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**Pioneer Valley Large-Scale
Wholesale Produce
Market Study
2016**

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OBJECTIVES

Demand for locally grown produce continues to climb. Across Massachusetts, larger buyers, like individual consumers, are choosing to use their food dollars to support local farms and to obtain locally grown products. Institutions, retailers, restaurants, and others call CISA and other “buy local” organizations searching for locally grown products. As demand for locally grown produce grows and becomes more mainstream, there is an increasing need to support local farms, entrepreneurs, and partner organizations to enable them to more accurately assess the economic opportunities and challenges involved in scaling up to meet this demand. Effective support requires detailed, current, on-the-ground knowledge of patterns of production, distribution, and demand in large-scale wholesale produce markets.

The main objective of this study was to gain such a detailed understanding of production, distribution, and demand patterns for local produce sold to larger buyers in the Pioneer Valley, and to identify pressure points where improvement was needed. CISA intends to use this enhanced knowledge base to serve local wholesale farms better, to more accurately identify the challenges and opportunities in large-scale wholesale produce markets, to channel our resources better so as to support efforts that will provide the most benefit, and to help peer and partner organizations and entrepreneurs use their resources most effectively to serve wholesale farms. This project represents the first step in a comprehensive effort to strengthen and enhance the production, distribution, and sale of locally grown produce for larger buyers.

METHODS

During the period from September 2015 through October 2016, CISA staff conducted 26 in-depth interviews with farmers, buyers, and partners engaged in large-scale wholesale produce markets. In addition, three other large-scale wholesale produce buyers were invited to present at a farmer-buyer networking session held in December 2015. Each of these buyers provided an overview of their business’s work with local farms, shared their experiences of challenges and opportunities in local produce markets, and discussed how farms could develop sales relationships with them. In April 2016, two focus groups were held to obtain further input from small groups of wholesale buyers and farmers, with three additional buyers and four additional farms providing in-depth input about their experiences in large-scale wholesale markets at each of these focus groups.

In all, 42 farmers, buyers, and partners from 35 businesses and organizations provided input for this study through interviews, panels, and focus groups. This included 16 farmers from 12 farms, 22 buyers from 17 businesses, and four partners with expertise in large-scale wholesale produce markets. Participating buyers included ten distributors, five schools, three retailers, and one restaurant. In addition to these in-depth interactions, we held a discussion with 33 wholesale growers and buyers early in the process and surveyed CISA’s *Local Hero* farm business members about desired improvements for wholesale production and sales in the winters of 2015 and 2016.



Andy Cox, Smith College Director of Dining Services, and Brad Morse of Outlook Farm in Westhampton

FINDINGS

Who are the players in large-scale wholesale markets?

We often speak of “large-scale wholesale markets” as a single category in this report, though it is important to keep in mind that these markets contain a wide variety of unique players. There are many different types of buyers and suppliers in large-scale wholesale markets, operating at a wide range of scales. Buyer types include school district cafeterias; large restaurants; dining services at colleges, retirement communities, hospitals, and workplaces; large grocery stores, big box stores; chain distribution centers; processors; and others. These buyers in turn are supplied by farms of many different scales, in addition to a wide range of businesses that serve as produce distributors, aggregators, processors, shippers, and logistics coordinators to meet each buyers’ unique needs (see the case study at right for one example).

Matching players by scale

Order size is the one of the most important variables in matching buyers with local farm produce suppliers. Each individual buyer has distinct needs in terms of produce volume, and often farms are only prepared to serve buyers ordering at a particular volume. Some of the wholesale farms interviewed for this study produce a large quantity of just a few crops and target only the highest volume wholesale buyers of these crops, selling to buyers like distributors or retail chains. Other farms grow a more diverse crop mix and serve just a few large-scale wholesale buyers while primarily selling direct to consumers or to lower volume buyers like individual restaurants, stores, or schools.

Several factors influence buyers’ order size, including customer base and demand, storage capacity, and the purchase volume of local produce relative to non-local produce. The size of a buyer’s customer base has the biggest impact on their produce needs, and typically as a buyers’

Case Study: Performance Foodservice

Farms sometimes sell and deliver their produce directly to an institution, grocery store, or other large-scale wholesale buyer. More often, however, several different businesses are involved in bringing locally grown produce to the end-user. One example to illustrate this is the market chain that supplies local produce to the distributor Performance Foodservice Group (PFG) Springfield and its customers.

PFG Springfield distributes produce and other foods to a wide range of foodservice providers in the region including colleges, hospitals, restaurants, and workplace cafeterias. In response to growing demand from its customers for locally grown produce, the distributor initiated a new relationship in 2013 with FairAcre Traders, a business which facilitates sales between local farm supply networks and large-scale wholesale buyers. FairAcre Traders also assists their buyers with marketing locally grown produce by providing ready-to-use marketing materials to highlight local farms, and by clearly identifying the origin of each case of produce with a QR code that allows the buyer to access farm information.

Red Tomato, a non-profit organization based in Plainville, MA, serves as FairAcre Traders’ coordinating hub for the Northeast region. The non-profit buys produce from about 50 farms throughout the Northeast to supply the many large grocery chain and foodservice buyers it works with, including the customers of PFG Springfield. About ten of the farms supplying Red Tomato are located in the Pioneer Valley, and these local farms deliver their produce to farm aggregators like Plainville Farm in Hadley. From there, trucking companies contracted by Red Tomato pick up the produce and deliver it to FairAcre Traders’ customers like PFG Springfield.

customer base grows larger, their order volume goes up and pricing goes down. However, even similar types of buyers sometimes have different produce needs that affect their order size and cause them to work with different suppliers. For example, Mount Holyoke College and Hampshire College have similar numbers of students, so one might expect produce needs to be similar at both institutions. However, Mount Holyoke has a large amount of cold storage capacity and a greater number of students on campus meal plans, while Hampshire College has less storage capacity and more students who cook their own food. Thus, Mount Holyoke's greater demand and storage capacity is likely to lead to larger produce needs and order sizes. It is also important to note that Hampshire College has set an ambitious goal to serve 100% local food in its dining hall, so as the college makes progress towards meeting this goal, the size of the produce orders the college places with local farms relative to other suppliers would be expected to increase.

Approaches to local purchasing

Some buyers consistently prioritize local produce over non-local produce, purchasing only local farm products when possible. For example, Randall's Farm & Greenhouse, an independent grocery store in Ludlow, orders only local apples when available, placing orders for as many as 100 bushels of apples per week from a local orchard during peak apple season. In other cases a buyer will order at different volumes through different supply channels – some of which are local and some of which are not. For example, an individual store in the Big Y grocery chain may buy directly from one local farm, placing an order for ten bushels of apples per week through that farm. Another larger local farm might sell to Big Y's distribution center in Springfield, shipping an order of ten pallets of apples, which are in turn shipped by Big Y to its individual stores. The Big Y distribution center might at the same time place an even larger order for apples with a regional packinghouse like J.P. Sullivan and Co. or a produce supplier from outside the region, ordering one or more full tractor trailer loads that are also then shipped to individual stores. Most

grocery stores, institutions, and other buyers use such a multi-tiered approach for purchasing produce, ordering in different volumes from a range of suppliers including farms as well as regional or national distributors.

Types of distributors

Several different types of distributors play a role in market chains for locally grown produce, including broadline distributors, specialized produce distributors that offer a steady year-round supply of local and non-local produce, and local-only distributors with offerings that fluctuate seasonally based on the local products that are available.

Broadline distributors and suppliers

Broadline distributors like Performance Foodservice are so named because they distribute a wide range of products including dry grocery, perishable, and frozen goods as well as equipment and supplies. Buyers are increasingly being served by broadline cash and carry suppliers like Restaurant Depot, which offer one-stop shopping warehouses throughout the country for restaurants and other foodservice buyers. Such broadline distributors and other suppliers account for the lion's share of food distribution in the country, and so while they are the most challenging distributors for local farms to work with, they are at the same time crucial to expanding wholesale markets for local produce and scaling up local food access. Broadline suppliers typically operate nationwide or internationally, and they are heavily dependent on economies of scale to maintain profit margins. For this reason, farms selling to broadliners must achieve significant economies of scale to profit at low prices.

