# INVESTIGATING OPPORTUNITIES TO STRENGTHEN THE LOCAL FOOD SYSTEM IN SOUTHEASTERN MICHIGAN

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**Abstract**

A localized food system is one where a greater proportion of food produced in a region stays in the region to be processed, distributed, sold and consumed. Southeastern Michigan, boasting a still-thriving agricultural base as well as a major urban center including the Detroit and Ann Arbor metropolitan areas, is ripe for the development of a more localized food system. In 2004, a master's project within the School of Natural Resources and Environment investigated the costs and benefits of conventional industrial farming versus local food systems and made a compelling argument for the viability of a local food system in Washtenaw County. Shortly after the release of the Local Food Master's Project report, a team of individuals from all aspects of the region's food system – which later became the leadership team of the Ann Arbor-based Food System Economic Partnership (FSEP) – began identifying mechanisms for implementing the report's recommendations.

Building upon this previous study, the primary objective of this project was to help FSEP develop resources and tools in support of its mission to "catalyze change in the local food system." The project team accomplished this by conducting research on the local food system within a five-county region of southeastern Michigan (Jackson, Lenawee, Monroe, Washtenaw and Wayne counties). Research included reviewing existing food system literature; compiling regional data; developing, implementing and analyzing a multi-sector food system survey; conducting interviews with food system stakeholders; and engaging in Participatory Action Research while working with FSEP's Leadership Team and committees. The outcomes of this research will support FSEP's work by informing the development of local, agricultural economic development opportunities, food system networks and collaborative multi-stakeholder partnerships in southeastern Michigan.

The project team found that southeastern Michigan boasts both a strong agricultural base that includes many farmers who currently sell or desire to sell their products locally and a substantial urban population eager to consume more local foods. This makes the region well-poised for the development of an intentionally localized food system. Although formidable communication and infrastructural barriers exist within the current food system structure, cross-sector demand and the presence of active local food system advocates increase viable opportunities for bridging communication gaps and developing necessary infrastructure through networking, supporting agriculture entrepreneurship, and developing systems for local food distribution. Working together, organizations like FSEP, other food system-focused groups, new and existing entrepreneurs and local governments have the capacity to turn current barriers into future opportunities.

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We would also like to thank Mike Score, Chair of the FSEP Leadership Team, and the other Leadership Team members for their support, collaboration, and guidance over the last year. We have enjoyed working with and getting to know many of them through our work with FSEP committees. Their vision for the food system in southeastern Michigan inspires us all. We hope that this work will support their mission and objectives as they forge new paths, partnerships and opportunities within the region.

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### *Overview of Project*

While Washtenaw, Monroe, Lenawee, Wayne and Jackson counties (referred to hereafter as the "Study Area") in the southeastern region of Michigan was characterized by much economic growth and urbanization throughout the 20th century, the region still boasted over 750,000 acres of agricultural lands at the beginning of the 21st century (U.S. Department of Agriculture National Agricultural Statistics Service 2002). Michigan's unique geography, including two large, primarily flat peninsulas surrounded by four of the five Great Lakes, contributes to its designation as the second most agriculturally diverse state in the United States. Michigan's 50,000 farmers grow over 125 crops, engendering a farm industry that contributes over $50 billion to the state's economy (Michigan Land Use Institute 2006). Yet, like many U.S. states, thousands of acres of farmland are converted annually to other uses and family farmers are hard pressed to remain solvent in a sector increasingly dominated by corporate farming and economies of scale. Consequently, development pressures and poor returns on their products are forcing many small and mid-sized farms to dissolve each year.

The Study Area is also home to the largest city and metropolitan area in the state and one of the largest in the nation. Over two million people call Detroit and its surrounding suburbs home, and over 300,000 others live in cities and villages within Washtenaw County, the second most populous county within the Study Area after Wayne County. This population represents a considerable consumer base for the more agricultural counties of Monroe, Lenawee and Jackson. Despite the fact that the region produces a wide variety of agricultural food commodities, its residents consume only a fraction of those items. Instead, the majority of food produced is shipped out of the state, leaving food that is grown hundreds, if not thousands of miles away, to be consumed by the region's residents. Furthermore, amidst this large-scale exchange of commodities, thousands of residents in the area lack reliable access to affordable, nutritious, culturally-appropriate foods.

There are as many definitions for local food systems as there are examples of them around the world. Generally speaking, "local food system" refers to "new, consciously formed systems, which are characterized by a close producer-consumer relationship" (Vergunst 2001). Local food systems support long-term connections; meet economic, social, health and environmental needs; link producers and markets via locally-focused infrastructure; promote environmental health; and provide competitive advantage to local food businesses (Regional Food Systems Working Group 2006). Of

the number of local food systems in place and thriving throughout the United States, the most successful networks boast a common factor: a major metropolitan area within close proximity to fertile farmland. Based on this observation, southeastern Michigan is seen by many to be ripe for the development of a more localized food system (Davis *et al.* 2004).

### *Benefits of a Local Food System*

The potential benefits of such a system are numerous. The local economy is bolstered as less money is diverted to national or transnational corporations based outside of the region, and local businesses satisfy unmet demands or create new or more efficient systems for the production and movement of foods (Regional Food Systems Working Group 2006). These opportunities help to strengthen the local economy by growing the agricultural sector, creating jobs, providing more choices for consumers, contributing to the local tax base, and reinvesting local money exchanged for food back into local farms and businesses (Che *et al.* 2005; Regional Food Systems Working Group 2006).

In a viable local food system, producers and consumers are linked via efficient infrastructures, which can provide a competitive advantage for local farmers, processors, distributors, retailers, and consumers alike (Regional Food Systems Working Group 2006). Farmers receive a greater return for their produce when there are fewer intermediaries. For example, direct marketing to consumers (e.g., farmers' markets, farm stands, and Community Supported Agriculture) increases returns to farmers (Cantrell *et al.* 2006), often decreases prices for consumers, and may promote more environmentally-sound farming practices. By sharing the risks and rewards of food production, processing, distribution, and retail with other local partners, farmers and businesses can explore opportunities to produce new varieties of foods or expand existing ventures to meet a local or regional need (Griffin *et al.* 2003).

A strong local food system can also result in positive effects on community development and revitalization (Regional Food Systems Working Group 2006). Consumers receive fresher, healthier food and the opportunity to develop a relationship with the farmers and a connection to the origins of their nourishment (Regional Food Systems Working Group 2006). This, in turn, helps to support the viability of small and medium-sized family farms and foster a sense of place, culture, history, and ecology within a region (Che *et al.* 2005; Regional Food Systems Working Group 2006). Similarly, a strong local food system and informed land use policy and local decision-making can help create healthier communities; the strategic preservation of farmland and the production of healthy and

accessible foods can combat urban sprawl, obesity, and hunger (Tufts Food Awareness Project 1994; Tauber *et al.* 2002).

Environmental benefits are also numerous. Paramount among them is the decreased energy and fuel consumption with fewer miles needed for shipping, depending on the mode of transportation and volume of goods transported per load (The Economist 2006). Local farmers that have a direct connection to the consumer through farmers markets and other networks are also more likely to take greater care to grow fresh and healthy foods; farmers that market their products locally do not typically engage in the types of harmful practices common in conventional agriculture. When foods are grown and consumed locally, harmful chemicals are not required to preserve the foods for long periods of time (David Suzuki Foundation 2004). Since local foods are harvested and then processed or sold to the consumer within a matter of hours or days instead of weeks or months, foods are fresher and often have a greater nutritional value when purchased because they can mature fully before being harvested and consumed (Tufts Food Awareness Project 1994; David Suzuki Foundation 2004). Thus, local food systems can help to meet the economic, social, health, and environmental needs of communities and residents within a region (Palan 2005).

### *Background*

This master's project builds upon the 2004 local food system report, entitled *Toward a Sustainable Food System: Assessment and Action Plan for Localization in Washtenaw County, Michigan* (Davis *et al.* 2004), which was conducted by a team of master's students at the University of Michigan's School of Natural Resources and Environment. This previous report made a compelling argument for the viability of a local food system in Washtenaw County, Michigan. Briefly, the primary components of the report were: 1) a literature review contrasting the impacts of industrialization and localization in food and farming in the United States; 2) an analysis of eleven case studies detailing the success and failures of creating an intentional local food system; 3) a food-shed report of Washtenaw County that examined population demographics, agriculture and the environment, food distribution systems, food consumption, and community food security and access; 4) a stakeholder assessment of the Washtenaw County Food System; and 5) an analysis and action plan for localizing the Washtenaw County Food System.

Within a few months of the release of the report, a few dozen individuals representing restaurants, farmers, growers, local governments, universities, and community members came together to discuss

how they might bring the report's recommendations to fruition. These individuals hail not only from Washtenaw, but also Wayne, Monroe, Jackson, and Lenawee counties, more fully representing all stakeholders in the regional agriculture-based economy. The group is now recognized as the leadership team of the Food System Economic Partnership (FSEP), an Ann Arbor-based nonprofit organization.

Barely a year after its charter members first convened, it is driven by the group's overwhelming enthusiasm for the project, its recommendations, and a shared sense that an intentional localized food system has the unique potential to reinvigorate the region's economy, preserve family farms, and promote sustained food security of all of its residents. Yet, in order to build FSEP's capacity to spearhead the development of the local food system and ensure its sustained viability, the group's zeal must be buttressed with evidence and resources to leverage support among stakeholders and potential funders. As such, this master's project work has revolved around the design and implementation of the tools FSEP needs to generate this support. Through literature review, case studies, and primary research through surveys and interviews, we have attempted to review the region's assets and unmet demands in order to identify and prioritize the opportunities for strategic agricultural economic development. Building upon the previous master's project case for local food systems, we aim to help develop a strong and enduring local food system in southeastern Michigan.

### *Description of Partners*

Food System Economic Partnership

The Food System Economic Partnership (FSEP) is an urban-rural collaboration to enable strong farms, healthy cities, community wealth, and job creation in southeastern Michigan. FSEP was officially launched in the beginning of 2005 to identify economic opportunities and implement creative solutions to chronic issues relevant to the food system in the region. The strength of FSEP comes from the combined effort of five county administrations, farm organization leaders, food industry heads, community groups, and food system and economic development experts and resource providers (Food System Economic Partnership 2006). This master's project team has worked closely with FSEP to develop their preliminary goals as an organization.

Michigan State University Extension (MSUE)

The MSUE serves the communities of Michigan through knowledge-based education. The agricultural and natural resource arm of the MSUE researches topics that apply to the farming

communities of Michigan. Among their many scientific, economic, and social focuses is a dedication to promoting Michigan-produced food products. Mike Score is an agent of the MSUE working toward increasing the economic opportunities within a local food system. He works closely with FSEP and brings a reservoir of knowledge in the areas of design of production agriculture research, public meeting facilitation, public speaking, program planning, and team building. Mr. Score has extensive training in agronomy, public policy deliberation, conflict management, business planning, adult education, grain marketing, leadership development, and program evaluation.

### *Goals and Audience*

The primary objectives of this research endeavor were to assist FSEP in developing resources and tools to identify unmet local consumer demands and opportunities for agricultural economic development, including gathering data to inform the future work of FSEP, identifying potential barriers and opportunities for a localized food system, developing research-based resources for FSEP outreach to the public and policy makers, and creating tools to assist FSEP with measuring and evaluating organizational progress. These objectives were accomplished via a review of the existing food system literature; the compilation of regional data; the development, implementation and analysis of a multi-sector food system survey within the Study Area; the conduct of interviews with food system stakeholders; and Participatory Action Research through engagement with FSEP's Leadership Team and committees. In partnership with FSEP, major outcomes from this research include:

- A review of local food system research focused tightly on issues and components of local food systems germane to the region;
- A profile of the local food system within the five-county area intended to be distributed broadly to residents within the Study Area as a learning tool for communicating the ideas and concepts underlying a local food system;
- A mechanism for conducting an organizational assessment of FSEP in order to document successes and areas for improvement on an annual basis; and
- A presentation and summary of research findings and data collected from a multi-sector survey and stakeholder interviews.

In support of FSEP's mission to create local, agricultural economic development opportunities and enhance community viability in southeastern Michigan through creative solutions, outcomes from

this venture will inform future efforts to develop food system networks, collaborative multi-stakeholder partnerships, and entrepreneurial opportunities. This report will serve as a baseline assessment of the local food system for FSEP and will be the initial foundation for a more comprehensive inventory of the food system to be conducted by FSEP over time as they continue to implement their mission and initiatives.

# Chapter 2: Literature Review

## Introduction

*Background*

In August 2004, a group of Master's students from the School of Natural Resources and Environment at the University of Michigan completed a Master's thesis, entitled "Toward a Sustainable Food System: Assessment and Action Plan for Localization in Washtenaw County, Michigan." Over the course of a year, the authors conducted an extensive literature review, a case study analysis, a local *foodshed*[1] report, and a stakeholder assessment, which informed an action plan of "Strategies for Localizing the Washtenaw County Food System." The project's client was Slow Food Huron Valley, the Washtenaw County *convivium* of Slow Food USA. Slow Food is an international movement dedicated to ensuring that food is "good, clean and fair" (SlowFoodUSA 2006). Slow Food's mission is to link "pleasure and food with awareness and responsibility." The association's activities seek to defend biodiversity in our food supply, spread the education of taste and link producers of excellent foods to consumers through events and initiatives" (Weiner 2005). At the time, Slow Food Huron Valley was the most aptly positioned local entity to solicit the project. Today, in part resulting from the group's work, there is a broader audience for future study and research on food system localization in southeastern Michigan.

"Toward a Sustainable Food System" reviewed the literature on the state of the U.S. food system and the problems associated with the dominant model of large-scale, industrial agriculture that characterizes that system. The review investigated and contrasted the environmental, human health, and international costs of the dominant global, industrial food system model with the benefits of an intentionally localized food system (Davis *et al.* 2004). The review cited Jack Kloppenberg's definition of a "local food system" as "self-reliant, locally or regionally based comprised of diversified farms using sustainable practices to supply fresher, more nutritious food stuffs to small-scale retailers and consumers, to whom producers are linked by the bonds of community as well as economy" (Davis *et al.* 2004). Components of local food systems, as identified by Vergunst (2001), include the exchange of food, the flow of information from producer to consumer and the attribution of additional "immaterial" qualities to the food.

[1] "The term "foodshed," borrowed from the concept of a watershed, was coined as early as 1929 to describe the flow of food from the area where it is grown into the place where it is consumed. Recently, the term has been revived as a way of looking at and thinking about local, sustainable food systems" Wisconsin Foodshed Research Project (2006). What is a foodshed? **2006**.

The literature review developed the background for an in-depth case study analysis of 11 models of intentionally localized food systems in the United States, Canada and Tokyo. The case studies analyzed the scope of each organization's mission, the nature of the organizational structure and the emphases of its programs and represented a diverse set of model organizations that engaged a variety of food system issues through context-appropriate approaches. Highlights of the findings by Davis *et al.* (2004) include:

- "Most local food system initiatives emerge from already existing efforts. They come together around a common mission and this mission itself becomes a structural response to the needs and conditions of the locality."
- "A system will be more viable at a scale where at least some producers, providers, and consumers are jointed and well-balanced in terms of flow of goods."
- "The loss of food processing infrastructure limits what can be done in a local food context to create added value."
- "Consumer demand can leverage the creation of new local food infrastructure."
- "The interface between local production practices and conventional distribution and retail infrastructure is a significant barrier for locally-oriented producers."
- "A clear, focused mission can attract partners and facilitate fundraising."

From the case studies, the authors found that "the first step for any intentional local food intervention is to gather information about the locality – to shorten the distance between itself and those it serves" (Davis *et al.* 2004). Therefore, the purpose of the current Master's project has been to do just that in partnership with the organization that the former group's research helped to establish.

Based on their findings from the literature review and case studies, as well as a locally-focused foodshed report and stakeholder analysis, the report concluded with an action plan for localizing the food system in Washtenaw County, including the following activities:

1) Educate the community on the value of localized food systems
2) Build an alliance of local stakeholders
3) Expand research into food systems issues and opportunities
4) Increase local producer viability
5) Promote and develop local processing, distribution and retail

6) Access and use knowledge, networks, models of other local food initiatives
7) Actively support local and broader scale policy changes

(Davis *et al.* 2004)

Without going into detail on these key components of establishing a more localized food system, it suffices to say that significant action has begun to follow the suggested course. Since the completion of that report, FSEP, a five-county collaboration of individuals representing all sectors of the food system, was established in 2005 and attained 501(c)3 non-profit status in 2006. Notably, FSEP's scope is much broader than that originally envisioned in the former Master's project team. FSEP represents Jackson, Lenawee, Monroe, Wayne and Washtenaw counties. The organization is currently involved in activities to promote education about the food system, increase producer viability, promote new local agricultural businesses such as processing facilities and support broader policy change. A core aspect of FSEP's work, led by the research and technology work group, is to engage in research on the local food system and opportunities.

Over the last few years, myriad food system-related issues including community food security, school food and wellness policies, the organic food industry, the economic viability of small-scale agriculture, and the energy dependence of the international food system have gained increasing media and research attention, both nationally and locally. In order to build upon the former Master's project and provide FSEP with valuable, current information, this literature review focuses on recent data, demographics, research, policy and news to gain a more comprehensive understanding of the viability of an intentionally localized food system in southeastern Michigan. Emphasis has been place on the five-county area that is served by FSEP.

To place this review in context, we begin with a brief overview of the demands and barriers for localized food systems and an examination of some of the models of local food systems in the United States. With this foundation and working familiarity with the common local food systems discourse, we turn the focus to the local context, examining demand and barriers for intentional food systems in Michigan, and southeastern Michigan in particular. This discussion is rounded out with a presentation of relevant regional data and statistics that FSEP and others can bring to bear in the design and implementation of programs and initiatives within the local food system.

**Macro-Level Opportunities and Barriers to Intentional Local Food Systems: An Overview**

The structures of food production and distribution systems in the United States (and elsewhere) have shifted radically over the past several decades. Control over these systems has been centralized in corporate retailers and processors, shifting the locus of control away from producers and consumers. This amalgamation of control occurs through multifaceted processes, both economic and societal. The primary economic forces which shape today's food industries are horizontal and vertical integration of production, processing, distribution, and retailing entities within and between industries. These forces operate within a framework affected by recent changes in societal policies concerning control over energy usage, commodity subsidization, industry regulation, and application of intellectual property laws to biological organisms.

This transfer of power within the food industry has forced consumers to adapt to new roles within their food systems. Consumers in the United States have largely become little more than codependent end-users as commoditization of "raw material" foodstuffs in combination with increasingly specialized processing and distribution of pre-packaged foods creates a compartmentalization in which consumers become increasingly disconnected from their sources of food. This compartmentalization and codependency has produced structural inequalities in the social and economic systems responsible for the availability and distribution of foodstuffs throughout the country. As a result, community-based food movements have arisen as attempts to recognize, address, and change these inequalities. These alternative models are all based upon the concept of the return of a community's food supply to localized control; however, they differ in their strategies for achieving this goal. The local food movement attempts to implement its strategies on the geographically localized level. Examples of local food strategies include community-supported agriculture (CSA), consumers' cooperatives, farmers' markets, community gardening, agritourism, and farm-to-school programs.

### *The current trend in food industries: consolidation*

Food markets in the United States were once characterized by a larger proportion of small and medium-sized producers, processors, distributors, and retail outlets. Over time, those smaller-sized entities have since become integrated into tight networks, with decision-making power over production and processing methods moved increasingly to the retail end of those networks. This integration has led to the consolidation of production, processing, distribution, and retailing facilities into very large entities owned primarily by corporations (as smaller facilities are outsourced). As a

result of this consolidation, control over food production and consumption is being shifted away from producers and consumers and concentrated in corporate retailers and processors (Mardsen *et al.* 1994; Mardsen *et al.* 1997; Welsh 1997; Heffernan 1998; Hendrickson *et al.* 2001; Conner 2004; Che *et al.* 2005).

### *Horizontal consolidation*

Much of the consolidation in the retail sector has come through horizontal integration as large retailers acquire other retailers to gain market share. In 1997, the five largest food retailers (i.e., Kroger, Alberson's, Wal-Mart, Safeway, and Ahold USA) accounted for 24 percent of the retail food market in the United States (Hendrickson *et al.* 2001). By 2005, these retailers had increased their share of that market to 56 percent through mergers and acquisitions (Hendrickson *et al.* 2005). Beginning in the 1970s, large retail corporate interests began to lobby for the relaxation and/or elimination of governmental controls over their industries, including regulations concerning oligopolies and monopolies. When these changes were set into place during the 1980s, large retailers attempted to protect their positions in the deregulated markets through the acquisition and/or elimination of competitors (Mardsen *et al.* 1997; Carolan 2005). If these acquisition trends continue, it is predicted that six or fewer global food retailers will survive into the next decade, with Wal-Mart being the only U.S. firm (Hendrickson *et al.* 2001).

Horizontal integration of food processing firms in the United States began in the first half of the 1900s (Heffernan 1998). In many areas, food processing industries were comprised of hundreds of specialized firms which competed against each other regionally. Deregulation of food processing markets, pushed along by the political efforts of large agribusiness corporations, began to subject those markets to the pressures of globalization (McMichael 1999). As many processors found themselves in markets where demand was still relatively constant despite expansion, they began to create value-added markets through the creation and sale of fully processed and packaged foods for direct distribution to retail outlets. This was intended to combat pressures such as the depression of workers' wages and direct competition against new competitors in distant places such as Mexico and Chile (Welsh 1997).

By forming strategic alliances and mergers with other processors and producers, processing firms were able to shift risks of production to producers through the reorganization of processing methods along principles of industrial rationalization, which use the scientific method to analyze,

separate, and manage all components of jobs within an industry. For example, beef processors began to consolidate their operations into large regional facilities where operations were conducted using non-skilled labor in conjunction with automated and mechanized processes (Mardsen *et al.* 1994). As of 2005, 83.5 percent of beef processing in the United States was controlled by four firms (i.e., Tyson Foods, Cargill, Swift & Co. and National Beef Packing Co.), 64 percent of pork processing was controlled by four firms (i.e., Smithfield, Tyson Foods, Swift & Co. and Hormel Foods), 71 percent of soybean processing was controlled by three firms (i.e., Archer Daniels Midland, Bunge, and Cargill), and 63 percent of flour processing was controlled by four firms (i.e., Cargill/CHS, Archer Daniels Midland, ConAgra, and Cereal Food Processors) (Hendrickson *et al.* 2005).

### *Vertical Consolidation*

Through the process of industrial rationalization, processors are becoming increasingly vertically integrated with producers (Welsh 1997; Heffernan 1998). An example of this process is ConAgra's involvement in poultry production. ConAgra is the largest turkey producer and second largest chicken producer in the United States. It distributes agricultural chemicals and fertilizers; produces poultry feed; and owns grain storage elevators, railroad cars, and barges. ConAgra operates poultry hatcheries in which it hires growers to raise its birds. The birds are then transferred to ConAgra facilities for processing. The processed meat is then sold under the name of Country Pride or processed further into value-added products under the names of Banquet and Beatrice Food (Heffernan 1998). Under this type of contract production, producers are required to provide land and facilities, equip these facilities to the processor's specifications, and provide labor resources (Heffernan 1998; Lyson *et al.* 2004). However, the producers never actually own the poultry, feed, medications, etc.; have no knowledge of the underlying technologies; and don't make major decisions concerning the production process (Heffernan 1998; Lyson *et al.* 2004). In many respects, producers have become paid laborers for agribusiness.

Retailers are also consolidating markets through vertical integration with processors and distributors. Whereas retail grocers of the past tended to carry more unprocessed "raw materials" foods, which the consumer would then prepare at home, large retail firms now increasingly contract directly with processors and distributors to procure store-ready and/or pre-prepared value-added food products (Welsh 1997; Hendrickson *et al.* 2001). For example, Kroger now purchases store-ready beef (i.e., processed and packaged for direct placement on store shelves) directly from Cargill, and Wal-Mart

purchases store-ready beef from IBP, Farmland Industries, and Smithfield (Heffernan 1998). Smaller distributors and wholesalers, producers, processors, and retailers are being forced out of the food production process as vertically integrated retailing networks become more widespread (Mardsen *et al.* 1997; Heffernan 1998; Kuhn 1999). Many retail chains now charge food producers and manufacturers slotting fees for the introduction of new products, display fees, presentation fees, and failure fees. These fess may account for up to 50% – 75% of these chains' total net profits, and may have the effect of discriminating against small producers and processors (Heffernan 1998; Stanton 1999).

### *Governmental roles in the change of food systems: neoliberal globalization*

The retailers, processors, distributors, and producers of food systems do not exist in a vacuum. All of these entities exist within the panoply of institutions and processes which make up our societal structures. These structures also include agents of the state and citizens/consumers, whose participation, compromise and/or consent is necessary for the survival of such structures (Dovring 1988; Mardsen *et al.* 1997; Koc *et al.* 1999; Carolan 2005). During the 1980s and 1990s, neoliberal privatization movements began to force governments to deregulate industries. Through agreements structured under globalized organizations such as the World Trade Organization, traditional structures of centralized governmental rule-making and control of economic processes through legislation and regulation were reduced or eliminated. A key example of this process in the United States was the Federal Agriculture Improvement and Reform Act of 1996 (1996 Farm Bill). This bill attempted to bring laissez-faire market principles to the agricultural markets of the United States by reducing or eliminating food and farm commodity price controls and supports (Mittal 2002). Before the 1996 Farm Bill, governmental regulation was used to maintain pricing controls throughout agricultural industries in order to maintain market structures which did not discriminate against particular players, such as smaller firms, or consumers' interests. These controls also helped to protect producers within agricultural markets from the periodic economic downturns of those markets, and helped to regulate the national markets against global influences such as price-dumping (Dovring 1988; Mardsen *et al.* 1997; Mittal 2002).

Other forms of deregulation reduced or replaced centralized governmental oversight of industries with increasing third party control. This led to an increasing occurrence of manufacturers, retailers, etc. assuming the responsibility of oversight of their industries. An example of this process occurred in 1997 when the U.S. Food and Drug Administration (FDA) changed its regulations concerning the

quality control of ground beef. Oversight of these responsibilities traditionally fell upon FDA field inspectors, but under the new regulations, automated irradiation processes were allowed to substitute for direct inspection by field inspectors (Mardsen *et al.* 1997; Koc *et al.* 1999; McMichael 1999).

As retailer, processor, and distributor networks began to grow, these economic interests began to exert influence on governmental and economic policies by pushing for policies that would maintain market conditions that were favorable toward their businesses. These policies were set up to favor economic growth and consumption over other interests, and were tuned to facilitate the expansion of large-scale businesses onto the international level – a process which came to be described as globalization (Dovring 1988; Mardsen *et al.* 1997; McMichael 1999; Carolan 2005). National and international regulations concerning the flow of capital were revised, restricted, or removed, along with legislation and other policies that were determined to be detrimental to competition (e.g., environmental laws, labor regulations, income redistribution) (Mardsen *et al.* 1997; Koc *et al.* 1999; McMichael 1999; Carolan 2005).

### *Energy policies*

Agricultural aid in the United States is largely directed to producers who use conventional farming techniques, which are based on the consumption of fossil fuels. In comparison, little aid is given to research alternative farming techniques, which reduce dependency on fossil fuels. This approach to energy usage has influenced the conventional systems of agriculture in a way that has caused most producers to become increasingly reliant on mechanized/industrialized farming techniques (Pirog *et al.* 2001; Conner 2004; Box *et al.* 2005; Murray 2005). As the production-processing-distribution-consumption chains for food have become longer and more mechanized, they have become a substantial portion of the United States' overall energy budget. In 2000, the total U.S. energy consumption was 99.0 quadrillion Btus[2] (quads) (Energy Information Administration 2005). Of this total, 10.3 quads (about 10.4 percent of the total budget) were used by the United States' various food systems (Heller *et al.* 2000). Of the energy used by the food system, 21 percent was used for agricultural production and the remaining 79 percent was used for processing, transportation, packaging, storage, preparation, etc. (Heller *et al.* 2000; Murray 2005).

In industrialized farming, heavy equipment is used to grow monocultures of crops, which are grown on large tracts of land and require massive amounts of energy to thrive. These methods require

[2] A Btu is a unit of energy used in North America (1 Btu = 1,055.05585 joules).

heavy use of agrochemicals, including fertilizers and pesticides. This chemical dependence effectively disconnects the plants from some natural energy and nutrient sources, as the energy used to grow the plants is instead derived from the fossil fuels used to create the chemicals. The process of converting fossil fuels into chemicals used for agriculture is severely more energy intensive than using direct sunlight as the sole source of energy for the plants (Jones 2001; Box *et al.* 2005; Murray 2005). In addition, energy is now used to move water great distances to help green previously non-arable areas, which increases the use of fossil fuels and drains aquifers (Murray 2005). With increased subsidization of energy sources such as oil, coal and natural gas, transportation costs for the transport of economic goods are lower than their "real" cost (Pirog *et al.* 2001; Box *et al.* 2005; Murray 2005). The distances between producers, processors, distributors, retailers, and consumers of food products have dramatically increased as the costs of transportation have decreased (Pirog *et al.* 2001; Box *et al.* 2005; Murray 2005). Food within the conventional production, distribution and retail systems in the United States now travels an average of 1,500 – 2,500 miles from points of growth to consumer tables (Halweil 2005).

### *Subsidization of selected crops*

Since the 1970s, U.S. governmental policies concerning the subsidization of agriculture have been modified, due in part to the influence of corporate lobbying. The majority of federal monies now are used to encourage the growth of a few different types of plants, such as corn, wheat, and soybeans. These crops are either sold as raw materials by large agribusinesses to processors for the construction of processed foodstuffs or are sold as commodities to help balance trade deficits with other countries. In the latter case, extra surpluses are often masked as foreign aid (Alteri 2002; Manning 2004). Before the 1970s, the majority of farmers in the United States grew large varieties of plants – hundreds of different types of fruits, vegetables, and grains, with scores of variations of each plant – for direct distribution on a regional scale to retailers and consumers (Alteri 2002; Manning 2004). However, the Farm Bills of 1996 and 2002 restructured governmental subsidy programs to direct aid mainly to large-sized agribusinesses growing a select set of crops (Mittal 2002).

These subsidy programs have created a situation in which most farms now must produce a small set of commodities to sell on a large scale to big agribusiness corporations (Manning 2004). This has resulted in a dramatic decrease in genetic diversity of cultivated plant types. By the end of the1970s, 60-70 percent of beans in the United States were planted with only three varieties of beans, 72 percent of potatoes were planted with four varieties, and 53 percent of all cotton was planted with

three varieties (Alteri 2002). This decrease in biodiversity has left many crops unable to adapt to changing environmental factors, which increases farmers' dependence on artificial controls such as fertilizers, pesticides and irrigation. This situation, in turn, increases farmers' dependence on large corporations for capital inputs such as loans (Conner 2004; Manning 2004). In addition to depleting biodiversity in agriculture, the subsidy system tends to the overproduction of major crops and lower commodity prices. This creates a situation of dependence in which producers are forced to produce more of the same few crops and depend on government subsidies to stay afloat.

### *Genetically modified crops*

Agribusiness corporations have created "genetically modified" (GM) species of plants which possess specific "desirable" traits that have been introduced to help plants withstand certain environmental factors (Alteri 2002; Mittal 2002; Ching 2003; Kimbrell 2003). Examples include Monsanto's "Bt" corn, which produces a toxin that is poisonous to insects that feed on the corn. The toxin-producing genes were "spliced" into the corn from the genes of *Bacillus thuringiensis* (Alteri 2000). GM species of plants have created major problems for farmers engaged in medium- and small-sized production scales. The traits of GM, which are enhanced by biotechnology companies often are only beneficial if used in conjunction with agricultural chemicals (Alteri 2000; Mittal 2002). Monsanto also produces seed for crops (e.g., corn, soybeans, cotton, canola) which are resistant to its RoundUp product, a chemical it also produces. This modification allows farmers to place increasing amounts of chemicals into the soil to combat non-desirable plants, but has the effect of trapping many farmers into a two-fold dependence on agribusiness corporations: first for the chemical inputs needed to grow the crops and second for the "enhanced" plants which can withstand the increased usage of chemicals (Alteri 2000; Ching 2003). Other concerns created by GM crops include unintended biological consequences that often cannot be controlled for in laboratory testing. For example, the toxin produced by Monsanto's aforementioned "Bt" corn is poisonous to predators of herbivores which feed on the plants (Alteri 2000). Furthermore, "Bt" toxin has been documented to kill bacteria in the soil which aid in organic decomposition, thereby negatively impacting soil fertility and increasing use of fertilizers (Alteri 2000).

Perhaps the most significant impact of GM products on medium- and small-sized producers is the dispute over who owns the intellectual property rights to these GM plants. The Delta and Pine Land Company (now a part of the Monsanto Corporation) in conjunction with the U.S. Department of Agriculture (USDA) has created "terminator" seeds, which become sterile after a single growing

season. The seeds are not available commercially yet; however, farmers who would potentially use these seeds would not be able to save seed surpluses for planting in subsequent years, a practice known as "seed banking." (Alteri 2000; Mittal *et al.* 2001; Mittal 2002; Ching 2003; Kimbrell 2003; Borowiak 2004). Lack of seed banking could drastically increase production costs for farmers, and increase their dependence on large corporations for loans and other inputs (Ching 2003). Furthermore, farmers whose crops become hybridized with GM varieties of plants can now be accused of possession of biotech companies' intellectual properties, regardless of whether the cross-pollinization was intentional or not (Mittal *et al.* 2001; Kimbrell 2003; Borowiak 2004). Under these circumstances, biotech companies can (and have) sued and seized farmers crops and seed stores or have forced farmers to pay monetary compensation for the aggrieved offenses (Mittal *et al.* 2001; Borowiak 2004).

### *Consumers' changing roles in food systems*

All of these aforementioned processes and influences have combined to create a situation in which consumers are disconnected from the sources of their foods. Due to the demands of U.S. society, many consumers now perceive themselves as being "time-deficient", and are willing to pay more for processed food products that require little preparation (Box *et al.* 2005). Commoditization of "raw material" foodstuffs, combined with the specialized processing and distribution of pre-packaged foods, has created an environment of extreme compartmentalization where many consumers have no idea where their food is grown or collected, how it is prepared or processed, or how far it has to travel to reach their tables (Feenstra *et al.* 1998; Koc *et al.* 1999; Selfa *et al.* 2005; Wilkins 2005). As that distance "from field to table" has lengthened, consumers' perceptions of whom and what makes up their "local food system" have changed as well. People who once considered the area of their local food system to include the county in which they live and, perhaps the few counties which surround it may now consider their state, region or even the entire nation to be part of their food system. As a result, many people are now willing to accept foods containing higher amounts of chemicals and foods with lower nutritional value as being a normal and acceptable part of their diet because of their lack of understanding of how their food system operates (Selfa *et al.* 2005).

### *Local food availability and information*

Often, locally-produced or organic foods are not equally available to all communities within a region. Due to disparities in pricing and/or distribution that arguably result from the subsidies for conventional agricultural products and other factors mentioned above, many communities do not

have access to non-conventional foods (Allen 1999; Kantor 2001). Even when locally-produced or organic foods are locally available, many consumers may view those products as extravagant as they may not fit easily within their food budget (Gussow 1999; Conner 2004). Consumers often may not understand the differences between locally-grown, organic, and conventionally-produced foods since voluntary labeling is often the primary method for communication of this information in the United States (Conner 2004). This places the burden of education directly on the consumer, as they must study non-standard voluntary labeling, read direct marketing materials, or make direct contact with producers to determine which products meet their needs. This chore can often be a confusing and time-consuming experience (Conner 2004). In cases where information standards have been established by the government, such as organic labeling, these standards do not always provide a complete picture of a food product's production and distribution. For example, organic labeling currently concerns itself only with information on how the food was produced and the production processes' impact on the immediate growing environment. It does not include information about the environmental impact of its transportation, processing, distribution, packaging or labor. As a result of the lack of comprehensive and standardized labeling information on foods, consumers are largely unable to make the informed choices which would allow them to purchase and consume higher-quality, healthier foods (Gussow 1999; Conner 2004).

### *A counterforce arises: the food security movement*

In response to the aforementioned conditions that characterize the United States' and other food systems, a movement has arisen throughout the world to advance the issues of "food security." In 1996, the Food and Agriculture Organization of the United Nations (FAO) convened an event in Rome referred to as the World Food Summit. The summit was an attempt to address global malnutrition problems through a renewed commitment of governmental resources. The summit produced two documents: the Rome Declaration on Food Security (which was amended in 2003) and the World Food Summit Plan of Action (Food and Agriculture Organization of the United Nations 2003). The FAO describes the concept of "food security" as a condition which exists when "all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life" (Food and Agriculture Organization of the United Nations 2003). "Food insecurity" exists when countries experience perpetual food distribution problems and shortages, which often result in widespread chronic hunger for significant numbers of people. Conditions of food insecurity can be created when the distribution of food becomes a political issue (Allen 1999; Koc *et al.* 1999; Hassanein

2003). An example of this occurs in the United States when governmental subsidies are used to encourage the growth of a few specific types of plants (corn, wheat, soybeans, etc.), which are then often sold at artificially low prices as either raw materials to agribusiness processors for the construction of pre-prepared foodstuffs or as commodities which help balance trade deficits with other countries (Menezes 2001; Alteri 2002; Manning 2004).

Food system activists advocate for "food sovereignty" as an economic approach for achieving food security (Allen 1999; Koc *et al.* 1999; Menezes 2001; Hassanein 2003; Wekerle 2004; Mosseau *et al.* 2006). "Food sovereignty is the right of each nation to maintain and develop its own capacity to produce the staple foods of its peoples, respecting their productive and cultural diversity" (Menezes 2001). The movement promotes the idea that localized control over food systems has been usurped at various points throughout history and today by colonial powers. In the past, these powers were represented primarily by nation-states and their various agents, while today's neocolonial powers are represented primarily through multinational corporations operating under international trade agreements constructed through non-transparent governing organizations such as the World Trade Organization (Koc *et al.* 1999; Menezes 2001; Mosseau *et al.* 2006). As mentioned, this process takes place in the United States when agribusiness corporations purchase agricultural resources at artificially low prices and use them to produce cash crops or pre-processed foodstuffs for exports (Menezes 2001). To make this type of trading easier for the agribusiness corporations, international trade agreements, such as the North American Free Trade Agreement (NAFTA) and the General Agreement on Tariffs and Trade (GATT), are used to restructure national and international laws and controls (e.g., trade tariffs, trade quotas, labor laws, environmental restrictions) to facilitate the easier movement of capital and goods between nations while externalizing costs such as environmental and social impacts (Menezes 2001; Mosseau *et al.* 2006). The food sovereignty movement advocates that revising international trade agreements and restructuring societal controls over multinational agribusiness corporations will help to lessen those corporations' control over the food systems of localized communities. Reducing these corporations' control over localized food systems will allow that control to be returned to the local communities, which would help those communities achieve the conditions necessary for food security (Allen 1999; Koc *et al.* 1999; Menezes 2001; Hassanein 2003; Wekerle 2004; Mosseau *et al.* 2006).

### *Food security based alternative models*

While the food security movement has its roots in diverse communities throughout the world, several common themes for alternative models of food production and distribution have evolved. Underlying almost all of these alternative models is the concept of return of a community's food supply to localized control. Assorted labels such as "civic agriculture" (DeLind 2002; Lyson *et al.* 2004), "food citizenship" (Wilkins 2005), and "sustainable agriculture" (Conner 2004) are used to describe various lenses through which the topic is addressed (i.e. political, economic, environmental) and the manner in which solutions should be applied. However, the fundamental concept on which each is based is that of localized control (Feenstra *et al.* 1998; Allen 1999; Koc *et al.* 1999; McMichael 1999; DeLind 2002; Conner 2004; Wilkins 2005).

The movement has evolved to the point that the lenses of approach now range from the global to the local level. Suggested interventions on the global level include dismantling of international trade agreements which work to concentrate power within multinational corporations, including the removal of agriculture from the World Trade Organization (Henderson 1998; Koc *et al.* 1999; McMichael 1999); restoration of trade tariffs, embargoes, pricing subsidies and other national controls which help to regulate the flow of goods and capital between countries (Henderson 1998; Allen 1999; McMichael 1999); and harmonizing of environmental, labor, and human rights standards on an international level in an attempt to force multinational corporations to minimize externalities (Henderson 1998).

Within the United States the movement is working on the national level to rescind trade agreements such as NAFTA, restructure U.S. intellectual property laws to protect genetic diversity, construct legislation to protect farmers' rights to conserve their agricultural resources, enhance consumers' health and safety rights (Alteri 2000; Ching 2003), and expand product labeling provisions to include information on genetically modified components along with additional health/nutritional information (Conner 2004; Wilkins 2005). Interventions on the localized level in the United States are mainly focused on the creation of decentralized institutions and mechanisms of direct interaction between individual producers and consumers. Such models include:

| | |
|---|---|
| Community-supported agriculture (CSA) | Consumers purchase shares at the beginning of a farm's growing year which entitle them to a portion of the farm's crops (Kantor 2001) |
| Consumers' cooperatives | Groups of consumers which pool their resources to purchase products (Kantor 2001; Selfa and Qazi 2005) |
| Farmers' markets | Community gathering locations which bring producers and consumers into direct contact at specific times of the week (Kantor 2001) |
| Community gardening and urban agriculture | Common gardens in urbanized areas which are shared by multiple residents from a neighborhood in order to ensure a supply of fresh foods (Cook and Rodgers 1997; Kantor 2001) |
| Agritourism | A form of tourism in which people are invited to visit farms to experience the agricultural lifestyle (Che, et al., 2005) |
| Farm-to-school programs | Projects in which school systems arrange to purchase food products directly from local producers (Kantor, 2001) |

Despite the formidable barriers posed by the dominant, global industrial food system, many communities, cities, states and regions are making great strides to intentionally re-localize their food systems in the name of public and environmental health, environmental stewardship and sustainability. To help develop a better understanding and vision of a stronger, intentionally localized food system in southeastern Michigan, it is useful to look at some leading examples elsewhere. The following section presents some useful information generated from the experiences of recent alternative food systems from around the United States.

**Alternative Food System Models: Successes and Lessons Learned**

An intentionally localized food system is considered by most to be an "alternative food system," defined in contrast to the dominant national or global food system. The book *Bringing the Food Economy Home: Local Alternatives to Global Agribusiness* (Norberg-Hodge *et al.* 2002) chronicles the emerging trends toward alternative food systems. Its authors claim that "consumers and farmers are forging links to promote smaller-scale, more diversified, and ecologically sound agriculture. These

groups favor foods grown nearby, rather than global commodities mass-produced thousands of miles away" (Norberg-Hodge *et al.* 2002).

A review of the literature on alternative food system models brings to light the several important components of a successful localized food system including: geographic location, creative marketing initiatives, expanding business opportunities through partnerships and networks, and overcoming farm-level challenges (Kremen *et al.* 2001; Griffin *et al.* 2003; Jackson 2003; Hadad 2004; Che *et al.* 2005). Key characteristics that experts and practitioners identify as paramount to the success of locally-supported food systems include reasonable prices, high quality products, convenient accessibility, and partnerships among producers, distributors, and other stakeholders (Tauber *et al.* 2002; Che *et al.* 2005; Palan 2005). In this section, we elaborate on each of these components and characteristics to form a better understanding of alternative, localized food systems in a global economy.

### *Geographic Location*

While many regional food systems have experienced tremendous success, some systems have met the limitations of numerous geographic or location-based barriers. For example, producers, distributors, and consumers may be fragmented based on their geographic locations or proximity to urban areas. This reduces the convenience factor for distribution and can also reduce the availability of a wide variety of products – both of which have been identified as key characteristics of successful food systems. Research has also shown that local populations may be familiar with the types of products and processes associated with a local food system, but less knowledgeable about a system's positive and negative outcomes, including its social and environmental impacts (Palan 2005). This has the potential of influencing the success of a local or regional system and signals the need for additional community education.

### *Marketing*

The communication of product availability and specific health and environmental benefits of consuming local products has been found to be critical in establishing and maintaining successful food systems. However, for some food systems, marketing the system and its particular components has been a recurring challenge, especially with limited budgets for advertising. Other challenges include finding and maintaining an identity or niche; changing consumer trends; competition with supermarkets, larger farms, and dealers who bring in outside products; seasonal trends; the location,

accessibility, and hours of retail outlets such as farmers' markets; and distributor contracts, which can prevent buyers from making any significant local purchases (Griffin *et al.* 2003).

These challenges are not easily overcome, but must be addressed and communicated to the target audience for local foods. For example, some farmers' markets are attempting to increase access to local foods for specific populations by locating markets near modes of public transportation and adjusting market times to accommodate a variety of customers and schedules (Griffin *et al.* 2003). Similarly, some communities have worked to improve customer awareness and perceptions of local products through educational campaigns focusing on the value of farms, farmers' markets, and local foods, or through cooking demonstrations at local retail outlets (Griffin *et al.* 2003; Palan 2005). Consumers also appear to value honesty with respect to product information, quality, and growing practices when purchasing local food items, a characteristic that may sometimes be the distinguishing factor between a one-time purchase and a repeat customer (Griffin *et al.* 2003).

Through various surveys and focus groups, research has shown that preferred communication mechanisms for conveying information and education about food systems include television, newspapers, signs or displays inside grocery stores, and information from public health officials, doctors, and food professionals (Palan 2005). Not surprisingly, word-of-mouth is also a popular way to convey information about local food products and their availability through retail establishments. More formal mechanisms to advertise local products or a regional food-based identity have included the use of labels or certification seals to identify local, healthy foods (Jackson 2003).

Agritourism

Some agricultural regions have attempted a shift from wholesale production to service-oriented agritourism – a type of tourism based on attracting visitors to active agricultural farms. Agritourism has been in place in some European countries since the 1960s, and is even supported through government policy and/or subsidies as a way to support local and regional products and geographic identities, increase farm income, create new jobs, and diversify the tourism sector (Clemens 2004). Such ventures can help to mitigate the impacts of tariffs, labor costs, subsidies, and demands on land uses that can be harmful to small farms and can help to develop a stable niche for local food products (Che *et al.* 2005).

For example, local heritage has been preserved through the establishment of farm-based summer resorts along the coast of Lake Michigan, tree farms in central Michigan, and apple and berry orchards in southwest Michigan (Che *et al.* 2005). Often these efforts are an attempt to save a family farm or to retain agricultural lands in production, but agritourism can also be used to develop a regional identity by attracting new customers to farms through retail and entertainment ventures (Che *et al.* 2005).

Despite continued competition with supermarkets that purchase at wholesale prices, small farms and agritourism ventures have been able to capitalize on comparative advantages by offering more individualized services and diverse agricultural products through purchasing programs and information sharing with neighboring farms. Purchasing programs exist when one farm supports other neighboring farms through the purchase and resale of items not otherwise produced on-site. This provides agritourism visitors with a broader selection of products at a single location. Cooperative agritourism has also been observed in England, where groups of 15-20 farmers have joined together to market a particular regional farm-based identity. These efforts contribute to the local tax-base, employment opportunities, consumers' choices, and strengthened rural communities. However, it is clear that the most successful agritourism ventures benefit from being located within regions with strong place-based identities near large, urban, tourist-generating areas. (Che *et al.* 2005)

Farmers' Markets

A USDA Agricultural Marketing Service study conducted in 1994 and 2000 showed that farmers' markets are "a growing marketing tool for farmers" and that "customers can benefit from direct contact with the producers of their food" (Payne 2002). As evident from the growing number of farmers' markets nationwide (up from 1,200 in 1980 to 2,800 in 2000 and 4,385 in 2006), these small retail operations are a popular way of selling local products and an important opportunity for both full and part-time farmers (Griffin *et al.* 2003; U.S. Department of Agriculture 2006). In recent years many small-scale farmers have transitioned from selling at farmers' markets for supplemental income to establishing these sales as their primary retail operations (Griffin *et al.* 2003). Farmers' markets also provide economic benefits for local food systems and their small-scale producers through the development and marketing of a specific regional niche or identity, by drawing more customers than typical roadside stands, and by providing an outlet for farmers to experiment with new products or to transition to larger ventures at minimal risk (Griffin *et al.* 2003).

Studies have shown that a wide range of customers from different socioeconomic backgrounds are drawn to farmers' markets, which illustrates a growing support and interest in local agriculture (Stephenson *et al.* 1998). Additionally, it is believed that larger volumes of customers may be attracted through better marketing practices such as brand names or point-of-origin labels; larger varieties of available products; educational opportunities such as cooking demonstrations (e.g., "Chef-at-Market" Programs), informational displays or brochures about the farms, and free samples of uncommon products; and improved accessibility for elderly or disabled populations (Griffin *et al.* 2003).

The success of a farmers' market generally depends on whether the customers' and vendors' needs are being met. For example, customers often seek markets with convenient locations and accessibility; fresh, high quality products; fair pricing; and pleasant social interactions with the vendors (Lockeretz 1987; Brown 2002). Increasingly, shoppers are also looking for local products, specialty produce varieties, and products that were grown using low-impact, ecologically sensitive techniques such as organic production methods (Kremen *et al.* 2001).

Vendors tend to participate in markets based on their popularity, location, management and infrastructure (Kremen *et al.* 2001). When vendors work cooperatively instead of competitively, these retail outlets help to foster informal networks and provide social benefits such as the sharing of information and education through personal interactions between consumers and producers.

Cooperative Alliances

Another opportunity to improve marketing for small farms and local products has been observed through the development of horizontal alliances (Che *et al.* 2005). Sometimes referred to as a 'value web', two or more competing farms may join together to share resources, such as advertising, promotion, and marketing information in a mutually beneficial way. This type of alliance benefits the members through increased efficiencies, even while the individual farms are still in competition with one another for sales (Che *et al.* 2005). However, by improving customers' awareness of local farms and products, collaborative marketing can grow the overall market, resulting in greater market shares for all involved (Che *et al.* 2005).

### *Expanding Business Opportunities through Partnerships and Networks*

Farm-to-Restaurant

Many restaurants buy their produce and food products from wholesalers, allowing them to purchase a variety of items in the quantities needed to prepare menu items over a specific period of time. Since many restaurants do not have a lot of space to store large quantities of perishable items on-site, buyers are often hesitant to purchase directly from farmers. Other primary concerns with purchasing local products directly from farmers are cost and dependability; wholesalers are typically able to provide a variety of products at a cheaper price than many local farmers and can do so more reliably than individual farmers who are more dependent on growing conditions and variable yields from season-to-season.

To address these issues, groups of local farmers in the Twin Cities region of Minneapolis have joined together to develop cooperatives and other networks to coordinate orders and sales with local restaurants (Jackson 2003). These farmers have recognized that by joining together they can earn higher prices in selling directly to restaurants than to wholesalers and can also offer the variety of products demanded by most restaurants (Jackson 2003). Another example of farmers working together to succeed is the Patchwork Family Farms cooperative, founded by a group of farmers in Columbus, Missouri, in 1994, which performs processing, marketing, and selling of meat products for its members (Tauber *et al.* 2002). This model, which is now being replicated in other areas throughout the United States, sells meat to food co-ops and restaurants that feature local foods and free-range meat (Tauber *et al.* 2002). This helps the member farms to avoid these external processing costs incurred by most meat producers.

Another aspect of farmer/restaurant relationships that can benefit the use of local products is for restaurants to have greater flexibility with their menus, allowing for chefs to make adjustments according to what items are available at any given time (Jackson 2003). By developing close working relationships, the individual farmer or cooperative can fax a list of available items to the restaurant and the chef can use that list to plan the menu for the next several days (Jackson 2003). From a practical sense, this might require a chef to vary the type of vegetable that is served with entrées based on the produce that is available throughout different periods of the growing season. Similarly, with meat products, a chef may also need to vary the daily or weekly entrées to use several different cuts of meat rather than simply offering only one cut, so that farmers can sell whole pigs, chickens or steer instead of only certain portions of the animal (Jackson 2003).

While this type of arrangement benefits the farmer, it also poses a challenge to restaurants in the form of additional storage needs (Jackson 2003). However, this challenge can be overcome by restaurants making arrangements for the farmer to store the items off-site or adapting their meals to use frozen cuts of meat over a longer period of time, if necessary (Jackson 2003). With skill, this can be done without lowering the quality of the meal.

Community Supported Agriculture

Another growing trend in local agriculture is participation in community-supported agriculture (CSA) farms, a movement that originally began in Japan more than 30 years ago (Hadad 2004). CSA arrangements allow consumers to invest in a local farm or a multi-farm cooperative by purchasing a season's worth of produce before it is grown and harvested (Allen 1999). By paying for the produce up-front, consumers are able to support the farmers in the farming of their land and then reap the benefits of their investment through freshly picked "shares" from the farm's harvest (Allen 1999; Hadad 2004). This type of arrangement also grows relationships between the farmers and consumers and helps to "put a face to agriculture" (Hadad 2004). Similarly, CSA cooperatives made up of many farms can help to reduce the risk associated with failed crops by joining together to supply "shares" to the cooperative's entire membership (Allen 1999; Hadad 2004).

Community Food Projects

Many communities across the country and around the world have also worked to develop community food projects to help improve local food access and security, increase the self-reliance of communities, and create jobs for underserved populations (Tauber *et al.* 2002). As defined by the Community Food Security Coalition (a leader in training, networking, and advocacy), food security is "a condition in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance and social justice" (Community Food Security Coalition 2006).

Programs such as the NorthEast Neighborhood Alliance (NENA) in Rochester, New York, have helped residents to "regain power through ownership of their community's food production and distribution resources" through the farming of a three-acre farm site and management of a warehouse and neighborhood restaurant (Tauber *et al.* 2002). In addition to providing fresh, healthy foods to the community, NENA also benefits the community by helping local youth with community building, job training, and violence prevention. Other projects such as the San Francisco

League of Urban Gardeners (SLUG) in San Francisco, California, have developed four community gardens run by at-risk teenagers, which have grown and harvested enough produce to supply vegetables for a nearby housing project and 90 percent of the surrounding community (Tauber *et al.* 2002). The Practical Farmers of Iowa (PFI) in Boone, Iowa, have also worked to develop a field-to-family project which supports local farmers and low-income households through educational programs which "inform the public about the benefits of good nutrition, sustainable agriculture, and supporting the local economy" (Tauber *et al.* 2002).

### *Farm-Level Challenges*

Other facets of the success or failure of particular regional food systems include farming challenges such as weather conditions and crop diseases; rising costs for fuel, seeds, pesticides, and fertilizers; transportation costs and distance from producer to markets; the economy; and labor challenges due to financial constraints and disinterested younger generations (Griffin *et al.* 2003). In addition, a limited local supply of products, processing infrastructure, delivery problems, and pricing issues can be problematic for the sale of local products (Leopold Center for Sustainable Agriculture 2005).

### *Conclusion*

An awareness of other alternative food system models, their key aspects and common challenges is essential for informing the development of new localized food systems, in southeastern Michigan and beyond. In the next section, we turn to consider the potential demand for an intentionally localized food system with an emphasis on the five-county southeastern Michigan context in particular. We examine some of the barriers to developing an alternative food system and highlight potential opportunities to overcome them.

## Towards a localized food system: demand, barriers and opportunities in SE Michigan

Both national and local studies show that there is a present and growing demand among diverse stakeholders for the development of stronger regional food systems generally and in southeastern Michigan in particular. Despite the myriad barriers that are consistently identified in the literature, outlooks are generally positive and suggest that support is ripening to the point where it has the potential to overcome some of the formidable challenges.

### *Support for a localized food system*

Advocates and supporters of intentionally localized food systems, nationally and locally, represent a wide and growing variety of interests and perspectives. Localized food systems, sometimes called re-localized food systems, are those in which multiple actors work together to increase the share of local foods and products within the local market. This convergence of interests and research on these alternatives bodes well for the development of regional food systems in the coming years.

Economic development

In Michigan, like many areas of the country, economic development is a foremost concern among policy-makers, local industry, entrepreneurs, community advocacy and development organizations. With an increase in unemployment in the last few years marked by the continuous atrophy of the auto manufacturing industry, the Michigan economy is suffering across many sectors. According to a 2002 Census Bureau County Business Report, the state is experiencing significant growth in the professional, research and technology sectors, yet all food and agriculture-related sectors experienced significant job attrition between 2000 and 2003.

Despite this loss of employment, the agri-food business is one of the three primary sectors of the Michigan economy, which include auto manufacturing, agriculture and tourism (Michigan Economic Development Corporation 2006). As a whole, Michigan ranks 21st in the United States in cash receipts for agriculture products (U.S. Department of Agriculture National Agricultural Statistics Service 2003). Combining the farm sector, food processing and manufacturing, wholesaling and retailing and an emerging bio-energy sector, food-related enterprise accounts for over $60 billion in direct and indirect economic activity in the state and employs about one million people (Peterson *et al.* 2006). Agriculture and food processing alone account for about $15 billion annually in direct contributions to the state economy (Michigan Land Use Leadership Council 2003).

In spite of this important market share, a 2005 policy analysis report found that 57 percent of Michigan farmers lose money annually. At the same time, real farmland prices are on the rise (Ferris 2001). While there are many reasons for farmers remaining chronically in the red, one is the global food distribution system. While Michigan consumers spent $25.7 billion on groceries and eating out in 2001, for instance, only about 10 percent of that food comes directly from Michigan farmers (Cantrell *et al.* 2002).

As a result of these trends, there is interest in identifying and supporting development of innovative new agri-food businesses in Michigan, particularly small-scale enterprise. In a recent study, the MSU Product Center constructed two models of coordinated investment in the Michigan agri-food sector: one assumed a continuation of the current investment patterns in the Michigan agri-food sector and the other assuming "a more generic set of venture creation figures" (Peterson *et al.* 2006). Investment "venture" scenarios included biofuel and ethanol plants, small-size animal slaughtering facilities and small-size agri-food ventures. Through economic analysis, the researchers found that both scenarios of investment would generate significant stimulation in the Michigan economy in terms of production and employment opportunities. In general, the report suggests that investment in new agri-food ventures geared towards existing and future demands of Michigan consumers and other markets would result in significant impact on the Michigan economy as a whole. "Fundamental to future success in the agri-food system will be the ability of businesses to innovate and to fully grasp contemporary consumption patterns, their driving forces and growth opportunities. In this regard, small-scale agri-food entrepreneurial ventures that can adapt their ideas, technologies and resources to the ever-changing consumer wants, needs and perceptions will play a significant role in promoting Michigan's economy" (Peterson *et al.* 2006).

Two central players on the Michigan economic research field, the Michigan Land Use Institute and the C.S. Mott Group for Sustainable Food Systems at Michigan State University, recently released a joint report on the projected economic impact of increasing the proportion of Michigan-grown fruits and vegetables that is sold in local fresh produce markets, entitled *Eat Fresh and Grow Jobs, Michigan.* Using economic modeling tools, the potentially influential study found that a state-wide program to promote and support local foods in local fresh markets would have a significant impact. It would generate at least 1,889 new jobs on the farming side, alone, due to the increased net profits of local growers allowing them able to hire more employees to meet the heightened local demand. The estimated net revenue gains to Michigan farmers would be $164 million (Cantrell *et al.* 2006).

State Policy

Likely informed by these and other policy reports, the Michigan state government has taken action to support agri-food sector development statewide. For the last several years, the Michigan Department of Agriculture has awarded competitive grants for agricultural innovation as part of the Julian-Stille Value-Added Program which can support individuals, farmers' cooperatives and corporations in technical assistance, market research and business planning to improve the viability

of their farm-based businesses (Michigan Department of Agriculture 2006). In 2000, Michigan created Agricultural Processing Renaissance Zones (APRZ), expanding the scope and potential of the national tax-free Renaissance Zone program that Michigan pioneered in 1997 to spur new investment and job creation. The zones are exempt from all state and local taxes for all qualified agriculture processors who begin or expand their operations within them. In 2003, the State Legislature expanded the program from 10 to 20 zones. And in 2006, recommendations by the Michigan Food Policy Council included a recommendation to expand and amend the APRZ program even further. Suggestions for amendments to the program included changing the criteria to emphasize use of Michigan grown products and prioritizing the development of new livestock, poultry and dairy processing facilities (Michigan Food Policy Council 2006).

Since 2003, the Michigan Department of Agriculture (MDA) has supported the Select Michigan Campaign with the help of other government and interest organizations. According to the Department's website, the purpose of the program is to "increase marketing opportunities for Michigan locally grown food products" and "to increase the awareness and purchases of locally grown food products" via identifiable labeling, collective marketing and consumer education campaigns (Michigan Department of Agriculture 2006). Select Michigan products can be found in a variety of retail locations, including major chain grocers like Meijer, Kroger and Farmer Jack in the Grand Rapids and Detroit areas. The Initiative was initially implemented only in the Grand Rapids area, but was expanded in 2004 to include the Detroit market. The MDA reports great success of the program in the first years of implementation, suggesting an effective campaign and consumer support. For instance, the Grand Rapids market saw a 111 percent increase in overall sales in 2003. Between 2003 and 2004, over both metropolitan area markets, Select Michigan products represented an increase in both dollar and unit sales where the prior year witnessed decreases. About 40 percent of the participating farmers sold more products because of the program (Michigan Department of Agriculture 2006).

Modeled after food policy councils in other states and regions, Michigan Governor Jennifer Granholm established the Michigan Food Policy Council in June 2005 (2005). The role of the Council, which is funded in partnership with the W.K. Kellogg Foundation, is to "recommend programs and policies that build on the state's agricultural diversity to enhance economic growth while cultivating a safe, healthy and available food supply for all of Michigan's residents"(Michigan Food Policy Council 2006). The council is made of a diverse group of 21 representatives from all

aspects of the Michigan food system. The Council's work is divided into four primary task forces focusing on business development; access to fresh, healthy foods; promoting Michigan-grown and produced foods; and improving viability of Michigan agriculture (Michigan Food Policy Council 2006).

In early 2006, as part of the State's economic plan, Governor Granholm instituted a "Buy Michigan First" policy that requires all state institutions to direct state purchases to Michigan businesses (Connors 2006). The law marks an important departure from the "lowest bidder" system that dominates most government contracting processes nationally, and indicates the state's efforts to stimulate and support a squandering local economy. Michigan follows a few other states, which have recently implemented similar programs, such as Colorado. Farmers note that more local contracts mean savings on freight fees to out-of-state markets and processing facilities (Connors 2006). Another State initiative approved in late 2005 created a $10 million fund to support the development of new farm-based enterprises (Schneider 2006).

Environment and Land Use

In order to ensure the long-term viability of the agri-food sector in Michigan and preserve the state's rural character, there is strong interest in implementing creative land use policies that will help farmers keep land in agricultural use. According to a study by the American Farmland Trust, thousands of acres of Michigan's most valuable farmland, particularly in the southern half of the state, is threatened by encroaching urban and suburban development (American Farmland Trust 2002). As the state loses about 30,000 acres of farmland each year, Michigan's unique agricultural diversity is threatened as well (Adeleja 2005). The Michigan Land Use Leadership Council noted "land use trends in Michigan over the last half-century have had a major negative effect on biodiversity, primarily through the urbanization of land and the attendant destruction of habitats far beyond the need to support human population growth and a prosperous economy" (Michigan Land Use Leadership Council 2003). The report predicted that, based on current trends, the state will lose 25 percent of orchard land and almost two million acres of farmland in the next 40 years. To hedge this trend, voters in Washtenaw, Kent and Grand Traverse counties have passed local tax increases to support farm preservation (Schneider 2006). For instance, in November 2003, Ann Arbor voters approved a tax millage (0.5 mills) to protect land from urban sprawl. The unprecedented initiative will generate millions of dollars over the next three decades to help protect an estimated 7,000 acres

of land from development (George 2003). This public support is not universal, however, as similar tax increases in other regions of the state have failed (American Farmland Trust 2004).

These trends parallel national priorities. Americans generally want to support smaller-scale family farms and, thus, consistently support farm subsidies and smart growth strategies, which they see as furthering this goal (American Farmland Trust 2003; Bostrom 2005). "Americans value farms and are concerned that the number of farms in the United States is in decline. They hold far more favorable impressions of small-scale farms than large industrial farms and believe that small family farms are better than large farms and producing safe, nutritious food and protecting the environment" (Bostrom 2005). Although price often trumps other priorities and commitment to local foods is not consistent among most people, studies have shown that the public prioritizes local food and that most people have acted to buy locally produced food (Bostrom 2005).

