Scaling-up Connections between Regional Ohio Specialty Crop Producers and Local Markets: Distribution as the Missing Link

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Executive Summary

Many local food systems advocates focus on increasing the number of farmers selling their products directly to consumers, but this type of direct marketing is only one strategy for increasing the consumption of local foods. Almost 90% of all food for home consumption is acquired from retail venues (such as grocery stores) (USDA, ERS, 2010), suggesting an important strategy to increase the consumption of Ohio-grown foods by Ohioans is to focus on increasing the flow of these foods through the state's distribution and retail market systems. This research is the first attempt at inventorying the existing produce retail-distribution structure to identify opportunities, barriers, and the development needs associated with increasing the flow of Ohio-grown fruits and vegetables to existing retailers and ultimately Ohio consumers. This research draws on our review of previous food system studies, as well as interviews we conducted with Ohio retailers, and a survey of produce distributors in the state. The goal of this work is to generate useful information that can identify next steps in scaling-up the connections between Ohio specialty crop producers and Ohio retail markets.

The following are highlights from our research:

Retailer Interviews: Interviews with retailers revealed the different ways stores procure fresh fruits and vegetables in Ohio and the different types of social and economic relationships retailers have with growers and distributors. In sum, retailer interviews revealed:

- As retailers grow in size, distribution becomes increasingly formalized and vertically integrated. As a result, the opportunities for small and medium-sized Ohio farmers to service large-scale retailers are reduced.
- The regional and national chains we interviewed have longstanding direct relationships with larger farms, grower-shippers, and co-ops, able to supply the quantity and quality products desired.
- Among the retailers we interviewed who were committed to purchasing from local growers and supporting the local community, the challenge of purchasing from multiple farmers and managing too many vendor accounts is a potential limitation and frustration.
- Retailers emphasized the desire to have a relationship and know the farmers they are purchasing from, but have a consistent and efficient ordering and distribution system.
- While food safety is a concern for all retailers, the larger retailers seek formalized certifications, especially those purchasing from large-scale farmers or companies not in close proximity. The greater physical and social distance from the actual producers creates the need for extra security, often achieved via third-party certification.
- Many of the retailers interviewed are slowly embracing the trend of identity preservation of local produce by not only marketing "local" but also creating signage that identifies the specific farm on which the food was grown.

- The regional mid-size chains and independent grocery stores interviewed report a willingness to purchase from local small and medium-sized farms, and tend to increase their local fruit and vegetable inventory when common aggregation points are available, such as an auction house or a distributor who carries local fresh produce.
- The produce buyers and store managers of the regional mid-size chains and independent stores tend to have more autonomy and flexibility in making purchasing decisions.
- Interviews demonstrated that the retailers with a strong commitment to local produce are more likely to develop social relationships with growers and develop distribution streams that increase the overall efficiency and adaptability of the fresh fruit and vegetable supply chain.
- The regional mid-size chains and independent retailers interviewed expressed an interest in working with farmers to develop a produce list and planting schedule.
- Retailer, distributor, farmer networking and planning sessions could create new opportunities for Ohio's small and medium-sized fresh fruit and vegetable farmers.

Surveys of Distributors: A mail survey was sent to Ohio distributors. The objectives of the survey were to better understand the Ohio fruit and vegetable distribution industry and identify distribution patterns, practices, and opportunities.

- Thirty-nine fruit and vegetable distributors responded to the survey. These distributors represent 219 distribution facilities in Ohio and employ 753 full-time and 37,620 part-time workers.
- Many of the distributor respondents are distributing more than just fruits and vegetables, often carrying dairy and eggs.
- Almost all respondents are supplying produce to supermarkets that focus on general line food, followed by convenience or corner stores and greenmarket or specialty produce stores. Only about a quarter of surveyed distributors are supplying discount supermarkets and supercenters, superstores, and warehouse clubs, which follows the dominant model where these types of stores rely on their own distribution capacity.
- The majority of all surveyed distributors agreed that their transportation costs are lowered by using Ohio produce.
- All respondents reported similar requirements for food safety, traceability, and inventory management.
- Many of the surveyed distributors are interested in partnering with growers and agencies to develop infrastructure that would increase the flow of Ohio-grown produce.
- Creating relationships of trust between distributors and producers is key to expanding market opportunities for Ohio-grown fruits and vegetables.

Based on our survey data, it was possible to classify distributors based on their size (total sales) to identify differences among different sized distributors and identify whether opportunities for Ohio farmers might vary by the size of the distributor. This study found the barriers to market access differ depending on distributor size:

- Flows of produce:
  - ► Large and mid-sized distributors primarily rely on grower-shippers. Small and very small distributors rely mostly on farmers for sourcing products.
  - ► Small and very small distributors also rely on other wholesalers for sourcing.
  - ► As a percentage of overall produce purchasing, purchasing of Ohio produce decreases as the size of distributor increases. However, larger distributors purchase a higher volume of Ohio produce overall.
  - ► Sourcing from outside of the region during the height of the Ohio growing season is more frequent among larger distributors compared to small distributors.
  - ► Smaller distributors work more with single, independently owned stores.
  - ► The service area widens as size of distributor increases.

- Large distributors more frequently reported having uniform standards, such as contracts, packaging, and PLU coding compared to other distributors.
- All large distributors surveyed require third-party food safety certification. Certification requirements were more variable with other sized distributors.
- To a small degree, desire to source produce from a central aggregation center declined with firm size, although the majority of all distributors, no matter what type, were interested.
- Motivations for purchasing Ohio produce varied by the size of distributor.
  - ► Large distributors reported a desire to purchase Ohio because they feel their customers care that produce is raised in Ohio. Yet these same distributors were less likely themselves to believe Ohio produce is inherently a better product.
  - ► The rest of distributors believe that Ohio produce is fresher in season. Furthermore, they are more committed to purchasing Ohio produce.
- Distributors indicated they do not use farmer directories to source new products.
- Opportunities for Ohio farmers to link with distributors varied by distributor size.
  - ► Word-of-mouth and referrals are key points of entry for farmers to connect with medium and small size distributors.
  - ► All distributors rely on farmers approaching them, but for large distributors this is less important as they tend to already have established relationships with large growers.
  - ► A third of the distributors in this survey have used Ohio MarketMaker, an online service that allows for wholesale purchasers to search for products.
- Very small and small distributors reported a preference for purchasing directly from farmers compared to other procurement methods.
- Medium-sized farmers are most willing to work collaboratively with farmers on logistics and planning. These distributors and the small distributors are more likely than the very small distributors to participate in educational sessions with growers, most likely because the time/labor commitment costs are too great for such small operations.
- Large distributors relied less on personal relationships with farmers for sourcing produce and were least interested in developing new relationships with farmers. This group was also the least interested in working with organizations and agencies to develop new relationships and infrastructure.

Conclusions: Based on these research findings, we offer two main conclusions regarding the potential of Scaling-up Connections between Regional Ohio Specialty Crop Producers and Local Markets:

1. **A population of established small and mid-sized distributors exists who are motivated to buy from Ohio farmers and have the capacity to increase the volume of Ohio-grown fruits and vegetables they carry.**
   a. Our distributor survey found of respondents, small and mid-sized distributors currently carry the majority of Ohio-grown produce and have expressed the most interest in building new relationships with Ohio farmers.
   b. Distributors, farmers, and retailers can create strategic relationships by utilizing existing infrastructure.
      i. Small and medium-sized farmers are searching for market access, distributors are looking for market viability, and the mid-level store is looking for competitiveness.

ii. The strength of distributors is their ability to source from multiple producers and multiple regions, ensuring an even supply of flow for retailers. Creating a regional supply system that includes global commodities when needed is a more resilient system.

iii. Value chains are able to work with differentiated products, are flexible, and are able to implement innovative production systems that can meet market demand.

iv. Avoiding duplication of services, utilizing existing infrastructure, and creating economies of scale (not available to direct marketers) and economies of scope lead to efficiencies that increase profitability all along the chain.

v. These varying groups both cooperate and compete to achieve economies of scale and marketplace advantages.

2. **The lack of supply of Ohio-grown produce and aggregation are the primary barriers to increasing the flow of Ohio produce to retail outlets.**

   a. Retailers want to purchase Ohio-grown fruits and vegetables, but do not want to purchase from a large number of growers. By working with distributors small and medium farmers can find market access points into the retail sector.

Recommendations: Based on our research and review of previous studies, we are able to offer the following recommendations for increasing the availability of locally grown produce through Ohio distribution channels.

1. In local and regional food system work, proponents may be inclined to propose the development of new intermediaries and alternatives. Our review of previous studies and our own research indicate **there is room to develop and grow within the current system**. Working with existing actors and infrastructure can achieve economies of scope and scale, increase efficiencies, and save resources that would otherwise be spent on developing alternatives. Existing infrastructure can include existing facilities, educational curriculum already available, and distributors already equipped to move produce.

   a. Our study identified distributors are willing to collaborate with agencies and organizations to develop needed aggregation and infrastructure.

   b. Growers can take advantage of existing Ohio-based Retail Ready Curriculum. This short course includes modules on invoicing, pricing, marketing, packaging, supply, labeling, delivery, insurance, quality assurance (temperature control, GAPS, storage, etc.), certification and audits, communication, and satisfaction guarantee.

   c. Develop education and training for growers that includes distributors. The incentive for distributors is that they can groom growers who will ease the procuring of produce for them. To an extent, these types of sessions are already taking place at produce auction houses.

   d. Recognize that facilities may already exist for aggregation and seek ways to work with these existing entities.

      i. Many localities have some type of produce terminal that has the physical capacity to aggregate, cool, and hold a large amount of local produce that is conveniently located near many types of transportation.

      ii. Ohio is home to several produce auctions that are already collection points for produce. With minimal investments in cooling, these sites could expand their aggregation functions.

2. **Focus on facilitating relationship building up and downstream from the distributor. Business relationships based on trust and value-added features can benefit farmers, distributors, and retailers.**

   a. Explore innovative co-op development and business structures that include the entire value chain (or at least multiple parts). Co-ops have had a long history of success and failure. The opportunity for creating successful food co-ops is to focus on the broader food system. An example in Wayne County, Ohio, is Local Roots that has consumer, producer, distributor, and retailer members.

i. Co-ops or alterative business structures could be centered around an identity or a message that unites partners, e.g., what it means to be a farmer, what it means to be a community-scale distributor, etc. (Gray and Stevenson, 2008).

ii. Co-ops or alternative business structures could include value-added strategies in the food system, aggregation strategies, mechanisms for season extension, education and training, and co-marketing.

iii. Service providers, educators, and agency officials can facilitate these relationships and business models upfront to defray some of the initial costs to individual participants.

3. **Agencies and organizations can facilitate growth in this sector by directing resources into developing farmer-distributor-retailer relationships.**

   a. The opportunities for growing this industry are not in the logistics or flow itself, but are in the business practices that focus on trust and relationships.

   b. Retailer, distributor, farmer networking and planning sessions could create new opportunities for Ohio's small and medium-sized fresh fruit and vegetable farmers.

   c. Surveys of distributors reveal directories and mapping are useful but only to a point, leveraging motivations for purchasing Ohio fruits and vegetables and the willingness to make face-to-face relationships are the key foundations for expansion and growth.

   d. The fruit and vegetable sector includes a wide range of actors. Bigger retailers and growers have established relationships and business practices that are already solidified. It is more efficient to first focus on the segments of the fruit and vegetable industry that are open and interested in developing strategic relationships but may not have the resources to do so.

4. In Ohio interviews with regional mid-size chains and independent stores revealed these outlets are more willing to purchase from local small and medium-sized farms, and tend to increase their local fruit and vegetable inventory when common aggregation points are available, such as an auction house or a distributor who carries local fresh produce. **Creating and expanding fruit and vegetable aggregation centers can expand market opportunities**.

   a. In Ohio regional mid-size chains and independent stores expressed an interest in working with farmers to develop a produce list and planting schedule.

   b. Aggregation centers that provide cooling facilities can increase the quality, quantity, and flow of Ohio fruits and vegetables for retail markets. Two potential opportunities were discussed during our interviews—introducing cooling facilities at produce auctions or using underutilized cooling facilities at locations such as the Cleveland Produce Terminal.

   c. Innovative aggregation and distribution systems such as the L.A. Farmers Market Hub (appendix D) and new generation co-ops offer new models for Ohio.

5. **Focus greater attention on capacity-building efforts for smaller growers and distributors that have the potential for participating in new producer-distributor relationships, but lack the time and capital to participate**. While mid-size distributors may be best positioned to move more Ohio produce through existing infrastructure in the short-term, there are also longer term growth opportunities associated with working with smaller or new distributors who are already committed to local products and who could potentially grow and increase their sales volume. The lack of aggregation points might actually be hurting their businesses, as they have less capital and fewer resources to source products versus some of the middle-sized distributors who may have long-standing networks and more established grower relationships.

   a. Beyond facilitating relationship building, a focus could be on facilitating aggregation. If growers are not able to scale-up because of time or capital constraints, then it is possible to provide technical assistance and infrastructure so that growers, together, can look big and "jump" scales, reaching larger markets and moving more produce.

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1.0 Introduction

Demand for locally grown food is growing in Ohio, and 64% of Ohioans indicate state and local governments should be working to develop local food systems (Bean Smith and Sharp, 2008). Specialty crops (fruits and vegetables) are a key subsector to focus on to further develop Ohio's food system in response to increased consumer interest. Nationally, retailers are offering more fruit and vegetable items in their stores and per capita fruit consumption is projected to increase by 24–27% by 2020 (Lin, 2004). Ohioans consume an estimated 4.65 billion pounds of vegetables and 3.08 billion pounds of fruit annually, yet an estimation by Brad Masi[1] for Northeast Ohio suggests that 1% of these fruits and vegetables are grown by Ohio farmers. Given current fruit and vegetable production levels, Ohio farmers could be satisfying over 26% of Ohioans' vegetable needs and 5% of their fruit needs.

While growing consumer demand and enthusiasm for locally produced foods represent an opportunity, few farmers have the relationship with traditional fruit and vegetable distribution networks that would allow them to increase production and successfully market it to consumers. In Ohio, we currently have limited understanding of the specialty crop distribution system and how local farmers can link into the system. Addressing this gap is a priority of the 2007–2010 Ohio Food Policy Council, Food System Assessment Task Force (see box 1), and this study provides a detailed report of the system of distributing fruits and vegetables to retail outlets in Ohio. This report also identifies the potential for increasing the volume of Ohio-grown fruits and vegetables distributed to retail outlets. This research was conducted by Ohio State University's Center for Farmland Policy Innovation (in the Department of Agricultural, Environmental, and Development Economics) and the College of Food, Agricultural, and Environmental Science's Social Responsibility Initiative. The research was supported by funding from an Ohio Department of Agriculture's Specialty Crop Block Grant.

Box 1. Food System Assessment Task Force

This task force of the Ohio Food Policy Council was created to address the following directive of the Governor's Executive Order: "Collect and analyze information on the production and processing of foods in Ohio, as well as the patterns of food consumption."

Moreover, as described in the 2009 Annual Report of the Ohio Food Policy Council, this task force is to "identify how much Ohio food is produced, processed, distributed, and marketed in the state. How does this compare to the potential in these areas? Identify the barriers—what limits access to: farming, distribution, processing, local and statewide markets and institutions? Identify and assess cost barriers; What policy barriers exist and what types of policies can advance access and development of local markets?"

2.0 Project Purpose and Scope

Developing a local food system is complex. To substantially increase the availability and accessibility of locally grown food, attention to the mainstream distribution and retail market system is necessary given the fact that almost 90% of all food for home consumption is acquired from retail markets (USDA ERS, 2010). Many advocates of local food systems focus on increasing the number of farmers marketing their product directly to consumers, and while those efforts are commendable, direct marketing is only one strategy for increasing the consumption of local foods. Direct marketing also has limitations, including the following: many consumers unable to conveniently buy directly from farmers; increased demands on farmers who must both produce and market their product; and possible inefficiencies, such as high transportation costs and energy consumption associated with a diffused distribution network (Mariola, 2008; Pirog, Van Pelt, Enshayan, & Cook, 2001).

[1]http://www.neofoodweb.org/about

Previous Ohio research has also found the majority of retail food buyers in Ohio (83% of restaurants and 90% of retail outlets) actually would prefer to purchase from a food distributor rather than directly from a farmer (Inwood, Sharp, Moore, & Stinner, 2009). Such a preference is understandable as retailers often have long-existing relationships with distributors and prefer the convenience and reliability of working with a few distributors over a large number of farmers.

In this report, we focus primarily on wholesale distributors (which we will simply refer to as "distributors"), rather than grower-shippers or retailers who self-distribute.[2] This research is the first attempt in Ohio to inventory the existing produce retail-distribution structure. Our purpose is to identify opportunities, barriers, or development needs associated with linking Ohio-grown fruit and vegetables to the existing system of fruit and vegetable distribution to retailers in Ohio. While produce distributors can simultaneously supply restaurants, institutions, and retail markets, this study focuses on the links between distributors and retail markets. For a study examining the relationship between distributors and restaurants please see Inwood et al. (2003) and Inwood et al. (2009).

2.1 Potential Impact

Better meeting the demand for local produce will benefit Ohio's communities and economy in the following ways:

By keeping and circulating more dollars locally, Ohio's economy can capture more money that would otherwise leave the state, thereby translating into increased jobs, income, and tax revenue. A study for the Detroit metro area suggests that with a 10% increase of consumption of locally grown food, the increased regional output would be roughly $3.5 billion. This includes the creation of 36,000 jobs and $900 million more in earnings, and $155 million more in business taxes (Schuman, 2007). In Ohio, fruit and vegetable farmers sold over $180 million worth of produce in 2007. Keeping more of these dollars locally would multiply across Ohio communities.

With 4,767 farmers in Ohio already producing fruits and vegetables, better understanding the opportunities in distribution to Ohio retail markets can lead to increased production on existing farms, as well as opportunities for new farms or existing farms to consider this market. Thus farm income can be enhanced and new farm opportunities developed.