The vast majority of produce that broadliners distribute at present is not locally grown, and the barriers to doing business with broadline suppliers are far greater than the barriers to doing business with local or specialty distributors. High levels of liability insurance are required – often in the range of \$6 to \$8 million or more – as well as stringent

food safety and traceability requirements. Warehouse spaces, or “slots,” are typically limited, since broadliners warehouse a large volume of each produce item at any given time, so there is not always room for a “duplicate” locally grown version of any non-local produce item. Consistency of supply, quality, and packaging are crucial to sell to these distributors. For farms to reliably meet broadline distributor needs with local produce, farms must often work cooperatively through a food hub that can achieve a steady and high-volume supply while maintaining a single point of contact for the distributor.

Year-round produce distributors

Unlike broadline distributors, many specialized distributors handle produce only, and they typically strive to meet buyers’ needs for a consistent year-round supply of produce. Such year-round produce distributors operate at many different scales ranging from international to local. Produce distributors at all scales may buy from local farms, especially smaller local distributors. To take one example, the produce distributor FreshPoint operates throughout the United States and Canada, and their local branch in Connecticut distributes mostly non-local produce but also buys from a number of local produce farms. For growers to sell to FreshPoint they must have food safety certification and a consistent supply of produce at a high enough volume that they can earn a profit at low prices. In contrast with national or international produce distributors like FreshPoint, smaller produce distributors like Squash, Inc. in Belchertown and AC Produce in Springfield operate only in our local region. Both Squash, Inc. and AC Produce strongly prioritize buying from a wide range of local farms and can provide more accessible and flexible markets for local farms than larger produce distributors like FreshPoint.

Local-only specialty distributors

There are several distributors in the region that are committed to selling exclusively (or nearly exclusively) local and/or regional produce. These



Tony Calabrese loading local produce for distribution at AC Produce in Springfield

distributors have offerings that change seasonally as the farm season progresses. Pioneer Valley Growers Association (PVGA) in South Deerfield is the largest such distributor in western Massachusetts. PVGA is a grower-owned cooperative distributor that ships produce to grocery chains throughout New England. In 2015, PVGA distributed produce for its twenty-five members as well as for over forty other local and regional farms.

Several smaller local-only specialty distributors have also recently begun to serve farmers in western Massachusetts. These local-only distributors strongly brand their products as locally grown, do not fill in with non-local produce when local produce is unavailable, and typically use source identification to highlight the specific farm that grows each product. What Cheer Fruit and Produce in Northampton and Marty’s Local of Richmond, for example, both work exclusively with local farms and specialty producers to distribute source-identified produce to buyers. These smaller distributors are often

able to be more flexible than larger distributors in their requirements of growers, and thus can accommodate smaller farms. They can also frequently be more flexible in their requirements of buyers, accommodating more special orders with variable timing and content.

The local-only distributors we spoke with described their relationships with other similar distributors as more cooperative than competitive. Several of the distributors already work together with other distributors serving adjacent and overlapping regions, thereby increasing their distribution efficiency. There was interest in expanding such cooperation with regard to local product sourcing, distribution, and storage.

Many of the smaller local-only distributors are relatively new and thus have not yet demonstrated long-term economic viability. However, the distributors we interviewed for this study confirmed the importance of these new distributors in helping them to expand sales by accessing new wholesale markets, and to shift their focus from direct-to-consumer sales to wholesale sales.

Cultivating relationships with large-scale wholesale buyers

Marketing strategies

A common refrain among the farmers interviewed for this study was the perception that opportunities to enter new wholesale markets for produce were difficult to come by, and that growers should try to find ways to take advantage of new market opportunities whenever they presented themselves. All farmers interviewed indicated that they had to compete with produce growers from other regions for markets and prices – for example, greens producers in California and Canada, orchards in Washington, and mixed vegetable farms in New Jersey, Georgia, and the Carolinas.

Vegetable farmers interviewed for this study also believed that they faced increasing competition

from other local vegetable farmers. The farming landscape in the Pioneer Valley has changed significantly in recent years as farms have had to adapt their businesses to the changing economics of farming, and some types of farms that were once more prevalent in the valley have faced increasing economic challenges. Some interviewees felt that this has resulted in more farms transitioning from dairy field crops and tobacco to vegetable production in an effort to maintain profitability. This analysis appears to be supported by data from the USDA-NASS Census of Agriculture, which shows that the harvested acreage of vegetables in the Pioneer Valley has almost doubled since 1992 (the first year this figure was recorded), while during the same period the total harvested acreage of all crops in the Pioneer Valley has remained static or declined.

According to census data, about 5,000 acres of harvested vegetables were added in the Pioneer Valley from 1992 to 2012, with almost half of that increase occurring during the most recent census period between 2007 and 2012. This additional acreage may have come in part from dairy cropland, given that the number of dairy cows being milked in the Pioneer Valley declined by 51% from 1992-2012, and dairy farm acreage in the state declined by 61% (acreage figures specific to the Pioneer Valley are unavailable). Harvested acres of tobacco in the Pioneer Valley increased between 1992 and 2007, but then decreased sharply by about 900 acres between 2007 and 2012, during which time some of this acreage may also have been repurposed for vegetable production. The amount of orchard land in the Pioneer Valley also decreased significantly from 1992 to 2012 – by about 1,650 acres or 63% – though it is less likely that this land was planted with vegetables, given that orchard land is often hilly and less well-suited for annual crops.

While the increase in vegetable production suggests that wholesale vegetable markets have remained more profitable than markets for fruit, dairy, or tobacco, it also likely has contributed to the highly competitive nature of local wholesale vegetable markets as supply has increased in

tandem with the rising demand for local over the past two decades. Local farmers use a variety of different strategies to establish relationships with large buyers and meet financial goals in these competitive wholesale markets, several of which are highlighted below.

Serving as a key provider in certain produce categories vs. selling surplus

In order to access and retain certain wholesale markets, some growers reported needing to fill one or more entire produce categories - like lettuce, tomatoes, apples, or cooking greens - consistently throughout the entire season. In the event of a crop failure which interrupts this supply, such growers buy produce in from other local growers in order to ensure that the buyer has a steady supply of local produce in that category. This marketing strategy helps promote loyal season-long relationships with buyers, though growers report that it does not guarantee a good price if market conditions change such that buyers are able to find cheaper produce from non-local sources.

In contrast, some growers use certain wholesale markets primarily to move surplus produce. For example, several local wholesale farms use the Hatfield-based distributor C&S Wholesale Grocers for this purpose. Growers also move surplus produce by selling through distributors who serve as “short-fill” suppliers (or by acting as direct short-fill suppliers themselves), augmenting the standing orders of retailers and other buyers when needed. Such short-fill suppliers are frequently needed in the case of buyers who place large orders for produce grown on the West Coast, which must be ordered several weeks in

advance of shipment. In such cases, when produce needs are higher than expected, buyers must place supplemental orders with local distributors who can ship produce with less advance notice.

Serving organic vs. conventional produce markets

Growers grow organic produce for a variety of different reasons – economic, environmental, and social considerations all factor into growers’ choices. Growers selling organic produce to wholesale markets can get a significant price premium for organic produce and have greater likelihood of establishing loyal relationships with buyers, but have a more limited number of markets available to them than do growers of conventional produce. One organic produce grower we spoke with commented, “It is a different landscape in organics than in conventional as far as price and customer choice – it’s harder to shift markets and you’re more reliant on current customer relationships continuing. For example, maybe with a conventional product you could move extra product at the last minute to a terminal market in New Jersey if you needed to, but with organics it’s more about consistent relationships and it’s harder to make such shifts.”



