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Farmers Markets and the Local Food System: The Case of Gettysburg, Pennsylvania

Paul A. Di Salvo
Gettysburg College

Claire Quinn
Gettysburg College

Robin Arnold
Gettysburg College

Caroline Clark
Gettysburg College

Suzanne Englot
Gettysburg College

See next page for additional authors

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In order to examine and obtain a better understanding of the local food system within Adams County, Pennsylvania, this study explores the characteristics and perspectives of the customers and vendors at the farmers markets in Gettysburg, Pennsylvania. Survey findings from the Gettysburg Farmers Market and the three Adams County Farmers Markets include customer demographic information, perspectives and shopping behavior as well as vendor product information, farm size and location and preference for market management. Introductory background information on the Farm Bill and the influence of agricultural practices on the environment, human health and nutrition and the relationship between farmers markets and the local economy are offered in order to emphasize the value of a well-managed local food system. Conclusions provide evidence that lower income and lower education levels are not sufficiently represented at all the markets and food stamp programs are being underutilized. This study suggests employing additional marketing to target underrepresented demographic groups, public transportation to potentially inaccessible market locations and increased advertisement and encouragement of food stamp programs at all markets in order to expand the customer base and increase access to healthy, local foods for less advantaged citizens. The results from this study are intended to offer evidence that will promote and facilitate market management, strengthen customer/vendor relationships and encourage better ties between the local community and local food systems at the farmers markets within Gettysburg in Adams County, Pennsylvania.

Keywords

farmers markets, farmers, markets, Gettysburg, customers, vendors, survey, community, local food system

Disciplines

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Comments

This is a joint project created by the students of the Fall 2012 Environmental Studies Senior Seminar Class at Gettysburg College.

Authors

Paul A. Di Salvo, Claire Quinn, Robin Arnold, Caroline Clark, Suzanne Englot, Andrew Mello, Julia P. Mitchell, Emily Ruhl, Rebecca Taormina, Cashin Conover, Valerie Leone, Michael Mattaini, William Patton, Elizabeth Rouillard, Nicholas Smith-Herman, Jordan Swenson, Kelly Webster, Brian Wooldredge, and Randall K. Wilson

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Photos by Paul Di Salvo

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Abstract

In order to examine and obtain a better understanding of the local food system within Adams County, Pennsylvania, this study explores the characteristics and perspectives of the customers and vendors at the farmers markets in Gettysburg, Pennsylvania. Survey findings from the Gettysburg Farmers Market and the three Adams County Farmers Markets include customer demographic information, perspectives and shopping behavior as well as vendor product information, farm size and location and preference for market management. Introductory background information on the Farm Bill and the influence of agricultural practices on the environment, human health and nutrition and the relationship between farmers markets and the local economy are offered in order to emphasize the value of a well-managed local food system. Conclusions provide evidence that lower income and lower education levels are not sufficiently represented at all the markets and food stamp programs are being underutilized. This study suggests employing additional marketing to target underrepresented demographic groups, public transportation to potentially inaccessible market locations and increased advertisement and encouragement of food stamp programs at all markets in order to expand the customer base and increase access to healthy, local foods for less advantaged citizens. The results from this study are intended to offer evidence that will promote and facilitate market management, strengthen customer/vendor relationships and encourage better ties between the local community and local food systems at the farmers markets within Gettysburg in Adams County, Pennsylvania.

Introduction

"From a civic perspective, agriculture and food endeavors are seen as engines of local economic development and are integrally related to the social and cultural fabric of the community"

(Hinrichs & Lyson, 2007, chapter 1). The establishment of farmers markets has the potential to influence the dynamics of the local food system and solve some of the issues raised with conventional agriculture problems.

Farmers markets provide a unique opportunity for a customer to obtain fresh, locally-produced items while interacting closely with the product vendor. In addition, farmers markets provide a multi-dimensional experience, which impacts the local economy, builds community, promotes environmental consciousness, and supports healthy nutrition. These principles of direct-to-consumer local systems are the foundation that governs operations of the two farmers markets in Gettysburg in Adams County, Pennsylvania.

This study seeks to provide a better understanding of the customer base as well as the characteristics and viewpoints of vendors in the Gettysburg Farmers Market and the three Adams County Farmers Markets (Appendix A). In particular, the identities, perspectives and shopping behavior of customers who frequent the market are examined. In addition, the vendors were explored in terms of products sold, size and location of farms and preference for market management. The intent is to provide information that will promote and facilitate market management, strengthen customer/vendor relationships and encourage better ties between the local community and local food systems. This was done in conjunction with the Pennsylvania State University Extension at the Gettysburg Agricultural Center in order to provide tangible results and proliferate future market success.

In this report, a background literature review explains the importance of the Farm Bill to the evolution of the local food system, the impact of agriculture on the environment, the influence of food sources on human health and nutrition, and how the food system affects the local economy through socioeconomic factors. In addition, a detailed background of agricultural practices in Adams County will be provided. Surveying done at the Gettysburg farmers markets provides a case study, which demonstrates the influences that the food system plays.