For the estimated 170 firms in Ohio focused solely on fruit and vegetable distribution, incorporating Ohio-grown fruits and vegetables into their inventory can help increase their markets. Research has demonstrated a high demand for Ohio-grown products by Ohio consumers. For small and mid-size distributors searching for ways to differentiate themselves, gaining a foothold in the Ohio-grown produce market can translate into increased and diversified markets.

Ohioans will have increased access to Ohio-grown fruits and vegetables. For Ohioans who cannot regularly access farmers markets, opportunities to purchase Ohio fruits and vegetables will increase if they are incorporated into more storefronts.

3.0 Previous Studies

3.1 What Are Distributors?

Distributors are intermediaries who arrange for the movement and transportation of food products. Produce generally moves through one of three primary marketing channels—grower-shippers, wholesalers, and retailers (Perrett, 2007) (figure 1). Grower-shippers distribute their own (and sometimes other farmers') produce to retailers, wholesalers, food service companies, and self-distributing retailers (Perrett, 2007). When wholesalers take title of the produce they are called "merchant wholesalers." When they **do not** take title of the produce

[2]Although some of the largest food retailers have their own distribution system, most food retail outlets still rely on independent intermediaries (which include distributors) when sourcing their fresh produce. Also, distributors often source from farms of varying sizes and deliver produce throughout the season, in contrast to a grower shipper.

they are referred to as "brokers." See **appendix A** for expanded definitions. A study conducted by Kaufman et al. (2000) found that 50% of produce was being moved by wholesalers, while the other 50% was going right from grower-shippers to retailers. More and more, produce is shipped directly from grower-shippers to mega-retailers that self-distribute. The overall trend in distribution has been for consolidation and vertical integration in the retail food sector, where retailers create their own distribution arm to serve their stores. Despite this trend retailers continue to purchase 25% of their produce through intermediaries, and smaller stores rely more on intermediaries than larger stores do (Perosio, McLaughlin, Cuellar, & Park, 2001).

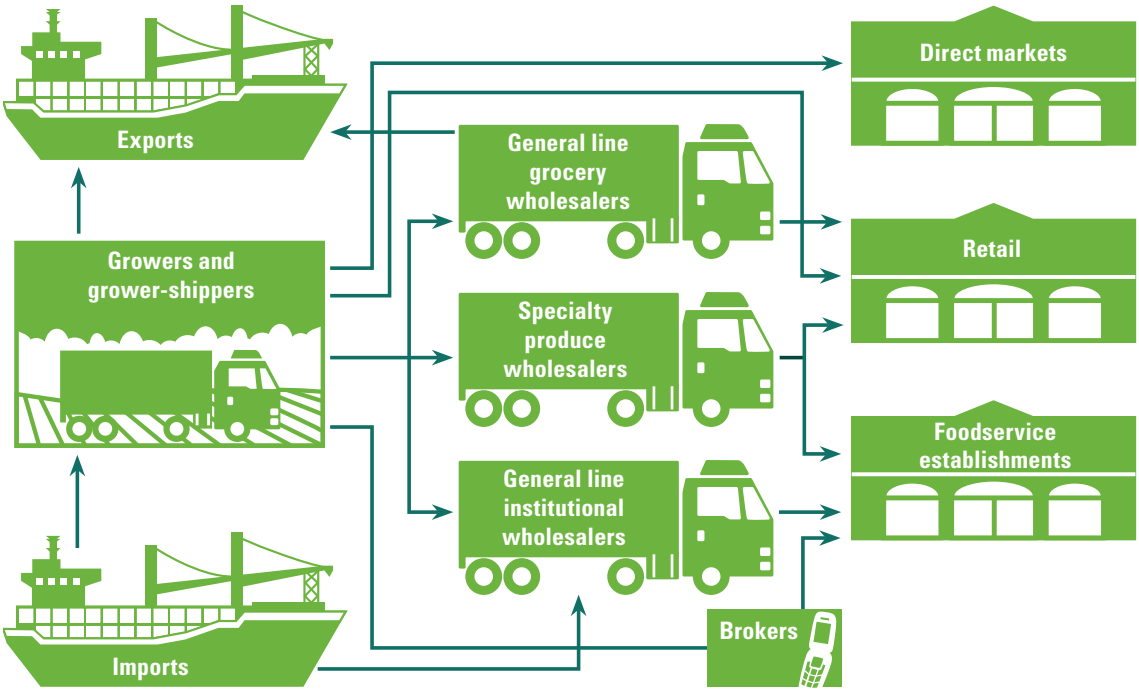

Figure 1. Produce distribution (adapted from Kaufman et al. 2000).

Traditionally distributors and wholesalers have not been involved in food processing, but more recently some engage in minimal processing, e.g., fresh-cut and pre-packaged food items. They also provide a range of services to downstream parties, such as shipping, distribution, warehousing, wholesaling, packing, re-packing, and exports. Services provided upstream include, but are not limited to, marketing assistance, quality procedures, legal relationships, terms of payment, financing, and communication. A variety of purchasing strategies are used by retailers to procure fresh produce. **Appendix B** provides a brief overview of common terms describing purchasing relationships.

3.2 Opportunities and Challenges to Increasing the Availability of Ohio Produce in Ohio Retail Outlets

To understand the challenges associated with linking more Ohio produce to Ohio retail outlets via the distribution system, it is necessary to examine the challenges different groups of farmers, distributors, and retailers face. Compared to 30 years ago fewer firms (and farms) are producing, processing, distributing, and retailing the majority of food. The end result is that fewer and larger companies have come to dominate each state of the food system. A detailed description of current conditions and trends in retailing, distribution, and production can be found in **appendix C**. In this section we briefly describe some of the challenges and opportunities for increasing the supply of locally grown produce that exist among different types of retailers, distributors, and farmers.

Research conducted by University of Wisconsin (UW) Extension's Agricultural Innovation Center & UW Center for Integrated Agricultural Systems examined eleven in-depth case studies of food entrepreneurs across the country to identify bottlenecks (and possible solutions) to moving significant amounts of local and regional foods into mainstream markets (Day-Farnsworth, McCown, Miller, & Pfeiffer, 2009). Their main findings include:

- Issues associated with controlling for product quality and consistency
- Issues associated with local seasonality
- Need to match supply and demand
- Need to track food origins that provide product differentiation
- Lack of supply chain infrastructure in aggregation and processing
- Lack of capital investment for supply chain infrastructure
- Lack of appropriate technical assistance from service providers
- Need for information flow and transparency in all parts of the food chain

Additional research conducted by Hanson & Rada (1992) (working in the mid-Atlantic states) and Eastwood et al. (2004) (working in southeastern states) found that poor packing and grading, inconsistent quality of produce, inconsistent volumes over the season, unresponsive growers, and unreliable deliveries were the main problems that wholesale produce buyers had with purchasing local produce.

Many of the issues associated with increasing the volume of locally grown fruits and vegetables in retail markets are associated with the size of the grower, distributor, and retailer.

Among retailers consolidation in the retail sector has led to the increasing power of a small number of very large retailers, many of whom have centralized and streamlined their purchasing systems and integrated distribution into their operations to take advantage of economies of scale. As self-distributors these companies manage their own fleet of trucks, warehouses, buying offices, and some contract with producers. The scale of these retailers often creates little room for the flexible purchasing practices needed for incorporating more locally grown fruit and vegetable inventory. Small and medium retailers who still rely on distributors as intermediaries and are often able to purchase from a wider variety of suppliers offer more flexibility in their purchasing systems.

Among producers it is difficult for smaller-scale operations to break into larger grocery stores due to their procurement systems, price point, volume requirements, and need for year-round supply (Perrett, 2007). Retailers and suppliers have become increasingly interdependent. Buyers and suppliers co-manage store inventory with electronic surveillance of purchases via electronic data interchange (EDI), efficient consumer response (ECR), and continuous replenishment programs (CRP). Many larger growers have successfully been able to adapt to these often costly systems. However, the lack of infrastructure to support the aggregation, inventory management, processing, and distribution of small and medium farm products has been a persistent challenge.

The relationship between farm size, distribution channel, and market outlet. The role farm scale has in marketing outlets is presented in figure 2, a simplified illustration that shows relationships across distribution channels between growers (top row) and the type and size of the outlet and the activities associated with the outlet (remaining rows). The figure illustrates that as production volume increases, so do marketing opportunities. Moreover, it suggests that only larger growers can plug into the wholesale strategies. **Taken a step further, this figure would seem to suggest that if small and mid-size growers banded together, they may appear to be larger and, therefore, be able to "jump" scales to move their produce locally**.

Grower Production	Very Small Volumes	Small Volumes	Medium Volumes	Large Volumes
Outlet Activity	Farmers Market Direct Selling Private	Farmers Market Direct Selling Public/Private	Wholesalers Packers Distributors Public/Private	Wholesalers Packers Processors Public/Private
Outlet Type	Direct Outlets	Direct Outlets Small Retailers	Retailers Wholesalers	Wholesalers
Outlet Size	Very Small Volumes	Small Volumes	Medium Volumes	Large Volumes

Figure 2. Grower distribution and retail strategies (adapted from Eastwood et al. 2004).

Key Challenges

The challenges for moving produce between small and mid-size fruit and vegetable growers and mainstream distributors are:

1. The difficulty in addressing larger grocery stores' procurement systems, price points, volume requirements, and need for year-round supply.
2. A general lack of infrastructure to support small and medium farm products through aggregation, processing, and distribution poses barriers to increasing Ohioans' consumption of Ohio fresh fruit and vegetables.
3. The perception, or reality, that growers are not "retail ready,"[3] and therefore are ill-prepared for grower-distributor relationships.

Key Opportunities

In Ohio, larger produce growers are already networked into mainstream distribution channels to retail markets. Significant opportunities exist for small and medium volume growers to aggregate produce and access medium and larger sized markets. Therefore, much of this report focuses on understanding the opportunities for creating new relationships between small and medium-sized growers and small and medium retailers.

3.3 Examples of Creating Opportunities

A recent movement supported by research and outreach organizations,[4] called "Agriculture of the Middle," focuses not on creating brand new or alternative systems, but on existing actors in the food system. The theory is that the firms (and farms) being squeezed by trends in the market can, together, develop value-chains that benefit one another while keeping their business viable.

In local food system development, direct marketing initiatives have been one strategy for small and mid-size famers to service markets that larger farms do not. However, many small and mid-size farms may produce too much for direct markets while generating insufficient production to effectively compete in the coordinated and corporate-dominated commodity markets (Lyson, Stevenson, & Welsh, 2008).

A new strategy for aggregating, processing, and distributing products produced by small and medium farms is to employ value chains that *"are long-term networks of partnering business enterprises working together to*

[3]Retail Ready is a new educational program to help producers prepare to sell to restaurants, grocery stores, and other wholesale buyers (http://directmarketing.osu.edu/content/retailready.htm).

[4]http://www.agofthemiddle.org/.

maximize value for the partners and end consumers" (Stevenson & Pirog, 2008, p. 120). The defining feature of agriculturally based mid-level value chains is that they operate at a regional level that includes mid-size regional farmers and mid-size independent regionally based processors and distributors who both cooperate and compete to achieve economies of scale and marketplace advantages through differentiated products.

Farmers are looking for market access. Distributors are looking for market viability. The mid-level store is looking for competitiveness. Value chains work with differentiated products without mass commodification that retain the ability to be flexible to implement innovative production systems and still deliver the capacity to meet market demand. An advantage to functional, long-term relationships between value chain actors is the benefits of vertical integration with the benefits of external and varied ownership.

Researchers Bloom and Hinrichs (2010) articulate the four qualities that define the value-chain:

1. Product differentiation and value-added to create a competitive advantage
2. Commitment to the welfare of all participants where the goal is economic viability for all partners
3. Partnerships to increase overall efficiency and adaptability (including information sharing)
4. Trust and shared governance that leads to a shared sense of procedural justice

Often a response to a system that does not function in favor of local or regional food distribution is to develop alternative approaches. A report from the USDA Agricultural Marketing Service examined distribution systems that link small scale producers to consumers, focusing around value chains (Diamond, Barham, & Tropp, 2009). We profile some of their cases in addition to others in **appendix D** to illustrate alternative types of produce distributors delivering to retail markets. These distribution systems attempt to address many of the issues related to scale, creating more opportunities for small and medium farmers through aggregation.[5] **Some of the common themes in these case studies are development of innovative infrastructure; a focus on value-based relationships that rely on trust; more equitable power-sharing in the commodity chain; and value-added branding and marketing**.

4.0 Distributors from the Ohio Retailer's Perspective

To understand the relationship retailers have with fresh fruit and vegetable distributors in Ohio we conducted in-depth interviews with six retail outlets. Retail respondents represented a variety of store outlets including a small co-op, independent stores, regional chains, and large national chains. At each retail outlet, semi-structured interviews were conducted with either the produce buyer or store manager. Interview questions were designed to understand fruit and vegetable distribution from the end user; understand different models of distribution and relationships between the retailers, distributors, and Ohio farmers; and identify and characterize current local food distribution streams. Finally, these interviews helped to inform later survey work with distributors.

The interviews were analyzed using a value-chain analysis framework (Stevenson and Pirog, 2008; Bloom and Hinrichs, 2010) focusing on:

1. Supply chain economics
2. Social relationships of participants along the supply chain
3. Opportunities for Ohio farmers and distributors in the retail fresh fruit and vegetable sector

4.1 Small Co-op

Interviews with a small co-op revealed one of the most complex purchasing systems of our sample. Purchasing from a range of in- and out-of-state growers, the co-op procured fresh fruits and vegetables through a number of different mid- to large-sized distributors and directly from local farmers (see figure 3). The store prioritized clear fruit and vegetable purchasing guidelines: 1st choice—organic and local; 2nd choice—chemical-free and local; and 3rd choice—organic non-local. The co-op does not require any type of certification to be on record. They define local as Ohio-grown.

[5]We note that not all alternative systems distribute the volume of produce that more traditional produce distribution systems currently do.

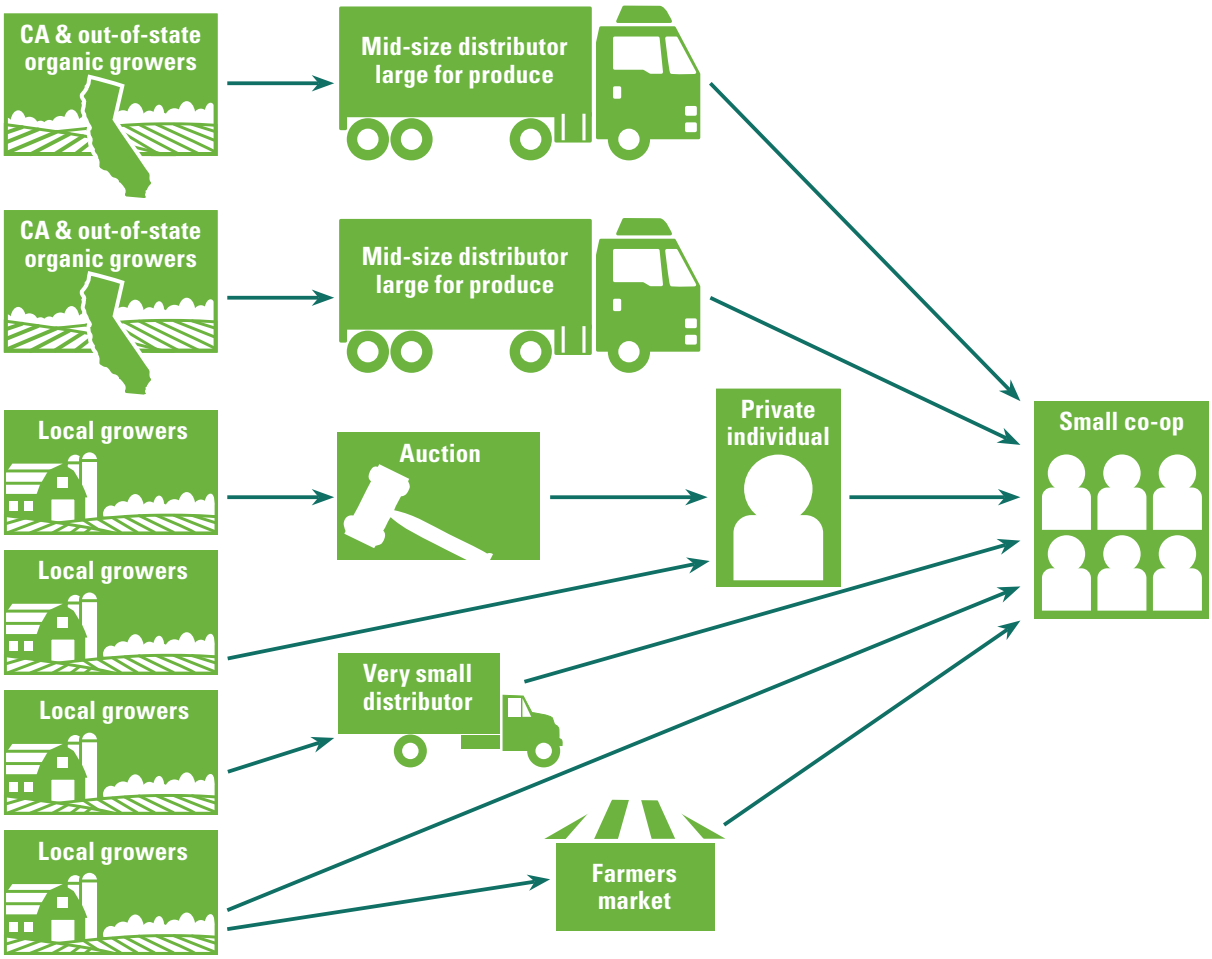

Figure 3. Small co-op.

The co-op works with two mid-size traditional distributors year-round that provide California-grown produce. The two distributors maintain different but complementary inventory and delivery schedules, and are able to offer predictability, price, and availability.

To source Ohio-grown produce, the co-op works with a variety of small distributors and independent farmers. The store has a long-term relationship with three farmers, who grow for the co-op on a seasonal basis. One farmer produces spring crops for the co-op, the other produces fall crops, and one delivers a variety of crops throughout the year. The farmers decide what varieties of fruits and vegetables to grow and set their own prices; two of the three are certified organic, one is chemical-free. The farmers will call the co-op when the crop is in and they are ready to deliver. One of the farmers also distributes California organic produce. On Saturday afternoons, the store buyer will purchase produce that farmers were not able to sell at the local farmer's market.