Packing up tomatoes at E. Cecchi Farms in Feeding Hills

Selling standard crops vs. niche crops

As in the case of growers choosing to sell organic produce, growers choosing to sell niche products have fewer market options, and with that a higher degree of financial risk, but they also have more likelihood of being able to cultivate loyal markets and negotiate on price. Often, local farms choose to grow a mix of standard and niche crops, so they are able to mitigate risk while at the same time supporting a higher level of customer loyalty and profitability.

One farmer interviewed for the study described growing a variety of standard crops in addition to one specific niche ethnic crop to select stores in Massachusetts, Rhode Island, and New Jersey where there is high customer demand for that particular crop. The niche product helps the farm gain a loyal following among stores that would not otherwise buy from the farm, and this also enables the farm to sell other standard crops to these stores. The farmer stated his belief that “this market will eventually collapse as more people get into it,” describing other previous niche crops he had grown, but subsequently stopped growing after other farms began producing the crops and the price collapsed.

Another farmer growing mainly standard produce crops described their choice of product mix as follows: “We try to grow a mix of crops that all have more than one potential market outlet – not just niche crops that have to go to a particular market. If you grow crops for just one market – if the price drops or a buyer drops you, you have no alternative.” However, in the interest of greater profitability, this farmer, too, has chosen to grow one specific niche crop for several of their buyers so that they have more room to negotiate on price than with other crops.

Selling direct to stores vs. selling through grocery distributors or distribution centers

Many of the farms selling to grocery stores deliver their produce to centralized store-owned distribution centers like the Big Y distribution center in Springfield. Others sell through

Case Study: Red Tomato Direct Store Delivery

The food hub Red Tomato initiated a pilot direct store delivery program in 2014 to be able to serve a greater number of grocery stores and further its vision of increasing stores’ access to fresh local produce. Now in its third year, Red Tomato’s direct store delivery program has grown rapidly. It is harder to manage than its other accounts – with many different invoices instead of just one to a single distribution center, and more time-consuming packing required on the part of farms. In addition, it results in less trucking efficiency, since trucks doing direct store delivery to many different stops are rarely full. The appeal remains significant, though, and the market Red Tomato serves with direct store delivery continues to grow. In 2015, direct store delivery accounted for about 15% of Red Tomato’s gross sales, the majority of which was delivered directly to Hannaford grocery stores. Red Tomato’s challenge over the next five years while scaling up this model will be to increase efficiency and profit margins.

distributors that deliver produce to grocery chains. For example, C & S Wholesale Grocers in Hatfield serves Stop & Shop, Market Basket, and a number of other grocery chains, and the Pioneer Valley Growers Association (PVGA), a farmer-owned marketing cooperative based in South Deerfield, supplies most major grocery chains in eastern Massachusetts. Farms selling through distribution centers or distributors typically deliver high volumes of produce per order, often filling the delivery truck. Selling through a distributor gives these farms access to the large buying power of supermarket chains.

Working with a distributor can give growers access to new markets and reduce the costs of trucking product themselves, but delivery to distributors can have costs of its own. Farmers’ experience working with distributors varied widely. In some cases, farmers described long waits to unload trucks or the need to monitor

their produce in the distributor's warehouse in order to ensure that it is shipped out promptly. In other cases, farmers spoke very highly of their distributors.

Smaller farms often choose to deliver smaller orders of produce directly to stores, bypassing the need to warehouse the produce in a distribution center and facilitating "just-in-time" ordering. In contrast with working with distributors and distribution centers, the ongoing management costs of direct store delivery are high. However, delivery direct to stores has the benefit of improving communication between the farmer and buyer, creating a stronger relationship with stores than working through distributors. Such direct relationships also increase the ease of taking on new retail accounts, build customer loyalty, enable farms to serve independent grocery stores, and can give farms a market edge and price advantage. Direct store delivery also enables farms and stores to capitalize on one of the most attractive aspects of local food for customers: its freshness. While distributors and distribution centers often prioritize freshness as well (e.g. Big Y's policy is to deliver produce to stores within one day of it being dropped off at its distribution center) direct store delivery removes the need to warehouse produce between the farm and the store destination altogether.

Communication norms

Communication norms vary widely among different large-scale wholesale buyers. Many of these buyers place orders using a combination of email and phone/text, or occasionally by fax. For other buyers – e.g. C & S Wholesale Grocers and Price Chopper – most communication happens via online ordering platforms. In both cases, farmers reported that it was to their benefit to build rapport with buyers via regular email and phone communication to ensure that buyers remembered to order from the farm.

Some large-scale buyers like Squash, Inc. take the initiative of communicating actively with their growers, even at times communicating before the season begins to discuss the farmer's crop plans and the buyer's purchasing intentions. More often

in the competitive landscape of large-scale wholesale markets, it is up to the farmer to differentiate themselves from other suppliers and make it as easy as possible for buyers to order from them. This typically requires farmers to maintain active communication with buyers so as to forecast crop availability and provide ordering information.

Many large buyers, including grocery chains and institutions, need advance notice in order to switch their produce suppliers to a local source once the season begins. Growers we spoke to recommended contacting buyers at least one month in advance to notify them as to when farm produce will become available; otherwise, buyers often take weeks to switch to the local produce once it is available, resulting in significant lost revenue for the farms that supply them. In such cases, however, farms must be careful not to err on the side of suggesting that a crop will be available too early. "We definitely don't want to promise something sooner than we can deliver it," commented one grower, "because that would burn our buyer bridges."

Negotiating prices

Growers selling to large-scale wholesale markets typically reported feeling as though the prices they were able to get for their produce were governed by national market forces and were largely beyond their control. However, several growers emphasized the importance of staying on top of national and regional trends in produce market pricing, and attempting to re-negotiate price with buyers when the market forces were favorable to doing so.

Growers monitor price trends by following the published prices at the Boston and New York Terminal Markets, and through comparing prices among their buyers and with other local growers. One grower commented that whenever he sees that the going market rate has increased he calls each of his buyers to tell them, "The price is up – can I get a little more out of you this week?" His experience is that buyers always initially decline his request to increase prices, but if he follows up and repeats the same request in future weeks that they sometimes will agree to a limited increase in price.



Tomatoes from Simple Gifts Farm on display at Whole Foods Market in Hadley

One trend growers reported in wholesale produce ordering is the increasing popularity of “just-in-time” ordering of local produce, especially in the case of grocery buyers. Hannaford grocery stores, for example, have offered feedback to their local produce suppliers that it is a priority for their stores to be able to order produce and get it delivered three times per week. This enhances the benefit of ordering local produce by maximizing produce freshness and reducing waste (since stores can order based on fluctuating customer demand), but in turn it creates logistical challenges for farmers, who often have little advance notice to harvest and deliver their produce. One vegetable grower in Deerfield, for example, often receives orders for their produce on the same day that they need to harvest and deliver the order to a local farm aggregator for shipping. The unpredictability of just-in-time ordering can also reduce the efficiency of aggregators and distributors handling local produce by making it more difficult to ensure that there is enough supply to meet demand, and resulting in less efficient trucking routes or underutilized trucking capacity.

Liability insurance

Most large-scale wholesale buyers require farms supplying them to carry at least \$1 million in commercial general liability insurance. Farms serving these markets commonly carry this level of insurance. It is common for high volume distributors to require higher levels of liability insurance, however, which presents a greater obstacle for local farms. The distributor FreshPoint CT, for example, generally requires farms to carry a \$4 million policy, though the distributor’s own umbrella policy allows them some flexibility to work with the many local farms who cannot afford this high level of insurance. Performance Foodservice requires farms to have an even higher level of insurance (\$13 million), which significantly limits their ability to buy from local farms. One way local farms can attain the insurance level needed to sell to Performance Foodservice is through working with a food hub like Red Tomato, which is able to supplement the insurance of individual farms.