Personal and Community Health

Most Americans see the connection between physical health and food. Along with environmental concerns, the health connection seems to drive the growing interest in purchasing organic and local foods (Halweil 2005). In his review of the food system, Halweil found that Americans generally want to know the origins of their food and that local food is becoming more important to consumers. Nationally, direct marketing sales increased by 37 percent between 1997 and 2002. Local food councils are emerging across the country, and visits to local food websites have risen markedly along with membership in organizations like Slow Food, USA. Another W.F. Kellogg Foundation-funded report found strong support among the American public for food labeling and information about product quality (Bostrom 2005). A marketing research firm, American LIVES, found that 23 percent of U.S. adults of all income and age levels consider environmental and health concerns when making purchasing decisions (Cantrell *et al.* 2002).

Noting the importance of developing healthy habits beginning in childhood, schools across the state are working to provide more nutritious foods in school. One school in Kalkaska, Michigan did away with the ubiquitous and unhealthy candy sales as school fundraisers and replaced them with local food product sales. Not only has this program altered the fundraising focus to healthy, local foods, but it has generated 'healthy' revenue for local farmers, as well (Connors 2006). The Michigan Healthy Schools, Healthy Students website has compiled scores of "Success Stories" of healthy

school initiatives and includes nearly 30 programs across the state designed to improve school nutrition (Michigan Healthy Schools 2006).

### *Addressing the challenges*

Despite the increasing support for the development of regional food systems in Michigan and across the country, research consistently identifies a litany of barriers that must be strategically and creatively addressed to establish and ensure the success of a localized food system.

Americans' understanding of the food system

Americans' perceptions and opinions are powerful forces which significantly influence decision-making, including food consumption. (Aubrun *et al.* 2005). Therefore, Aubrun and colleagues stress the importance of understanding these perceptions for food system change efforts. With a shrinking percentage of the American public involved in agriculture (less than 1 percent), most Americans are quite removed from the production side of the food system. Generally, people in the United States think very little about where their food comes from, especially since food has been easily available for most Americans (Aubrun *et al.* 2005). While there is a limited public knowledge of farming, most Americans are generally satisfied with the various actors in the food system (Bostrom 2005).

With the rise in popularity of organic and genetically modified (GM) foods comes a new set of misperceptions. One study found that public opinions about GMs are "unformed and malleable" as American consumers are conscious of and uncomfortable with GMs, but not very familiar with the details and not opposed to them generally. A handful of recent articles in the news media have begun to uncover the actual condition of organic farming today, which strays considerably from the ideal many consumers have in their minds when they encounter organic foods. Rather than small-scale family farms with free-grazing livestock and food grown in tune with nature, much of the organic produce, meat and dairy increasingly available today originates on massive mono-cropped farms or in animal feeding operations where few animals enjoy the outdoors. Increasingly, organic foods sold in the U.S. market are grown in other countries around the world including Central and South America, China and New Zealand (Bostrom 2005; Brady 2006; Pollan 2006).

Opportunities abound for closing information gaps about the food system and local and organic foods, in particular. As noted, Michigan is one of many states that have launched campaigns such as

Select Michigan to promote locally-grown products and provide information about their origins.[3] With these "branding" programs, common points of food purchase like mainstream supermarkets can help provide information to consumers about the origins of their food. Farmers' markets, where consumers can interact directly with the growers of their foods, as well as schools, where children develop many habits for life, can be crucial loci of food system information exchange, as well (Kremen *et al.* 2004; U.S. Department of Agriculture 2006).

Consumer trends

In Michigan, as around the country, farmers' markets are becoming more popular and reaching more residents than in recent history (Bingen 2003; Michigan Food and Farming Systems 2006). Michigan Food and Farming Systems reports a marked increase in Michigan farmers' markets in the last five years, from 90 in 2001 to over 150 today (Michigan Food and Farming Systems 2006). Despite the growing interest in local foods and dramatic increase in sales of organic products, consumers nationally continue to cite high costs as a barrier to regular, consistent purchase of local and organic foods (Bostrom 2005). In addition, more and more meals are being prepared outside of the home (Halweil 2005).

While both discount superstores and natural food markets occupy growing market shares, the majority of food is still purchased at major grocery stores (Harris *et al.* 2002). Thus, one key challenge to buying local is the lack of consistent and showcased local products in grocery stores. While over 200 Michigan grocery stores carry Michigan produce – including Kroger, Farmer Jack and K-mart – according to the Michigan Department of Agriculture's Select Michigan Campaign, many consumers are not aware of what is local and generally do not read labels (Halweil 2005).

Marketing

Many smaller-scale farmers and producers have limited resources to devote to marketing and advertising their products. In a recent study of the potential for an apple and cherry-apple hard cider market in Michigan, one of the primary concerns was marketing constraints and cost (Mainville *et al.* 2005). However, the Select Michigan brand has successfully increased local food purchases in the northern part of the lower peninsula (Cantrell *et al.* 2006). Some cooperative producer councils, including asparagus growers in northern Michigan and the Michigan Cider Guild have worked to

[3] Other states include: Pennsylvania, Oregon, New York, New Jersey, Rhode Island and Wisconsin. More information can be found on their respective State Department of Agriculture websites.

promote their products jointly in partnership with Select Michigan. From 2002 to 2005, for example, Michigan asparagus growers increased local sales of their crops from 5 to 25 percent, and increased profit for farmers because of the higher prices they command through direct marketing (Cantrell *et al.* 2006). Reports including "Eat Fresh and Grow Jobs, Michigan" and the Michigan Food Policy Council's Report of Recommendations note the necessity of the State to support the Select Michigan brand extension throughout Michigan (Cantrell *et al.* 2006; Michigan Food Policy Council 2006).

The seasonality gap

Most institutional buyers like grocery stores, school districts, hospitals and restaurants enter into contracts with distributors who can guarantee a reliable and consistent supply of food to meet consumers demand. Since consumer demand often does not coincide with local seasonality, distributors rarely find it profitable or even feasible to focus on local foods since they will not be able to meet their clients' demands (Halweil 2005; McClelland 2006). Yet, since institutional buyers play a role in the overall consumption of most foods in the United States and in Michigan, they are an essential aspect of a localized food system (Bellows *et al.* 2003). In order for institutions to increase the proportion of local foods, new local food distribution options and other incentives need to be available to reduce the opportunity cost of sourcing local products. Some potential solutions to the local food distribution challenge that have worked elsewhere in the country include farmers' cooperatives, local wholesalers acting as a distributor and broker of local foods, farmers' markets acting as central food pick-up locations, or even the state government acting as a distributor in North Carolina (Bellows *et al.* 2003). The Food System Economic Partnership (FSEP) is currently exploring the viability of some of these and other creative solutions and new business opportunities to facilitate local food distribution in southeastern Michigan (Moghtader 2006).

Access to information about technical innovations

The feasibility of a more localized food system depends on the viability of local small- and medium-scale agriculture. Yet, smaller farms across the country and in Michigan find it increasingly difficult to remain in farming when "land used for mining, agriculture and forestry often cannot compete with the land's value for other uses" (Michigan Land Use Leadership Council 2003). One potential reason for the high percentage of farmers who are losing money is a lack of connection to new, innovative techniques and technologies that can save or generate more money by helping farmers connect with changing demands for agricultural products (Adeleja 2005; Adelaja *et al.* 2006). In particular, season extension strategies like hoophouses and the development of value-added products

with a longer "shelf life" can increase the profitability of farms by allowing them to meet demand for local produce beyond the standard Michigan growing season.

A lack of accessible, affordable opportunities for knowledge and skills development paired with farmers' limited time availability to engage in such activities perpetuates the gap between farmers and new techniques and technology. However, strategies for connecting farmers with new knowledge and technologies do exist to counter this trend. Michigan State University Extension (MSUE) provides a number of services for Michigan farmers and plays a critical role in the transfer of knowledge and information from the academy to the farm. For example, MSUE's Project GREEEN (Generating Research and Extension to meet Environmental and Economic Needs) "funds research and Extension projects that benefit Michigan's plant-based agricultural industry" (Michigan State University Extension 2006). GREEEN grants have funded produce marketing conferences, supported projects to develop markets for Michigan-grown products, and encouraged the creation of new, value-added products to improve Michigan crop viability. Similarly, the National Sustainable Agriculture Information Service provides a wealth of information, research and strategies for improving the viability of sustainable agriculture throughout the country (http://attra.ncat.org/).

Urban growth pressures

Agriculture industries are largely unable to compete with the value of the land for residential development in southeastern Michigan (Michigan Land Use Leadership Council 2003). Land values in Washtenaw, Monroe, Wayne, Jackson and Lenawee counties are among the highest in the state, largely due to their proximity to urban areas. With land values high and revenue from farming consistently low, farmers are increasingly persuaded to sell off all or part of their land to developers. As urban growth consumes farmland, opportunities shrink for the production of food locally (Daniels 1999; Roberts 2006). As noted above, some county and local governments in Michigan, including Washtenaw, have found support for tax-based initiatives to keep land in agricultural use. As land prices continue to rise, however, it will be difficult for these programs that are funded largely through voluntary taxes to keep apace. Even at current land prices, farmland preservation programs do not have the funds to ensure that all land in farming use will be able to remain so (Adelaja *et al.* 2006).

Lack of political will

Another way to help farmers continue to work their lands is to decrease their costs. Yet, the Michigan Senate has twice declined to take up legislation passed by the Michigan House that would decrease taxes for farmers (Schneider 2006). While Adelaja's 2005 report proposed innovative "equity insurance" and "equity mortgage" programs among other strategies and structural policy changes to support farmland preservation in Michigan, it noted that there was little political chance of these programs coming to fruition. On the other hand, Governor Granholm's appointment of a Michigan Food Policy Council in 2005 to research and develop recommendations for strengthening the State's food system and her 2006 "Buy Michigan First" campaign represent needed political support at the state level, the impact of which is yet to be seen.

### *New opportunities for food system localization in southeastern Michigan*

An understanding of the potential barriers helps inform prioritization of the many opportunities that exist in the creation of intentional local food systems. Below are some of the opportunities and recommendations listed in several reports and policy papers:

- *Energy Crops and Bio-energy Production*: With a growing interest and investment in alternative forms of energy nationally, Michigan is well-situated to become a leader in the business. There is one bio-energy plant in Michigan that produces about 45 million gallons of ethanol per year and has an estimated economic impact of $75 million dollars. Development of four similar facilities is currently underway (Michigan Land Use Leadership Council 2003; Halweil 2005; Peterson *et al.* 2006).[4]
- *Viable Value-added Agriculture: Michigan's Land, Michigan's Future* lists several potential areas of food systems that can be developed, including on-farm technical assistance, education and technology, expanding direct marketing and agricultural tourism (Michigan Food Policy Council 2006). While each small venture may have only marginal impacts on the larger economy, Peterson and colleagues (2006) envision hundreds of new small-scale businesses and show their concerted significant impact on the Michigan economy.

[4] It is important to note, however, that research suggests that biofuel production does not represent a sustainable or even feasible solution to our high and increasing consumption of fuel. While it presents a potential new opportunity in agriculture, government and food system actors should carefully consider and weigh the benefits and costs of large-scale biofuel production in Michigan. For more information see Giampietro, M.*, et al.* (1997). "Feasibility of Large-Scale Biofuel Production: Does an enlargement of scale change the picture." BioScience **47**(9): 587-6000, McLaughlin, S. B.*, et al.* (1998). "Evaluating Environmental Consequences of Producuing Herbaceous Crops for Bioenergy." Biomass and Bioenergy **14**(4): 317-324, Ulgiati, S. (2001). "A Comprehensive Energy and Economic Assessment of Biofuels." Critical Reviews in Plant Sciences **20**(1): 71-106.

- *Local Processing Ventures:* Some of the discontinuities between producers, distributors and consumers can be filled by local processing enterprises such as kitchen incubators, grain processing plants and on-farm processing facilities. Even basic processed foods, like washed and cut produce, can make local products more accessible to a broader array of consumers (Michigan Land Use Leadership Council 2003; Halweil 2005).
- *Develop Niche and Specialty Food Markets*: One weakness of the global food system is its relative ineffectiveness at meeting differentiated demand for unique goods (Hendrickson *et al.* 2002). Alternatively, local farmers and producers are far better situated to directly supply emerging markets for specialty and sustainably grown or raised agricultural products. For instance, the demand for specialty meat choices is growing and the market for local poultry is even stronger (Cantrell *et al.* 2002) and small vegetable farmers can provide more unique varieties of produce, often called heirlooms, that are not found in most supermarkets.
- *Distribution*: Institutions, like schools, hospitals and government facilities and restaurants rely almost entirely on distributors to meet their prepared and raw food needs. New distributors dedicated to regional produce and value-added products will provide an essential link to connect local producers with these crucial markets (McClelland 2006).

### *Conclusions*

Research shows that there is growing support nationwide for connecting consumers with more local foods and other agriculture-based products. This demand is anchored in economic development efforts working in concert with environmental, farm and agricultural land preservation interests. Challenges to developing an intentional local food system include consumers' limited knowledge about the food system, real and perceived higher costs of local and organic foods, gap between seasonality and demand of local produce and urban growth pressures. Various entities in Michigan are taking steps to overcome some of these barriers by supporting the marketing of Michigan-grown and produced foods, implementing greenbelt and farmland preservation initiatives, and educating future consumers through school curriculum and wellness policies. Opportunities abound to develop small-scale businesses that meet unmet consumer demands and bolster local and regional economies. The data in Michigan, and southeastern Michigan in particular, reflect these national trends. "The support infrastructure that future-focused agriculture will need is very different from what was needed in the past. The agricultural transformation will require new partnerships, new business practices, new markets, new technologies, new forms of entrepreneurship, and new funding

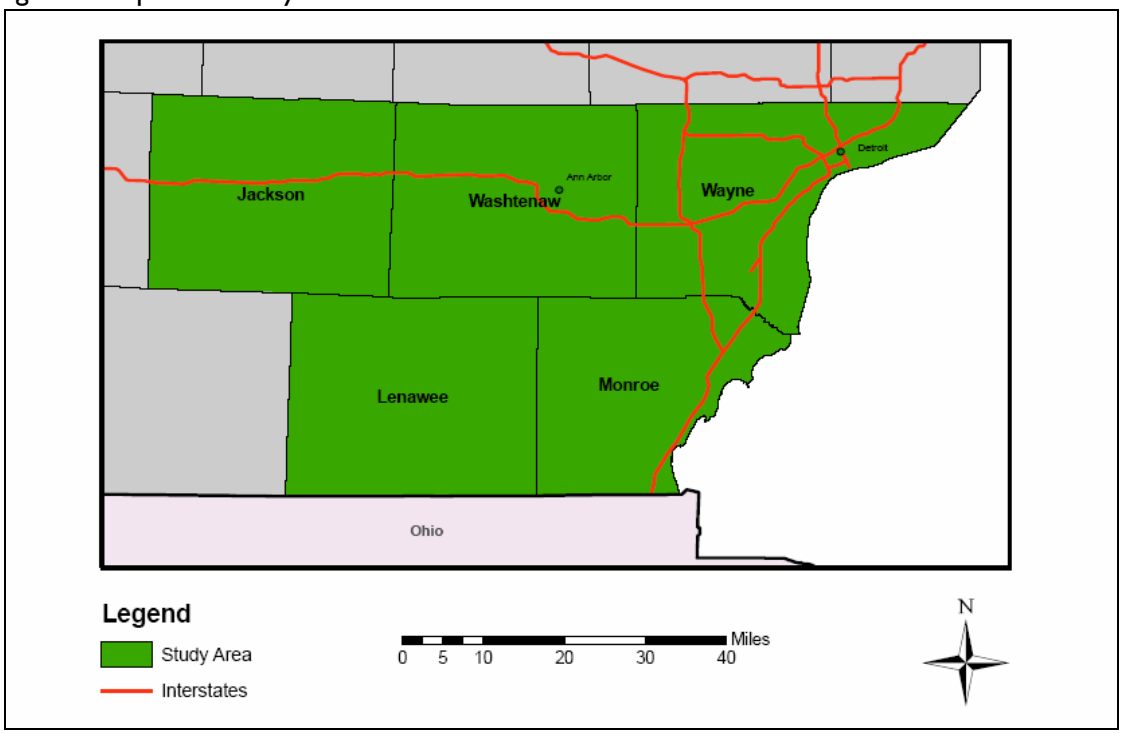
mechanisms to make it all happen" (Adeleja 2005). While opportunities clearly exist, strong networks of political and market support must be established to ensure long-term economic impact and local food system viability.

This section enumerated the array of support for strengthening Michigan agriculture and food systems and highlighted a number of the barriers that local food system initiatives will have to overcome. To gain a fuller understanding of how to apply this information to the southeastern Michigan context, we must develop a picture of the region with respect to the people who live in the five-county study area, the way that land is used and the existing role of agriculture. The following section paints this picture using demographic, economic and geographic data and statistics paying particular attention to the opportunities that abound for the development of an intentional localized food system.

**Profiles for the possibility of a localized food system in southeastern Michigan**

The Food System Economic Partnership (FSEP) service area in southeastern Michigan is composed of Jackson, Lenawee, Monroe, Washtenaw, and Wayne counties (referred to hereafter as "the region" or "the Study Area"). The region has many demographic characteristics that support the creation of an intentionally localized food economy. One topographical feature of many successful local food economies is that they contain both substantial consumer and producer bases – often one or more urban areas paired with large areas of agricultural land. The Study Area includes several cities. The largest urban area, Detroit and its suburbs, is home to over two million people. Other cities of moderate size within the region include the rapidly expanding Ann Arbor, home to 114,024 people; Jackson, with a population of 36,316; Ypsilanti, with a population of 22,362; Monroe, with a population of 22,076; and Adrian, with a population of 21,574. See Table 2.1 for the population breakdown by county (U.S. Census Bureau 2006).

Figure 1: Map of the Study Area




The Study Area includes Jackson, Lenawee, Monroe, Washtenaw and Wayne counties.

Figure 2: Population Statistics for the Five-County Region

| | Jackson County | Lenawee County | Monroe County | Washtenaw County | Wayne County | Five County Region Totals |
|---|---|---|---|---|---|---|
| Total Population (2000) | 158,422 | 98,890 | 145,945 | 322,895 | 2,061,162 | 2,787,314 |
| Percentage Urban Dwellers (2000) | 58.7 | 45.9 | 63.0 | 82.4 | 99.3 | 91.2 |

Source: U.S. Census Bureau 2000

Southeastern Michigan boasts a substantial agricultural base. In the five-county region there are 5,538 farms, which account for over ten percent of Michigan's total number of farms (Figure 3). These farms cover close to one million acres of land, and produced a market value of agricultural products worth over $320 million in 2002, 8.5 percent of the entire state's total (Figure 4).

Figure 3: Farms and Farmland for Michigan and Five-County Region

| | Michigan | Jackson County | Lenawee County | Monroe County | Washtenaw County | Wayne County | Region Totals |
|---|---|---|---|---|---|---|---|
| Farms | 53,315 | 1,265 | 1,446 | 1,183 | 1,325 | 319 | 5,538 |
| Land in Farms (Acres) | 10,142,958 | 193,011 | 353,083 | 217,421 | 175,259 | 21,485 | 960,259 |

Source: USDA Census of Agriculture 2002

Figure 4: Agricultural Economic Data for Michigan and Five-County Region

| | Michigan | Jackson County | Lenawee County | Monroe County | Washtenaw County | Wayne County | Region Totals |
|---|---|---|---|---|---|---|---|
| Market Value of Agricultural Products Sold (per $1000) | 3,772,435 | 43,096 | 103,357 | 92,243 | 54,618 | 27,559 | 320,873 |
| Market $ % From Crops | 62.6 | 49.2 | 62.2 | 93.4 | 68.6 | 97.8 | 73.6 |
| Market $ % From Livestock and Poultry | 37.4 | 50.8 | 37.8 | 5.9 | 31.4 | 2.2 | 26.4 |
| % Workforce in Agriculture, Forestry, and Fishing Industry | 0.40 | 1.1 | 1.7 | 1.3 | 0.6 | 0.1 | 0.38 |

Source: USDA Census of Agriculture 2002

The five-county region is among the top producers within Michigan of many agricultural goods. Main staple food commodities in the region are corn, soybeans, cattle and calves and dairy products. Lenawee County is the state's top producer of soybeans and Monroe County ranks fifth in soybean production. Lenawee also ranks in the top five in wheat and corn-for-grain production (U.S. Department of Agriculture National Agricultural Statistics Service 2005). While major commodities are predominant, a wide array of farm products are produced in the area including eggs, wood, honey, and a range of fruits and vegetables.

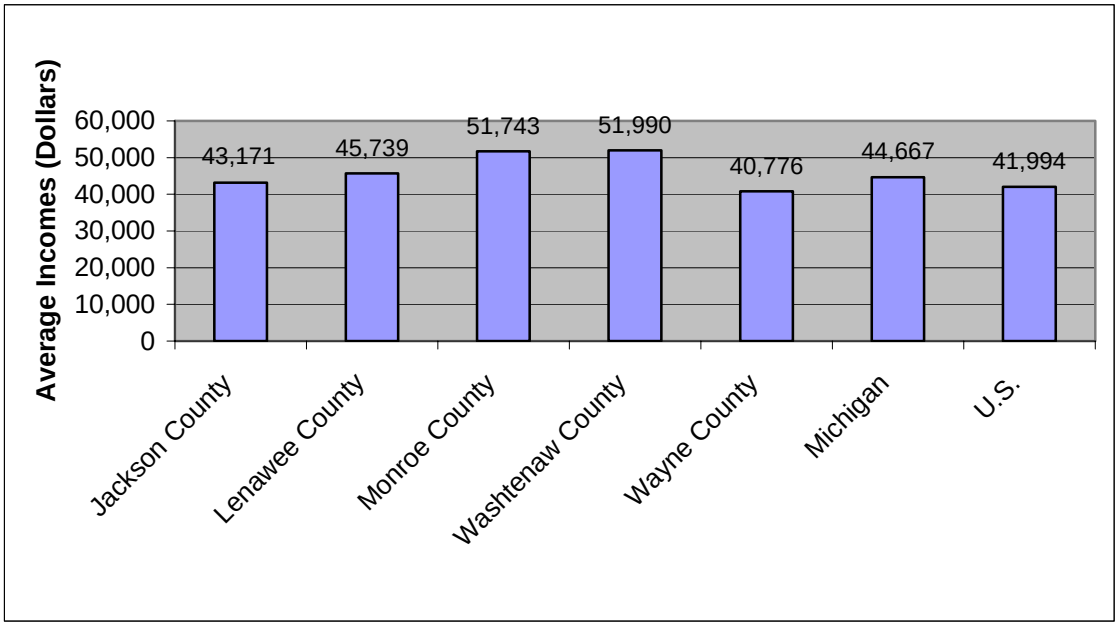
In addition to a broad and diverse agricultural base, consumer and producer attributes play a key role in the regional food system. A look at the consumers in the five-county region provides information valuable to the development of a localized food system. The next section looks at some of the characteristics of the people who live, work and consume in the region.

### *Consumer Attributes*

Income Levels

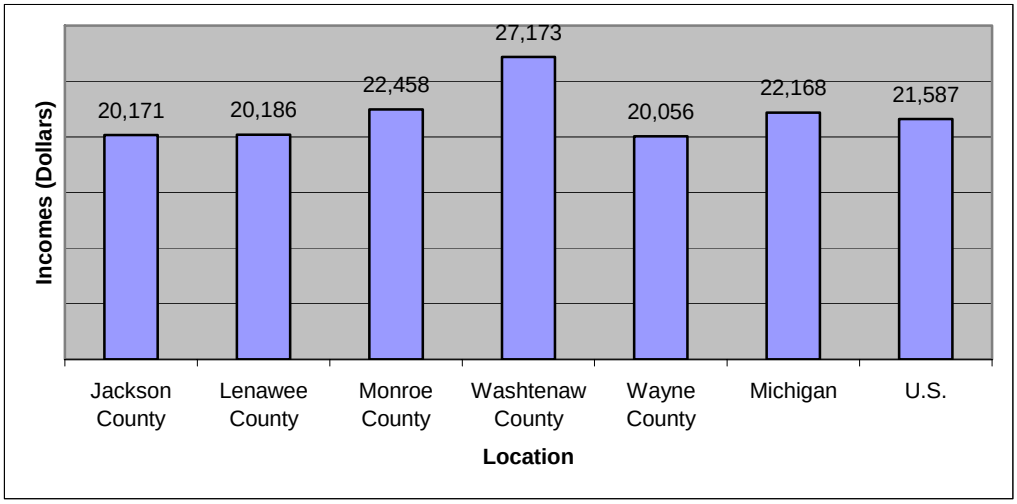
Various characteristics suggest that the region's consumer base would support a more localized food economy. Though there is variation, the Study Area includes communities of moderate and relatively high household incomes compared with the rest of the state, especially within the region's cities. As Figure 5 indicates, median household incomes in Monroe and Washtenaw Counties are notably higher than the Michigan and national statistics. Per capita incomes within the region cluster around the average for the state (Figure 6). However, Washtenaw County ranks second among Michigan's 83 counties in terms of per capita income (Bureau of Economic Analysis 2006). Since higher incomes often translate into increased discretionary income, higher income consumers represent one important component of viable localized food systems as they may have more choices in their food purchasing spending. A successful localized food system, however, will serve the needs of people of all income levels. Localized food systems can also present important opportunities to bring more fresh produce into communities that have been historically under-served with respect to food options.

Figure 5: Median Household Incomes for Five-County Study Area, Michigan and the United States




Within the study area, Washtenaw and Monroe counties have the highest median household incomes. (Source: U.S. Census Bureau 2000)

Figure 6: Per Capita Incomes for Five-County Study Area, Michigan and the United States



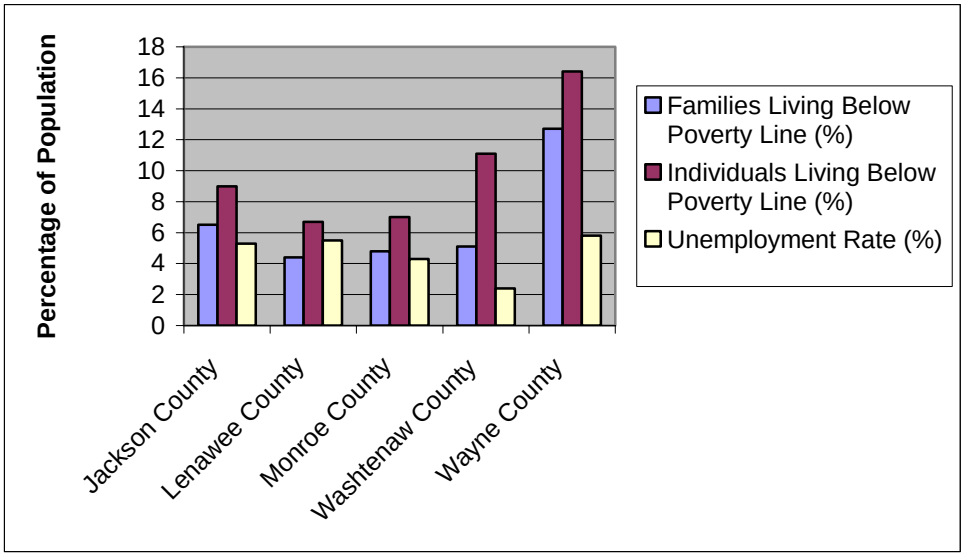

Washtenaw County has the highest per capita incomes within the five-county study area, followed by Monroe County. Both Washtenaw and Monroe counties have higher per capita incomes than the state of Michigan and the United States as a whole. (Source: U.S. Census 2000)

Local food economies in southeastern Michigan have the potential to improve food security to the citizens of the five county region. Food security is defined by the United States Department of Agriculture as having "consistent, dependable access to enough food for active, healthy living" (Nord *et al.* 2006). The most recent USDA Economic Research Service report, released in November 2006, found that in 2005, about 11 percent of U.S. households experienced food insecurity, which is about 12.6 million households. While this number on the national level is down slightly from 2004, the number of households that experienced "very low food security" (formerly known as "food insecure with hunger") remained constant at 4.4 million households or 3.9 percent of all U.S. households (Nord *et al.* 2006). Food insecurity is more common in urban and rural areas, and less prevalent in suburbs.

In Michigan, the 2005 U.S. Food Security report estimates that 11.5 percent of households experienced low or very low food security and 4.1 percent experienced very low food security during 2003-2005. Both of these measures increased in Michigan from both the 1996-1998 measures and the 2001-2003 measures (Nord *et al.* 2006). The number of people in the Study Area living under the poverty line is well over ten percent (Figure 7). Although those people who are in poverty are not necessarily food insecure, the Center on Hunger and Poverty has found that food insecurity is concentrated among people with lower incomes (Hall 2005; Nord *et al.* 2006). This rate is due not simply to income, but to the lack of access to supermarkets with high quality, nutritious and fresh

foods (Pothukuchi 2003). Some research has found that low-income urban neighborhoods often pay more for food than their middle-class suburban counterparts (Kaufman *et al.* 1997). This research and local data suggests there is potential for programs connecting local produce with lower-income markets currently "underserved" with respect to fresh, nutritious, affordable food.

Figure 7: Poverty Statistics for Five-County Study Area

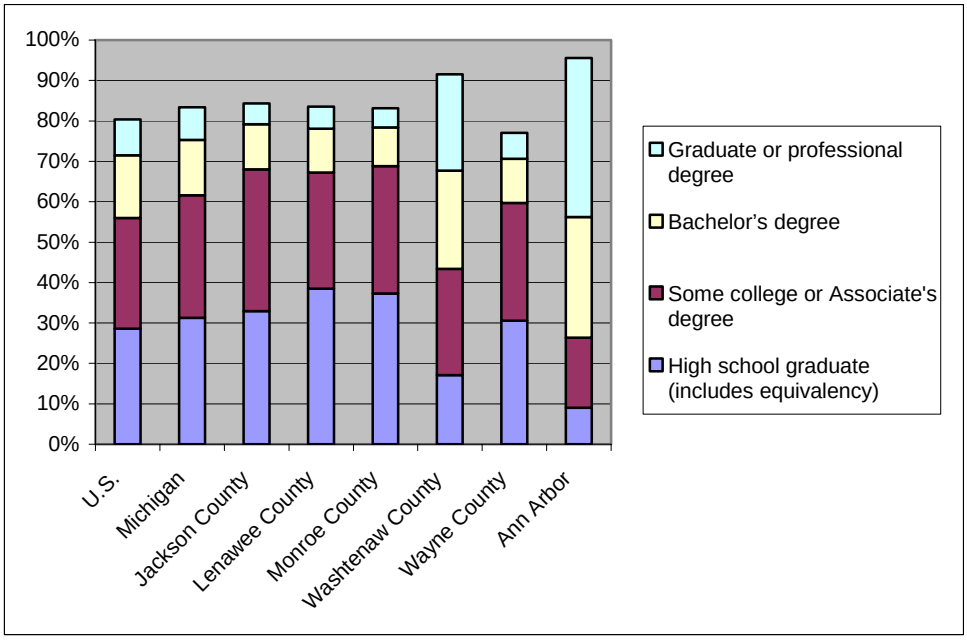



Of the five counties in the Study Area, Wayne County shows the greatest number of both families and individuals living below the poverty line. Unemployment is also greatest in Wayne County. (Source: U.S. Census 2000 and Michigan Employment Service Agency, 2001)

Educational Attainment

At least one study has documented that more educated people are more likely to buy "specialty" foods such as organic or locally produced foodstuffs (Daly 1996). Consistent with research on the relationship between education level and income, Washtenaw County has both the highest level of income as well as the highest level of education attainment within the region. Washtenaw County as a whole and the City of Ann Arbor in particular have a significantly higher proportion of residents with graduate and professional degrees. As Figure 8 depicts, the other four counties and Michigan as a whole have slightly lower proportions of college-educated residents.

Figure 8: Highest Educational Levels Attained in the United States, Michigan and the Five-County Study Area




Within the Study Area, Ann Arbor and Washtenaw County have the greatest percentage of residents with a Bachelor's, graduate or other professional degree. (Source: U.S. Census 2000)

Ethnic and Racial Diversity

The Study Area has become increasingly and substantially ethnically diverse over the last 15 years. In between 1990 and 2000, the levels of minorities within the five county region increased by over five percent to account for almost 40 percent of the population (Figure 9). A foregoing report on the local food system suggested that this diversity can open up possibilities for producers to engage in direct niche marketing, a staple of many viable local food economies (Davis *et al.* 2004).

Figure 9: Ethnic and Racial Diversity in the Region

| | Jackson County | Lenawee County | Monroe County | Washtenaw County | Wayne County | Region Total |
|---|---|---|---|---|---|---|
| Minority Population Increase 1990-2000 (%) | 3.0 | 1.9 | 1.6 | 5.4 | 5.8 | 5.2 |
| Minority Population 2000 (%) | 11.5 | 7.5 | 4.6 | 22.6 | 48.3 | 39.5 |

Source: U.S. Census 1990, 2000

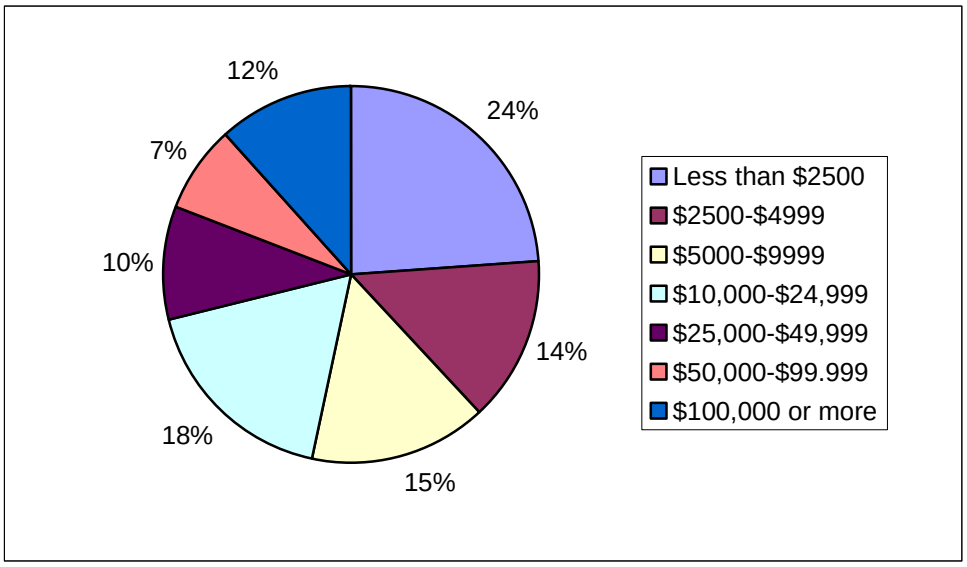
As noted in the previous section of this review, farming both in the region and nationwide has become increasingly difficult to maintain as a viable livelihood due to increased urban growth pressures and low receipts for crops (Ferris 2001). The creation of local food economies has the

potential to allow for farming to become a more sustainable occupation for farmers by connecting growers more directly with markets where they can get a fair price for their produce (Cantrell *et al.* 2006; Michigan Food Policy Council 2006).

### *Producer Attributes and Farming Trends*

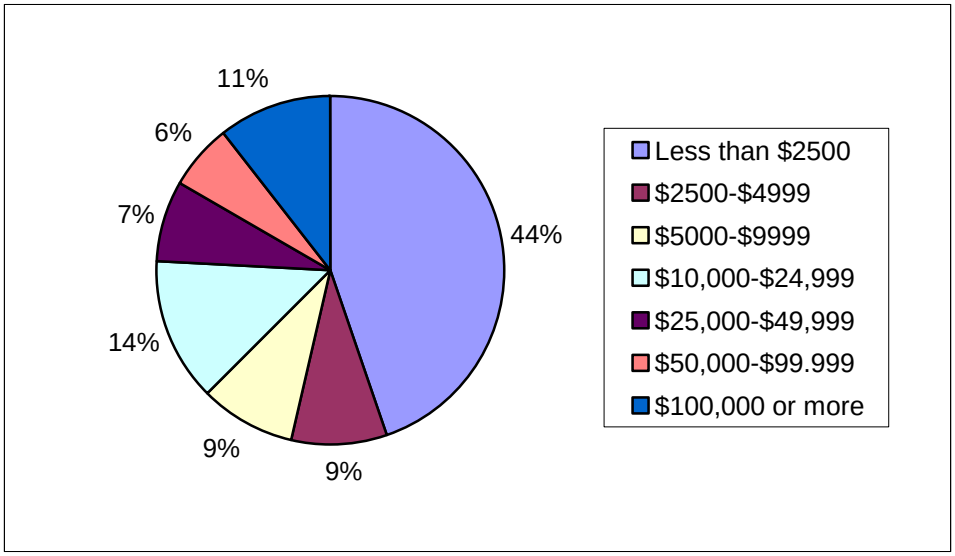
In recent years, it has become increasingly difficult to make a living in farming. The number of farmers selling less than $2,500 (by value of sales) within the five-county region nearly doubled between 1987 and 2002 (Figures 10, 11 and 12). In 2002, about 45 percent of farms reported sales less than $2,500, and the yearly net income for a typical farm in the five-county region was only $7,290 (Figure 13).

Figure 10: Farm Numbers by Value of Sales (1987)



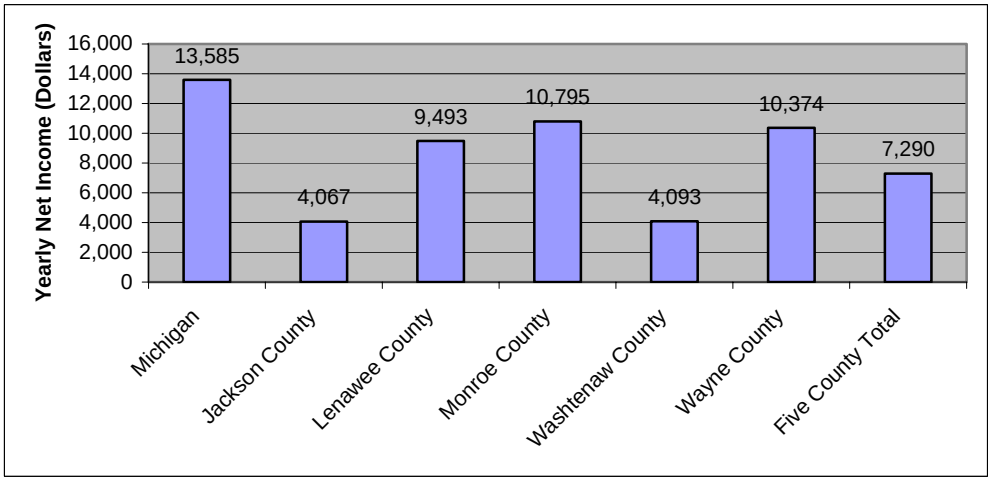

In 1987, roughly half of the farmers within the Study Area reported sales below $10,000. (Source: U.S. Census of Agriculture 1987)

Figure 11: Farm Numbers by Value of Sales (2002)




Between 1987 and 2002, the number of farmers within the Study Area reporting sales of less than $2,500 nearly doubled. (Source: U.S. Census of Agriculture 2002)

Figure 12: Yearly Net Incomes for Farms in the Five-County Study Area and Michigan




Within the Study Area, farms in Monroe and Wayne counties reported the highest average annual net income. (Source: U.S. Census of Agriculture, 2002 Census)

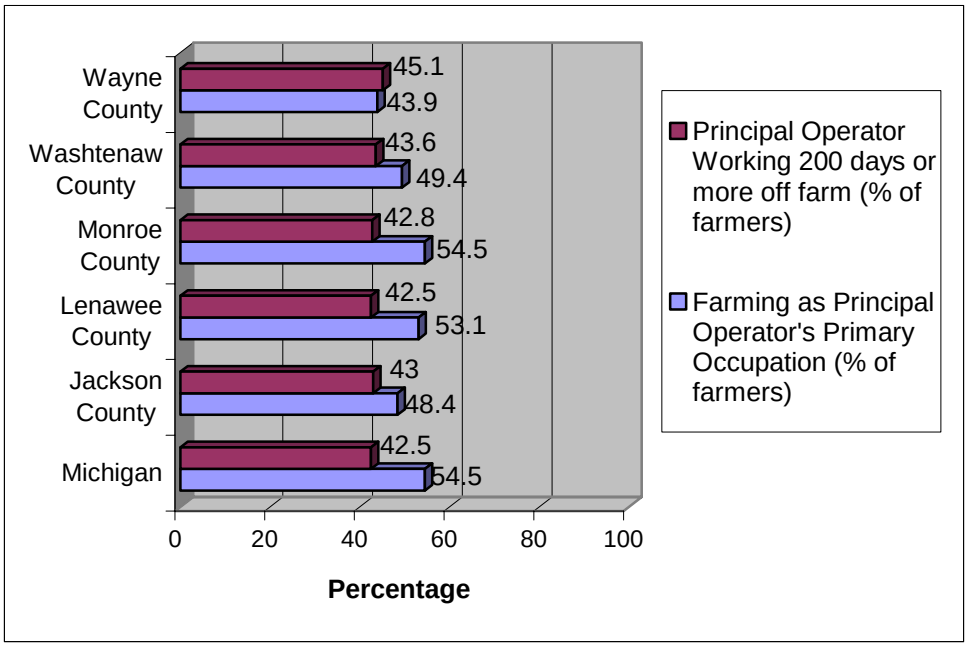
Figure 13: Farms by Value of Sales for Five-County Region (1987-2002)

| | Region total 2002 | Region total 1997 | Region total 1992 | Region total 1987 |
|---|---|---|---|---|
| Farms by value of sales: | | | | |
| Less than $2,500 | 2,477 | 1,289 | 1,104 | 1,269 |
| $2,500-$4,999 | 496 | 451 | 550 | 744 |
| $5,000-$9,999 | 481 | 580 | 710 | 813 |
| $10,000-$24,999 | 753 | 802 | 845 | 947 |
| $25,000-$49,999 | 405 | 502 | 499 | 520 |
| $50,000-$99,999 | 339 | 359 | 410 | 389 |
| $100,000 or more | 587 | 712 | 677 | 622 |

Source: U.S. Census of Agriculture 1987, 1992, 1997, 2002

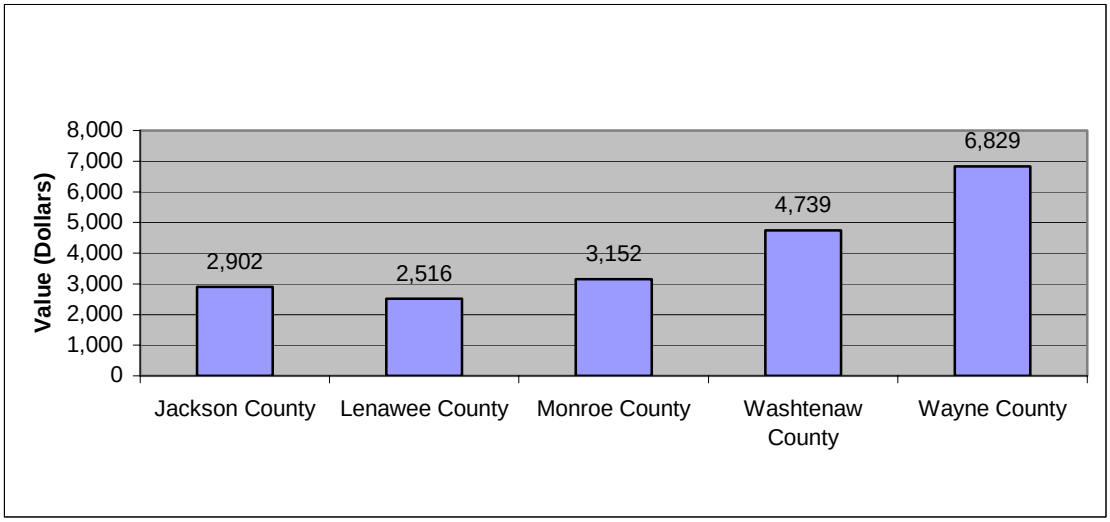
Many farmers have attempted to augment their incomes by engaging in employment in addition to or instead of farming. Less than half of farmers in the five county region cite farming as their primary occupation and over 40 percent work 200 days or more per year away from the farm. As shown in Figure 14, these averages are fairly consistent, if not more accentuated, in the five-county region than compared with the state of Michigan as a whole.

Figure 14: Farmer Involvement in the Five-County Study Area and Michigan (2002)




Within the Study Area, Monroe and Wayne counties report the highest percentage of farming as a primary occupation. (Source: U.S. Census of Agriculture 2002)

Figure 15: Farmland Values per Acre in Five-County Study Area




Urban counties such as Wayne and Washtenaw show the highest average estimated values for farmland within the five-county Study Area. (Source: U.S. Census of Agriculture 2002)

The withering of farming as a viable livelihood has contributed to the decrease in farmland within the Study Area, shrinking by almost 50,000 acres from 1987 until 2002 (Figure 16). Much of the lost farmland acreage has been to "urban influences", where farmland near urban peripheries is swallowed up as cities expand. Given the inability to profit from farming, many farmers near the urban fringe have resorted to selling off their farmland, for which developers are willing to pay a high price. Figure 15 shows that the values per acre of farmland in the more urban counties, Washtenaw and Wayne, are two to three times the state average of $2,667 (U.S. Department of Agriculture National Agricultural Statistics Service 2002). Washtenaw County has been especially affected by the loss of farmland, where almost 30,000 acres were removed from production between 1987 and 2002. The rapid population expansion expected within Washtenaw County, as well as in Monroe and Lenawee Counties, during the next 25 years will continue to chip away at the amount of viable farmland (U.S. Census Bureau 2006).

Figure 16: Cost and Loss of Farmland in Five-County Region

| | **Jackson County** | **Lenawee County** | **Monroe County** | **Washtenaw County** | **Wayne County** |
|---|---|---|---|---|---|
| Change in farmland acres 1987 -2002 | -25,364 | *+8,282* | -2,853 | -29,013 | -711 |
| Population Growth Rate (2030) (%) | 4.71 | 14.58 | 34.66 | 38.75 | -2.29 |

Source: U.S. Census of Agriculture 1987, 2002

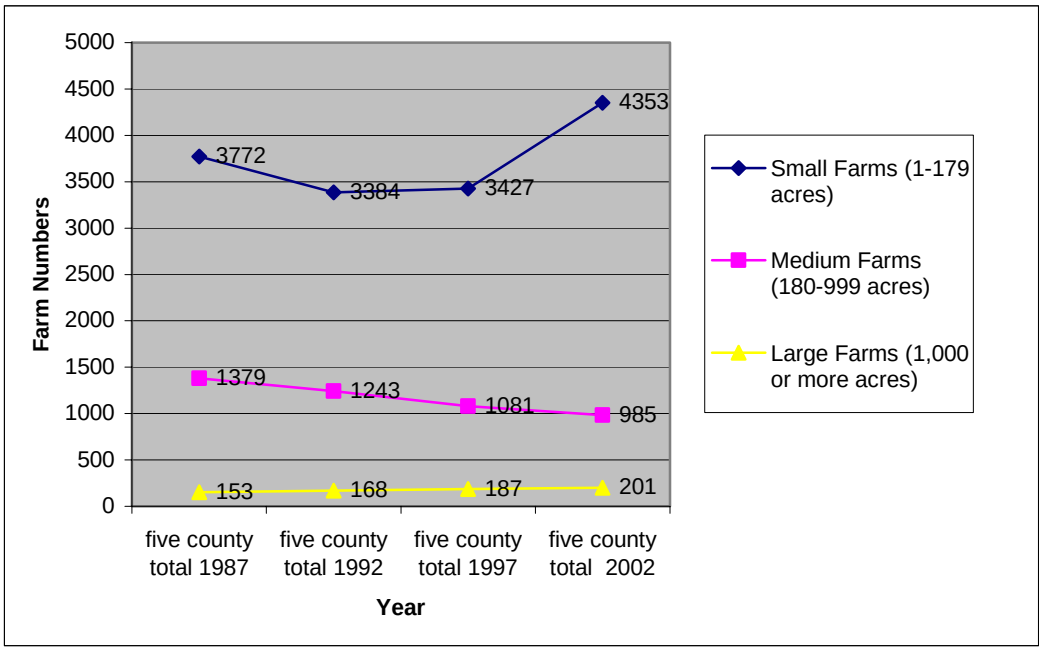
Interestingly, despite the loss of acres in production, the number of farms within the five-county region increased slightly from 1987 to 2002. While the number of medium size farms (180-999 acres) steadily decreased, the numbers of large (1,000 or more acres) and small farms (less than 180 acres) throughout the region have steadily increased (Figure 17) (U.S. Department of Agriculture National Agricultural Statistics Service 2002). While evidence of the reason for the growth in small farms was not found, it likely correlates with the increase in community supported agriculture (CSA) and niche farm enterprise in the area (Tegtmeier *et al.* 2005). This trend is somewhat consistent with farming trends throughout the United States, where there has been a shift from small to medium sized owner operated farms to large, non-locally owned industrial farms which integrate processing and distributing (Che *et al.* 2005).

Figure 17: Farm Numbers and Size within Five-County Region (1987-2002)

| | Region total 1987 | Region total 1992 | Region total 1997 | Region total 2002 |
|---|---|---|---|---|
| Farms | 5,304 | 4,795 | 4,695 | 5,538 |
| Land in Farms (acres) | 1,009,918 | 975,452 | 946,795 | 960,259 |
| Average Size of Farm (acres) | 855 | 913 | 941 | 780 |

Source: U.S. Census of Agriculture 1987, 1992, 1997, 2002

Figure 18: Number of Farms in Five-County Study Area (1987-2002)




The number of small farms within the Study Area increased between 1987 and 2002, while medium farms decreased and large farms showed only very minor increases in number. (Source: U.S. Census of Agriculture 2002)

### *Conclusion*

While some of these trends are discouraging with respect to the viability of farming throughout the five-county region of southeastern Michigan, possibilities exist for the creation of an intentionally localized food system given the characteristics of the region. The region contains numerous urban centers in close proximity to prime agricultural land, a natural advantage of many successful local food economy areas. The region contains substantial consumer and producer bases that suggest the capacity to support a more localized food system, which may help to bolster farming sustainability within the region as well as providing consumers with healthy, nutritious food.

In the later stages of this report, we investigate this capacity in greater depth through a multi-sector survey of the region's food system. Before turning to our primary data collection, we will take a look at some of the literature on a key element of localized food systems that is of particular interest and import to the Food System Economic Partnership (FSEP) among other food system stakeholders in the region – Farm to School programs.

## Issue In-Depth: Opportunities for Farm to School programs in southeastern Michigan

### *What is Farm to School?*

Farm to School (FtS) is a term used to describe collaborative community efforts to integrate locally produced farm products into K-12 schools. FtS programs may include cafeteria school lunches that feature farm fresh foods, integrating food system and nutrition education into classroom teaching, making local products available at the school store, or school-sponsored special events that make the farm-school connection (Flock *et al.* 2003; McDermott 2003; Harmon 2004). FtS programs are never the work of a single individual, instead, members from a wide spectrum of the community come together to fulfill the goals of FtS (U.S. Department of Agriculture 2005). Stakeholders include teachers, farmers, administrators, food service directors, students, parents, nonprofits, processors, distributors, vendors, health care workers, and nutritionists.

FtS programs often strive to fulfill multiple goals by building stronger connections between food production, consumption and education. One primary goal of FtS programs is to address the growing problem of childhood obesity (Parker *et al.* 2003; Hasse *et al.* 2004). Increasing children's consumption of nutritious foods including fresh produce, meat, and dairy products in schools from local farmers and producers can help students to develop healthier relationships with and an appreciation of their food (Harmon 2004). FtS programs also have the potential to bolster local

economies and support agricultural livelihoods, forge strong relationships among community members, and reduce overall fuel costs from transporting food shorter distances (Ohmart 2002; McDermott 2003; Harmon 2004). Hands-on nutrition, science, and environmental curriculum often accompany FtS programs, providing an empirical educational component with the hope of engraining healthier eating habits into the lives of youth (Ohmart 2002; Flock *et al.* 2003; McDermott 2003; Hasse *et al.* 2004).

**Benefits of Farm to School**

Combating Childhood Obesity and Increasing Consumption of Healthier Foods

The number of children who are overweight or obese in the United States has increased at an alarming rate nationwide. Today one in five children is overweight. This number has increased by more than 50 percent over the last two decades. As youth, the health risks of being overweight include greater incidence of asthma, sleep apnea, orthopedic problems and liver disease (Center for Disease Control 2007). Unbalanced nutrition in a child's diet also negatively affects their attention span and their ability to perform well in school (Cohen 2000; McDermott 2003). Overweight children are 70 percent more likely to be overweight adults. As overweight adults, health problems include greater risk of type two diabetes, heart disease, some forms of cancer and high blood pressure stroke (Center for Disease Control 2007).

Many varieties of local produce have a higher nutrient value because they are not genetically engineered with the purpose of being transported long distances (Soil Association 2007). Greater nutrient content and variety in the foods served to our children is one of many factors in a wide strategy to combat the nationwide juggernaut of obesity. FtS programs also lead to an increase in the overall daily consumption of fruits and vegetables, leading to a more nutritious childhood diet (Flock *et al.* 2003).

Schools play a vital role in feeding our children. During the 2004-05 school year, 29.5 million children participated in school lunch programs. On average, 17.5 million of the 29.5 million participants received free or reduced price lunches (Rosso *et al.* 2006). For some children this may be the only meal of the day. Therefore, school systems play an operative role in affecting change in the foods consumed by our nation's children. They also represent a fairly centralized, faster means by which to create systemic change as opposed to the highly decentralized manner of producing change in individual households through their eating habits.

Strong Communities, Strong Schools, Strong Economies

Through Farm to School programs, schools can develop lasting relationships with their broader community. Positive publicity around FtS community-based projects is met with enthusiasm and support from residents and school employees. Schools can also leverage FtS to help them fulfill legal requirements like the National Wellness Policy or nutrition education curriculum (Hasse *et al.* 2004; Brown 2005).

Farm to school programs can provide a steady and necessary market for small and medium farmers (Harmon 2004). Contractual relationships with institutions such as schools and school districts provide farmers with the potential for a steady, reliable market in the future (Ohmart 2002; Markley 2006). However, many FtS programs start small and do not yet have the infrastructure in place to facilitate large volumes of food. Meanwhile, some farmers involved with FtS report that they will continue their participation because they believe in the philosophy of FtS and enjoy the community connections that it provides (Ohmart 2002). Most producers also welcome an increase in demand for their agricultural products but explain that a different set of contractual and working relationships will need to be established in order for them to successfully supply a greater volume of food (Ohmart 2002). This may include communicating in the off-season with school districts to develop planting and harvesting schedules around the school lunch menu and determining a payment and delivery strategy that minimizes time and resource use.

Regardless of the scope of the relationship, producers and farmers participating in FtS develop more face-to-face relationships with the community at large, giving them exposure for their farm products and direct marketing sales. For example, through increased access to information about local farms, parents of children involved in FtS programs may choose to become a part of a community supported agriculture (CSA) share or attend a farmer's market, where they had not done so in the past (Brillinger *et al.* 2003).

FtS programs can help bolster the local agricultural economy by increasing the demand for locally sourced products (Brillinger *et al.* 2003; McDermott 2003). Local business and food system advocates emphasize the importance of keeping investments in the community, rather than allowing money to flow out of the community into the profit margins of distant and often multi-national corporations (Shuman 2006). Therefore, with investment into local agriculture, the surrounding community will receive more of the positive economic benefits of their own food-based consumption.

FtS provides significant potential in fostering institutional demand for local food. Institutions can increase demand, sometimes on the order of magnitudes, for locally sourced products. The significance of institutional buyers goes beyond sheer volume. Larger demand facilitates the development of the necessary infrastructure of a locally-based agricultural economy, such as processing facilities, distribution mechanisms, and other retail outlets. Institutional demand from school districts provides an important piece in fostering the ongoing economic viability of FtS programs (Ohmart 2002; Hasse *et al.* 2004).

Environmental Benefits

When food in school districts originates close to home, communities also receive environmental benefits. Foods that must be transported long distances, potentially even thousands of miles, to a specific school require greater fuel consumption than food delivered from a local source. Reduced use of nonrenewable resources translates into less money used on transportation costs, less demand for extractive industries that are harmful to natural ecosystems, and less pollution in our air and waterways.

FtS programs contribute to farmland preservation efforts when they help to establish to a viable income for small to medium farmers. In San Diego, the "Fresh from the Farm Pilot Project" buys local food from the Tierra Miguel Foundation and Farm (Hasse *et al.* 2004). In doing so, they have made an immediate impact on the ability for this farm to weather the difficultly San Diego County farmers encounter in remaining financially afloat. With time, farmers that provide food to schools may be able to develop a longer-term relationship with schools and other institutional buyers that can represent a significant and reliable demand for farm products. With a reliable income, farmers may choose to not succumb to the pressure to sell their farmland for municipal development.

Participating schools indicate a high preference for bringing in local produce in their school cafeteria (Betty *et al.* 2006). Produce farming is far less common than grain farming (i.e. corn and soybean cultivation). By providing more local farmers with a greater demand for their local produce, FtS can also contribute to decreasing the presence of monoculture farms and increasing the diversity of agricultural species grown. Diversity of species helps the environment through less intensive demands on soil and an increased capacity for crops to resist pests and disease.

### *Challenges and Potential Solutions to the Implementation of Farm to School*

Implementing a FtS program is not as easy as it may appear at first glance. In many ways, the movement is an attempt to revise the baseline of school district food system operations and the method in which producers sell their products. Additionally, each school or school district may experience different problems concerning implementation, based upon their unique decision-making and organizational structures. The following portion of this literature review will look at some of the most prevalent barriers to implementation and ongoing operations expressed by existing FtS programs. We hope the compilation of this information will help other future FtS programs anticipate some of the challenges they may encounter.

Barrier: Legal Constraints

Any publicly funded school or school district that receives federal funding for school lunch programs must follow a specific set of guidelines in purchasing food. Because nearly every school throughout the nation has students on free or reduced lunch programs, these laws apply almost ubiquitously. Under this law, a school must contract to bid any purchase in a given category, such as produce, that exceeds a certain monetary amount over the course of the year. For example, if a school plans to order more than $10,000 in produce for the year, they are required to put their order out to a national bid. In placing this bid nationwide, they must accept the lowest bidder regardless of the origin of the produce (U.S. Department of Agriculture 2005). There are specific stipulations in some laws that explicitly prohibit establishing a geographic preference for the source of food or other products (U.S. Department of Agriculture 2005). Many state, city, or county governments have even tighter restrictions than the national standards. These laws present formidable challenges for school districts that would like to give preference to locally-grown and produced foods and are even willing to pay a rate above the lowest bid. In fact, a 2004 study conducted by Michigan State University of food service directors throughout Michigan found federal regulations to be the one issue that posed a "prohibitive challenge" to many food service personnel's interest in FtS (Betty *et al.* 2006).

Potential Solutions to Legal Constraints

The most important solution to these legal bottlenecks is to rally joint efforts across the country to change policy that allows for geographical preference as part of food purchasing agreements. This problem is one of the central concerns of national organizations whose central mission is working on FtS programs such 'Farm-to-school' and the Community Food Security Coalition (CFSC). The

CFSC and 350 other organizations have joined forces to organize stakeholders, supporters, businesses, schools, and community members involved in FtS programs across the country to build momentum to develop and support legislation to reform the U.S. Farm Bill and procurement laws at the national and state levels (Fisher 2007).

Within the existing legal framework, however, many school districts have found ways to bring local food products into their cafeterias regardless of the potentially restrictive laws. Successful examples include:

- Keeping orders of local products within the monetary parameter regulated by law. For example, if a school or school district wants local diary and does not exceed the national limit of say, $10,000, then they may be able to avoid putting the order out to a national bid. This option works well for new projects that want to start small.
- Schools can identify and encourage local farmers to participate in the biding process, effectively putting their 'hat in the ring,' where it might not have been present otherwise.
- Schools might be able to request certain varieties of produce or food that can only be satisfied by local producers. This may give local producers a more competitive edge in the bidding process; however, this is not a guarantee. Where this strategy is possible, schools can legitimately bring in local products as the lowest bid.
- Schools can also choose to focus their FtS efforts on classroom snacks, school stores, and school-related events that are not subject to the same legal requirements as the cafeteria school food service (U.S. Department of Agriculture 2005).

<u>Barrier: Contracts with Food Vendors</u>

Many schools contract out their food service director position to an outside company that receives its food from vendors and brokers (U.S. Department of Agriculture 2005; Lahey 2006). Currently, these companies rarely work with local producers. Since schools are engaged in a contractual agreement with these companies, unless the food service provider is willing to service local foods, it may be difficult to make large changes to the food lunch program. In some cases, it may even be illegal to bring any food into the school that is not brought forth through the channel of the food service director and parent company (Lahey 2006). Furthermore, the structure of large distributors and food service directors are geared toward achieving financial outcomes and often do not incorporate the benefits of local foods in their business models (Rimkus *et al.* 2004).

Potential Solutions to Contracts with Food Vendors

Schools can urge the companies with whom they have a contract to stock the cafeteria with local products, whenever possible. Many companies may be receptive, especially given the wave of demand for 'buying local' across the nation over the past two years. Chartwells, a food service provider for much of the state of Michigan, has acknowledged local demand and is currently investigating ways to provide their customers with locally produced food products throughout the United States (Lahey 2006).

Barrier: Liability Requirements

Even when a contracted vendor shows interest in buying from local growers and processors, they often have a legal requirement concerning liability. Food vendors generally require farmers, producers, and processors to carry an insurance policy for multiple millions of dollars. For instance, Chartwells requires a $5 million dollar insurance policy for any producers with which they work. Most small and medium sized farms only carry $1-2 million in insurance (Lahey 2006). In many cases, it may not be financially feasible for smaller, local farmers to carry the large required liability policies. Other producers, however, may actually have such a policy but are unwilling or uninformed as to how to add the food service company onto their policy (Ohmart 2002). In general, food service personnel cite the issue of safety as a potential problem (Betty *et al.* 2006).

Potential Solutions to Liability Requirements

Grant funding or other leveraged resources can subsidize some of the farmer's start up or ongoing costs surrounding insurance. Practitioners involved in each community's respective FtS program can also help to facilitate connections between the farmers' insurance agents and food service companies by making the calls for the farmers who already have the necessary insurance (Ohmart 2002).

Barrier: Limited Resources and Cost

School lunch programs work within budgets that are often inadequate to provide healthy food options. Consequently, food service directors cited cost to be a central concern in Michigan (Betty *et al.* 2006). This fiscal pressure has resulted in many schools turning to fast food chains to provide some of the cafeteria food, often resulting in many high fat, highly processed foods with low nutritional value (Ohmart 2002; Brillinger *et al.* 2003; McDermott 2003; Harmon 2004). By entering into a contract with these corporations, the schools receive very inexpensive food to service their cafeterias. Businesses see this as a way to tap into a future investment of life-long customers. While

these companies will see long-term benefits through reliable future consumers, our children loose out by developing a weak health ethic at an early age.

At times, local foods can cost more money than non-local foods because the farmers often to do not have the benefits of economies-of-scale of large-scale producers (Harmon 2004). In addition, most schools receive food from the USDA commodity food program. This program subsidizes some aspects of school lunches and also provides schools with national surplus goods for nearly no cost, making it nearly impossible to compete with these prices for the goods involved in the USDA community foods. Items like milk, meat and apples are the most common goods provided to schools through this program (Harmon 2004).

FtS programs often rely on funding from grants and enthusiastic volunteers to maintain the program and hire a point person who can broker the food service director-farmer interactions (Rimkus *et al.* 2004). However, grant funding and volunteerism is usually not sustainable into perpetuity. Therefore, schools must establish a strategic plan for funding their FtS program in the long term.

Potential Solutions to Limited Resources and Cost

It is important that schools and school districts invest in their school lunch programs if they want to address childhood obesity and academic performance as it relates to nutrition and diet. Current price allotments for school meals are very low and do not reflect the real price of food. Many districts, including the San Francisco School Public School District, struggle with resources for the FtS program in addition to competitive food sales (Rimkus *et al.* 2004). This means that school administrators and public school systems will need to find a compromise or seek funding through new legislation in order to adequately fund healthier food for the cafeteria and the FtS programs, themselves (Betty *et al.* 2006). Determining how much of the cost will be borne by the district and how much will come from fundraising will be an important, but challenging, task of an FtS program (Brillinger *et al.* 2003).

It is important to note that fresh, local food does not always have to cost more money. In fact, there may be certain items in which local producers are either highly competitive with national commodity markets or may even be able to provide at a cheaper price, given the saving in shipping and volume considerations. In general, it is important that local foods provided to FtS programs remain competitive in both price and quality (McDermott 2003).