The co-op also purchases Ohio-grown produce and other specialty crops (plants, honey, etc.) from two very small independent distributors. One distributor will call the co-op each week for an order before purchasing produce at one of the produce auction houses. The other distributor also owns his own truck and purchases directly from farmers, specializing in vegetables, greenhouse-nursery crops, honey, and some local grains.

The co-op is generally able to source all of the locally grown produce it can sell, and often has to turn away farmers. When farmers do call and they need the product, they will purchase the produce through a spot market. It often takes longer to negotiate a price when purchasing this way.

The co-op's produce buyer likes to work with local farmers because the product is fresher, their customers prefer to purchase local produce, the quality is more predictable, and they have a closer relationship to the farmer.

However, the buyer has to negotiate the overabundance of Ohio produce during the height of the season and lack of supply throughout the rest of the year. While dedicated to purchasing from local farmers, the co-op noted it would be easier to work with growers if they could share pricing, planning, and delivery logistics with retailers upfront as larger more conventional distributors do.

The co-op has a strong commitment to serving both its members, and the farmers and small distributors they directly work with. The co-op's use of relationship marketing (marking produce as organic, local, displaying farm names, etc.) enables co-op members to purchase produce that most closely aligns with their priorities while developing a stronger connection to their food. Transparency characterizes the co-op's entire food supply chain from grower distributor relationships to the shared ownership and community governance structure members participate in. This transparency allows the co-op to clearly define "local" and purchasing priorities, thereby enabling growers and distributors to more easily identify entry points into the co-op's market. By prioritizing local as a purchasing goal and being committed to fair pricing, the co-op is a flexible yet reliable retail partner. Additionally, the co-op's willingness to work with growers to develop a planting schedule creates opportunities for small and medium-sized farmers and those willing to aggregate their produce.

4.2 Mid-Size Independent

This mid-size independent has one main store and three branch locations in the region. Each store carries slightly different products. We focused on the main, parent store, which purchases from in- and out-of-state growers, and procures fresh fruits and vegetables from mid- and small sized distributors, and directly from farmers (see figure 4). In the summer the store carries dozens of different Ohio products. The store does not emphasize local, but rather promotes "Ohio, and considers "local" to be Ohio-grown.

The store has cultivated relationships with ten farmers. Five of these relationships have been long-term, and five are more recent. Some of these farmers grow primarily for the store; the store does not maintain contracts with any of the growers. The store produce buyer also has a relationship with one of the local farmers markets to purchase excess product from farmers on Saturday afternoons. The produce buyer does not require farmers to hold insurance or be certified through any third-party organization. Due to the strong relationships they have with their farmers they trust the growers they work with in regards to food safety.

The produce buyer also purchases fresh produce through a mid-size and small distributor. The mid-size distributor sources produce from California, Arizona, and Florida; they provide 70% of the store's produce for 75% of the year. This distributor is headquartered in an adjacent state, and has a distribution facility in Ohio. When Ohio produce is in season, the produce buyer shifts the majority of their ordering to a small-scale distributor/processor who procures fruit and vegetables from mid- and larger-sized Ohio farms. The store also sources pre-cut fresh products from this distributor, which minimally processes Ohio-grown fresh fruits and vegetables. This Ohio-based small distributor was originally a farmer co-op and was sold to an individual with the understanding they would continue the commitment to Ohio farm products.

The produce buyer does not engage in buying forward purchasing practices. The distributors they work with call every morning to check in and report what they have available, anticipating what inventory the store might need and prompting the store buyer to order. Some of the farmers the store purchases directly from are more elusive about what they are growing and do not always maintain clear communication channels with the store. The distributors are able to provide the quantity the store needs and streamline their produce, performing quality checks ensuring high-quality, uniform produce. While the farmers the store purchases directly from don't provide this same service, the store buyer began purchasing local and directly from farmers because of the fresh product they could provide. The store buyer emphasized that their store customers expect fresh produce and "*local tomatoes simply taste better.*"

Figure 4. Mid-size independent.

For this retailer, carrying Ohio produce was a result of customer demand rather than an inherent dedication to local. However, over time the store has become an advocate for local foods, placing a high degree of trust in local grower practices, and actively differentiating inventory to communicate when produce is Ohio-grown, and clearly defines local to both their distributors and customers. The produce buyer emphasized the importance of working through a distributor, as they often share more information than growers do, are able to fill in supply gaps local farmers may not be able to meet, and take less time to order from. The local distributor also provides value-added services including their own line of fresh-cut vegetables (that can include seasonal Ohio-grown produce).

4.3 Mid-Size Regional Chain

This mid-size regional chain operates stores in towns and small cities. As a family-owned business embedded in the community there is a strong commitment to purchasing from local growers in the immediate community, the region, and around the state. Similar to other mid-size and independent stores they procure produce through a variety of distribution channels. The chain is large enough to operate a corporate warehouse as a central point for aggregation and distribution to each of the satellite stores. Produce is purchased through a variety of grower-shippers, and national and regional distributors. While one of the mid-size distributors they work with sources fresh fruits and vegetables from around the country and Ohio, they do not rely on this distributor for "local produce." The chain procures local produce by purchasing: (1) directly from farmers and (2) purchasing produce from one of the regional produce auction houses (see figure 5).

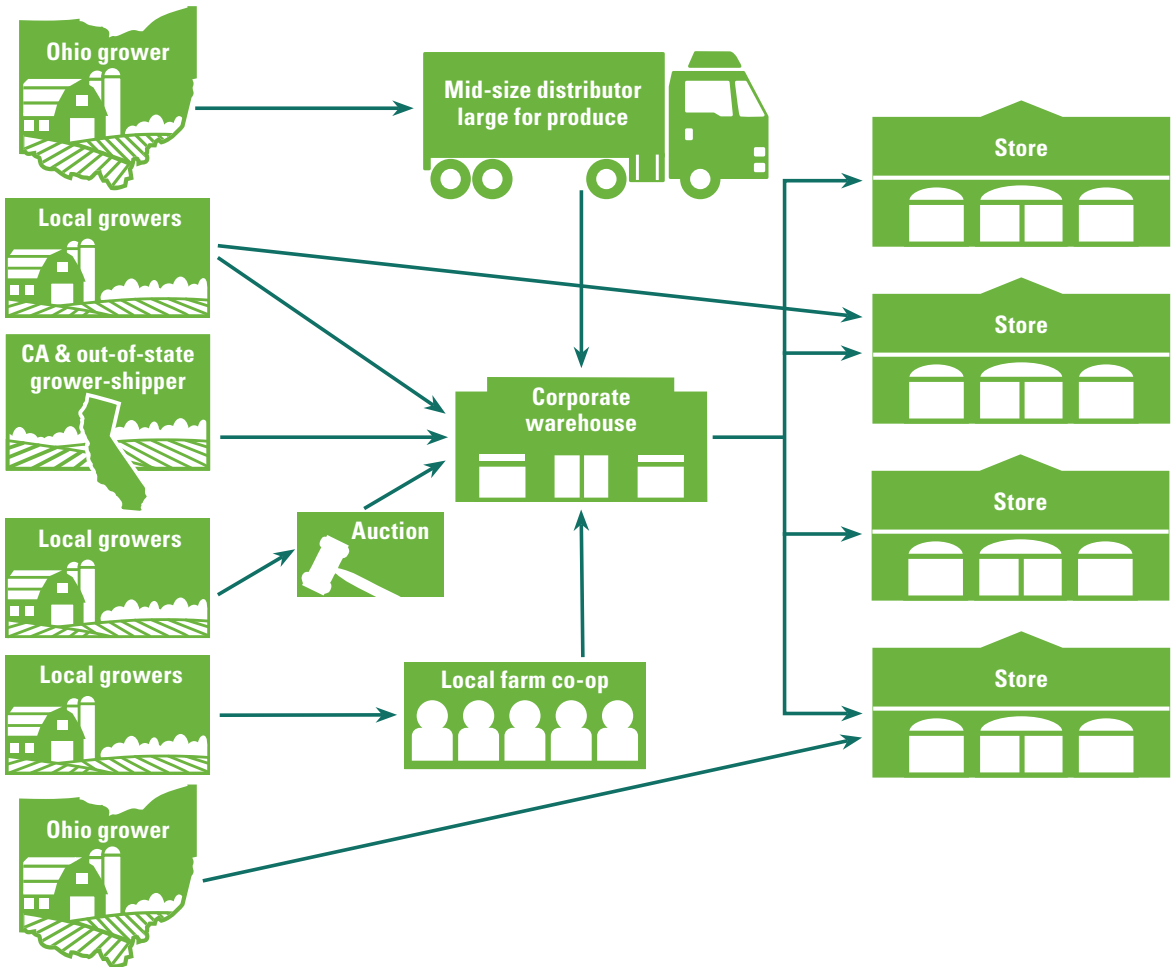

Figure 5. Mid-size regional chain.

When purchasing directly from farmers, the chain prefers to deal with medium and larger growers who understand their quality and quantity needs. These relationships have often been long-term, and some growers have expanded their operations to meet the store's needs. Growers deliver either to the corporate warehouse or individually to each store depending on location and availability. There are no formal contracts used, rather the relationship is built on trust and direct communication, and solidified over the years. The store has tried to move away from growers trying to sell small quantities of product to individual stores, and while they will still purchase varying amounts of product from different size farmers, they prefer to have the growers work through the main produce buyer.

The chain's produce buyer brings a semi-truck to the regional produce auction house to purchase fresh fruits and vegetables. Many of the farmers selling through the auction house are Amish. The produce buyer works with the auction house, participating in grower education meetings and presenting on topics such as packing, cleanliness, and harvesting. By attending the auction regularly the produce buyer knows individual growers and their product. The produce available through the auction is extremely high quality; however, there are no cooling facilities available at the auction house, nor is there any cooperative cooling facility the growers might utilize to take the field heat out of the product. While produce is still fresh, it is prone to faster decay and may not last as long on the supermarket shelf. The availability of cooling infrastructure would increase the quality and value of the produce at the auction.

The produce buyer will also order through some very small distributors and grower co-ops in the community. Despite the fact that these are less organized and not as efficient as larger distributors, the store continues to

support and work with the growers. Growers are not required to be inspected by third-party certifiers for food safety requirements or other measures. The store highlights and promotes locally grown fruits and vegetables with an aggressive signage campaign featuring photos of the farmers.

As a family-owned business, this mid-size regional chain is embedded in a customer base that has strong ties to the regional agricultural community. While always having a strong commitment to local, the chain has increased its local-foods promotional and marketing campaign to respond to increased customer demand. The chain is able to keep local food cost-effective by taking advantage of the economies of scale the regional produce auction house provides as an aggregation point. Utilizing the auction house allows the chain to purchase and move a greater volume of produce compared to other retailers interviewed. The produce buyer actively cultivates relationships with local farmers (small, medium, and large) and participates in grower workshops sponsored by the auction to create higher quality supply chains. The multiple entry points for local farmers demonstrates how retail outlets can potentially work with different sized growers through scale-appropriate distribution chains.

4.4 Large Natural Food Chain

Interviews with a large natural food store chain revealed the large variation in purchasing patterns that can occur at the individual corporate store level. As part of the retail chain some purchasing decisions at stores are highly standardized, while others are highly decentralized, allowing points of entry for Ohio produce. For example, the company formally defines "local" as products locally owned, produced, or manufactured within a day's drive (seven or fewer hours by car or truck). This national company allows each of its regions to develop its own guidelines for using the term "local." Stores have the option to establish a shorter maximum distance; most define local as a four-hour (or half-day) drive. Using the store itself as the nucleus, this definition allows stores to purchase across state lines. The amount of local product actually purchased and the way it is advertised and promoted (e.g., placing product in end caps and using signage) is up to each store manager. There is also some autonomy in how each store defines local. Some stores embrace and promote produce from adjacent states as local, while others place more emphasis on trying to procure and promote products grown within state lines. In addition to local, the store emphasizes and prefers ***Organic*** (must be certificated according to NOP rules) and ***All Natural*** (limited use of herbicides and pesticides).

Produce procurement is as simple or complex as each store manager chooses. A full line of organic, natural, and conventional produce is available through the regional distributors and the corporate warehouse. Much of the produce flowing through the warehouse originates in California and other western states. Stores can also procure produce directly from local growers or through a local distributor. In one of the stores we interviewed, approximately 70% of produce is coming from the regional distributor and 30% is purchased directly from local farmers (see figure 6).

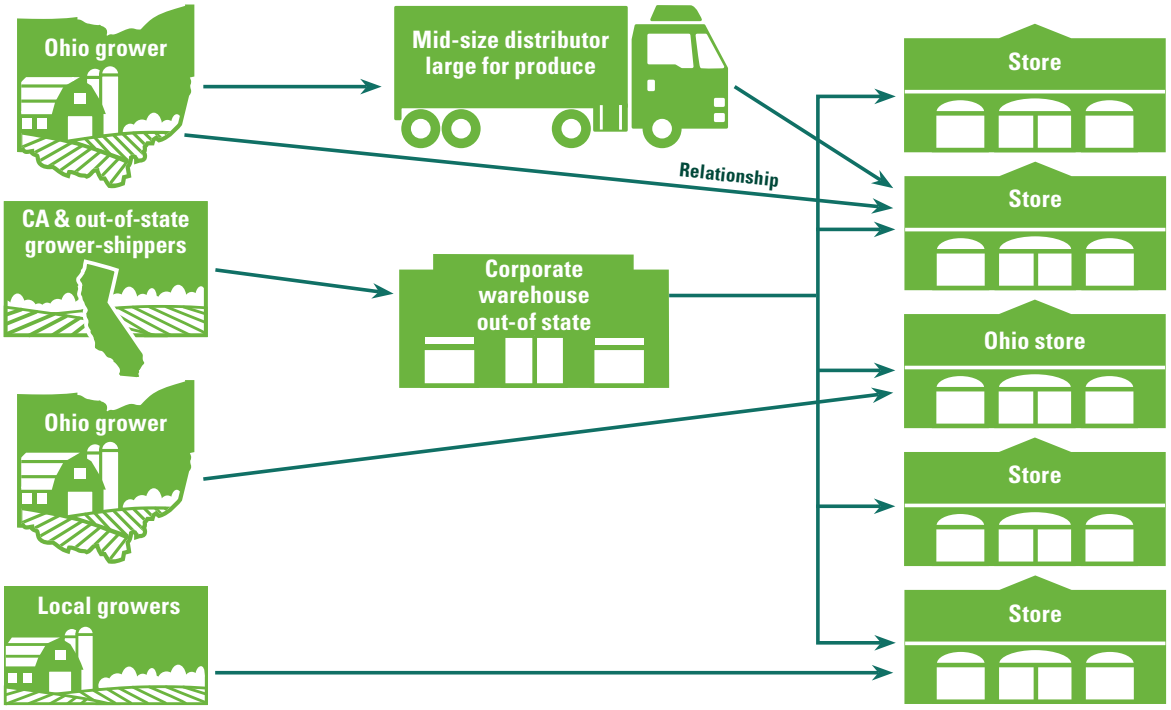

Figure 6. Large natural food chain.

Vendor relationships are important. One store manager explained, *"Vendor relationships need to be two way; when they are not, we drop them."* This is especially true when ordering from local distributors and independent farmers. When developing a new relationship with a local grower, the local buyer (who also has a background in agriculture and environment) visits the farm to inspect facilities and growing standards, and conduct soil tests. If the producer does not meet store standards they are given an opportunity to adjust their production practices to be in-line with store guidelines. If after a period of time they cannot meet the requirements, they are dropped as a vendor.

One store manager expressed pride about the store's commitment to local and the large number of farmers and the different types of farms it purchases from. While the store purchases from a spectrum of farms ranging from large to small, it has actively been exploring ways to create more efficient local distribution systems, particularly for the small farms it purchases from. The cost of delivery can be prohibitively expensive for small farms, limiting the profit they can make on any one sale. To address this issue and reduce the number of accounts the store needs to manage, the store works with its regional produce distributor to coordinate produce purchases and inventory management with small local farmers. The distributor also runs a logistics firm that assists with developing efficient pickup and delivery routes. It is less expensive for the farmers to put their product on the delivery truck than to individually deliver to the store. Additionally, the distributor manages the billing and payment to the individual farmers, thereby eliminating the need for the store to manage multiple accounts. While the distributor acts as an intermediary there is a direct relationship built on trust between the store and the farmers the distributor coordinates. The store plans to continue to grow this system as it expands its local food purchases.

In regard to price, some locally grown produce is less expensive, while some is more expensive. In season local produce tends to be less expensive. The store has also made a commitment not to haggle over pennies especially if the quality is superior and the product meets their standards. The store does not use any types of contracts with producers stating they rely on an honor system based on trust and transparency. They do however have a contract with their regional distributor. The interview revealed there are almost two distinct ordering logics

to purchasing decisions as the store balances inventory needs with their commitment to local farmers. The commitment to local farmers and purchasing decisions made between stores can vary tremendously even in the same city or town. Much of the store level activity is dependent on the personality and goals of the local management team, suggesting that while these stores have tremendous buying power as a chain they also operate as semi-independents.

For this store, social relationships, trust, transparency, and economic efficiency are key factors in developing partnerships with local growers. Responding to their customers and to ensure a level of consistency the store maintains guidelines for defining and promoting "local" and "sustainable/ecological" food and farming. The emphasis on personal relationships creates a climate of flexibility allowing growers to gradually transition to store standards while still having access to the store's market. Store buyers are actively involved in building the capacity of Ohio growers and developing entry points into the store through more traditional distribution systems. The store actively facilitates aggregation activities that enable economies of scale to be reach that economically benefit the farmers, distributor, and the store itself. By maintaining the integrity of each individual farm's produce while simultaneously taking advantage of the distributor's logistics expertise, this system could potentially grow to distribute to other stores and food outlets. However, because the points of entry for individual farmers are dictated on a store by store basis, the overall volume of Ohio produce that can currently be moved through these stores is lower compared to the mid-size regional chain. The multiple points of entry within this store's structure allow for a range of opportunities for small, medium, and large-scale farmers and distributors.