Requirements of large-scale wholesale buyers

Ordering systems

Farmers selling to large grocery chains, distributors, and other buyers are often required to use special online ordering systems with costly annual subscription fees. One such ordering system, FoodLink®, requires farms to pay a fee of around \$700 per year so as to be able to use the system to sell to buyers like Stop & Shop, C & S Wholesale Grocers, and BJ’s Wholesale Club. The costs of this and other custom ordering systems can be a barrier to entering high volume wholesale markets, increasing the risk of selling to these markets particularly for smaller farms or for those selling niche products or smaller volumes of produce. In order to justify the expense of the subscription, local farms must be able to count on the buyer ordering consistently and at a high volume.

Produce sizing, quality, and types

High volume wholesale markets typically have far stricter standards for produce sizing, quality, and varieties than smaller wholesale markets and direct markets, and farmers report that such standards have grown more stringent over time.

Produce sizing

Larger wholesale markets often now demand produce of one particular uniform size. An apple grower commented that wholesale produce buyers used to have farming experience themselves, but now they know little about the actual business of growing the produce. Perhaps as a result, buyers now request more precise sizes of produce than in the past without fully understanding how challenging it can be for a farmer to supply only the produce that is properly sized to meet buyers' needs. For some crops, like bunched greens, there is one uniform industry sizing standard that predominates (i.e. one pound per bunch) and produce size is fully within the farmers' control, so farmers must simply learn to comply with industry standards. For other crops, size is only partially within the farmers' control and yet one uniform industry standard still predominates. For example, in the case of summer squash, where size is controlled by the precision of harvest time, a farmer might do their best to harvest squash that fall within the standard size range. Squash at the lower end of that range may be sold to one buyer (e.g. Whole Foods) and squash at the higher end of that range may be sold to another (e.g. Price Chopper) with other squash going to waste or being sold to a more forgiving direct-to-consumer or seconds wholesale market. In still other cases, produce size is largely out of the farmers' control (e.g. for apples or potatoes) and different buyers demand a variety of different sizing standards. Farms selling these types of crops wholesale must have the labor or equipment required to properly sort produce by size, and they must carefully diversify their markets so as to be able to sell all their produce. An orchard, for example, may choose to sell larger apples to stores in Texas, mid-sized apples to stores in New England, and small apples to schools.

Produce quality

Quality is key in large-scale wholesale markets, and the financial stakes are high if quality standards are not met. Growers have little recourse should a buyer choose to reject a large produce shipment upon arrival due to quality concerns. Even when quality is high, produce with undesirable traits can be rejected. One grower, for example, reported trying to sell a table grape variety to a grocery chain that displayed brown spots when it was fully ripe and at peak flavor. Although the brown spots were not in fact an indication of low quality, the produce buyer rejected the entire shipment of grapes, arguing that consumers would not buy grapes with spots.

Not surprisingly, given the subjective nature of quality standards, some growers did not trust their buyers to accurately assess the quality of their produce and speculated that buyers sometimes rejected their shipments upon arrival due to "quality concerns" simply because they had found a lower price elsewhere. Because of such mistrust and the high cost of rejected shipments, one farmer indicated that he preferred to do all the trucking for large shipments himself, so that he can negotiate with the buyer and attempt to avert economic losses should any real or perceived quality concerns arise. Another farmer discussed her experience of having a shipment of produce rejected due to quality concerns and only finding this out from her distributor after two months had passed and many more shipments had been sent to the same buyer. This highlights the benefits for farms of building a good rapport with their buyers whenever possible to foster open communication channels, and the importance of working with a distributor that is able to communicate in a timely manner with the farmer about any quality concerns or rejected shipments of produce from the farm.

Types of produce

When selling to large-scale wholesale buyers there is often little opportunity for the farmer to communicate with the end-user of their produce. This means that farmers are more limited in the varieties of produce they can sell than when selling direct to restaurants, stores, or consumers. In large-scale wholesale markets it can be difficult to build demand for new varieties among consumers unfamiliar with the new varieties, even when farmers believe such varieties to be superior. One farmer, for example, bemoaned his failure to build interest in the bora bora variety of winter squash or a green-tipped variety of summer squash, both of which had superior flavor to the more well-known varieties of squash sold in grocery stores.

Our conversations with farmers and buyers did not reveal any significant areas in which the supply of a given local produce crop or variety was clearly inadequate to meet buyer needs. Farmers voiced several opinions regarding how supply and demand were likely to fluctuate for the most commonly grown crops in the coming years, and some mentioned specific niche crops that they speculated might be undersupplied at present and likely to be more profitable for farms. However, none described any large gaps in the supply of local produce that would require a significant shift in production to fill. Likewise, some buyers mentioned minor gaps in supply of local crops like pears, plums, napa cabbage, and bok choy, but none identified significant gaps in the supply of fresh local produce. Buyers did discuss significant unmet needs for a range of processed products, as discussed below, and more research is needed to determine which of these needs can be met by local processors at a price that is at once profitable for farms and affordable for buyers.

Food safety requirements

Larger wholesale buyers often require their farm suppliers to have third-party food safety audits and certifications like GAP (Good Agricultural Practices) or CQP (Commonwealth Quality Program). The Commonwealth Quality Program was developed by the Massachusetts Department of Agricultural Resources and is based on GAP and Food and Drug Administration (FDA) standards. CQP certification offers buyers much the same benefits as GAP certification but is less costly for growers while offering growers more food safety technical assistance, so it is accessible to a wider range of farms. CQP certification is accepted by many larger wholesale buyers in Massachusetts and is less commonly accepted by wholesale buyers operating more regionally, outside of the state.

The FDA's Food Safety Modernization Act (FSMA) recently set new federal food safety standards for produce. As this Act is implemented over the next couple of years it will impact the food safety practices and documentation that growers must implement to obtain certification. As a result of the Act, many farms will be legally required to comply with FSMA food safety standards for the first time, and in turn more buyers will require the farms they work with to have food safety certifications.



Green beans being sorted and packaged at Plainville Farm in Hadley

At present, food safety certifications like CQP or GAP are generally required by grocery chains, foodservice management companies, hospitals, and distributors. Independent stores and self-operated institutions are more likely to have the flexibility to be able to buy from farms without food safety certifications.

Buyers that require GAP food safety certification can sometimes differ in the type of standards they require farms to meet. Some large-scale wholesale buyers will buy from farms that meet any type of GAP standards, but others only accept specific types of GAP certification and audits, or they make additional demands of growers on top of the routine standards of GAP certification. For example, some buyers specify that they require produce suppliers to get a GAP audit from a private company like PrimusLabs, while others require farms to have one of the two forms of USDA GAP audits – the Harmonized GAP audit or the GAP & GHP audit – conducted by the MA Department of Agricultural Resources. Some buyers go even further in their food safety requirements, requesting that farms submit a copy of their full food safety audit report for review before being accepted as a vendor. After reviewing the audit, buyers then sometimes demand additional food safety practices to be implemented on the farm on top of the standards that the farms have already implemented for their certification.

In spite of the strong industry trends towards increasing food safety requirements among large wholesale buyers, some of these buyers have thus far continued to permit long-time suppliers to sell produce to them without meeting new food safety requirements. Such farm suppliers have been temporarily “grandfathered” in to allow them adequate time to transition to meeting the requirements. Such wholesale buyers are beginning to phase out this flexibility in food safety requirements, however. In 2016, eleven produce farms in the Pioneer Valley had USDA-GAP certification for one or more of their crops, and thirteen produce farms in the region were CQP certified. These numbers are still small relative to the number of farms selling produce wholesale in the region, and it is likely that many more farms will have to obtain such certifications in the

coming years –both due to FSMA requirements and increasingly stringent buyer requirements – so as to be able to maintain or enter new wholesale markets.