Schools can work to decrease the proliferation of corporate "junk" foods in cafeterias and change the general acceptance of processed foods in school cafeterias. By rethinking the temptation of revenue from corporate fast food sources that require serving their foods to students, schools may be forced to look beyond short-term solutions to funding problems that can result in long-term problems in our children's health, education, and well-being.

Finally, local foods that compete with USDA commodity foods simply may not be something that can be sourced locally on a large scale, given the extremely low price of these USDA commodity foods. However, some smaller scale school events or classroom snacks may be able to feature local items that fall under this category.

For example, the Davis Unified School District in Yolo County, CA, near Sacramento, began its Farmers Market Salad Bar project in 1999—one of the first in the country. A case study was published in 2003 that detailed three stages of development of their FtS salad bar, or as they call it, the "Crunch Lunch" program. In this publication, they stressed the initial need to have a strong volunteer corps to help kitchen staff make the transition. The study explained the proven value of volunteers to ensure greater success in the program, keep costs down, and involve parents and community members in the program (Brillinger *et al.* 2003).

Barrier: Volume and Seasonality

Many FtS programs and pilot projects have been limited in scope and scale from the perspective of volume of food entering into school lunches and classroom snacks. In addition to some of the legal and contractual challenges to producing the volumes of food demanded by schools and school districts, a single farmer will rarely be able to fulfill the necessary supply on any given item (Betty *et al.* 2006). In Iowa, an acknowledged challenge revolved around "ensuring an adequate supply of product on specific days, clear communication on product size and form, and streamlining of orders" (Harmon 2004).

Seasonality also poses a problem in supplying schools with local foods (Brillinger *et al.* 2003; Hamm 2004; Harmon 2004; Rimkus *et al.* 2004). The school year only corresponds to a few months on either end of the growing season. It is difficult, therefore, to source most produce products during the winter months.

Potential Solutions to Volume and Seasonality

In order to satisfy demand, producers in some communities have entered into farmer cooperatives or collective groups that will pool together their products for institutional buyers, thus satisfying an entire order or the demand of an entire season (Harmon 2004; Rimkus *et al.* 2004). Multiple farmers can collectively achieve the needed volume. Sourcing from multiple producers also has a greater positive impact on the economy, but may be more work for school employees or an outside facilitator to organize. In Santa Fe, the FtS program worked with this type of cooperative where 40 farmers in total sell to the participating schools (Harmon 2004).

In general, it is important to make connections with a wide variety of farmers and to make regular contact with them in order to establish a relationship between the producers and schools (Brillinger *et al.* 2003). Once schools establish base-line relationships with local producers, they can develop a database with farmer information, produce and seasonal availability in addition to quantities available, the farmers' normal schedule, and ways to minimize the delivery efforts (Brillinger *et al.* 2003).

Schools and farmers can also develop systems of communication and payment-contract structures where a school will let the farmer know at the beginning of the season what they will need and when they will need it. This allows the farmer to plan what s/he will plant and when s/he will plant it, according to the needs of the school (McDermott 2003). This may also reduce prices by allowing schools and farmers to negotiate bids (Harmon 2004). In this scenario, the farmer has a guaranteed buyer and the school has a reliable source of local food. Meanwhile, food service directors need to consider seasonality of local fresh and processed products when designing lunch menus (McDermott 2003). Planning the school menu significantly ahead of time will allow for a dialogue between the decision-making personnel and local producers to navigate around the issue of seasonality.

Furthermore, certain fresh produce may be cultivated under enclosed, greenhouse, or passive solar conditions, thus extending the growing season for some products. This concept may also be integrated into part of the school curriculum for FtS (e.g., developing a school garden or a garden club).

However, local meat, dairy, and some durable produce such as apples and root vegetables are available in most communities right through the winter. Local products can also include some

mildly processed food products such as jams and sauces, made from local agricultural products. The benefits of processing local foods are two-fold: 1) the products have a longer shelf life and are easy to serve during the off-season, and 2) in some cases, like the New Jersey FtS program, processing local foods was received as a valued-added opportunity to farmers or local processors, allowing them to reap more of a financial return from their products and providing the ability to tap into different markets (Harmon 2004).

Barrier: Distribution and Transportation

In the U.S. food system, distributors are responsible for moving food from farms to retail locations, restaurants and institutions, including schools. In order to meet consumer demands and find markets for ripe products, distributors work across state and sometimes national boundaries. Very few distributors specialize in transporting local food products and most actually depend upon the additional money they make when they ship food in from out-of-state. In order to meet the weekly and sometimes daily demands of school food service systems, schools usually work with large-scale distributors who are usually less well-poised to meet specific demands for local products. Thus, the problem of distribution becomes a major sticking point for many districts and other institutions that desire to increase their consumption of local foods (Betty *et al.* 2006).

Potential Solutions to Distribution and Transportation Needs

The critical distribution link poses the need for creative solutions and innovative delivery methods. It may also open up some opportunities for local entrepreneurs to enter the local food distribution business. Some smaller distributors specialize in local and specialty products, which school districts may seek out. If there is a critical mass in the demand for a distributor in a certain area, then establishing those connections will further boost the local economy by creating more distribution jobs. In some pilot projects, cafeteria employees or FtS practitioners may make their own arrangements to pick up produce from a farm or a farmer's market and deliver it to a school (Harmon 2004). However, this solution is dependent upon location, uniquely dedicated individuals, and means of compensation, which usually proves unsustainable. In one cited case in the Mattole School District in California, the school bus not only stops to pick up children for school, but also picks up farm products for the cafeteria at farms on its rural routes (Harmon 2004).

Alternatively, deliveries and pick-ups may revolve out of a central location where producers can pool their goods and consumers can purchase in a manner similar to some cooperative food businesses.

In Santa Fe, the FtS program did just that. The farmers cooperative they work with either sells to a central warehouse that then distributes the goods to the schools, or they deliver directly to the school (Harmon 2004). However, once the produce comes to the central warehouse, it is sent out via the regular delivery schedule for the warehouse, which typically occurs only once a week. Thus, some schools only receive this food at the end of the week and, therefore, cannot serve it at its freshest point.

In some cases, minor adjustments to existing distribution channels, like contracting local vendors, may prove effective (Harmon 2004; Rimkus *et al.* 2004). Produce and grocery vendors, as well as larger vendors that school districts contract their lunch programs out to, may be interested engaging in local food distribution practices. While many distributors' current practices are not conducive to local distribution and transportation, some businesses' pick-up and drop-off points may be fairly close to local producers' routes and, therefore, would not take much extra time and resources. This was the case in New Jersey, where a local distributor was able to work with the FtS program to achieve its delivery goals (Harmon 2004).

Barrier: Limited Local Processing and Production Capacity

School cafeterias often use food products that have been processed beyond basic washing and rinsing, such as pre-sliced vegetables, frozen foods, and sauces. In the dominant, long-distance agricultural system, produce is first moved from farm to processor and the resulting processed goods are transported by distributors to their points of sale and consumption. Since many regions do not have infrastructure that includes processing facilities to meet the needs of school cafeterias, local farmers and schools alike are left with few choices regarding where the food they sell or buy goes to or comes from. Schools that do choose to purchase locally often require some level of processing of farm items before they reach the school's cafeteria (Brillinger *et al.* 2003).

Potential Solutions to Processing Needs

This situation also lends itself well to the possibility of developing new locally-based businesses or the development of more on-farm processing plants. Processing adds value to farm products. On-farm processing gives farmers the chance to receive greater net gains for the time devoted to their product and business (Rimkus *et al.* 2004). Extension of seasonality via valued shelf-stable products also addresses the issue of limited produce availability during the winter months.

Some schools may also choose to invest in production equipment such as industrial lettuce washers, chopping equipment, and fruit sectioning machines, which will allow minor processing to take place in the school kitchen, while reducing potential labor costs for the schools (Brillinger *et al.* 2003).

Barrier: Lack of School Cafeteria Equipment and Complex Regulations

Surprisingly, many cafeteria workers are not allowed to use knives in the kitchen, as mandated by district or school regulations. When school lunches are contracted out to a vendor, the food often arrives either ready-to-serve or only needs to be heated. Centralized kitchens are often used in order to cut down on labor costs (Brillinger *et al.* 2003). School kitchens that only receive pre-packaged heat-and-serve food stuffs may lack conventional food preparation items such as ovens, stoves, and refrigerators. Most kitchens do not have less common items like salad bars or food processors (Harmon 2004; Rimkus *et al.* 2004). Additionally, the National School Lunch Program requires detailed records on students' eligibility, nutritional intake, meal participation, etc. (Rosso *et al.* 2006). This poses a significant administrative burden to the school lunch program. FtS programs may exacerbate this already strained system.

Potential Solutions to Cafeteria Limitations

In general, attention to equipping schools with adequate kitchen supplies and equipment will be necessary for successful FtS programs. The New Jersey FtS recommended that in order to begin a FtS program, schools "must have facilities that permit fresh fruit and vegetable storage, processing and preparation, food service personnel equipped with the skills to process and prepare fresh fruits and veggies, and adequate financial resources to manage programs" (Harmon 2004). In San Francisco, one of the central recommendations to the district was an investment in the "district's infrastructure and ability to prepare/serve better food by providing: better facilities, equipment, labor, and distribution links" (Rimkus *et al.* 2004).

To overcome the barrier of inadequate cooking facilities, school districts will need to locate funding to adequately equip school kitchens. Such funding may be in the form of grants, in-kind donations, or accessing money from the school district. Regulations must be lifted to allow employees to prepare at least some of the food. This solution may demand collaborative negotiations between employees who may be adverse to change and unions who may oppose the proposals. Given this potentiality, it is important that cafeteria workers are involved in every step of this process. With luck, they will also be advocates of the program and help to facilitate the change (Harmon 2004).

Barrier: Time Requirements for Food Service Personnel and New Ways of Doing Business

Purchasing locally often demands more time on the part of food service personnel. Some food service directors who have purchased locally in the past felt that this challenge of additional time requirements would prohibit them from participating in the future (Betty *et al.* 2006). Especially at the beginning of pilot projects, finding and connecting with producers will demand more time, more phone calls, and new methods of updating each other, than would a single phone call to a national distributor, as was commonplace in the past (Ohmart 2002).

Teachers and administrators must also put in additional time and exhibit a sincere commitment to the educational component of FtS. Without nutrition, environmental, and food system education incorporated into the school curriculum, FtS programs will fall short of their holistic goals of school-wide food system change.

Possible Solutions to Time Requirements

In order to lesson the burden of time requirements on food service personnel and farmers, some FtS programs have hired a liaison who works as a broker between schools and farmers (Rimkus *et al.* 2004). Often this person works in conjunction with a participating non-profit organization or government. This person can work to establish connections that will ultimately allow them to slowly hand over the responsibility of communications to the schools and farmers themselves. Alternatively, this position can become a permanent one, if participating parties establish adequate funding.

As mentioned earlier, farmers' cooperatives can cut down on time from both the farmer and schools' position, by pooling goods in a central area from which communication and distribution needs are streamlined (Harmon 2004; Rimkus *et al.* 2004). Overall, it is important to remember the importance of patience and perseverance. The depth and success of the relationships between farmers and schools are essential.

Barrier: Support for Teachers, Bureaucratic Challenges, and Communication within Schools

An essential component to any FtS program is the participation of teachers via the incorporation of nutrition, urban planning, food system, and environmental science into their curriculum. Lack of support for teachers from the administration or lack of resources to create adequate lesson plans will leave the goal of achieving school-wide food system change falling short of its intended reaches

(Harmon 2004).

In addition to support for teaching staff, the schools and communities must incorporate and support other essential stakeholders in FtS programs. Namely, the food service director and kitchen staff need to play a central role in FtS development (Harmon 2004). Bureaucratic red tape can also hinder the need to make timely decisions concerning FtS pilot projects (Rimkus *et al.* 2004). When developing the school menus, schools must ensure the food service director plans with a genuine commitment to using local produce and farm products (McDermott 2003). It is also important to include parents and students in decision-making processes (Flock *et al.* 2003; McDermott 2003).

Possible Solutions to Teacher Support, Bureaucratic Challenges, and Communication within Schools

Just as food systems themselves transcend multiple areas of our communities, so does food system curriculum transcend multiple academic subject areas. Giving teachers access to adequate curriculum development resources allows them a greater role in actualizing a school-wide food system change, so as not to view nutrition as just a unit taught in isolation.

Some possible solutions to the lack of communication within schools include:

- Inviting kitchen personnel to staff meetings,
- Having teachers and staff work together on education development,
- Encourage professional camaraderie and mutual respect between kitchen staff and teachers,
- A training program for staff and volunteers in the cafeteria can help to bring staff on-board with the program. This can also provide the necessary additional food procurement skills and management of participants, often needed for FtS programs (Harmon 2004).

# Chapter 3: Methodology

## *Introduction*

To develop our understanding of the food system, we reviewed the literature investigating the complex system on various levels and through multiple perspectives. Chapter Two presented our findings, including an overview the macro-system analysis, an account of the characteristics and conditions for the success of alternative food systems, an investigation into the regional-level support for and barriers against a more localized food system in southeastern Michigan integrating relevant regional data and statistics, and a look at the literature on Farm-to-School programs throughout the United States that serve as models for the development of such programs in the five-county region. This familiarity with existing research helped to shape the main component of our research, which was to collect and analyze new primary data on the regional food system. This kind of primary research is essential to FSEP in its mission to develop effective networks, mechanisms and programs to strengthen the region's food system.

Because of the complexity of the food system, the many actors involved and the myriad influences at play, it is essential to gather information about the food system through a variety of means in order to develop a clear picture. Once information has been collected through engaged research, it should then be made widely available and presented in multiple ways to make it accessible to the various stakeholder audiences. Our Local Food Project Team engaged in two complementary research processes to garner more information about the food system in southeastern Michigan. This research included a multi-sector survey and a community food profile.

- The multi-sector survey collected both quantitative data and qualitative feedback from five primary food system stakeholder groups: producers, processors, distributors, retailers, and consumers. The multi-sector survey had three goals: to gather basic information about each food system sector in the region, to gauge the level of engagement within each sector in the local food economy, and to evaluate the interest within and across the stakeholder groups in increasing their role and participation in a more localized food system.
- We based the primary qualitative component of our research on the Community Food Profile (CFP) model developed by the C.S. Mott Group for Sustainable Food Systems at Michigan State University. The goal of the community food profile was to create a visual, tangible, and accessible snapshot of the food system in southeastern Michigan focusing on a

variety of food system actors in the five-county region. The *Southeastern Michigan Community Food Profile* was designed as a public and policy informational tool and as a point of departure among stakeholders for further investigation into the local food system.

This chapter details the research methodology for the multi-sector survey of the five-county study area of southeastern Michigan and the interview-based community food profile. The results of the survey are discussed in Chapter Four and our conclusions based on the research are summarized in Chapter Six.

## *Multi-Sector Survey Methodology*

### Overview and Purpose

The Food System Economic Partnership (FSEP) exists to "catalyze change in the food system of southeastern Michigan." In order to direct, define and inform their efforts, FSEP and its partners require a solid foundation of current information and research about the regional food system and its actors. To contribute to FSEP's knowledge and growing library of data about the regional food system in southeastern Michigan, we developed and implemented a multi-sector survey. The information collected in the survey will support FSEP's work in developing initiatives and will lay the groundwork for further research. Through FSEP's networking capacities, local decision-makers and entrepreneurs may benefit from the research as well.

### Goals of the Survey

In order to learn from a diverse group of food system stakeholders, we designed slightly different surveys for regional producers, processors, distributors, retailers and consumers. All of the surveys had the same general goals, and the goals of the multi-sector survey, in general, were threefold. The first was to collect basic information about each sector of food system, including an assessment of the amount of local food currently being produced, processed, distributed, retailed, and consumed in the region. The second goal was to gauge the interest among the various food system stakeholders in increasing their participation in the local food economy. The third goal was to evaluate the barriers against participating in a more localized food system perceived by each stakeholder group. Including multiple goals allowed us not only to gather information, but to investigate the relationships between local food system perceptions.

Survey Development

In order to gather both general and sector-specific information, we created five different surveys, one each for food producers, processors, distributors, retailers, and consumers. While the food system can be broken down in many different ways, and divided into many different components, we choose these stakeholder groupings to align with FSEP's work. One notable absence from our survey was restaurants. We did not include this sector so that we would avoid duplicating work underway by other FSEP colleagues[5].

To inform the survey development, we searched the Internet to locate sample surveys and other relevant research from around the country focusing on each sector. Based on this review and on our conversations with FSEP leaders, we identified the types of questions to include on each survey in order to address each of our goals. In order to maximize the depth and validity of our study and uncover useful information, we decided to include numerical, ordinal and open-ended questions on each survey. This variety in question types would allow us to employ multiple data analysis methods. As our team developed the surveys focused on current use of and future interest in local foods, FSEP was in the early stages of a study funded through a Project GREEEN grant that focused on organic food and grain production and consumption in the five-county region. Rather than create and implement two separate survey instruments, FSEP leaders suggested that our surveys be adapted to incorporate some of their grain-specific questions. FSEP was able to revise the original grant proposal to broaden the scope of the project. In doing so, the omnibus multi-sector survey was funded in part by the Project GREEEN grant.

IRB Methodology

Since our team's research involved interactions with human research subjects, we were required to submit our research methodology and data collection plans to the University of Michigan's Behavioral Sciences Institutional Review Board (IRB). Approval from the IRB is required to ensure that the rights and welfare of human research subjects recruited to participate in University of Michigan research activities are adequately protected. When the survey instruments were finalized, we submitted them along with our research plan to the IRB for approval. Approval was granted for our project on May 19, 2006 (Appendix 1). Although we did not anticipate that our subjects would experience any risks in association with our research, we provided a thorough explanation of our

[5] The restaurant survey report "Marketing Potential for Local Producer to Restaurants in Jackson, Lenawee, Monroe, Washtenaw and Wayne Counties," prepared by Michaelle Rehmann, is available at http://fsepmichigan.org/reports.

research, subject involvement, and measures taken to minimize any potential risks or discomfort of subjects in a Research Consent Form for Study Participants (Appendix 2). This material, along with contact information for the study team, was distributed with each survey that was mailed or completed in person. Subjects were encouraged to skip questions or discontinue participation at any time if they felt uncomfortable.

### *Multi-Sector Survey Collection*

All surveys were collected either via U.S. mail or in person. The producer, processor, distributor, and retailer surveys were distributed via U.S. Mail. The three-part mailing included an initial introductory letter (Appendix 3), the survey itself with information and research consent form and a reminder postcard (Appendix 4). The initial letter was sent to potential survey respondents telling about our Master's Project Team, FSEP and the survey that will be mailed to them shortly. The next mailing followed within a week and included the actual survey, a consent form, an introductory cover letter, and a self-addressed stamped envelope. The last mailing was a follow-up postcard that was sent to remind people to return the survey if they desired to participate and thanking them for their participation if they had already mailed in the survey. This postcard was sent approximately a week and a half after the second mailing. Approximately three weeks after the survey mailing, follow-up phone calls were made to survey participants in all sectors (producers, processors, distributors, and retailers) to ask them one final time to complete the survey and return it via mail or fax if they hadn't yet done so yet. The phone call also gave us a chance to thank respondents in person.

Methods for Choosing Farmer Survey Recipients

We chose all the survey sample participants using a random sample based on existing databases of food system participants that was obtained through FSEP's working relationships with other organizations. The farming database was obtained through Michigan State University Extension (MSUE). Representatives working at MSUE in each of the counties of Jackson, Lenawee, Monroe, and Washtenaw were contacted and asked to provide a contact list of farmers within their counties. Jackson, Lenawee, Monroe, and Washtenaw counties each provided producer contact information. Because of the small number of farms in Wayne County, we did not gather producer information from Wayne. We sent surveys to five producers in each of the following categories: produce, meat, dairy, and grain farmers, for a total of 20 surveys sent to each of the four counties. In total, eighty surveys were mailed out to a variety of producers in four counties.

Methods for Choosing Retailer Survey Recipients

To select the retailer survey recipients, we first started with a 2004 MSUE database of over 8,000 food-related retailers. In order to pare down the information, we eliminated all types of retailers except produce, dairy, and meat markets, independent and chain grocery stores, farmers' markets and bakeries. We chose a total of 160 independent retailers and 40 chain grocery stores. We started the list with approximately 20 retailers from the FSEP contact list. With the remaining 140 slots, we randomly selected a number of retailers from each county that was proportional to the total number of retailers in the database. The following are the number of independent retailers we determined for the counties: Jackson-16, Lenawee-7, Monroe-12, Washtenaw-30, and Wayne-95. Using a random number generator, we choose the aforementioned number of retailers from the larger list. As mentioned before, an initial letter was sent to inform businesses about the survey and prepare them to receive it in the mail the following week. After we sent the initial correspondence, some of these letters were "returned to sender" due to a change of address or because the store was no longer in business. The number of final surveys sent out after we eliminated these returned addresses from the database was as follows: Jackson-16, Lenawee-7, Monroe-11, Washtenaw-30, Wayne-85. One hundred and forty nine independent retailers actually received the survey in the mail.

Methods for Choosing Processor and Distributor Survey Recipients

The processor and distributor samples were both drawn from the same MSUE database. The methods for choosing both mailing lists were identical except for the number of contacts generated in each category. We first eliminated all businesses that were blatantly not a food processor or a food distributor. Next, since FSEP represents all five counties, we wanted to make sure that at least a few businesses were represented from each county in the database. Eighty processor contacts were generated and one hundred distributor contacts were generated from the remaining list. The same initial letter was sent to these businesses and after those that were "returned to sender" in the mail were eliminated from the mailing list, 74 processor contacts remained and 95 distributors. We sent surveys to these contacts and followed up with postcards and phone calls, as with all the other survey sectors.

Universe sample sizes for the multi-sector survey ranged between 74 and 149 for each sector mailing. The number of surveys mailed out for each sector was limited due to financial constraints. Despite this, we received 10 competed processor surveys, 21 distributor surveys, 36 retailer surveys and 38 producer surveys. While small, our samples allowed us to analyze the descriptive data for all sectors

and to conduct more in-depth statistical tests on the retailer and producer surveys leading to some valuable initial findings about the viability of a localized food system in southeastern Michigan.

Methods for Consumer Survey Distribution and Collection

All consumer surveys were collected in person at various food purchasing or consumption locations throughout the five-county region. We aimed to obtain an equitable and representative sample by visiting a variety of locations and types of establishments within the five-county region. Survey sites included grocery stores, farmers' markets, and other places where people regularly purchase or consume food.

We initially selected five survey sites in each of the five counties, including one or two farmers' markets for each county and three to five grocery or other types of food stores. These locations were selected at random based on their location within the county and other characteristics, such as name recognition, estimated size, and nature of the store (e.g., independent, chain retailer, etc.) to ensure a variety of customers and retail locations. We also attempted to select stores from communities of various sizes in each county; however, some of the smaller towns and cities in a few of the counties lacked retail locations appropriate for in-person survey collection. We initially planned to collect 20 surveys at each site, making for 100 surveys per county and culminating in 500 surveys in total. A list of the proposed target survey sites can be seen in Appendix 5.

After identifying the initial target list of consumer survey sites with equal numbers of sites in each county, we revised our methodology to reflect the vast population differences among the counties. We decided that the consumer survey would better represent the five-county region if surveys were collected in relation to the population size of the counties. Therefore, we collected substantially more surveys from Wayne County.

We collected 247 surveys over the course of six weeks. The sample included 37 respondents were from Jackson County, 38 from Lenawee County, 20 from Monroe County, 37 from Washtenaw County, and 84 respondents from Wayne County. Fifteen survey respondents did not indicate where they live. Twenty-one respondents were found, after data analysis, to live in counties outside of the five-county region. We chose not to eliminate the data from respondents who lived outside of the five-county region since all respondents were surveyed at area locations where they purchased

food. We assumed that these respondents consumed food within the region, and thereby had a stake in the regional food system.

Before distributing the surveys at each location, we obtained consent from the managers to approach customers. Once at a location, we selected individual shoppers as randomly as possible in order to obtain a representative sample. We first explained that we were Master's students at the University of Michigan conducting research for a project. We then asked whether they would be willing to take our short survey. If they agreed, we briefly mentioned the IRB stipulations, presented the consent form and oriented them to the survey, and provided a pen and the survey on a clipboard. We remained available to answer any questions and allow respondents to voice any concerns while they were taking the survey. After they had completed the survey we presented them with the consent form, which included our contact information, placed the completed survey in an envelope and thanked them for taking the survey.

Consumer Survey Challenges

As mentioned previously, over six weeks we collected 247 surveys from a dozen locations throughout the five-county region. The survey sites included four farmers' markets, three grocery stores, and several other retail outlets (a list of actual survey location sites can be seen in Appendix 6). Our initial goal was to obtain 500 consumer surveys from 25 sites throughout the five-county region. However, time, travel and financial constraints limited our ability to realize this ambitious goal. We were unable to obtain surveys from some of the originally selected sites because store managers did not grant consent to distribute and collect surveys at their establishments. Additionally, some of the target farmers' market sites had switched business hours, which prevented our survey collecting at these sites due to inability to make return trips to more distant locations. Lastly, funding to support the data collection and transportation costs was extremely limited, allowing fewer trips to the various counties for collection of data at the 25 different sites.

### *Survey Aggregation and Analysis*

During and after survey collection, we entered responses into Microsoft Excel in a format that could be easily uploaded into the statistical analysis program Statistical Package for Social Science Research (SPSS). After all the surveys were collected and the data were uploaded into SPSS, we conferred with the University of Michigan's Center for Statistical Consultation and Research (CSCAR) for assistance in determining which statistical tests to run on our large data set.

We began with basic descriptive and frequency tests on each of the questions for each of the five surveys. These basic descriptive and frequency tests included information on means, modes, medians, ranges, standard deviations, frequency numbers, percentages and sample size. These tests were run to establish a basic understanding of the data for each sector, to identify the current levels of participation in the southeastern Michigan food system and to evaluate the interest in increasing the local food availability within and across the stakeholder groups.

Three of the five surveys – the farmer, retailer and consumer surveys – returned sufficient sample sizes to run more in-depth tests for cross-tabulations, correlations and associations between different questions and among different subsets of each stakeholder group. We ran in-depth statistical analyses to identify relationships among characteristics of stakeholders, level of interest in food system localization, perceived barriers to a more localized food system, opportunities for strengthening the local food system, and leverage points for localization.

We selected appropriate statistical tests based on the structure and design of the survey questions. We used the Chi-square cross tabulation test to check for associations between two categorical variables. For situations where the cross tabulation table was sparse, we used the Fisher's Exact test rather than the Chi-Square method to adjust for small sample distortion. To measure the strength of the associations between two continuous variables, we ran the Spearman correlation test for non-parametric datasets because we assumed our data was not normally distributed. We used the non-parametric dataset assumption at the advice of a CSCAR statistics consultant, who recommended the use of the Spearman test. To analyze the relationship between a continuous variable and categorical variables, we used T-tests and ANOVA tests. T-tests and ANOVA tests assess whether the means of sample groups are statistically different from each other. Examples of these types of tests are the Mann Whitney test, which is a nonparametric two sample T-test that compares the means of two samples. We also used the Wilcoxon Signed Rank test, which is a T-test for nonparametric data for the case of two related samples or repeated measurements on a single sample. The Kruskal-Wallis test is a nonparametric method of testing several samples for whether at least one of the sample means in the data set are statistically different. In order to further discern what sample means were statistically different from each other after the Kruskal-Wallis test indicated significance in the samples, we ran Tukey Post Hoc tests between each variable mean for multiple comparison. Lastly, we ran linear regressions on some of the consumer data in order to test for differences among ethnicities in their willingness to purchase local foods, their interest in local foods, and their purchasing frequency for local foods when income was held constant.

After the statistical tests were conducted, we analyzed the results from each survey. The analysis paralleled the survey goals. First, we identified the current characteristics and trends in each sector, generally and with respect to participation in the local food system. We then looked at the levels of interest in increasing participation in the local food system and compared responses to these questions with the descriptive characteristics. Finally, we considered the key barriers identified by each stakeholder group and compared these responses with level of interest in increasing participation in the local food system and against descriptive characteristics. Through the analysis process, we identified additional question-response pairs on which we needed to run tests. The results of the survey are presented and discussed in Chapter 4.

**Community Food Profile Methodology**

***Introduction***

Purpose

Survey and other data provide valuable information to organizations like FSEP and others who can use the information to develop programs, new businesses or policy recommendations. Supplementing data collection with more qualitative research is an effective way to make information about the food system accessible and useful to a wider variety of stakeholders and potential change agents, particularly farmers, consumers and local policy-makers. As a fledgling non-profit organization, FSEP is in the process establishing a library of data and resources from which to build upon. As it is necessary for strategic planning, program development, and fundraising, this information is essential to FSEP's work.

Background

FSEP requested that our team create a Community Food Profile (CFP) to contribute qualitative data and "stories" to their growing library of research. Our partners provided us with a model document and development framework created by the C. S. Mott Group for Sustainable Food Systems at Michigan State University. The C.S. Mott Group's 2004 publication, *Food Connections: Capital Area Community Food Profile*, highlighted elements of the local food system in the tri-county region surrounding Michigan's state capital, Lansing.[6] To support the development of more food profiles around the state and beyond, leading to a better understanding of how food gets from farm to table, the C.S. Mott Group published a brief guide to creating a CFP and encouraged others to use and adapt the model to generate more knowledge about their local food system.

[6] The document is available at www.mottgroup.msu.edu/downloads/CACfoodprofile.pdf.

The development guide mentions a few of the many potential reasons for developing a CFP including: highlighting community-based food activities in the area, sharing a "community-based food system perspective with the broader public" and helping to build food system connections in the community (C.S. Mott Group for Sustainable Food Systems 2005). The guide then details the CFP development process, suggesting key themes to address and people to include in the process as well as pointers for planning, researching, editing and publishing the document. Importantly, the development guide and the C.S. Mott Group encourages individuals and organizations to adapt the CFP process to their own food system environment and needs, "the *Capital Area Community Food Profile* presents one way to approach sharing a community-based food system perspective. There are certainly many others, and quite likely, more appropriate approaches for your community and the audience you hope to reach. Please take liberty in modifying, adding to, subtracting from, or reinventing this example CFP" (C.S. Mott Group for Sustainable Food Systems 2005). Since our Study Area within southeastern Michigan shares many characteristics of the Lansing area, but also has many unique aspects, our team both drew from the development guide directly and developed our own CFP process.

## *Methodology*

Getting started

The C.S. Mott Group guide provided a valuable set of suggestions and point of departure for our profile of the five-county region in southeastern Michigan. After reviewing the *Capital Area Community Profile* and other similar documents[7], we began to create the *Southeastern Michigan Community Food Profile*. In the spring of 2006, FSEP director Mike Score asked the members of the FSEP Leadership Team to answer a few open-ended questions about their impressions of the local food system. The questions were both e-mailed to the group and distributed as a single-page survey during two in-person meetings. The questions included:

- What community do you see yourself as part of?
- On the production side of agriculture, what are the most notable sources of food in your community?
- On the consumption side of agriculture, how is most food delivered to consumers in your community?

[7] See "Exploring Community Food Systems in Audubon, Benton, Johnson and Marshall Counties" at www.leopold.iastate.edu/pubs/other/other.htm.

- Having already identified the most common sources of food in your community, are there any new types of food production businesses that you are excited about?
- From your perspective of a grower or a consumer (whichever you see yourself as), how would you describe interest levels in increasing access to local food products in your community?

Over a dozen leadership team members representing as many professions and all five counties answered the questions. Their responses formed the basis of the food profile. We read all of the responses and compiled them into a database. We informally coded the responses to identify the key themes and ideas most important to the Leadership Team members.
The key topics included:

| Production & Processing | Consumption & Marketing |
|---|---|
| Grain production<br>Grain processing<br>Small vegetable farming<br>Fruit orchards and cider<br>On-farm processing (i.e. soybeans)<br>Dairy production<br>Meat production<br>Meat processing<br>Farmland preservation | Direct marketing<br>Grocery stores<br>Farmers' markets<br>Community Support Agriculture |
| Distribution | Emerging Opportunities |
| Local foods distribution | Community & School gardens<br>Farm to School<br>Processing facilities<br>New agriculture-based business |

Planning the document

As leaders in and diverse representatives of community food systems in the five-county region, we felt confident that the aspects of the food system that were repeatedly mentioned by the Leadership Team would form a solid basis for our first CFP. We divided the key themes into two main categories, production and consumption, and two smaller categories, distribution and emerging opportunities. The topics became the feature articles and the categories gave structure to the

document. From this framework, and drawing heavily from the C.S. Mott model to designate the topics of the introductory material, we developed a page-by-page outline for the profile.

Before beginning the research and personal interviews that would inform the bulk of the document, we articulated the goals of our community food profile based on FSEP's stated interests and our knowledge of effective models of similar documents. The goals, as articulated in the document itself, include:

- The CFP provides **a snapshot of the local food system** from the varied perspectives of food system actors in a five-county region of southeastern Michigan. These representatives include farmers, producers, processors, distributors and consumers as well as policy-makers, educators, entrepreneurs and community leaders. Through interviews, photographs and supporting research the profile gives the seemingly impersonal food system a face and a story. More precisely, it begins to build a library of the many faces and stories that comprise the local food system.
- Beyond painting a picture, the profile strives to **inform stakeholders** including individuals and organizations, current and potential entrepreneurs, and policy-makers about the local food system in a creative and accessible way. The themes addressed in this edition were chosen based on conversations and responses to an open-ended survey about perceptions of local food communities.
- Through this information, the profile aims to **promote increased awareness of and dialogue about the food system**. Awareness and dialogue are the first steps in taking an active role in creating a food system that better represents our values as a community.
- Finally, to promote active change in the food system, this document showcases future **opportunities for development** of small businesses, organizations and networks to promote local economic growth through a stronger food system.

Research and Interviews

Once we identified our research goals and feature story topics, we conferred with FSEP leaders and other food system contacts, including the Slow Food Huron Valley leadership team, to locate potential interviewees including producers, distributors, chefs and retailers that would help tell the southeastern Michigan community food system story. The CFP was a collaborative effort and each member of the Master's group took responsibility for three to five main articles plus one aspect of

the introduction. By sharing the responsibility, each member added to his or her understanding of the local food system through direct contact with it. In the end, it also allowed us to communicate what we learned through multiple voices and perspectives, adding to the "magazine-style" quality of the document. Lead authors on each article then searched the Internet and local news sources to gather background information on the feature topics. Research was targeted primarily on local markets and sources of information, but we also looked briefly to relevant models in other regions and made note of any regional or national-level organizations related to the article topics. Throughout this process, we noted key sources of additional information to include in the text boxes and resources sections of the CFP.

Based on background research, lead authors developed interview questions and made arrangements with interviewees. Depending on availability, transportation and personal preference, we conducted interviews either in person, over the phone or, if necessary, via e-mail exchange. Interviews were conducted on farms, at farmers' markets, or at local meeting places like coffee shops. Interviews varied in duration, depending on the nature of the conversation and the interviewees, most of whom were eager to share their perspective on the community food system. Some interviews with busy farmers at market were only 10 minutes and some phone conversations lasted more than an hour, but most were between 15 and 30 minutes.

Nearly all of the prospective interviewees were outwardly willing to talk with us. A few contacts did not pan out due to inability to coordinate an interview or lack of interest on the part of the interviewee. In particular, we were unable to establish an interview with a representative from a local dairy producer due to the representative's busy schedule, and meat processors were either uninterested in talking about local foods or unavailable for comment. We adjusted the final document slightly to accommodate these minor changes from our plan.

We developed the feature articles based on the information gathered from background research and personal communication. In most cases, the author derived the article's focus directly from the interview(s). We also made sure to document our food system stories visually, taking or collecting photographs of our featured farmers, farms, products, markets, stores and gardens wherever possible. Since the goals of the publication were to both inform the public and stakeholders in the community food system and provide resources for further discovery, we collected additional information on the topic to include with the stories.

Production

Once the articles were researched and written, one group member and graphic designer used Adobe InDesign to format the document. The readable, "magazine-style" design was specifically requested by FSEP and was inspired, in part, by the *Capital Area Profile*. The "stories" comprised the bulk of the document. Photographs helped tell the story wherever possible and helped to make the document readable, accessible and visually appealing to a broad audience. The supplementary resources, contact information and suggestions for action were integrated with the main text and photographs in the form of visually-attractive textboxes and sidebars with the goal of drawing the reader's eye to ways to become more involved in the local food system.

To ensure that the CFP mets the client's needs, the FSEP Leadership Team was given an opportunity edit the document and request any final changes or additions before publication. In addition, with the design template created, it will be relatively easy to add more articles in the future

Publication

The final product, the *Southeastern Michigan Community Food Profile*, as shown in Appendix 7, will be disseminated to a wide audience via multiple means. FSEP will print the document to disseminate throughout the five-county region, particularly at their third annual conference in late March 2007 and in meetings with local and state policy-makers. A portable document format (pdf) of the entire document and its constituent parts will be created and made available on the FSEP website. The website design will allow viewers to read and download either the entire document or individual pages or stories of interest. This format will also allow FSEP leaders to create smaller, targeted or issue-specific versions of the document for different purposes. As requested by the C.S. Mott Group, we will submit the final document to the group and invite them to post a link to it on their CFP website. Local food-related organizations such as Slow Food Huron Valley may also post the document or a link to it on their websites and share it with members at meetings. Other means of publication include posting to local food related list-serves such as "FOODSPEAK" and "COMFOOD," which reach state and national audiences.

Future steps

The *Southeastern Michigan Community Food Profile* is only a glimpse of a complex and dynamic local food system in the five-county region of southeastern Michigan. The stories included are merely a sample amid a sea of additional stories of local producers, consumers, retailers and others to tell. We hope that this CFP is the first of many visually-appealing and inspiring documents produced by and in

partnership with FSEP. In order to facilitate future additions to and editions of the document, we will provide FSEP with the design template and a list of ideas for future articles, including some of the topics that we were not able to include in the first document.

# Chapter 4: Presentation and Discussion of Findings

This chapter reports the findings of our food system surveys for farmers, processors, distributors, retailers, and consumers. We first provide an account of the descriptive statistics for each survey question. Next, we discuss the results of the statistical tests we conducted that analyze the relationship between demographic and descriptive qualities of the survey respondent and their interest in the local food system, their perceived barriers and opportunities within their sector of the food system, and any other noteworthy relationships. Both the processor and distributor surveys only received enough responses to warrant a descriptive statistical analysis. For each survey, we provide a summary of that sector's demand for local food, the perceived barriers of engagement in the local food system, and the opportunities that exist to develop the local food system in Southeastern Michigan. We end with a summary description of the demand, barriers, and opportunities for the whole regional food system by drawing connections between the surveys.

## Producer Survey Results

### *Introduction*

Agriculture is the foundation of the food system and a critical component of the economy. Despite the centrality of producers and their products, the relationship between farmers and consumers in the global, industrial food system is often distant or even non-existent (Kloppenburg *et al.* 1996; Hendrickson *et al.* 2002). Attention to the needs, demands, and perceptions of producers is vital to the establishment of a viable alternative local food system. When regional consumers support local farmers, the community as a whole stands to benefit environmentally and economically (Palan 2005). Potential benefits include increased investment in the local agricultural economy, farmland preservation, reduced use of fuel for transportation, and increased viability of small and medium-sized farms. Relationships between farmers and consumers, often mediated by other food system actors like distributors and retailers, are the most fundamental links within the local food system. When these bonds grow stronger, they can fuel the fervent dedication of local food system leaders, planners and policy-makers who catalyze systemic change toward intentionally localized food systems.

<u>Farming in southeastern Michigan</u>

Due to the rich soils and diverse microclimates in the "Great Lakes State," Michigan is the second most agriculturally diverse state in the United States. Michigan's farmers produce over 200 crops

(Michigan Department of Agriculture 2006; Michigan Food Policy Council 2006). The five-county study area of southeastern Michigan boasts a substantial and diverse agriculture base. There are over 5,500 farms covering nearly one million acres of land. In 2002, these farms produced agricultural products worth over $320 million, 8.5 percent of the state's total market value of agricultural products. The region is among the top producers of livestock including sheep, hogs, cattle and calves. Many farms produce commodities including corn, soybeans, wheat and dairy and there is a growing number of small vegetable farms.

For myriad reasons including low commodity prices, increasing costs of inputs and processing, and increasing land values due in part to urban development, land in farming has decreased throughout the state and in the region. In the five-county study area, farmland acreage decreased by 50,000 acres between 1987 and 2002 (U.S. Department of Agriculture National Agricultural Statistics Service 2002). This trend is expected to continue in the face of projected growth in Washtenaw, Monroe and Lenawee counties over the next few decades.

Survey goals

Viable farms are an essential component of the food system and strengthening the connections within the local food system has the potential to help support farmers and keep land in agricultural production. To inform strategies and policy to build these connections, we developed a producer survey to learn about the local food system directly from the perspective of farmers in the region. The goals of the producer survey were to gather information from local producers about their current farming practices, their interest in participating in a more localized food system by selling their products directly to local consumers, processors or retailers, and the key barriers that inhibit a more localized food system.

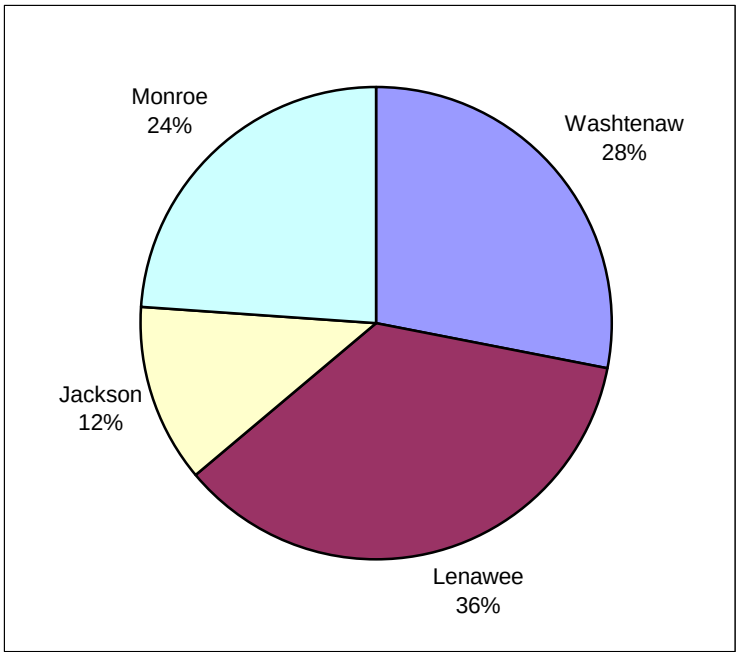
Survey design

The producer survey consisted of 17 questions (Appendix 8). After a basic set of questions about the farm location, size, crops and profitability, we asked about current level of participation in the local food market, future interests in selling more of their products locally and the perceived barriers to participating in the local food economy. Respondents had the option of including their contact information at the end of the survey if they were willing to correspond with FSEP in the future.

### *Response rate and demographics*

We sent eighty surveys to farmers in Monroe, Lenawee, Jackson and Washtenaw Counties. Due to the relatively small number of farmers in primarily urban Wayne County, we did not include Wayne producers in the survey. Thirty-eight farmers returned the survey, an overall return rate of 47.5 percent. Twenty-four respondents responded to the questions about farm location. Of those who identified location, 20 different zip codes were represented in the sample showing a broad geographic distribution. By county, three farmed in Jackson, nine in Lenawee, six in Monroe and seven in Washtenaw (Figure 19). Most of the producers in our sample reported farming as a full-time occupation (71.1%).

Figure 19: Producers by County



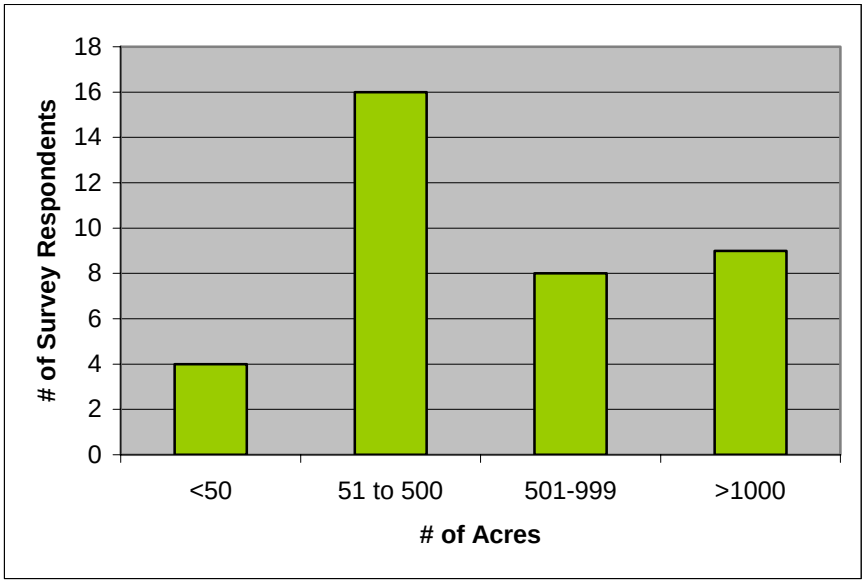

The roughly representative sample of producers included 9 responses from producers in Lenawee, 7 from Washtenaw, 6 from Monroe, and 3 from Jackson.

Farm size and products

Nearly all of the respondents included information about the size of their farm by checking the acreage range that best described their working land (n=37). Four farmers in our sample (11.8%) farmed on fewer than 50 acres. Just **over half (54%) of the survey respondents work on or own small or medium farms,** defined as fewer than 500 acres. About 22 percent (21.6%) farm 500-999 acres and nearly 25 percent (24.3%) work farms over 1,000 acres (Figure 20). Grain was the most commonly grown crop, 25 of the respondents (65.8%) grew grains. Thirteen of 38 (34.2%) grew

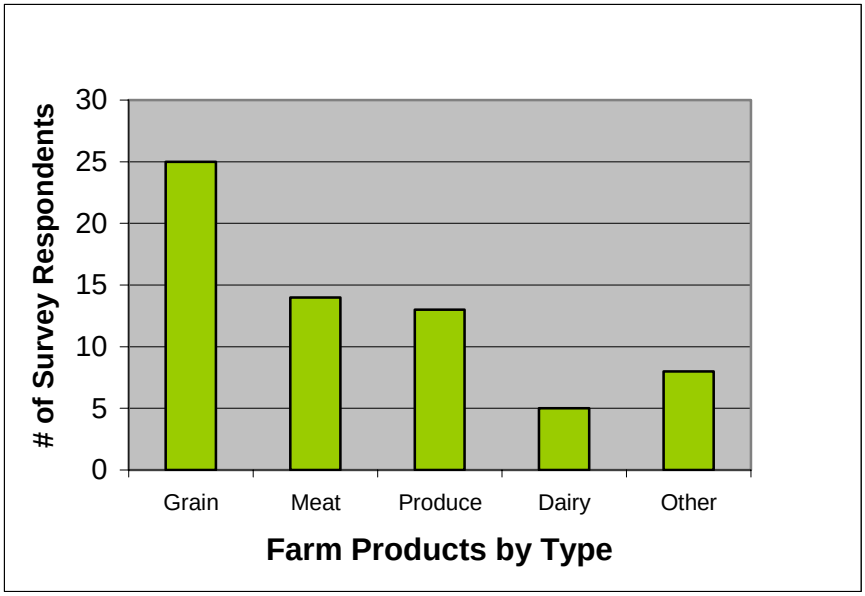
produce (fruits and vegetables) and five (13.2%) worked a dairy farm (Figure 21). Eight farmers (21.1%) reported that they sell other types of products in addition to primary crops. Cited examples of other crops included wood, eggs, honey, hay, straw, popcorn, wine, gourds, nuts and flowers.

Figure 20: Farm Size by Acreage




The majority of producers worked on medium sized farms, while roughly 1/5 worked on farms larger than 1000 acres and 1/10 worked on small farms.

Figure 21: Farm Products Produced by Survey Respondents

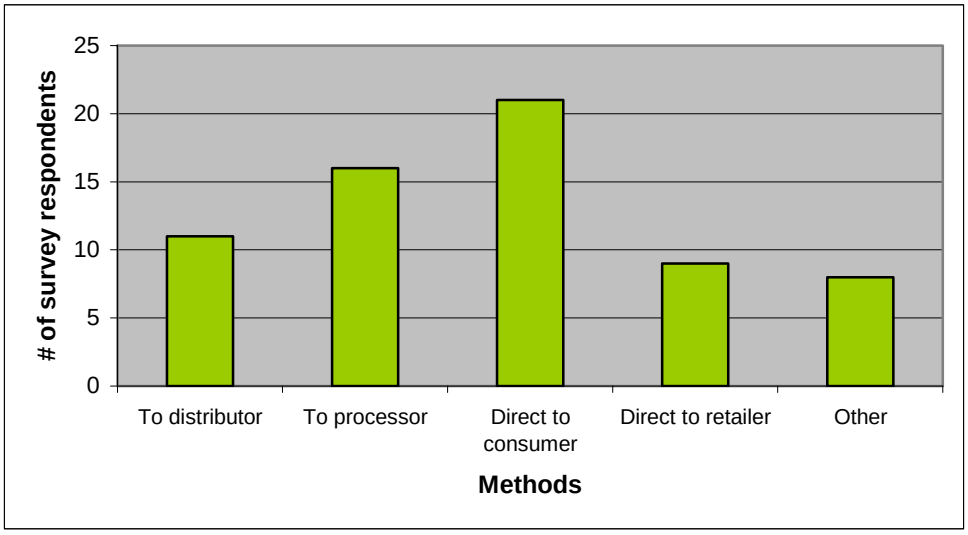



Since many producers cultivate more than one agricultural good on their farm, each survey participant could choose more than one option. Most farmers produce at least some grain product. Over 1/3 produce meat and/or produce. Roughly 13% produce dairy.

Marketing Farm Products

We asked farmers to report all of the means by which they sell their products (n=38). Eleven farmers (28.9%) reported that they sell their products **to a distributor**; 16 (42.1%) reported that they sell **to a processor**; 21 (55.3%) reported that they sell **directly to consumers**; 9 (23.7%) reported that they sell their products **directly to retailers**; and 8 (21.1%) reported that they sell their products **to "other"** food stakeholders (Figure 22). Written examples of other markets included brokers, wholesalers, other farmers, grain elevators, and livestock exchanges. Grain farmers were more likely to sell to a processor or distributor. Farmers selling produce were more likely to sell directly to consumers and to retailers. Nineteen (50%) of the respondents reported selling their products via multiple means while 6 (15.7%) only sold direct to consumer.

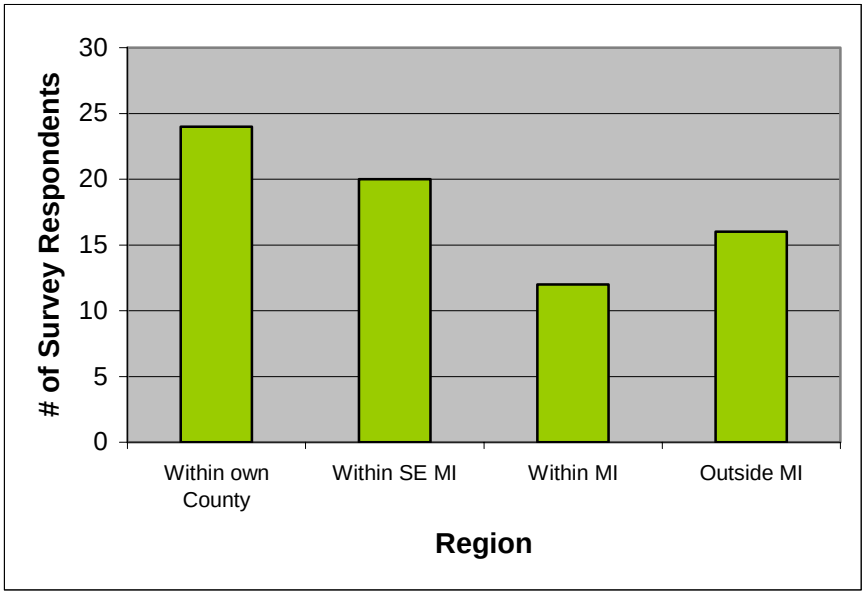
Figure 22: Producers' Methods of Sales




Most farmers sold directly to consumers via some method, followed by selling to a processor or distributor. More than one answer could be chosen for this question.

To learn more about where food grown in the region is sold, we asked farmers to indicate the geographic location of the buyer(s) of their product. Respondents could check all locations that applied (n=38). Nearly two-thirds of farmers (24 of 38) sell at least some of their products within their own county or another county in southeastern Michigan. Over 40 percent (16 producers) sell at least some of their products outside of the state of Michigan. Meanwhile, 53% (20 producers) sell at least some of their products within the region and roughly one-third (20) producers sell to other areas within the state of Michigan (Figure 23). Over half (52.6%) indicated that the buyers of their products were located in multiple areas (i.e. they sold their products both within their county and outside of the state).

Figure 23: Producers' Geographic Sales Areas

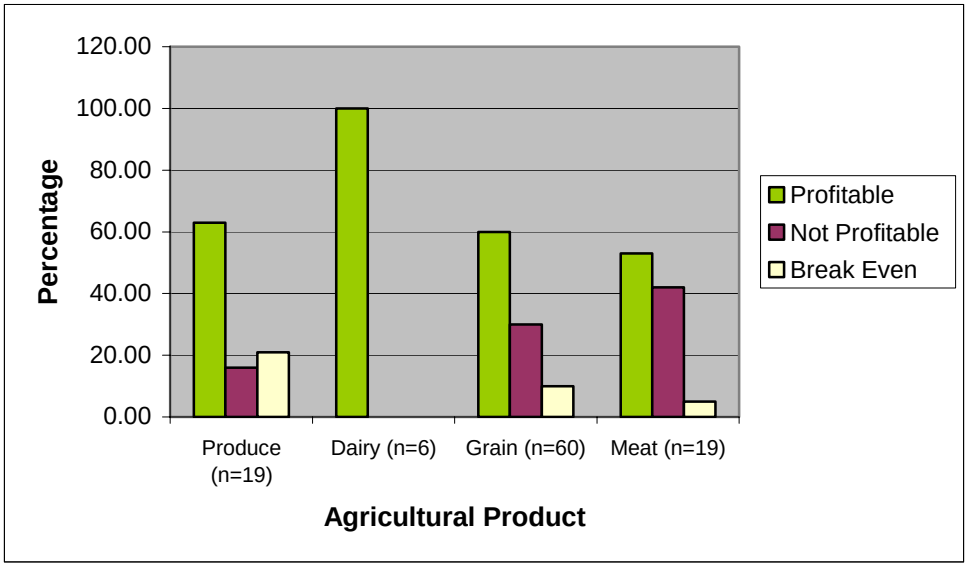



There was a fair amount of variability in where farmers sell their goods. Most sold at least some goods within their county while 1/3 sell out of state.

Farm Profitability

Among other indicators, farm profitability can provide some insight into the future of farming in the region. We asked farmers to indicate the overall profitability of each of their agricultural products over the last five years. Overall, 60 percent of the sample reported making a profit on their crops; 28 percent broke even; and 10 percent lost money. The results varied among types of farmers. Grain farmers reflected the overall trend as 60 percent were profitable; 30 percent broke even; and 10 percent were not profitable (n=60). Produce farmers had the highest rate of losses yet most were profitable (n=19): 63 percent of produce growers were profitable; 15.8 percent broke even; and 21.1 percent were not profitable. And a large proportion of meat producers reported neither profits nor losses (n=19): 53 percent of meat producers reported a profit; 42 percent broke even; and 5 percent were not profitable. Of the six producers that make dairy products, all (100%) reported making a profit (Figure 24).

Figure 24: Profitability of Farmers by Agricultural Product

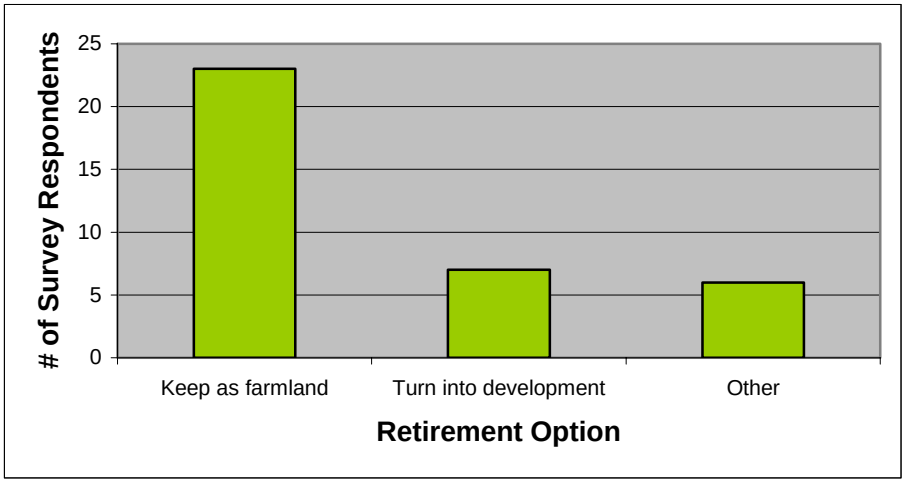



Produce and dairy farmers were more profitable. Grain farmers reflected the sample averages; and meat producers reported roughly even levels of profitability and non-profitability.

Farm Succession

In the face of rapid urban and suburban growth, farmland in the region is regularly sold to developers for housing and retail developments. In many cases, these transactions happen when farmers reach retirement age. We asked farmers to share their plans for their farm and farmland when they retire (n=36). Roughly two-thirds of the farmers in the survey expressed the desire to keep their farm and farmland in farming when they retire, either through the sale of their farm and farmland or by giving it to their children, relatives, or friends. About 20 percent reported that they intended to change their farm and farmland over to a non-farming use, either through the sale of the land to developers or by giving it to their children, relatives, or friends, who would develop it (Figure 25).

Figure 25: Retirement Plans for Agricultural Land




The majority of farmers plan to keep their land in farming either by passing the land onto their children or selling it to farmers. Roughly 20% plan to sell their land to developers.

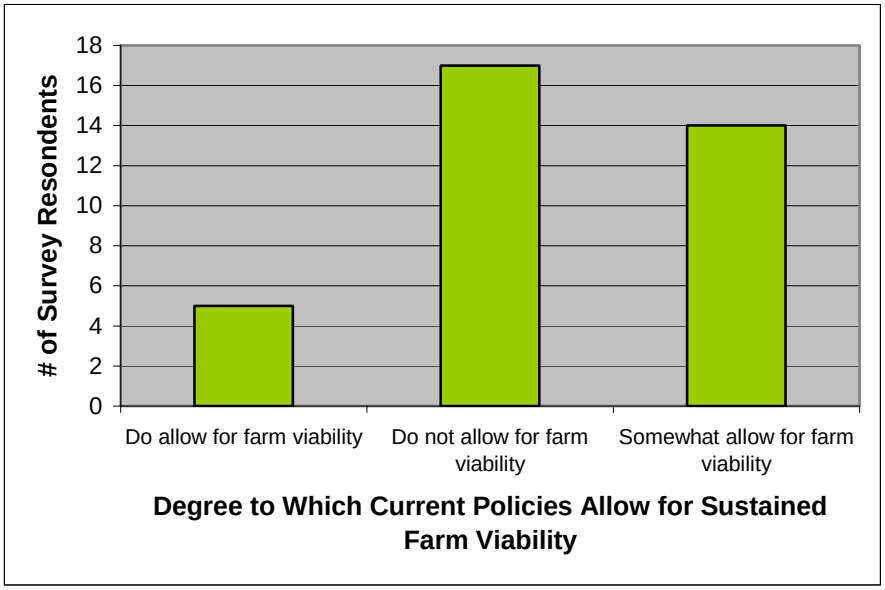
Agricultural Policy

Farmers are ingrained in a complex system of state and federal agricultural policy that influences their practices and, thus the local system. When asked whether current markets and farming policies allow for sustained farming viability:

- 17 of 36 farmers (47.2%) believed that current markets and farming policies **do not allow** for sustained farming viability.
- 14 of 36 farmers (38.9%) reported that they felt that current markets and farming policies **"somewhat" allow** for sustained farming viability.
- Five of 36 farmers (13.9%) had the opinion that current markets and farming **policies do allow** for sustained farming viability (see Figure 26).

In an open-ended follow-up question, we asked farmers to cite the main factor **enabling** sustained farming viability. Twenty-five farmers responded to this write-in question. The answers varied widely, but many farmers mentioned **consumer interest**, **viable markets** for their products and **low costs**. Written responses included: "an **informed public** willing to support sustainable farming," "good markets and **good prices locally**" and "market opportunities and **market infrastructure**."

Figure 26: Producer Perceptions of Farm Policy




The majority of farmers do not have faith that the current polices will enable sustained farming practices.

Though not statistically significant, we found those that that want to keep their land as farmland tend to be more profitable than those that want to develop their land (Mann-Whitney: z= -1.500, p=.158, n=30).

### *Producing food for the local market*

As the core of the food system, local producers must have an interest in participating in an intentionally localized food system in order for it to work. To begin to gauge this interest, we asked farmers about the existing opportunities for marketing their products locally and about their interest in participating in the local food economy.

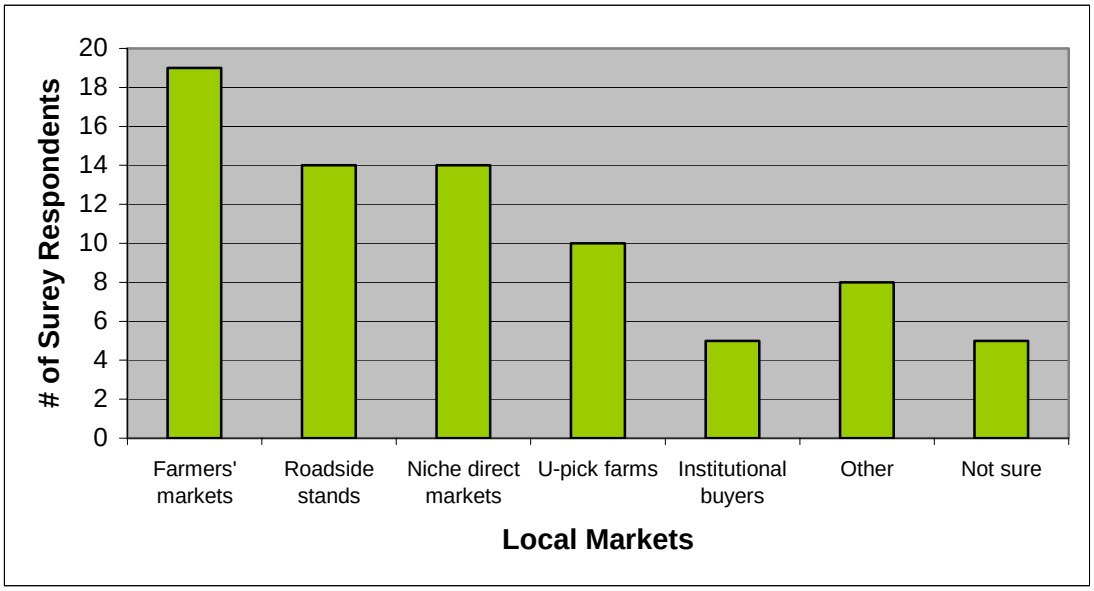
Existing Opportunities to Market at the Local Level

With regard to existing local food marketing opportunities, we asked farmers to check all that applied from the following options: farmers' markets, roadside stands, U-pick farms, institutional buyers, and direct niche markets (Figure 27). There was space to write in other outlets, as well.

- 19 of the 38 farmers (50.0%) reported that "**farmers' markets**" were an opportunity that existed in their community for the direct sale of farm products.
- 14 of the 38 farmers (36.8%) reported that "**roadside stands**" were an opportunity that existed in their community for the direct sale of farm products.

- Ten of the 38 farmers (26.3%) reported that "**U-pick farms**" were an opportunity that existed in their community for the direct sale of farm products. U-pick farms often have farm stands that sell regional products that did not originate on the farm directly.
- Five of the 38 farmers (13.2%) reported that "**institutional buyers**" were an opportunity that existed in their community for the direct sale of farm products. Institutional buyers include schools, hospitals, prisons and government facilities.
- 14 of the 38 farmers (36.8%) reported that "**niche direct markets**" were an opportunity that existed in their community for the direct sale of farm products. When asked to elaborate on what these niche direct markets were, farmers wrote "local slaughter house," "word of mouth to consumers," "restaurants and co-ops," "community supported agriculture," "straw sales," "home delivery," and "supply large farm with feed."
- Eight of the 38 farmers (21.1%) reported that "other" types of opportunities existed in their community for the direct sale of farm products. Farmers listed "other" opportunities as: "on farm retail store," "direct on the farm," "food co-op," "retailers and distributors," and "growers cooperative."
- Five farmers (13.2%) were "not sure" about the opportunities that exist in their communities for direct sales.