The Evolution of the Local Food System: A History of the Farm Bill

One of the major obstacles to the success of local food systems, including Farmers Markets, is the United States farm bill. Created in 1965, the Food and Agriculture Act was the first of ten farm bills meant to federally regulate agriculture and food policy, overseen by the United States Department of Agriculture. With titles on international trade, food safety and security, public health, livelihood of rural communities, and environmental conservation, farm bills impact many areas of American life. Traditionally, the farm bill has been geared toward the needs of conventional agricultural producers, which has led to a number of ecological, socioeconomic, and wellness concerns. However, more recent farm bills include a number of provisions that shift support toward a nation of civic agriculture where local communities can flourish.

The most recent farm bill, the Food, Conservation and Energy Act of 2008, passed by the Bush Administration, had several key additions that affect the livelihood of farmers markets. The Farmers Market Promotion Program assists rural communities with funds to increase access to and marketing for farmers markets, as well as make it easier for communities to start new markets. The Community Food Project was developed to promote community self-reliance and access to local produce in low-income areas.

The 2008 farm bill continued several programs that help preserve viable farmland and small farms to remain competitive. Included was a $4 billion increase in the Conservation Security Program, which encourages farms to enhance on-site natural resources such as soil, water and air. This program, started with the 1985 farm bill, was meant to address conservation concerns that arose from agricultural expansion and production. It helped 37 million acres be enrolled in the Conservation Reserve Program, which incentivizes for farmers to idle land. Also included in this bill were provisions to preserve wetlands and grasslands along with threats to withdraw federal payments if landowners backed out of these agreements. Since 1985, the Conservation Reserve program has grown to include the Wetland Reserve Program, Wildlife Habitat Incentive Program and Environmental Quality Incentive Program, which all target critical habitats for restoration and for clean air and water while promoting organic farming principles (Imhoff, 2012).

Other new or expanded initiatives include permanent disaster assistance and crop insurance programs, which reserve money from the farm bill to give to farmers who experience crop damage during natural disasters and the resulting decline in price for certain agricultural commodities. However, this money is usually for large conventional farmers with weak monoculture systems that are easily susceptible to these forces, leaving smaller farmers out of the program.

Unfortunately, programs like the Conservation Reserve Program face constant opposition from other Farm Bill initiatives that incentivize conventional producers. In recent years these have been programs supporting the development of biofuels, tax breaks for ethanol producers, and the Average Crop Revenue Election (ACRE) that help pay farmers if their revenue is less than the target price. Such programs help pay large conventional farms that continue to reap the benefits of commodity subsidies as well. (Imhoff, 2012).

The Conservation Reserve Program in particular was an effective program until corn ethanol demand spiked and surpluses remained, keeping global commodity prices low. The argument that Farm Bill subsidies for ethanol support local farmers is misguided, at best.

Currently, close to 80% of ethanol plants are absentee-owned operations that rely on federal supports and take market share from smaller farms through mergers and acquisitions (Imhoff, 2012). This industrial agricultural model, which has proven environmental and human health effects, receives the bulk of legislative support in the Farm Bill, while a civic model of agriculture is only accounted for in a handful of initiatives.

While the 2008 farm bill was allowed to expire September 30, 2012, proposals for the newest farm bill contain certain measures that look promising for a nation of civic agriculture. These include the repeal of ACRE, an end to direct-to-farm payments, and removal of commodity entitlements for millionaire farmers. Unfortunately, the current political climate gives low priority to passing a timely farm bill, which may not occur until well into 2013. If civic agriculture, including farmers markets are to prosper they will need the support of a focused, progressive farm bill, which the proposed 2012 version may provide.

Agriculture and the Environment

In terms of ecological impacts of agriculture, some of the most profound impacts derive from conventional agriculture. Soil degradation, water pollutants, and greenhouse gas emissions all evolve from not only agriculture's dependence on oil, but also our current system and the processes required for the large scale mass production of our food. The various ways in which the conventional agriculture system impacts our ecosystem can be mitigated through a shift to local food systems as the suppliers of our food.

Starting from the roots, soil is impacted by conventional agriculture systems that use monoculture farming techniques. The long-term cultivation of one major crop on one plot of land will deprive the soil of organic matter and carbon dioxide. Ultimately, without a polyculture technique which is often used in local growing systems, soil will become less nutritious and will erode due to the more shallow roots of annuals (Hinrichs & Lyson, 2007; Imhoff, 2012). Soil degradation is further caused by the compaction from heavy farming machinery and highly concentrated livestock production. The overuse of fertilizers, loss of water holding capacity from tillage, and deforestation for new farmland has diminished soil health (Lang et al., 2009). With the inability to retain water, the water input is quickly lost through runoff.

Most farms will regularly replenish their soils with fertilizers and preserve their crops with pesticides and herbicides, and runoff from the soil will head into the water supplies and has the potential to lead to contamination. Often, larger conventional farms have no other means to manage weeds, insects, and pathogens on their crops except with pesticides. These pesticides may slow the process of soil loss, but they insert nitrates, phosphates, and bacteria into water channels. Leaching of these pesticides and fertilizers into the groundwater system results in excessive levels of nitrogen in the water that leads to the growth of plants and algae that absorb oxygen in the water (Lang et al., 2009). This process, known as eutrophication, decreases the amount of available oxygen for the other organisms in the water, killing them and decreasing the overall biodiversity within the ecosystem. Water is also wasted throughout the post-farming processes, from the processing of the crops to the packaging of the final product.