The new USDA GroupGAP Certification Program, which began in April 2016, was created in an attempt to reduce costs for farms seeking GAP certification by creating a mechanism to share resources and work under a common food safety program. In theory, the GroupGAP certification can reduce costs when compared to each farm obtaining individual certification. However, in practice the USDA GroupGAP program is often not cheaper, since the program requires each grower to obtain an individual internal audit in addition to third-party USDA audits performed at a subset of the farms. The training and labor costs for these internal audits, combined with substantial program set-up and management costs, are substantial and often exceed the cost of individual GAP certifications. Initial USDA GroupGAP pilot projects indicate that USDA GroupGAP is only likely to be a cheaper form of GAP certification when a large number of farms are working together closely and marketing all of their crops through one central food hub or other channel. Thus, policy improvements are needed to reduce the costs of the program before it will be a viable option for Massachusetts farms.

Delivery needs

Delivery needs of large buyers vary widely, and this is a key factor in determining how feasible it is for local farms to supply these buyers. Delivery is not always necessary at all – for example, some distributors are able to pick up produce orders from the farms that are on their delivery routes, which significantly benefits some of the local farms that are more centrally located in towns like Hadley. The distributor FreshPoint CT delivers produce to the University of Massachusetts in Amherst, so it is convenient for them to pick up and backhaul produce from nearby farms. Likewise, distributors like Black River Produce, Costa, Outlook Farm, and Squash, Inc., all of which sell to a range of customers in the Pioneer Valley, are able to pick up from a number of farms that are on their extensive delivery routes.

Other buyers, like grocery chains or distributors which ship produce out of the region, are less likely to be able to pick up produce at multiple farms. The food hub Red Tomato, for example, asks their farm suppliers to deliver their produce to one central farm so that their truckers can pick up all of the produce orders in one location. Other buyers will not pick up at all. For example, farms that sell to Big Y must deliver their produce direct to the distribution center in Springfield or to individual stores. Similarly, growers selling their produce through the PVGA marketing cooperative must deliver to the PVGA facility in South Deerfield.

In the case of institutions, even buyers of similar types can vary dramatically in their delivery needs. For example, Smith College has very little food storage capacity and no central kitchen, so it requires suppliers to deliver food directly to each of their fifteen residence hall kitchens in delivery trucks small enough to accommodate their loading docks. Suppliers unable to meet this requirement may in some cases deliver to fewer residence halls, but the farmer does not gain access to the full buying power of the college, and the college must manage multiple relationships serving different dining facilities and may miss out on lower prices available for higher volume purchases. In contrast to Smith College, Amherst College has one primary dining hall and kitchen and more storage capacity, so farms supplying the college can deliver to just one central location. Each college also purchases from a local distributor which sources from local farms.

The feasibility of delivering produce varies according to the efficiency of delivery. If farms are able to fill their truck for a delivery route, or backhaul produce on the way home, this can increase the feasibility of delivering produce to buyers. However, the increased efficiency of shared trucking or backhauling is often offset by financial disincentives. For example, when farmers only truck their own farm's produce and remain within 150 miles of the farm, they are exempt from having to pay road tax and having to get a commercial driver's license. As a result of these additional costs, many of the farms interviewed

for this study reported hiring out their produce delivery to trucking companies that were more able to maximize efficiency by combining the farm's individual delivery needs with the complementary needs of other shippers.

Packing requirements

Growers supplying large-scale markets must learn to follow all industry standards with regard to pack size, as well as to label produce cases and individual produce items according to the specifications of a given buyer. Growers repeatedly cited buyer packing and labeling requirements as a significant challenge in doing business with large buyers, commenting that the burden of packing and labeling produce in large-scale grocery markets has been increasingly shifting from the buyer to the farmer.

Many large grocery buyers now require produce to enter their store already labeled with the product PLU, which either requires a substantial financial investment in costly manual labor or new equipment purchases on the part of farms so as to be able to sticker products individually. The expense of such equipment puts the small farms in our region at a significant disadvantage in relation to larger non-local farms supplying produce markets. One local grower, for example, reported having to spend \$20,000 in 2015 to buy a machine that would individually sticker their products so as to be able to access new wholesale markets. Some large grocery buyers in the region have also recently begun to require that some produce items be individually shrink-wrapped, although most farms lack the equipment needed to do so.

Even for relatively large local farms, such substantial equipment investments threaten to eliminate the profitability of selling to large-scale wholesale markets, where economic margins are already small. For smaller local farms, such financial obstacles to accessing markets are insurmountable. In some cases, farms can work together to share equipment. For example, several farms marketing produce through PVGA have



Peeled and cubed butternut squash from Plainville Farm on display at AC's Main Street Market in Springfield

begun to sell their produce to a local farm with shrink-wrapping equipment, who in turn markets the produce through PVGA. This also presents challenges, however, including new liability risks, the added expense of having one more step in the farm-to-table market chain, and additional regulations given that one farm is handling the produce grown on multiple farms.

Processing needs

Foodservice buyers often purchase processed produce to reduce food preparation labor. For example, peeled and pre-cut produce like French fries, butternut squash, and carrot coins are widely used in schools, hospitals, and other foodservice venues. Produce is also frequently used in frozen (e.g. sweet corn, broccoli, mixed vegetables) or canned form (e.g. tomatoes, pickles). There is a significant demand for processed produce in the retail setting as well, and as consumer preference continues to grow for foods that are easy to prepare, processed products like pre-cut butternut squash often generate far more income for retailers than fresh produce. If appropriate markets can be found to match demand for processed local produce with supply, at a price that can sustain both the farmers and processors, processing has the potential to significantly contribute to the

economic viability of farms and widen consumers' access to local food in the region.

Many farms in western Massachusetts use the Western Massachusetts Food Processing Center to flash-freeze and can their produce. Some growers from our region also have their products processed at Roch's Produce in Rhode Island, a processor which delivers a variety of peeled and cut produce to schools and other foodservice venues. Some processing is also done right on local farms, such as peeling and cutting of butternut squash, turnips, and other produce at Plainville Farm in Hadley. The Western

Massachusetts Food Processing Center in Greenfield was founded on the principle that processing facilities are crucial to stabilizing prices and fully utilizing crops grown in the region when fresh produce markets are flooded with produce during peak season. Additionally, processing produce can enable farms to access new markets for their products – including selling direct to the consumer and to foodservice buyers.

For large-scale foodservice buyers, the price of local processed produce can be a challenge. It is difficult for small local processors to compete with large national processors on price, while at the same time paying fair wages to their workers and making significant investments in equipment. The IQF (individually quick frozen) machine used at the Western Massachusetts Food Processing Center, for instance, required a \$100,000 investment for the machine alone, with substantial additional costs for the nitrogen needed to use the IQF equipment. The Western Massachusetts Food Processing Center has found that some types of produce – like broccoli – can more easily compete on price than others – like carrots. Discussions among three processors in the Northeast region are also underway about how these processors might work together to achieve greater economies of scale and lower prices.

Institutional buyers' demand for processed products is unlikely to disappear, and this market

holds as-yet-unrealized promise for local growers as demand for locally grown products by these buyers continues to rise and as local processors gain in experience and efficiency. Additional information exchange among growers, processors, and buyers may help to reveal the products which will meet the needs of all parties in regards to supply, demand, availability, and price point. For example, some institutional buyers are moving away from “institutional food,” responding to demand from their customers for high quality, on-site cooking and fresh foods. This change may not eliminate the demand for some pre-cut or frozen foods, but may shift demand away from items whose quality or appearance is diminished by freezing or other processing.

Pricing in large-scale wholesale markets

In the higher volume wholesale markets that serve distributors, schools, grocery chains, and other large buyers, pricing norms are typically far lower than those in lower volume wholesale markets such as those serving independent grocery stores or restaurants. Buyers and farmers alike often keep their prices confidential, so for growers looking to explore the economic feasibility of entering large-scale wholesale markets it can be difficult to determine what prices they can expect from different buyers. Growers can use several sources to estimate likely price ranges, however.

