ [Yogurt: A new dairy culture for Ashfield](#) BY RICHIE DAVIS RECORDER STAFF
June 22, 2007

The Local Financing Landscape

←	The Local Financing Landscape		→
Lower Risk, Lower Reward	Higher Risk, Higher Reward	“Other”	
Community & Regional Banks Community-based Lenders / Revolving Loan Funds <i>(Collateral and/or cash flow based, mission driven)</i> Examples: WMEF CDCs Farm Credit East?	Venture Capital & Angel Investors <i>(High risk tolerance, but expects a return)</i>	Grants: <i>(Highly competitive, no repayment required by grantee)</i> Examples: USDA Rural Dev't MDAR Private Donors & Foundations	
State & Federal Govt <i>(Collateral driven, looks at past performance)</i> Examples: USDA guarantees?	PVGrows Loan Fund	PVGrows Community Capital & Equity Funds <i>(2012 launch)</i>	Family & Friends or Personal Funds <i>Higher risk, may never see a return)</i>

Local food systems all around the country are looking to strengthen their pool of higher risk investments (the Right side of the table above) At the same time, many professional investors are being asked by their clients how they can invest in sustainable food systems. These converging groups are creating “social finance” tools such as *Slow Money*¹⁷ (both a nod to “slow food” and a rejection of “fast money”).

A local version of *Slow Money* has recently emerged under the networking umbrella *Pioneer Valley Grows*, which is developing financing tools dedicated solely to local food system infrastructure development. The \$1 million PVGrows Loan Fund¹⁸ offers loans to small food enterprises that would be too risky for banks or even community-based lenders. The next step for PVGrows will be to fill two more gaps in the financing landscape by launching a “community capital” fund (for individuals with small amounts to invest) and an equity fund (for venture investors willing to take on more risk for a potentially higher return).

¹⁶ Chart adapted from Vermont Farm to Plate Report (to be released in January 2011). Chapter 3, Section 10, Vermont’s Financing Landscape

¹⁷ www.slowmoney.org

¹⁸ www.pvgrows.org

TEXT BOX –

Putting the Investment Pieces Together

Woodbury County, Iowa is a great example of how a local region has used a variety of complementary strategies to invest in new infrastructure for local food. Through a combination of grants, private investment, tax incentives, regulatory reform, and community organizing, the county is breaking from the model of its neighboring farm communities. Some of the key components are:

- Raised hundreds of thousands of dollars in grants to create the Floyd Boulevard Local Foods Market in downtown Sioux City. The complex includes a natural-foods store open daily, which offers locally produced free-range meat; a weekly farmers' market featuring vegetables; and a full-service restaurant that sources everything it can from within a 100-mile radius... The Floyd Boulevard folks also operate a farmer-owned cooperative that sells produce to other nearby institutions and retailers.¹⁹
- Adopted an *Organics Conversion Policy*, which offers a 100% property tax rebate for 5 years to any farmer who converts to organic farming.
- Enacted a *Local Foods Purchase Policy* mandating the county jail, to purchase locally grown food through a local food broker, as a model for institutions and restaurants to follow.

Find out more at: <http://woodburyorganics.com>

Conclusion

Thriving farms benefit local communities, residents, and regional economies. Presently, the interest in locally grown food in our region is most beneficial to small-scale vegetable and fruit growers. We will all benefit if our communities support a range of sizes and kinds of farms, producing a wide variety of products that are available in all of the places that we buy food. Communities that welcome the infrastructure businesses that allow distribution to supermarkets, processors, corner stores, institutions, and urban and rural locations. There are many roles to play in supporting these businesses, including:

- Advocate for improved regulation;
- Town official or member of volunteer town board
- Neighbor
- Investor
- Consumer
- Technical Assistance Provider
- Wholesale buyer

All of us eat, and we are all effected by the quality of our food and the health of our communities and our economy. We are lucky to live in a region with good soils and diverse farms, and can build on those strengths to ensure that agriculture sustains our communities long into the future.

¹⁹ Philpott, Tom. "Eating Local, and Well, in Sioux City Iowa." *Grist* August 2 2007.

PART 4. FURTHER READING:

Essays about the need to invest in food/ag infrastructure, read more of Tom Philpott's articles in Grist magazine.

- Philpott, Tom. "[Time for the Public to Reinvest in Food-System Infrastructure.](#)" Grist April 20 2010.
- Philpott, Tom. "[Forget the Farm Bill.](#)" Grist August 2, 2007.
- Philpott, Tom. "[Unrigging the Game.](#)" Grist April 26, 2007.

A variety of perspectives on our food infrastructure needs nationwide:

- The Editors. "[Making it Easier to Eat Local Food](#)" New York Times April 19 2010.
- Zezima, Katie. "[Push To Eat Local Food is Hampered by Shortage.](#)" New York Times March 27 2010.

Where does infrastructure fit within the broader food system?

- Cochran, Jim and Larry Yee et. al. "[The Food Commons: Building a National Network of Localized Food Systems.](#)" (2010).
- Community Food Security Whole Measures Working Group. "[Whole Measures for Community Food Systems: Values-Based Planning and Evaluation.](#)" Center for Whole Communities (2009).
- Hendrickson, Mary. "[Community Food Systems: Visions of A Different Food System.](#)" University of Missouri (2010).

Case Studies: What are other regions doing?

- Hewitt, Ben. [The Town that Food Saved: How One Community found Vitality in Local Food.](#) Emmaus, Pennsylvania: Rodale, 2009.
- Dillon, Casey, Ed. Martin Harris. "[Counties and Local Food Systems: Ensuring Healthy Foods, Nurturing Healthy Children.](#)" NACo Center for Sustainable Communities (2007). Pages 13-16.