Figure 27: Existing Opportunities to Market Local Goods

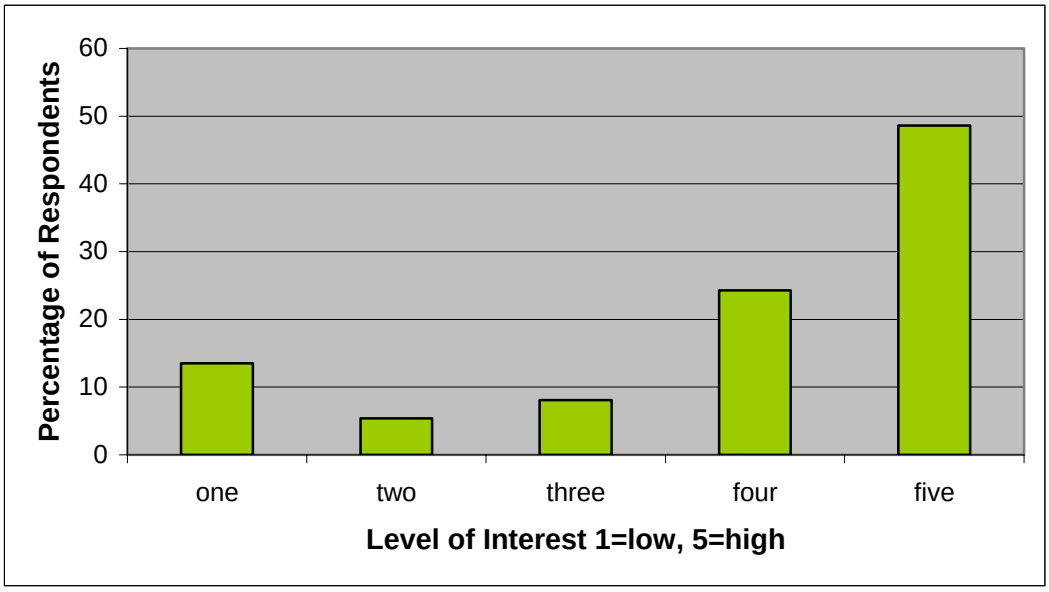



Local producers are most aware of classic local markets such as farmers' markets and roadside stands. Fewer are aware of opportunities such as institutional buyers (schools, hospitals, etc.) to sell their local goods to.

### *Future interest in participating in the local food economy*

We asked farmers to rate their level of interest in selling their food directly at the local level using a Likert scale. With "1" as lowest interest and "5" as highest interest, the overall mean was 3.89 (n=37), with a standard deviation of 1.43. Nearly three fourths of the respondents indicated a high or very high level of interest in direct marketing their products. Nearly half of the respondents (48.6%) rated their interest as a "5" and nine (24.3 %) reported a "4." At the other end, five of the 37 farmers (13.5%) indicated a low interest of "1" in selling their food on the local market (Figure 28). The five farmers that indicated low interest in selling their products on the local market were all large farms growing over 500 acres of grains plus some produce, meat or dairy.

Figure 28: Producers' Future Interest in Marketing Local Goods




Producers indicated a very strong interest in participating in the local foods market with nearly half indicating a high interest of (5) and another 25% reporting a 4.

Full vs. Part Time Employment and Interest in Local Marketing

We tested to see if there was a relationship between interest in local agricultural markets and whether farming was full or part time occupation for the survey respondent. Using the Mann-Whitney Test, we found no significant correlation between farmer occupation and interest in selling local foods (sig.=.602). However, 70% of fulltime farmers and 80% non-fulltime farmers rate their interest high in selling local foods with a 4 or 5. Fulltime farmers were more apt to rate interest in local foods lower (26% rated their interest with a 1 or 2 score), whereas zero non-fulltime farmers ranked their interest at this level.

Preserving Farmland and Interest in Local Marketing

A split group descriptive statistic test was run between the survey question "When you retire, what do you expect to do with your farm and farmland?" and question "Rate your interest level in selling your products directly at the local level." The results in question addressing retirement plans were consolidated into two groups: those that desired to keep their farmland as agricultural land and those that desired to develop their farmland.

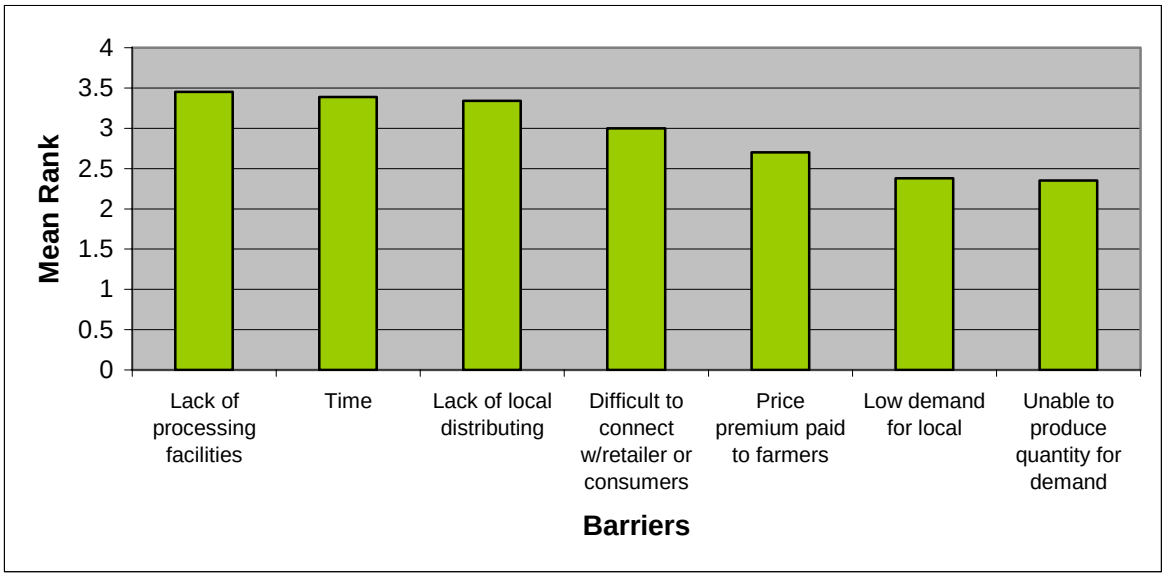
After running a Mann-Whitney Test, we found no significant correlation between what the farmers wanted to do when they retire and their interest in selling local foods (sig.=.266). However, we observed that those who wanted to keep their farmland as farmland were more likely to rate a higher level for interest in local foods than those that sought to develop their farmland. The mean scores for this were 3.91 and 3.14, respectively.

### *Barriers to participating in the local food market*

One of the key goals of our survey was to learn more about the barriers and perceived barriers to food production for the local market in order to better inform efforts to improve the connections among stakeholders in the local food system. Based on background research, we identified seven potential barriers and asked respondents to indicate the level of importance of each on a "1" (low factor) to "5" (high factor) Likert scale. The question read: "Using the scales below, indicate the degree to which the following factors limit your direct local sales" (Figure 29).

The top three barriers indicated were "**lack of processing facilities**" (mean=3.45), "**requires too much time**" (mean=3.39), and "**lack of distribution system for local products**" (mean=3.34). With a mean of 3.00, "difficult to find, interact, or correspond with retailers and consumers" was a close and notable fourth barrier. Also important to note are the less highly rated barriers: "unable to produce sufficient quantity to meet demand" (mean=2.35), "insufficient demand for local products" (mean=2.38), and "price premiums paid to farmers" (mean=2.70) were the lowest rated options.

Figure 29: Producers' Perceived Barriers to Involvement in Local Markets




Top barriers to farmers include lack of local processing facilities, additional time requirements for local marketing, and lack of distributors willing to transport local goods.

To supplement their responses to given options, we asked farmers list any other barriers to direct local sales. Farmers provided an array of answers, but some key themes emerged. These included government regulations ("federal and state regulations," "government regulations are unreasonable"), costs and prices ("labor," "costs too much to start a business" "prices are chronically low-it is hard to produce and market enough to sustain oneself") and lack of market for their products ("there is no local marketing in the quantity we produce," "no buyer in marketplace"). One farmer mentioned that there are "no elevators that purchase organic grains." Another indicated "publicity and advertisement" as a barrier to direct marketing of their products locally.

Interest in Local Sales and Perceived Barriers of Local Food System

A non-parametric Spearman correlation test analyzed the relationship between Question 8: "Indicate the degree to which the following factors limit your direct local sales" and Question 9 "Rate your interest level in selling your products directly at the local level." Two relationships showed significant associations. There was a negative correlation between level of local food interest and the barrier "difficult to find, interact, or correspond with retailers and consumers." ($r = -0.388$, $p = .047$). Therefore, those farmers with a greater interest in increasing local food sales were likely to rate "difficult to find, interact, or correspond with retailers and consumers" as a low barrier. Those who were less interested in local marketing rated connections with retailers and consumers as a

considerable barrier. Similarly, farmers with significant interest in increasing local food sales were likely to rate "insufficient demand for local products" as a low barrier and vice versa ($r = 0.425$, $p = 0.012$). The mean ranks between level of local food interest and the barrier "insufficient demand for local products" were also negatively correlated.

Some additional tests

The following tests all showed no statistical significance but may be worthy of note and further study.

- Farmers with more interest in local food sales tend to operate small or medium sized farms. Spearman-($r=-.209$, $p=.214$)
- Producers who want to keep their land as farmland when they retire have a higher interest in local foods sales than those that desire to develop their farmland. Mann-Whitney-($Z=-1.199$, $p=.266$, $n=30$)

### *Producer Survey: Summary of findings*

The survey of food producers in the five-county region returned many interesting and significant results. Key findings from the producer survey included:

- Nearly half of the farmers surveyed currently sell some of their farm products directly to consumers.
- Two thirds of the farmers sell at least some products within the state of Michigan; 42% sell at least some products outside the state.
- Many farmers are not aware of some opportunities to market their products locally, e.g. institutional buyers.
- Nearly 75 percent of farmers in our sample are interested in increasing their direct local sales.
- Farmers who are more interested in local food sales tend to operate small or medium sized farms.
- Part-time farmers have a high degree of interest in local food sales.
- Producers who want to keep their land in agricultural use when they retire have a higher interest in local foods sales than those who desire to develop their farmland.

- Farmers most interested in participating in the local food system **did not** find demand for local products to be a barrier.
- Farmers who are less interested in local marketing found interacting with retailers and consumers to be a considerable barrier. Those farmers who had high interest in local marketing did not find interactions with retailers and consumers to be a barrier.

**Processor Survey Results**

### *Introduction*

Processors are businesses that add value to raw agriculture material. In doing so they make products available to a wider array of consumers through more diversified forms of food products. It is through processing facilities that we get products like canned vegetables and fruits from produce, crackers and bread from milled grain, cheese from milk, soy milk and tofu from soybeans, and slaughter house cuts of beef from animals. Processing is also a central means by which we consume local goods year-round. Though it is difficult to find local lettuce in January, we can easily purchase local jams, canned goods, dairy products and meats regardless of the season.

In today's global agri-food system, many processing facilities are autonomous entities often hundreds to thousands of miles away from the farms from which they receive products. On-farm processing presents an alternative to this model of remote processing. In on-farm processing, farmers are in control of the management of processing and marketing activities, and thus receive the economic benefits of the value-added opportunities (Gellynck *et al.* 2002). Local food systems look to on-farm processing as a means to overcome some of the shortages of local processing facilities, as well as creating more robust economic opportunities for local producers.

Processing in Southeastern Michigan

In southeastern Michigan, processors are possibly the least well-represented sector of the food system, with relatively few local processing facilities housed in our region. While it is difficult to quantify the number of processors given the many different definitions of food processing, there are over 100 food businesses that can be considered processors in the five-county area.[8] The majority of these are "starch processors" including bakeries, candy and confectionaries, brewers, wineries, snack manufacturers and noodle manufacturers. There are about a dozen dairy processors that produce ice cream and frozen desserts and about 20 meat processors including meat packers and sausage makers. Examples of local processors include Jiffy Mix, Zingerman's Creamery, and Eden Foods.

Survey goals

Regionally-based processing businesses are necessary to maintain a diverse local food system that exists beyond niche markets. Local processors are also a solution to the barrier of seasonality—they

[8] This number was derived from a list of food-related businesses in the Study Area furnished to FSEP by Michigan State University Product Center.

allow people to consume local goods right through the winter months. To elucidate regional processors' perception of the local food system and inform these perceptions to the central actors of our food system, we developed and distributed a survey to area processing businesses. The goals of the survey were to assess processors' current and future interest in the local food system, gauge perceived barriers to their involvement in processing local foods for the local market, and to compare this information with general information about the type of processing businesses surveyed.

Survey design

The processor survey consisted of eleven questions (Appendix 9). The questions were all multiple choice and five-point Likert scale questions. After a basic set of questions about the business location, size, and type of customer base, we asked about current level of participation in the local food market, future interests in participating in the local food market and the perceived barriers to participating in the local food economy. Respondents had the option of including their contact information at the end of the survey if they were willing to be contacted for more information.

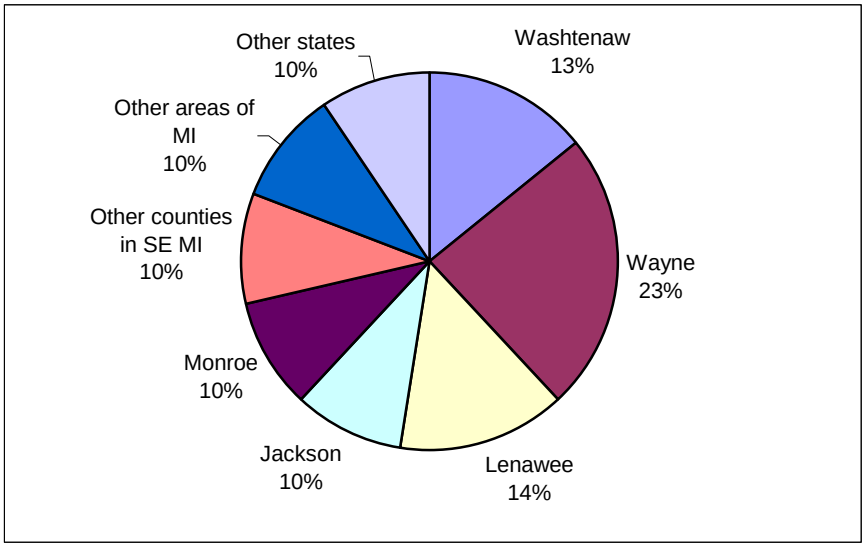
### *Response rates and demographics*

We received a 10% response rate with 8 individual responses to the 77 surveys we mailed out to a randomly generated list of processors in the area. Because of the small response rate, we only ran descriptive statistics on this survey. Of the eight processors responding, all were from different zip codes. Five were based in Wayne County two in Lenawee and one in Washtenaw.

Geographic Service Area

When we asked to indicate all the counties and regions their business served, we found four businesses served more than one area, with two choosing all of the counties and other areas of Michigan. Of the four processors that only reported working in one area, one served Wayne County, one served Lenawee, one served other counties in Southeastern Michigan (Hillsdale), and one served other states (Figure 30). In general, there was a fairly even distribution to each of the counties in our region. However, this question did not take into account size and capacity of the processing facilities. The following figure shows the service areas within which processing businesses supply.

Figure 30: Processor Service Areas

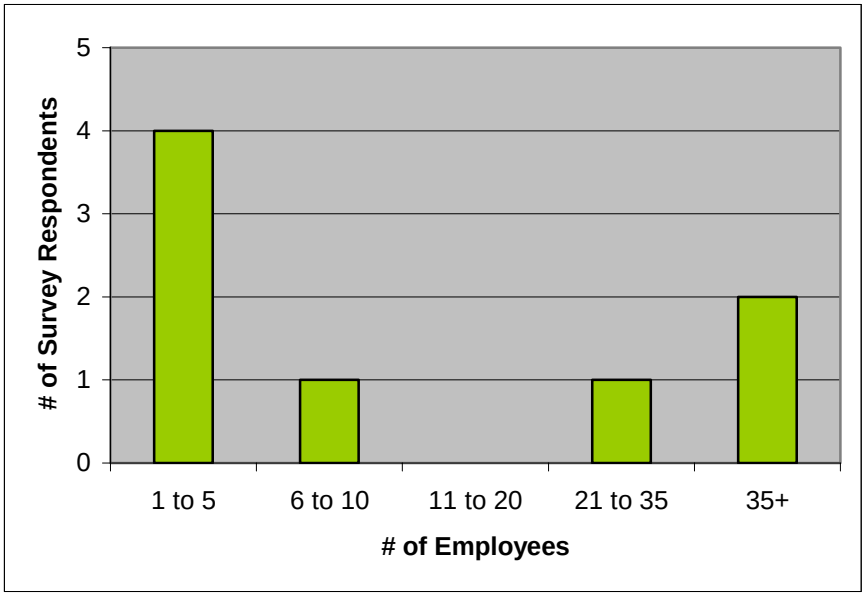



Processors sell goods in all of the counties in southeastern Michigan as well as other areas of the state and other states.

Number of Employees

The size of processor businesses varied with four small businesses (1-5 employees); one with a medium sized business (6-10 employees); and 3 with a large business (greater than twenty employees). Therefore, most of the processors are smaller operations, with over 60% having fewer than 20 employees (Figure 31).

Figure 31: Number of Processor Employees

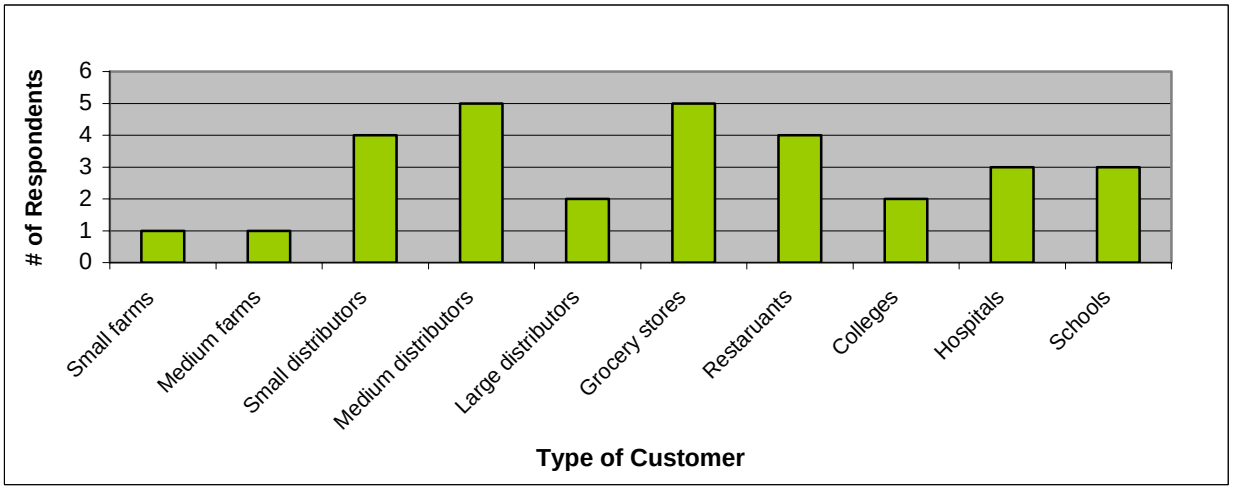



Most of the processors surveyed are smaller businesses, with over 60% having fewer than 20 employees.

Customer Base

Processors that work with local retailers as well as institutional buyers represent two of the greatest needs in the development of the regional southeastern Michigan food system. The graph below shows the distribution of customers processors served (Figure 32).

Figure 32: Processor Customer Base




Most processors currently work with small or medium distributors, grocery stores, and restaurants.

From the graph we see that, most processors surveyed currently work with small (4) or medium (5) distributors, grocery stores (5), and restaurants (4). A few work with institutions such as colleges (3)

and hospitals (3). Institutional buyers may represent an important future opportunity for regional food system growth. Institutional buyers create a 'critical mass' or significant demand for local goods, which help to develop infrastructure and business strategies around a local market. Few processors currently work with farms, with only one respondent indicating work with both small and medium farms.

### *Interest in local foods*

In response to "What percentage of the food that you process is local?,"

- 4 said 0%
- 1 said 1-25% (a bakery)
- 1 said 26-50% (a soybean processor)
- 1 said 51-75%(a snack foods company)
- 1 said 76-100%

The majority (5 of the 8) of the processors do not process or process little local food. The one business that indicated 76-100% of its food comes from local sources appears to be a poultry processing facility. A snack foods company indicated 51-75% of its ingredients as coming from local producers. However, **50% process at least some local foods currently.**

Change in the percentage of local foods

We asked whether the percentage of local foods the company processes has increased, decreased, or remained constant over the last five years. **The majority (6 of 8) of respondents had either experienced an increase or consistent demand for local products.** A bakery and a snack foods processor reported the increase in demand for local products. Only two indicated a decrease in demand for products sourced locally, including the poultry facility and the soy products company. The four that reported a constant percentage of demand were also those that reported no demand for local products in the first place.

Requests for local foods

When we asked if processors had received requests for local foods, four reported that they had and four reported that they had not. Those who have never received requests also indicated that they do not process any local ingredients and reported that this lack of requests has remained constant over

the last five years. If the processor had received a request for local food, they were asked three follow up questions:

1) How often do you receive requests for local foods?
    - 2-reported less than once per month
    - 2-reported 1-5 times per month

2) What kinds of local products are requested?
    - 1 said produce
    - 1 said dairy
    - 2 said other: poultry and snack foods

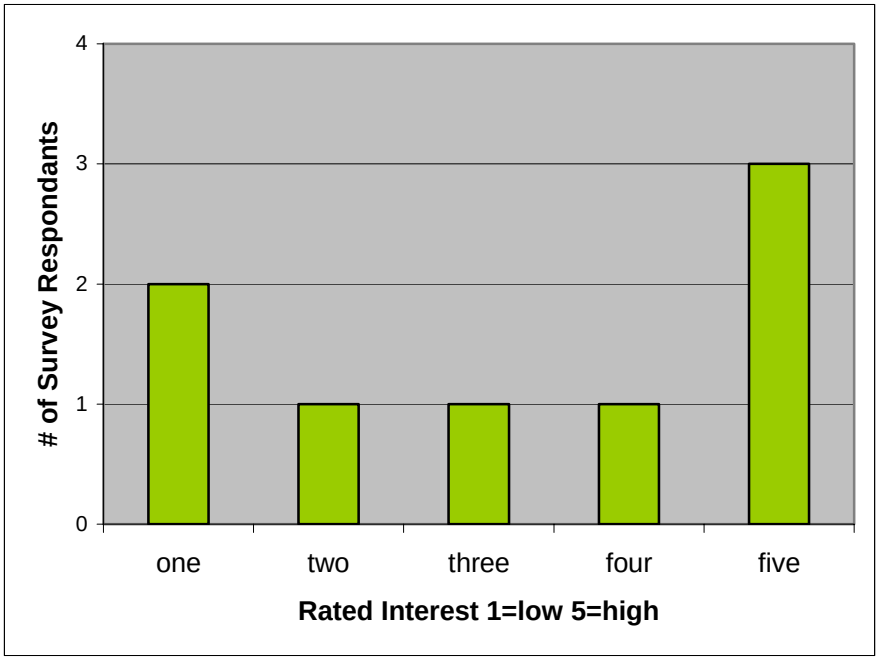
3) What percent of these requests are you able to satisfy?
    - 2 said 1-25%
    - 1 said 76-100% (poultry)
    - one did not answer

In general, we found processors receive modest requests for local products but work to satisfy the local requests that they received. However, they were generally not able to satisfy all of the requests received.

Level of interest in working with local producers: (n=8)

All respondents were asked to rate their level of interest in working with local producers to distribute their food on a 1-5 Likert scale from low to high (n=8). The interest, on average is a little above moderate interest (mean of **3.25**). However, many of those that answered had significant interest, with three individuals indicating a high interest of 5 and one an interest of four. Two indicated a low interest of one and a single respondent indicated an interest of two (Figure 33).

Figure 33: Processor Interest in Local Foods



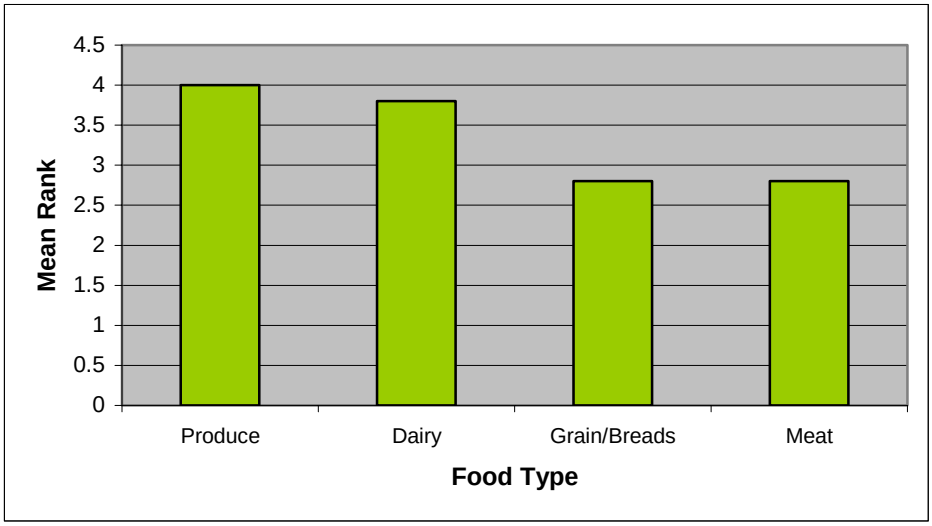

Though the mean interest in processing local foods was moderate, 3 of 8 processors indicated a very high, 5, interest in processing local food and one indicated an interest of 4.

Interest in specific types of local foods

To get a more clear idea of the types of local foods local processors would be most interested in working with, we asked respondents to rate their level of interest in various categories on a 1-5 Likert scale from low to high interest. We received a variable of high and low interest for the different food categories. Generally, the type of food the company currently processes corresponds to a high interest in working with that type of local food.

From the survey we found that **most processors are interested in working with produce (mean=4) and dairy (mean=3.8).** Both grain/bread products and meats registered a mean of **2.8**. Looking at the individual responses, three respondents rated produce with a five; three rated dairy a five; two rated meat with a four; and one rated grain a five and another with a four. Other products of interest listed in response to an open-ended question included poultry, and organic honey, organic wheat berries, organic sesame seed, and organic sunflower seed.

Figure 34: Processor Interest in Types of Local Food Type



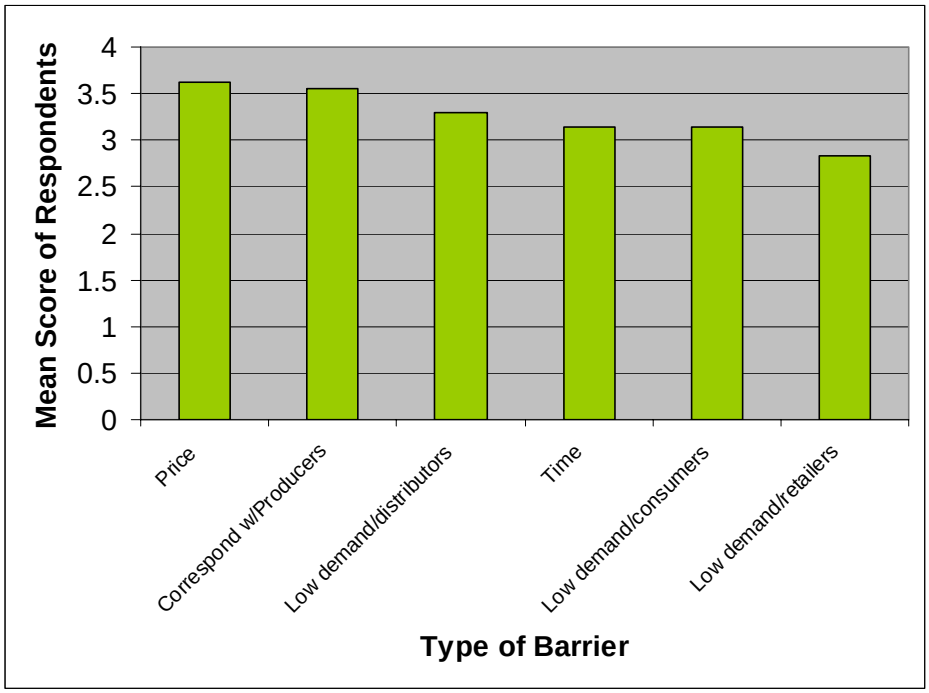

Processors indicate the highest interest in working with local produce and dairy products, followed by grain and meat products.

### *Barriers to local processing*

Determining barriers and perceived barriers to local food processing allows us to speculate as to areas of our food system that need the most attention when determining where to allocate resources toward the infrastructure of a regional food system. We identified several potential reasons and asked respondents to indicate the level of importance of each: "Using the scales below, indicate the degree to which you perceive the following factors as limitations to you increasing the amount of local food you distribute."

The factors perceived as the greatest limitations to increasing the amount of local foods the company processes are: 1) Price (mean=**3.63**); 2) Difficult to find, interact, or correspond with local producers (mean=**3.56**); 3) Insufficient demand from distributors to transport local goods (mean=**3.29**); 4) Requires too much time (mean=**3.14**); 5) Insufficient demand from consumers (**3.14**); 6) Insufficient demand from retailers (**2.83**). One additional barrier noted was "bird flu" from the poultry facility. In sum, price and the ability to find and interact with producers pose the largest barriers to processors involvement in local food ingredients (Figure 35).

Figure 35: Barriers to Processors




The largest barriers to processors working with local foods were price, corresponding with producers, and insufficient demand from distributors.

*Processor Survey: Summary of findings*

- **Fifty percent** of respondents **indicated carrying at least some** local foods currently.
- Seventy-five percent said the proportion of local foods carried has remained constant or increased in the past five years.
- **Fifty percent** of respondents reported that they **receive requests** for local foods. Those who have never received requests for local foods also indicated that they do not process any local ingredients and reported that this lack of requests has remained constant over the last five years.
- Processors receive modest requests for local products but work to satisfy the local requests that they received. However, the were generally not able to satisfy all of the requests received.
- Most of the demand processors receive is for local food is for **produce** and **dairy.**
- Barriers to processing local food include: **price**, difficulty **communicating** with local producers, and insufficient **demand** from distributors.

**Distributor Survey Results**

### *Introduction*

In a word, distributors could be called the lynchpin of the food system. They connect two other critical forces of the food system, producers and retailers, in order to link supply with demand, often on a grand scale. Since only about a half of one percent of all food sales in the United States is a direct sale, distributors are involved in almost all food sales throughout the country and in southeastern Michigan. Distribution is consistently noted as one of the key challenges to developing a more localized food system (Halweil 2005). In most cases, distributors are able to remain profitable and viable when they help move food products from widespread locations to widespread locations (McClelland 2006). On the other hand, there are a handful of models of innovative local distribution infrastructure used throughout the country including websites[9] and pilot projects of large distributors[10]. Where there is interest among distributors, there may be potential for developing an alternative distribution system in the region.

Survey goals

The goals of the distributors' survey were to gather information about the current trends and characteristics of locally-based distributors, to gauge interest in distributing local foods, and to assess the barriers to local food distribution from the perspective of the distributors. The survey had 11 multiple choice and Likert scale questions plus the option to "opt in" to be contacted in the future and to provide contact information (Appendix 10). We developed the questions based on our preliminary knowledge of the sector, basic research about local food distribution challenges and conversations with FSEP leaders.

### *Response Rate and Demographics*

Twenty-one individuals completed and returned the survey, a response rate of 22 percent. After reviewing the returned surveys, it was clear that one respondent was not a distributor, but a pick-your-own fruit location. This individual did not answer any of the distributor-specific questions. The effective sample size for the distributor survey was 20. The respondents represented a fairly broad range of distribution businesses spanning three counties, serving a broad range of businesses throughout Michigan and beyond.

[9] Such as the Supermarket Coop: www.supermarketcoop.com/superhome.htm
[10] SYSCO Minnesota Farmers' Market: www.syscomn.com/fmarket.htm

Business Location

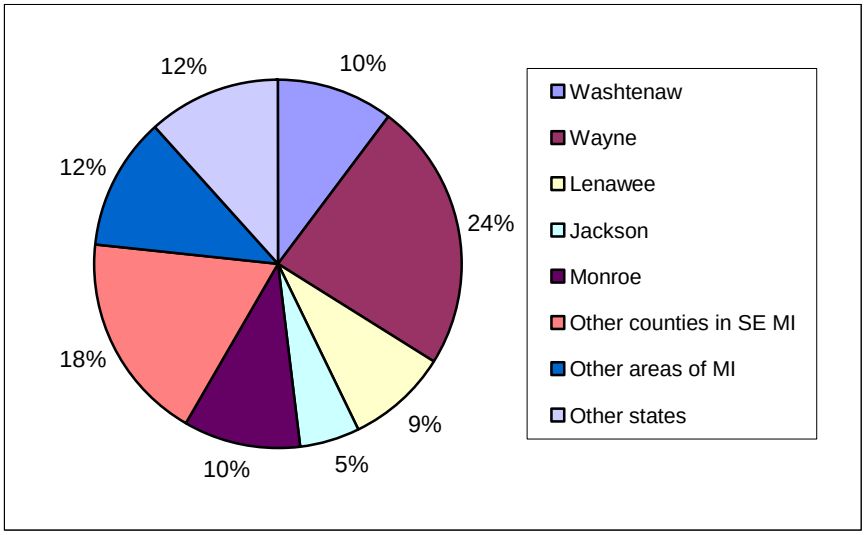
Nineteen reported the location of their business by zip code. Most of the 11 different zip codes had a frequency of one, representing a wide geographic distribution. There were a few clusters of distributors located in two zip codes, 48207 ($n$=5), and 48209 ($n$=4). The area of zip code 48207 includes the Eastern Market area of Detroit where dozens of distributors are based. Zip code 48209 is in a section of southwest Detroit and includes the Mexicantown neighborhood, also home to many food-related businesses. Nearly, half of the respondents who indicated a zip code were based in Detroit and 15 of 18 were based in Wayne County. Of the other three, two were from Lenawee and one from Monroe. Two respondents did not indicate a zip code or business location.

Service Area

We asked distributors to indicate which counties and regions their business serves. The question allowed them to indicate all that applied, and most (18 of 21) serve multiple areas. The three distributors who only reported working in one county all serve Wayne County, the most populous in the region. Three distributors checked all of the eight options, stating that they work with each of the counties in the region, throughout Michigan and in other states. The service within the five-county study area was fairly even, but relatively fewer of our respondents serve Jackson County (Figure 36):

- Eight distributors serve Washtenaw County
- Seven serve Lenawee County
- Eight serve Monroe County
- Four serve Jackson County
- Eighteen serve Wayne County
- Fourteen work with other counties in southeastern Michigan
- Nine serve other areas of Michigan
- Nine distributors work in other states

Figure 36: Distributors' Geographic Service Area

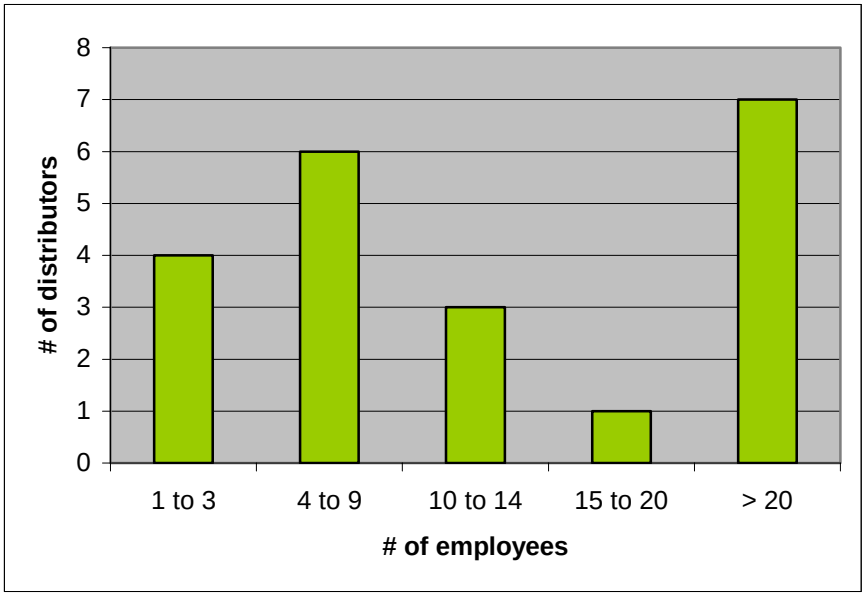



Local distributors serve all counties in the study area. Jackson Co. was the least served and Wayne Co., the most populous and industrial area in the region, was served by the most distributors.

Number of Employees

The size of the distribution businesses that participated in the survey varied. There were four small businesses (1-3 employees), 10 mid-sized (4-20 employees) and seven large businesses (more than 20 employees). More precisely, four companies had 1-3 employees; six had between 4 and 9; three had between 10-14; one had between 15 and 20; and seven had more than 20 employees.

Figure 37: Number of Employees: Distributors




The size of the distribution businesses varied with 4 small, 10 mid-sized, and 7 larges businesses.

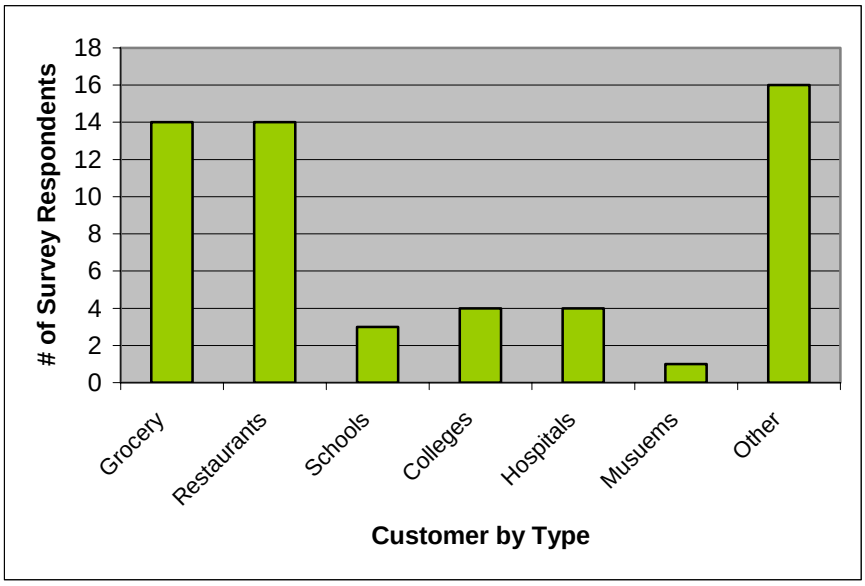
Customer base

Distributors make business decisions based on client demands. To better understand the role distributors play in the local food system, it is necessary to have an idea of the types of businesses and institutions the local distributors serve. We listed several types of customers and asked respondents to check all that applied. The survey data, shown in Figure 38 reveals that **grocery stores and restaurants are the primary clients** of area distributors and most respondents worked with either grocery stores, restaurants or both. Fourteen distributors service each grocery stores and restaurants. Of the two who did not report working with either grocery stores or restaurants, one was a pick your own farm and the other a large scale distributor who distributes only beyond the immediate region.

Educational institutions are other major customers. Three distributors work with schools (implied elementary and high school districts) and four serve colleges. Four distributors provide food for hospitals and one works with museums. Many of respondents also checked "other" and wrote in additional types of businesses they serve. "Other" clients included other distributors (2), price clubs like CostCo and Walmart (2), produce markets (2), produce wholesalers (who service all of the listed businesses) (2) and "jobbers" defined by one respondent as "those wholesalers that service restaurants," country clubs, catering company, and processors. (National studies and state reports

emphasize the important role that large, institutional buyers can play in sustaining local farms and food-businesses (Halweil 2005; Connors 2006; Michigan Food Policy Council 2006).

Figure 38: Distributors' Customer Base



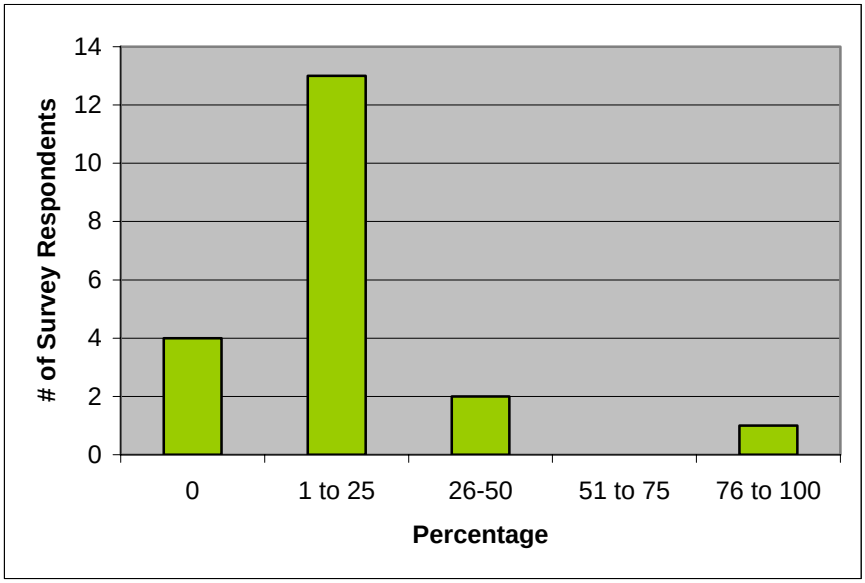

Grocery stores and restaurants are the primary clients of area distributors.

### *Distributing Local Foods in Southeastern Michigan*

Percentage of Local Foods Currently Distributed

When asked what percentage of the food or food products distributed is grown or produced locally, most distributors reported distributing at least some local foods but few reported more than 25 percent (Figure 39). Four indicated that zero percent of their products are locally grown or produced. Thirteen (65%) reported that 1-25% of their products are local and two indicated 26-50 percent. One distributor reported that most (76-100%) of the products distributed were grown or produced locally. This distributor was a large business that serves grocery stores, restaurants and processors in Washtenaw, Lenawee, Monroe and Wayne counties as well as other areas of Michigan and other states.

Figure 39: Current Distribution of Local Foods




Eighty percent of respondents indicated carrying at least some local foods currently, though few carried a large amount of local goods.

We also asked whether this proportion of local foods in the distributors' inventory has increased, decreased or remained constant over the last five years. Out of 19 who responded to the question, four (21%) reported that the percentage had increased and two (10.5%) reported a decrease, however most (68%) said the percentage had remained constant over the last five years suggesting a consistent and slowly growing demand for local products.

Requests for Local Food

When asked if they had ever received requests for local food from their customers, over half of the 20 respondents (60%) said yes. Eight respondents (40%) reported that they had never received requests for local foods. Those who had received requests were asked a few follow-up questions. Eight of the respondents answered these questions:

- *How often do you get requests?*
- *What kinds of local food requests have you received?*
- *What percentage of these requests are you able to satisfy?*

Six (of eight or 75%) reported requests less than once per month, one said one to five times per month and one reported more than ten times per month. Every distributor who responded to these

questions had received requests for **produce** and one for **dairy** products (choices included also meats, grain/bread or other). Two of the eight (25%) were not able to satisfy any of the requests. One was able to satisfy between 1 and 25% and five (62.5%) were able to satisfy 76-100% of the local food requests.

Level of Interest in Working with Local Producers

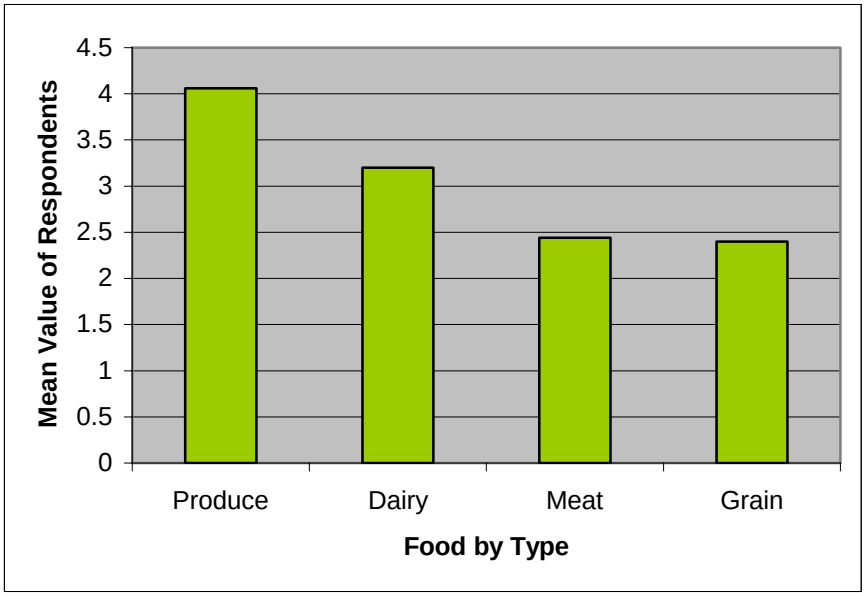
All respondents were asked to rate, on a five-point Likert scale from low to high, their level of interest in working with local producers to distribute their food (n=19). The mean level of interest was 2.63 with a standard deviation of 1.54 indicating **broad range of interest**. About half (10, 52%) of those who answered the question gave a rating of three or greater including three who indicated the highest level of interest. On the other end, six indicated lowest interest.

Level of Interest in Specific Types of Products

To get a more clear idea of the types of local foods local distributors would be most interested in distributing, we asked respondents to rate their level of interest in various categories on a 1-5 Likert scale from low to high interest. For most areas of interest, there was a high standard deviation, as a result of a mix of relatively high and relatively low interest (Figure 40).

- The highest level of interest was in distributing local **produce**: 17 of 21 indicated an interest and the mean level of interest was 4.06 on a five-point scale (std dev =1.25). Eight distributors indicated the highest level of interest in distributing local produce and 14 of 17 rated it a three or higher.
- **Dairy and Cheese** were the next most popular: 10 of 21 indicated an interest and the mean level was 3.20 (std dev=1.93) Six indicated an interest level of four (2) or five (4). (The remaining four rated it a "1")
- Ten distributors were somewhat interested in Grain and Bread products, the average level was lower (mean= 2.40, std dev=1.71)
- Nine respondents would be interested in distributing local meat products. The mean level of interest was also relatively low (mean=2.44, std dev=1.81).

Figure 40: Interest in Distributing Local Food by Type




Distributors indicated the highest interest in distributing more local produce followed by dairy products.

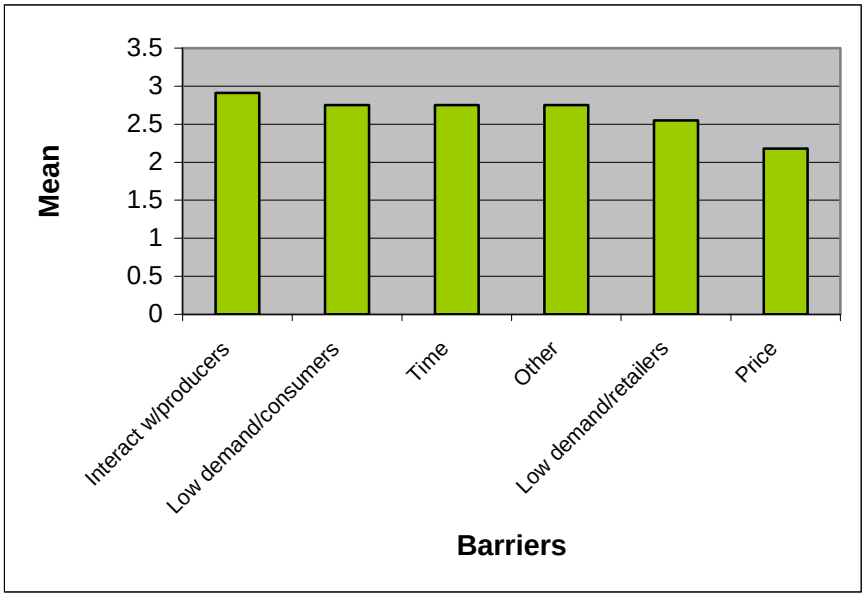
### *Barriers to local food distribution*

One of the key goals of our survey was to learn more about the barriers and perceived barriers to local food distribution in order to better inform efforts to improve the connections among producers, distributors and consumers in the local food system. We identified several potential reasons and asked respondents to indicate the level of importance of each: "Using the scales below, indicate the degree to which you perceive the following factors as limitations to you increasing the amount of local food you distribute."

All of the means were clustered just below the "medium" rating of 3 and variance was somewhat high, again indicating a range in perceived degree of limitations imposed by the various barriers (Figure 41). Twelve distributors noted **insufficient demand** from consumers as a barrier (mean = 2.75 std dev =1.29). Insufficient demand from retailers (i.e. grocery stores) was found by 11 respondents to be a barrier (mean 2.55, standard dev. 1.29). Twelve distributors indicated that working with local food **requires too much time** (mean = 2.75 std dev = 1.66). Eleven cited the difficulty of locating and interacting with local producers as a barrier (mean = **2.91**, std dev =1.64). Finally, 11 also noted **price** as a barrier (mean 2.18, std dev. = 0.98)

Four respondents indicated "other" barriers and provided explanations of additional barriers. Some commented about the mismatch between availability and demand: "product availability" and "raw milk has little demand." Another distributor who indicated a very high interest in distributing local produce mentioned that "packaging and pre-cooling capabilities" were a barrier to working with local foods. A few of the distributors in the area focus on ethnic foods and wrote in this focus as an additional barrier, "customer interested more in Middle Eastern food" and "We distribute Indian groceries." However, this did not mean they were not interested in distributing more local products. One Indian foods distributor indicated an interest in local grain and bread products and local dairy products as a four on the five-point scale.

Figure 41: Barriers to Local Food Distribution




Top barriers are communicating with producers, insufficient demand from consumers, and time required when working with local foods.

### *Distributor Survey: Summary of findings*

- Eighty percent of respondents indicated carrying at least some local foods currently.
- Almost 90 percent said the proportion of local foods carried has remained constant or increased in the past five years.
- Sixty percent of respondents reported that they receive requests for local foods.

Over half reported being able to meet more than 75% of the demand for local products, but nearly 40% were **not** able to meet more than 25% of the demand.

- Most of the demand is for local food is for **produce**
- Barriers to distributing local food include: lack of consumer and retailer **demand** for local products, the amount of **time** it takes to work with local foods, and difficulty **communicating** with local producers.

**Retailer Survey Results**

## *Introduction*

Retail outlets represent the contemporary interface between consumers and agricultural goods. With the decline of agriculture as a common American livelihood, nearly all people in the United States use supermarkets the primary means by which they get their food (Halweil 2005). In fact, even when people indicate a desire to buy local goods, they prefer to buy them at a supermarket (Betty, 2004). Despite the recent growth of farmers' markets and increased consumer demand for local goods, only 0.4% of all food sales in the US are direct. Food is primarily accessed via retailers in the food system.

### Survey Goals

Our retailer survey was designed to elicit information about stores' current inventory of locally sourced foods, storeowners' and managers' desire to carry more local products, and their perception of challenges to carrying more local goods (Appendix 11). From the analysis of the survey, we extracted opportunities that may enable retailers to become greater stewards of local goods. We also worked to show how their perceptions and demands correspond with other sectors of the food system.

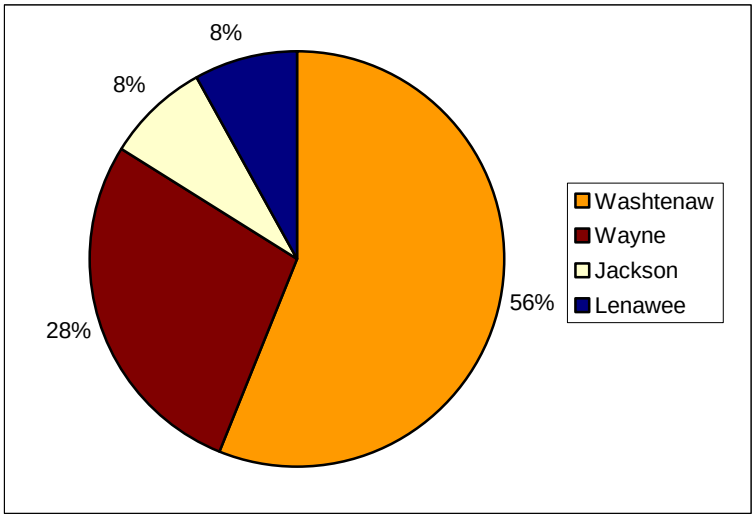
The retailer arm of our multi-sector survey included queries to a variety of store-related retailers, with restaurants purposefully left out. Another committee from the FSEP leadership team was working on a survey related to restaurants at the time this project began, and we did not want to duplicate work, given our limited resources. We mailed surveys to chain supermarkets, independently owned markets or supermarkets, mass merchandisers, food co-ops, and bakeries. In choosing the survey recipients, we paid special attention to target each sector of agriculture (produce, meat, grain, and dairy), and to represent each county relative to the number of retailers it houses. We focused on sending surveys out to independently owned markets, where decisions about purchasing local foods more readily take place. At the same time, we sought responses from chain retailers to compare and contrast their demand and perspective on local foods.

## *Response Rate and Demographics*

In total, we collected 36 surveys. Twenty-five respondents specified their zip code. From those that indicated location, there were eighteen zip codes represented throughout the five county area. We received 14 responses from Washtenaw County, seven from Wayne County, and two each from

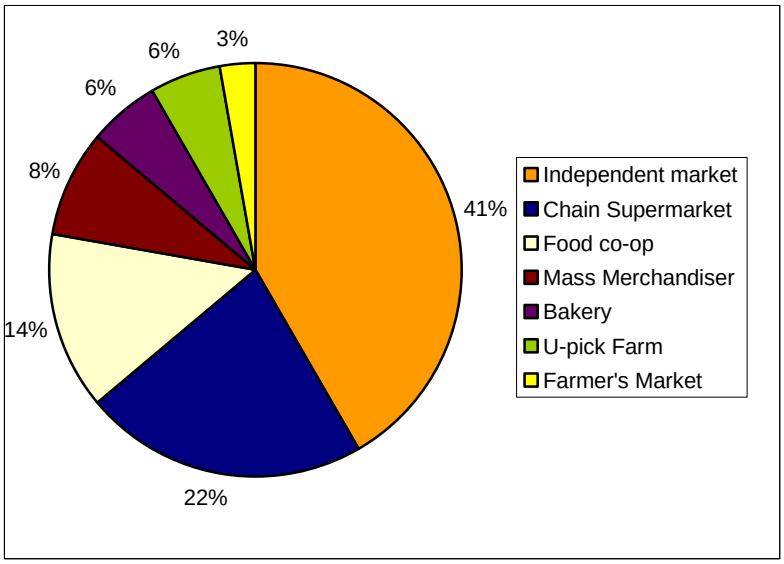
Jackson and Lenawee Counties (Figure 42). We did not receive and retailer responses from Monroe County, though we sent them to businesses in the County. Of the 36 retailers, the characterization of the businesses are as follows: independently owned market or supermarket-15; chain supermarket-8; food co-op 5; mass merchandiser-3; bakery-2; u-pick farm or other-2; farmers' market-1 (Figure 43).

Figure 42: Retailers' Response by County




Most survey respondents reside in Wayne or Washtenaw County, which also have a sizably larger population base than Jackson, Lenawee, or Monroe Counties.

Figure 43: Type of Food Retailers

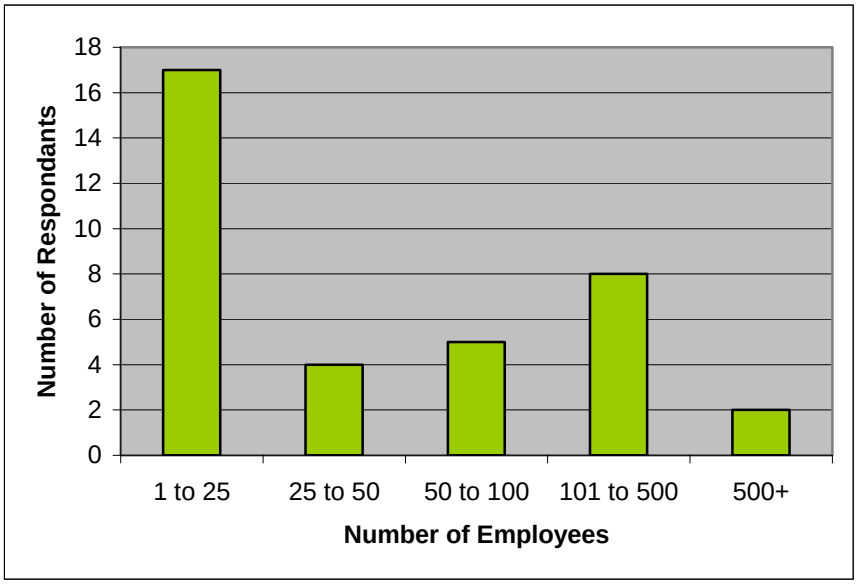



The majority of respondents were independent markets or chain supermarkets.

Business size

Generally, the businesses surveyed were smaller in size, with the chain grocery stores and mass merchandisers representing larger scale operations (Figure 44). The following is an aggregate response to reported employment for each business (N=36): seventeen business employ 1-25 persons; four employ 26-50 persons; five employ 51-100; eight employ 101-500; and 2 employ more than 500 persons.

Figure 44: Retailer Employment



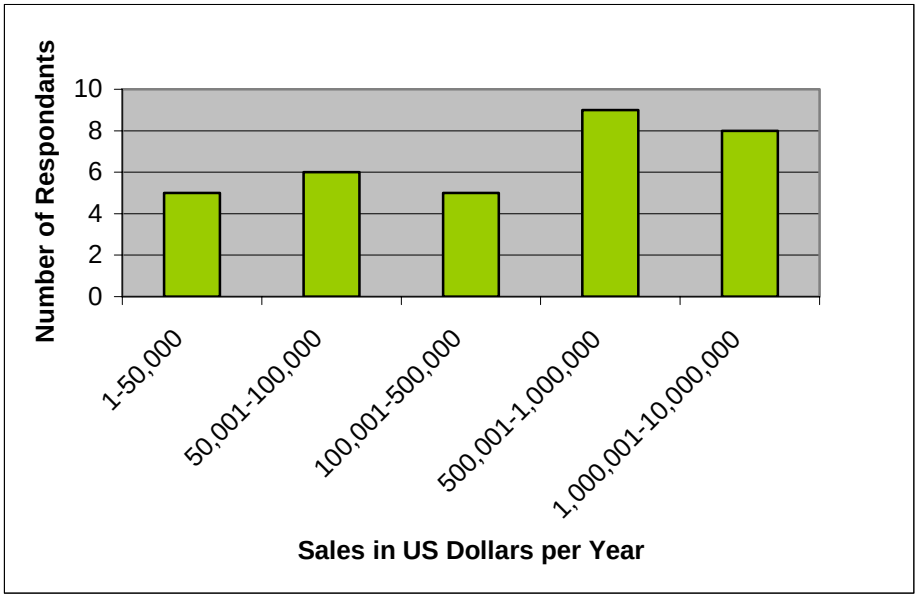

The majority of survey respondents employed fewer persons with 17 of 36 businesses employing between 1-25 people.

Volume and types of sales

The volume of food sales reported were as follow in US dollars per year (N=33): five reported $1-50,000; six reported $50,000-100,000; five reported $100,000-500,000; nine reported $500,000-1,000,000; eight reported $1-10 million. The estimated number of customers per week was (N=36): three reported 1-200; five reported 201-500; six reported 501-1000; five reported 1,001-2,500; seventeen reported more than 2,500 (Figure 45).

The types of food products sold at each establishment are as follows (n=36, respondents could choose more than one answer): 31 sold fruits and vegetables; 28 sold meat and fish; 31 sold dairy products; 33 sold bread, flour and baked goods; 32 sold jam, honey, and sauces; 30 sold tinned, packaged, and prepared goods; 29 sold beverages.

Figure 45: Retailer Food Sales by Volume

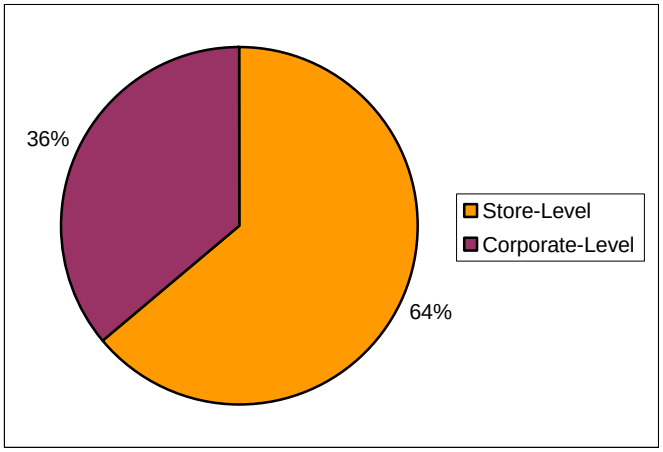



There was a fairly even response between smaller and larger operations.

Decision-making level

Twenty-three retailers claimed to make decisions regarding food purchasing and pricing at the establishment/store level. Thirteen claimed these decisions had to be transferred to the corporate level to receive approval (Figure 46). Using Fisher's Exact test, we found a significant difference between larger retail operations such as chain supermarkets, independent retailers, and others regarding where decisions were made (p=.000). We found that the larger chain retailers made decisions at the corporate level.

Figure 46: Retailer Decision Making

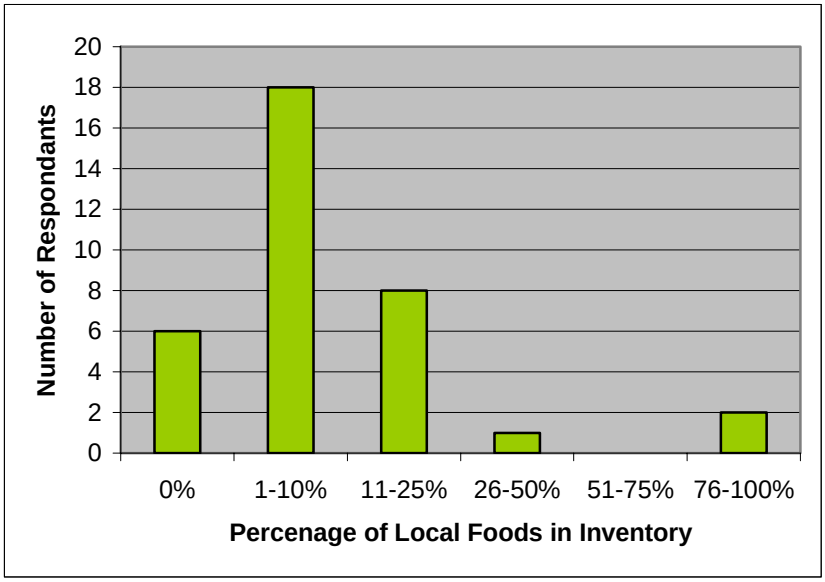



Chain stores required decision making regarding food purchasing and pricing at the corporate level, while independent market made decisions at the store-level.

### *Retailing Local Foods in Southeastern Michigan*

We asked retailers to indicate the percentage of their food inventory that is locally grown or produced foods (N=35) (Figure 47). Nearly **eighty-five percent of the respondents carry some local products**. The actual volume stores carry is not yet large. Seventy-five percent of retailers claimed that less than 25 percent of their inventory was local goods. Seventeen percent claimed to have no local inventory. There was no relationship found between type of retailer and percentage of current local food inventory. Kruskal-Wallis ($\chi^2$=.163, df=3, p=.922, N=35). Furthermore, there was no significant relationship between type of retailer and type of local goods in the current inventory. Kruskal-Wallis ($\chi^2$=2.538, df=2, p=.281, N=36).