The wholesale prices paid to farms for produce in larger wholesale markets roughly reflects the produce prices reported at the Boston Terminal Market in Chelsea, MA, which are reported on the website of the USDA Agricultural Marketing Service at www.ams.usda.gov. These prices are only an approximate guide, however. As grocery buyers and other food businesses have become more consolidated with greater buying power, more of these buyers are able to establish direct relationships with suppliers and dictate the price that they will pay, rather than buying through the Boston Terminal Market.

In larger wholesale markets it is rare for buyers to pay a premium for local produce, and when they do pay a premium due to significant consumer

preference for local produce, this premium typically reflects only a small increase over the going wholesale rate.

As noted above, producing more unusual crops for niche markets may allow growers somewhat more latitude in price negotiations, but most growers do not expect those price benefits to last for long as others enter a profitable marketplace.

One common refrain from farmers interviewed for this study was that prices in large-scale wholesale markets have increased very little, if at all, in recent decades, while costs for things like labor, fuel, and production supplies have all increased substantially. While the farmers we spoke to view their current markets as economically viable for the farm, many of them reported that profit margins were small enough so as to make them worried about future price stagnation and cost increases.

Pricing when selling to schools

The prices that schools can pay to farms and other suppliers are limited by federal policy and budgetary constraints. For public K-12 schools, food budgets are controlled by the federal meal reimbursement level, which for the 2015-16 school year was about \$3 per lunch. In addition to these cash reimbursements, public schools are allocated a set amount of USDA Foods “entitlement money” from the federal government to spend on farm products that have been purchased at very low prices and at high volumes by the USDA and processed for use in schools. Schools also have the option of using a portion of these entitlement dollars to purchase fresh produce through the Department of Defense Fresh Fruit and Vegetable Program (DoD Fresh), which contracts with the company A.T. Siravo & Co. in Rhode Island to supply schools with fresh produce, including some from New England farms.

At public K-12 schools, food costs and labor costs each typically account for about 40-45% of the total foodservice budget for the school. Other expenses like equipment purchases, maintenance,

and professional development make up the remaining 15-20% of budgetary costs. Food and labor budgets at colleges and universities are typically slightly higher than for grade schools, but are still limited.

Schools' pricing flexibility is strongly impacted by whether or not the school's foodservice is self-operated or is run by a foodservice management company like Whitsons Culinary Group or Chartwells. This distinction remains true across all types of schools: public, private, K-12, or colleges and universities. Self-operated schools (referred to as "self-ops") typically have greater flexibility in who they can purchase from than schools run by foodservice management companies. One foodservice director at a self-op public K-12 school commented, "It's true that school budgets are very small, but the ability to use local depends on priorities. It's possible to work them into the budget." Schools run by foodservice management companies also can find ways to increase their local procurement, though the basic cost structure under which foodservice management companies operate often limits local procurement. Many foodservice management companies make as much or more money from rebates negotiated for high-volume purchases from particular vendors as they do from foodservice sales, giving them a powerful incentive to avoid substituting too much local produce. While some school dining services operated by foodservice management companies have excelled at local sourcing, their managers have achieved this goal while navigating the goals and priorities of both the client school and the foodservice company.

Pricing when selling to grocery stores

The pricing paid to farms by large-scale grocery buyers typically roughly matches Boston Terminal Market pricing. However, there is some variation depending on the buying power and customer base of the buyer. Typically, grocery stores with more buying power will pay lower prices to farms than those with lower buying power. When farms sell to independent stores, for example, there is often some room to negotiate on price, but farmers report having little if any control over the

price paid to them by large grocery chains. Farmers also report having more leeway in pricing for grocery buyers that serve more quality-conscious customers. For example, growers report that the grocery chain Whole Foods will pay up to a few dollars more per case for high quality produce than other grocery chain buyers.

Pricing when selling to distributors

As is the case with grocery buyers, the price paid by distributors varies significantly depending on the type of distributor – largely due to differences in the scale of the distributor and the types of buyers they serve. For example, growers report that distributors like Squash, Inc., which primarily serves restaurants and heavily prioritizes its relationships with local farms, will tend to pay growers a higher price than larger distributors like C & S Wholesale Grocers or FreshPoint CT, which serve large-scale grocery chains or institutions with a variety of local and non-local produce.

In all cases, when produce is sold via distributors or distribution centers the price generally must be lower to pay for the costs of distribution. The price a distributor pays to a farm must be such that it allows the distributor to mark up the produce enough to generate a profit. For example, Squash, Inc. reports having to pay at least 15-20% below the price a farmer could get by selling directly to its restaurant buyers in order to cover its costs. Purchasing from a variety of local farms is more costly than if Squash, Inc. were to buy all of its produce in one place at the Boston Terminal Market. An additional 15-30 hours per week are needed to manage the local buying, but purchasing from local farms is a priority for Squash, Inc. that extends beyond just managing costs.

Like Squash, Inc., the farmer-owned distributor PVGA takes a percentage of each sale to cover the costs of distribution, so farms in effect get a lower price for their product than if they were able to sell directly to stores. This tradeoff can be worthwhile for farms if it in turn significantly reduces the farmers' management and distribution costs. For example, one grower reported that the return he

could get by selling produce through PVGA was usually similar to the return he could get by paying for trucking costs to sell his produce at the Boston Terminal Market.

Smaller local-only distributors like Marty's Local and What Cheer Fruit and Produce tend to be more flexible in the price they offer to farms for produce, often following the farmers' lead on pricing and then offering a transparent pricing structure to buyers in which there is a set markup on the price paid to the farm supplier for each item. For example, Marty's Local currently allows farms leeway in setting their own prices and then marks up these prices by a standard percentage which is openly communicated to all buyers.



Right: Michael Cecchi in a field of green beans at E. Cecchi Farms in Feeding Hills

Below: Marge Levenson and Eric Stocker of Squash, Inc. at their warehouse in Belchertown (photo: Polly Wagner)



RECOMMENDATIONS

Growers, buyers, and partner organizations all made recommendations for improvements in the wholesale marketplace for local products. These suggestions fell into three distinct categories. First, some players in the wholesale marketplace had very specific, individual needs, such as delivery to a particular location on a particular day. Second, some interviewees identified global marketplace forces that in some cases put locally grown produce at a disadvantage, such as market prices that are driven lower by industry consolidation and global competition, or the decreasing share of food in household budgets. In some cases, CISA or our partner organizations may be able to offer solutions to the individual needs identified in the first category. Suggestions in the second category are difficult to solve at the local or regional level, instead requiring national policy changes or shifts in public perception.

The third category of suggestions are those most amenable to local action that could benefit multiple players in the wholesale markets in our region. In our interviews, we found that in some ways these suggestions are the most difficult for growers and buyers, thoroughly embedded in the current system, to envision and articulate. In many cases, our interviewees found it easier to name small changes or to identify ways that the current global economy makes large-scale sales of locally grown produce difficult. Similarly, stakeholders were reluctant to firmly rank recommendations for improvement, recognizing that different approaches were useful in different circumstances.

Nonetheless, our interviews yielded valuable recommendations for ways that growers, buyers, distributors, and service providers can foster local purchasing by large buyers. The following recommendations, if implemented, will help expand large-scale markets for local produce while supporting farm business viability.

Suggestions for support needed to fill in gaps in wholesale markets

Provide technical and financial assistance to farms for food safety improvements.

Farmers and buyers of all types repeatedly voiced their concerns over the ability of local farms to meet the increasingly stringent food safety requirements of wholesale buyers. Buyers in CISA's wholesale focus group agreed that the biggest challenge the local farmers they work with face in meeting their needs is in the area of food safety. Several farmers likewise expressed fears that their farm or other farms would not be prepared to meet buyers' standards.

The farmers interviewed for this study discussed both the high initial costs of food safety-related infrastructure improvements and the time-intensive nature of implementing ongoing food safety-related paperwork and practices. One farmer producing only a couple of acres of wholesale crops estimated the cost of necessary food safety improvements to be \$25,000 for a packing shed and new water system. Another farmer indicated that he had to dedicate ten hours per week of labor year-round to practices required for food safety certification. Farmers cited such increasing food safety costs amidst the stagnant prices in large-scale wholesale markets as a significant threat to the viability of local farms.