4.5 Large Chain (Some Franchise)

This chain operates stores in Ohio and neighboring states as both a chain and, in some cases, franchise. In a small number of cases when the company has purchased grocery stores they allow the stores to maintain a degree of autonomy, where store buyers and managers may purchase directly from local growers (see figure 7). Further, individual stores are able to develop relationships with local growers. All-in-all, the chain and its stores source from at least 130 local growers, some of which they have long-standing relationships with and others that have just been brought on as sources. This chain does not use distributors specifically for local produce, with the majority of local produce sold being purchased directly. As a whole, the chain stores stock a variety of locally produced and Ohio-grown products and do promote these items via in-store signage and circular advertisements. The company defines local as statewide and a neighboring state. The definition of local is defined, but it is the broadest.

This chain looks for farmers who can meet product demand and have GAP certification. Further, the chain has a traceability method they use with growers and an internal safety department. They seek to have daily communications with growers. Agreements are negotiated and result in some contracts, forward buys, and weekly pricing. What is presented here is not as thorough as the other cases, which is a result of the reluctance of interviewees to answer questions.

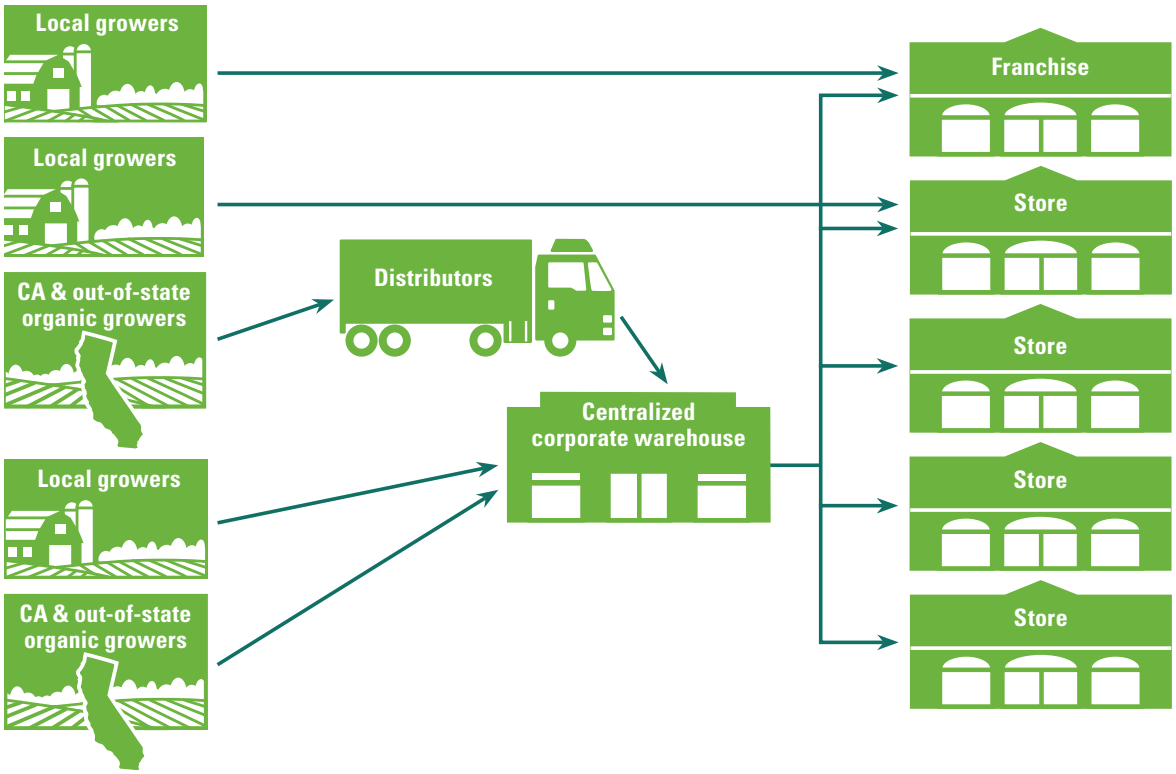

Figure 7. Large chain (some franchise).

4.6 Large Chain

The largest grocery chain in our sample also had the fewest fresh produce entry points. As a national chain operating with stores under regional names, the supply chain from farm to store is vertically integrated (see figure 8). Growers sell their product to the parent company's field buying office. Growers and distributors deliver produce directly to the company-owned regional warehouse. Product is then distributed out to each store. While buyers and distributors may operate under a different name, they are all owned by the same parent company. Purchasing standards for fresh fruits and vegetables are based on quality and price.

While the parent company indicated they have a standard by which they demarcate local products, they would not share that definition. The company emphasized they have long-term relationships with growers across the country, some of whom happen to be "local." The company has always had to source "local" produce as the growing season makes its way from the south to the north. Eventually Ohio crops are in season while other southern states are post-harvest and in more northern climates crops have not yet matured. However, the company also recognizes the increasing importance and preference for local produce among their customers. To address this demand, they have begun highlighting the "local" produce they have always purchased in the store and have also picked up some new growers to increase the supply of local fruits and vegetables. However, the company emphasizes that their overall purchasing habits have not changed much because they have been sourcing local for so long.

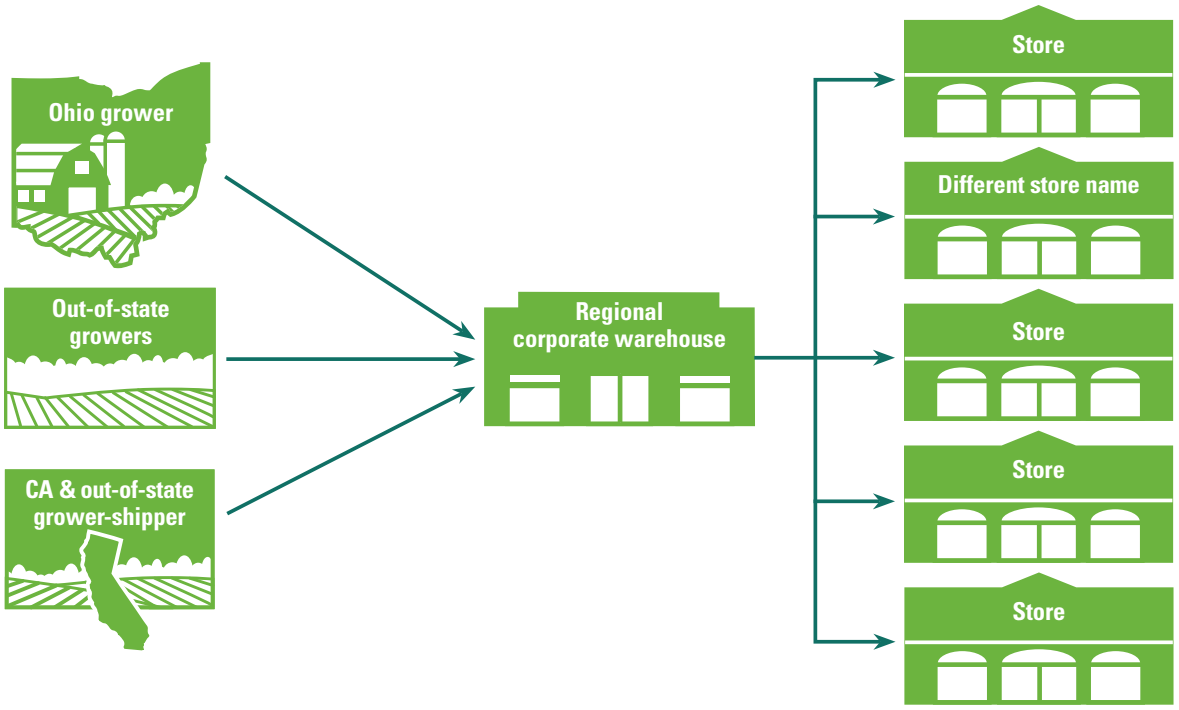

Figure 8. Large Chain

The company does not allocate specific shelf space for Ohio produce. When "local" produce is available they substitute that local product in the shelf space where that type of fruit or vegetable would normally be. For example, cantaloupes might be from Kentucky one week, then the next week they are sourced from Ohio, and are labeled to promote their origin. Individual stores typically do not have much independence to purchase directly from farmers or to organize produce. If they do procure produce outside of the corporate distribution stream, it is not from another distributor, but directly from the farmer. The company has recently launched a more active marketing program to highlight local produce through in-store displays.

Food safety is a high priority for the company. They emphasize Good Agricultural Practices (GAP) certification and the ability to trace back produce to the farm. Company inspectors visit each farm they purchase from, and organize and participate in vendor/supplier meetings. Company buyers prefer to purchase from larger grower networks such as Dole who can meet their volume and quality standards. They prefer not to work with co-ops or auction houses because these venues cannot guarantee the volume they need. The company uses sophisticated computer programs to assist with inventory management.

In the past, the company has worked with smaller growers to purchase organic produce. When the market for organic produce first began to develop, many of the larger growers would not grow organically because of the risk involved. The company began to work with smaller growers, encouraging them to scale-up production. While it was a difficult process, the company did have some success stories.

Relationships with local growers are based on size and seasonality (as they relate to other growers around the country). The ability to self-distribute, limited differentiation of local produce, and expressed preference for large California growers, contracts, and third-party regulators suggests there are greater opportunities for larger sized Ohio growers who can fulfill the price and quantity requirements than for small and medium farmers.

4.7 Summary of Retailer Interviews

Interviews with retailers revealed the different ways stores procure fresh fruits and vegetables in Ohio and the different types of social and economic relationships retailers have with growers and distributors. In summary, retailer interviews revealed:

- As retailers grow in size, distribution becomes increasingly formalized and vertically integrated. As a result, the opportunities for small and medium-sized Ohio farmers to service large-scale retailers are reduced.
- The regional and national chains we interviewed have longstanding direct relationships with larger farms, grower-shippers, and co-ops, able to supply the quantity and quality products desired.
- Among the retailers we interviewed who were committed to purchasing from local growers and supporting the local community, the challenge of purchasing from multiple farmers and managing too many vendor accounts is a potential limitation and frustration.
- Retailers emphasized the desire to have a relationship with and know the farmers they are purchasing from, but have a consistent and efficient ordering and distribution system.
- While food safety is a concern for all retailers, generally the larger retailers tended to seek formalized certifications, especially those purchasing from large-scale farmers or companies not in close proximity. The greater physical and social distance from the actual producers creates the need for extra security, often achieved via third-party certification.
- Many of the retailers interviewed are slowly embracing the trend of identity preservation of local produce by not only marketing "local" but also creating signage that identifies the specific farm on which the food was grown.
- The regional mid-size chains and independent grocery stores interviewed report a willingness to purchase from local small and medium-sized farms, and tend to increase their local fruit and vegetable inventory when common aggregation points are available, such as an auction house or a distributor who carries local fresh produce.
- The produce buyers and store managers of the regional mid-size chains and independent stores tend to have more autonomy and flexibility in making purchasing decisions.
- Interviews demonstrated that the retailers with a strong commitment to local produce are more likely to develop social relationships with growers and develop distribution streams that increase the overall efficiency and adaptability of the fresh fruit and vegetable supply chain.
- The regional mid-size chains and independent retailers interviewed expressed an interest in working with farmers to develop a produce list and planting schedule.
- Retailer, distributor, and farmer networking and planning sessions could create new opportunities for Ohio's small and medium-sized fresh fruit and vegetable farmers.

5.0 Survey of Ohio Distributors

Working from a different point in the fresh fruit and vegetable commodity chain, we surveyed fresh fruit and vegetable distributors that have distribution centers in Ohio. The distributor survey was developed in consultation with the Ohio Department of Agriculture's Office of Sustainable Agriculture and a review committee with knowledge of distribution systems. The overall survey design was guided by The Ohio Food Policy Council's objectives outlined in Section 1.0. The survey included questions on: type and locations of retail outlets distributed to; size and location of firm; types of products distributed; ways distributors identify, purchase, and work with

growers; volume of Ohio-grown fresh fruits and vegetables carried; challenges associated with purchasing Ohio-grown fresh fruits and vegetables; motivations for purchasing local; standards and certification; and interest in working further with Ohio growers and the Ohio Department of Agriculture. See **appendix E** for a copy of the survey instrument.

Respondents were identified through a purchased list of distributors operating in Ohio identified by the NAICS codes and through the Blue Book, a directory of produce sellers, buyers, transportation, and supply firms operating in the United States. Verification of this list was conducted via Internet and phone. Two hundred fifteen distributors were on the original list. Forty-five were no longer in business or did not have current contact information, resulting in a list of 169 distributors. Fifty-seven responded, resulting in a 34% response rate for fruit and vegetable distributors. It appears we had a response bias towards those fresh fruit and vegetable distributors that distribute to Ohio retailers (versus non-Ohio retailers or Ohio non-retailers).

Our approach to analyzing the survey data focused on four main objectives:

1. Create a baseline understanding of the Ohio fruit and vegetable distribution industry.
2. Investigate any differences between distributor firm size and opportunities for Ohio farmers to build relationships. What previous studies have failed to do is distinguish between size and scale of distributor and retailer. Barriers for market access may very well be different between size and scale.
3. Identify opportunities for Ohio fruit and vegetable growers to enter into relationships with fruit and vegetable distributors.
4. Identify any regions of Ohio that may be ripe to address the need to build aggregation infrastructure for Ohio fruit and vegetable farmers.

5.1 Fruit and Vegetable Distributor Respondent Demographics

Almost all fruit and vegetable distributors responding to the survey are headquartered in Ohio. The 39 fruit and vegetable distributors represent 219 distribution facilities in Ohio, 753 full-time workers, and 37,620 part-time workers. The distribution of the size of firm can be found in table 1.

Sales Volume	Number of Distributors
< 1 million	9
1–5 million	11
5–15 million	10
15–25 million	5
> 25 million	4

Table 1. Size of firms.

Fruit and vegetable distributor respondents carry a wide variety of products including dairy products and eggs (15 or 38.5%), meat (10 or 25.6%), fish (9 or 23.1%), packaged frozen foods (9 or 23.1%), general line groceries (9 or 23.1%), and poultry (8 or 20.5%).

Respondents distribute to a range of store types and sizes. Eleven (or 29.7%) distribute mostly to major, nationally based chains; 16 (or 43.2%) to smaller, regionally based chains; and 10 (27.0%) to individual stores that are not part of a chain. Table 2 illustrates the type of stores that fruit and vegetable distributors sell to. Most distributors, 31 (80.0%), are providing services to supermarkets that focus on general lines of food (not supercenters like Wal-Mart or Sam's Club). This is followed by convenience stores at 16 (41.0%).

Store Type	Number	Store Type	Number
Supermarkets that focus on general line of food	31	Gas stations with convenience stores	6
Convenience or corner store	16	Natural food supermarket	6
Greenmarket or specialty produce store	13	Natural food co-op	3
Discount supermarket	10	Dollar store	1
Supercenters, superstores, and warehouse clubs	9		

Table 2. Types of retail outlets distributors service.

Retail establishments are not the only type of outlet that fruit and vegetable distributors serve. They also work with restaurants, hotels, school and colleges, government agencies, and prisons, hospitals, and other institutions. Most respondents service northeast Ohio (28 or 71.8%), followed by central Ohio (18 or 46.2%), then the southeast (13 or 33.3%), northwest (12 or 30.8%), and southwest (11 or 28.2%). The fruit and vegetable distributors that responded are as likely to distribute to urban areas (11 or 31.4%) as suburban areas (12 or 34.3%) and as rural areas (12 or 34.3%). Finally, most fruit and vegetable distributors service retailers close to home, with an average of 67% of sales taking place within 100 miles of their distribution centers, 38% between 100 and 500 miles and 11% outside of 500 miles (see table 3). (Note: Because these are averages across all firms' sales within 100 miles, all firms' sales between 100 and 500 miles and so forth, the total may not equal 100%).

	Percentage of store sales
Within 100 miles of distribution center	66.9%
Between 100 and 500 miles of distribution center	37.8%
Beyond 500 miles of distribution center	10.6%

Table 3. Percentage of store sales within 100, 500, and greater miles.

Table 4 illustrates where distributors are sourcing Ohio produce from and where the retailers are located that they are selling to. Most flows of produce are remaining in the northeast, followed by movement of northwest product to the northeast and central Ohio.

Number of distributors sourcing Ohio produce from …	Number of distributors selling Ohio produce to retailers in …				
	Northeast	Northwest	Central	Southwest	Southeast
Northeast	15	5	8	6	6
Northwest	10	6	9	5	6
Central	5	4	7	3	4
Southwest	6	2	5	6	2
Southeast	5	4	7	3	6

Table 4. Distributors sourcing Ohio produce—sourcing and retailing locations.

Distributors in this sample purchased an average of $493,476 worth of Ohio-grown fruits and vegetables in 2009.

5.2 Similarities between Distributors

In this section we highlight common issues all distributors (regardless of size) identified. All respondents reported that price is not the biggest barrier to purchasing more Ohio-grown produce. The bigger issues are infrastructure, availability, and quality. We highlight the significant findings below.

Incorporating more Ohio-grown produce into mainstream distribution channels can expand markets and profitability.

- All distributors agreed Ohio produce is priced comparably to fruits and vegetables grown in other states, and their transportation costs are lower because they are purchased locally. Distributors also indicated they can sell Ohio-grown foods at a premium.
- Respondents all reported it was important for the future of their business to purchase Ohio-grown fruits and vegetables.
- The combination of a premium product and lower transportation costs creates an opportunity for expanding markets and profitability through the addition of more Ohio-grown produce into mainstream distribution streams.

All distributors had similar requirements for food safety, traceability, and inventory management.

- Distributors all indicated they prefer to have Country of Origin Labeling (COOL) stickers and produce traceability documentation.
- Respondents in this sample of distributors reported producers were not required to use Electronic Data Interchange (EDI).

Distributors are interested in partnering with growers and agencies to develop infrastructure that would increase the flow of Ohio-grown produce.