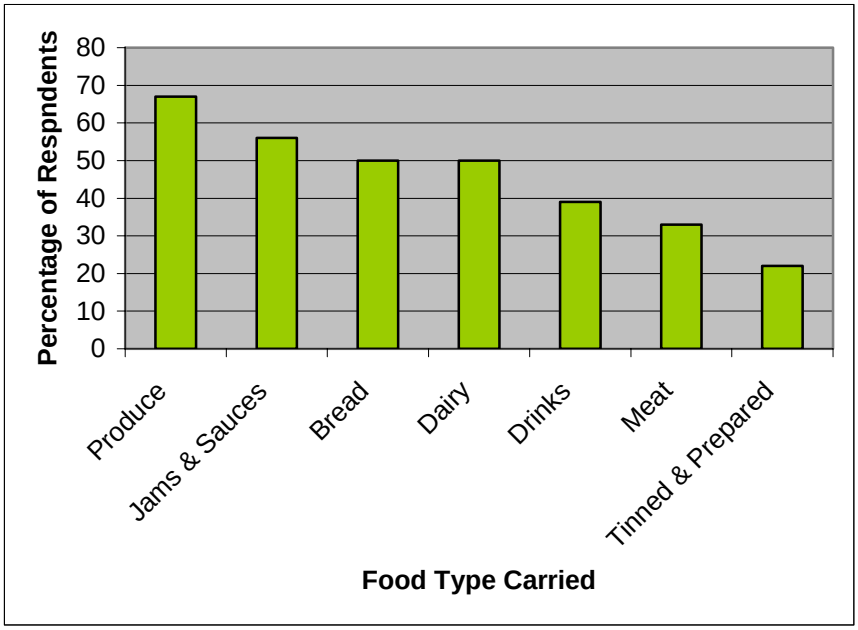
Figure 47: Current Retailer Inventory of Local Food




Nearly 85% of all retailers carry some local food. Few carry large percentages of local food.

Produce, honey and sauces, dairy and breads from the region are more commonly carried than drinks, meats or tinned goods. In total, 67% sell local produce; 56% sell local jams, honey, or sauces; 50% sell local bread, flour, or baked goods; 50% sell local dairy; 39% sell local drinks (alcoholic & soft); 33% sell local meat, fish, or game; and 22% sell local tinned, packaged, and pre-prepared goods (Figure 48).

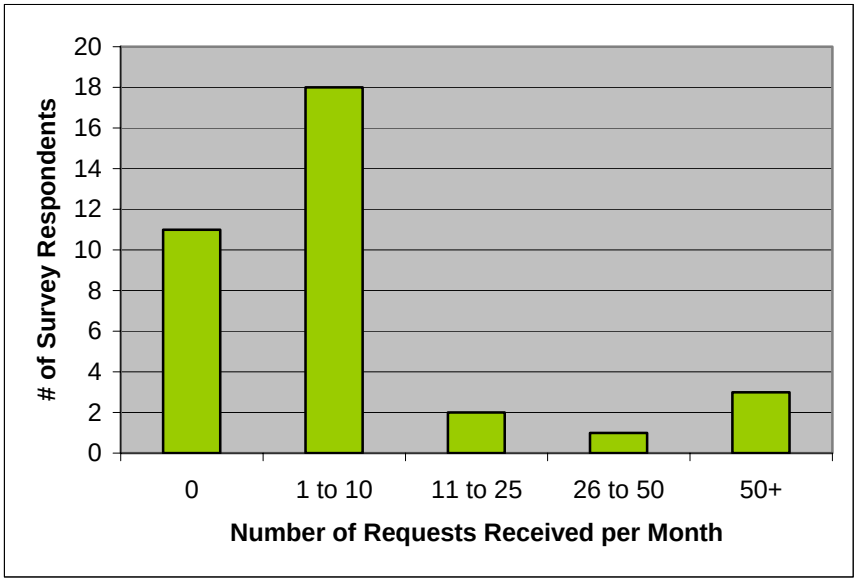
Figure 48: Current Local Inventory




Retailers tend to sell produce and jams & sauces over other food or food products

The number of requests for locally grown food is notable. **Nearly seventy percent of retailers (n=35) have received some requests each month for local foods** (Figure 49). The following are the specific percentages of local food request received: 31.4% claimed they received no requests; 51.4% claimed they received between 1-10 requests per month; 5.7% claimed between 11-25 requests per month; 2.9% claimed between 26-50 requests per month; 8.6% claimed more than 50 requests per month.

Figure 49: Requests Received for Local Food



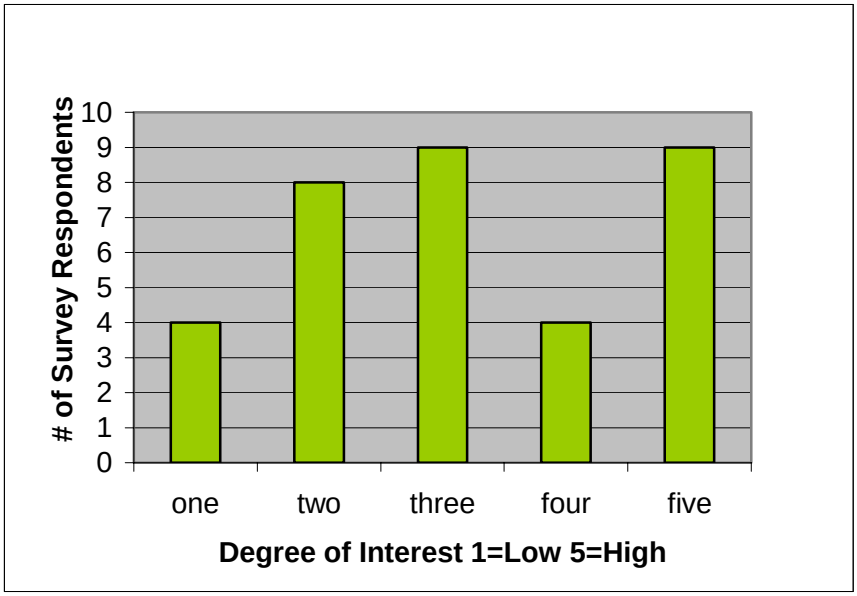

Nearly 70% of all retailers have received requests for local foods.

### *Interest in selling more local foods*

A crucial aspect of this survey was to gain an understanding of retailers' future interest in carrying local foods. We next illustrate the general interest of retailers and then analyze connections between their interest and their demographic information. From these connections, we can begin to see opportunities and leverage points to bolster the local food system.

We first asked retailers to relate their interest in increasing the percentage of locally grown/produced food in their store using a five point Likert scale with 1=low interest and 5=high interest. Of the 35 retailers that responded to this question, 11.8% claimed low interest or '1'; 23.5% indicated '2' or fair interest; 26.5% indicated '3' or medium interest; 11.8% indicated '4' or significant interest; 26.5% indicated '5' or high interest. Though the mean was just above center at 3.18, **25% of the respondents indicated a high interest in carrying more local goods** and nearly 40% indicated significant (4) or high (5) interest (Figure 50).

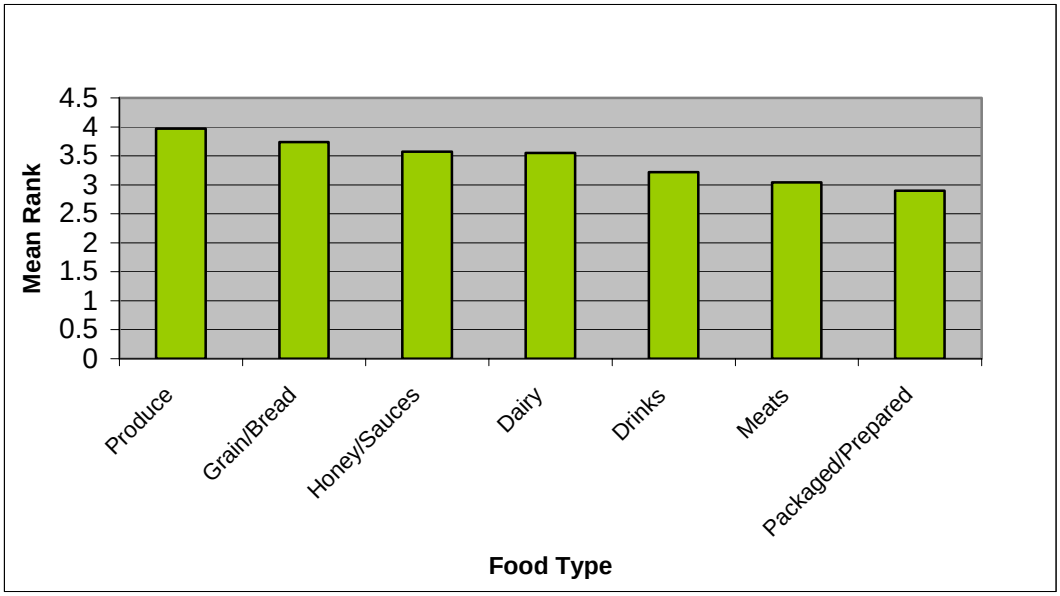
Figure 50: Retailer Interest in Increasing Percentage of Local Foods




While the mean was just above average, ¼ of retailers had high (5) interest in carrying more local goods. Nearly 40% indicated an interest of 4 or 5.

Regarding the specific local products the retailers would like to feature, **produce** was the overwhelming favorite. However, there was significant interest in just about every product type. When asked to rate their interest on the same 1-5 Likert scale, produce received a mean score of 3.97, N=30; Bread, flour and baked goods received a mean score of 3.74, N=31; Jams, honey, and sauces received a mean score of 3.57, N=30; Dairy received a mean score of 3.55, N=31; Drinks, including wines and alcohol, received a mean score of 3.32, N=28; Meat, fish and game received a mean score of 3.04, N=27; packaged and tinned goods received a mean score of 2.90, N=30 (Figure 51).

Figure 51: Retailer Interest in Local Food by Type




Retailers are most interested in carrying produce, followed by grain products and sauces, jams, and honey.

Looking at the relationship between type of retailer verses interest in selling local foods, we found no significant correlation: Kruskal-Wallis test ($\chi^2$=.160, df=2, p=.923, N=34). The mean interest for supermarkets was 3.13 (N=8); the mean interest for independent retailers was 3.27 (N=15); the mean interest for all others including specialty shops was 3.09 (N=11). Likewise, there was no relationship found between where decision were made (in-house vs. corporate) and interest in increasing the percentage of local goods sold at the store. Mann-Whitney-(Z= -.819, p=.413, N=34)

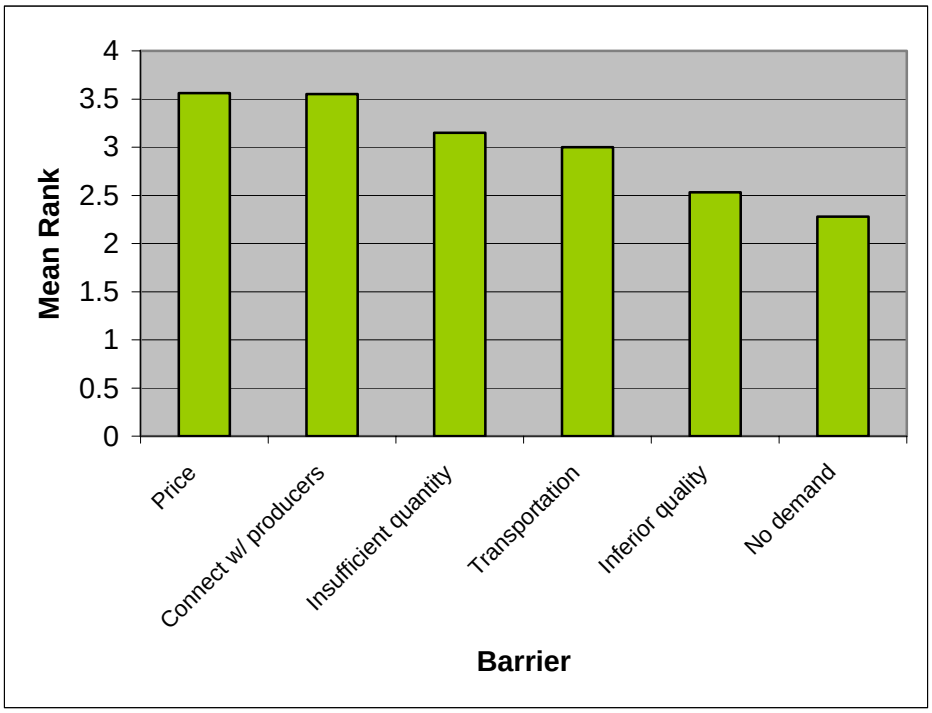
We did determine a difference between the amount of requests for local foods per month and the retailers' interest in selling local goods. Kruskal-Wallis-($\chi^2$=12.722, df=4, p=.013, N=34). Additionally, we did find a difference between current inventory of local foods and interest in carrying more local foods. Kruskal-Wallis-( $\chi^2$=11.418, df=4, p=.022, N=34).

### *Barriers to Retailing More Local Foods*

Retailers' intention and desire to carry more local goods is a starting point to reifying change in retailers' purchasing behavior. Determining the real and perceived barriers to selling local goods is the next step in the process. We asked retailers to rate the degree to which they perceive a given list of factors as limitations to their retail outlet carrying locally grown or produced foods (Figure 52). The following is the mean score for each barrier highest to lowest: Insufficient supply/seasonality

(m=3.82, N=34); Price (m=3.56, N=32); Connecting with producers (m=3.55, N=33); Insufficient quantity to meet demand (m=3.15, N=33); Transportation and receiving products (m=3.00, N=33); Inferior quality (m=2.53, N=32); No demand for local products (m=2.28, N=32); Other-'Corporate Supply Chain' (m=5, N=1).

Figure 52: Barriers to Retailers




Retailers cited price, connecting with producers and insufficient quantity to meet demand as the top barriers to their business selling local goods.

There were many retail barriers that were correlated together as perceived limitations. The following is a list of correlated barriers as determined by Spearman's rho test for correlation:

- Insufficient quantity & Connecting with producers ($\rho$=.439, p=.012)
- Insufficient quantity & Inferior quality ($\rho$=.401, p=.025)
- Inconsistent supply and seasonality & Connecting with producers ($\rho$=.468, p=.006)
- Inconsistent supply and seasonality & Insufficient quantity ($\rho$=.636, p=.000)
- Inconsistent supply and seasonality & Inferior quality ($\rho$=.478, p=.006)
- Transportation and receiving products & Connecting with producers ($\rho$=.483, p=.004)

- Transportation and receiving products & Insufficient quantity (ϱ=.386, p=.029)
- Transportation and receiving products & Inferior quality (ϱ=.458, p=.008)
- Transportation and receiving products & Inconsistent supply and seasonality (ϱ=.528, p=.002)

Interest in Local vs. Barriers to Involvement

We were interested in the relationship between interest in increasing local food sales and the perceived barriers to increasing local food sales. We found a significant negative correlation between interest and the barrier 'no sufficient demand for local food.' (ϱ=.376, p=.037) Therefore, **those retailers who were in support of local food did not find consumer demand to be a limitation** to their interest in local goods. Other noteworthy findings (though not statistically significant) were the relationship between interest and inferior quality (ϱ=.335, p=.065), and the relationship between interest and inconsistent supply/seasonality (ϱ=.225, p=.158)

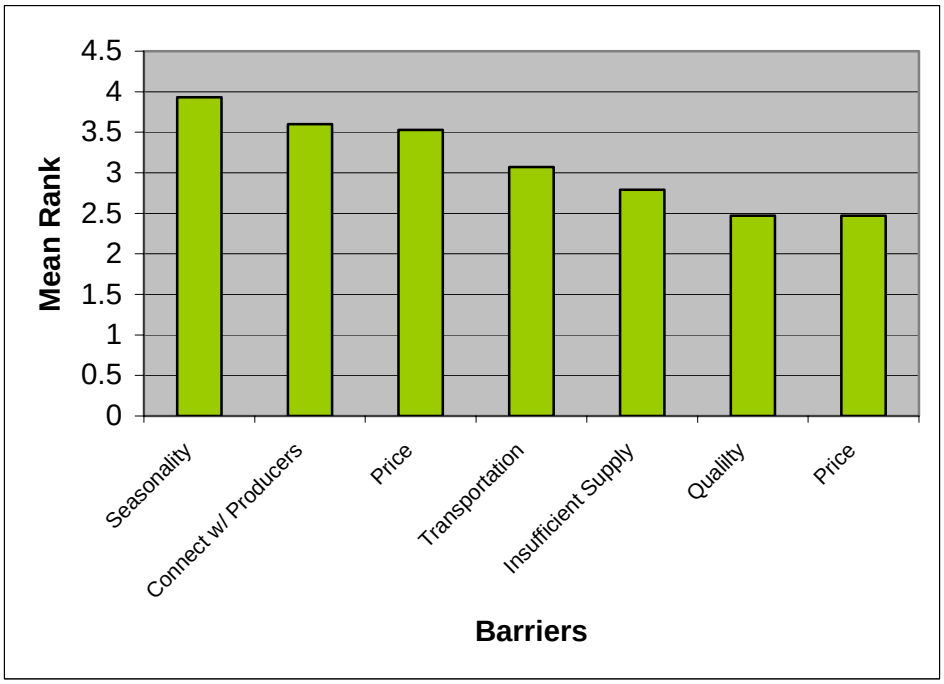
Perceived Barriers vs. Type of Store

Again, we grouped store type by supermarket/mass merchandisers, independently owned grocery stores, and others including specialty stores. The top three barriers for each of the store types are reflected in the following table:

Figure 53: Barriers According to Type of Retail Outlet

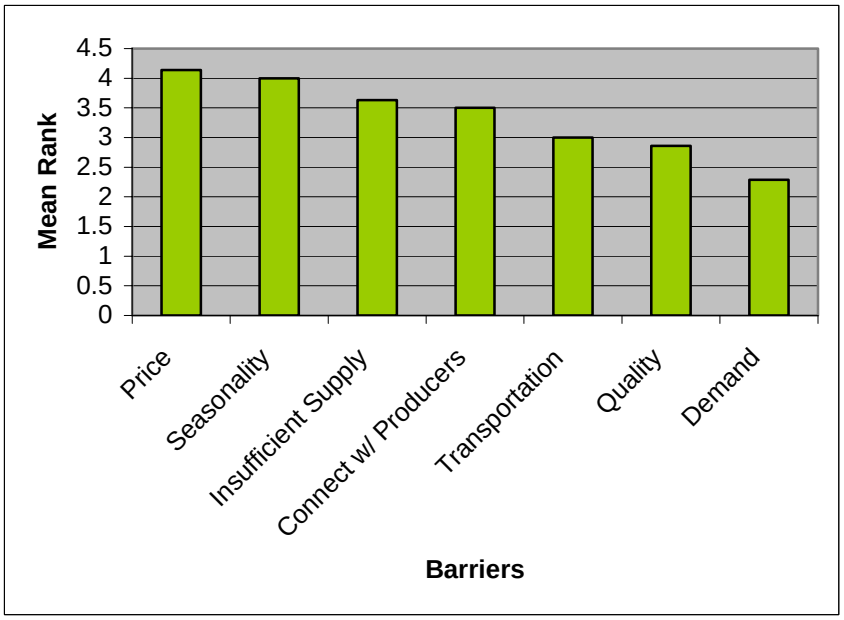
| Store Type | Top Barrier | Second Barrier | Third Barrier | Fourth Barrier |
|---|---|---|---|---|
| Supermarket/ Mass Merchandiser | Price (m=4.14,N=7) | Inconsistent supply/seasonality (m=4.00, N=8) | Insufficient Supply to meet demand (m=3.63, N=8) | Connecting with Producers (m=3.50, N=8) |
| Independent Grocery/Market | Inconsistent supply/seasonality (m=3.93, N=15) | Connecting with Producers (m=3.60, N=15) | Price (m=3.53,N=15) | Transportation and receiving products (m=3.07, N=15) |
| Speciality/Other | Inconsistent supply/seasonality (m=3.55, N=11) | Connecting with Producers (m=3.50, N=10) | Insufficient Supply to meet demand (m=3.27, N=11) | Price (m=3.20,N=10) |

Figure 54: Barriers to Independent Retailers



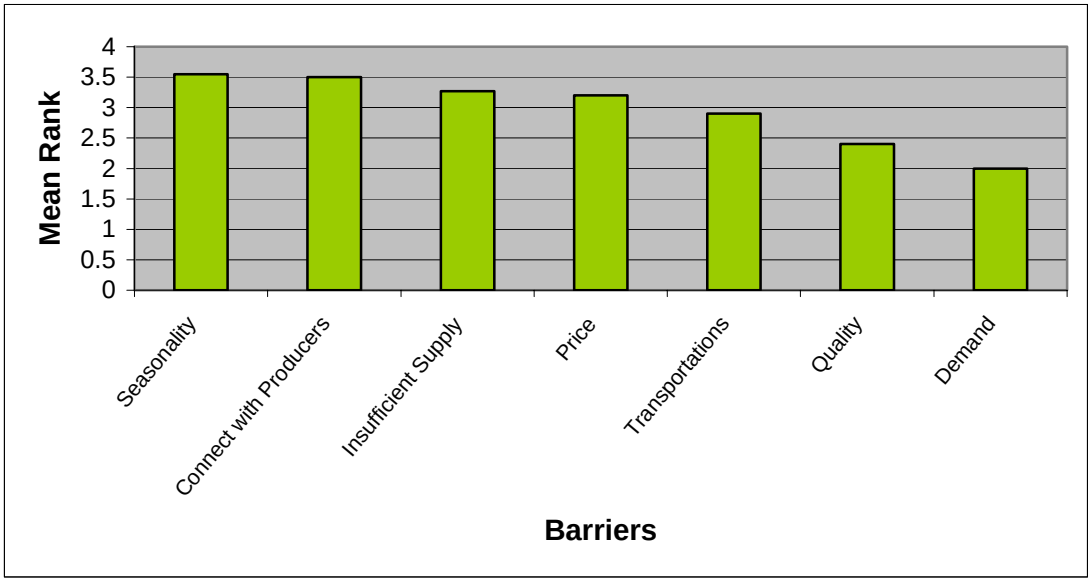

The top barriers to independent retailers were seasonality, connecting with producers, and price.

Figure 55: Barriers to Large Retailers




The top barriers to large retailers were price, seasonality, and insufficient supply to meet demand.

Figure 56: Barriers to Specialty Stores / Other




The top barriers to specialty stores were seasonality, connecting with producers, and insufficient supply to meet demand.

Perceived Barriers vs. Size of Store

We found no significant correlations between the size of retailers and any of the barriers. However, we found it worth to note that larger stores regarded "Insufficient supply to meet demand" higher than smaller stores.) Spearman's rho-($\varrho$=.265, p=.136)

Perceived Barriers vs. Number of Requests

We did find a significant positive correlation between the number of requests retailers receive and the barrier "inferior quality," meaning that those businesses that receive more requests are likely to perceive inferior quality as a barrier. Spearman's rho-( $\varrho$=.363, p=.041).

We also found a significant negative correlation between the number of requests retailers receive and the barrier "No demand for these types of products." Spearman's rho-( $\varrho$=-.395, p=.025). This suggests that **those retailers that receive requests do not see demand for the requests as a barrier**—a finding that follows logically from number of requests received.

Perceived Barriers vs. Percentage of Local Inventory

We found one significant negative correlation between the percentage of local foods in the current inventory of retailers and the barrier "Connecting with producers." Spearman's rho-($\varrho$=-.414,

p=.018). Therefore, **those retailers that carry more local foods did not find connection with producers to be a major challenge.** Tough not a significant finding, those retailers that currently stock local foods also tend not to see price and inconsistent supply and seasonality as major barriers.

### *Retailer Survey: Summary of Findings*

We found many interesting findings in our retailer survey. Here is a highlight of the results:

- We received a 24% response rate, with 36 of the 147 surveys mailed back.
- Eleven of the 36 were large retailers and 25 were small retailers.
- The respondents were located in four of the five counties. Though we sent surveys to Monroe County, we did not receive any in return. We received 17 from Washtenaw, 7 from Wayne, 2 from Jackson, and 2 from Lenawee.
- Most retailers were full service grocery stores that stock all types of food and beverage related products.
- 85% of retailers carry at least some goods sourced from the region.
- There was strong interest in carrying local foods with 40% of the stores indicating a very high or high interest.
- Produce was the most favored type of local food retailers wished to carry. However, there was significant interest in each food type.
- ¾ receive regular requests for local food.
- We found a significant correlation between number of requests received and degree of interest in carrying local foods.
- Top three barriers to retailers were:
    1. Seasonality
    2. Price
    3. Connecting with Producers
- Retailers that were very interested in carrying local goods did not find consumer demand to be a barrier.
- Those retailers that receive more requests are likely to perceive inferior quality as a barrier.
- Those that carry more local foods did not find connection with producers to be a major challenge.

**Consumer Survey Results**

***Introduction***

One aspect of the food system that connects us is that we all consume food. We all need the nourishment and energy that food provides, regardless of our socioeconomic status, gender, race or ethnicity. And all of us possess a unique relationship with food. Yet, this relationship is often superficial. Most of us do not even know where our food comes from. Our current global food system has developed into such a complicated set of relationships that we, in Michigan, often get many of our tomatoes from California, asparagus from China, or beef from South America. Yet, all of these items are produced locally in our region.

Local food systems seek to establish an intentional set of relationships between local farmers, processors, distributors, retailers, and consumers of our food and food products. Reworking and strengthening the interconnections within our food system may help us address community problems ranging from public health, to economic development and job loss, to urban sprawl and our dependency on fossil fuels.

A cornerstone of a viable local food system is the committed participation of well-informed consumers who can influence how and where their food is produced. When local agriculture and food production are integrated in community, food becomes part of a community's problem-solving capacity rather than simply a commodity that's bought and sold. By turning toward the local we increase the capacity, as a community, to enhance our social, economic, political, and environmental well-being.

In conducting this survey, our main objectives were to collect basic characteristics of shoppers within the Study Area, assess current shopping trends, gauge interest in increased consumption of local foods, and identify potential barriers and opportunities for consuming local foods.

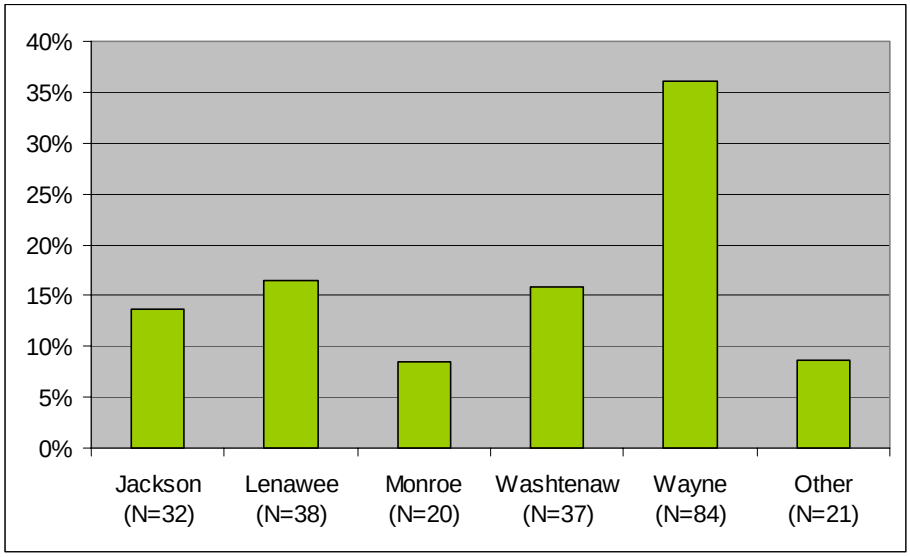
<u>Survey Design</u>

As a primary research objective, our project team collected and analyzed original data from 247 randomly sampled consumers at various food retail outlets within the Study Area. The consumers' survey (Appendix 12) consisted of 22 questions ranging from basic demographic information to shopping trends to perceptions about local foods in their community.

Survey Distribution

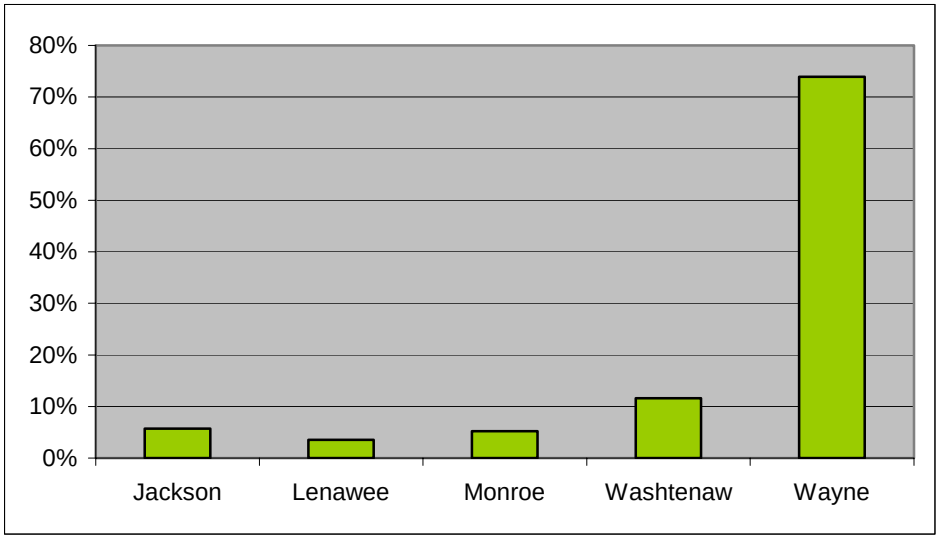
The distribution of survey respondents among the 5 counties of the Study Area include 32 shoppers (13.8 percent) from Jackson County, 38 (16.4 percent) from Lenawee County, 20 (8.6 percent) from Monroe County, 37 (15.9 percent) from Washtenaw County, 84 (36.2 percent) from Wayne County, and 21 (9.1 percent) from counties outside of the Study Area (Figure 57). Although we originally planned to obtain an equal number of completed surveys from each of the five counties, in actuality we obtained fewer surveys from Monroe County and more from Wayne County, which more accurately reflects the large number of residents within this urban population center (Figure 57). Demographically, in many respects the sample population surveyed within the Study Area closely resembled that of the actual population within the five counties, as described in greater detail below.

Figure 57: Survey Respondents by County




The number of respondents varied by county with the most from Wayne County, the most populous. While all surveys were collected within the Study Area, some respondents were not residents of one of the five counties.

Figure 58: Percent of Study Area Population by County, 2002




The majority of people in the Study Area reside in urban Wayne County (Source: U.S. Census Bureau, 2002 Census)

### *Sample Demographics*

Of the 232 survey respondents (93.9 percent) that provided their age range, 79 (34.1 percent) identified themselves as age 18-34, 126 (54.5 percent) as age 35-64, and 27 (11.5 percent) as age 65 or older. As planned, no surveys were collected from individuals under the age of 18. Our calculations show that the mean age of the consumers that completed the survey was approximately 44.

Since survey respondents were randomly selected at each location, the team anticipated that the range of reported races/ethnicities would closely reflect the population of residents within the Study Area (Figure 59). In reality, of the 230 survey respondents that reported their race/ethnicity, 176 (76.5 percent) indicated that they considered themselves to be White or Caucasian,[11] 32 (13.9 percent) were African American, 7 (3.0 percent) were Asian or Pacific Islander (including the Indian subcontinent), 6 (2.6 percent) were American Indian or Alaskan Native, 4 (1.7 percent) were Hispanic or Latino (Spanish culture or origin, regardless of race), and 5 (2.2 percent) indicated that their race/ethnicity was not included as an option.

[11] Persons not of Hispanic origin, having origins in any of the original peoples of Europe, North Africa, or the Middle East.

Figure 59: Comparison of Race/Ethnicity Classifications within the Study Area

| Race/Ethnicity | Survey Respondents | Study Area [AC] | State of Michigan [AC] |
|---|---|---|---|
| White persons | 76.5% | 64.7% | 81.4% |
| African American persons | 13.9% | 13.3% | 14.3% |
| Asian or Pacific Islander persons | 3.0% | 2.3% | 2.2% |
| American Indian and Alaska Native | 2.6% | 0.4% | 0.6% |
| Persons of Hispanic or Latino origin | 1.7%[B] | 4.0% [C] | 3.7% [C] |
| Persons reporting 2 or more races or race/ethnicity not listed | 2.2% | 1.5% | 1.4% |

[A] Source: U.S. Census Bureau (2004)

[B] Respondents selected this option as their race/ethnicity and may or may not be included in other survey race/ethnicity categories.

[C] Hispanic individuals may be of any race and are also included in other applicable U.S. Census race categories.

Two-hundred nineteen survey respondents provided their household income range in response to this survey question. Of these individuals, 21 (9.6 percent) of the respondents indicated a household income roughly at or below the U.S. federal government's 2006 poverty guidelines[12], defined as $9,800 for single-person households within the 48 contiguous states and the District of Columbia.[13] On average, respondents' households consisted of two adults and 0.58 children under the age of 18. Thus, after adjusting these household income data to account for the average number of individuals within a household, our results reveal that poverty estimates for our sample population accurately reflect poverty trends within the five-county region of the Study Area, as reported by the U.S. Census Bureau (Figure 7). Additional income figures collected from our sample population are shown in Figure 60.

[12] Federal Poverty Guidelines published in the Federal Register, January 24, 2006 (Volume 71, Number 15), Page 3848-3849.

[13] Percentage of survey respondents who indicated a household income range of less than $10,000.

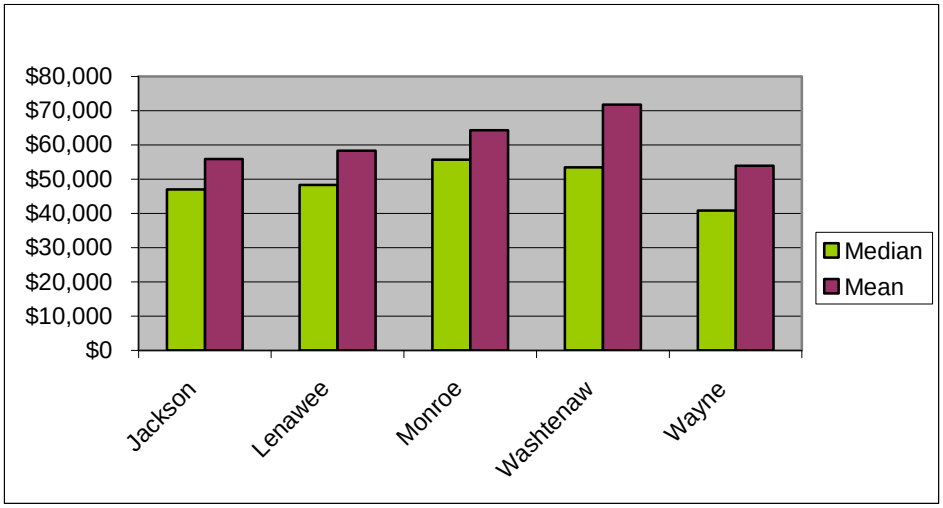
Figure 60: Comparison of Household Income Ranges within the Study Area

| **Household Income Range** | **Survey Respondents** | **Study Area [A]** | **State of Michigan [A]** |
|---|---|---|---|
| Less than $10,000 | 9.6% (N=21) | 8.3% | 8.6% |
| $10,000 to $14,999 | 7.8% (N=17) | 6.0% | 6.1% |
| $15,000 to $24,999 | 15.5% (N=34) | 11.5% | 12.0% |
| $25,000 to $34,999 | 11.9% (N=26) | 11.2% | 11.7% |
| $35,000 to $49,999 | 17.4% (N=38) | 14.0% | 15.0% |
| $50,000 to $74,999 | 18.3% (N=40) | 20.0% | 19.5% |
| $75,000 to $99,999 | 6.8% (N=15) | 13.3% | 11.8% |
| $100,000 to $149,999 | 8.7% (N=19) | 10.8% | 10.0% |
| $150,000 or more | 4.1% (N=9) | 4.9% | 5.2% |
| Median household income | - | $49,073 | $46,039 |
| Mean household income | $51,982 | $60,844 | $60,008 |

[A] Source: U.S. Census Bureau, 2005 American Community Survey

Based on this information, we can conclude that our sample population included a larger percentage of mid- to low-income households than is reflected by the actual population within the Study Area. This conclusion is further confirmed by our calculated mean income of $51,982 for the sample population, compared with U.S. Census Bureau figures of $60,844 for the Study Area and $60,008 for the state of Michigan as a whole. Mean and Median household incomes by county are shown in Figure 61.

Figure 61: Mean and Median Household Income by County

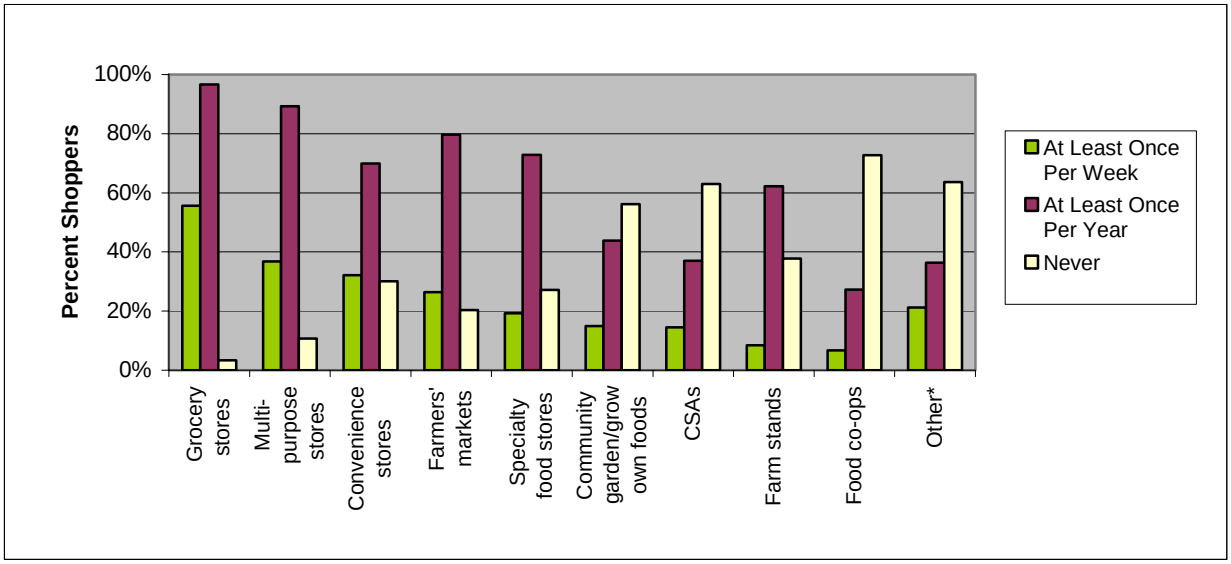



Washtenaw has the greatest mean income and tied with Monroe for the greatest median income. Wayne has the lowest mean and median income of the five counties. (Source: U.S. Census Bureau, 2005 American Community Survey)

Consumers' Shopping Habits

Of the 239 survey respondents that provided information about their shopping responsibilities, 142 (59.4 percent) were responsible for 80 percent or more of the food shopping for their household, while 28 (11.7 percent) were responsible for 61-80 percent, and 69 (28.9 percent) were responsible for less than 60 percent of the food shopping. Data collected on consumers' shopping habits also revealed several notable findings, including that 132 shoppers (55.6 percent) within the sample population visit ***grocery stores*** (e.g., Kroger, Busch's, Farmer Jack), 83 shoppers (36.8 percent) frequent ***multi-purpose stores*** (e.g., Meijer, K-Mart, Target), and 67 shoppers (32.1 percent) visit ***convenience stores*** to purchase foods at least once per week. Other types of stores that are visited less frequently to obtain foods include ***specialty food stores*** (e.g., Whole Foods, ethnic markets), ***farmers' markets***, and ***farm stands***. However, over the course of a year, an estimated 80 percent of consumers purchase food at ***farmers' markets***, 62 percent at ***farm stands***, 43 percent ***grow their own foods*** or participate in a ***community garden***, 37 percent obtain foods from ***community supported agriculture (CSA) initiatives***, and 27 percent purchase foods at ***food cooperatives*** at least once (Figure 62).

Figure 62: Frequency of Food Purchases by Retail Outlet




Most people buy their food from grocery stores or multi-purpose stores such as Meijer or Target. The "Other" option allowed survey respondents to list additional types of retail outlets or other means of obtaining foods, as appropriate. These included wholesale outlets (e.g., Sam's Club), pharmacies, restaurants, and hunting.

When conducting Kruskal-Wallis tests on these data, statistically significant differences were revealed among the five counties with respect to the frequency of food purchases at all listed food retail outlets (e.g., grocery stores, specialty food stores, multi-purpose stores, food cooperatives, farmers' markets, farm stands) and other food sources (e.g., CSAs, community or own garden) except ***convenience stores*** ($\chi^2$=7.996, df=5, p=.156, N=199). These results were also reflected by one-way ANOVA tests.[14] Post hoc comparisons using Tukey HSD tests also revealed the following key findings:

- Shoppers in Lenawee County are statistically more likely than those in Wayne County to purchase foods at ***grocery stores*** (p=.048); more likely than their counterparts in Wayne County to purchase foods at ***multi-purpose stores*** (p=.001); more likely than shoppers in Jackson (p=.004), Monroe (p=.039), Washtenaw (p=.000), and Wayne (p=.001) counties to obtain foods from ***CSAs***; more likely than Jackson (p=.000), Monroe

[14] One-way ANOVA tests show highly significant differences between the five counties of the Study Area with respect to frequency of food purchases at: specialty food stores (F(5, 195)=3.612, p=.004); multi-purpose stores (F(5, 207)=4.672, p=.000); CSAs (F(5, 181)=4.894, p=.000); food co-ops (F(5, 177)=5.402, p=.000); farmers' markets (F(5, 198)=9.524, p=.000); and farm stands (F(5, 185)=4.759, p=.000). No significant difference was found between the five counties with respect to the frequency of food purchases at grocery stores (F(5, 216)=1.911, p=.094); however, post-hoc comparisons using Tukey HSD tests do show a significant difference between shoppers in Lenawee and Wayne counties.

(p=.000), Washtenaw (p=.000), and Wayne (p=.000) county shoppers to buy foods at ***farmers' markets***; and more likely than shoppers in Washtenaw or Wayne counties to purchase foods at ***farm stands*** (p=.001 and p=.000, respectively);

- Shoppers in Washtenaw and Wayne counties are statistically more likely than Jackson County shoppers to purchase foods at ***specialty food stores*** (p=.045 and p=.009, respectively); and
- Shoppers in Washtenaw County are statistically more likely than shoppers in Jackson (p=.002), Lenawee (p=.000), and Monroe (p=.009) counties to buy foods at ***food cooperatives***.

These results suggest that the type of retail outlets available for obtaining food may vary by county within the Study Area. However, these findings may also be a factor of varying socioeconomic status among residents of the communities within each county.

Using Spearman's rank correlation tests, the team was also able to identify several instances of differentiated markets for retailers based on shopping trends within our sample population. For example, there is a statistically significant negative correlation between shoppers that frequently purchase foods for their household at ***grocery stores*** and their frequency of purchases at ***food cooperatives*** ($\varrho$=-.154, p=.033). Thus, it appears that these two types of retail outlets attract differing sets of consumers for food retail purchases. Similarly, shoppers that frequently purchase foods for their household at ***multi-purpose stores*** are statistically unlikely to purchase foods at ***specialty food stores*** ($\varrho$=-.162, p=.021). Conversely, a highly significant correlation was noted among consumers that frequently purchase foods at ***multi-purpose stores*** and their frequency of food purchases at ***convenience stores*** ($\varrho$=.233, p=.001).

To investigate potential connections between household income and the frequency of food purchases at specific types of retailers, we conducted Spearman's rank correlation tests which showed a highly significant relationship between household income and the frequency of food purchases at ***specialty food stores*** ($\varrho$=.193, p=.007). Conversely, these tests also revealed a highly negative correlation among household income and purchases at ***convenience stores*** ($\varrho$=-.229, p=.001).

Our team also investigated any potential connections between race/ethnicity and shopping trends at various retail outlets. Kruskal-Wallis tests of these data showed a statistically significant difference between the three primary race/ethnicity classifications (i.e., white/Caucasian, African American, and other) with respect to consumers' frequency of shopping for food at ***specialty food stores*** ($\chi^2$=11.528, df=2, p=.003, N=201), ***multi-purpose stores*** ($\chi^2$=12.646, df=2, p=.002, N=214), ***convenience stores*** ($\chi^2$=6.446, df=2, p=.040, N=199), and ***food cooperatives*** ($\chi^2$=8.998, df=2, p=.011, N=185). One-way ANOVA tests confirm these results.[15] More specifically, post-hoc comparisons using Tukey HSD tests indicate that all "other" shoppers (i.e., non-white and non-African American consumers) are statistically more likely than white shoppers to purchase foods at ***specialty food stores*** (p=.003); shoppers classified as white or African American are significantly more likely than other non-white or non-African American shoppers to purchase foods at ***multi-purpose stores*** (p=.028 and p=.001, respectively); African American shoppers are statistically more likely than white shoppers to buy foods at ***convenience stores*** (p=.018); and "other" shoppers are statistically more likely than white or African American shoppers to buy foods at ***food cooperatives*** (p=.002 and p=.046, respectively). Conversely, Kruskal-Wallis test results show no statistically significant difference between the three race/ethnicity classifications and consumers' frequency of shopping for food at ***grocery stores, CSAs, community gardens/grow own foods, farmers' markets,*** and ***farm stands***. These data may warrant further investigation to answer potential questions about access to healthy and nutritious foods in various communities and populations, and may highlight opportunities to utilize more effective product pricing and marketing techniques.

Further, Mann-Whitney tests showed no statistically significant difference between households with children under 18 compared with households with no children as it relates to their frequency of food purchases at ***grocery stores, specialty food stores, multi-purpose stores, CSAs, community garden/grow own food, convenience stores, food cooperatives,*** and ***farm stands***. However, consumers with no children were, in fact, statistically more likely to shop for food at ***farmers' markets*** (z=-2.886, p=.004).

[15] One-way ANOVA tests show significant differences between three classifications of race/ethnicity (i.e., white, African American, and other) and frequency of food purchases at: specialty food stores (F(2, 198)=5.501, p=.005); multi-purpose stores (F(2, 211)=6.797, p=.001); convenience stores (F(2, 196)=3.946, p=.021); and food co-ops (F(2, 182)=5.826, p=.004).

Consumers' Awareness of Food Origins

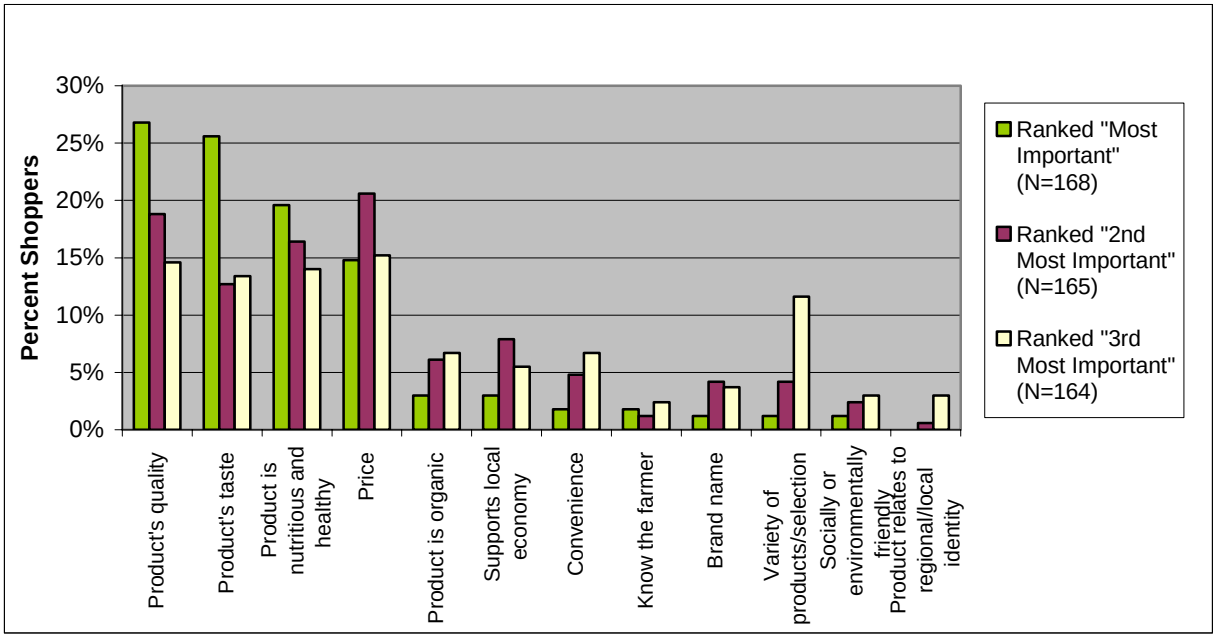
We then asked respondents to rate how often they thought about how and where their food was produced using a five-point Likert scale with "1" as Never and "5" as Always. Of the 246 survey respondents (99.6 percent) that replied, 114 shoppers (46.3 percent) selected either 1 or 2 to indicate that they ***frequently*** think of these factors, 115 (65.0 percent) chose 3 or 4 to reflect that they ***occasionally*** or ***rarely*** think of these factors, and 17 (6.9 percent) selected 5 to show that they ***never*** consider these factors. Aggregate survey responses for this question showed a mean response of 3.33 (SD=1.096), which roughly correlates with ***occasionally*** thinking of how and where food is produced. We then used a one-way ANOVA to test for significance among the five counties in the Study Area with respect to the frequency of thinking about how where food was produced; however, these results showed no differences among the counties.

To investigate other potential influences on consumers' likelihood of considering how and where their foods were produced, our team ran Mann-Whitney tests which showed no statistical significance between consumers with or without children under 18 in the household as it relates to how often they think about how and where food was produced. A Spearman's rank correlation test also shows that consumers who frequently purchase foods at specialty food stores ($\varrho$=.327, p=.000), CSAs ($\varrho$=.359, p=.000), food cooperatives ($\varrho$=.172, p=.017), farmers' markets ($\varrho$=.411, p=.000), farm stands ($\varrho$=.284, p=.000), or who participate in community gardens or grow their own food ($\varrho$=.306, p=.000), are statistically significantly correlated with their frequency of thinking about how and where their foods were produced. Conversely, no significant relationship was shown to exist between the frequency of thinking about how and where food was produced and the frequency of food purchases at grocery stores, multi-purpose stores, and convenience stores.

Factors that Influence Consumers' Food Purchases

Our project team was also interested in learning more about the factors that influence consumers' decisions to purchase foods for their household. Of the 168 survey respondents (68 percent) that completed this portion of the survey, 45 (26.8 percent) selected ***product quality,*** 43 (25.6 percent) listed ***product taste,*** 33 (19.6 percent) chose ***nutritional value***, and 25 (14.9 percent) listed ***price*** as the most important factors considered when purchasing food items (Figure 63).

Figure 63: Factors Considered by Consumers when Purchasing Food Items




The top factors considered by consumers are quality, taste, nutritious value, and price.

We then compared these responses with consumers' frequency of shopping for food at specific types of retailers and found several potential patterns. For example, consumers that shop most frequently at grocery stores, multi-purpose stores, and convenience stores tend to value ***price*** as the most important factor when purchasing foods; consumers who purchase foods at specialty food stores and food cooperatives consider ***nutritional value*** of foods to be most important; and consumers who frequently shop at farmers' markets, farm stands, or participate in CSAs value ***product quality*** as the most important factor when purchasing foods. However, one-way ANOVA tests confirm significant differences among the top four purchasing factors for only specialty food store and farmers' market shoppers.[16] Specifically, post-hoc comparisons using Tukey HSD tests reveal that shoppers who value ***quality*** and ***nutritional value*** over ***price*** are statistically more likely to purchase foods at specialty food stores (p=.045 and p=.043, respectively); and shoppers who value ***taste*** and ***quality*** over ***price*** are statistically more likely to purchase foods at farmers' markets (p=.032 and p=.029, respectively).

[16] One-way ANOVA tests show a significant difference among the top four purchasing factors (i.e., taste, quality, price, and nutritional value) with respect to the frequency of food purchases at specialty food stores (F(3, 122)=3.284, p=.023) and farmers' markets (F(3, 122)=3.108, p=.029). Similar tests show no significant differences with respect to CSAs (F(3, 114)=2.225, p=.089).

Further, Chi-square and Fisher's Exact tests revealed a significant relationship between the number of children under 18 living in a household and the consideration of ***quality*** and ***price*** as the top two most important factors when purchasing foods ($\chi^2$=4.062, df=1, p=.044, N = 62).

### *The Demand for Local Foods*

In investigating the demand for local foods within the Study Area, our team asked survey respondents to indicate how important they felt it was to have local foods grown and available for purchase in their community, using a five-point Likert scale with "5" as ***very important*** and "1" as ***does not matter at all***. Of the 231 respondents (93.5 percent) that provided an answer to this question, 196 (84.8 percent) selected 5 or 4 to indicate that it was either ***very*** or ***somewhat important***, 25 (10.8 percent) selected 3 showing that they were ***neutral*** and did not feel strongly either way, and only 10 (4.3 percent) recorded a 1 to show that it ***does not matter at all*** to have local foods grown and available in their community. Consequently, the mean response from this question was 4.29 (SD=.875), which confirms the relative importance of the availability of local foods to most consumers within the sample population. When analyzing these data by geographic location, a one-way ANOVA test showed no significant difference among the five counties with respect to consumers' importance of the availability of local foods in their community.

We then analyzed the survey responses to learn how specific demographic factors may impact consumers' opinions of the importance of local food availability within their community. When considering the sample population by age, 33 (42.9 percent) of the respondents between 18 and 35 years old indicated that local food availability in their community was ***very important***, as did 70 (56.9 percent) of respondents between 35 and 64, and 12 (46.2 percent) of the respondents age 65 or older. However, a Spearman's rank correlation test indicated that there was no significant relationship between consumers' age and importance of local food availability ($\rho$=.104, p=.119). Similarly, a Kruskal-Wallis test showed no statistically significant differences between consumers' importance of local food availability in their community with respect to consumers' household income ($\chi^2$=1.402, df=4, p=.844, N = 213). A Spearman's rank correlation test also confirms this conclusion ($\rho$=.069, p=.319).

Further, in considering race/ethnicity as a potential factor, our team used Kruskal-Wallis tests to compare three groupings of race/ethnicity (i.e., white, African American, other) with consumers' importance of the availability of local foods in their community. Results from this inquiry show no

statistically significant relationship between these two factors. On the other hand, the number of children under 18 in the household appears to influence a shopper's importance of the availability of local foods in their community, as identified by a Mann-Whitney test of these two factors (z=-2.077, p=.038). Specifically, consumers with no children under 18 in the household are statistically more likely to feel that it's important to have local foods grown and available for purchase in their community.

Although a large majority of survey respondents felt that it was very or somewhat important to have local foods available within their community, their perceptions of current local food availability within their communities were much less optimistic. Specifically, survey respondents were asked to rate the availability of local foods within their community based on a five-point Likert scale, with "5" as ***excellent*** and "1" as ***poor***. Of the 232 survey respondents, 88 (38.0 percent) reported food availability as ***above average*** or ***excellent***, 74 (31.9 percent) as ***average***, and 70 (30.2 percent) as ***fair*** or ***poor***. The mean response for this question was 3.09 (SD=1.14), showing that the average consumer within the sample population perceives food availability within their community to be about ***average***. This discrepancy between relative importance and perceived lack of availability may be interpreted as an important indicator of the demand for local foods within the Study Area.

In investigating the nature of geographic location with respect to these perceptions, a one-way ANOVA test shows a highly significant difference among the five counties with respect to perceptions of local food availability in consumers' communities ($F(4, 194)=4.917$, $p=.001$). More specifically, post-hoc comparisons using Tukey HSD tests show that shoppers in Washtenaw County perceive greater access than their counterparts in both Monroe and Wayne counties ($p=.022$ and $p=.006$, respectively).

To learn more about this potential opportunity for local entrepreneurs, our team compared data on race/ethnicity and consumers' perceptions of the availability of local foods in their community. However, using a Kruskal-Wallis test, we determined that there was no statistical significance among the three race/ethnicity classifications (i.e., white, African American, other) in this regard. Similarly, Spearman's rank correlation tests show no significant relationships between age and consumers' perceptions of availability of local foods or between household income and consumers' perceptions of availability of local foods.

Frequency of Local Food Purchases

Next, our team investigated the frequency of local food purchases by consumers within the Study Area. Of the 241 survey respondents that completed this question, 121 (50.2 percent) indicated that they purchase local foods ***at least once per week*** during the typical growing season, defined as May to December. Of the remaining respondents, 69 (28.6 percent) of consumers purchase local foods ***several times per month,*** 33 (13.7 percent) purchase local foods ***at least once per month***, and only 18 (7.5 percent) ***never*** purchase local foods during this time period. Not surprisingly, a Spearman's rank correlation test found a highly significant relationship between consumers' perceptions of the availability of local foods in their community and the frequency of purchases of local foods during the typical growing season ($\varrho$=.248, p=.000). This suggests that consumers who know that local foods are available are more likely to purchase these items; whereas, consumers who are not aware of the availability of local foods in their community are not likely to buy local foods.

To explore this issue further, we then compared the frequency of local food purchases during the growing season with demographic data collected from the sample population. First, a Spearman's rank correlation test revealed a statistically significant relationship between the age of consumers and their frequency of local food purchases during the typical growing season ($\varrho$=.133, p=.044). However, a Kruskal-Wallis test shows no statistically significant difference between age groupings in this scenario ($\chi^2$=5.050, df=2, p=.080, N=229), indicating that all age groups are significant with respect to their purchase frequency. Further, a Spearman's rank correlation test indicated that household income levels are not significantly related to frequency of local foods purchases. Similarly, Kruskal-Wallis tests show no significant difference between the three ethnicity classifications (i.e., white, African American, other) or among the number of children under 18 living in the household as these demographics relate to consumers' frequency of local food purchases during the growing season.

We then compared consumers' frequency of purchases of local foods during the typical growing season with the top four factors identified as most important when purchasing foods (Figure 64). The data collected from our sample population of 142 survey respondents show that shoppers who purchase local foods most frequently (***at least once per week***) tend to value product quality and taste when purchasing foods, whereas less frequent shoppers (***at least once per month***) tend to value nutritional value and price as most important when purchasing foods. Shoppers that reported

***never*** purchasing local foods during the typical growing season identified price as their most important purchasing factor for food items.

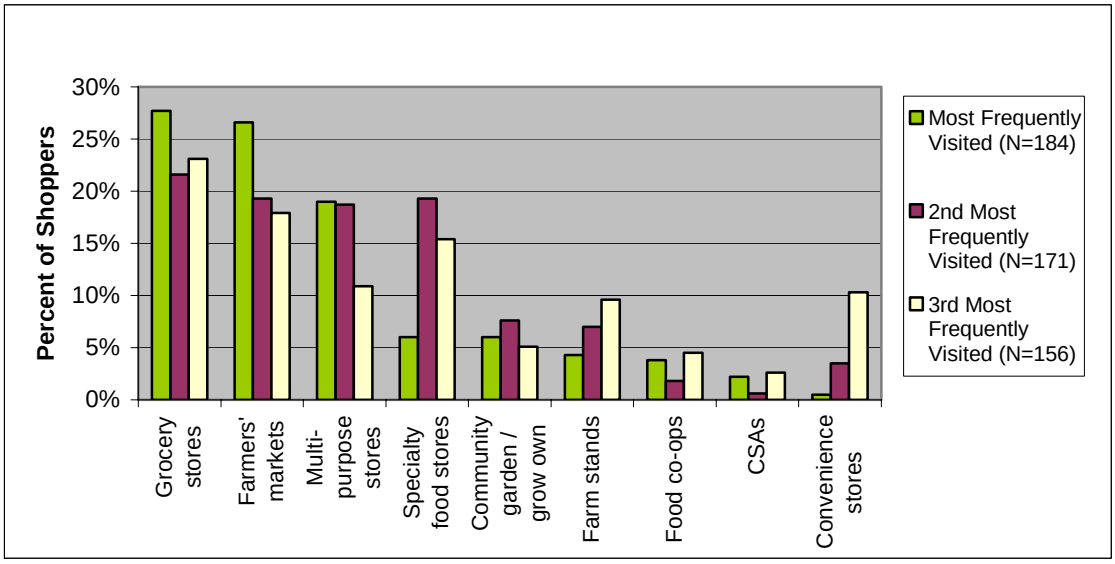
Figure 64: Frequency of Local Food Purchases during the May-December Growing Season Compared with Purchasing Factors

| Most Important Factors When Purchasing Foods | Frequency of Local Food Purchases (% Shoppers) | | | |
|---|---|---|---|---|
| | At least once per week (N=66) | Several times per month (N=42) | Once per month (N=21) | Never (N=13) |
| Taste | 51.2% | 18.6% | 14.0% | 16.3% |
| Quality | 51.5% | 32.6% | 16.3% | 0.0% |
| Price | 39.1% | 21.7% | 17.4% | 21.7% |
| Nutritional value | 39.4% | 45.5% | 12.1% | 3.0% |

Purchasing Local Foods

When asked to identify the three places visited most frequently to purchase or obtain local foods in their community, 51 (27.7 percent) survey respondents indicated that they visit grocery stores, 49 (26.6 percent) visit farmers' markets, and 35 (19.0 percent) visit multi-purpose stores to purchase local foods (Figure 65). Conversely, other retailers such as specialty food stores, farm stands, food cooperatives, CSAs, and convenience stores are visited less frequently. However, Kruskal-Wallis tests showed no statistically significant relationship between the frequency of consumers' food purchases at these top three retail outlets and perception of the availability of local food in their community.

Figure 65: Frequency of Visits to Food Retail Outlets to Purchase Local Foods



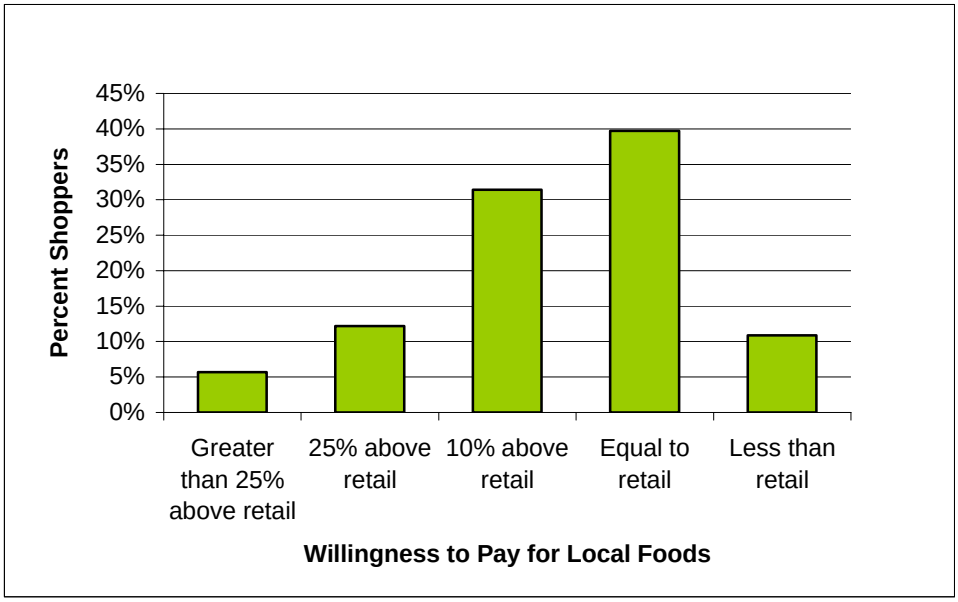

Consumers most often purchased local foods at grocery stores, followed by farmers' markets and multi-purpose stores.

Using a Pearson Chi-Square test, the data show a significant relationship between the top three retailers visited most frequently to purchase local foods and the county in which the consumer resides ($\chi^2$=20.386, df=10, p=.026, N=127). However, statistical testing of the survey data indicate that race/ethnicity, household income, and age do not appear to be associated with the frequency of consumers' visits to specific types of food retailers to purchase local foods. Interestingly, however, a Chi-square test showed a statistically significant relationship between the number of children under 18 in the household and the types of retailers visited most frequently to purchase local foods ($\chi^2$=7.754, df=2, p=.021, N=123).

Consumers' Willingness to Pay for Local Foods

Finally, our team chose to investigate primary factors influencing consumers' willingness to pay for locally grown or produced foods to further clarify the demand for local foods within the Study Area. In posing this question to our survey respondents, of the 229 individuals (92.7 percent) that provided an answer, 113 (49.3 percent) were willing to pay greater than the typical retail price for similar items, 91 (39.7 percent) were willing to pay equal to the typical retail price, and only 25 (10.9 percent) were willing to pay less than the typical retail price for similar food items (Figure 66).