Increasingly stringent and expensive food safety requirements will also be a challenge to the viability and growth of new farms. The infrastructure, equipment, and time required to meet food safety standards will be an additional barrier for new farms that need to scale up or enter larger markets in order to succeed. New farmers, particularly those who are low-income, socially disadvantaged, or do not speak English as their first language, may find this barrier particularly hard to overcome.

In light of such input from farmers and buyers, it is clear that more technical and financial support is needed to help local farms plan and implement food safety infrastructure improvements, as well

as learn how to efficiently fit new tasks into farm workflows. The Massachusetts Department of Agricultural Resources currently offers farms both grants for food safety improvements and technical assistance on how to identify and implement needed improvements. Funders and service providers should work to reach a wider audience of farmers and strengthen the technical and financial assistance available to farms for food safety, implementing different levels and types of support for different growers. Service providers should also advocate for policies that increase the accessibility and cost-effectiveness of food safety certifications through programs like GroupGap or CQP, in order to ensure that food safety requirements do not plug the pipeline of new farmers who will grow tomorrow's food.

Help buyers identify the “sweet spots” in purchasing local produce.

Conversations with buyers suggest that more technical assistance is needed to help buyers identify the “sweet spots” in local purchasing – the opportunities to expand local purchasing that are most economical for buyers and can be implemented in such a way as to have the most impact in supporting local farms.

The range of scales and marketing strategies of the farms interviewed for this study clearly demonstrated that some types of farms are better equipped to meet any given buyer's needs than others. In addition, some types of local farm produce are clearly more price-competitive in large-scale wholesale markets than others. The variations in how strongly customers prefer different crops to be local vs. non-local also affects how economical it is for buyers to purchase different types of locally grown produce. The owner of Randall's Farm & Greenhouse in Ludlow, for example, reported that asparagus, blueberries, corn, strawberries, and tomatoes were among the crops for which their customers exhibited the greatest preference for local. For these crops, sourcing local leads to strong product sales even when the price point is higher.

More support is needed to help buyers make the local purchasing decisions that best fit their needs.

Some of the buyers interviewed for this study indicated that they often made purchasing decisions on a case-by-case basis, without a full understanding of the range of opportunities for purchasing local. Sometimes this led to a large percentage of the buyers' budget being spent on a single local purchase to the exclusion of other purchases that may have had a greater impact for the buyer or the farm. Several buyers felt they could benefit from assistance in setting priorities for local purchasing, finding the local farms that could best meet their needs, and assessing how any single purchasing decision fit into their budget and overall strategy for expanding local purchasing.

Assistance is also needed to help build capacity to process a wider range of local produce, as well as to evaluate whether appropriate price points can be set for new processed products that are profitable both for farms and buyers. For example, the Western Massachusetts Food Processing Center has not yet tried to process and market frozen greens, so more research is needed to determine the best processing techniques and assess whether frozen local greens might represent a “sweet spot” in purchasing local produce.

Offer support to distributors that have a central mission of supporting local farms.

While a wide variety of businesses play important roles in the distribution of local produce – as described above – only a small handful of distributors in western Massachusetts particularly specialize in local produce. PVGA and Squash, Inc. are two of the more well-established distributors that strongly prioritize selling locally grown produce. Businesses like PVGA and Squash, Inc. with the central mission of supporting local farms play especially large roles in getting many different farms' produce to market. Both PVGA and Squash, Inc. were founded several decades ago and continue – amidst substantial changes in all aspects of the produce industry during this period – to act as key players in the local food system. Thus, the success of both of these businesses significantly impacts a large number of farms that continue to rely on their distribution.

Given the key roles played by PVGA and Squash, Inc., it is likely that any support given to these businesses – e.g. to facilitate business transitions, strengthen communication with stakeholders, update infrastructure, or help improve profitability – would benefit many farms. Feedback from interviewees suggested that PVGA and Squash, Inc. are both nearing a stage of possible transitions. After more than four decades in business, the founders of Squash, Inc. are likely to consider transitioning the business to new ownership in the coming years—perhaps even to a farmer-owned model similar to PVGA. In the case of PVGA, one of the founding members interviewed for this study commented that the vast majority of farmers selling through PVGA are now over 55 years of age. This farmer and others expressed their opinions that the future of PVGA depended on building a new base of younger farmers – trained in high standards of quality – to continue to supply the cooperative.

Outside support may be beneficial to help ensure the success and sustainability of key distributors of local produce. In particular, in the cases of PVGA and Squash, Inc., such support could help the distributors assess different business transition options and could facilitate greater communication among stakeholders and management. Maintaining open lines of communication can be especially important during times of transition – both to gain stakeholder buy-in and benefit from sharing ideas and input. This is especially true in the case of PVGA, which works with almost seventy farms, twenty-five of whom are members. With such a large number of direct stakeholders it is almost inevitable for there to be a wide variety of opinions on what the future of the cooperative should look like. Our grower interviews confirmed that such a range of opinions does exist among growers who ship produce through PVGA, suggesting that outside financial and technical assistance resources could be of use to help the cooperative strategically plan for the future.

Support could also benefit smaller local-only distributors that are relatively new and are still in a period of rapid growth to achieve a scale that is

financially sustainable. These distributors could benefit from business planning assistance to strategically plan for future growth. Given the interest that some distributors have expressed in strengthening their cooperation with other distributors, support in assessing opportunities for increasing efficiency through cooperation on sourcing, storage, and distribution could also be beneficial.

Continue to expand the “buy local” campaign.

The most common advice given by farmers and buyers on how to strengthen large-scale wholesale markets for local food was to expand efforts to educate the community about the benefits of buying from local farms. One grocery store owner voiced her opinion that “CISA has to keep on raising awareness about local to a new generation.” Another interviewee indicated that he perceived a need to build more demand for local produce among buyers in Springfield. Others commented that they thought there was a need to continue building new connections between local farmers and buyers, including buyers seeking regional produce in nearby cities like New York.

Several of the buyers interviewed for this study discussed increasing demand for local produce among their customer base as the central reason for their expansion of local purchasing. Farmers perceived this trend as a key factor in building markets for their produce, and advocated that CISA continue to promote the “buy local” campaign to further expand the trend. Amidst the growing demand for local produce, interviewees also indicated concern over the varying definitions of “locally grown,” especially in the case of large-scale wholesale markets where there is less opportunity for a relationship between the farmer and end-user. One farmer described some grocery chains that defined the term as any farm products grown within a 24-hour drive of the store and warned that “local-washing is becoming a real thing.” It is clearly important for “buy local” organizations like CISA to continue to work to protect the integrity of the term “local” as markets for local food continue to expand.

Provide support for local sourcing and market development for farmers and buyers.

Farmers, distributors, retailers, processors, and dining service companies all operate in an environment of low margins and little extra time. Changing existing systems for purchase, delivery, communication, or invoicing is costly simply because it is new. Both growers and buyers build market expertise over time, but both parties can benefit from support from organizations that are in active communication with a range of farmers and buyers, who can help identify current market opportunities and prepare for possible future trends. This kind of support, sometimes called “value chain facilitation,” can include simple matchmaking, helping a grower move surplus product or a buyer find a new item or a new supplier. In addition, these service providers can encourage the development of new products, new infrastructure or services, or new markets.

Many of the farmers and buyers interviewed for this study discussed changes they had observed over the course of their career in the marketplace for large-scale wholesale produce. Many of them also speculated about future marketplace changes – such as up-and-coming crops with growth potential or inadequate supply, increasing demand for processed products like pre-cut produce, disease issues threatening to reduce the profitability of certain crops, or new buyers with untapped demand for local produce. Each individual farmer and buyer has a wealth of experience to inform their predictions, but the combined experience of many farmers and buyers can paint a more complete picture of current opportunities and future trends in the wholesale produce marketplace.