- Over 75% of respondents reported they are willing to partner with growers and agencies to develop infrastructure and educational resources.
- Twenty-eight distributors provided their information for the Ohio Department of Agriculture to contact them regarding future opportunities. The majority of these distributors were located in northeast Ohio (see figure 9).
- Distributors primarily preferred to work with growers and agencies to develop regional produce aggregation hubs, logistics planning, and food safety education. They were less interested in partnering with growers to research on-farm variety selection trials or season extension infrastructure.

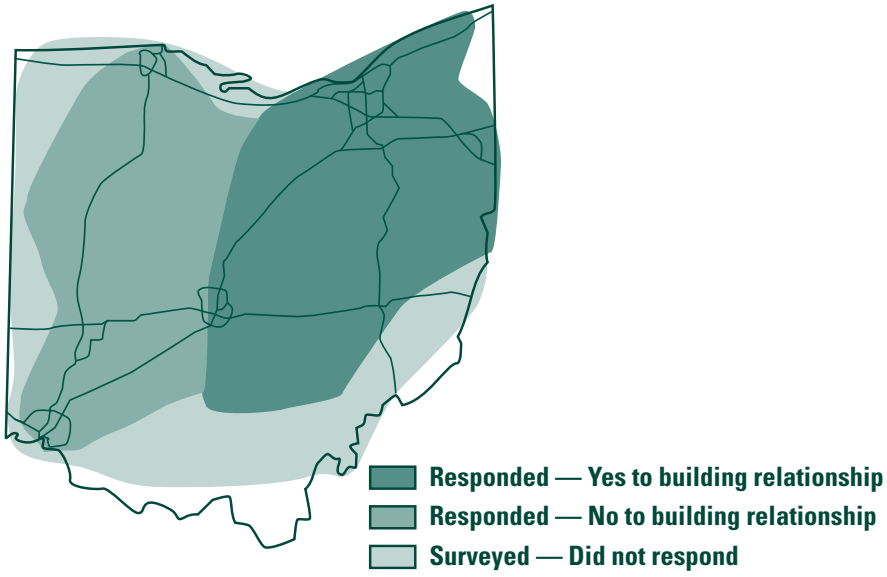

Figure 9. Distributors interested in further Ohio produce opportunities.

Relationships rather than directories are key to expanding market opportunities for Ohio-grown fruits and vegetables.

- Distributors currently purchase through farmers, growers, wholesalers, and broker agents.
- Less than half the sample (42.1%) indicated they were looking for new farmers, suggesting that even though distributors are looking to increase their supply of Ohio-grown fruits and vegetables they may not be actively searching for new individuals to work with.
- Many distributors commented that farmers were not interested in selling into wholesale markets. It may be farmers who are listed in local food directories are smaller scale and oriented more towards direct marketing. Future efforts to connect farmers and distributors should focus on those farmers interested in wholesale markets.
- Distributors indicated having personal relationships with farmers facilitated through face-to-face meetings were more important and useful compared to printed or online local grower directories. These results reinforce the important role local food trade shows and networking sessions have in expanding economic markets.

5.3 Differences between Distributors

The next five sections detail differences found between distributors, separating them into four types: large, medium, small, and very small. The types were determined by total sales self-reported. Large distributors reported selling over $15 million in produce in that past year. Medium distributors reported selling between $5 to $15 million. Small distributors reported selling $1 to $5 million, and very small distributors reported selling less than $1million. The following subsections compare and describe significant differences in the following:

1. Fruit and Vegetable Sourcing and Types of Stores Distributors Service
2. Service Areas and Distribution Radius
3. Where Fruits and Vegetables Are Sourced from at the Height of Ohio's Growing Season
4. Importance of Factors Associated with Purchasing Ohio-Grown Fresh Produce
5. Relationships Between Distributors and Farmers

5.3.1 Fruit and Vegetable Sourcing and Types of Stores Distributors Service

Large fruit and vegetable distributors source from various types of providers (see figure 10). The most common are grower/shippers and farmers (71% of large distributors source from both these types). Compared to all distributors they source the least from auctions. They primarily distribute locally and in the region to small regional chains and large, national chains. They do not distribute to independently owned stores. Like large distributors, **mid-size distributors** source from a variety of produce providers (see figure 11). Grower/shippers and farmers top the list, followed closely by shippers and brokers for produce providers. Mid-size distributors are most likely of all size distributors to source from a produce auction.

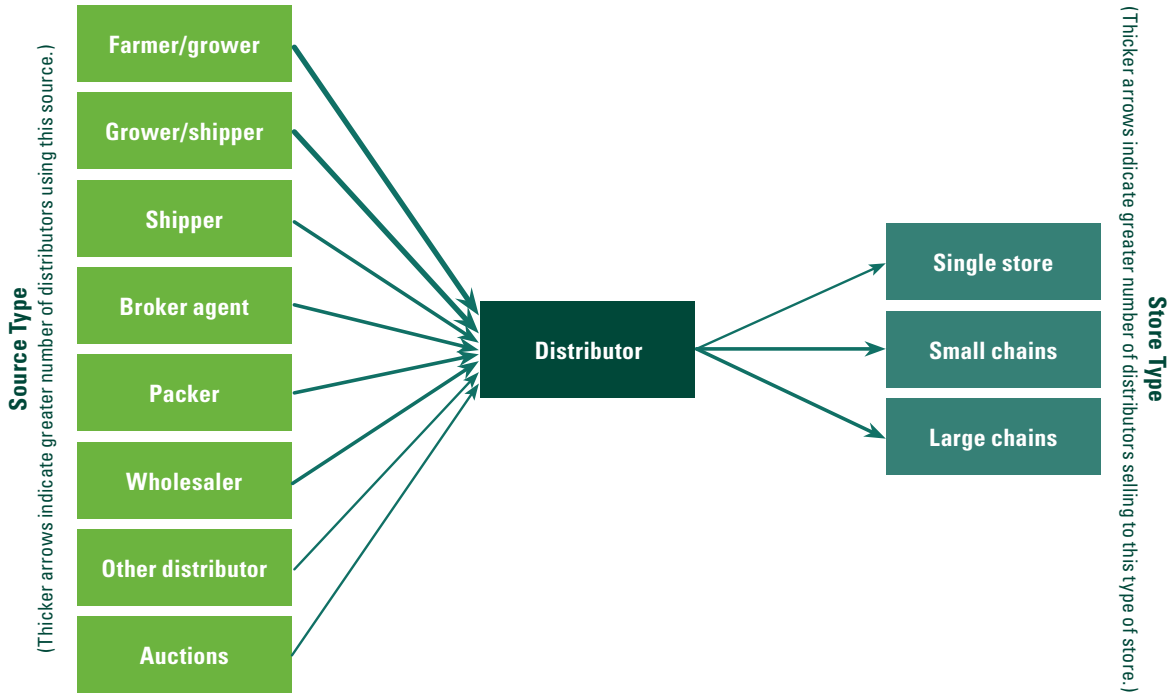

Figure 10. Locations large distributors source fruits and vegetables from and types of stores they distribute to.

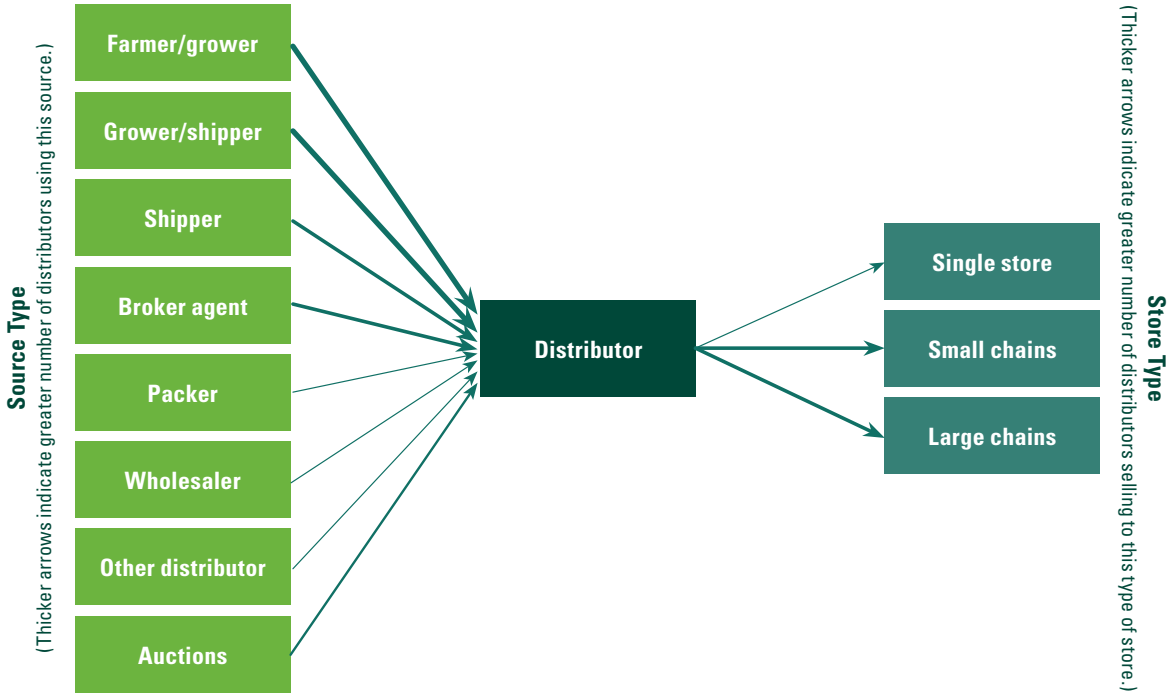

Figure 11. Locations mid-sized distributors source fruits and vegetables from and types of stores they distribute to.

Parallel to large and mid-sized distributors, **small fruit and vegetable distributors** source from a variety of produce providers (see figure 12). However, small distributors most commonly reported purchasing directly from farmers compared to all other groups of distributors (88.9% purchase directly from growers). Small distributors also reported purchasing from wholesalers, grower/shippers, and other distributors followed by

shippers, packers, and broker agents. Only 22% of small distributors reported purchasing through produce auctions. Similar to all other distributors, **very small fruit and vegetable distributors** source from a variety of produce providers (see figure 13). Small distributors reported purchasing equally from farmers and wholesalers followed by grower/shippers, shippers, packers, and broker agents. None of the very small distributors reported purchasing through produce auctions.

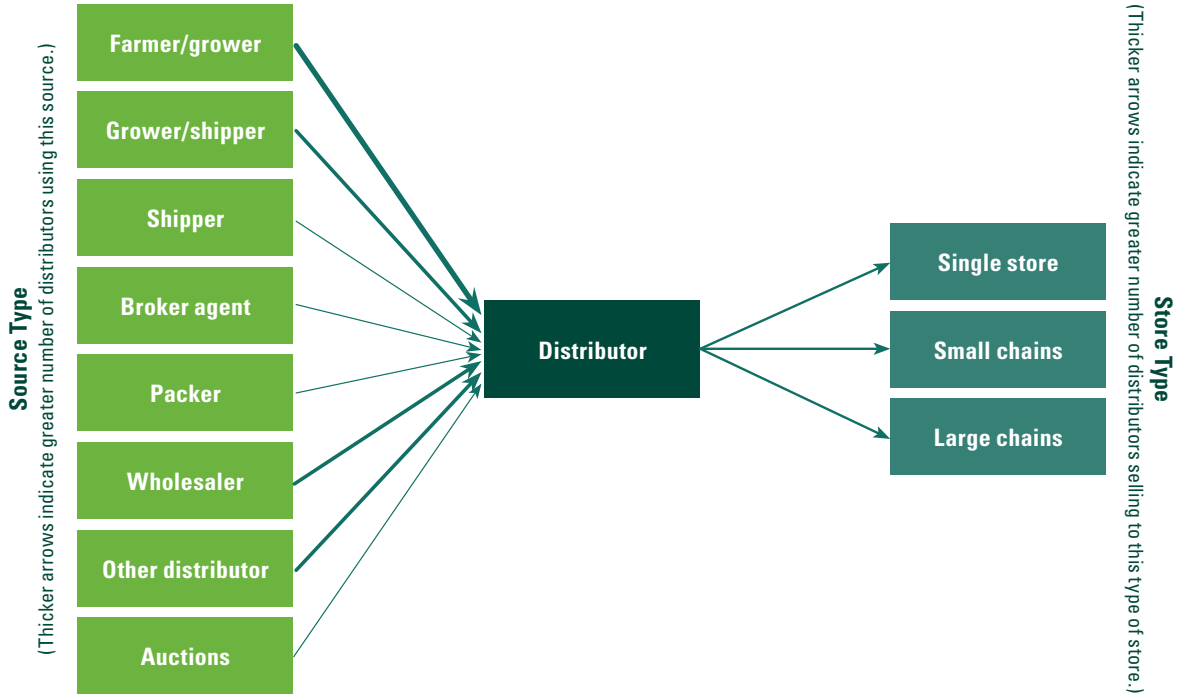

Figure 12. Locations small distributors source fruits and vegetables from and types of stores they distribute to.

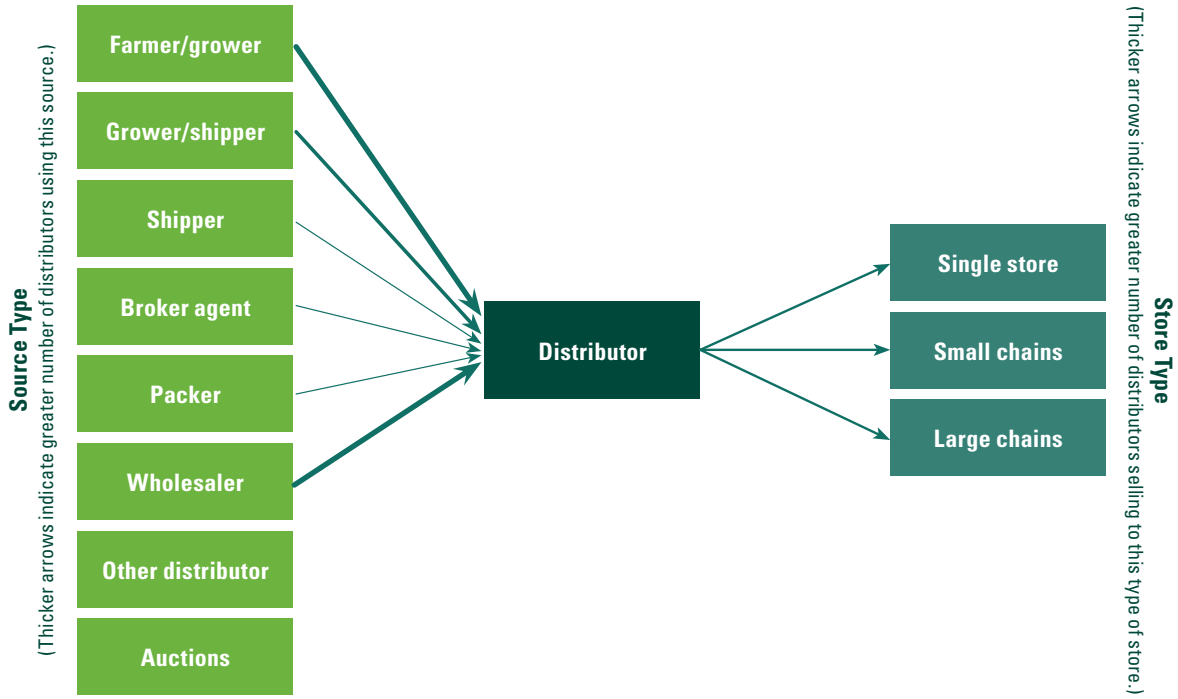

Figure 13. Locations very small distributors source fruits and vegetables from and types of stores they distribute to.

5.3.2 Service Areas and Distribution Radius

On average, **large distributors** distribute to a wider radius from distribution points than other distributors (see figure 14). They primarily distribute locally and in the region to small regional chains and large national chains. They do not distribute to independently owned stores. **Mid-size distributors** distribute to a smaller radius from distribution points compared to large distributors, but greater than smaller distributors. They distribute to small regional chains and large national chains. They generally do not distribute to independently owned stores. **Small distributors** are similar to mid-size distributors; they primarily distribute locally and in the region, and very few go outside of the region. On average **very small distributors** serve the most local customer base; 80% distribute locally, primarily to single stores, small chains, and some large chains.

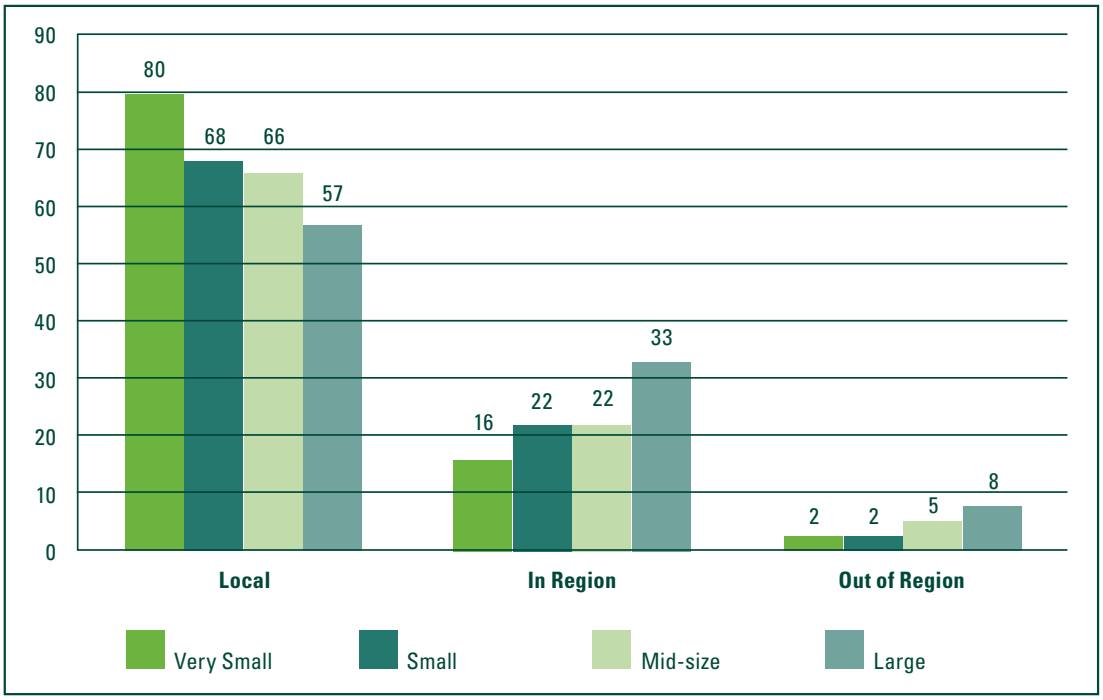

Figure 14. Percent distribution locally, within region, and out of region, by distributor size (Note: The percentages are averages for each category and therefore do not necessarily add to 100% for each distributor size).