Figure 66: Consumers' Willingness to Pay for Locally Grown or Produced Food Items




While most consumers are only willing to pay equal to retail for local goods, nearly 20% are willing to pay 25% or greater.

To further investigate the potential factors that may influence a consumers' willingness to pay for local foods, our team compared these data with several demographic factors. Interestingly, Spearman's rank correlation tests showed no statistically significant relationships between household income range ($\rho$=.129, p=.061) or age and consumers' willingness to pay for locally grown or produced foods. And a Chi-square test also showed no statistically significant relationship between the number of children under 18 living in the household and consumers' willingness to pay. On the other hand, Kruskal-Wallis tests did, in fact, show a highly significant difference between the three race/ethnicity classifications (i.e., white, African American, other) with respect to a consumers' willingness to pay for locally grown or produced foods ($\chi^2$=10.496, df=2, p=.005, N=222), which was also confirmed by a one-way ANOVA test showing similar results (F(2, 219)=4.793, p=.009). Specifically, post-hoc comparisons using Tukey HSD tests showed that white shoppers are statistically willing to pay more than African American shoppers when evaluating race/ethnicity based on three classifications (p=.007).[17] However, in further investigating this finding, a Mann-Whitney test showed that no significant difference exists among the three race/ethnicity

[17] One-way ANOVA tests comparing race/ethnicity data with all six categories also revealed a significant difference among race/ethnicity classifications with respect to consumers' willingness to pay for local foods (F(5, 216)=2.471, p=.033); post-hoc comparisons using Tukey HSD tests showed that white shoppers are statistically willing to pay more than African American shoppers (p=.028).

classifications with respect to household income ($z$=-1.434, $p$=.152) within the Study Area, which further illustrates the importance of race/ethnicity over household income in this finding.

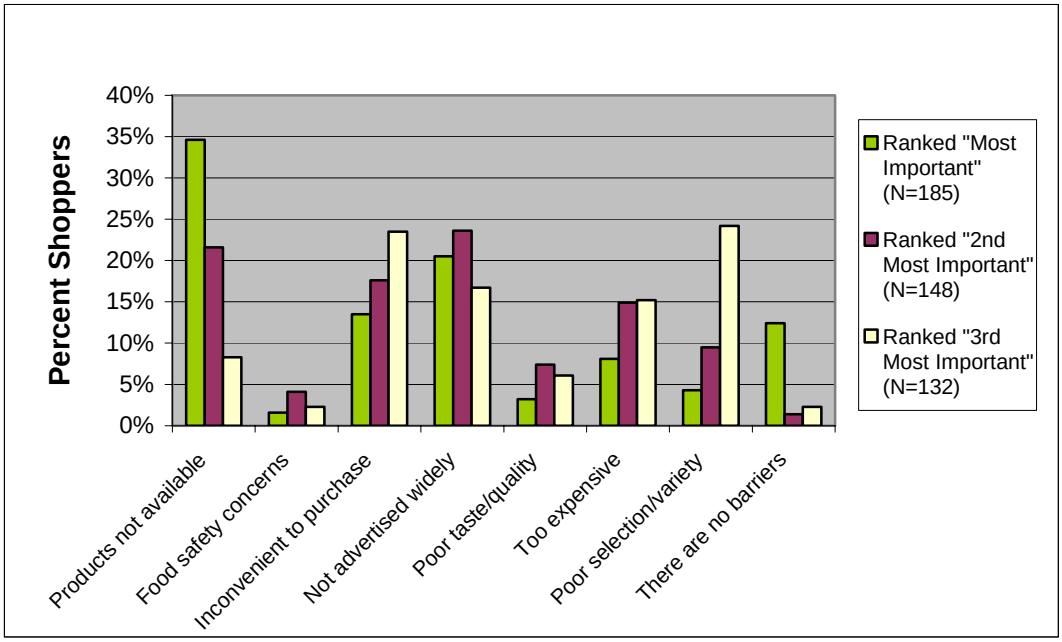
In addition, a Kruskal-Wallis test showed statistically significant differences between the top four purchasing factors considered when purchasing foods (i.e., taste, quality, price, and nutritional value) with respect to consumers' willingness to pay for locally grown or produced foods ($\chi^2$=10.817, df=3, $p$=.013, N=137). A one-way ANOVA test also supported this conclusion ($F(3, 133)$=3.480, $p$=.018), while post-hoc comparisons using Tukey HSD tests revealed that shoppers who consider the nutritional value of foods to be most important when purchasing foods are significantly willing to pay more for local foods ($p$=.015).

In comparing a consumers' willingness to pay for local foods, Spearman's rank correlation tests showed a highly significant relationship between willingness to pay and shoppers that frequently purchase foods at specialty food stores ($\varrho$=.271, $p$=.000), farmers' markets ($\varrho$=.293, $p$=.000), or participate in CSAs ($\varrho$=.213, $p$=.003). Other significant relationships were identified between a consumers' willingness to pay and their frequency of food purchases at food cooperatives ($\varrho$=.148, $p$=.047) or obtaining foods from a community garden or their own garden ($\varrho$=.162, $p$=.027). Conversely, a Spearman's rank correlation test identified a significant negative relationship between a consumers' willingness to pay for local foods and their frequency of shopping for foods at multi-purpose stores ($\varrho$=-.157, $p$=.022), indicating a potential price sensitivity among those consumers. No statistically significant relationship was found between consumers' willingness to pay for local foods and their frequency food purchases at grocery stores, convenience stores, or farm stands.

### *Barriers to the Consumption of Local Foods*

To identify potential barriers to purchasing local foods, we asked respondents to identify the top three barriers within their community. Of the 185 respondents (74.9 percent) that replied, 64 (34.6 percent) identified their perceived top barrier as the availability of local products, 38 (20.5 percent) indicated that local items are not widely advertised, and 25 (13.5 percent) suggested that local items were inconvenient to purchase. Additional write-in comments from survey respondents also confirmed that shoppers perceive advertising or labeling of local foods to be poor or nonexistent at retail outlets in their communities. However, 23 (12.4 percent) survey respondents felt that there were no significant barriers to purchasing local foods in their community.

Figure 67: Potential Barriers to Purchasing Local Foods




Consumers' top barriers are low availability of local products, inconvenient to purchase, and lack of knowing where local products exist through advertising.

We then compared these data with basic demographic data for the survey respondents to learn more about potential differences in perceived barriers among residents within the Study Area. Using a Chi-square test, we identified that no statistically significant relationship exists between the number of children under 18 living in consumers' households and the factors considered to be barriers when purchasing local foods in their community. With respect to race/ethnicity classifications, the descriptive statistics gathered from the survey show that white and "other" race/ethnicity shoppers (e.g., Asian, American Indian, Alaskan Native, or Hispanic/Latino populations) tend to feel that local foods are not available in their community, whereas African American shoppers tend to feel that local foods are not advertised widely within their community and are too expensive (Figure 68). In addition, Kruskal-Wallis tests showed no significant differences among the top three perceived barriers and the perception that there are no barriers to purchasing local foods in consumers' communities as it relates to consumer age groupings or household income.

Figure 68: Top Barriers to Purchasing Local Foods Compared with Consumers' Race/Ethnicity

| Top Barriers to Purchasing Local Foods | Race/Ethnicity (% shoppers) | | |
|---|---|---|---|
| | White/Caucasian (N= 143) | African American (N=18) | Other (N=17) |
| Products not available | 37.1% | 16.7% | 41.2% |
| Food safety concerns | 0.0% | 0.0% | 17.6% |
| Inconvenient to purchase | 13.3% | 11.1% | 17.6% |
| Not advertised widely | 21.7% | 22.2% | 5.9% |
| Poor taste/quality | 1.4% | 16.7% | 5.9% |
| Too expensive | 6.3% | 22.2% | 5.9% |
| Poor selection/variety | 4.9% | 0.0% | 5.9% |
| Other[A] | 1.4% | 5.6% | 0.0% |
| No barriers exist | 14.0% | 5.6% | 0.0% |

[A] Other was identified by survey respondents as location and/or perceived racial segregation.

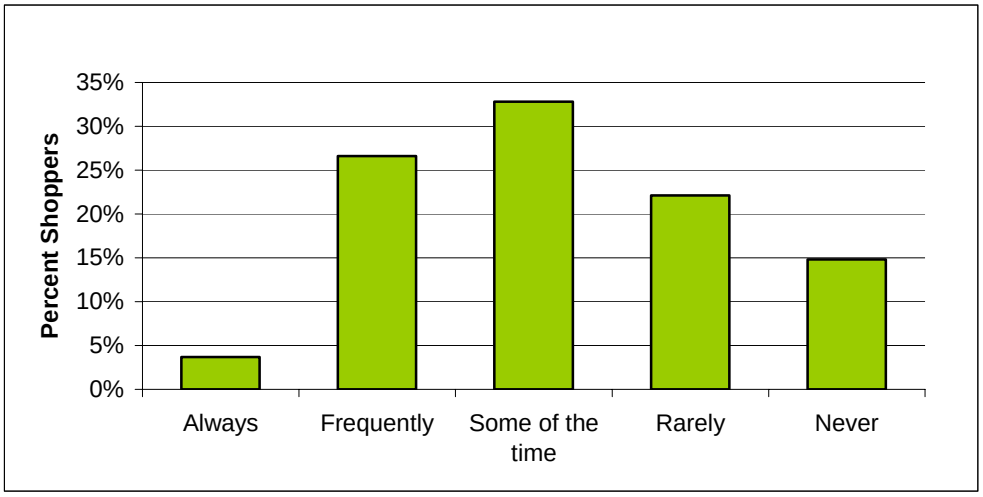
When comparing consumers' perceived barriers to purchasing local foods with their geographic location by county within the Study Area, a Pearson Chi-square test showed that no significant relationship exists between these two factors.

### *Opportunities for Local Foods*

As noted in our review of the existing food system literature, the demand for and sales of organic foods may be a potential indicator of future trends for local foods. To investigate this potential linkage within the Study Area, our team asked survey respondents to provide estimations of their frequency of purchases of organic food items (Figure 69). Of the 244 individuals (98.8 percent) that responded, 9 (3.7 percent) reported that they ***always*** purchase organic foods, 65 (26.6 percent) purchase organic foods ***frequently***, 80 (32.8 percent) purchase them ***occasionally***, and 90 (36.9 percent) ***rarely*** or ***never*** purchase organic foods. Using Spearman's rank correlation tests, we were then able to identify a highly statistically significant relationship between consumers' frequency of organic food purchases and their frequency of local food purchases during the typical growing season ($\rho$=.210, p=.001), which confirms the conclusions identified by previous studies that similar consumers are currently seeking out both organic an local food items. One might be able to infer from these results that, over time, the demand for local foods may eventually mirror that of organic foods which has sparked significant growth within the organic food industry over the last several

years. Thus, local farmers and producers, as well as other food system stakeholders, should take note of this demand and potential for local foods and work to address this unmet demand.

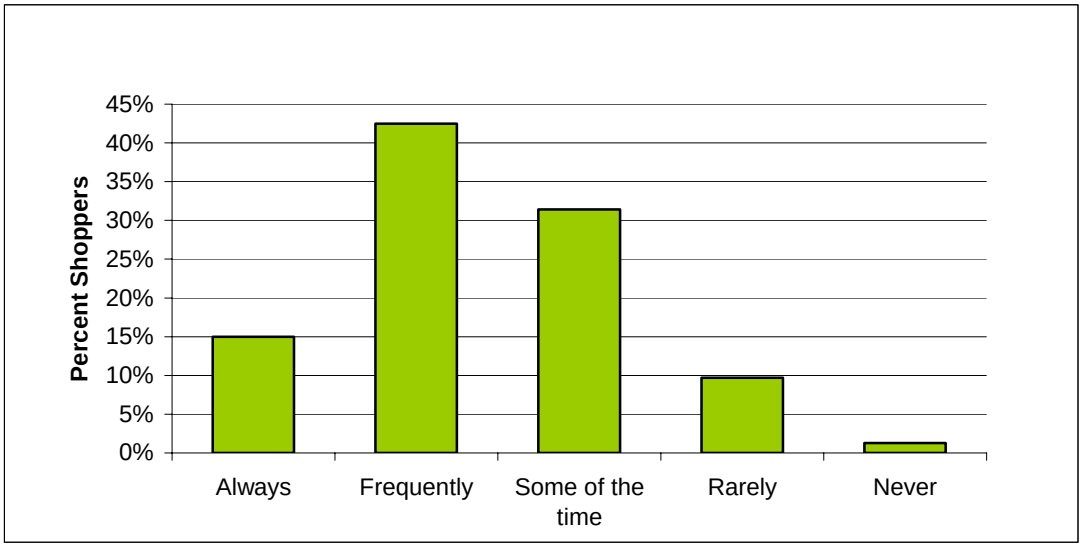
Figure 69: Frequency of Organic Food Purchases




Over half of the respondents reported purchasing organic foods "some of the time" or "frequently."

Another potential opportunity for local foods that we investigated was for restaurants to increase their usage of local food items in meals. To test this hypothesis, we asked survey respondents to identify how often they would likely select dishes at restaurants or other food service establishments that were prepared with local foods, if they were available (Figure 70). Of the 226 individuals (91.5 percent) that responded, 130 (57.5 percent) indicated that they would ***frequently*** or ***always*** choose these items, 71 (31.4 percent) would select these dishes ***some of the time***, and only 25 (11.0 percent) would ***rarely*** or ***never*** order these items.

Figure 70: Frequency of Ordering Dishes Made with Local Foods




Consumers indicated a promising intent to order dishes made with local foods a restaurants if offered to them in the future.

### *Consumer Survey: Summary of findings*

- Over half of consumers surveyed frequently purchase food from grocery stores; 1/3 shop at multi-purpose stores on a weekly basis.
- Eighty percent of shoppers buy at farmers' markets, 62 percent at farm stands, 43 percent grow their own foods, 37 percent participate in CSAs, and 27 percent buy at food co-ops at least once per year.
- Forty-six percent of shoppers reported they "always" or "frequently" think about how or where their food was produced.
- Eighty-five percent of shoppers felt that local food availability in their community was either very or somewhat important.
- Thirty-eight percent rated local food availability in their community as above average or excellent; 30 percent rated it fair or poor. Consumers in Jackson, Lenawee and Washtenaw counties perceive greater access to local foods.
- Fifty percent purchased local foods at least once per week during the growing season (i.e., May to December); 8 percent never did.
- No relationship was found to exist between household income or race/ethnicity and the frequency of local food purchases.

- Consumers who buy local tend to value quality and taste; less frequent buyers value nutritional value and price; other shoppers value price.
- Twenty-eight percent visit grocery stores to buy local foods; 27 percent visit farmers' markets; and 19 percent visit multi-purpose stores.
- Forty-nine percent were willing to pay greater than retail price for local foods; 40 percent were willing to pay equal to retail price; and 11 percent were willing to pay less than retail.
- No relationship was found to exist between consumers' willingness to pay and household income.
- Shoppers that were willing to pay higher prices for local foods tend to value nutritional value over price in purchasing food items for their household.
- Top barriers to purchasing local foods included: availability, convenience, and lack of advertising; 12 percent surveyed perceived no barriers.
- Fifty-eight percent of shoppers would select dishes prepared with local foods at restaurants, if available.

# Chapter 5: Supplementary Research

## Introduction

As a non-profit organization with a five-county mandate and diverse membership, the Food System Economic Partnership is involved in a wide variety of research and program initiatives. With only one full time staff member to coordinate activities, much of the work is done by leadership team members who have volunteered to add to their primary job responsibilities. Each of FSEP's working groups have developed ambitious agenda's for the coming year – often extending well beyond the real capacity of the individuals involved directly.

In the initial meetings between FSEP representatives and the Master's project group, FSEP proposed an array of activities for the team to pursue as part of the year-long project. After discussing group and individual interests and capacity, we identified four primary components that would comprise our project, namely: a literature review, a multi-sector survey, a community food profile and an organizational assessment plan. The first three components, all related directly to assessing the demand, barriers and opportunities for an intentionally localized food system in southeastern Michigan, represented the bulk of our research and have comprised the foregoing chapters of this report. Two additional projects, an analysis of grain production opportunities in the five-county region and an organizational assessment and evaluation plan focused on FSEP itself as an organization, are also discussed in this chapter.

## FSEP Grain Producer Survey

### *Overview*

In the summer of 2006, several members of our Local Food Master's Project Team worked for FSEP to analyze survey data and generate reports on a survey that was created and administered by FSEP earlier in the year (Appendix 13). The grain producer survey was sent to grain producers within the southeastern Michigan region during the spring of 2006. Funded by a Project GREEEN grant, the purpose of the survey was to gather information on grain production trends in the region with a particular emphasis on organic grain production and processing opportunities in the region.

The grain producer survey began as an independent FSEP initiative, however, since there were some areas of overlap, we chose to combine our Local Food Team's broader multi-sector surveys to gather more information and minimize duplication of efforts. FSEP was able to revise and expand

the scope of the Project GREEEN grant proposal to support one large survey integrating questions about grain production, consumption and processing into the broader surveys about the local food economy[18]. Members of our Local Food Master's Project Team worked over the summer of 2006 to analyze the grain producer survey and report the findings while disseminating the multi-sector survey to collect more information from other producers, consumers, processors, distributors and retailers. Grain specific findings from the multi-sector survey were added to the producer survey findings to paint a more complete and complex picture of current and future grain production opportunities in the region.

### *Purpose*

The purpose of the grain survey project was to gather information on grain production trends in southeastern Michigan. The grain producer survey assessed demographics, marketing, and trends in grain farming in the region, and also investigated the relationship between the farmers' current grain production practices and those that they desired to employ in the future. The survey also included questions to gather information about the barriers and possibilities for alternative markets and practices for grain production as well.

As requested by FSEP, the grain producer survey results and relevant findings from the multi-sector survey were compiled into a concise summary, presented primarily in bulleted form and circulated among the FSEP leadership team. This summary is included in Appendix 14. FSEP will use the information generated by the surveys to inform programs and recommend policy to support the development of grain production opportunities in southeastern Michigan. The findings will be made available to the public through the organization's website, leadership team communication with grain production stakeholders and other outreach methods to be identified.

### *Survey Development, Collection, Analysis, and Reporting*

Our Local Food Project Team was not directly involved in the process of developing, implementing the grain producer survey. This aspect was conducted by FSEP director Mike Score in the spring of 2006. After developing the survey, it was distributed through the Michigan Farm Bureau and Organic Growers of Michigan who generated the mailing lists based on their producer databases. The survey was sent via U.S. Mail to 361 grain producers in southeastern Michigan. Of the 361

[18] The methodology and findings of the multi-sector survey are presented and discussed in Chapters 3 and 4 of this report. A summary of findings from the entire project are included in Chapter 6.

surveys mailed, an approximately equal number were sent to grain producers in each of four counties: Lenawee, Monroe, Jackson and Washtenaw County. Seventy-two responses were received back, a response rate of 20 percent. Of the responses, nine were from Jackson County, 26 from Lenawee County, 14 from Monroe County, and 17 from Washtenaw County. Six survey respondents did not indicate their location.

Data analysis, led by members of our Local Food Project Team, began upon receipt of the 72 responses in June of 2006. We compiled all of the survey responses into a Microsoft Excel spreadsheet in a in a format compatible with the Statistical Package for Social Science Research (SPSS) program which was used for analysis. After uploading the data into SPSS, we first ran a basic series of frequency and descriptive data analyses. This included using the software to generate means, modes, medians, ranges, standard deviations, and frequency numbers and percentages for each question.

With the help of the statistical consultation services available to University of Michigan students (CSCAR), we ran several more in-depth tests to identify significant statistics, correlations and associations. The various in-depth tests were chosen according to the structure of the questions being analyzed. The most useful test for the grain producer data set was the Wilcoxon Signed Ranks Test. The is a T-test for non-parametric data for the case of two related samples or repeated measurements on a single sample. We also used the Chi-square test to determine association between two categorical variables. For assessing whether or not associations existed between two continuous variables, we employed the Spearman's correlation test. We employed the Spearman correlation over the Pearson correlation based on the assumption that our data was non-parametric. Analysis between one continuous variable and categorical variables was measuring using T-tests and ANOVA tests, including the Wilcoxon Signed Ranks Test.

After analyzing the data, we generated a concise summary of the findings for FSEP (Appendix 14). In addition to this internal briefing, we contributed to the final report of the GREEEN Project (Appendix 15), which was furnished to the funding organization. This report included information on how the GREEEN grant money was spent, a brief overview of the surveys' purpose, the findings from the surveys, and recommendations based on the information garnered in the surveys.

Since the results of the grain producer survey are highly relevant and related to our Master's Project research for the creation of an intentionally localized food system in southeastern Michigan, these results from the grain producer survey and discussion will be presented in-depth in the following pages.

### *Survey Results*

Grain Production in the Region - An Overview

The grain producer survey asked respondents to report the type of grain that they produced, the amount of acreage dedicated to grain, the production methods employed (conventional or organic), and whether or not the grain production was profitable. We found that the primary grain crops grown were corn, soybeans, and wheat. Oats were the next most typically grown grain. Respondents' farm size ranged from 24 to 5,200 acres, and the average overall farm size was 645 acres. The largely agricultural counties Lenawee and Monroe had an average farm size of approximately 800 acres. The average farm size in Jackson and Washtenaw counties were 332 and 472 acres respectively. Over 96 percent of farmers responded that they did not market grains labeled as "organic" while 4 percent did. Financially, 68 percent of farmers reported that the grain production was profitable. Twenty-two percent reported that they broke even, and ten percent stated that they lost money.

Grain Marketing Methods: Actual and Desired

The survey asked farmers to identify how they brought their grain crops to market. Currently, about 74 percent sell their grain through a grain elevator. Slightly less than 10 percent reported selling grain directly to a processor. Meanwhile, less than 3 percent of survey respondents reported selling grain directly to consumers (Figure 71). When asked which grains they would "ideally" grow and by what method they would bring these to market, farmers largely concluded that they would prefer an alternative or multiple alternatives to the grain elevator. Over half of the farmers who currently use the elevator to sell their grain said that they would prefer not to be using it. The main alternative of choice was to sell their grains directly to processors. Fifty-one percent of potential corn farmers, 37 percent of soybean farmers and 32 percent of wheat farmers indicated a desire to sell their product direct to processors. Meanwhile, about 10 percent wanted to sell directly to consumers (Figure 72).

Figure 71: Current Method of Selling Grain

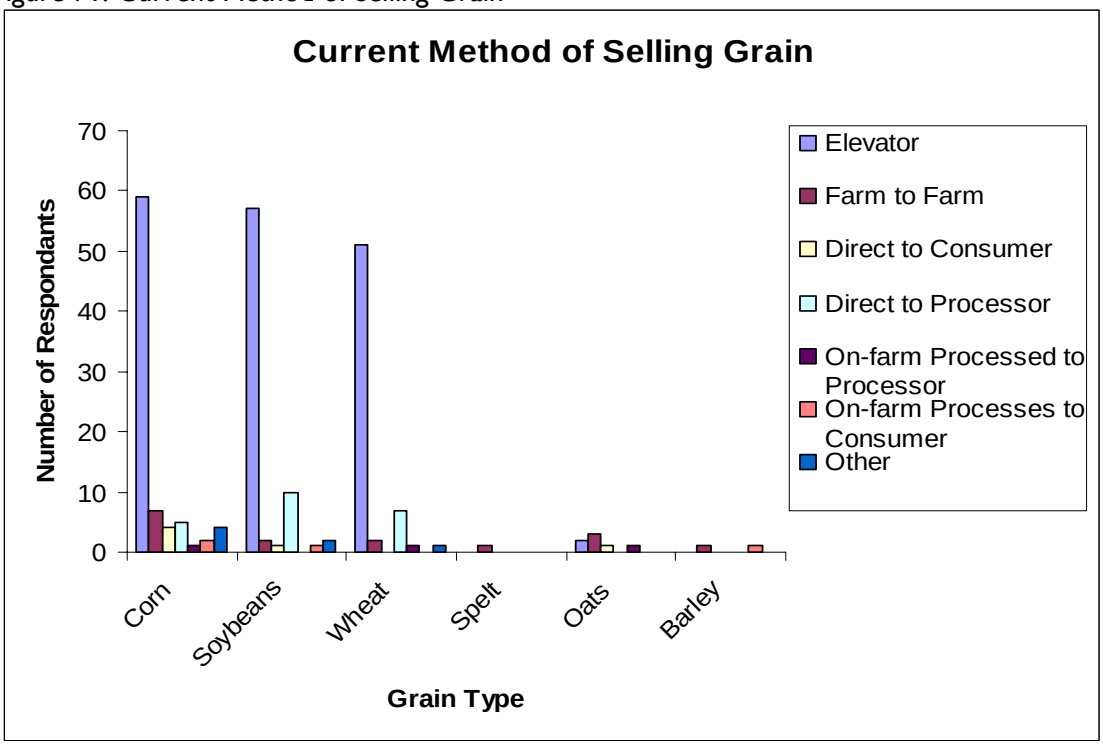
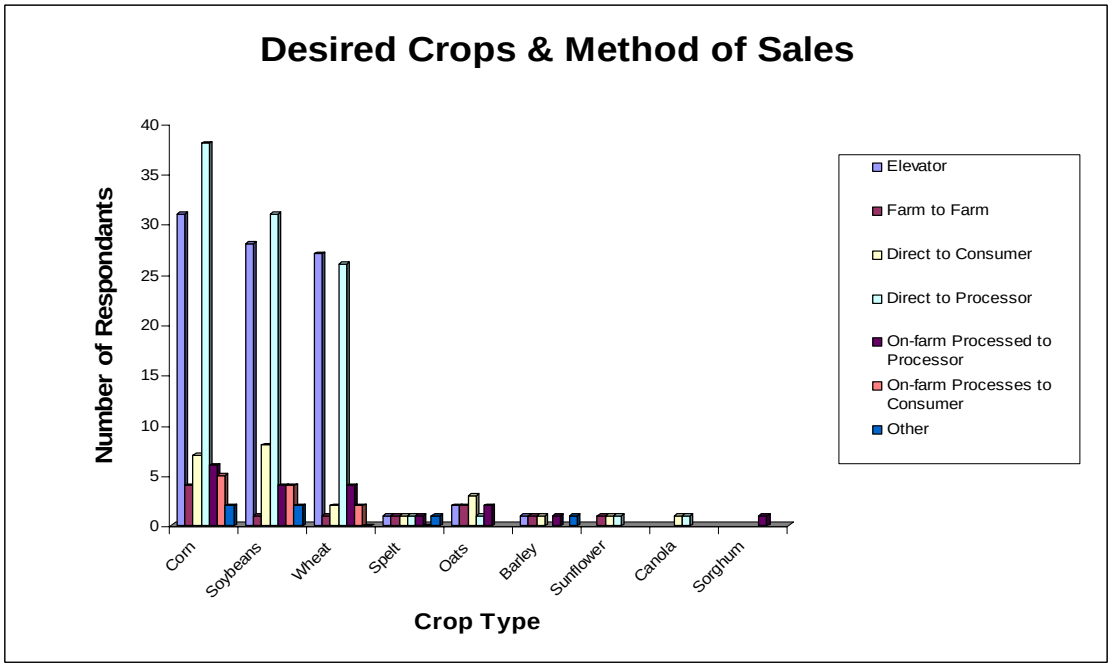



**Figure 72: Desired Crops and Method of Sales**




Using Wilcoxon Signed Ranks Tests, we found that the shifts in actual verses desired marketing methods were found to be all highly significant statistical findings for usage of the grain elevator,

direct to processor method, and direct to consumer method (p=.000 in all cases). This indicates there is a strong desire among grain farmers to shift their method of sales to a more local, direct method, such as selling directly to a processor or consumer in the region.

Opportunities and Barriers in Alternative Grain Production

The grain producer survey assessed the barriers and opportunities for alternative markets, practices, and grain production. Where only four percent of farmers currently grow grains other than corn, soybeans and wheat, slightly over ten percent of producers reported a desire to grow alternative grains. The most noted alternatives to these commodity grains were oats, spelt, barley, and canola. This survey result indicates that there is a desire among some farmers of the region to grow alternative grains.

Farmers were asked to report which barriers limit the production of alternative grains (grains other than the commodity crops of corn, wheat, and soybeans). The survey included 15 potential barriers and asked farmers to rank them on a 1 to 5 scale where 1 indicated a "low barrier" and 5 a "high barrier." The top three barriers indicated were "the cost of production inputs" (mean=3.62, std. dev.=1.14), "the lack of near-by facilities for delivering harvested grains" (mean=3.32, std. dev.=1.43), and "the recent price trends for other grains" (mean=3.09, std. dev.=1.08). These results suggest that the most significant barriers to participation in the alternative grain market are the lack of infrastructure and the price of commodity grains. When considered with the level of interest in alternative grain production and marketing, these findings point to opportunities within the region to develop new grain processing facilities and local markets.

Farmers were also asked to rate factors that limit organic grain production. Seven potential barriers were given and the farmers were asked to rank them on a 1 to 5 scale where 1 was a "low factor" and 5 was a "high factor." The top three barriers indicated were "the management options for controlling weeds in organic grain production" (mean=4.28, std. dev.=.94), "management options for controlling insects in organic grain production" (mean=4.02, std. dev.=1.01), and the "management options for controlling diseases in organic grain production" (mean=3.83, std. dev.=1.03). These results strongly point to opportunities in the region to promote organic production through education about organic management practices. The lowest rated barrier was "consumer demand for products made from organic grain" (mean=2.83, std. dev.=1.24), indicating that farmers were aware of a substantial consumer demand for organic grain products.

Next, farmers were asked to report their expectations for grain markets over the next ten years given four scenarios. On a 1 to 5 scale where 1 indicated an "unlikely change" and 5 indicated a "very likely change." Responding to four scenarios given, farmers believed federal policies will change in a way that lowers price supports for commodity grains (mean=3.93, std. dev.=1.20). On the other hand, they expect that new businesses will develop in southeastern Michigan that will increase conversion of commodity grains into consumer goods (mean=3.37, std. dev.=.99) Despite the expected reduction in subsides, farmers were optimistic about new opportunities emerging locally to convert raw grain to consumer-ready, value added goods. Clearly grain farmers are aware of the potential, alternative markets for their grain. These results suggest a need to for new infrastructure to support new business development and develop networks to connect local grain producers with new processing and value-added facilities.

Opportunities for Grain Products

When asked to rate interest in potential grain-based products, farmers rated all 17 given options highly. The mean scores for the 17 products listed ranged from 3.00 to 4.57 on a 1 (low interest) to 5 (high interest) scale. Overall, the responses indicated a desire among grain producers for more outlets or markets for their crops. Figure 73 lists the number of responses, minimum and maximum scores given, and the means and standard deviation for each product listed.

Figure 73: Interest in Grain Based Products for Grain Survey

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Fuel for home heating | 68 | 1 | 5 | 4.44 | .780 |
| Fuel for industrial processes | 69 | 1 | 5 | 4.28 | .968 |
| Fuel for engines | 70 | 1 | 5 | 4.57 | .791 |
| Cereal bars | 69 | 1 | 5 | 3.48 | 1.171 |
| Flour products | 69 | 1 | 5 | 3.57 | 1.078 |
| Edible chips | 69 | 1 | 5 | 3.52 | 1.208 |
| Biodegradable plastics | 69 | 1 | 5 | 4.14 | 1.033 |
| Cooking oils | 69 | 1 | 5 | 4.17 | .999 |
| Household/Industrial lubricants | 69 | 1 | 5 | 3.93 | 1.155 |
| Livestock feed | 68 | 1 | 5 | 4.07 | 1.124 |
| Ingredients for ethnic food menus | 67 | 1 | 5 | 3.45 | 1.294 |
| Craft materials | 67 | 1 | 5 | 3.13 | 1.290 |
| Alcoholic beverages | 68 | 1 | 5 | 3.00 | 1.425 |
| Household/industrial cleaning products | 68 | 1 | 5 | 3.57 | 1.250 |

| | | | | | |
|---|---|---|---|---|---|
| Cosmetics/Skin care products | 68 | 1 | 5 | 3.51 | 1.228 |
| Lawn Fertilizer | 68 | 1 | 5 | 3.72 | 1.244 |
| Bread/Baked goods | 69 | 1 | 5 | 3.75 | 1.181 |

### *Conclusion*

The grain producer survey collected valuable information from 72 grain producers in southeastern Michigan. The survey was designed to gauge current grain production trends and identify opportunities for future development in grain production and processing. The data returned many significant findings, showing, in general, that farmers were not fully satisfied with the current market for grain. Farmers were eagerly receptive to more alternative opportunities for marketing their crops. The four primary opportunities for local grain production, processing, and marketing that emerged were:

- Promote increase in organic production through education about organic management practices
- Increase direct marketing opportunities for local grain
- Develop new grain processing facilities
- Develop new value-added products that use locally-grown grain

Through their rich network of food system stakeholders and innovators, the Food System Economic Partnership is in position to translate these findings into action in the coming years. There are many exciting opportunities for new business development in the region focused on local grain production. The new processing and marketing opportunities that have the potential to bolster grain producer profits, convert more farmland to organic methods to meet consumer demands, and localize the consumption of more locally-grown grain.

## FSEP Annual Organizational Review
## A Proposed Plan

### *Overview*

As a complex and rather unprecedented non-profit organization, the Food System Economic Partnership (FSEP) aims to catalyze change in the regional food system through research, education and business development in order to foster more sustainable, healthy local economies and

communities. Through this work, FSEP has the potential to become a model for organizations throughout the country working to create change in their food systems. In order to most effectively achieve its goals, it is important that FSEP document and periodically assess its processes, successes and challenges through reflection and evaluation.

To this end, FSEP leaders identified a need to develop a *formative* evaluation plan that will lend structure and predictability to the documentation process and help integrate an ethos of evaluation into the organization. Formative evaluation is designed to supply information that will be useful in improving organizational function and products and planning for the future. As the FSEP Leadership Team members have numerous demands on their time, is critical that the evaluation is as effective, efficient and "low-cost" as possible. Taking these demands in heed, we have designed an evaluation plan that combines interviews, brief surveys and document review which will be conducted in partnership with an external evaluator and will maximize the participants' input while minimizing the time put in.

After conducting semi-structured interviews with a subset of Leadership Team members and working group leaders as well as reviewing documents representing the past year's work and conducting a brief survey of the Leadership Team and outside stakeholders, the evaluator will create a report summarizing the qualitative results. The report may be used for planning, communication and fundraising.

### *Evaluation Design*

This proposed evaluation plan was developed by the Local Food Project Team of University of Michigan Master's degree candidates in partnership with representatives from the FSEP Leadership Team. The approach and methods were chosen based on observations of FSEP meetings and activities since January 2006 and on a series of semi-structured interviews with representatives from the Leadership Team[19]. During these conversations, FSEP members were asked to share their views on the primary goals of the organization and the primary objectives of the evaluation, identify key evaluation questions, identify ideal methods of information collection, and propose an evaluation timeline. We also consulted several program evaluation resources including *Measuring Progress: An Evaluation Guide for Ecosystem and Community-Based Projects* produced by the Ecosystem Management

[19] Interviewees were: Michael DiRamio, FSEP Deputy Director; Mike Score, FSEP Director and Susan Schmidt, FSEP Board Chair

Initiative at the University of Michigan and *Community Food System Evaluation Handbook and Toolkit* published by the Community Food Security Coalition. (Additional resources listed below.)

We circulated an initial draft of the evaluation plan among our team and with the three interviewed FSEP leaders in early August 2006. After a comment period, we revised the draft plan to reflect the feedback and suggestions. We added a few additional elements to the plan including an open comment period and adjusted some of the survey questions for clarity.

We presented the following plan to the FSEP Leadership team at their monthly meeting in October 2006. Dedicated to developing a plan that the entire leadership team supports and is wiling to participate in, we solicited comments or suggestions on the plan and provided a draft with contact information to each leadership team member present. The draft was also sent electronically to the group to reach all that were not in attendance at the meeting.

To date, we have not received any additional feedback. Currently, the plan is in the hands of FSEP leaders who intend to solicit an external evaluator to facilitate the process beginning next spring.

### *Evaluation Plan*

Purpose

There are four primary purposes of the proposed annual FSEP Organizational Assessment. First, to evaluate on an annual basis the extent to which FSEP is achieving its goals as an organization. Second, to document the organization's progress, successes and challenges. Third, to inform FSEP's strategic and program planning processes. And, fourth, to support FSEP's fundraising efforts by regularly compiling information commonly requested by funders.

To provide sufficient breadth and depth of information to achieve these goals, the evaluation employs a variety of methods to gather feedback from within FSEP as well as from external observers and clients. These methods are outlined below.

Internal Review Methods

To make most effective use of Leadership Team members' limited time, the evaluation will employ a brief survey of all Leadership Team members and interviews with a subset of members to gather feedback and opinions on the individual and working group levels. Individual interviews will focus

primarily on process evaluation, whereas working group interviews will collect outcome and output information at the working group level.

*Document Review:* The Leadership Team and each working group will provide the evaluator with pertinent documents representing the work of the previous year to date. Unless desired by the working groups, this will not require the creation of any additional documents. Relevant documents include meeting agendas and minutes, attendance records, strategic planning documents and financial statements. The evaluator should also review outside documents such as newspaper articles or sector publications that refer to FSEP projects or work.

*Leadership Team Survey:* To gather some more quantifiable feedback from the entire group and add another dimension to the evaluation, a very brief survey will be given to Leadership Team members in February or March. The survey will give all FSEP Leadership Team members an opportunity to participate in the annual review. It is designed to assess the degree to which FSEP leaders feel that FSEP is achieving its goals as an organization and living up to its values. These goals and values were identified and articulated through the strategic planning process that took place in the winter of 2005-2006. The survey includes several Likert scale questions regarding overall effectiveness of Leadership Team meetings, effectiveness of meeting format, working group meetings, outside/social activities, etc. The survey may be distributed on paper or via an Internet survey tool depending on the preferences of the organization. The proposed survey format is available in Appendix 16.

*Individual Interviews*: The FSEP Leadership Team is comprised of about 40 individuals that represent every facet of the regional food system. With such diverse involvement, it is important that the annual review includes an array of individual perspectives on the progress of the organization. About one third of the Leadership Team members will be randomly selected each year. This group of 10 to 15 team members will meet individually with an outside evaluator to answer a short set of open-ended questions. The interviews will be approximately 30 minutes in length. The proposed Leadership Team Individual interview questions are available in Appendix 17.

*Working Group Interviews*: Because working groups form the core of FSEP's work, it is important to give each group the opportunity to evaluate their progress with respect to the specific goals and action plans the group has articulated for itself. Each working group will decide whether to

participate as a group or have an individual represent the group. The evaluator will either conduct an individual interview with a working group leader or facilitate a small group interview with working group members. The proposed Working Group interview questions are available in Appendix 18.

External Review Methods

While the emphasis of the annual review will be on the activities, process and organizational culture of FSEP itself, feedback from "clients" and external partners can add another critical dimension to the assessment process, which may prove helpful in identifying successes and areas of progress and planning for the future. External components that might be integrated into the assessment include a client survey and interviews with key outside observers.

*Client/Stakeholder Survey:* As an organization that aims to provide services to "clients" who are stakeholders in the local food system, FSEP should not pass up the opportunity to learn from these clients. For the first year, FSEP should identify a list of clients by January to whom the survey should be mailed. Surveys should be mailed in early February along with a letter explaining the review purpose and process and requesting participation. A follow-up phone call a week later will improve the response rate. Like the internal survey, this might also be offered through an on-line Internet survey engine. In the future, FSEP might choose to distribute the client survey throughout the year, perhaps after a particular "job" has been completed. The proposed survey format is available in Appendix 19.

*Interviews with outside observers/stakeholders*: While the FSEP Leadership Team includes a wide array of players and representatives from all sectors of the regional food system, there are many individuals not officially affiliated with FSEP who play an important role in local food system change. The annual review provides an opportunity to add another dimension to the assessment process and solicit feedback from these outside observers adding another dimension to the assessment process. Given the constraints of time and resources and the developmental state of FSEP, we suggest involving two to four outside "experts" in the review process. The FSEP leaders will identify individuals to interview and the evaluator may identify individuals based on document review and internal interviews. The proposed interview questions are available in Appendix 20.

Open Comment Period

While the interviews and surveys provide the structured framework for the evaluation, FSEP leaders have also requested that the evaluation allow for a voluntary, open-ended comment period. FSEP Leadership Team members will have the opportunity to submit additional documents addressing any topic(s) they feel will contribute meaningfully to the evaluation process. These can be submitted in one of two primary ways: the FSEP wiki site can make space for public posting; and the evaluator can collect anonymous submissions in printed form. Outside observers, stakeholders and clients will also be invited to submit written documents.

These documents will provide rich qualitative information that will be incorporated into the analysis and report. The issues discussed will also help revise the evaluation in coming years by highlighting any additional key issues that were not brought out through the other methods.

Analysis

The evaluator will collect and analyze the qualitative feedback and quantitative data collected. S/he will compile quantitative survey data into a database and run basic statistical tests. S/he will compile and analyze feedback, form conclusions and prepare a discussion of the rich qualitative information collected through interviews and document review.

Report

The results of the interviews, surveys and document review will be written in a concise report. The report will include: an Executive Summary of the key findings for FSEP as a whole; a summary of findings on each working group; a summary and discussion of findings from the external review; and derived conclusions and recommendations.

Process

The Board will issue an RFP for the evaluator in December and hire the individual by mid-January. The evaluator will commence work by the end of January and conduct document review and interviews through mid-March. Once the report is completed by mid-April it will be produced to the Board for review. The Board will be responsible for presenting the report to the Leadership Team (possibly during an Annual Meeting?). The findings of the report will be used for strategic planning, fundraising and publicity.

# Chapter 6: Conclusions, Recommendations and Next Steps

This project integrated multiple research methods to gather valuable information about the food system in southeastern Michigan. The goals of the project were to gather data and information about the current food system, identify barriers and opportunities for a more localized food system and to develop research-based resources to inform the future work of food system organizations in their efforts to re-localize the regional food system. The research, conducted over the course of the year, consisted of a broad literature review, a multi-sector survey, the creation of the "Southeastern Michigan Community Food Profile" and engagement in Participatory Action Research working with FSEP on several projects.

In conducting this research, we established more broad-based evidence for the conclusion of Davis *et al.* that southeastern Michigan is indeed well poised for the development of an intentionally localized food system. The region boasts a strong agricultural base that includes many farmers who currently sell or desire to sell their products locally, as well as a substantial urban population eager to consume more local foods. While formidable communication and infrastructural barriers exist within the current food system structure, cross-sector demand and the presence of active local food system advocates increase viable opportunities for bridging communication gaps and developing necessary infrastructure through networking, supporting new agricultural entrepreneurship, and developing systems for local food distribution.

## The southeastern Michigan food system today

### *Land Use*

Between 1990 and 2000, the percentage of land developed in southeastern Michigan increased by 17 percent. In 2000, 37 percent of the land in the region is developed (Southeast Michigan Council of Governments 2003). The five-county Study Area of accommodates a population of 2.8 million, most of which live in urbanized areas. There are about 5,500 farms in the region. Over the last 15 years, the composition of farms has changed slightly with an increase in large (1,000 or more acres) and small (fewer than 180 acres) farms, but a decrease in medium-sized farms (180-999 acres) according to the US Department of Agriculture. (U.S. Department of Agriculture National Agricultural Statistics Service 2002). The region lost about 50,000 acres of farmland between 1987 and 2002, mainly to urban development. This trend continues but is tempered by growing support for preservation of working lands in the region. Although 20 percent of farmers interviewed reported

intentions to sell their land to developers when they retire, two-thirds of farmers would like to keep their land in agricultural use. Joining a handful of other communities across the state, voters in Ann Arbor and Washtenaw County have approved taxes to support farmland preservation programs.

### *Food Businesses*

There are several thousand food-related businesses in the five-county region of southeastern Michigan. The Study Area boasts notable numbers of producers, processors, distributors, retailers and consumers.[20] The following are brief descriptions of each sector we included in our study.

**Producers**, including produce growers, grain farmers and meat producers, are the foundation of the food system. The primary agricultural goods produced in the southeastern Michigan are grain, meat and produce. Yet, consistent with the rest of the state, a wide variety of products originate in the region including eggs, dairy, honey, hay and straw, flowers, nuts and wine. Producers in southeastern Michigan sell their products through a variety of means, including sales to distributors, processors, retailers or directly to consumers. Still others sell to other markets including brokers, wholesalers, other farmers, grain elevators, and livestock exchanges.

**Food processors** turn raw agricultural goods into "value-added" products that are more readily usable by a broader array of consumers. Basic processing like washing and cutting vegetables can make local foods an option for hospitals, school districts and some restaurants. More extensive processing like roasting, mixing and canning are ways of extending the seasons of locally-grown produce making them available year round. Yet, processors comprise the smallest proportion of food-related businesses in the region, resulting in a limited array of options and outlets for local producers.

Local food **distributors**, who link food supply with demand, serve local, state and national clients including grocery stores, restaurants, schools and hospitals. While food distributors are located throughout the region, there is a concentration in the Eastern Market area of Detroit, a historical and thriving center of food system activity. Nearly all local distributors serve clients in multiple areas within and beyond the region. In order to be profitable, most food distributors also diversify their supply networks, often working with growers across state and, sometimes, national borders to provide products demanded year round.

[20] List provided to FSEP by the C.S. Mott Group for Sustainable Agriculture and Michigan State University.

Whereas most consumers rarely think about food production, processing and distribution, **food retailers** are likely the most commonly recognized aspect of the food system. There are 645 grocery stores and approximately 23 multi-purpose stores in the five-county region. Many other food retail outlets exist in the area, as well. There are an estimated 23 farmers' markets in the region - a number which has increased in recent years to meet a growing demand that is reflected nationwide; the number of farmers' markets across the country grew from 1,200 in 1980 to 2,800 in 2000 and 4,385 in 2006 (U.S. Department of Agriculture 2006). Several food cooperatives and dozens of farm stands and U-pick farms speckle the community.

### *Food consumption and purchasing habits*

Area consumers shop most regularly at grocery stores. Over 55 percent of shoppers purchase from grocery stores at least weekly. Close to one third of shoppers also reported making purchases at "multi-purpose stores" including Target, K-mart and Meijer or convenience stores on a weekly basis. People who shop at multi-purpose stores tend to frequent convenience stores as well.

Though less often, most consumers purchase foods directly from producers at least once during the growing season indicating that most consumers are aware of opportunities to buy local foods. Over the course of year, 80 percent of consumers surveyed visit farmers' markets, 62 percent buy food at farm stands, 37 percent participate in community supported agriculture (CSA), and 27 percent buy food at a food cooperative. Interestingly, 43 percent grow some of their own food at their homes or in community gardens. Institutions are also central food purchasers in the region. Institutional food buyers include school districts, colleges and universities, hospitals, museums and government facilities. Because of their high volume purchases, institutions wield significant influence within the food system.

### The demand for a localized food system in southeastern Michigan

Participant stakeholders from each of the five major food system sectors surveyed or interviewed by the research team articulated some level of demand for a more localized food system. Producers and consumers voiced strong interests in increasing the proportion of products grown and consumed locally in southeastern Michigan. Food system intermediaries, including processors, distributors and retailers, indicated a mild interest in localizing the food system and showed that their level of interest depends largely on their perceived demand from producers and consumers.

### *Consumer demand*

Our survey found that consumer demand is shared by individuals representing all socioeconomic groups. Over 45 percent of consumers reported thinking frequently about how and where their food was produced and only 7 percent stated that they "never" think about their food's origins. Eighty-five percent stated that it is either very or somewhat important to have local foods available in their community. The increase in farmers' markets in the region reflects and also helps to foster growing consumer demand for local food products. Notably, consumers in Jackson, Lenawee and Washtenaw counties perceive greater access to local foods currently than those in Monroe and Wayne counties.

Nearly half of all consumers surveyed were willing to pay a premium for local foods and would pay prices at or above the grocery store prices to which they are accustomed for particular food items. By a substantial margin, consumers are most interested in local produce, but also expressed notable interest in local dairy, meat and grain products. When purchasing food, consumers tend to make choices based on taste, quality, price and nutritional value. People who regularly buy local foods tend to value taste and quality, while rare local food buyers prioritize price. Outside of grocery stores, a large proportion of food is purchased at restaurants for consumption both in and outside of the home. When surveyed, over half of shoppers would select dishes prepared with local foods at restaurants when available.

### *Producer demand*

Overall, the producer survey points to a strong desire among farmers within the five-county region to increase their participation in the local food system. While the majority of farmers surveyed sell at least some of their product within the state, a substantial portion of food grown in the area is sold in distant markets. Over half of the region's producers surveyed currently sell some of their products directly to consumers and close to 75 percent of the respondents indicated a strong interest in increasing the direct sale of their products. Those more interested in local food sales tended to operate small- or medium-sized farms, and part-time farmers showed consistently higher interest in increasing their local sales. Few farmers identified a "lack of consumer demand" as a barrier to participation in the local food system suggesting that many farmers acknowledge consumer demand for more locally-grown and produced food.

Grain producers in the region are particularly interested in more options for marketing their products and desire alternatives to the dominant grain elevators and general commodity markets. Many producers also noted heritage and agricultural tourism as opportunities for sustaining the local food system and creating jobs in the region. Heritage and *agritourism* are gaining state and national recognition, and some opportunities – such as support from Cooperative State Research, Education, and Extension Services – exist to support farmers in these endeavors. Not surprisingly, producers who desire to keep their land in farming into the future noted a stronger interest in strengthening the local food system.

### *Processor demand*

Although our sample of local processors was small, there was a notable interest in processing local food products, which suggests the need for a subsequent, broader-reaching survey. However, this demand also appears to be dependent on the type of processing facility. Half (4 of 8) currently process some local foods and half stated that they have received requests for local foods, including requests for dairy, produce, meat, snack foods and poultry. Respondents were able to satisfy only some of this demand. Five of eight respondents said that they were very interested in processing local foods in the future.

### *Distributor demand*

Overall, the survey suggests a moderate interest among locally-based food distributors in increasing the proportion of local foods they distribute. Over half of the distributors surveyed have experienced articulated demand from their customers for local foods and those who received requests worked to meet the demand. About half of the distributors surveyed indicated that they were able to meet most of the demand for local. Yet, 40 percent were not able to meet the demand. Eighty percent of distributors surveyed carry at least some local foods currently and almost all reported that the proportion of local foods distributed has remained constant or increased in the last five years. Though they noted insufficient demand from retailers and consumers as somewhat of a barrier to increasing the proportion of local food carried, distributors felt the strongest demand was for local produce and were, thus, most interested in distributing local produce in the future.

### *Retailer demand*

Eighty-five percent of all stores surveyed currently carry some local goods. Further, the retailer survey reveals a strong interest to carry more local goods among grocery stores of all sizes. With

40% of all retailers indicating a very high or high interest in increasing the amount of local foods in their inventory, the retailer arm of the food system shows promise as the central means by which to make more local foods available to consumers. Notably, the number of requests received per month was positively correlated with the retailers' level of interest in increasing the number of local goods carried. This suggests that retailers respond to requests for local foods from customers and work to meet the demand.

**Turning barriers into opportunities: the food system of tomorrow**

Although our research points to an articulated demand for a more localized food system within southeastern Michigan, system participants in each sector identified key barriers to increasing the proportion of locally-grown foods that stay in the region. Meeting the demand for a more localized food system in the region will require creative, collaborative action to turn the barriers into opportunities. Working together, organizations like FSEP, other food system-focused groups, new and existing entrepreneurs and local governments have the capacity to make many of the necessary changes.

At either end of the complex food system, producers and consumers in the region were most interested in a localizing their food sales and purchasing. In order to strengthen the local food system, it is critical to address the barriers identified by these key stakeholders.

*Consumers' barriers and opportunities*

The barriers articulated by consumers to purchasing local foods center around, in order of strength, **availability**, **convenience** and **information**. Based on our analysis, consumers in southeastern Michigan will be likely to purchase more local foods should they be available and advertised at common, convenient points of purchase. While local foods are already available at other retail outlets like farmers' markets, food cooperatives and farm stands, we feel that the greatest potential for increasing the consumption of local foods lies within grocery stores and supermarkets.

Currently, American households spend an average of $5,375 per year on food, which results in roughly $325 billion spent on foods eaten at home and $239 billion for foods eaten outside of the home (Hamm 2004). Thus, if consumers were to begin spending even a small percentage of their weekly food budget toward local foods, the local food system and local economy would likely experience significant stimulation (Hamm 2004). As concerns about the rising incidence of obesity

of other related diseases such as diabetes grow, locally produced foods can also offer fresh, healthy and nutritious alternatives to foods preserved with waxes or other chemical substances or processed with less healthful additives (Leopold Center for Sustainable Agriculture 2004).

### *Producers' barriers and opportunities*

Where there is a clear demand among producers to increase their participation in the local food system, there are notable challenges to participation that must be addressed by local food system advocates like FSEP. Among the producers surveyed, the key barriers to selling more products locally included the lack of local **processing facilities**, the **time** it takes to sell locally and the lack of **distribution system** for local products. These three barriers are interrelated and aptly reflect the interdependence of the food system where producers are limited to the available services and priorities of processors and distributors. Within the existing infrastructure, there are few options for food processing – making locally-grown raw agricultural products more useful to local consumers – and for locally-focused distribution of both raw and processed products. These primary barriers also indicate a lack of infrastructure necessary for the direct sale and marketing of their products. Most notably, however, the farmers' feedback relates directly to all of the other components of the food system: distribution, processing, retail and consumption.

Similar concerns regarding the existing local food system infrastructure were voiced by farmers within the five-county region during the spring and summer of 2006 when the Local Food Master's Project Team, in conjunction with the Food System Economic Partnership, administered a survey to grain producers within the southeastern Michigan region (see Chapter 5: FSEP Grain Producer Survey). In a question about alternative market barriers, grain farmers rated "lack of near-by facilities for delivering harvested grains" as the second highest barrier out of 15 options. Further, a statistical analysis of the data collected from this survey exhibited a shift in "actual" verses "desired" marketing methods for the use of grain elevators, direct to processor sales, and direct to consumer sales. This suggests there is a strong desire among grain farmers to shift their method of sales to a more local, direct method, such as selling directly to a processor or consumer in the region.

Information and communication about the local food system and opportunities that exist was also a key barrier for producers. The survey found that many farmers are not familiar with local outlets through which to market and sell their products. This finding is likely the result of both a current lack of outlets as well as insufficient information and communication about local direct marketing

opportunities that do exist. For instance, there are 23 farmers' markets in the five-county region and the number is growing. Each county has at least one market, and Lenawee, Monroe, Washtenaw and Wayne counties each have more than three markets. Based on these numbers, it is likely that most farmers are within a reasonable proximity to a market where they might be able to sell directly to consumers.

Farmers' voluntary written comments point to a handful of other issues that local food system organizers should consider. One is how to sufficiently and efficiently market local foods. Some farmers noted the importance of addressing national and local policies that may inhibit the ability to develop the food system. Most farmers in our survey felt that current markets and farming policies do not allow for sustained farming viability. Some of the farmers cited the need for market infrastructures and opportunities that promote locally grown products and sustainable agriculture. They also cited the need to see a "critical mass" of consumer demand to provide sufficient financial incentive for
shifting to a more locally-oriented business strategy.

A number of interesting barriers were identified by the intermediate sectors of the food system revealing a strong need for improved communication among sectors.

### *Processors' barriers and opportunities*

For processors, barriers to increasing the proportion of local foods they process include **price**, **communicating** with local producers, and **insufficient demand from distributors**. Processors acknowledge the demand from consumers and retailers, and do not see this as an important barrier to the processing of local foods. Further, if this consumer demand maintains momentum, an expected entrepreneurial gap would likely emerge to fulfill this demand. For both processors and distributors, a critical mass of demand from consumers as well as supply from local producers must often be in place in order to create change in an existing business or to spur the creation of a new business.

Given the few processing facilities in the five county region, food processing is an area that shows great promise for the development of new businesses. This will also open up the possibility of developing on-farm processing that will give farmers more opportunities for value-added processing and business strategies that, at times, come with significant financial benefits. An important factor in

the development of local food processing is the need to make stronger connections with local producers and local distributors. This may be the role of a broker or possibility a paid position through MSU Extension or FSEP to facilitate these relationships. There is a slightly higher demand for local produce and diary, though there was significant demand for each category of food, depending upon the specialization of the processing company.

### *Distributors' barriers and opportunities*

Among distributors, **communicating** with local producers, the amount of **time** it takes to accommodate local foods and the perceived **lack of consumer and retailer demand** for local products were the top reasons against distributing more local foods. No particular barriers stood out from the rest or produced a strong response from our respondents, however, about half of them verified several of the barriers commonly cited in the literature. Not all distributors felt that there was a huge demand from customers generally, or retail customers in particular, for local food. However, distributors will typically work to meet the demands of their customers. If demands among major and institutional buyers like grocery stores, schools and hospitals increase, there will likely be an increase in the interest and effort on the part of distributors to work with local producers.

Local produce was the clearest opportunity for development in the local food distribution system. Infrastructure to more efficiently connect producers and growers with local distributors is needed. Building a better system for connecting local producers and distributors may help mitigate the barriers of time and trouble locating producers. Locally-grown and produced varieties of produce, dairy and grain products that appeal to immigrant populations, including Indian and Middle Eastern, may also be an avenue to explore.

### *Retailers' barriers and opportunities*

Retailers reported **insufficient supply/seasonality**, **price**, and **connecting with producers** as the largest barriers to increasing local foods in their inventory. We can address the barrier of overall supply in two ways: The first requires aggregating information about local producers in the region to determine the volume of foods we have to supply to local retailers. When we pool this information we may find that there is more supply, through more connections, than we are currently aware. The second way to address this issue is to encourage more individuals to choose local agricultural

entrepreneurial endeavors. In fact, reviving agriculture as a viable career choice is a long-term goal of many local food systems.

Seasonality is a highly-rated barrier because it is difficult, if not impossible, to stock most local produce year round. Customers who expect to obtain virtually any product when they walk through the door of a market largely influence retailers' high rating of seasonality as a challenge. However, we must be sure to stress to retailers and consumers that eating local foods often implies eating items when they are in season in Michigan. That is, most local fruits and vegetables will only be available to local food retailers at certain times during the year. When those foods are not available, retailers can either: 1) put less energy and focus into selling those foods, or 2) they can import those foods during the off-season. What *is* important is the need for retailers to commit to buying from local producers when the products are available.

It is also important to stress the more consistent availability of meat, dairy, and most grain products (stored), which are less dependent upon growing seasons. In fact, a prudent marketing approach to local foods may be an initial focus on marketing produce during the spring and summer months and highlighting local meat and dairy during the winter season.

Because local food infrastructure including processing and distribution systems are not currently in place, some local goods are more expensive than conventional goods, making price an important barrier to retailers. However, local does not always mean more expensive and, in fact, some goods or outlets such as farmers' markets are actually cheaper than traditionally distance-sourced products. As we strengthen our local food system infrastructure and the demand for local goods goes up, we may even see decreases in some local food prices over time.

Southeastern Michigan can address the barrier of connecting retailers with producers through working together as a region and a food system to facilitate the sharing of information on local producers and time saving techniques. Organizations like FSEP are working to build a database of local producers that is easily and freely accessible to local retailers. Actors in a food system may also find it advantageous to serve as a broker or liaison between local producers and consumers. A drawback of this option, however, is the potential loss of community connections, which are forged by continued direct contact between the consumers and producers as they speak to each other directly.

Our finding that local retailers who are interested in carrying local foods did *not* find consumer demand to be a barrier is encouraging. This reveals the strong base of consumer demand that is necessary to drive the system as a whole, in addition to retailers' willingness to change practices in response to this demand. Likewise, the finding that retailers who carry more local foods did not find connecting with producers to be a major challenge assuages the barrier of connecting with producers perceived by those retailers that have not yet worked to forge those relationships.

**Recommendations to strengthen the local food system**

One of the primary goals of this study was to elucidate key barriers to strengthening the local food system in order to inform efforts to overcome them. These regional findings are consistent with conclusions of studies and reports conducted in other areas of the state and we can look to these and other reports to identify some potential strategies for addressing and eliminating these challenges. As such, we have listed several recommendations below that we feel will result in significant improvements to the existing food system in southeastern Michigan as well as new opportunities to create healthy and self-sustaining communities within the region.

***Improve communication among sectors/food system actors***

One key finding of our research was that there is a notable disconnect between consumer and producer demand for local food and the perceived lack of demand among food system intermediaries including processors, distributors and retailers. In our opinion, this is likely the crux of the food system challenges currently experienced within southeastern Michigan. Producers have demonstrated an interest in producing more local foods and consumers have indicated that they would purchase these items if they were more available and convenient to purchase. Yet, supermarket purchasers do not recognize that demand exists for local products.

There are many challenges for intermediaries within the food system, as noted previously within this discussion; however, we recognize a clearly defined role for food system advocates in working to educate these key stakeholders of the importance linkages they may provide within the existing local food system. Many grocery stores within southeastern Michigan are owned by large corporations that may or may not be located within the region. Thus, it will be essential to increase communications with these stakeholders and begin to bring these players to the table. Corporate purchasing policies will not be changed easily, but local food advocates must be willing to seek out the appropriate audiences and make the case for increasing local food availability within the region.

To achieve this, producers must also be willing to come to the table to address production and supply challenges that have historically been obstacles for partnerships with large retail outlets. Our team believes that a great opportunity exists for local producers and entrepreneurs within the region, but technical assistance and education will also be necessary to achieve this outcome. The Michigan State University Extension can play a critical role in this regard.

### *Support development of local food processing facilities*

Many producers surveyed and interviewed noted the lack of processing facilities as a key barrier to a local food system. In fact, producers rated "lack of local processing facilities" as the most significant barrier to their future participation in the local food system (mean=3.45, n=38). Meat producers lamented the paucity of small-scale processors in the area and noted the relatively high per head cost of small-scale livestock processing due in part to the lack of competition. In the multi-sector survey, processors indicated that the key barriers to processing more local foods were price, lack of interaction or correspondence with local producers and insufficient demand from distributors. In general, the research team recommends both the facilitation of communication between producers and processors, as well as the development of local food processing facilities in southeastern Michigan. These facilities may include both on-farm processing, and autonomous food-related businesses.

Local products can also include mildly processed food products such as jams and sauces, made from local agricultural products. The benefits from processing local foods are two-fold: 1) products have a longer shelf life and are easy to serve during the off-season, thus allowing for a season extension for many varieties of local produce, and 2) in some cases, processing local foods is a valued-added opportunity to farmers or local processors, allowing them to reap a greater financial return from their products while providing the ability to tap into additional markets (Harmon 2004).

### *Develop local food distribution systems*

Like local processing facilities, without local distribution networks the regional food system will experience a break in the local foods chain-of-custody. This critical distribution link poses the need for creative solutions and innovative delivery methods. The following are a few possible solutions: 1) opportunities may open up for local entrepreneurs to begin *new* ventures in the local food distribution business; 2) in some cases, minor adjustments to *existing* distribution channels could prove an effective way of hiring local distributors to move and broker local products; 3) with a

critical mass of demand for a distributor in a given area, farmers and processors may strategize to collectively hire a local distributor to meet their common needs concerning transport and brokering; 4) while many national distributors' current practices are not conducive to local distribution and transportation, some businesses' pick-up and drop-off points may be fairly close to local producers' routes and, therefore, would not take much extra time and resources for a larger distributor to take on.

### *Promote local foods through advertising and education*

Food system advocates must continue to play a role in helping to educate consumers of the benefits of purchasing local foods and the power of their pocketbooks. If consumers begin to ask for more local food items at their supermarkets, purchasers will begin to realize the potential of local food sales. This will not happen overnight; however, our research shows that large chains may be more amenable to working to overcome the challenges of offering local foods if they can recognize a net gain in return.

The fact that we found a correlation between the number of requests received for local products and retailer interest in carrying more local food, reinforces the importance of the vocalization of consumer interests in creating change in our food system. The more consumers ask for local goods, the more retailers will engage with our community to create forums to sell local goods. Therefore, it is imperative that consumers ask for local goods as often as possible.

Additional in-store advertising is also likely to increase the purchases of local food items. Branding programs like *Select Michigan* have been successful in Grand Rapids and a few locations in Detroit in advertising locally-grown products in grocery stores (Michigan Department of Agriculture 2006). Our research strongly supports the expansion of the *Select Michigan* program throughout southeastern Michigan to meet consumer demand for local produce, in particular.