Some buyers may be large enough to develop this expertise in house over time, but farmers and many buyers would benefit from additional expertise and support provided by non-profit, university, or Department of Agriculture personnel.

Assist farms with in-depth business analysis.

Our conversations with wholesale farmers indicate there is an unmet need among this group for in-

depth, individualized support to help analyze farm finances, evaluate current enterprises, assess opportunities, and strategically plan for the future. The circumstances of each farm business are unique, such that any particular business strategy may work well for one farm but not for another, and one-on-one support can be crucial in enabling farms to make profitable business decisions. In the extremely challenging environment in which wholesale farms operate, this kind of targeted, expert assistance can make the difference between success and failure.

Suggestions for buyers to help expand local food purchasing

Offer flexibility in requirements for local farms.

Adopting scale-appropriate supplier requirements can help buyers ensure that local farms are able to compete with other vendors in supplying their needs. For example, buyers should consider requiring levels of liability insurance that are attainable for local farms and accepting local food safety certifications like CQP so that farms need not invest resources in unique food safety programs for different buyers and are more likely to be able to access technical support in obtaining the certification.



Herbs growing at Full Bloom Market Garden in Whately

Prioritize investments in local produce that offer a larger “bang for the buck.”

It is often in buyers’ best interest to start with the “low hanging fruit” when expanding local purchasing, choosing to work with farms and buy local crops that are more price-competitive with non-local produce and suppliers. Additionally, buyers may be able to get more “bang for their buck” by prioritizing local food purchases of crops like tomatoes for which customers demonstrate a stronger preference for local produce over non-local produce. At the same time, buyers should see these products and relationships as a platform from which to expand their local sourcing, rather than reaching an early and final plateau.

Offer support to farmers for online ordering fees, food safety certification, etc.

When farmers must incur up-front costs to sell to a buyer (such as for online ordering or food safety certifications) buyers can help ensure that small local farms are not disadvantaged by sharing in such costs or guaranteeing future order volumes and pricing. Some buyers like the distributor FreshPoint CT offer cost-share assistance to farms they work with to obtain new food safety certifications. Such support can help farms to make the necessary transitions to meet new food safety requirements. Farmers also suggested that buyers consider offering higher prices to local farms that demonstrate exemplary food safety practices to account for the additional costs incurred by these farms.

Financial assistance is particularly important in cases where buyers require special certifications that many other buyers do not require. For example, the food service management company Sodexo requires all processing facilities that are part of its supply chain to be inspected yearly by a designated approved third party. As part of their commitment to strengthening relationships with local farms, the dining services at The Hotchkiss School in Lakeville, CT, run by Sodexo, covered the \$2,200 cost of the first such audit of Adams Farm Slaughterhouse in Athol. The slaughterhouse was able to fund subsequent audits themselves

after the sustained financial benefits of the certification in accessing markets were clear.

Maintain in-house labeling or packaging capacity for local farm produce in retail settings.

Having the ability to label individual produce items in-house can enable smaller farms to sell to retail buyers without being unfairly disadvantaged by having to invest in expensive equipment to sticker produce. Similarly, buyers should be aware that requiring farms to individually pack produce, such as by shrink wrapping it, also prevents smaller farms that lack the needed equipment from selling to such buyers. If individual packaging of produce items is required, retailers should consider investing in the equipment to pack produce once it reaches their store or warehouse.

Offer greater transparency regarding rebates or “volume discount allowances.”

Foodservice management companies should offer full transparency to their clients regarding the amounts of the rebates they are given for high-volume purchases, so as to improve their clients’ ability to understand the actual costs of food, and should work in cooperation with them to manage the budgetary costs of local food in particular.

Offer training to increase staff capacity to prepare local food, and seek staff input.

For foodservice buyers, transitioning to using more local produce in the kitchen can require kitchen staff to develop new skills in things like from-scratch food preparation, minimizing trim waste, and batch cooking. Maintaining open lines of communication with kitchen staff and using this transition as an opportunity for professional development and increased chef creativity is important for getting staff buy-in regarding changes. Some institutional kitchens that prioritize local sourcing have changed job descriptions or added new positions focused on in-house food preservation and preparation of specialty products, giving their employees new job skills which may be more and more marketable in an expanded local food economy.



Above: Dining services kitchen at Hampshire College

Below: Greens being harvested and packed at Harvest Farm of Whately



Consider foodservice management changes to expand local produce use.

Institutions and workplaces that contract with a foodservice management company should discuss local purchasing goals with their foodservice management company to explore opportunities for working together to expand local purchasing. Local purchasing is hindered if foodservice managers and their client institutions do not hold shared local sourcing goals. If a given foodservice management company lacks the purchasing flexibility to attain local food procurement goals, its client may want to consider choosing a different foodservice management company that clearly prioritizes using local produce in their contract, or exploring the pros and cons of transitioning to a self-operated cafeteria.

Consider structural changes in dining services that support using local produce.

Having greater produce storage space can increase a foodservice buyers' capacity to utilize seasonal produce and make bulk purchases. Likewise, having more centralized kitchen and dining facilities can increase the efficiency of processing fresh produce, can result in budgetary savings that can be invested in local produce, and can increase the feasibility and affordability of getting produce delivered from local farms.

Promote local farm suppliers to customers.

Point-of-sale marketing materials that promote local farms can increase sales by capitalizing on the growing customer demand for local produce. Buyers can seek out distributors, farms, and organizations that can provide ready-to-use materials that can be used in the store to promote local produce and tell the farm story to customers. Demand from end-users is a critical driver of local sourcing, and communicating to and educating those end-users helps to build momentum for local purchasing that can institutionalize local purchasing patterns, making them more resistant to changes in management or personnel. In addition, the enthusiasm of informed customers can help drive buyers to continue to expand their local purchasing.

CONCLUSION

Our interviews with farmers, buyers, distributors, and processors revealed a marketplace for locally grown produce that is both promising and fragile. It corroborated our understanding that demand from large buyers is increasing and represents a significant outlet for Massachusetts-grown produce. There was widespread agreement among farmers and buyers that the strong “buy local” campaign in western Massachusetts has expanded large-scale wholesale market opportunities for local produce. At the same time, local farms continue to be at a disadvantage when compared to the large industrialized farms that supply the bulk of these markets. In many cases, the systems and relationships on which local produce sales are built remain dependent on particular individuals or businesses, and are not yet institutionalized in public policy or the private sector. In addition, prices have remained stagnant amidst increasing costs, threatening the continued profitability of these markets for local farms. Labor costs in particular have risen rapidly on local wholesale farms due to minimum wage increases and new regulatory and buyer requirements such as those for food safety, favoring large and heavily mechanized farms over smaller and more diversified farms. The small profit margins for

local farms in these markets limit both farmer income and worker advancement, and none of the farmers we spoke with expressed confidence that their businesses could weather additional cost increases or lower prices.

Total produce sales increased by 36% for Pioneer Valley farms from 2007 to 2012, according to census data, during which time total farm product sales declined by 5%. This suggests that wholesale produce markets continue to be a key growth area for local farms and represent new market opportunities. Until buyer demand for locally grown produce becomes more institutionalized and the strong consumer preference for local produce translates into widespread pricing or marketing advantages for local farms, Massachusetts’ farmers remain vulnerable players in a global marketplace.

In this environment, greater financial and technical support is crucial in enabling farms to strategically evaluate and develop new markets as well as meet new buyer requirements. Support for distributors that primarily serve local farms can also help ensure that these key players in large-scale local produce markets are able to weather transitions and achieve the best prices possible for local products. A strong “buy local” effort is also

needed to continue to build demand for local produce among a wider audience of consumers and large buyers. At the same time, in order to achieve true long-term sustainability and expansion of local wholesale produce markets, investment in the recommendations outlined in this report must be matched by efforts to shift federal agricultural policy in ways that support local food systems and family-scale farms.



Local produce being processed at the Western Massachusetts Food Processing Center in Greenfield