5.3.3 Where Fruits and Vegetables Are Sourced from at the Height of Ohio's Growing Season

In this section we report on the percentage of inventory distributors are sourcing locally (less than 100 miles), from in the region (between 100 and 500 miles), outside of the region (more than 500 miles), and out of the United States during the height of Ohio's growing season (summer to fall). On average mid-sized distributors purchased the most Ohio produce spending over a million dollars ($1,007,500) in 2009. Large distributors purchased $433,750 worth of produce, followed by small distributors who purchased $311,333. Comparatively, very small distributors purchased the smallest amount of produce at $119,166.

During the height of the Ohio growing season, **large distributors** are sourcing an average of 18% of their produce from local and 22% from regional sources (figure 15). **Mid-size distributors** reported sourcing an average of 34% of their produce from local and 37% from regional sources. **Small distributors** on average purchased roughly $311,333 of Ohio-grown fruits and vegetables in 2009. At the height of the growing season small distributors are sourcing an average of 53% of their produce from local and 11% from regional farms. Only the very small distributors purchase more local produce.

Very small distributors purchased the smallest amount of Ohio-grown produce in 2009, purchasing an average of $119,166 of Ohio-grown fruits and vegetables. However, Ohio-grown produce accounted for the largest percentage of inventory in the height of the growing season compared to all other distributor groups. Very small distributors reported an average of 65% of their inventory was sourced from local and 2% from regional farms.

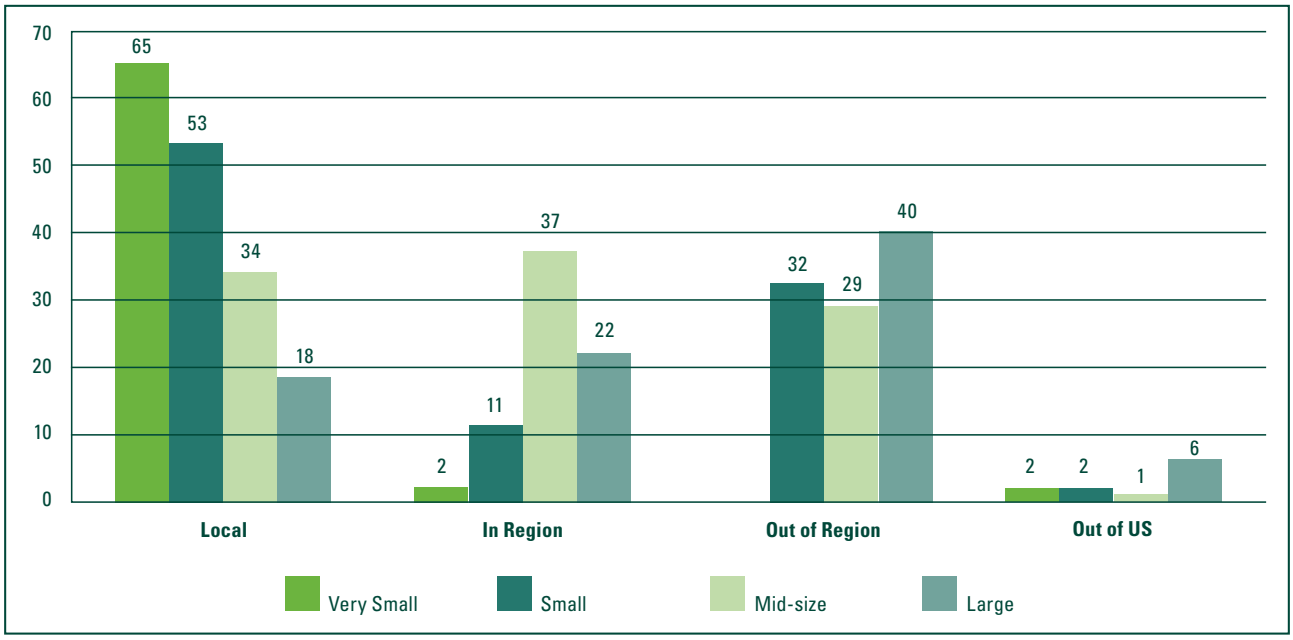

Figure 15. Distributors' percentage of Ohio-grown fruit and vegetable inventory in height of growing season (Note: The percentages are averages for each category and therefore do not necessarily add to 100% for each distributor size).

5.3.4 Importance of Factors Associated with Purchasing Ohio-Grown Fresh Produce

Distributors were asked to identify what factors were most important when deciding to purchase Ohio produce. Table 5 highlights the varying priorities different size distributors have in descending order. We expand on this table below.

Priority	Large Distributors	Medium Distributors	Small Distributors	Very Small Distributors
1.	Transportation costs are lowered by purchasing Ohio produce.	Ohio produce is fresher in season.	Ohio produce is fresher in season.	Ohio produce is fresher in season.
2.	Customers care that produce is raised in Ohio, yet are less likely themselves to believe Ohio produce is inherently a better product.	Ohio produce is less expensive and transportation costs are lowered.	Have a commitment to Ohio growers and transportation costs lower.	Have a commitment to Ohio growers and transportation costs lower.
3.	Ohio produce is fresher, and less expensive in season.	Have a strong commitment to the Ohio growers currently purchasing from.	Ohio produce is less expensive in season.	Ohio produce is less expensive in season and customers care that produce is raised in Ohio.
4.	Have a strong commitment to the Ohio growers currently purchasing from.	Customers care that produce is raised in Ohio.	Customers care that produce is raised in Ohio and can sell Ohio produce at a premium.	Can sell Ohio produce at a premium and believe Ohio produce is a better product.
5.	Can sell Ohio produce at a premium.	Can sell Ohio produce at a premium but distributors themselves don't believe Ohio produce is necessarily a better product.	Believe Ohio produce is better product.	

Table 5. Importance of factors associated with purchasing Ohio-grown fresh produce.

Large distributors do not necessarily agree that Ohio produce tastes better. They are most cognizant that quality is quality, and that just because fruit and vegetable branding is place-based doesn't mean better quality, but it can add value. When further asked what the motivations are for purchasing Ohio fruits and vegetables, large distributors tended not to emphasize that produce is grown on a family farm, is organic, or is grown in Ohio. Instead, they prioritize price, consistency, cooling, delivery and pickup, and logistics. This is perhaps because large distributors are moving large volumes and do not have as much flexibility in these factors.

Moving large volumes of produce in mainstream supply chains may also be behind the requirements that large distributors have for sourcing. For example, large distributors use contracting (sometimes, but not always), and they more often (along with mid-sized distributors) require PLU labels. Large distributor respondents always require third-party certification, and always want sizing and grading, and standardized packing materials when purchasing fresh produce.

Medium distributors had a wide range of motivations for purchasing Ohio fruits and vegetables. Their motivations included price, consistency, cooling, and delivery and pickups but they're also concerned about grown in Ohio and grown on family farms organic. Obstacles to purchasing more Ohio-grown fruits and vegetables were identified primarily as transportation and delivery, and the need for precooling.

Like large distributors, moving larger volumes of produce in mainstream supply chains may also be behind the requirements that mid-size distributors have for sourcing. Again, like large distributors, mid-size distributors use contracting (sometimes, but not always), and they more often require PLU labels. Moreover, mid-size distributors always want sizing and grading, and standardized packing materials when purchasing fresh produce. However, unlike large distributor respondents who *always* require third-party certification, mid-size distributors' third-party verification requirements varied widely between distributors of this type.

Small distributors reported delivery and pickup arrangements, cooling, price, consistency in sizing and grading, and produce grown in Ohio were all important factors when purchasing Ohio-grown fruits and vegetables. Similar to large and mid-sized distributors, small distributors generally prefer to purchase pallets and not individual lots. Small distributors will sometimes use contracts and ask for third-party certification but not always, and they are also less likely to require PLU coding compared to medium and large distributors.

All distributors are concerned about pricing and consistency; however, small distributors are generally less concerned about cooling and logistics compared to larger sized distributors, and tend to prioritize the produce they carry is grown in Ohio, grown on family farms, and organic compared to other groups.

Very small distributors were similar to small distributors, reporting that the following factors are important when purchasing Ohio-grown fruits and vegetables: being grown in Ohio, price, consistency in grading and sizing, followed by cooling, delivery and pickup arrangements, and produce grown on family farms. Very small distributors will sometimes use contracts and ask for third-party certification but not always, and they are also less likely to require PLU coding compared to medium and large distributors.

5.3.5 Relationships Between Distributors and Farmers

Large distributors relied less on personal relationships with farmers for sourcing produce. They were least likely to be interested in developing any new relationships with farmers. Furthermore, they were least likely of all distributor respondents to indicate they would be willing to work with the Ohio Department of Agriculture to develop, maintain, and grow relationships and markets with Ohio farmers. These distributors were least likely to want to participate in training farmers to build capacity at the supply-end. However, 100% of large distributor respondents did say they would be interested in purchasing from a regional aggregation hub if conveniently located. This likely reflects their need to secure large volumes.

Mid-size distributors indicated that personal relationships with farmers they source from are important. In addition, these distributors have the capacity and interest in providing and sharing in training to build capacity of local farmers to build a more reliable and accessible supply. Almost every mid-size distributor indicated they would be willing to work with the Ohio Department of Agriculture to develop, maintain, and grow relationships and markets with Ohio farmers. Finally, 75% are interested in purchasing from a regional aggregation hub if conveniently located.

Small distributors overwhelmingly (63.6%) indicated they were interested in purchasing from a regional aggregation hub if it was conveniently located. This group of distributors was also highly motivated to work with the Ohio Department of Agriculture, and were interested in developing and maintaining relationships with Ohio farmers.

Very small distributors reported personal relationships are very important; they tend to find farmers through word-of-mouth and when farmers approach them. Very small distributors were moderately interested in participating in grower education and trainings. Demonstrating their commitment to Ohio-grown produce, the majority of very small distributors (66.7%) indicated they were interested in purchasing from a regional aggregation hub if it was conveniently located.

5.3.6 Flows of Product by Distributor Type

Table 6 summarizes, by firm size, produce flows from the type and origin of produce sources to type and location of retail outlet. What is apparent is that smaller distributors source a larger proportion of local produce. Although it is likely that the larger distributors may be sourcing less proportionally, the volume of produce they are moving may be more than the smaller distributors. Smaller distributors tend to work with smaller, more geographically local retail outlets. While we can learn from examining the flows of product from distributor sourcing to eventual retailing, these figures mask the willingness and desire of distributors to change business practices.

Size	% of Distributors Sourcing from…	% Sourcing in Summer	% Distribute to Following Store Type	% Distribute to Stores…
Large	Grower/shipper—71% Farmers—71%	Local—18% In region—22% Outside region—40% Foreign—6%	Few single stores Small, regional chains Major, national chains	Local—57% In region—33% Outside region—8%
Mid-size	Grower/shipper—86% Farmers—78% Shipper—67% Broker—67%	Local—34% In region—37% Outside region—29% Foreign—1%	Few single stores Small, regional chains Major, national chains	Local—66% In region—22% Outside region—5%
Small	Farmers—80% Grower/shipper—50% Wholesaler—50% Other distributor—50%	Local—53% In region—11% Outside region—32% Foreign—2%	*Equally distributed between* Single stores Small, regional chains Major, national chains	Local—68% In region—22% Outside region—2%
Very Small	Farmers—67% Wholesalers—67%	Local—65% In region—12% Outside region—21% Foreign—2%	*Equally distributed between* Single stores Small, regional chains Major, national chains	Local—80% In region—16% Outside region—2%

Table 6. Produce sourcing and delivery flows.

5.4 Summary of Surveys

The objectives of the survey work was to create a baseline understanding of the Ohio fruit and vegetable distribution industry and to shed light on the black box of distribution.

- Thirty-nine fruit and vegetable distributors responded to the survey. These distributors represent 219 distribution facilities in Ohio and employ 753 full-time workers and 37,620 part-time workers.
- Many of the distributor respondents are distributing more than just fruits and vegetables, and are often carrying dairy and eggs.
- These distributors service stores all over Ohio—in rural, suburban, and urban locales.
- These distributors service a variety of store types, including independents, regionally based chains, and national chains.
- Almost all respondents are supplying produce to supermarkets that focus on general line food, followed by convenience or corner stores and greenmarket or specialty produce stores. Only about a quarter of surveyed distributors are supplying discount supermarkets and supercenters, superstores, and warehouse clubs, which follows the dominant model in which these types of stores rely on their own distribution capacity.
- The majority of all surveyed distributors agreed that their transportation costs are lowered by using Ohio produce.
- All respondents reported similar requirements for food safety, traceability, and inventory management.
- Many of the surveyed distributors are interested in partnering with growers and agencies to develop infrastructure that would increase the flow of Ohio-grown produce.
- Creating relationships of trust between distributors and producers is key to expanding market opportunities for Ohio-grown fruits and vegetables.

Based on our survey data, it was possible to classify distributors based on their size (total sales) to identify differences among distributors of different sizes and identify whether opportunities for Ohio farmers might vary by the size of the distributor. This study found the barriers to market access differ depending on distributor size.

- Flows of produce:
  - ► Large and mid-sized distributors primarily rely on grower-shippers. Small and very small distributors rely mostly on farmers for sourcing products.
  - ► Small and very small distributors also rely on other wholesalers for sourcing.
  - ► As a percentage of overall produce purchasing, purchasing of Ohio produce decreases as the size of distributor increases. However, larger distributors purchase a higher volume of Ohio produce overall.
  - ► Sourcing from outside of the region during the height of the Ohio growing season is more frequent among larger distributors compared to small distributors.
  - ► Smaller distributors work more with single, independently owned stores.
  - ► The service area widens as size of distributor increases.
- Large distributors more frequently reported having uniform standards, such as contracts, packaging, and PLU coding compared to other distributors.
- All large distributors surveyed require third-party food safety certification. Certification requirements were more variable with other sized distributors.
- To a small degree, desire to source produce from a central aggregation center declined with firm size, although the majority of all distributors, no matter what type, were interested.
- Motivations for purchasing Ohio produce varied by the size of distributor.
  - ► Large distributors reported a desire to purchase Ohio because they feel their customers care that produce is raised in Ohio. Yet these same distributors were less likely themselves to believe Ohio produce is inherently a better product.
  - ► The rest of distributors believe that Ohio produce is fresher in season, and they are more committed to purchasing Ohio produce.
- Distributors indicated they do not use farmer directories to source new products.
- Opportunities for Ohio farmers to link with distributors varied by distributor size.
  - ► Word-of-mouth and referrals are key points of entry for farmers to connect with medium and small distributors.
  - ► All distributors rely on farmers approaching them, but for large distributors this is less important as they tend to already have established relationships with large growers.
  - ► A third of the distributors in this survey have used Ohio MarketMaker, an online service that allows for wholesale purchasers to search for products.
- Very small and small distributors reported a preference for purchasing directly from farmers compared to other procurement methods.
- Medium-sized farmers are most willing to work collaboratively with farmers on logistics and planning. These distributors and the small distributors are more likely than the very small distributors to participate in educational sessions with growers, mostly likely because the time/labor commitment costs are too great for such small operations.

- Large distributors relied less on personal relationships with farmers for sourcing produce and were least interested in developing new relationships with farmers. This group was also the least interested in working with organizations and agencies to develop new relationships and infrastructure.

6.0 Conclusions

If the goal of local food system development is to increase the availability and accessibility of food products to mainstream consumers, locally grown specialty crops need to be integrated into the mainstream distribution system and retail markets. Although the dominant trend in the industry has been for distribution to be absorbed by retailers, this trend primarily applies only to the largest retailers. There is still a need for intermediaries and distributors to serve independent stores and small and medium chains. Studies consistently find ownership and management structure greatly affect flexibility in purchasing. Reviewing past research in combination with interviews and surveys of Ohio retailers and distributors leads us to two overarching conclusions:

1. **A population of established small and mid-sized distributors exists who are motivated to buy from Ohio farmers and have the capacity to increase the volume of Ohio-grown fruits and vegetables they carry.**
    a. Our distributor survey found of respondents, small and mid-sized distributors currently carry the majority of Ohio-grown produce and have expressed the most interest in building new relationships with Ohio farmers.
    b. Distributors, farmers, and retailers can create strategic relationships by utilizing existing infrastructure.
        i. Small and medium-sized farmers are searching for market access; distributors are looking for market viability; and the mid-level store is looking for competitiveness.
        ii. The strength of distributors is their ability to source from multiple producers and multiple regions, ensuring an even supply of flow for retailers. Creating a regional supply system that includes global commodities when needed is a more resilient system.
        iii. Value chains are able to work with differentiated products, are flexible, and are able to implement innovative production systems that can meet market demand.
        iv. Avoiding duplication of services and utilizing existing infrastructure, and creating economies of scale (not available to direct marketers) and economies of scope, lead to efficiencies that increase profitability all along the chain.
        v. These varying groups both *cooperate* and *compete* to achieve economies of scale and marketplace advantages.
2. **The lack of supply of Ohio-grown produce and aggregation are the primary barriers to increasing the flow of Ohio produce to retail outlets.**
    a. Retailers want to purchase Ohio-grown fruits and vegetables, but do not want to purchase from a large number of growers. By working with distributors, small and medium-sized farmers can find market access points into the retail sector.

Understanding the nuances in the distribution sector provides greater insights into how scale can affect trust, relationships, access, and purchasing practices. Identifying gaps in the current distribution system creates room for implementing new and innovative strategies that generate economic development opportunities for Ohio farmers, distributors, and retailers.