We would urge that local food advocates focus efforts on increasing local produce in grocery and markets, since people tend to identify local food with farm produce before meat, dairy, and grain. Simultaneously, local food advocates and retailers can work together to raise awareness about the many other local products available beyond produce.

**Areas for Future Research**

This research has identified a number of opportunities to strengthen the existing food system within southeastern Michigan. However, our survey and other research are but one more step on the on-going path of research that will guide and propel the local food movement in southeastern Michigan and throughout the country. Our work was limited by time and resources, but as we conducted our research and analyzed our findings, we noted several areas of further research that we hope others will soon conduct. Some areas in need of further investigation include:

- Expand upon processor survey research. As local food processing presents important opportunities for the localized food system, we need to learn more from processors in order to more precisely identify opportunities and strategies.
- Study ethnic and socioeconomic differences in consumer habits and demand for local foods. Members of different ethnic and social groups may have particular interests and needs with respect to local foods. More information is needed to assess and meet the needs of all groups.
- Identify opportunities to differentiate marketing. Since different populations may demand local foods in different ways and for different reasons, various marketing and education strategies may be needed to effectively connect supply and demand.
- Identify local, state and national policy connections and influences on local food systems. Our research was intentionally focused on analyzing trends, interests and barriers within the region. We did not have time to investigate the myriad ways that existing policies may enable or constrain food system localization and the ways future policies may be used to support or limit the development of the local food economy. Such information will be necessary to inform future food system change priorities and strategies.
- Conduct focus groups within each food system sector. Often, surveys are followed by focus groups to gather more in-depth information from stakeholders and shed light on interesting or puzzling survey findings. Future research teams could convene several focus groups and use our survey findings as a starting point for dialogue.
- Use geospatial analysis to identify specific needs, challenges and opportunities for various segments of the population. Geographic Information Systems (GIS) present powerful tools for analyzing spatial information and trends. GIS may be used to identify clusters or networks of food system activity that may be expanded upon; identify

"holes" with respect to various food-related services; identify opportunities for Agricultural Tourism, or agtourism, in the region; or analyze the feasibility of food distribution systems. These are just a few potential uses of GIS software and we encourage partnering with county GIS experts to consider further the many ways GIS can be used to achieve food system change goals.

- Investigate how stronger local food systems can address food security and food access issues. In recent years, new farmers' markets have opened up in a few Detroit communities that have limited access to fresh healthy foods. In partnership with the Farmers' Market Nutrition Program that allows individuals to use food stamps to buy fresh, local produce, many families have been able to meet their food needs with local produce. Research and creativity will likely reveal additional opportunities to build "Farm to City" connections, supporting local farmers and filling gaps left by the dominant food system.
- Develop local distribution solutions. More research of successful models and creative collaborations among food system stakeholders are needed to fill-in one of the key "missing links" in the effort to localized the food system, distribution. FSEP is currently working on a potential local food distribution business that would be run by several partners or as a cooperative.

We hope that FSEP, its partners and others stakeholders in the food system will undertake these and other research endeavors in the coming years. Solid research combined with informed and persistent action and advocacy are key ingredients in the recipe for local food system change. We hope our contributions to the growing body of knowledge about local food systems will prove useful as the movement charges ahead.

**List of Appendices**

## Appendix 1: Behavioral Sciences Institutional Review Board Approval


Behavioral Sciences Institutional Review Board (IRB) • 540 East Liberty Street, Suite 202, Ann Arbor, MI 48104-2210 • phone (734) 936-0933 • fax (734) 998-9171 • irbhsbs@umich.edu

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**Date:** 5/19/2006

**To:** Laura Kaminski

**Cc:** DRDA, IRB Behavioral Sciences

**Subject:** Notice of Exemption

**The Behavioral Sciences Institutional Review Board (IRB) has reviewed your research project and determined that it is exempt from review by the IRB.** Your project meets the following exemption requirement:

**EXEMPTION #2 of the 45 CFR 46.101.(b):**
Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

This project is considered exempt from ongoing IRB review as long as it remains unchanged in its use of human subjects and within the scope of this exemption category. Please contact the IRB if you propose any changes which would exceed this exemption category or impact the human subjects participating in the project. You may be required to submit a new application for review.

Sincerely,

**James Sayer**
Chair, IRB Behavioral Sciences

Title: Southeast Michigan Food System Assessment
Study eResearch ID: HUM00005928
IRB Exemption Determination Date: 5/19/2006
eResearch workspace: Southeast Michigan Food System Assessment

UM Federalwide Assurance: FWA00004969 Expiration 6/12/06

## Appendix 2: Research Consent Form for Study Participants

Title of Research Project: Local Food Systems Master's Project

Research Team:
Ken Anderson, University of Michigan, Dual Master's Candidate in Environmental Justice and Social Work
Karl Buck, University of Michigan, Master's Candidate in Resource Policy
Laura Kaminski, University of Michigan, Dual Master's Candidate in Resource Policy and Business Administration
Deirdra Stockmann, University of Michigan, Doctoral Candidate in Urban and Regional Planning
Ann Vail, University of Michigan, Master's Candidate in Resource Policy

Description of Research: The goal of this project is to inform future efforts to establish a more sustainable local food system, while creating local agricultural economic development opportunities and enhancing community viability in southeastern Michigan. To help us in assessing the food system as it currently exists, we are collecting information on food system perceptions from a variety of community stakeholders, including food producers, distributors, retailers, and consumers. We anticipate that such knowledge will prove beneficial for local decision makers and entrepreneurs regarding future food production and consumption issues in southeastern Michigan.

Description of Human Subject Involvement: We are asking our study participants to fill out a brief survey regarding their perceptions of the existing food system within southeastern Michigan. Different surveys will be used for different target audiences, including food producers, distributors, retailers, and consumers. However, each study participant will be asked to fill out only one survey. Some participants will receive the survey in person, while others will receive the survey by mail. Study participants who receive the survey by mail will be asked to use the return envelope provided to return the anonymous survey to the study team. Study participants who volunteer to participate in a focus group will be contacted separately. Focus groups will involve facilitated group discussions regarding the participants' perceptions of the food system and potential ways to improve access to local food products.

Length of Human Subject Participation: It is estimated that the survey will require approximately 10-15 minutes to complete. Participants who volunteer to attend a focus group session will be asked to spend approximately 1 hour or less answering questions in a group setting during a single session.

Potential Risks and Discomforts of Participation: We do not anticipate that you will experience any risks or discomforts in association with this research.

Measures Taken to Minimize Risks and Discomforts: Surveys and focus group sessions will be conducted anonymously to minimize the possibility of any risks or discomforts associated with this study. In addition, you may choose to skip questions or discontinue your participation at any time if you feel uncomfortable. Members of the research team are also available to answer your questions.

Expected Benefits to Subjects or to Others: Although you may not experience direct benefit from participation in this study, others may ultimately benefit from the knowledge obtained from this research.

Costs to Subject Resulting from Participation in the Study: The only cost anticipated from participating in this study is the time required to complete and return the survey. Participants

volunteering to participate in a focus group session will incur costs associated with traveling to the location where the focus group will be held, as well as the time spent participating in the session itself. The Local Food Systems study team will hold multiple focus group sessions throughout the study area so that participants' potential travel will be minimized.

Payments to Subject for Participation in the Study: Participation in this study is voluntary. There is no compensation for study participants.

Confidentiality of Records/Data: You will not be identified in any reports resulting from this study. Records will be kept confidential to the extent provided by federal, state, and local law. The Institutional Review Board, the sponsor of this study, or university and government officials responsible for monitoring this study may inspect these records.

Availability of Further Information: If significant new knowledge is obtained during the course of this research which may relate to your willingness to continue participation, you will be informed of this knowledge.

Contact Information: You may contact the following individuals for answers to further questions about this research:

Laura Kaminski
Master's Candidate
School of Natural Resources & Environment
University of Michigan
Phone: 734-846-7455
Email: foodsys@umich.edu

Ivette Perfecto, Ph.D.
Associate Professor of Natural Resources
School of Natural Resources & Environment
University of Michigan
Phone: 734-764-1433
Email: perfecto@umich.edu

IRB Contact Information: Should you have questions regarding your rights as a research participant, please contact the Institutional Review Board, Kate Keever, 540 E. Liberty Street, Suite 202, Ann Arbor, MI 48104-2210, 734-936-0933, email: irbhsbs@umich.edu.

Voluntary Nature of Participation: Your participation in this project is voluntary. Even after you sign the informed consent document, you may decide to leave the study at any time without penalty. You may skip or refuse to answer any survey or focus group question that makes you feel uncomfortable.

Documentation of the Consent: By completing and returning the survey and/or participating in a voluntary focus group session, you will have consented to be a participant in the study. You will be given a copy of this consent form to keep.

**Consent of the Subject:**
**I have read [or been informed of] the information given above. Laura Kaminski or another member of the Local Food Systems research team has offered to answer any questions I may have concerning the study. I agree that I am 18 years of age or older. I understand that by completing and returning the survey and/or participating in a voluntary focus group session, I hereby consent to participate in the study.**

**Appendix 3: Cover Letter to Study Participants**


Dear Food System Partner,

Last week you received a letter in the mail about a study that is being conducted by the Food System Economic Partnership (FSEP) and a group of Master's students from the University of Michigan on the consumption of local foods in Southeast Michigan. Outcomes from this study will help to guide the future work of FSEP, create more local jobs, and strengthen YOUR community.

We are collecting information on the food system from community partners, including farmers, distributors, grocery stores, produce markets, and shoppers. As an important partner in this community, you have a unique perspective of your food system.

Please take a few moments to complete the enclosed survey. Please note that all answers that you provide will be anonymous. I am also including a pre-paid return envelope for your convenience, and information about participating in this study. Please contact me if you have any questions or concerns.

Your feedback is extremely valuable to us. We hope that you will answer the questions and drop the survey in the mail today. Thank you very much for your time and consideration.

Sincerely,

Laura Kaminski
Master's Student, University of Michigan
Local Food System Project
(734) 846-7455
foodsys@umich.edu

**Appendix 4: Survey Follow-Up Postcard**

## Have you completed our survey?

Hello! Last week you received a survey in the mail asking about your perspectives of the food system in Southeast Michigan. This information is being collected by a group of Master's students from the University of Michigan and the Food System Economic Partnership (FSEP), a local non-profit organization.

If you have already completed and returned the survey in the mail, we thank you very much for your time and consideration. If you have not yet completed the survey, we encourage you to take a few moments to answer the questions and drop it in the mail today.

Please contact Laura Kaminski from the study team if you have any questions or need another copy of the survey. She can be reached at **foodsys@umich.edu** or **(734) 846-7455**.

Your feedback is very valuable to us. We thank you again for your time and participation in this important study.

*The UM Local Food Systems Master's Project Team*

foodsystem
economic partnership

## Appendix 5: Proposed Target Consumer Survey Sites

### JACKSON COUNTY

**Borchardt Brothers Market**
7880 Napoleon Rd
Napoleon, MI 49261

**Hutch's Food Center**
8025 Spring Arbor Rd.
Spring Arbor, MI 49283

**Jackson-Kuhl's Bell Tower Market**
117 Louis Glick Highway
Jackson, MI 49201

**Kroger**
3021 E Michigan Ave
Jackson, MI 49202

**Pulaski Grocery**
9965 Pulaski Road
Hanover, MI 49241

### LENAWEE COUNTY

**Adrian Farmers' market**
Toledo Street parking lot
Adrian, MI 49221

**Blissfield Farmers' market**
325 West Adrian Street
Blissfield, MI 49276

**Borchardt Brothers Market**
628 W. Adrian St.
Blissfield, MI 49228

**Country Market**
1392 S. Main St.
Adrian, MI 49221

**George's Market**
2998 W. Russell Rd.
Tecumseh, MI 49286

### MONROE COUNTY

**Bob's Country Market**
4551 Sylvania Petersburg Rd.
Petersburg, MI 49270

**Farmer Jack Supermarket**
407 S. Telegraph Rd
Monroe, MI 48161

**Food Town Store**
7375 Secor Road
Lambertville, MI 48144

**Kroger**
571 E. Monroe St
Dundee, MI 48131

**Monroe Farmers' market**
20 East Willow Street
Monroe, MI 48162

### WASHTENAW COUNTY

**Ann Arbor Farmers' market**
315 Detroit Street
Ann Arbor, MI 48104

**Busch's Valu Land**
565 E. Michigan Ave.
Saline, MI 48176

**Chelsea Market**
125 S. Main St.
Chelsea, MI 48118

**Meijer Inc.**
3825 Carpenter Rd
Ypsilanti, MI 48197

**Ypsilanti City Farmers' market**
1 South Huron Street
Ypsilanti, MI 48917

### WAYNE COUNTY

**Detroit Eastern Market**
2934 Russell Street
Detroit, MI 48207

**Evergreen Market**
8048 Evergreen Ave
Detroit, MI 48228

**Farmer Jack Market**
34414 Ford Rd
Westland, MI 48185

**Livonia Farmers' market**
Middlebelt & West Chicago
Livonia, MI 48150

**Meijer Inc**
14640 Pardee Rd.
Taylor, MI 48180

## Appendix 6: Actual Consumer Survey Sites

**JACKSON COUNTY**

**Jackson-Kuhl's Bell Tower Market**
117 Louis Glick Highway
Jackson, MI 49201

**LENAWEE COUNTY**

**Adrian Farmers' market**
Toledo Street parking lot
Adrian, MI 49221

**MONROE COUNTY**

**Farmer Jack Supermarket**
407 S. Telegraph Rd
Monroe, MI 48161

**WASHTENAW COUNTY**

**Ann Arbor Farmers' market**
315 Detroit Street
Ann Arbor, MI 48104

**David's Books and Media, Inc.**
215 W. Michigan Ave.
Ypsilanti, MI 48197

**Meijer Inc.**
3825 Carpenter Rd
Ypsilanti, MI 48197

**WAYNE COUNTY**

**Detroit Eastern Market**
2934 Russell Street
Detroit, MI 48207

**Wayne State University/Cass Corridor Neighborhood**
Amsterdam Café
Avalon International Bakery
Cass Café
Detroit, MI

**Meijer Inc.**
13000 Middlebelt Road
Livonia, MI 48150

**Appendix 7:** ***Southeastern Michigan Community Food Profile***

# Southeastern Michigan Community Food Profile

# SOUTHEASTERN MICH
# COMMUNITY FOOD PR

## Preface

This Community Food Profile is designed to highlight and explore various aspects of our local food system in southeastern Michigan.

The Profile was compiled by a team of University of Michigan graduate students working on behalf of the Food System Economic Partnership (FSEP). The Community Food Profile template was developed by the C.S. Mott Group for Sustainable Food Systems at Michigan State University.

Since this Profile only begins to explore a fraction of our food system, we hope it will be the first in a series of informational brochures produced by FSEP and others investigating, challenging and celebrating the local food system.

## About FSEP

The Food System Economic Partnership (FSEP) is an urban-rural collaboration dedicated to the tenets of local food systems within Jackson, Lenawee, Monroe, Washtenaw and Wayne counties.

Its mission is to catalyze change in the food system to enable strong farms, healthy cities, community wealth, and job creation in southeastern Michigan. FSEP was officially launched in the beginning of 2005, and provides research, education and outreach with urban and rural parternships, resulting in agricultural development opportunities, sustainable communities, and healthy local economies.

A central strength of FSEP comes from the collaboration of its diverse leadership: the combined effort of five county administrations, farm organization leaders, food industry entrepreneurs, community groups, food system and economic development experts and resource providers. This Profile serves as an important communication tool to enable these goals for change in the local food system.

IGAN
OFILE

## Prepared with assistance from the Food System Economic Partnership.


**Principal authors:**
Karl Buck
Laura Kaminski
Deirdra Stockmann
Ann Vail

Graphic design by Ken Anderson



Available on the web at: www.fsepmichigan.org


food system
economic partnership

# PURPOSE



## Community Profile Goals:

The Community Food Profile provides a snapshot of the local food system from the varied perspectives of food system actors in a five-county region of southeastern Michigan. These representatives include farmers, producers, processors, distributors and consumers as well as policy-makers, educators, entrepreneurs and community leaders. Through interviews, photographs and supporting research, the Profile gives the seemingly impersonal food system a face and a story. More precisely, it begins to build a library of the many faces and stories that comprise the local food system.

Beyond painting a picture, the Profile strives to inform stakeholders including individuals and organizations, current and potential entrepreneurs, and policy-makers about the local food system in a creative and accessible way.

Through this information, the Profile aims to provoke increased awareness of and dialogue about the local food system. Awareness and dialogue are the first steps in taking an active role in creating a food system that better represents our values as a community.

Finally, to promote active change in the local food system, this Profile showcases future opportunities for development of small businesses, organizations and networks to promote local economic growth through a stronger food system.

The topics and examples included here only begin to represent the complex, interconnected food system in our region and the many opportunities for change toward a system that better meets the needs of all stakeholders. As FSEP deepens its work, the Community Food Profile will serve as a compass to help steer change in the local food system and a weathervane to gauge its progress.

We hope you enjoy browsing the colorful, informative pages of this Profile and we urge you to get more involved in supporting the local food system.

# TABLE OF CONTENTS



# INTRODUCTION



## Food: the tie that binds...

It is rare that something can claim to connect each of us to every other person in the world. Food is one of these rare, all encompassing elements. We all need the nourishment and energy that food provides. And all of us possess a unique relationship with food. Yet, this relationship is often superficial. Most of us do not know where our food comes from. Do you know who produced the vegetables that you eat? Do you know how your food was processed or shipped to get to your market? Did you know that the average distance that your food travels from farm to plate is 1,500 miles?

Our current global food system has developed into such a complicated set of relationships that we in Michigan often get many of our tomatoes from California, asparagus from China, or beef from South America. Yet, all of these items are produced locally in our region. Local food systems seek to establish an intentional set of relationships between local farmers, processors, distributors, retailers, and consumers of our food and food products. This new set of relationships requires mutually beneficial connections among all of the people involved in the food system. Reworking and strengthening the interconnected set of relationships within our food system helps us to address community problems ranging from public health, to economic development and job loss, to urban sprawl and our dependency on fossil fuels.

## Why a turn toward the local?

When we prioritize local markets, resources, and products, we invest in our community. Instead of allowing money to filter out of our region, these new more self-reliant practices circulate money within our community to create opportunities and investment. Locally produced products often focus on goods that are fresher and healthier. Resource use is cut drastically when we shy away from long-distance shipping. When we enforce local connections, it is typically easier for the needs of all community members to be met more readily. Community-based decision making is especially important in low income communities, where larger supermarkets have abandoned many areas.

The cornerstone of a viable local food system is the committed participation of well-informed consumers who can influence how and where their food is produced. When local agriculture and food production are integrated in community, food becomes part of a community's problem-solving capacity rather than just a commodity that's bought and sold. By turning toward the local we increase the capacity, as a community, to enhance our social, economic, political, and environmental well-being.

## Our region: Southeastern Michigan

For the purpose of this Profile, southeastern Michigan is defined as Jackson, Lenawee, Monroe, Washtenaw, and Wayne counties. Of the local food systems re-emerging throughout the United States, the most successful networks share a common factor: a major metropolitan area in close proximity to fertile farmland. Southeastern Michigan, which includes both the Detroit Metropolitan Area and rural agricultural land, is ripe for the development of a decidedly more localized food system.

## Using this Guide

Usually, we think of food as following a linear path from farm to table; food is grown on farms, processed in factories, distributed by trucks and purchased by consumers at grocery stores or restaurants.

If we instead think of the food system as a circle, we are reminded that we are all linked in a multiple ways (see diagram below).

Realizing the nature of these connections, acknowledging and revering their importance and, when possible, strengthening them within our communities, we begin to see a host of possible benefits.

The outer ring in the Circle of Connections diagram suggests some potential outcomes of a local food system. That diagram provides more detail as to their significance.

Everyone—regardless of economic status, ethnicity, profession, or political bent—has a stake in the food system. It is indeed reasonable to ask, **"what type of food system do I want for my community?"**

This Community Food Profile will help you answer that question.

**Inner Ring** - food system components

**Outer Ring** - food system outcomes

# OUTCOMES



## The Benefits of Local Food Systems

A strong local food system has many potential economic, social, health, and environmental benefits for a region's communities and residents. For example, an assessment of local needs can provide entrepreneurs with key information to satisfy unmet demands and create new or more efficient opportunities for the production and movement of foods. These opportunities help to strengthen the local economy by growing the agricultural sector, creating jobs, providing more choices for consumers, contributing to the local tax base, and reinvesting local money exchanged for food back into local farms and businesses.

When producers and consumers are linked via efficient infrastructures, local farmers, processors, distributors, retailers, and consumers alike can experience a competitive advantage over alternative systems. By sharing the risks and rewards of food production, processing, distribution, and retail with other local partners, farmers and businesses can explore opportunities to produce new varieties of foods or expand existing ventures to meet a local or regional need.

A strong local food system can also result in positive effects on community development and revitalization. For example, the development of networks within a community supports long-term connections between farmers and consumers. This, in turn, helps to support the viability of small and medium-sized family farms and foster a sense of place, culture, history, and ecology within a region. A strong local food system and informed local decision-making can also help to create healthier communities. The strategic preservation of farmland and the production of healthy and accessible foods can combat urban sprawl, obesity, and hunger.

- Opportunities for niche markets
- Agricultural viability
- Job creation
- Efficient movement of foods
- Reinvestment of local money
- Long-term connections between farmers and consumers
- Supports small-scale farms
- Preserves farmland
- Revitalization of communities
- Combats urban sprawl, obesity, and hunger
- Reduced environmental impacts
- Greater nutritional value of foods
- Less energy used to grow and transport products

Similarly, local food systems can foster the long-term sustainability of communities through reduced environmental impacts and increased stewardship. Foods produced locally are typically grown on a smaller scale than most large "factory farm" ventures and do not require as much energy as mass-produced products. Local farmers that have a direct connection to the consumer through farmers markets and other networks are also more likely to take greater care to grow fresh and healthy foods. Consequently, many local farmers do not engage in the types of harmful practices seen in larger operations.

When foods are grown and consumed locally, harmful chemicals are not required to preserve the foods for longer periods of time, and less energy is needed to transport the products to their final destinations. Since local foods are harvested and then processed or sold to the consumer within a matter of hours or days instead of weeks or months, foods are fresher and often have a greater nutritional value when purchased because they can mature fully before being harvested and consumed.

# ABOUT THE 5-COUNTY AREA

## Regional Data & Statistics

Our five-county region of southeastern Michigan, comprised of Jackson, Lenawee, Monroe, Washtenaw, and Wayne counties, has many elements that support the creation of a local food economy. Characterized by diversity in land use and population, the region is full of opportunities for networking, partnership and small business development to strengthen the local food system.

Southeastern Michigan contains both large urban areas and prime agricultural land - a combination that has been an asset to local food systems in other regions. The major metropolitan area of Detroit contains over two million people in the city and suburbs. Other cities of moderate size within the region include Adrian, Ann Arbor, Jackson, Monroe, and Ypsilanti.

Over 90 percent of the region's 2.8 million people live in urban areas. According to the U.S. Census, minorities account for nearly 40 percent of the aggregated population - an increase of 5.2 percent since 1990. While the average household and per capita incomes are near the U.S. averages, between 7 and 16 percent of individuals in each county live below the poverty line.

Simultaneously, southeastern Michigan boasts a substantial agricultural base. In the five-county region there are over 5,500 farms that cover almost one million acres of land. In 2002, these farms produced agricultural products worth over $320 million, or 8.5 percent of the state's total market value of agricultural products. In 2001, the Michigan Farm Bureau estimated that agriculture contributed $37 billion to the state's economy.

As a state, Michigan is the second most agriculturally diverse in the United States, after California and a variety of agricultural products originate in our region. Southeastern Michigan is among the top producers of livestock including sheep, hogs, cattle and calves. Main food commodities include corn, dairy products, soybeans, and wheat. While these crops cover much of the working lands, a wide array of other fruits, vegetables and grains are grown in the area.

Despite farming's strong presence in the region, the occupation has become increasingly difficult to sustain a living. The number of farmers selling less than $2,500 worth of agricultural products (by market value of sales) within the region has nearly doubled between 1987 and 2002. The yearly net income for a typical farmer in the region is less than $10,000.

As farming has become less profitable, many farmers near the urban fringe have sold their farmland to developers. This, in part, has caused total farmland acreage in the region to shrink by almost 50,000 acres between 1987 and 2002. The rapid population expansion expected within Washtenaw, Monroe, and Lenawee counties during the next 20 to 30 years will continue to chip away at the amount of farmland within these counties, enabling further urban sprawl.

Looking forward, current trends of urban growth will continue to challenge the viability of farming in the southeastern Michigan. This future will undermine a substantial sector of the regional and state economy, further distance consumers from the origins of their food and increase reliance on outside markets and energy-intensive transportation.

Yet with a substantial and diverse base of consumers and a rich array of producers in the region, opportunities abound for the development of a more localized food system. Such a system can help to support local farms, bolster the regional economy, provide high quality food for local consumers, and help to maintain the region's rich agricultural heritage.


**SOURCES:**

US Bureau of the Census. Census 2000. American Factfinder Online. May 5, 2006 http://factfinder.census.gov

National Agricultural Statistic Service. US Census of Agriculture, 2002. US Government Printing Office, Washington, DC.

Davis et. al. "Toward a Sustainable Food System: Assessment and Action Plan for Localization in Washtenaw County, Michigan. University of Michigan School of Natural Resources and Environment. August 2004.




### Demographics:

Population of 2,787,314 in 2002,

91.2 % live in urban areas.

39.5% minority population; an increase of 5.2% since 1990.

Average household income: $42,962 (U.S. average: $41,994).

29.2% of residents have an Associate's degree or completed some college (27.4% for the United States).

### Farm Facts:

5,538 farms in 2002 which is over 10% of the farms in Michigan.

960,259 acres in farmland (in 2002).

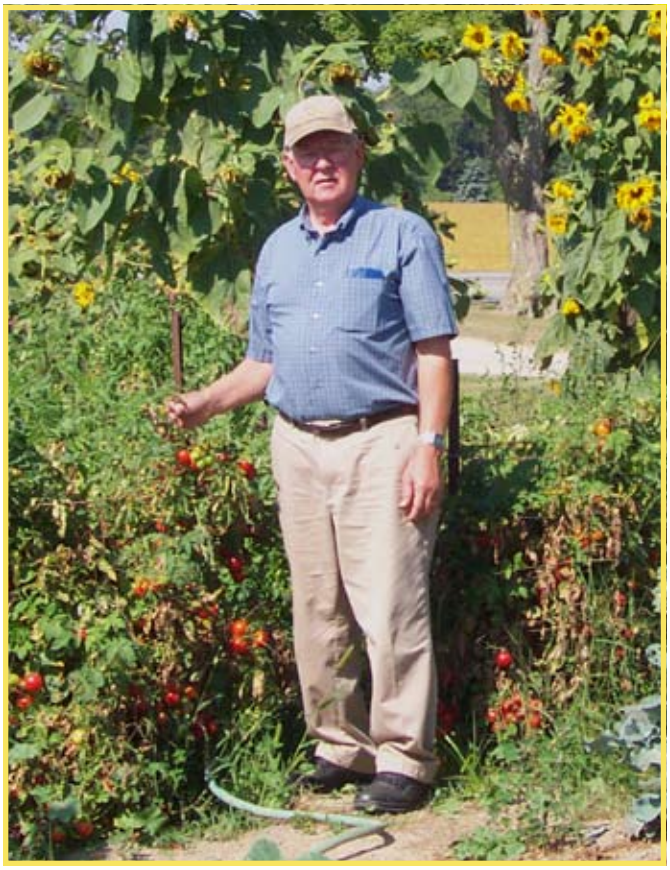
Net average farm income per year: $7,290; State average: $13,585.

Estimated value of farmland and buildings per acre: $3,520 State average: $2,667 (in 2002).

Population in Monroe and Washtenaw counties is expected to grow 30% by 2030.

## Commodity grain farmer sees new opportunities in local food market

In many ways, Larry Gould, owner and operator of Gould Farm in Lenawee County, is your average farmer in the southeastern Michigan region. Like many farmers here, Larry's involvement in farming has deep roots in family tradition. Working on the Gould Farm that, as Larry says, was "homesteaded before the state of Michigan was established," Larry has been farming for 50 years. Three generations of Goulds, including Larry's father, brother, and son, currently work with him on his farm.



In addition to the family ties, Larry is like many other grain farmers of the region because he grows the commonly grown commodity crops of corn, wheat, and soybeans on a large farm. Larry also raises cattle for meat, which is marketed in Philadelphia and sold mostly on the East Coast. Much of the grain that Larry grows is fed to his livestock, but any excess is sent to local intermediary businesses called grain elevators to be stored and eventually sold when Larry decides to bring it to market.

Larry typically works with three area elevators in order to diversify his sales and, hopefully, minimize risks. Since elevators compete among each other for business, the cost of storing grain varies slightly from one to the next. However, many times the elevator with the lowest storage fees levies a higher fee when Larry decides to sell his grains on the commodity market. Therefore, Larry plays it safe by holding and selling grain through a few elevators.

Despite all this, Larry admits that some years he still loses money farming his grains. Like many farmers in the region, he doesn't know year to year whether he will make any money at all. Likely because of this, Larry acknowledges the economic opportunity in producing and selling foods on a local level.

Larry states that selling grains locally would benefit farmers because "the cost of transportation and advertising that is currently included in the price of the finished product… is the cost the producer seems to be absorbing from his profit margins." But Larry, being your average grain farmer in the region, usually doesn't have a whole lot of sway in deciding these types of matters. Or does he?

Besides being a farmer, Larry is also an active member of the Food System Economic Partnership (FSEP), where he serves on the board of directors and represents Lenawee County. He got involved with FSEP by way of his work as a Lenawee County Commissioner. Through these duties, Larry uses his 50 years of agricultural experience to provide insights and improvements for the region's farmers and the entire community as a whole.

When pressed, Larry admits that he will probably retire from farming some day. When this does happen, Larry says that he plans to pass his farm along to the next generation in his family. Thanks to his work with FSEP and as a Commissioner, Gould Farm and other farms just like it in the region may be able sustain themselves economically in the future, maintaining the rich agricultural heritage of generations.

# GRAIN PROCESSING



## FSEP works to increase grain processing in SE Michigan

Grains, throughout most of history, have been an integral part of a human being's diet. Today, cereals, breads, pastas, noodles, crackers, and many other things are made from grains. Even fuel today is made in part from grains. But have you ever wondered where the grains in your cereals, breads, pastas, and other products come from and how they get that way?

Your typical grain today goes through an extensive lifecycle before it is eventually consumed. First, of course, the grain must be grown. In southeastern Michigan, grain production is a primary farming activity. Grains are grown on about two-thirds of all the farmland in the region. After growing and harvesting the grains, most farmers of the region sell their product to local grain elevators, which are intermediary businesses where farmers can either sell or store their grains for a fee before they decide to sell them on the commodity market.

Since the vast majority of grains are processed in some capacity, almost all of the grains in the region are sent from the elevators and out of the state to be processed before they are ultimately sold. Toledo, Ohio, being home to a large Nabisco processing plant, is a major hub for grain shipments from the region. After processing is complete, the new products made (in part) out of grains from southeastern Michigan are shipped throughout the nation and the world to be sold and consumed.

At this point, you may be wondering why grains from our southeastern Michigan region are not processed and then sold within southeastern Michigan. You may wonder even more about this when you learn that farmers in the region strongly desire to sell their grain products directly to local processors. A survey study conducted by FSEP in the spring of 2006 showed that over half the farmers within the region currently selling to a grain elevator would prefer not to. Instead, these farmers overwhelmingly preferred to sell their grains directly to a local processor.

However, farmers in the region cannot sell their grains to local processors. This is because the types of processing facilities needed to accommodate the local grains of the region do not exist. Ironically, the few processing facilities that do exist in the region almost completely import their grains from outside of southeastern Michigan, processing grains that are not commonly grown in the region. The disconnect between the grains grown and the grains processed here in southeastern Michigan is indeed substantial.

However, thanks in part to the work done by FSEP and other groups and organizations in the region, grain processing facilities that purchase locally grown products are on the rise. In January of 2007, a grain processing plant for ethanol fuel will open here in southeastern Michigan and become a major market where farmers of the region can sell their grains. Given the many benefits of locally produced products, this is great news!

**SOURCES:**

National Agricultural Statistic Service. US Census of Agriculture, 2002. US Government Printing Office, Washington, DC.

# SMALL VEGETABLE FARMS & CSAs



## Small family farms sustain local consumers and the land

In the global food system most of our food is grown on large farms and shipped hundreds of miles before it gets to our table. Yet, despite the increasing trend toward larger food business, scores of small, local farmers across the country – including here in southeastern Michigan - work tirelessly to bring high-quality produce to the region's consumers via a pick-up truck and a few gallons of gas.

There are hundreds of small farms in southeastern Michigan. Many of these farmers sell most or all of their produce directly to the local consumers through one or more means that serve as alternatives to the national food distribution system. Some find local farmers' markets to be the best outlet for their produce. Increasingly, small, local farmers are building relationships with small local grocers and cooperative markets to sell their produce on a more daily basis. One of the fastest growing alternative means of selling produce is Community Supported Agriculture programs, referred to simply as "CSAs."

### Local CSAs:

**Boxelder Acres:** Ypsilanti (734) 483-7752
**Community Farm of Ann Arbor:** (734) 433-0261
**Frog Holler Organic Farm**: Brooklyn (517) 592-8017
**Garden Works:** Ann Arbor (734) 995-5130
**NeedleLane Farms:** Tipton (517) 263-5912
**Tantre Farm:** Ann Arbor (734) 475-4323

CSAs present a unique opportunity to cultivate more intimate relationships between producers and consumers. Most CSAs are characterized by a group of local "shareholders" in a farm. These individuals or families buy a "share" of the farm's produce usually at the beginning of a season and collect a weekly bounty of produce throughout the growing season. The contents of each week's harvest change throughout the season as different varieties become ready for harvest.

A CSA system can be invaluable to a small farm by providing capital for seed and labor at the beginning of the season and a consistent consumer base throughout the year. Successful CSA programs that pair local markets with local agriculture can help small farms remain viable and keep lands in agricultural use – particularly farms on the "urban fringe" where development pressures are on the rise.

While farmers benefit from the reliable consumer base, CSA members benefit from the weekly supply of well-priced, responsibly-grown local produce and the opportunity to participate in the production of food. In doing so, CSA members are also helping to sustain and preserve farming in their region. A 1999 national survey of CSAs found that 94% of CSAs practice sustainable agricultural including organic and biodynamic methods.

Some farms invite their CSA members to help out on the farm, either as part of the member agreement or even for compensation. Asa and Peggy Wilson of Boxelder Acres in Ypsilanti, enjoy having a number of part-time workers to help out on the farm. Not only does this allow for greater flexibility and variety, but it gives more people the opportunity to "experience first hand how all this food gets delivered."

The CSA movement in the United States began with a handful of farms in 1986 when Robyn Van En introduced the concept to North America. Today, there are an estimated 1,200 CSAs in the US and the numbers continue to grow. Local agriculture databases list at least 15 CSAs in southeastern Michigan.

Running a CSA, in addition to the many responsibilities and obligations of small-scale organic farming, is no simple feat. Local farmer Mary LaFrance, of the Lakeplain Prairie Organic Farm in Wayne County, is opting out of the CSA business after two years due to low membership and lack of member participation. She says, however, "I will continue to sell organic food to stores like Whole Foods, Peoples' Food Co-op and chefs at the Henry Ford. They like the variety, and heirloom vegetables offer that kind of appeal."

Heirloom varieties of fruits and vegetables are "any garden plant that has a history of being passed down within a family, just like pieces of heirloom jewelry or furniture" according to Seed Savers, a non-profit dedicated to saving and sharing heirloom seeds. Though growing some heirloom vegetables can be a challenge, LaFrance and her customers find that they usually have a richer, more interesting flavor.

Of the food that Chef Nick Seccia of the Henry Ford gets from local farmers, including LaFrance, he says, "the produce is much higher in flavor and I know how and where the produce as grown and by whom. There is much more of a connection with cooking when you personally know the people who raise your food." Small, local farms and Community Supported Agricultures are key to building strong food communities around local food systems.

### CSA information available on the Net:

**Seed Savers:** www.seedsavers.org
**Sustainable Agriculture Network:** www.sustainableag.org
**The Eat Well Guide**: www.eatwellguide.org
**Local Harvest:** www.localharvest.org/csa

# ORCHARDS & CIDER MILLS

## Agri-tourism as an opportunity to promote local foods

The sweet smell of apples and freshly-baked pies is a familiar scent that ushers in the beginning of fall each year in Dexter, Michigan. A popular seasonal destination, both local residents and visitors from great distances have come to cherish the Dexter Cider Mill, a family owned and operated business located in Washtenaw County. Although the owners have never used advertising strategies to market their business, it's not unusual to see large crowds of people at the Mill enjoying a beautiful fall day while sipping cider or savoring a caramel apple or other baked goods made from local ingredients.

There are 178 orchards, covering 1,699 acres, located within southeastern Michigan. Of these, 151 are apple orchards. Other MI-grown fruits include apricots, cherries, grapes, nectarines, peaches, pears, and plums.

As the oldest continuously operating cider mill in Michigan, the Dexter Cider Mill has been in production since 1886. Owned by the Koziski family for more than 20 years, many local families and children grew up with the Mill, making regular trips to buy apples or other locally produced foods.

The Koziski family prides itself on using very basic methods to produce their cider. "It's important to us to preserve the heritage of traditional cider making for future generations of young people." Apples are sourced from local orchards within a 30-mile radius from the Mill and are hand-picked directly from the trees. After a thorough washing, a seasonal mixture of apple varieties are then ground and pressed using a traditional wooden press to generate the all-natural, unpasteurized cider that cannot be found in stores. The Koziskis look forward to harvesting their own apples from their newly planted orchard once it begins to mature.

In addition to apple cider and freshly baked desserts, a wide array of other local products are sold in the Mill's retail store. These include honey from local orchards, cheeses, pickles, jams, apple cider vinegar, pastry and bread mixes, and products from the occasional guest vendor. The Koziski family cookbook, which provides recipes for preparing foods with local ingredients, is another popular item for sale at the Mill.

As the Mill continues to expand its operations, the Koziski family is considering the addition of a second cider mill featuring new attractions for the whole family such as hayrides and pumpkin harvesting.

Orchards, cider mills, roadside produce stands, and U-Pick operations are just a few examples of consumer-focused farm-related attractions that contribute to a growing industry known as Agri-tourism. Agri-tourism presents a number of opportunities to local farmers in southeastern Michigan and can be utilized to grow a regional agricultural identity and stabilize farm revenues to keep small farms viable. For more information, visit the Michigan Farm Marketing & Agri-Tourism Association website at www.mi-fmat.org.

**SOURCES:**

2002 USDA Agricultural Census Data
Michigan Cider Makers' Guild (http://ciderguild.org)
Dexter Cider Mill (http://dextercidermill.com)



## Craving locally produced apples or cider?


**Alber Orchard & Cider Mill**
Manchester
alberorchard@aol.com

**Dexter Cider Mill**
Dexter
www.dextercidermill.com

**Obstbaum Orchards**
Salem
www.obstbaum.com

**Parmenter's Northville Cider Mill**
Northville
parmenters.homeip.net/parmenters

**Plymouth Orchards & Cider Mill**
Plymouth
www.plymouthorchards.com

**Wiard's Orchards & Country Fair**
Ypsilanti
www.wiards.com

## Who knew a little bean could do so much?

Soybeans: The second most abundant crop in the United States, exceeded only by corn. If you are unfamiliar with agricultural practices, this statistic is probably unexpected. That's because there are few foods that are made from soybeans. Perhaps, for you soybeans conjure images of tofu, soymilk, and soy sauce.

Historically, soybeans have not been used for food but instead are the key ingredient in animal feed, industrial products, and many oils/lubricants. They are also used to create biodiesel fuels. In order to make these products, however, the versatile soybean crop must be heavily processed.

Commodity Markets rein supreme as the most popular means of selling this legume. This typically sees a marginal return for the farmer, demanding grand-scale farms in order to make a profit. However, some farmers in southeastern Michigan are finding new and innovative ways to process soybeans into food products.

Tom and Roseanne Bloomer, residents of Washtenaw County, are an example of entrepreneurs who have developed their business within the emerging markets of soybean products. Located 5 miles outside of the city of Ann Arbor, the Bloomer's farm, Burr Oaks, is home to the on-farm processing business Rabble Roasters soynut products and Burr Oaks gourmet popcorn. Rabble Roasters are dry roasted soybeans (GMO free) that come in four flavors. Many specialty shops and independent grocery stores sell Burr Oaks products throughout the State of Michigan and in select locations in eight other US states.

All of the soybeans for Rabble Roasters are grown on the 150 acre Burr Oaks farm. Tom explains the business structure of his company: "Burr Oaks has an unusual business structure in that I am in a partnership

with a neighbor. He (the neighbor) farms the land on Burr Oaks. Meanwhile, I run the on-farm processing, marketing, and the business itself…the practice of farming land other than your own is not uncommon, however."

On-farm processing is a strategy a business owner employs to create 'value-added' steps to their production capacity, selling the end product which has more value than the raw commodity. The Bloomers have a cleaning and conditioning plant, an on-site roasting/processing plant, and infrastructure for packaging the products. Plenty of on-farm storage allows the bloomers to navigate around the seasonality of crops.

Rabble Roasters and Burr Oaks popcorn are distributed throughout Michigan via four small specialty foods distributors. Tom personally distributes the soybean and popcorn products to retailers in the Ann Arbor area.

This on-farm processing business plan allows the Bloomers to maintain a viable local business and live on the farm that they have been on for over twenty years. Keeping the farm in agricultural land and not succumbing to developmental pressures is not an easy thing to do in today's market. The Bloomers received some additional help in ensuring the future of their farm from the Ann Arbor Greenbelt initiative.

### Did you know?

Nearly 75 million acres of land were planted in soybeans in the US in 2006

Soybeans are the #2 cash crop in America, next to corn

Soybeans are the #1 export crop in the US

44% of all soybeans in the US go towards animal feed, not human food

# RESERVATION



Burr Oaks Farm was the first to participate in the Ann Arbor Greenbelt initiative, a law passed by voters that secures taxpayer funds to purchase land and development rights both within and outside of the city limits in an attempt to curb urban sprawl. If an easement obtains a farm's development rights, then that land is legally required to stay as farmland forever. Through the Greenbelt initiative, the City of Ann Arbor redirected .5 mills to farmland preservation from the parks acquisition program to buy these farm development rights.

"Agriculture is our business and the greenbelt easements are an enhancement to our business," reasoned Tom Bloomer. "The easement is perpetual, which means that the land will remain in agricultural production forever. This fit well with the vision for the company, so we decided to apply soon after the law passed."

Tom went on to explain, "Healthy communities must have a diversified economy. Because most communities are near agricultural land, farming is a very important part of a diversified economy and healthy community…I'm not sure if voters realize how visionary they were or not when they passed the law. Through being willing to spend money outside the city's borders, Ann Arbor strengthened their investments in the city and will have a pleasant community for many years to come."

The Bloomers represent an example of how innovative business models along with small-farm friendly policies may enable agriculture livelihoods as a viable profession for members of the Southeastern Michigan community.

If you are interested in knowing more about farmland preservation, The Michigan Land Use Institute (www.mlui.org) is the predominant organization working on maintaining the integrity of agricultural land in the state. Their approach to farmland protection includes engaging in state and local policy, strengthening agricultural zoning, supporting land easements, and using farmland taxation as a means to incentiveize attainment of development rights by farmers.

## Things you can do

### Individual:

Buy local soy products such as roasted soybeans, edamame (fresh soybeans), tempeh (fermented soybeans), or soy flour


### Community:

Organize tours of farmland that are in danger of being developed. Create digital images of what the area would look like with sprawl development and use this as a tool to persuade community members and representatives to support farmland preservation.

### Municipally:

Introduce legislation or ballot initiatives similar to the Ann Arbor Greenbelt initiative in Ann Arbor to protect open space and family farms from urban sprawl.

## Family farmers feed growing demand for local meat

Stand around at the Hannewald Lamb Company booth at the Ann Arbor Farmers Market on a Saturday afternoon and you are sure to walk away with some new recipes and bits of knowledge about the best cuts for the grill or rotisserie. But be sure to get to market early if you want to walk away with some locally-raised lamb to prepare.


Now in their fourth year at the Ann Arbor Farmers Market, Hannewald Lamb Company regularly sells out of favorite cuts before the market closes. Rex Hannewald's family has raised lambs for generations, and several years ago Rex and his wife, Judy, created a business plan to devote their farm in Stockbridge to raising lambs with the ultimate goal of building a retail store on the homestead.

After two years of planning, they began selling at market to build a customer base and develop name recognition. If all goes as planned, the Hannewalds will open a store right on their farm within a year.

Over the last few years, a few other local producers have joined the Hannewalds at the Ann Arbor market. For instance, in 2004 D K Cattle expanded the fresh, local meat offerings to include beef and pork. Ernst Farms now offers beef, pork and some poultry as well.

"When you buy local meat from a trusted butcher, you've got tons of assurances that the meat is going to be healthier and tastier," said an Ann Arbor Farmers Market customer.

While more farmers markets in southeastern Michigan include meat producers, many area food retailers and restaurants now carry and prepare local meat products, as well. For the first time in its 35-year history marking a shift in the consumption trends of the health conscious, the Peoples' Food Co-op in Ann Arbor added a refrigerator dedicated to sustainably-raised meat featuring products from local farmers including D K Cattle.

A handful of local restaurants in search of high quality meat products to serve to diners, purchase products from local producers like the Hannewalds and DK Cattle in Washtenaw County. Pacific Rim in Ann Arbor uses Hannewald racks of lamb and Rodger Bowser, Chef at Zingerman's Deli, uses local meat products whenever he can. He praises the quality and flexibility of developing his own networks directly with farmers.

"When you have the availability of buying top quality meat from someone in your community without all the middle man garbage, strict order schedules and prices based on transportation, marketing and packaging," Bowser says, "it's a beautiful thing." Bowser and Zingerman's are committed to paying sustainable prices directly to producers to ensure quality and support local agriculture.

### What do all these buzz words mean, anyway?

***Pasture-raised*** means that the animals spent most of their time in the fields where they graze.

***Grass-fed*** means that the animals ate a diet consisting primarily or entirely of grasses which are what livestock are biologically best prepared to digest. To develop full flavor, grass-fed animals must grow to full size at their natural pace, which is more gradual than animals fed on primarily grain-based diets.

Some animals are ***finished*** on grain, which means they are fattened on a corn and soy-heavy diet before they are slaughtered.

***Organic*** meat products, as defined by the USDA must be fed a diet of 100% organic feed, cannot be given growth hormones or antibiotics for any reason, and must have access to the outdoors including pasture for ruminants. Organic meat production in the US increased fivefold from 1997-2003. (USDA, http://www.ers.usda.gov/AmberWaves/April06/Findings/Organic.htm)

**SOURCES:**

DK Cattle: dkcattle.tripod.com
USDA National Organic Program: www.ams.usda.gov/nop
US Meat Consumption trends: www.ers.usda.gov/Briefing/Baseline/livstk.htm

# Few options for meat processing pinch the pockets of local producers

Pleased at the increasing demand for their product, small-scale local meat producers face some formidable challenges when it comes to processing their animals to prepare them for safe human consumption. Recently, Mark DeKarske of DK Cattle in Washtenaw County said he was at risk of going out of business in part due to high processing costs imposed on small farmers with very limited options.

All meat processing must be done at USDA certified facilities. Only a few such facilities in the entire state are available to small farmers, the nearest to our corner of the state is Union City. Due to the limited options, local meat producers find the costs of processing to be significantly higher per head than the prices paid by conventional, large-scale operations – Judy Hannewald of the Hannewald Lamb Company estimated about $25. For producers to stay in business, they must pass that cost on to the consumer.

While slightly higher than the farmers would like, the price premium on meat raised by small, local farmers represents higher quality in a number of ways. In addition to being fed a healthier diet and raised in safe, healthy, humane conditions, Rick Kissau of DK Cattle noted based on his experiences that the level of inspection at small processing facilities is much higher. The USDA official scrutinizes every animal as it walks off the truck and witnesses every step of the process.

There are also many rules regarding labeling meat products that can put small, local producers at a disadvantage when they are striving to build a strong customer base through name recognition. Labels have to be approved by the USDA through the processor. No matter how much work the farmer is willing to put into getting his own label, processors may not have the time or desire to manage all of the paperwork and time required to get approval.

Local farmers have expressed a great interest in new processing facilities in the southeastern Michigan region. A local processing facility would allow farmers to save on energy costs of transportation. It might also present healthy competition into the limited supply to allow for more flexibility and lower costs to local farmers.

# GROCERY STORES: SUPERMARKETS



## Challenges for Local Foods

Within the southeastern Michigan region, large chain food retailers have very different opinions about the profitability and practicality of providing local foods in their stores. While most store purchasers see the merits of offering local food options for their customers, key themes that typically arise with respect to local foods include the purchasing constraints and "shelf-life" of fresh local products. Retailers seem to have divergent views on both of these points, with perspectives and experiences varying greatly according to the store's standard operating procedures.

While some stores have the ability to order items directly from one or more distributors, other chain stores choose to establish contracts directly with farmers and other suppliers up to nine months in advance – well before the crops have even been planted or harvested – to ensure a full selection of available products year-round.

When purchasing from distributors, stores appear to be more likely to supply local products and may source up to 15% of their total produce items from local producers during peak harvest months. The flexibility of being able to call in an order and select from what is currently available reduces the retailer's control in setting prices with the producer since they are one step removed from that process. But this flexibility also allows retailers to assess the market demand and supply at any given time and determine which products to offer in their stores and at what quantity.

On the other hand, stores that set contracts to purchase directly from farmers or other producers can guarantee specific quantities and prices for particular food items in their contract negotiations and can budget for these sales and associated marketing well in advance. However, this type of arrangement also introduces potential limitations to purchasing from certain regions or farm sizes in order to ensure that food items will be delivered as promised and at the guaranteed price.

Generally, many of these types of retailers are less willing to purchase local products, illustrating a perceived barrier within the food system. These stores assume that local producers cannot provide the consistent supply of items that is required to supply a major retail chain. The assumption is that local producers are not producing foods year-round and are subject to local climate variations that may impact the growing season, crop yields, and product quality for any given season. And while some stores recognize that local food sales generate increased revenues, others claim that the demand for local items is not strong enough for their store to warrant changes in their standard purchasing practices.

Other challenges to the purchasing of local foods by large retail chains include the seasonality of locally grown items. While foods such as local asparagus, cauliflower, apples, and blueberries are very popular during peak harvest months, California or foreign producers in warmer climates can often provide a greater variety and consistent supply of many of these items less expensively year-round.

Similarly, some retailers also question the practicality of preserving the quality and freshness of local foods in their stores. Although these items are often of excellent quality, because they have not been preserved for the purpose of transportation from region to region, stores must take greater care to refrigerate or otherwise store these products to prevent spoilage. This can ultimately increase operational costs, which may then be absorbed by the retailer or passed on to consumers through higher prices.

# Oppotunities for Local Food Producers

In a market where price margins for retailers are already at a minimum and competition for business and customer loyalty is intense, food retailers are looking for creative ways to minimize costs. Local foods may play a key role in this effort.

According to a recent report from the Worldwatch Institute, on average, U.S. food travels an estimated 1,500-2,500 miles from the farm where it was grown to the consumer's table. As fuel prices continue to rise and distributors as well as retailers are faced with increased costs of supplying goods and services, grocery stores may find promising opportunities in locally grown or produced items. Since products are produced nearby, transportation costs are minimized and products are fresher and more flavorful because less time passes between the time the food is harvested and consumed. Since travel time is reduced, the need for special packaging or other means of preserving foods can also be minimized, which contributes to decreased costs and reduced environmental impacts.

U.S. food travels an estimated 1,500-2,500 miles from the farm where it was grown to the consumer's table.

In addition, large chain grocery stores often search for ways to adapt their stores to the communities and populations they serve. One potential way to connect with local residents and the local food system in this regard is to supply foods from local farmers, producer cooperatives, distributors, and processors. By supporting local farms, these large chain stores can contribute to the local economy by reinvesting funds back into local agricultural businesses and enhancing the viability of small and medium farms.

By supporting local farms, large chain stores can contribute to the local economy...

**SOURCES:**

Case Study Analysis of Marketing Potential for Local Producer to Independent Grocer in Jackson, Lenawee, Monroe, Washtenaw and Wayne Counties. Prepared by Michaelle Rehmann for the Food System Economic Partnership. August 2006.

Halweil, Brian. 2002. Home Grown: The Case for Local Food in a Global Market, Worldwatch Paper 163, Worldwatch Institute.

# FARMERS' MARKETS



## Farmers' markets: a great place to buy local foods

Farmers' markets are a great place in your community to go and buy local foods. Although known for fruits and vegetables, farmers' markets in southeastern Michigan often have other foods for sale such as meat, eggs, honey, maple syrup, jams, bread and other baked goods. Much of the time other non-food items such as bedding plants, flowers, clothes, and craft or artisan items are available there as well.

When purchasing food at a farmers' market, you not only get the freshest food available, but you also get to meet the local farmer that grew or produced it. Farmers get to connect directly with the people eating their food, giving them an added sense of purpose and community. Farmers' markets are a socially and gastronomically vibrant place where the community comes together.

Farmers' markets also benefit the community economically. Farmers selling their food directly to you increase their profits because middlemen are eliminated. Consumers frequenting the market often also shop at neighboring local businesses and restaurants. These actions allow for more money to be retained and circulated in the local economy, benefiting everyone.

Get involved by shopping at your local farmers' market regularly! Tell your friends about it too!

## A few southeastern Michigan farmers' markets

**Adrian Farmers' Market**
Toledo Street parking lot
Adrian, MI 49221
Open May-November
Wednesday Noon-6 p.m.
Saturday, 8 a.m.- Noon

**Ann Arbor Farmers' Market**
315 Detroit Street
Ann Arbor, MI 48104
Open year-round
Wednesday & Saturday,
7 a.m.-3 p.m.

**Blissfield Farmers' Market**
325 West Adrian Street
Blissfield, MI 49276
Open June-October
Tuesday, 8 a.m.-1 p.m.

**Chelsea Farmers' Market**
Park Street
Chelsea, MI 48118
Open May-October
Saturday, 8 a.m.-Noon

**Detroit Eastern Market**
2934 Russell Street
Detroit, MI 48207
Open year-round
Sunday-Friday,
4 a.m.-Noon.
Saturday, 6 a.m.-5 p.m.

**Jackson-Kuhl's Bell Tower Market**
117 Louis Glick Highway
Jackson, MI 49201
Open May-October
Tuesday, Friday & Saturday
7 a.m.-1 p.m.

**Livonia Farmers' Market**
Middlebelt & West Chicago
Livonia, MI 48150
Open May-October
Saturday, 8 a.m.-3 p.m.

**Monroe Farmers' Market**
20 East Willow Street
Monroe, MI 48162
Open year-round
Tuesday & Saturday,
6 a.m.-Noon

**Ypsilanti City Farmers' Market**
1 South Huron Street
Ypsilanti, MI 48917
Open May-October
Tuesday, 3 p.m.- 7 p.m.

**Ypsilanti Farmers' Market/ Freighthouse**
100 Rice Street
Ypsilanti, MI 48197
Open May-October
Wednesday, 8 a.m.-4 p.m.
Saturday, 7 a.m.-3 p.m.

## A community gathering: the Adrian farmers' market

Functioning for over 35 years, the Adrian Farmers' Market brings together Lenawee farmers and community members every Saturday morning from 8am until noon during the months of May through October. Like many farmers' markets throughout our region and the United States, each market day is a time for community gathering, an exchange of locally grown produce to be used in the next week's family menu plans, and a chance to meet your neighbors while buying scrumptious baked goods, succulent fresh fruits and vegetables, or handmade crafts.

Over 12-15 vendors exhibit their homegrown and homemade goods every week in Adrian, attracting hundreds of consumers who prefer to buy their goods in this community setting. Market patrons cited a variety of reasons they choose to shop at the market including: getting better tasting, fresher food; the desire to support their local economy; the friendly atmosphere; the desire to have more environmentally conscious buying habits that include eating local so as to reduce the fuel usage from long distance shipping; healthier food that uses minimal to no pesticides and synthetic fertilizers; and knowing where their food comes from and who produced it.



Marv Sharrock manages the market, in addition to selling his own produce every week. He and his brother farm a couple of acres each, approximately 15 miles outside of Adrian. Over the course of the season they produce about two dozen different crops, which are harvested the day before or the day of market.

Marv said that he likes selling his produce at the market "because the people are always friendly." He also enjoys the large number of people that come through the farmers' market. Indeed with hundreds of people circulating in a matter of hours, farmers can sell a significant amount of goods over a short period of time at a fair price to the farmers. This makes farmers' markets an essential part of our viable local food system: they enable agricultural livelihoods.

To participate, vendors must have personally grown or produced the goods sold at the market. This rule ensures that wholesale vendors cannot underscore the price of local producers by selling produce that was not grown locally or that was mass produced by large farms.

Marv would like to see a permanent overhang structure constructed for the farmers' market in Adrian. A structure such as this provides a dry place to hold the market during rainy mornings.

The Kastel Family Farm is another Adrian Farmers' Market anchor. The Kastels have been selling their goods at the market for over 35 years. Their farm in Blissfield, MI, is 16 acres and a full time, seasonal venture for the entire family. Monica Kastel explained that farming provides an important activity for kids and gives them direction. "This way," she reasoned, "kids will be less likely to get into trouble when they are younger and are more likely to be responsible adults."

The Kastels are also in charge of Project FRESH at the Adrian Farmers' Market. This program provides low-income and nutritionally at-risk women and children with nutrition education and encourages participants to improve their dietary choices by providing them with coupons to buy fresh fruits and vegetables at local farmers' markets. Meanwhile, the program increases the demand for Michigan-grown produce and boosts the income of farmers who sell fruits and vegetables at participating markets.

In 2005, Project FRESH served more than 38,000 people in 75 counties throughout Michigan, with nearly $600,000 in federal, state, local, and private funding. Programs such as Project FRESH are working along side local food system initiatives to expand access and consumption of healthy, fresh, local foods in our communities.

Additional information on farmers' market in your community can be found on the web at *www.localharvest.org* or *www.michigan-farmers-market.org* or *www.moffa.org*

## Things you can do

### Individual:

Shop regularly at farmers' markets. Bring others along with you.

### Community:

Make your farmers' market a festive occasion with live music, cooking demonstrations, kids' activities.

### Municipally:

Sponsor a farmers' market in your town center. (See: ww2.attra.ncat.org/where.php/PDF/farmmarket.pdf)

Allocate funding to construct a permanent overhang for your farmers' market space to keep participants sheltered from poor weather.

# FOOD DISTRIBUTION



## Local food distributors close the "seasonality gap"

For innumerable Michiganders, summer is watermelon season. And summer is popularly defined by two holidays known for barbeques and cook-outs featuring sticky slices of huge, juicy, sometimes seedy watermelons: Memorial Day and Labor Day.

However, for Michigan farmers, watermelon season is roughly mid-July through early October, distinctly askew from the common period of high demand for the quintessential summer fruit. So how is that when we walk into our nearby supermarket in late May, we are welcomed by an enormous crate of ripe, 10-pound melons?

Grocers know that most people, when planning their barbeque menus, don't consider the local seasonality of their ingredients. And they know that if they don't have the goods their customers demand, they'll lose the business to another store that does. In today's global food market, consumers have come to expect the availability of nearly any kind of food nearly any time of year.

In order to bring us watermelons, and any other produce, when we want it, grocers work with distributors who build networks with farmers, growers, brokers, wholesalers and retailers around the country and world to move food from where it is ready to harvest to markets where consumers are ready to eat. In a word, distributors could be considered the lynchpin of the food system. They connect two other critical forces of the food system, producers and retailers, in order to link supply with demand, often on a grand scale.

In watermelon terms, this means that in May and June, Ann Arbor-based distributor Ed McClellan coordinates the transport of dozens of semi-truckloads of melons from farms in Georgia up to southeastern Michigan, northern Indiana and the Chicago-area. The trucks are delivered to wholesalers who inspect the products and bring them to area grocery stores. Later in the season, many of the trucks are moving the other way, delivering Michigan-grown melons to markets in other states.

McClellan strives to support local watermelon growers by connecting them with markets when their fruit is ripe. In many cases, he is able to connect local fruit with local markets, but he notes that retailers will only work with distributors who can provide the product throughout the season of demand. In order to sell local watermelons, he must also be able to provide watermelons of other origins to fill in any gaps in supply. In an odd way, the success of local watermelon producers is linked to producers across the country.

Watermelons are, of course, just one example of the seasonality gap that distributors bridge – where the local climate's idea of 'seasonality' doesn't quite square with local consumers' desires for a product, distributors bring in products from elsewhere. But some of these gaps can be narrowed to increase the viability of local agriculture.

Based on years of experience working with farmers around the country, McClellan has some suggestions about how Michigan growers can increase their market share and better meet the local demand for certain products.

One strategy is season extension. There are many techniques farmers can use to lengthen the harvest period of a crop. In most cases, these methods involve protecting the plant from the cold either at the beginning of the growing season, at the end, or both.

Another way to increase profitability of products available during a short period of time is to create value-added products that have a longer shelf life. This approach would necessarily involve at least one other sector of the food system, processors, to convert a perishable fruit or vegetable into an item that can be stored for a period of time and provide a more consistent supply to retailers. Canning and drying or dehydration and roasting are the most common value-adding processes. But more involved ventures that include multiple local products like juices, salsas, cereal bars and soups are just a few among innumerable possibilities.

McClellan puts the charge to local growers, processors and entrepreneurs to seek out new knowledge about extending the growing season and to find creative ways to add value and shelf life to the region's rich harvest. Despite the primary challenge of the distribution system, to provide reliable and consistent products throughout the year, growing interest in locally grown and produced food will likely present new opportunities for locally-based distributors like McClellan to help retailers meet their consumers' demand.

## When "local" means "just outside the principals office"

A year ago, few people paid much attention to the large, rarely-used courtyard at Sherrard Elementary Middle School in Detroit. Today, through a unique collaboration between the school, a community organization and the University of Michigan, students and teachers clamor to get a peek at the latest happenings.

In the summer of 2006, the once-forgotten ¼-acre space began its transformation into a school, community garden, and outdoor classroom. With the help of a grant through the U of M School of Social Work, the M.O.O.R.E. Community Council (a neighborhood group in the Milwaukee Junction neighborhood of central Detroit) spearheaded the garden project in partnership with the school.

M.O.O.R.E., which stands for Mobilizing Our Own Resources and Energy, purchased supplies and plants and hired a few community members to clear the land and prepare it for gardening. Meanwhile, Ms. LaWanda Smith, a 1st grade teacher and leader of the school side of the garden project, worked with other summer school teachers to engage students in the planting and tending of the garden.

Most of the students involved in the project had never worked in a garden before. Many younger kids were happy for the unique opportunity to get dirty and explore in the soil. And all of the students were mesmerized to observe as the seeds they planted in June become vibrant, green leaves in just a few weeks. Summer school teachers and students planted over a dozen beds with tomatoes, peppers, collards, and squash.

### No wonder school gardens are on the rise!

According to an annual survey by the National Gardening Association, 97% of US households (about 107 million households) believe schools should provide gardens and hands-on gardening activities for kids.

http://assoc.garden.org/press/

Though the first season's harvest was modest and interrupted by the August break and teachers' strike, the successful pilot project energized teachers and the community to devote more energy and resources to develop the garden further in the coming year. Community members also hope to start more gardens like this one in other school and neighborhood locations.

The Sherrard School Garden is a new player on a field of over a dozen established school-based gardens and scores of community gardens in Detroit. The Garden Resource Program, a collaboration between the Detroit Agricultural Network, the Greening of Detroit, Earthworks Garden and Michigan State University Extension, serves an invaluable resource to school and community gardens in the city.

In addition to providing member gardens with plants, seeds, compost and woodchips, the program offers dozens of classes for gardeners. Perhaps most important, the program aims to build a network of community and school gardeners across the city to share, teach and learn from each other through garden tours and strategic planning meetings.

Increasingly, schools are doing their part to get kids and families thinking about where their food comes from and how it grows. School gardens present endless opportunities for teaching across the curriculum and community gardens transform once-empty lots into green spaces ripe for community building and learning.