7.0 Recommendations

The recommendations in this report focus on facilitating and scaling-up relationships between Ohio fruit and vegetable growers, Ohio distributors, and Ohio retailers with the aim of providing more Ohio produce to Ohioans, increasing markets for Ohio's small and mid-size farmers through increasing the viability and vitality of the small and mid-size distributors and retailers focused on building relationships. The recommendations

below are aimed at agencies, organizations, local governments, and the dozen or so local food policy councils looking for ways to facilitate these relationships. These recommendations are drawn from the literature reviewed and our own research with retailers and distributors.

1. In local and regional food system work, proponents may be inclined to propose the development of new intermediaries and alternatives. Our review of previous studies and our own research indicate **there is room to develop and grow within the current system**. Working with existing actors and infrastructure can achieve economies of scope and scale, increase efficiencies, and save resources that would otherwise be spent on developing alternatives. Existing infrastructure can include existing facilities, educational curriculum already available, and distributors already equipped to move produce.
    a. Our study identified that distributors are willing to collaborate with agencies and organizations to develop needed aggregation and infrastructure.
    b. Growers can take advantage of the existing Ohio-based Retail Ready Curriculum. This short course includes modules on invoicing, pricing, marketing, packaging, supply, labeling, delivery, insurance, quality assurance (temperature control, GAPS, storage, etc.), certification and audits, communication, and satisfaction guarantee.
    c. Develop education and training for growers that includes distributors. The incentive for distributors is that they can groom growers who will ease the procuring of produce for them. To an extent, these types of sessions are already taking place at produce auction houses.
    d. Recognize that facilities may already exist for aggregation and seek ways to work with these existing entities.
        i. Many localities have some type of produce terminal that has the physical capacity to aggregate, cool, and hold a large amount of local produce that is conveniently located near many types of transportation.
        ii. Ohio is home to several produce auctions that are already collection points for produce. With minimal investments in cooling, these sites could expand their aggregation functions.
2. **Focus on facilitating relationship building upstream and downstream from the distributor. Business relationships based on trust and value-added features can benefit farmers, distributors, and retailers.**
    a. Explore innovative co-op development and business structures that include the entire value chain (or at least multiple parts). Co-ops have had a long history of success and failure. The opportunity for creating successful food co-ops is to focus on the broader food system. An example in Wayne County, Ohio, is Local Roots that has consumer, producer, distributor, and retailer members.
        i. Co-ops or alterative business structures could be centered around an identity or a message that unites partners, e.g., what it means to be a farmer, what it means to be a community-scale distributor, etc. (Gray and Stevenson, 2008).
        ii. Co-ops or alternative business structures could include value-added strategies in the food system, aggregation strategies, mechanisms for season extension, education and training, and co-marketing.
        iii. Service providers, educators, and agency officials can facilitate these relationships and business models upfront to defray some of the initial costs to individual participants.
3. **Agencies and organizations can facilitate growth in this sector by directing resources into developing farmer-distributor-retailer relationships.**
    a. The opportunities for growing this industry are not in the logistics or flow itself, but are in the business practices that focus on trust and relationships.
    b. Retailer-distributor-farmer networking and planning sessions could create new opportunities for Ohio's small and medium-sized fresh fruit and vegetable farmers.
    c. Surveys of distributors reveal directories and mapping are useful but only to a point. Leveraging motivations

for purchasing Ohio fruits and vegetables and the willingness to make face-to-face relationships are the key foundations for expansion and growth.

   d. The fruit and vegetable sector includes a wide range of actors. Bigger retailers and growers have established relationships and business practices that are already solidified. It is more efficient to first focus on the segments of the fruit and vegetable industry that are open and interested in developing strategic relationships but may not have the resources to do so.

4. In Ohio, interviews with regional mid-size chains and independent stores revealed these outlets are more willing to purchase from local small and medium-sized farms, and tend to increase their local fruit and vegetable inventory when common aggregation points are available, such as an auction house or a distributor who carries local fresh produce. **Creating and expanding fruit and vegetable aggregation centers can expand market opportunities**.

   a. In Ohio, regional mid-size chains and independent stores expressed an interest in working with farmers to develop a produce list and planting schedule.

   b. Aggregation centers that provide cooling facilities can increase the quality, quantity, and flow of Ohio fruits and vegetables for retail markets. Two potential opportunities were discussed during our interviews—introducing cooling facilities at produce auctions or using underutilized cooling facilities at locations such as the Cleveland Produce Terminal.

   c. Innovative aggregation and distribution systems such as the L.A. Farmers Market Hub (see appendix D) and new generation co-ops offer new models for Ohio.

5. **Focus greater attention on capacity-building efforts for smaller growers and distributors that have the potential for participating in new producer-distributor relationships, but lack the time and capital to participate**. While mid-size distributors may be best positioned to move more Ohio produce through existing infrastructure in the short-term, there are also longer term growth opportunities associated with working with smaller or new distributors who are already committed to local products and who could potentially grow and increase their sales volume. The lack of aggregation points might actually be hurting their businesses, as they have less capital and fewer resources to source products versus some of the mid-sized distributors who may have long-standing networks and more established grower relationships.

   a. Beyond facilitating relationship building, a focus could be on facilitating aggregation. If growers are not able to scale-up because of time or capital constraints, then it is possible to provide technical assistance and infrastructure so that growers, together, can look big and "jump" scales, reaching larger markets and moving more produce. Figure 2 suggests that if growers united, they could move to the right of the figure and fulfill larger markets. The incentives for smaller growers, who often rely on direct marketing, could be that they would spend less time marketing and more time growing.

8.0 Acknowledgments

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Appendix A. Roles in the Wholesale Sector

The structure and relationship of the produce distribution system are influenced by the highly perishable nature of the produce, need for specialized handling, transportation, certification, etc. The different roles buyers, sellers, and aggregators have in the distribution system are defined by USDA-Economic Research Service in figure A.

Grocery and related product wholesaling: Part of the food system in which goods are assembled, stored, and transported to retailers, food service organizations (hotels, restaurants, and institutions (HRI)), other wholesalers, export, and other types of businesses. Institutions include schools, prisons, and other government operations.

Merchant wholesalers: Operators of firms primarily engaged in buying groceries and grocery products, and reselling to retailers, institutions, and other businesses.

Manufacturers' sales branches and offices: Wholesale operations maintained by grocery manufacturers or processors to market their own products. Manufacturers' sales branches carry stocks of merchandise for delivery to customers. Manufacturers'sales offices do not stock merchandise for sale.

Brokers and agents: Wholesale operators who buy or sell as representatives of others for a commission and typically do not physically handle the products. They may serve as representatives of manufacturers or processors, but normally do not take title to the goods.

General line or broadline distributors: Merchant wholesale operators that handle a broad line of groceries, health and beauty aids, household products. Also referred to as general-line and full-line distributors. Examples include Supervalu, Fleming, and Sysco.

Specialty wholesalers: Establishments primarily engaged in the wholesale distribution of items such as frozen foods, bakery, dairy products, poultry products, fish, meat and meat products, or fresh fruits and vegetables.

Miscellaneous food wholesalers: Establishments specializing in the wholesale distribution of a narrow range of dry groceries such as canned foods, coffee, tea, or spices. Also referred to as systems distributors.

Warehouse clubs: A hybrid wholesaler and retailer that sells food, appliances, hardware, office supplies, and similar products to members (both individuals and small businesses) at prices slightly above wholesale. Examples include Sam's, BJ's, and Costco.

http://www.ers.usda.gov/publications/aer811/aer811.pdf
Figure A. Wholesale sector definitions (Harris, Kaufman, Martinez, & Price, 2002).

Appendix B. Relationships/Strategies between Producers and Distributors

A variety of purchasing strategies are used by retailers to procure fresh produce. In this subsection we provide a brief overview of common terms describing purchasing relationships using the work of L. Martinez & Thornsbury, 2006.

Spot market is a traditional commodity procurement instrument, with little to no coordination between buyers and suppliers. Often buyers have no direct contact with the suppliers. Instead, they purchase produce through the cash market. This arrangement offers a great deal of flexibility and does not require sophisticated market analysis. It can minimize inventory costs since storage is not needed and is easy for buyers and sellers to walk away from, but it is also associated with higher prices and price uncertainty.

Consignment is when one group continues to own inventory but places it in the hands of another holder until the goods are sold or transferred.

Buy forward is an extension of spot market procurement. Buyers can take possession of a commodity in advance of inventory needs when spot market prices are favorable. The advantage to buying forward is buyers can set a per-unit price and more accurately accrue their goal profit margins. There is a great deal of variation in terms of who takes physical possession of the commodity at the time of purchase (especially if storage space is limited).

Forward contracts/specification contracts are formal contracts where suppliers specify future transactions (quality, quantity, price of commodity, etc.). Contracts are based on the legally enforceable establishment of specific and detailed conditions of exchange. Buyers face the risk of suppliers failing to deliver the quality or quantities of product agreed on; however, buyers are protected through legal recourse.

Verbal agreements are still quite often used to procure produce, despite the growth in contracting. Verbal agreements rely on trust between the grower and distributor.

Vertical integration refers to companies (processors, distributors, retailers, and in some cases, growers) united through a common owner. Vertically integrated companies are characterized by intense coordination.

Strategic alliance is a formal relationship between two or more parties to pursue a set of agreed upon goals or to meet a critical business need while remaining independent organizations. There are different forms of strategic alliances including (1) **relation-based alliance**, where relationships are based on shared risks and benefits emanating from mutually identified objectives; and (2) **equity-based alliance**, where coordination intensity is moderately high, such as, an agricultural cooperative or a private firm who form a joint venture.

Appendix C. Current Trends in Retailing, Distribution, and Production

Retailing

Consolidation in the retail sector has led to the increasing power of a small number of retailers. So while floor space (and number of items carried) is growing in large supermarkets, the total numbers of supermarkets has declined (with the parallel trend of increasing numbers of convenience stores) (Kaufman, 2002). In recent history the top five retailing firms controlled less than 20% of the market. By 2003 the top five firms (Wal-Mart, Kroger, Costco, Supervalu/Albertsons, and Safeway) controlled over half of all grocery sales (Katy, 2007). To more efficiently distribute to their stores, larger retailers have centralized and streamlined their purchasing systems and have integrated distribution into their operations to take advantage of economies of scale. As self-distributors these companies manage their own fleet of trucks, warehouses, and buying offices. In 2001, self-distributing retailers accounted for 34% of all food distribution centers in the United States (Kinsey, 2001), and the importance of self-distribution is projected to grow (S. W. Martinez, 2002). This type of vertical integration has led to the increasing disappearance of wholesale and terminal markets. These trends also impact processors, manufacturers, farmers, and ranchers who have relatively little bargaining power. In order to meet regional and national inventory needs it is more cost-effective for purchasing departments to purchase from fewer and larger growers. These supply chain dynamics create barriers of entry to local and regional small and medium-sized farmers and distributors.

Another trend has been an increase in the number of food suppliers that must pay slotting to retailers. In the past these slotting fees were not applied to fresh produce; however, they are increasingly being used for fresh cut fruits and vegetables and bagged salad. Dole and Del Monte Fresh introduced slotting fees in the produce aisle in an effort to maintain a market advantage (Eastwood, et al., 2004).

Retailers also shape trends in contractual relationships and third-party certification. Previous studies have found that in the early 1990s most buyers (97%) did not use contracts and that prices were determined at time of sale. Additionally, they found that 94% of stores did not require any certification criteria such as product liability insurance (Hanson & Rada, 1992). More recent trends document retailers are increasingly setting prices and implementing contracts with growers (especially among larger retailers). In additionally, the increasing demand for organic and concerns over food safety have led to retailers shaping and requiring produce standards and third-party certification (with the largest chains being at the forefront of this trend).

Finally, more and more retailers are viewing "local" as a way to differentiate product and secure price premiums. In terms of marketing, while still only a small percentage, retailers are increasingly using the Internet, digital photography, and farm visits to promote the freshness and origin of certain foods (Martinez & Thornsbury, 2006).

Distribution

Similar to retailers, the overall trend for distributors has been to become very large or enter into smaller niche markets. Likewise, as retailers purchase or create distribution companies, some broadline distributors have purchased retail outlets. At the same time there has been a decline in specialty good wholesaler distributors. While the number of grower-shippers who market directly to retailers has been on the decline, they have gained increasing importance compared to traditional distributors (Perrett, 2007). When selecting a grower or grower/shipper to work with, wholesale distributors primarily consider quality, post-harvest handling practices, supply reliability, and volume availability, while price and volume are secondary (Eastwood, et al., 2004). Wholesale distributors also examine the ability of the growers to grade and pre-cool produce.

Although the role of the traditional wholesale distributor has continued to decline, in 2002, 38% of wholesale distribution to retail food stores was from traditional distributors, demonstrating that distributors continue to play a critical role for smaller retailers that do not self-distribute. Distributors are also increasing the number of services they offer, particularly value-added products such as precut and packaged salads, and merchandizing services. In fact Martinez and Thornsbury (2006) suggest it may be more appropriate to call distributors "intermediaries" because of all the services they provide to retailers and producers alike.

The trend in self-distribution and consolidation in the distribution sector has led to a decrease in spot market, verbal agreements, and consignment, and an increase in the use of marketing contracts, production contracts, and strategic alliances are increasing. However, many, particularly smaller, distributors still rely on personal relationships and verbal agreements (L. Martinez & Thornsbury, 2006). As contracts become more popular, they remain problematic for produce due to perishability and fluctuations in price and volume due to issues such as weather (Eastwood, et al., 2004). Another trend is the increasing use of standard inventory management and traceability systems. Again, these strategies are much more evident in larger distributors or distributors that serve larger retail chains.

Production

The structure of agriculture somewhat mirrors the structural changes in retail and distribution. Consolidation and concentration in the retail, processing, and distribution sector have created power imbalances in the marketplace that have left small and medium-sized farms increasingly vulnerable (Stevenson & Pirog, 2008). National processing plants and distribution channels prefer to contract with highly mechanized large-scale farms (often clustered in geographic production centers) rather than with regional small and medium-sized farmers. Mid-size farms make up the largest share of working farms and account for the largest use of farmland, but also operate closest to the edges of profitability and viability (Kirschenmann, et al., 2008).

Appendix D. National Case Studies of Alternative Distribution Systems

La Montanita (www.lamontanita.coop/) is an example of a retail-driven distributor. Co-op members realized their interest in local foods was directly connected to the fate of regional farmers and ranchers who were scaling back production or going out of business as wholesale market access diminished. The co-op approved a strategic plan to implement a food-shed initiative in 2006, investing $150,000 to support a distribution network of producers within a 300-mile radius from Albuquerque. Planning for a three-year breakeven point, they leased an 11,000 square foot warehouse with cold and frozen storage, and hired an enterprise development coordinator who works with farms to develop wholesale market channels and certifies farms as co-op verified (based on sustainable production practices as determined by the co-op). The co-op's distribution arm was able to become profitable in one year by obtaining vendor status with other food retailers and distributors such as Whole Foods, Sysco, Albertsons, and a variety of small and medium-sized grocery stores and food co-ops. In addition, they distribute national organic brands. By turning competitors into partners, these national partnerships allow La Montanita to cover the overhead costs of local distribution.

Red Tomato (www.redtomato.org) was founded in 1996 and is a domestic fair trade nonprofit produce company focused on distribution to the northeast and mid-Atlantic region. Rather than directly own or operate any infrastructure, the nonprofit serves as a broker between a network of family-scale, ecological fruit and vegetable farmers and retail stores (in addition to other distributors and buyers). Primarily operating as a logistics coordinator, Red Tomato also markets farmer products through eco-labeling (third-party certification via the IPM Institute of North America) and promote "dignity pricing" for 35 farmers. These commodity chain relationships are maintained through identity preservation of the farms and the low-infrastructure investment that works well for a nonprofit.

Good Natured Family Farms (GNFF) (www.goodnatured.net/) is an alliance of 75 local farms within a 200-mile radius of Kansas City marketing thirteen different product categories under one brand name. GNFF distributes their foods exclusively to Balls Food Stores, the largest regional grocery chain in Kansas City. Creating a "farmer's market within a grocery store," GNFF utilizes a "horizontal product diversification" strategy to create economies of scope in order to distribute beef, chicken, turkey, bison, pork, farmhouse cheese, honey, milk, eggs, fruits and vegetables, jams and jellies, and salsa, all year long. The partnership between GNFF and Balls Food Stores facilitates price negotiation between farmers and the grocery chain with the goal of ensuring farms stay financially viable. In the GNFF model, the producer sets the price, GNFF adds a markup to this base price to cover the packaging, labeling, administrative, and marketing costs, and then communicates this price to Balls Food buyers. The final price is based on negotiation between GNFF and Balls Food Stores. Members must meet specific standards to sell under the GNFF brand; however, they can also sell their products independently to other stores under a different brand in addition to being able to sell their product under the GNFF brand. GNFF delivers products to the Balls' 55,000 square foot central warehouse, at which point the inventory is distributed to individual stores. To educate customers GNFF invested $250,000 ($50,000 a year over five years) to implement educational marketing programs. GNFF also sponsors farm tours for Balls Food Stores' managers to tour farms and processing facilities and build stronger relationships with local producers from the ground up. For more information see the Good Food Network Report on Innovative Distribution Models at http://www.ngfn.org/resources/research-1/innovative-models/.

Local Roots Market and Café (http://www.localrootswooster.com) is a new venture of the Wooster Local Food Cooperative. Different from many food and agricultural cooperatives, this cooperative has both producers and consumers as members. The co-op's goals include local economic development, community involvement, healthy eating, and sustainable living. The Roots Market and Café has a year-round storefront for the centralized pickup of goods purchased at an online ordering system, reducing time for both consumers and producers. This storefront provides indoor, year-round space to extend the local farmers' market. In addition, the co-op plans on providing space for farmers to rent in the store. This storefront also includes a café and bakery that sources locally, and a community kitchen where local growers can prepare foods for sale. The co-op promotes community involvement by offering meeting spaced shared with the Wayne County Sustainable Energy

Network. In addition, they host events and offer community educational programming on topics such as food preservation. Finally, Local Roots is located in downtown Wooster promoting economic development in the historic downtown core.

Los Angeles Farmers Market Hub is a conceptual model that engages farmers market associations (FMAs) and farmers market managers in performing key organizing functions to distribute locally grown foods to institutions through farmers markets (Zajfen, 2008). Taking advantage of farmers already gathered at farmers markets, FMAs assist in developing wholesale marketing opportunities that will be run through a single hub market, but draw on growers from other regional markets. Wholesale orders are collected, packed, and shipped from the hub market in order to fill large institutional orders. The hub can or may be an actual physical structure near the market or a space that is set-up at the market and used only when the market is open. Resource sharing, such as utilizing empty trucks returning home from the farmers market to deliver wholesale orders, represents one of the many innovative ways farmers markets can play a role in building viable distribution models. FMAs can encourage resource sharing or in-kind trades between the association and its members or use membership dues to execute a collective effort to develop institutional programming. The consolidation of multiple farmers and their food products can help in addressing barriers such as seasonal fluctuations and supply issues that a single farmer cannot overcome alone. More about this concept can be found in the document "Fresh Food Distribution Models for the Greater Los Angeles Region" (http://departments.oxy.edu/uepi/publications/TCE_Final_Report.pdf).

Appendix E: Survey Instrument

Ohio Distributor Survey

Scaling-up Connections between Regional Ohio Specialty Crop Producers and Local Markets: Distribution as the Missing Link

Please return your completed questionnaire in the enclosed envelope to:

Jill Clark
Dept. of Agricultural, Environmental and Development Economics
The Ohio State University
Agricultural Administration Bldg., 337
2120 Fyffe Rd.
Columbus, OH 43201

If you have any questions, please call Jill Clark at Ohio State University, 614-247-6479, or visit the Center for Farmland Policy Innovation's web site at: http://cffpi.osu.edu

This research is funded by a 2009 grant from the Ohio Department of Agriculture's Ohio Specialty Crop Promotion Program.

I. Introduction

A. Do you distribute any food to any Ohio retail grocery stores [a retail grocery store is any store that sells food to the public and can be a supermarket, convenience store, or department store that also sells food]?
1. Yes – Continue with survey
2. No – Stop. Please mail back your survey. Thank you for your participation.

B. Are retail grocery stores your primary customer?
1. Yes
2. No

C. In addition to grocery retail outlets, what other types of food businesses do you sell to?
1. Restaurants
2. Hotels
3. Schools and Colleges
4. Government Agencies
5. Prisons, Hospitals and other Institutions
6. Other _____

II. Background Questions

We would like to ask you a series of questions about your company. This information, as with all information provided in this survey, will be used for statistical analysis only and your responses will remain strictly confidential.

A. Is your company headquartered in Ohio?
1. Yes
2. No

2a. If no, which state are you headquartered in:
__Indiana
__Kentucky
__Michigan
__Pennsylvania
__West Virginia
__Other

If no, do you have any distribution facilities located in Ohio?
1. Yes
2. No

B. How many distribution facilities does your company have in total? _____

C. How many individuals do you employ?
1. __ part-time
2. __ full-time

D. How many trucks are in your fleet? _____

E. To help us understand the size of your firm, what were your company's gross sales in 2009? Please circle one.

1. Less than $1 million
2. Between $1 million and $5 million
3. Between $5 and $15 million
4. Between $15 and $25 million
5. Over $25 million

F. Please circle the categories that describe the type of services your company provides. Circle all that apply.

1. Shipper
2. Packer/Re-packer
3. Broker/agent
4. Wholesaler
5. Grower/Shipper
6. Retailer
7. Processor
8. Other (specify): _____

G. What broad type of products do you distribute? Circle all that apply.

1. Confectionary
2. Dairy products and Eggs
3. Fish
4. Flowers
5. Fresh Fruit
6. Fresh Vegetables
7. General Line
8. Grains and Field Beans
9. Livestock
10. Meat
11. Other Farm
12. Other Grocery
13. Packaged Frozen
14. Poultry
15. Wine and Other Beverages
16. Other _____

H. Please describe your service area (e.g., names of cities, counties, regions, etc.)

_____

_____

I. What proportion of your estimated 2009 sales (i.e., the dollar value of food you distributed) went to retail grocers within 100 miles, 100–500 miles, and more than 500 miles of your main distribution facility? Please provide your estimates below.

Region	% of retail grocery 2009 sales
1. Locally or less than 100 miles	
2. Regionally or between 100 and 500 miles	
3. Outside of region or more than 500 miles in the U.S.	

J. What regions in Ohio are your retail grocery customers located in (see image on right)? Circle all that apply.
   1. Northeast Ohio
   2. Northwest Ohio
   3. Central Ohio
   4. Southeast Ohio
   5. Southwest Ohio

K. How would you characterize the areas where the majority of your Ohio retail grocery customers are located? Please circle one.
   1. Rural areas
   2. Suburban areas
   3. Urban areas

L. How would you characterize the size of the retail grocery stores you distribute the majority of your products to? Please circle one.
   1. Major chain (nationally based)
   2. Small chain (regionally based)
   3. Single store (not part of a chain)

M. How would you characterize the type of retail grocery store you distribute to? Circle all that apply.
   1. Greenmarket or specialty produce store (primarily selling fresh fruits and vegetables)
   2. Supermarkets that focus on general line of food (e.g., Kroger, Giant Eagle)
   3. Supercenters, Superstores, and Warehouse Clubs that, among other departments, contain a general line food department (e.g., Walmart, Sam's Club, etc.)
   4. Discount supermarket (e.g., Aldi, Trader Joes, Save-a-Lot, etc.)
   5. Natural food supermarket (e.g., Whole Foods, etc.)
   6. Natural food co-op
   7. Convenience or Corner store
   8. Dollar store
   9. Gas stations with convenience stores
   10. Other _____

N. Do you distribute fresh fruits and vegetables?
   1. Yes – Continue with survey.
   2. No – Stop. Please mail back your survey. Thank you for your participation.

III. Building Strategic Relationships between Distributors and Ohio Fruit and Vegetable Growers

The next set of questions explores the opportunities for fresh fruit and vegetable producers and distributors to develop strategic relationships.

A. When purchasing fresh fruits and vegetables, whom would you prefer to purchase from? Please rank the following individuals and groups from 1 to 5; 1 = most desirable and 5 = least desirable.

	Rank
Individual producers	_____
Producer supply groups (e.g., cooperatives)	_____
Produce auction	_____
Regional produce aggregation center	_____
Other	_____

B. Are you actively seeking new Ohio farmers to purchase fresh fruits and vegetables from?

1. Yes
2. No

C. To better assist Ohio fruit and vegetable producers in meeting retail demand, are you willing to partner with growers in developing infrastructure and educational resources?

1. Yes
2. No

D. How willing would you be to partner with growers in the following opportunities for education and growing industry infrastructure?

	Not Likely		Somewhat Likely		Very Likely
1. Assisting in the development local/regional produce aggregation hubs…….....	1	2	3	4	5
2. Assisting in the development of season extension infrastructure…….……	1	2	3	4	5
3. Assisting with logistics planning……...	1	2	3	4	5
4. Assisting with food safety education and execution….	1	2	3	4	5
5. Assisting with on-farm trials for variety selection……	1	2	3	4	5
6. Other_____	1	2	3	4	5

E. We are interested in determining the feasibility of creating regional fruit and vegetable aggregation hubs. These would be places where Ohio farmers could bring fresh fruits and vegetables to aggregate, cool, and package with other farmers to increase the quality, quantity, and flow of product for distribution. These hubs could be organized to allow distributors to order fruit and vegetables prior to pickup.

Would you purchase from a regional aggregation hub if conveniently located?

1. Yes
2. No

F. In the past three years, have you attended any in-service training and/or educational conferences related to fruit and vegetable production, processing or distribution?

1. Yes
2. No

G. If educational sessions were organized to prepare Ohio fruit and vegetable growers to meet distributor standards, how likely would you be to participate in this type of educational programming? Please circle a number from 1 to 7, with 1 representing Not Likely and 7 representing Very Likely.

1	2	3	4	5	6	7
Not Likely			Somewhat Likely		Very Likely	

H. What additional support/resources could service providers such as Ohio Department of Agriculture and Ohio State University Extension provide to help you develop new relationships with Ohio fresh fruit and vegetable growers?_____
_____

_____

I. Opportunities may be offered in the future to develop, maintain, and grow relationships and markets amongst Ohio farmers and distributors. These opportunities may include financing, infrastructure investments, networking, and other resources. **Can we share your company name and contact information with the Ohio Department of Agriculture so they can contact you regarding these opportunities?**

1. Yes
2. No

If yes, please provide a contact name and contact information.
Name: _____
Contact Information: _____

IV. Distribution

Distributors maintain certain requirements for farmers before purchasing from them. To help Ohio farmers become market ready for retail distribution the following section asks about your company's current purchasing preferences and future interests.

A. Do you currently buy products grown, raised, or processed in Ohio?
   1. Yes – **go to question B**
   2. No – **skip to section VI, page 10**

B. What Ohio products do you purchase? Circle all that apply.
   1. Meats
   2. Poultry
   3. Fish
   4. Dairy products and eggs
   5. Fresh fruits and vegetables
   6. Processed fruit and vegetable products
   7. Breads and baked goods
   8. Gourmet desserts
   9. Fresh herbs
   10. Fresh flowers
   11. Nursery crops (e.g., bedding plants)
   12. Ornamental horticultural crops (e.g., gourds)
   13. Wine and beverages
   14. Other_____

➔ If you have purchased Ohio-grown fresh fruits and vegetables go to Section V, page 7, below

➔ If you have <u>NOT</u> purchased Ohio-grown fresh fruits and vegetables go to Section VI, page 10

V. Ohio-Grown Fresh Fruits and Vegetable Purchasing and Distribution—<u>Only answer this section if you have purchased Ohio-grown fresh fruits and vegetables.</u>

A. How do you currently find and procure Ohio-grown fresh fruits and vegetables? Please indicate if you use the following resources by circling the appropriate answer.

	Yes	No	Don't Know
1. Ohio MarketMaker……	1	2	3
2. Produce auctions……....	1	2	3
3. Farmers approach me…….	1	2	3
4. Local grower directories……	1	2	3
5. Producer associations…….	1	2	3
6. Word-of-mouth or referrals……	1	2	3
7. Other _____	1	2	3

B. Have you purchased any of the following Ohio-grown fresh fruits and vegetables? Circle all that apply.

1. Leafy greens
2. Root crops
3. Other vegetables
4. Stone fruit (peaches, plumbs, cherries, etc.)
5. Tree fruit (apples, pears, etc.)
6. Melons
7. Berries
8. Grapes
9. Mushrooms
10. Herbs
11. Other _____

C. What regions in Ohio are your fruit and vegetable growers located in (see image on right)? Circle all that apply.

1. Northeast Ohio
2. Northwest Ohio
3. Central Ohio
4. Southeast Ohio
5. Southwest Ohio
6. No Ohio produce is purchased

D. What is the total amount (in dollars) of your Ohio produce purchases in 2009? $_____

E. How important are the following factors in your decision to purchase Ohio-grown fruits and vegetables? Circle a number between 1 and 5 for each of the following, with 1 representing strongly disagree and 5 representing strongly agree.

	Strongly Disagree		Neutral		Strongly Agree
1. Ohio-grown fruits and vegetables are fresher in season..	1	2	3	4	5
2. Ohio-grown fruits and vegetables are less expensive in season……...	1	2	3	4	5
3. My customers do not care if their fruits and vegetables are grown in Ohio……...	1	2	3	4	5
4. I can sell Ohio-grown fruits and vegetables at a premium.....	1	2	3	4	5
5. I have a commitment to the Ohio growers I currently purchase from……	1	2	3	4	5
6. I do not believe Ohio-grown fruits and vegetables are a better product……	1	2	3	4	5
7. My transportation costs are lowered by using Ohio-grown fruits and vegetables…….	1	2	3	4	5
8. Other _____	1	2	3	4	5

F. Please indicate the estimated percentage of your fresh produce inventory that is composed of **Ohio-grown fresh fruits and vegetables** across the seasons.

	Spring (March–May)	Summer (June–Aug)	Fall (Sept–Nov)	Winter (Dec–Feb)
%				

G. How does the price of Ohio-grown fresh fruits and vegetables in season compare to the same products imported from out of state? Circle one.

	Less Expensive		Priced the Same		More Expensive
1. Ohio fresh fruits and vegetables are generally	1	2	3	4	5

H. Please indicate how much of a problem the following issues are when purchasing *Ohio-grown fresh fruits and vegetables* by circling the appropriate numbered responses.

	Not a Problem		Somewhat a Problem		Serious Problem
1. Finding produce suppliers	1	2	3	4	5
2. Obtaining competitive prices	1	2	3	4	5
3. Variety of fresh fruits and vegetables available	1	2	3	4	5
4. Consistent quality	1	2	3	4	5
5. Consistent availability across seasons	1	2	3	4	5
6. Glut of produce at the peak of season	1	2	3	4	5
7. Grading consistency	1	2	3	4	5
8. Spoilage loss	1	2	3	4	5
9. Proper packaging	1	2	3	4	5
10. Quantities sold by individual farmers is insufficient	1	2	3	4	5
11. Producers do not carry sufficient insurance ……..	1	2	3	4	5
12. Business practices of small producers (e.g., invoicing)…….……..	1	2	3	4	5
13. My business is set up to purchase from local farmers if local produce is made available.....	1	2	3	4	5
14. Ability to communicate consistently with producers……	1	2	3	4	5

I. Reflecting on the challenges of purchasing Ohio-grown fresh fruits and vegetables, what are the top three problems in purchasing more Ohio/local produce? [open-ended]

1. First _____
2. Second _____
3. Third _____

➔ **If you have <u>NOT</u> purchased Ohio-grown fresh fruits and vegetables continue with Section VI, located below on page 10.**
➔ **If you have completed Section V, skip Section VI. Go directly to Section VII.**

Section VI. Reasons Don't Purchase Ohio-Grown Fresh Fruits and Vegetables—<u>Only answer this section if you have NOT purchased Ohio-grown fresh fruits and vegetables.</u>

A. Why have you not purchased fresh fruits or vegetables from local farmers and farmer groups? Check all that apply.
   1. Purchasing Ohio fruits and vegetables is not important to my business.
   2. Have never been approached by farmers and asked to purchase local products.
   3. Quantity needed would be difficult for farmers to meet.
   4. Producers are not able to meet quality standards.
   5. Producers are not able to meet food safety standards.
   6. Don't have the products we need.
   7. Other _____

B. What is the number one reason you have not purchased fresh fruits or vegetables from Ohio farmers?

_____

Section VII. Fresh Fruit and Vegetable Purchasing Decisions

A. Who do you buy fresh fruits and vegetables from? Check all that apply.
   1. Shipper
   2. Packer
   3. Broker agent
   4. Wholesaler
   5. Grower/Shipper
   6. Farmers/Growers
   7. Other distributor
   8. Produce auction
   9. Other (specify): _____

B. We are interested in understanding where distributors source their fresh fruit and vegetable inventory in the height of Ohio's growing season (summer to fall). From your distribution center, please estimate how much of your fresh produce inventory is locally grown, regionally grown, is from outside of the region, or is imported from overseas.

Region	**% of Fresh Fruit and Vegetable Inventory**
1. Locally or less than 100 miles……..	
2. Regionally or between 100 and 500 miles…...	
3. Outside of region or more than 500 miles……	
4. Foreign markets (imports)……	

C. To better understand the scale of your purchases from each grower, in general, what is the minimum lot size typically purchased by your company from a fresh fruit and vegetable grower? Circle your answer.

1. Individual lots/boxes
2. Under 1 pallet
3. Pallets, but less than a truck load
4. Truck load
5. Other _____

D. **When buying** fresh produce, do you require any of the following standards or certification? Please circle your answer: Yes = 1, Sometimes = 2, No = 3, N/A = 4.

	Always	Sometimes	No	N/A
1. Contracting	1	2	3	4
2. PLU coding	1	2	3	4
3. Country of origin labeling (COOL)……	1	2	3	4
4. Traceability documentation	1	2	3	4
5. EDI (electronic data interchange)	1	2	3	4
6. Third-party certification/quality assurance	1	2	3	4
7. HACCP, GAP, or other food safety standards	1	2	3	4
8. Sizing and grading……	1	2	3	4
9. Standardized packing materials……	1	2	3	4

E. When making purchasing decisions, how important are the following fresh fruits and vegetables attributes for your company? Please circle a number from 1 to 5 for each of the following, with 1 representing Not Important and 5 representing Very Important.

	Not Important		Neutral		Very Important
1. Price ……..	1	2	3	4	5
2. Consistently meets grading and sizing standards	1	2	3	4	5
3. Cooled to prevent spoilage loss	1	2	3	4	5
4. Delivery/pickup arrangements ……..	1	2	3	4	5
5. Grown in Ohio	1	2	3	4	5
6. Grown on family farms……...	1	2	3	4	5
7. Certified “organic”…….	1	2	3	4	5

F. How important is purchasing Ohio/local fresh fruits and vegetables to the future of your business? Please circle a number from 1 to 7, with 1 representing Not Important and 7 representing Very Important.

1	2	3	4	5	6	7
Not Important			Somewhat Important		Very Important	

G. Do rising transportation costs make it more likely or less likely that you will purchase more Ohio-grown fresh fruits and vegetables? Please circle a number from 1 to 7, with 1 representing Not Likely and 7 representing Very Likely.

1	2	3	4	5	6	7
Not Likely			Somewhat Likely			Very Likely

VIII. Final Comments

A. How likely are you to complete another survey like this one about a year from now?

1	2	3	4	5	6	7
Not Likely			Somewhat Likely			Very Likely

B. If you have any other comments that you would like to share with us at this time, please write them here.

Thank you for taking the time to complete this survey. We know that you are busy and appreciate your help.

THE OHIO STATE UNIVERSITY

DEPARTMENT OF
AGRICULTURAL, ENVIRONMENTAL,
AND DEVELOPMENT ECONOMICS

SOCIAL
RESPONSIBILITY
INITIATIVE