The energy and momentum around gardening in Detroit and throughout southeastern Michigan is sure to continue into the coming years. Other community gardening organizations include Growing Hope in Ypsilanti, Project Grow in Washtenaw County, and the Agrarian Adventure at Tappan Middle School in Ann Arbor. Most community and school gardens are always on the lookout for resources, including volunteers and donated items, providing ample ways to get involved!

### Learn more about school gardening!

#### *Local:*

**DAN (Detroit Agricultural Network)**
www.detroitagriculture.org

**Growing Hope**
www.growinghope.net

**MSU Michigan 4-H Children's Garden**
4hgarden.msu.edu/main.html

#### *National:*

**American Community Gardening Association**
www.communitygarden.org

**Kids Gardening (from ACGA)**
www.communitygarden.org

**Edible Schoolyard**
www.edibleschoolyard.org

**Junior Master Gardeners**
www.jmgkids.us

# FARM-TO-SCHOOL



## Farming, food, and our schools

### The Farm to School Concept

Farm-to-school (FtS) is a generalized term that refers to efforts by regional communities to establish direct markets between local farmers and schools or school districts as institutional purchasers of farm products. Local vegetables, fruits, eggs, meat, and dairy products are consumed as a part of cafeteria meals, classroom snacks, and school vending options.

A central goal of FtS programs is to address the growing problem of childhood obesity. This goal is fulfilled by increasing youths' consumption of nutritious food through augmenting the amount of fresh produce, meat, and dairy products in school lunches sourced by local farmers and producers.

Students also learn about nutritious eating habits, gain knowledge about environmental health and community capacity, and develop an appreciation of where their food comes from. In turn, FtS programs bolster local economies and support agricultural livelihoods, forge strong relationships among community members, and reduce overall fuel costs from transporting food long-distances.

Often, FtS will include classroom educational components on farming, land use practices, and healthy eating, student field trips to farms, as well as student-created school gardens. Participating schools see benefits through gaining an enriched school curriculum, as well as a greater engagement with the community at large.

FtS programs, collaborative by design, include stakeholders that range from school district administrators, teachers, parents, farmers, food service personnel, local food producers, processors, distributors, vendors, and nutritionists. Together, these stakeholders work to create viable and sustained change in the food served in our schools.

Jeremy Moghtader, a local community leader for FtS, explains the importance of FtS to our local food system in Southeastern Michigan: "Local school districts are feeding our children every day. This is an important role and large task that needs to be done well. By bringing local food into school, FtS represents an opportunity to make significant change in our children's wellbeing, in addition to providing an important educational component for the youth who will be our future community leaders."

Jeremy also stresses how FtS represents one of the most powerful forms of 'farm-to-institution.' As an institutional buyer, schools or school districts correspond to a large and consolidated amount of purchasing power. In turn, the large volume of food that institutions purchase will speed up and facilitate the development of the local food system by invoking economies of scale. Engaging this purchasing power helps to build the infrastructure of the local food economy necessary to get it up & running.

### Farm to School in Southeastern Michigan and FSEP

FSEP is working to create three pilot FtS projects. The Michigan FtS pilot is unique in that it is engaging school districts in addition to individual schools. Ann Arbor Public Schools, Chelsea Public Schools, and the Henry Ford Academy are all working to develop strategies to bring locally produced food into the school cafeterias. Chelsea elementary school had its first "Farm Day" event on November 20, 2006. Most of the food in the school lunch cafeteria came from local farms, including carrots, kale, and apples.

Each school district in the pilot program possesses different social/ethnic/income demographics and food service systems. For instance, while Chelsea Public Schools make all of their own food buying decisions, Ann Arbor Public Schools contracts out their food service to a company called Chartwells. This makes it easier for Chelsea to act quickly toward bringing in farm fresh food. Having pilots with a spectrum of school characteristics yields more knowledge about what FtS strategies work and what does not for different types of school districts.

A larger volume of farm products is slated to arrive in school cafeterias during the 2007 growing season. Meanwhile, people and organizations throughout the region are working hard to make this vision a reality. There are many hurdles to overcome, including State and Federal regulations that explicitly prohibit the preferrential buying of local food products for use in school lunch programs. These laws are a major hindrance and an unnecessary obstacle in the FtS efforts, which actually contradict other federal laws that give preference to local food.

Though barriers exist, we are marching on the path toward change in our schools and our community. Jeremy Moghtader emphasized the importance of FtS as "a real opportunity for our community to work collectively on issues that are very important to us, including childhood health, economics, and the health of our community." He invites us all to work together to achieve these goals.

# New Agriculture-Based Businesses



## Emerging food-related businesses

### Detroit's Eastern Market

Following the release of a 2004 Urban Land Institute study calling for the centralized management of Detroit's Eastern Market District, the Eastern Market Corporation (EMC), a nonprofit development company, was created to manage and oversee the long-term goals of the existing retail and farmers' market area. With support of Detroit's mayor and city council, the EMC officially took over management responsibilities in August 2006 with a renewed focus on educational programming and community purpose.

Since its establishment, the EMC has secured $20 million to renovate the historical shed structures to their original condition, add modern amenities such as improved heating and lighting allowing for year-round shopping, and construct a new local farmers-only shed and regional education center. The EMC is also working to provide wireless internet access for Market vendors by May 2007 to facilitate Bridge Card, WIC, and Project Fresh point-of-sale non-cash transactions for low-income consumer purchases of fresh and nutritious foods.

With these strategic renovations, the EMC strives to be the premier fresh food center for Detroit residents and is working to serve low-to-medium income populations by increasing access to fresh local foods. Through a partnership with Forgotten Harvest, food left behind by vendors is collected to help fight hunger in Detroit communities.

Secondary to this goal is the EMC's effort to draw shoppers from nearby communities by reinventing the Market as a Detroit attraction. Initial improvements to the Market have already attracted four new businesses, increased traffic for nearby business owners and market vendors, and created over 50 new jobs for local residents – with hundreds more to be created as the redevelopment continues.

For more information on the renovation of Detroit's Eastern Market or the Eastern Market Corporation, visit www.detroiteasternmarket.com.

### Organic Valley Family of Farms' Michigan Expansion

To meet a growing demand for organic milk in the region, Wisconsin-based Cooperative Regions of Organic Producer Pools (CROPP) is pursuing an expansion to include a new organic milk collection route in Michigan, pending organic certification of Michigan dairy farmers. Products such as dairy, juice, soy, eggs, and other produce are marketed by this group under the Organic Valley Family of Farms label. "More than 100 Michigan dairy farmers have expressed an interest in transitioning to organic dairy production and are considering marketing their organic milk as OV members," according to Lowell Rheinheimer, CROPP's Mideast Dairy Pool Coordinator.

Founded in 1988, CROPP is a farmer-owned cooperative with nearly 600 dairy members in 24 states. Under the Organic Valley label, members work together to set their own policies and establish milk prices. Farmers also benefit from additional support services and educational opportunities that come with CROPP membership.

This expansion, along with the Michigan Organic Food and Farming Alliance, Michigan State University Student Organic Farm's Organic Transition Program and others, provides an exciting opportunity for Michigan dairy farmers and will help to build the local supply of quality organic dairy products.

To learn more about OV's Michigan expansion, visit www.farmers.coop or call (888) 444-6455. More information on the Michigan Organic Food and Farming Alliance is available at www.moffa.org, and the MSU Student Organic Farm at www.msuorganicfarm.com.

**For more information contact:**

**Michigan Department of Agriculture**
P.O. Box 30017
Lansing, MI 48909
(800) 292-3939
mda-info@michigan.gov

**Michigan Food & Farming Systems**
416 Agriculture Hall
East Lansing, MI 48824
(517) 432-0712
www.miffs.org

**SOURCES:**
Eastern Market Corporation (www.detroiteasternmarket.com)
Organic Valley to Market Michigan Organic Milk. Michigan Food & Farming Systems. July 25, 2006

# ACTION STEPS – HOW TO GET INVOLVED



## Conclusion

We hope the articles in this community food profile have heightened your awareness of our Southeastern Michigan food system. More importantly, we hope that the stories and ideas have urged you to ask more questions about where your food comes from, about the power of your choices in the food system and about how you can influence the choices made by others that impact the vitality of our local and regional food system.

The individuals and places included here provide one snapshot of the richly complex regional food system. There are countless other individuals and organizations in the region working hard to help our food system thrive today and flourish in the future. You too can play a part! Whether you are a farmer, processor, retailer, policy-maker or consumer, there are innumerable actions you can take to help strengthen the regional food system by increasing access to healthy, local foods for all, supporting small and medium farmers, and protecting agricultural lands. Here are just a few ideas:

## Action Steps

### Individual

Shop at a farmers' market – and talk to the farmers!

Cook local food at home and invite friends to share

Buy local produce, meat and value-added products

Ask your grocer to stock more local food

Take your family to a U-Pick farm

Ask where your food comes from

Join a CSA

### Community

Support a school garden

Visit a local farm, orchard or cider mill

Start or participate in a community garden

Make your farmers' market a festive occasion (live music, cooking demonstrations)

Develop a school fundraiser using locally produced foods

Let your school administrators know that you support healthy food in school lunches

Volunteer with community groups making efforts to create change in the local food system

Get involved as citizen planners to add food systems issues to the local planning agenda

Work with your community of faith to organize a CSA group or host a farmers' market

### Policy

Write to your local and state government officials in support of farm-to-school programs

Collaborate with local government and community groups to establish a farmers' market in your town center

Advocate for funding to build a permanent structure for your farmers' market

Introduce and/or support greenbelt and farmland preservation legislation

Share this document and your ideas with local decision-makers (local and county planners, elected officials, chambers of commerce and public health departments)

# Some Local Food System Resources

## Five-county region

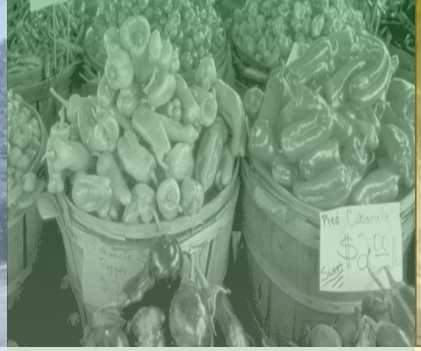
Detroit Agricultural Network: www.detroitagriculture.org
Growing Hope (Ypsilanti): www.growinghope.net
Food System Economic Partnership: www.fsepmichigan.org
MSU Extension Offices Portal: www.msue.msu.edu/portal
Slow Food Huron Valley: www.slowfoodhuronvalley.org
Washtenaw County Public Health: www.ewashtenaw.org/government/departments/public_health

## Michigan

C.S. Mott Group for Sustainable Food Systems: www.mottgroup.msu.edu
Michigan Department of Agriculture: www.michigan.gov/mda
Michigan Integrated Food and Farming Systems: www.miffs.org
Michigan Health Tools: www.mihealthtools.org
Michigan Land Use Institute: www.mlui.org
Michigan Organic Food and Farming Alliance (MOFFA): www.moffa.org
MSU Product Center for Agriculture and Natural Resources: www.aec.msu.edu/product/index.htm

## National

American Farmland Trust: www.farmland.org
The Sustainable Table: www.sustainabletable.org
Community Food Security Coalition: www.foodsecurity.org
Leopold Center for Sustainable Agriculture: www.leopold.iastate.edu
The Food Project: www.thefoodproject.org
Local Harvest: www.localharvest.org
Land Stewardship Project: www.landstewardshipproject.org
Rodale Institute: www.rodaleinstitute.org






## Appendix 8: Producer Survey

**FARM LOCATION (county): _____ ZIP CODE: _____**

1. **Is farming your current full time occupation? (circle one)**

   ☐ Yes
   ☐ No

2. **How many acres do you farm? (circle one)**

   ☐ 1-9 acres
   ☐ 10-49 acres
   ☐ 50-179 acres
   ☐ 180-499 acres
   ☐ 500-999 acres
   ☐ 1000 or more acres

3. **What food product[s] do you sell? (circle all that apply)**

   ☐ Grain
   ☐ Dairy
   ☐ Meats
   ☐ Produce (fruits and vegetables)
   ☐ Other (please specify)_____

4. **To whom do you sell your food? (circle all that apply)**

   ☐ Distributor
   ☐ Processor
   ☐ Consumer
   ☐ Retailer
   ☐ Other (please specify)_____

5. **Where is the buyer of your product[s] located in relation to you? (circle all that apply) Also, please indicate if this is an intermediary.**

   ☐ Within your county (please specify product)_____
   ☐ Within southeastern Michigan (please specify product)_____
   ☐ Within Michigan (please specify product)_____
   ☐ Beyond Michigan (please specify product)_____
   ☐ Not sure

**6. Because agricultural prices and costs of production vary, profitability of raising different crops or livestock changes from year to year. Using your own farm business indicate the overall profitability of the agricultural products that you have produced during the past five years. For example, if over the past five years a particular product generated net income three years, broke even one year, and lost money one year, the grain was profitable overall for the five year period. In this case, check the "Profitable" column for that grain.**

| Agricultural Product | Not Profitable | Break Even | Profitable |
|---|---|---|---|
| **Grain (specific product)_____** | | | |
| **Grain (specific product)_____** | | | |
| **Meat (specific product)_____** | | | |
| **Meat (specific product)_____** | | | |
| **Dairy (specific product)_____** | | | |
| **Dairy (specific product)_____** | | | |
| **Produce (specific product)_____** | | | |
| **Produce (specific product)_____** | | | |
| **Other (specific product)_____** | | | |

**7. What opportunities exist in your community for the direct sale of your product[s]? (circle all that apply)**

- ☐ Farmer's markets
- ☐ Roadside stands
- ☐ "U-pick" farms
- ☐ Institutional buyers
- ☐ Niche direct market (please briefly explain)_____
- ☐ Other (please specify)_____
- ☐ Not sure

**8. Using the scales provided below indicate the degree to which the following factors limits your direct local sales.**

Difficult to find, interact, or correspond with retailers or consumers

(low) 1 2 3 4 5 (high)

Unable to produce sufficient quantity to meet demand

(low) 1 2 3 4 5 (high)

Lack of distribution system for local products

(low) 1 2 3 4 5 (high)

Lack of local processing facilities

(low) 1 2 3 4 5 (high)

Requires too much time

(low) 1 2 3 4 5 (high)

Price premiums paid to farmer

(low) 1 2 3 4 5 (high)

Insufficient demand for local products

(low) 1 2 3 4 5 (high)

**List any additional barriers to your direct local sales.**

**9. Rate your interest level in selling your product[s] directly at the local level?**

(low) 1 2 3 4 5 (high)

**10. In your opinion, do the current markets and farming policies allow for sustained farming viability (circle one)?**

- ☐ Yes
- ☐ No
- ☐ Somewhat

**11. In your opinion, what is the primary factor enabling sustained farming viability? (please briefly describe)**

**12. If you produce grains, please indicate average annual acreage per crop and average annual total bushels per crop in the space provided: (*If you do not produce grain skip to question #16)***

| Grain | Annual Acreage | Tot. Bushels/Yr | Grain | Annual Acreage | Tot. Bushels/Yr |
|---|---|---|---|---|---|
| **Corn** | | | **Spelt** | | |
| **Wheat** | | | **Sunflower** | | |
| **Oats** | | | **Sorghum** | | |
| **Canola** | | | **Other-Please List** | | |
| **Barley** | | | **Other-Please List** | | |
| **Soybeans** | | | **Other-Please List** | | |

**13. If you produce grains, please mark boxes within the table below to describe how you sell the grain. (You may check more than one box per type of grain if you have more than one method of conducting grain sales.)**

| Grain | Elevator | Farm to Farm | Direct to Consumer | Direct to Processor | On-farm Processed to Processor | On-farm Processed to Consumer | Other |
|---|---|---|---|---|---|---|---|
| **Corn** | | | | | | | |
| **Soybeans** | | | | | | | |
| **Wheat** | | | | | | | |
| **Spelt** | | | | | | | |
| **Oats** | | | | | | | |
| **Sunflower** | | | | | | | |
| **Canola** | | | | | | | |
| **Sorghum** | | | | | | | |
| **Barley** | | | | | | | |
| **Other** | | | | | | | |
| **Other** | | | | | | | |
| **Other** | | | | | | | |

**15. Do you currently produce grain that is marketed as "organic"?** Yes___ No___

**14. Using the scales provided below indicate the degree to which you believe the following factors will limit organic grain production in the future:**

Management options for controlling weeds in organic grain production.

(low) 1 2 3 4 5 (high)

Management options for controlling insects in organic grain production.

(low) 1 2 3 4 5 (high)

Management options for controlling diseases in organic grain production.

(low) 1 2 3 4 5 (high)

Yield potential of varieties suitable for organic grain production.

(low) 1 2 3 4 5 (high)

Consumer demand for products made from organic grain.

(low) 1 2 3 4 5 (high)

Grain storage and marketing facilities for organic grain.

(low) 1 2 3 4 5 (high)

Level of price premiums paid to farmers for organic grain.

(low) 1 2 3 4 5 (high)

**15. When you retire, what do you expect to do with your farm and farmland? (circle one)**

- ☐ Sell as farmland
- ☐ Sell for development or another use
- ☐ Pass on to children/relative/friend with intent to continue farming
- ☐ Pass on to children/relative/friend with intent for development or another use
- ☐ Put into land trust
- ☐ Other (please specify)_____

**16. May we contact you if we have any follow-up questions?** ___ Yes ___ No

**17. If yes, please provide us with your name, email address and/or phone number:**

Name:_____

Phone:_____ Email:_____

THANK YOU for completing our survey. Your time and input is very much appreciated!

If you have any questions about this research or the outcomes from this survey, please contact the UM Local Food Master's Project Team at foodsys@umich.edu.

**LOCAL FOOD SYSTEM ASSESSMENT, C/O FOOD SYSTEM ECONOMIC PARTNERSHIP, 705 NORTH ZEEB, P.O. BOX 8645, ANN ARBOR, MI 48107-8645**

## Appendix 9: Processor Survey

**CITY: _____ STATE: _____ ZIP CODE: _____**

1. **What area(s) does your business serve? (Check all that apply)**

- ❑ Washtenaw County
- ❑ Lenawee Co.
- ❑ Monroe Co.
- ❑ Jackson Co.
- ❑ Wayne Co.
- ❑ Other counties in southeastern Michigan
- ❑ Other areas of Michigan
- ❑ Other states

2. **How many employees does your business have? (Check one)**

- ❑ 1-5
- ❑ 6-10
- ❑ 11-20
- ❑ 21-35
- ❑ more than 35

3. **What types of institutions/customers do you serve? (Check all that apply)**

- ❑ Farms-small
- ❑ Farms-medium
- ❑ Farms-large
- ❑ Distributors-small
- ❑ Distributors-medium
- ❑ Distributors-large
- ❑ Grocery stores
- ❑ Restaurants
- ❑ Schools (K-12)
- ❑ Colleges/Universities
- ❑ Hospitals
- ❑ Others: (please list)

_____

For the purpose of the following questions, **LOCAL FOODS** are defined as those grown or produced in southeast Michigan.

4. **What percentage, if any, of the food/food products you process is grown/produced locally?**

- ❑ 0%
- ❑ 1-25%
- ❑ 26-50%
- ❑ 51-75%
- ❑ 76-100%

5. **Over the last five years, this percentage has:**

- ❑ Increased
- ❑ Decreased
- ❑ Remained constant

**6. Have you ever received requests for local foods?** ___ YES ___ NO

*(If no, skip to question 7)*
**If yes:**
**6.1. How often do you get requests for local foods?**

- ❑ Less than once per month
- ❑ 1-5 times per month
- ❑ 6-10 times per month
- ❑ More than 10 times per month

**6.2. What kinds of local food requests have you received?**

- ❑ Produce (fruits and vegetables)
- ❑ Meats
- ❑ Dairy/Cheese
- ❑ Grain/Bread products
- ❑ Other: (please specify) _____

**6.3. What percentage of these requests are you able to satisfy?**

- ❑ 0%
- ❑ 1-25%
- ❑ 26-50%
- ❑ 51-75%
- ❑ 76-100%

**7. Rate your level of interest in working with local producers and distributors to process their food?**

(low) 1 2 3 4 5 (high)

**8. If they were available, what kinds of local foods would you be most interested in processing? (Check all that apply)**

Produce (fruits and vegetables)
(low) 1 2 3 4 5 (high)

Meats
(low) 1 2 3 4 5 (high)

Dairy/Cheese
(low) 1 2 3 4 5 (high)

Grain/Bread products
(low) 1 2 3 4 5 (high)

Others: (please specify) _____
(low) 1 2 3 4 5 (high)

**9. Using the scales below, indicate the degree to which you perceive the following factors as limitations to you increasing the amount of local foods you process?**

Difficult to find, interact, or correspond with local producers
(low) 1 2 3 4 5 (high)

Insufficient demand from distributors to transport local goods
(low) 1 2 3 4 5 (high)

Insufficient demand from retailers to carry local goods
(low) 1 2 3 4 5 (high)

Insufficient demand from consumers for local goods
(low) 1 2 3 4 5 (high)

Requires too much time
(low) 1 2 3 4 5 (high)

Price
(low) 1 2 3 4 5 (high)

Other (please specify)_____
(low) 1 2 3 4 5 (high)

**10. Do you currently process grain products labeled as "organic"?** Yes___ No___

**11. Using the scales below, indicate the degree to which the following factors influence your decision making about processing "organic" grain products:**

Environmental impacts of management practices used to produce organic grains.

(low) 1 2 3 4 5 (high)

Level of price premiums paid to farmers for organic grain.

(low) 1 2 3 4 5 (high)

Taste of products made from organic grains.

(low) 1 2 3 4 5 (high)

Health benefits of products made from organic grains.

(low) 1 2 3 4 5 (high)

**12. May we contact you if we have any follow-up questions?** ___ Yes ___ No

**13. If yes, please provide us with your name, email address and/or phone number:**

Name:_____

Phone:_____ Email:_____

THANK YOU for completing our survey. Your time and input is very much appreciated!

If you have any questions about this research or the outcomes from this survey, please contact the UM Local Food Master's Project Team at foodsys@umich.edu.

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## Appendix 10: Distributor Survey

**CITY: _____ STATE: _____ ZIP CODE: _____**

1. **What area(s) does your business serve? (Check all that apply)**

- ❑ Washtenaw Co.
- ❑ Lenawee Co.
- ❑ Monroe Co.
- ❑ Jackson Co.
- ❑ Wayne Co.
- ❑ Other counties in southeastern Michigan
- ❑ Other areas of Michigan
- ❑ Other states

2. **How many employees does your business have? (Check one)**

- ❑ 1-3
- ❑ 4-9
- ❑ 10-14
- ❑ 15-20
- ❑ more than 20

3. **What types of institutions/customers do you serve? (Check all that apply)**

- ❑ Grocery stores
- ❑ Restaurants
- ❑ Schools (K-12)
- ❑ Colleges/Universities
- ❑ Hospitals
- ❑ Museums
- ❑ Others: (please list) _____

For the purpose of the following questions, **LOCAL FOODS** are defined as those grown or produced in southeast Michigan.

4. **What percentage, if any, of the food/food products you distribute is grown/produced locally?**

- ❑ 0%
- ❑ 1-25%
- ❑ 26-50%
- ❑ 51-75%
- ❑ 76-100%

5. **Over the last five years, this percentage has:**

- ❑ Increased
- ❑ Decreased
- ❑ Remained constant

**6. Have you ever received requests for local foods?** ___ YES ___ NO

*(If no, skip to question 7)*
**If yes:**
**6.1. How often do you get requests for local foods?**

- ❑ Less than once per month
- ❑ 1-5 times per month
- ❑ 6-10 times per month
- ❑ More than 10 times per month

**6.2. What kinds of local food requests have you received?**

- ❑ Produce (fruits and vegetables)
- ❑ Meats
- ❑ Dairy/Cheese
- ❑ Grain/Bread products
- ❑ Other: (please specify) _____

**6.3. What percentage of these requests are you able to satisfy?**

- ❑ 0%
- ❑ 1-25%
- ❑ 26-50%
- ❑ 51-75%
- ❑ 76-100%

**7. Rate your level of interest in working with local producers to distribute their food?**

(low) 1 2 3 4 5 (high)

**8. If they were available, what kinds of local foods would you be most interested in distributing? (Check all that apply)**

Produce (fruits and vegetables)
(low) 1 2 3 4 5 (high)

Meats
(low) 1 2 3 4 5 (high)

Dairy/Cheese
(low) 1 2 3 4 5 (high)

Grain/Bread products
(low) 1 2 3 4 5 (high)

Others: (please specify) _____
(low) 1 2 3 4 5 (high)

**9. Using the scales below, indicate the degree to which you perceive the following factors as limitations to you increasing the amount of local foods you distribute?**

Difficult to find, interact, or correspond with local producers
(low) 1 2 3 4 5 (high)

Insufficient demand from retailers to carry local goods
(low) 1 2 3 4 5 (high)

Insufficient demand from consumers for local goods
(low) 1 2 3 4 5 (high)

Requires too much time
(low) 1 2 3 4 5 (high)

Price
(low) 1 2 3 4 5 (high)

Other_____
(low) 1 2 3 4 5 (high)

**10. Do you currently distribute grain products labeled as "organic"?** Yes___ No___

**11. Using the scales below, indicate the degree to which the following factors influence your decision making about distributing "organic" grain products:**

Environmental impacts of management practices used to produce organic grains.

(low) 1 2 3 4 5 (high)

Level of price premiums paid to farmers for organic grain.

(low) 1 2 3 4 5 (high)

Taste of products made from organic grains.

(low) 1 2 3 4 5 (high)

Health benefits of products made from organic grains.

(low) 1 2 3 4 5 (high)

**12. May we contact you if we have any follow-up questions?** ___ Yes ___ No

**13. If yes, please provide us with your name, email address and/or phone number:**

Name:_____

Phone:_____ Email:_____

THANK YOU for completing our survey. Your time and input is very much appreciated!

If you have any questions about this research or the outcomes from this survey, please contact the UM Local Food Master's Project Team at foodsys@umich.edu.

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## Appendix 11: Retailer Survey

**WHERE IS YOUR BUSINESS LOCATED?**

**CITY: _____ STATE: _____ ZIP CODE: _____**

**1. How would you characterize your business?** ***(check one)***

- ☐ Chain supermarket
- ☐ Independently owned market or supermarket
- ☐ Mass-merchandiser (Wal-Mart, Meijer, etc.)
- ☐ Specialty market (i.e. fish market, meat market, cheese store)
- ☐ Farmers' market
- ☐ Food Co-op
- ☐ Bakery
- ☐ Other _____

**2. How large is your business?** ***(check one)***

- ☐ 1-25 employees
- ☐ 26-50 employees
- ☐ 51-100 employees
- ☐ 100-500 employees
- ☐ More than 500 employees

**3. Annual amount of food products sold?** ***(check one)***

- ☐ $1 - $50,000
- ☐ $50,001 - $100,000
- ☐ $100,001 - $500,000
- ☐ $500,001 - $1,000,000
- ☐ $1,000,001 - $10,000,000
- ☐ More than $10,000,000

**4. Estimated number of customers per week?** ***(check one)***

- ☐ 1 – 200
- ☐ 201 – 500
- ☐ 501 – 1000
- ☐ 1001 – 2500
- ☐ More than 2500

**5. Food purchasing and pricing decisions for this establishment made at the…** ***(check one)***

- ☐ Establishment/store level.
- ☐ Corporate level.

**6. What types of food products are sold at this establishment? *(check all that apply)***

- ☐ Fruits, vegetables, and herbs
- ☐ Meat ,fish, and game
- ☐ Dairy products
- ☐ Bread, flour, and baked good
- ☐ Jams, preserves, honey, and sauces
- ☐ Tinned, packaged, or pre-prepared goods
- ☐ Beverages (alcoholic and soft)
- ☐ Other _____

**7. How would you define a 'locally grown/produced' product?**

For the purpose of the following questions, **LOCAL FOODS** are defined as those grown or produced in southeast Michigan.

**8. What percentage of your store's food inventory is made up of 'locally grown/produced' foods? *(check one)***

- ☐ None *(please skip to Question 10)*
- ☐ 1% – 10%
- ☐ 11% - 25%
- ☐ 26% - 50%
- ☐ 51% - 75%
- ☐ 76% - 100%

**9. What types of 'locally grown/produced' food products <u>are currently sold</u> at this establishment? *(check all that apply)***

- ☐ Fruits, vegetables, and herbs
- ☐ Meat ,fish, and game
- ☐ Dairy products
- ☐ Bread, flour, and baked good
- ☐ Jams, preserves, honey, and sauces
- ☐ Tinned, packaged, or pre-prepared goods
- ☐ Drinks (alcoholic and soft)
- ☐ Other _____

**10. How many requests per month do your customers make for 'locally grown/produced' foods? *(check one)***

- ☐ None
- ☐ 1 – 10
- ☐ 11 – 25
- ☐ 26 – 50
- ☐ More than 50

**11. Using the scale below indicate the degree to which you would be interested in increasing the percentage of 'locally grown/produced' foods in your store?**

(low) 1 2 3 4 5 (high)

**12. Using the scales below, indicate the types of 'locally grown/produced' food products <u>you would like to sell</u> at this establishment?**

Fruits, vegetables, and herbs
(low) 1 2 3 4 5 (high)

Jams, preserves, honey, and sauces
(low) 1 2 3 4 5 (high)

Meat, fish, and game
(low) 1 2 3 4 5 (high)

Tinned, packaged, or pre-prepared goods
(low) 1 2 3 4 5 (high)

Dairy products
(low) 1 2 3 4 5 (high)

Drinks (alcoholic and soft)
(low) 1 2 3 4 5 (high)

Bread, flour, and baked good
(low) 1 2 3 4 5 (high)

Other _____
(low) 1 2 3 4 5 (high)

**13. Using the scales below, indicate the degree to which you perceive the following factors as limitations to your store carrying 'locally grown/produced' foods?**

Connecting with producers
(low) 1 2 3 4 5 (high)

Inconsistent supply/seasonality
(low) 1 2 3 4 5 (high)

Insufficient quantity to meet demand
(low) 1 2 3 4 5 (high)

Transportation and receiving products
(low) 1 2 3 4 5 (high)

Inferior quality
(low) 1 2 3 4 5 (high)

No demand for these types of products
(low) 1 2 3 4 5 (high)

Price
(low) 1 2 3 4 5 (high)

Other _____
(low) 1 2 3 4 5 (high)

**15. Do you currently sell grain products labeled as 'organic'? Products can include a wide range of forms such as flour, oil, baked goods, etc.**

Yes___ No___

**16. Using the scales provided below indicate the degree to which the following factors influence your decisions**
**about selling 'organic' grain products:**

Environmental impacts of management practices used to produce organic grains.
(low) 1 2 3 4 5 (high)

Level of price premiums paid to farmers for organic grain.
(low) 1 2 3 4 5 (high)

Taste of products made from organic grains.
(low) 1 2 3 4 5 (high)

Health benefits of products made from organic grains.
(low) 1 2 3 4 5 (high)

**14. May we contact you if we have any follow-up questions?** ___ Yes ___ No

**15. If yes, please provide us with your name, email address and/or phone number:**

Name:_____

Phone:_____ Email:_____

THANK YOU for completing our survey. Your time and input is very much appreciated!

If you have any questions about this research or the outcomes from this survey, please contact the UM Local Food Master's Project Team at foodsys@umich.edu.

**LOCAL FOOD SYSTEM ASSESSMENT, C/O FOOD SYSTEM ECONOMIC PARTNERSHIP, 705 NORTH ZEEB, P.O. BOX 8645, ANN ARBOR, MI 48107-8645**

**Appendix 12: Consumer Survey**

# Local Food Systems in Southeastern Michigan:
## Consumer Survey

- YOUR PARTICIPATION IS IN THIS SURVEY IS VOLUNTARY.
- IF YOU COME TO A QUESTION YOU DON'T WISH TO ANSWER, PLEASE SKIP IT

Where do you live?

*CITY:* _____ *STATE:* _____ *ZIP CODE:* _____

1. What percentage of food shopping do you typically do for your household? *(Check one response only)*

☐ 0 - 20% ☐ 21 - 40% ☐ 41 - 60% ☐ 61 - 80% ☐ 81 - 100%

2. Please use the table below to indicate how often you purchase or obtain foods from different types of retailers or food sources? (*Check one box for each item)*

| | Several times per week | Once per week | Several times per month | Several times per year | Never |
|---|---|---|---|---|---|
| Grocery store (e.g. Kroger, Busch's, Farmer Jack, Trader Joe's, etc.) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Specialty food store (e.g. Whole Foods, ethnic markets, etc.) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Multi-purpose store (e.g. Meijer, Kmart, Target, etc.) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Community supported agriculture (CSA) farm | ☐ | ☐ | ☐ | ☐ | ☐ |
| Community garden / grow own foods | ☐ | ☐ | ☐ | ☐ | ☐ |

| | Several times per week | Once per week | Several times per month | Several times per year | Never |
|---|---|---|---|---|---|
| Convenience store | ☐ | ☐ | ☐ | ☐ | ☐ |
| Food cooperative | ☐ | ☐ | ☐ | ☐ | ☐ |
| Farmers' market | ☐ | ☐ | ☐ | ☐ | ☐ |
| Farm stand | ☐ | ☐ | ☐ | ☐ | ☐ |
| Other _____ | ☐ | ☐ | ☐ | ☐ | ☐ |

3. What are the top factors you consider most important when purchasing foods?
*(Please rate: 1 = most important, 2 = second most important, 3 = third most important)*

___ Product's taste
___ Product is organic
___ Brand name
___ Supports the local economy
___ Other _____
___ Product's quality
___ Convenience
___ Price
___ Know the farmer
___ Product is nutritious & healthy
___ Variety of products / selection
___ Socially or environmentally friendly
___ Product relates to regional / local identity

4. How often do you purchase "organic" foods? *(Check one response only)*

☐ Always ☐ Frequently ☐ Some of the time ☐ Rarely ☐ Never

5. How often do you think about how & where your food was produced? *(Check one response only)*

☐ Always ☐ Frequently ☐ Some of the time ☐ Rarely ☐ Never

FOR THE PURPOSE OF THE FOLLOWING QUESTIONS, LOCAL FOODS ARE DEFINED AS THOSE GROWN OR PRODUCED IN SOUTHEASTERN MICHIGAN.

6. Please rate the availability of LOCAL foods in your community: *(Check one response only)*

☐ Excellent ☐ Above average ☐ Average ☐ Fair ☐ Poor ☐ Not sure

7. If you purchase LOCAL foods, how frequently do you purchase them during the typical growing season (May to December)? *(Check one response only)*

☐ Several times per week ☐ Once per week ☐ Several times per month ☐ Once per month ☐ Never

8. If you purchase LOCAL foods, how frequently do you purchase them during the off-season (January to April)? *(Check one response only)*

☐ Several times per week ☐ Once per week ☐ Several times per month ☐ Once per month ☐ Never

9. What are the top three places you visit most frequently to purchase or obtain LOCAL foods in your community?
*(Please rate: 1 = most important, 2 = second most important, 3 = third most important)*

___ Grocery store *(Kroger, Busch's, Farmer Jack, Trader Joe's, etc.)*
___ Specialty food store *(Whole Foods, ethnic food markets, etc.)*
___ Multi-purpose store *(Meijer, Kmart, Target, etc.)*
___ Community garden / grow your own foods
___ Community supported agriculture (CSA) farm
___ Convenience store
___ Food cooperative
___ Farmers' market
___ Farm stand
___ Other _____

10. Please list the names of retailers where you purchase LOCAL foods in your community

_____

CONTINUED ON BACK SIDE...

11. In your opinion, what are the top three barriers to purchasing LOCAL foods in your community?
*(Please rate: 1 = most important, 2 = second most important, 3 = third most important)*

___ Products not available
___ Food safety concerns
___ Inconvenient to purchase
___ Not advertised widely
___ Poor taste / quality
___ Other _____
___ Too expensive
___ Poor selection / variety
___ There are no barriers

12. In your opinion, how important is it to have LOCAL foods grown & available for purchase in your community? *(Check one response only)*

☐ Very important ☐ Somewhat important ☐ Neutral ☐ Not very important ☐ Does not matter at all

13. What is the most you are willing to pay for LOCALLY grown or produced food? *(Check one response only)*

☐ Less than the typical retail price for similar items
☐ Equal to the typical retail price for similar items
☐ 10% above the typical retail price for similar items
☐ 25% above the typical retail price for similar items
☐ Greater than 25% above the typical retail price for similar items

14. If it was an option, how often would you select dishes at restaurants or other food service establishments that were prepared with LOCAL foods? *(Check one response only)*

☐ Always ☐ Frequently ☐ Some of the time ☐ Rarely ☐ Never

15. Please use the table below to indicate how frequently you eat products made from different types of grain. Products can include a wide range of forms such as flour, oil, baked goods, etc. (*Check one box for each item)*

| | Daily | Weekly | Monthly | Annually | Never | | Daily | Weekly | Monthly | Annually | Never |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Corn | ☐ | ☐ | ☐ | ☐ | ☐ | Soybeans | ☐ | ☐ | ☐ | ☐ | ☐ |
| Wheat | ☐ | ☐ | ☐ | ☐ | ☐ | Spelt | ☐ | ☐ | ☐ | ☐ | ☐ |
| Oats | ☐ | ☐ | ☐ | ☐ | ☐ | Sunflower | ☐ | ☐ | ☐ | ☐ | ☐ |
| Canola | ☐ | ☐ | ☐ | ☐ | ☐ | Sorghum | ☐ | ☐ | ☐ | ☐ | ☐ |
| Barley | ☐ | ☐ | ☐ | ☐ | ☐ | | | | | | |

16. Do you currently buy grain products labeled as "organic"? *(Check one response only)*

☐ Yes ☐ No

17. Us
"organic" grain products: (*Circle one number for each item)*

| | Weak influence | | | | Strong influence |
|---|---|---|---|---|---|
| Environmental impacts of management practices used to produce organic grains | 1 | 2 | 3 | 4 | 5 |
| Taste of products made from organic grains | 1 | 2 | 3 | 4 | 5 |
| Level of price premiums paid to farmers for organic grains | 1 | 2 | 3 | 4 | 5 |
| Health benefits of products made from organic grains | 1 | 2 | 3 | 4 | 5 |

18. Your age? *(Check one response only)*

☐ 17 or under ☐ 18-34 ☐ 35-64 ☐ 65+

19. Ethnicity *(Please check all that apply)*

☐ African American / Black (not of Hispanic origin)
☐ Asian / Pacific Islander (including the Indian subcontinent)
☐ American Indian / Alaskan Native
☐ Hispanic / Latino (Spanish Culture or origin, regardless of race)
☐ White (Persons not of Hispanic origin, having origins in any of the original peoples of Europe, North Africa, or the Middle East)
☐ Race / ethnicity not included above. Please specify: _____

20. Household income range *(Check one response only)*

☐ Less than $10,000
☐ $10,000 - $14,999
☐ $15,000 - $24,999
☐ $25,000 - $34,999
☐ $35,000 - $49,999
☐ $50,000 - $74,999
☐ $75,000 - $99,999
☐ $100,000 - $149,999
☐ $150,000 or more

21. Number of adults in household (including yourself): _____

22. Number of children (under 18) in household: _____

**Thank you for completing our survey. Your time and input is very much appreciated!**
**If you have any questions about this research or the outcomes from this survey, please contact the UM Local Food Master's Project Team at foodsys@umich.edu.**

Local Food System Assessment, C/O Food System Economic Partnership
705 N. Zeeb Rd., P.O. Box 8645, Ann Arbor, MI 48107-8645

## Appendix 13: FSEP Grain Producer Survey

**Introduction: This survey is being conducted by MSU Extension as part of research on the potential for agricultural economic development related to grain production in southeast Michigan.**

**Thank you for taking time to complete this survey. Results will be tabulated by zip-code. There is no need to provide your name or contact information. We will not track data back to your farm business.**

**Please write your zip code here: _____**

1) **For grains that you produce, please indicate average annual acreage per crop and average annual total bushels per crop in the space provided:**

| Grain | Acres/Bushels | Grain | Acres/Bushels |
|---|---|---|---|
| Corn | | Soybeans | |
| Wheat | | Spelt | |
| Oats | | Sunflower | |
| Canola | | Sorghum | |
| Barley | | Other-Please List | |
| | | Other-Please List | |
| | | Other-Please List | |

2) **Please mark boxes within the table below to describe how you sell grain. You may check more than one box per type of grain if you have more than one method of conducting grain sales.**

| Grain | Elevator | Farm to Farm | Direct to Consumer | Direct to Processor | On-farm Processed to Processor | On-farm Processed to Consumer | Other |
|---|---|---|---|---|---|---|---|
| Corn | | | | | | | |
| Soybeans | | | | | | | |
| Wheat | | | | | | | |
| Spelt | | | | | | | |
| Oats | | | | | | | |
| Sunflower | | | | | | | |
| Canola | | | | | | | |
| Sorghum | | | | | | | |
| Barley | | | | | | | |
| Other | | | | | | | |
| Other | | | | | | | |
| Other | | | | | | | |

**3) Because grain prices and costs of production vary, profitability of raising different grain crops changes from year to year. Using knowledge about your own farm business indicate the overall profitability of grains you have produced during the past five years. For example, if over the past five years a particular grain generated net income three years, broke even one year, and lost money one year and overall the grain was profitable over the five year period, check the "Profitable" column for that grain.**

| Grain | Not Profitable | Break Even | Profitable |
|---|---|---|---|
| **Corn** | | | |
| **Soybeans** | | | |
| **Wheat** | | | |
| **Spelt** | | | |
| **Oats** | | | |
| **Sunflower** | | | |
| **Canola** | | | |
| **Grain** | | | |
| **Sorghum** | | | |
| **Barley** | | | |
| **Other** | | | |
| **Other** | | | |
| **Other** | | | |

**4) Using the table below, indicate which grains you would like to raise in an ideal market, and how you would like to move your grain into the marketplace.**

| Grain | Elevator | Farm to Farm | Direct to Consumer | Direct to Processor | On-farm Processed to Processor | On-farm Processed to Consumer | Other |
|---|---|---|---|---|---|---|---|
| **Corn** | | | | | | | |
| **Soybeans** | | | | | | | |
| **Wheat** | | | | | | | |
| **Spelt** | | | | | | | |
| **Oats** | | | | | | | |
| **Sunflower** | | | | | | | |
| **Canola** | | | | | | | |
| **Sorghum** | | | | | | | |
| **Barley** | | | | | | | |
| **Other** | | | | | | | |
| **Other** | | | | | | | |
| **Other** | | | | | | | |

*If you reported for other grains, please list the grains you were referring to here:

_____ _____ _____

**5) Following are variables that could limit production of other grains in southeast Michigan. Use the scales provided to indicate how much of a barrier each variable is from your perspective. Circle the appropriate number on each scale (1=low barrier, 5=high barrier).**

Soil requirements for raising other grains.

1 2 3 4 5

Local climate's effect on crop growth.

1 2 3 4 5

Availability of production equipment.

1 2 3 4 5

Lack of on-farm handling facilities for harvested grain.

1 2 3 4 5

Labor requirements.

1 2 3 4 5

Availability of production inputs.

1 2 3 4 5

Cost of production inputs.

1 2 3 4 5

Lack of nearby facilities for delivering harvested grain.

1 2 3 4 5

Effects of new crops on current crop rotation.

1 2 3 4 5

Effects of new crops on pest populations.

1 2 3 4 5

Effects of new crops on environmental quality.

1 2 3 4 5

Labor requirements for production of new grain crops.

1 2 3 4 5

Recent price trends for other grains.

1 2 3 4 5

Lack of futures contracts for other grains.

1 2 3 4 5

Neighbor perceptions of raising other crops.

1 2 3 4 5

**6) Using a scale of 1 to 5, with 1 being unlikely and 5 being very likely, indicate your expectations for the following changes over the next ten years in grain markets:**

Federal policies will change in a way that lowers price support for commodity grains.

1 2 3 4 5

Farmers will increase on-farm grain processing to develop goods that are more marketable directly to consumers.

1 2 3 4 5

Over the next ten years farmers will change the grains raised in their crop rotations.

1 2 3 4 5

New businesses will develop in southeast Michigan that will increase conversion of commodity grains into consumer goods.

1 2 3 4 5

**7) Do you currently produce grain that is marketed as "organic"?**
Yes___ No___

**8) Using the scales provided below, with 1 being low and 5 being high, indicate the degree to which the following factors will limit organic grain production in the future:**

Management options for controlling weeds in organic grain production.

1 2 3 4 5

Management options for controlling insects in organic grain production.

1 2 3 4 5

Management options for controlling diseases in organic grain production.

1 2 3 4 5

Yield potential of varieties suitable for organic grain production.

1 2 3 4 5

Consumer demand for products made from organic grain.

1 2 3 4 5

Grain storage and marketing facilities for organic grain.

1 2 3 4 5

Level of price premiums paid to farmers for organic grain.

1 2 3 4 5

**9) Following are examples of consumer products that can be made from grains commonly raised in our region. Please indicate your level of interest in expanded regional processing of grain into these product lines (1=low interest, 5=high interest):**

Fuel for home heating

1 2 3 4 5

Fuel for industrial processes

1 2 3 4 5

Fuel for engines

1 2 3 4 5

Cereal bars

1 2 3 4 5

Flour products

1 2 3 4 5

Edible chips

1 2 3 4 5

Biodegradable plastics

1 2 3 4 5

Cooking oils

1 2 3 4 5

Household/Industrial lubricants

1 2 3 4 5

Livestock feed

1 2 3 4 5

Ingredients for ethnic food menus

1 2 3 4 5

Craft materials

1 2 3 4 5

Alcoholic beverages

1 2 3 4 5

Household/Industrial cleaning products

1 2 3 4 5

Cosmetics/Skin care products

1 2 3 4 5

Lawn Fertilizer

1 2 3 4 5

Bread/Baked goods

1 2 3 4 5

Thank you for completing this survey. Please return your responses in the stamped addressed envelope provided. If you have misplaced the envelope, please return this survey to Mike Score, MSUE. P.O. Box 8645. Ann Arbor, MI. 48107.

Results will be posted on the website for the Food System Economic Partnership. **http://www.fsepmichigan.org/**. If you would like a copy of survey results by mail please request a copy by calling Mike Score, MSUE, at 734-222-3905. MSUE is an affirmative action, equal opportunity institution.


# 2006 Survey

# Potential For Expanding Grain Processing In Southeast Michigan

## Producer Questionnaire
## Funded By Project GREEEN
## And
## The Food System Economic Partnership

**Prepared by: Mike Score, MSUE**
**P.O. Box 8645**
**Ann Arbor, MI. 48107**
**734-222-3905**
**score@msu.edu**

## Appendix 14: Grain Producer Survey Final Report

### FSEP Grain Producer's Survey Report

Overview

In the spring and summer of 2006, the Local Food Master's Project Team in conjunction with the Food System Economic Partnership administered a survey to grain producers within the Southeast Michigan region. Out of the 361 surveys mailed out to grain farmers of the region, 72 responses were received back, including nine responses from Jackson County, 26 responses from Lenawee County, 14 responses from Monroe County, and 17 responses from Washtenaw County. The survey assessed demographics, marketing, and production trends for grain farmers in the region, and also investigated the relationship between the farmer's current production practices and those that they desired to employ. Finally, barriers and possibilities for alternative markets and practices for grain production were evaluated.

*Results of the Survey*

Grain Production in the Region

Grain producer survey respondents reported the following:

- Primary crops grown in the region were corn, soybeans, and wheat.
- Farm size ranged from 24 to 5,200 acres. Average farm size was 645 acres.
- 96% of respondents used conventional grain farming methods, while 4% followed organic practices.
- 68% of grain farmers reported profits over the last five years, 22% reported that they broke even, and 10% ran a deficit.

Grain Marketing Methods: Actual and Desired

Farmers were asked to identify the grains that they produced and how they brought them to market. In a follow up question, farmers were asked indicate which grains they desired to grow in an "ideal market", and how they would bring these to market. These results showed that:

*Actual:*

- Currently about 74% sell their grain through a grain elevator.
- Slightly less than 10% reported selling grain directly to a processor.
- Slightly less than 3% reported selling grain directly to a consumer.

*Desired:*

- Over half of the farmers using a grain elevator said that they would prefer not to.
- About 50% of potential corn farmers, 37% of soybean farmers and 32% of wheat farmers reported a desire to sell directly to a processor.
- About 10% wanted to sell directly to consumers.

Using a Wilcoxon Signed Ranks Tests, the above shifts in actual verses desired marketing methods were found to be all highly significant statistical findings (sig=.000 in all cases).

Opportunities and Barriers in Alternative Grain Production

The grain producer survey assessed the barriers and opportunities for alternative markets, practices, and grain production. In the survey, it was found that some farmers did want to grow grains other than corn, soybeans, and wheat. It was found that:

- Slightly over 10% reported a desire to grow grains other than corn, soybeans, and wheat, an increase from the 4% who actually grown them.
- Most noted alternatives to these commodity grains were oats, spelt, barley, and canola.

Farmers were asked to report which barriers limit the production of "other" grains (grains other than the commodity crops of corn, wheat, and soybeans). 15 barrier options were given and the farmers were asked to rank them on a 1 to 5 scale where 1 was a "low barrier" and 5 was a "high barrier". For this question, the barriers to marketing alternative grains were rated in the following fashion from highest barrier to lowest barrier:

- Cost of production inputs (mean=3.62, st. dev.=1.14)
- Lack of near-by facilities for delivering harvested grains (mean=3.32, st. dev.=1.43)
- Recent price trends for other grains (mean=3.09, st. dev.=1.08)
- Local climate's effect on crop growth (mean=3.07, st. dev.=1.20)
- Lack of future contracts for other grains (mean=3.06, st. dev.=.1.22)
- Lack of on-farm handling facilities for harvested grain (mean=3.04, st. dev.=1.45)

- Labor requirements (mean=2.93, st. dev.=1.26)
- Labor requirements for production of new grain crops (mean=2.85, st. dev.=1.09)
- Effects of new crops on pest populations (mean=2.69, st. dev.=1.08)
- Effects of new crops on current crop rotation (mean=2.63, st. dev.=1.17)
- Soil requirements for raising other grains (mean=2.54, st. dev.=1.25)
- Effects of new crops on environmental quality (mean=2.52, st. dev.=1.07)
- Availability of production equipment (mean=2.43, st. dev.=1.22)
- Availability of production inputs (mean=2.40, st. dev.=1.21)
- Neighbor perceptions of raising other crops (mean=1.93, st. dev.=1.16)

Farmers were also asked to rate factors that limit organic grain production in the future. Seven options were given and the farmers were asked to rank them on a 1 to 5 scale where 1 was a "low factor" and 5 was a "high factor". For this question, the highest to lowest rated factors influencing organic grain production were:

- Management options for controlling weeds in organic grain production (mean=4.28, st. dev.=.94)
- Management options for controlling insects in organic grain production (mean=4.02, st. dev.=1.01)
- Management options for controlling diseases in organic grain production (mean=3.83, st. dev.=1.03)
- Level of price premiums paid to farmers for organic grain (mean=3.61, st. dev.=1.08)
- Yield potential of varieties suitable for organic grain production (mean=3.57, st. dev.=1.29)
- Grain storage and marketing facilities for organic grain (mean=3.15, st. dev.=1.22)
- Consumer demand for products made from organic grain (mean=2.83, st. dev.=1.24)

Farmers were asked to indicate their expectations over the next ten years for grain markets on a 1 to 5 scale where 1 was an "unlikely change" and 5 was a "very likely change". Out of four options, farmers reported that:

- Federal policies will change in a way that lowers price support for commodity grains

(mean=3.93, st. dev.=1.20)

- New businesses will develop in SE Michigan that will increase conversion of commodity grains into consumer goods (mean=3.37, st. dev.=.99)
- Over the next ten years farmers will change the grains raised in their crop rotations (mean=2.88, st. dev.=.96)
- Farmers will increase on-farm grain processing to develop goods that are more marketable directly to consumers (mean=2.86, st. dev.=1.02)

Opportunities for Grain Products

When asked to rate interest in potential grain based products, farmers rated all 17 options highly. The mean scores for the 17 options ranged from 3.00 to 4.57 on a 1 (low interest) to 5 (high interest) scale. The following table provides the N number, minimum and maximum scores received, and the overall means and standard deviation for each product.

Table 1: Chart of Interest in Grain Based Products for Grain Survey

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Fuel for home heating | 68 | 1 | 5 | 4.44 | .780 |
| Fuel for industrial processes | 69 | 1 | 5 | 4.28 | .968 |
| Fuel for engines | 70 | 1 | 5 | 4.57 | .791 |
| Cereal bars | 69 | 1 | 5 | 3.48 | 1.171 |
| Flour products | 69 | 1 | 5 | 3.57 | 1.078 |
| Edible chips | 69 | 1 | 5 | 3.52 | 1.208 |
| Biodegradable plastics | 69 | 1 | 5 | 4.14 | 1.033 |
| Cooking oils | 69 | 1 | 5 | 4.17 | .999 |
| Household/Industrial lubricants | 69 | 1 | 5 | 3.93 | 1.155 |
| Livestock feed | 68 | 1 | 5 | 4.07 | 1.124 |
| Ingredients for ethnic food menus | 67 | 1 | 5 | 3.45 | 1.294 |
| Craft materials | 67 | 1 | 5 | 3.13 | 1.290 |
| Alcoholic beverages | 68 | 1 | 5 | 3.00 | 1.425 |
| Household/industrial cleaning products | 68 | 1 | 5 | 3.57 | 1.250 |
| Cosmetics/Skin care products | 68 | 1 | 5 | 3.51 | 1.228 |
| Lawn Fertilizer | 68 | 1 | 5 | 3.72 | 1.244 |
| Bread/Baked goods | 69 | 1 | 5 | 3.75 | 1.181 |

Economic Opportunities in Southeastern Michigan

Based on the information gathered in the grain survey, FSEP has identified four primary opportunities for grain production, processing, and marketing:

- Promote increase in organic production through education about organic management practices
- Develop new grain processing facilities
- Increase direct marketing for local grain
- Develop new grain products

## Appendix 15: FSEP Project GREEEN Report

GREEEN Project Recap and Impacts:

The FSEP local grain research project involved the development, distribution, and analysis of surveys administered to grain producers and consumers within a five county region of Southeastern Michigan. The producer survey assessed demographics, marketing, and production trends for farmers in the region and investigated the relationship between farmers' current production practices and those that they desired to employ. Consumer surveys looked at demand for locally produced agricultural products, including specific queries about grains and organic goods. Finally, FSEP evaluated barriers and possibilities for alternative agricultural markets and practices. Grant money supported the material and labor costs of the development of the survey, the mailing and distribution of the survey, and the data entry and statistical analysis of the report.

Information gathered from the survey revealed important findings for local grain production, processing, and marketing. Marketing trends, both current and desired, showed some highly significant findings. While 74% of grain farmers currently sell their crop to an elevator, over half of the farmers using the elevator said that they would prefer not to. About 50% of potential corn farmers, 37% of soybean farmers and 32% of wheat farmers reported a desire to sell directly to a processor. Meanwhile, about 10% want to sell directly to consumers. These are highly significant changes from the current marketing practices.

The research also exhibited opportunities for alternative grain production. Over 10% of the producers reported a desire to grow grains other than corn, soybeans, and wheat. Some examples of alternatives included oats, spelt, barley, and canola. This desire to produce alternative grains corresponds with a finding in the consumer survey for a significant demand for locally produced grain-based goods, including products made from oats and canola. The primary barriers to alternative grain production includes cost of production inputs, lack of near-by facilities for delivering harvested grains, and recent price trends for other grains.

In general, there was a strong consumer demand for local agricultural goods. However, the barriers consumers cited to their consumption of local products are that the products are not available in their communities and that local goods are not advertised widely.

A considerable consumer demand for locally produced organic products did not equally meet up with the farmer desire to produce organic goods. Cited barriers to organic production from producers included weed mitigation, insect management, and disease control. These findings may provide an opportunity for education of local producers about organic management practices.

The survey showed farmers' desire to produce alternative grain-based products such as fuels, industrial lubricants, cooking oils, and livestock feed.

Based on the information gathered in the survey, FSEP identified five primary opportunities for grain production, processing, and marketing:

1. Develop new locally-based grain processing facilities
2. Increase direct marketing and advertising for local grain and agricultural products
3. Promote an increase in organic production through education about organic management practices
4. Develop new locally-produced grain products
5. Encourage retailers to carry locally produced goods

## Appendix 16: Leadership Team Survey

**Suggested Questions**

*[Morale & Involvement]*

**Indicate the degree to which you agree with the statement.**

I feel motivated by the FSEP mission

*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

FSEP is creating change in the local food system

*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

FSEP has the potential to create (more) change in the local food system

*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

I would rate my level of motivation to work on FSEP-related projects …

*(high) 5* *4* *3* *2* *1 (low)*

How many of the Leadership Team meetings have you attended over the last year?

*All* *Most* *Half* *less than half* *Few to none*

On average, I devote about _____ *(number)* of hours per week to FSEP activities.

Ideally, I would spend _____ (*number)* hours per week on FSEP activities.

Which working group(s) are you involved in?

To what extent do you feel you could describe the work of each of the working groups?

| | | | |
|---|---|---|---|
| Research and Technology | *Very wellWell* | *Somewhat well* | *Not at all* |
| Education/Outreach | *Very wellWell* | *Somewhat well* | *Not at all* |
| Farm to School/Demonstration | *Very wellWell* | *Somewhat well* | *Not at all* |

*[Organizational structure, mission, plan]*

I can clearly articulate FSEP mission

*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

FSEP has a clear strategic plan

*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

FSEP adheres to its strategic plan in its efforts

*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

*[Organizational functions & administration]*

FSEP has created agreed-upon measures of program success

*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

FSEP has a clearly defined plan for involving new partners

*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

I am satisfied with FSEP's plan for involving new partners
*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

The FSEP process promotes new opportunities for partnership and collaboration in the local food system
*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

The Board of Directors understands the mission of the organization
*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

The Board of Directors is working to help FSEP achieve its mission.
*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

The Board of Directors is an effective governing board
*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

*[Effectiveness]*
Rate the effectiveness of FSEP Leadership Team meetings for advancing FSEPs goals and mission
*(very effective) 5* *4* *3* *2* *1 (not at all effective)*

Leadership team meetings are well-planned
*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

Leadership team meetings are well-facilitated
*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

Leadership team meetings are motivating
*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

I learn a lot about other projects at leadership team meetings
*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

*[Communication]*
Rate the effectiveness of the FSEP website for communicating FSEPs goals and mission to others
*(very effective) 5* *4* *3* *2* *1 (not at all effective)*

Rate the effectiveness of the FSEP wiki site as a useful medium of communication among FSEP members
*(very effective) 5* *4* *3* *2* *1 (not at all effective)*

Communication among FSEP LT members is open and effective
*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

Overall, FSEP LT members follow through on their commitments
*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

In general, the FSEP LT works well together
*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

The products of FSEP's work (reports, conferences, etc.) are widely distributed
*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

## Appendix 17: Leadership Team Individual Interview Questions

*Estimated time: 20-30 minutes*

**Suggested Questions**

What is FSEP's mission?

In your opinion/own words, what are the primary goals of FSEP?

*[Interviewer repeats the goals s/he heard]*
To what extent is the organization meeting/making progress on (each of) those goals?
*[Assess each articulated goal; use a scale:*

*G1*_____ *no progress* *progress* *substantial progress*

*G2:* _____ *no progress* *progress* *substantial progress*

*G3:* _____ *no progress* *progress* *substantial progress*

*G4:* _____ *no progress* *progress* *substantial progress*

In your view, what are the most important accomplishments of FSEP to date? Over the last year?

*Follow-up questions*

If any of the progress on these goals is not satisfactory, what are/were some of the impediments or challenges? [What inhibited progress on the goals?]

What suggestions would you make to overcome these challenges/impediments?

How much time do you anticipate the group will need to make substantial progress on this goal?

How do you see your role in FSEP? What is the primary focus of your FSEP work?

About how many hours per week (or month) on average do you spend on FSEP-related activities?

Ideally, how many hours per week (or month) would you spend?

To what extent does your primary job align with your FSEP work?

*Not at all* *very little* *somewhat* *very closely*

What is the most exciting thing about FSEP?

What do you see as the priorities for the coming year?

What would you like to change about FSEP?

## Appendix 18: Working Group Interview Questions

*Estimated time: 30-40 minutes*

*Ideally, each working group would produce a list of goals by mid-February, which will allow the evaluator to tailor questions to assess the extent to which the group is meeting its self-identified goals.*

**Suggested Questions**

Do you have a working group mission? *Yes* *No*

If so, please articulate it.

What were your group's goals for the past year?

How were your group's goals defined/developed/identified?

To what extent is your group making progress on each of these goals?

*G1*_____ *no progress* *progress* *substantial progress*

*G2:* _____ *no progress* *progress* *substantial progress*

*G3:* _____ *no progress* *progress* *substantial progress*

*G4:* _____ *no progress* *progress* *substantial progress*

Please give some examples of how your working group's work furthers the goals of FSEP?

What do you see as the most important/significant accomplishments of your group to date?

In the last year? Challenges?

What aspect of your group's work are you most excited about?

How well do the members of your group work together?

*Extremely well* *Very wellWell* *Somewhat well* *Not well*

How would you characterize the level of communication?

*Excellent Great* *Good* *Fair* *Poor*

If you see room for improvement in communication, what suggestions do you have?

What do you see as the priorities for your working group in the coming year?

What would you like to change about FSEP?

*[Some questions may need to be adjusted to accommodate for the group interview setting.]*

## Appendix 19: Client/Stakeholder Survey

**Suggested Questions**

Which sector(s) of the food system do you represent/identify with? (Check all that apply.)

- ❑ Consumer
- ❑ Retailer
- ❑ Restaurateur
- ❑ Distributor/Broker/Wholesaler
- ❑ Processor
- ❑ Producer/Grower/Farmer

**Indicate the extent to which you agree with the following statements?**

FSEP has a clearly defined mission

*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

As a stakeholder/client, I can articulate FSEP's mission, goals and projects.

*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

As a stakeholder/client, I support FSEP's mission, goals and projects.

*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

FSEP's has a well-defined strategic plan

*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

FSEP adheres to its strategic plan

*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

FSEP promotes collaboration and partnership among various players/sectors of our food system

*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

FSEP is influencing positive change in the local food system.

*Strongly Agree* *Agree* *Neutral* *Disagree* *Strongly Disagree*

Using the scale, how would you characterize your interactions/partnership with FSEP?

*Very positive* *Positive* *Neutral* *Negative* *Very Negative*

How would you characterize the magnitude of FSEPs impact on the local food system, **<u>to date</u>**?

*(Substantial) 1* *2* *3* *4* *5 (Minimal to none)*

How would you characterize the magnitude of FSEP's **potential** impact on the local food system?

*(Substantial) 1 2 3 4 5(Minimal to none)*

Please give a few reasons for this appraisal.

Which relevant groups/food system actors do you feel FSEP represents?

Which groups, if any, are **not** represented?

Which groups, if any, are **over** represented?

Briefly describe the nature of your interactions/work with FSEP.

During what period did you work with FSEP?
*Approximate start date:* *Approximate end date:*

Would you work with FSEP again in the future?
*Yes* *No*

If so, elaborate on any particular kinds of projects/initiatives?

Would you recommend FSEP as a potential partner to other local food system-related endeavors?
*Yes* *No*

If you answered 'Yes,' what kinds of entities would you recommend to FSEP?

If you answered 'No,' why not?

**Please add any additional comments about your work with FSEP.**

Occupation and/or Affiliation:

## Appendix 20: Outside Observer/Expert Interview Questions

*Estimated Time: 30 minutes*

**Suggested Questions**

In what capacity, if at all, have you interacted with FSEP?

Do you feel FSEP has a clearly defined mission? *Yes* *No*

How would you articulate FSEP's mission?

In your opinion, what are FSEP's primary goals and projects?

Which of these goals or projects do you feel has the potential to have the greatest impact on the local food system?

Do you feel FSEP has a well-defined strategic plan? *Yes* *No*

Why or why not?

To what extent do you think FSEP adheres to its strategic plan?

To what extent do you feel FSEP promotes collaboration and partnership among various players/sectors of our food system?

Does FSEP appropriately represent all of the relevant groups/food system actors?
Which, if any, groups are not represented?
Which, if any, groups are over represented?

What do you think FSEP is doing well? What are FSEPs strengths? *[as an organization, in its work]*

What other projects do you think FSEP should/could be engaged in? *or, in particular* What else can/should FSEP do to further its mission?

Where do you see FSEP going in the next 10 years? **[**What is it going to take to get there?**]**

Is there anything else you would like to add?

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