The driving force behind conventional agriculture is oil. The oil is used in the production of inorganic pesticides and fertilizers, as well as fuel for farming equipment and product distribution. Oil is used by processing mills and manufacturing plants as their source of energy (Lang et al., 2009). From the production of the fertilizer to the distribution of the food, we see one thing in common, and that is the oil used and the carbon and nitrogen emissions that derive from the consumption of this oil. Global climate change is a threat to our current ecosystem and is perpetuated by the increasing concentration of greenhouse gasses in our atmosphere. Carbon dioxide and nitrous oxides are both major greenhouse gasses, and as mentioned before, they are emitted throughout the conventional agriculture process.

In contrast, local systems (including Farmers Markets) attempt to, and in some cases can, ameliorate the problems from conventional agricultural systems. Again, we return to the argument at hand of monocultures and polycultures in terms of biodiversity. There are vanishing crops and breeds of the common foods that we eat that can grow fastest and have the highest chances of production. Monoculture systems inherently have a reduced biodiversity, but one must keep in mind that these farms are not devoid of other creatures. They once provided habitat to creatures in areas such as wetlands and forest that was cut down to produce farms.

Farmers Markets are a local alternative to these damaging conventional systems. They can help remedy these impacts of conventional agriculture by selling unprocessed food produced with alternative farming techniques which minimize the use of fertilizers and pesticides and land degradation. However, it remains to be seen if the smaller scale agricultural techniques can not only exist without significant machinery but also provide for all those in the area and if they can address all concerns about the environment when in many locations they are not permanent year round. These ecological impacts are ways that conventional and local agriculture impact the environment but so too do they impact human health.

Local Food Health and Nutrition

Nutrition and food security are two common problems associated with the modern food system. However, studies have shown several ways in which integrating local food markets into the current system could help to moderate these issues. The first issue being addressed is food security.

"Food desert" is a term used to represent more than just areas with limited food access. In the United States especially, a "food desert" commonly describes areas that have limited access to healthy and affordable foods, specifically from supermarkets and super-centers. In many areas in the rural U.S., food deserts have been overlooked and disregarded as issues because policy makers have neglected to recognize that although these areas may have access to food, the quality of that food may be nutritionally substandard. Because food deserts are typically located a long way from a supermarket or super-center, food desert residents usually rely on convenience stores and fast food restaurants to feed themselves. Although this type of food may be readily available to food desert residents, foodstuffs from these types of retailers are generally more expensive and less nutritious than food that could be purchased from large chain supermarkets. Additionally, the variety of food is usually much more limited and may present a barrier to residents attempting to adopt healthier eating habits.

Food deserts are created by stationing a major food retailer that eventually runs smaller, widely distributed stores out of business, which typically results in the large retailer being the only available source of cheap, nutritious food for a great distance. Food deserts started to arise in the United States gradually over the last thirty years with the globalization of food production and distribution. This process created a situation where a small number of corporations now control the majority of food sales; businesses such as Wal-Mart, Target, Sam's Club, and several others are examples of these corporations. Because these large companies have the power and ability to mass produce food products, their prices are customarily lower than food available at small, local grocers. Therefore, the introduction of a large food retailer in a rural area can have a seriously negative impact on small retail establishments and the local economy. This process has caused a major decline in the number of grocery stores throughout the U.S., leaving communities with no local food source and forcing them to drive great distances or purchase expensive, poor quality food from other types of food retailers. A study of U.S. food deserts found that in food deserts across the continental United States, small grocers with expensive products, fast-food restaurants, and gas and convenient stores were more prevalent than in non-food desert counties (Blanchard & Matthews, 2007). These negative effects of large retailers are compounded in nonmetropolitan areas, where public transportation is usually lacking. Additionally, many residents living at or below the poverty line in rural areas may not own vehicles, and therefore do not even have the option of traveling to purchase cheaper food from a large retailer.

Food deserts are fast becoming a public health and economic issue in the U.S., as they may compound ongoing and severe nutritional problems and further intensify the socioeconomic gradient in health status in these areas. Health problems that could result from living in a food desert, such as diabetes and obesity, may increase public health care expenditures through insurance and hamper economic development of rural areas.

One simple solution to solving these health and food security issues is through supporting local food systems in rural areas, such as farmers markets, as they provide local foods at a reasonable price (Blanchard & Matthews, 2007). To support this claim, a study introduced a farmers market into a previously established food desert (Larsen & Gillard, 2009). Through analyzing the previously available food items and their prices, the study found that the implementation of this market introduced food to this area that was both healthier and less expensive than it had formerly been. Examples of such foods include grapes, celery, and broccoli. This study demonstrates why farmers markets are so valuable to food desert areas, both nutritionally and economically.

Unfortunately, it has been demonstrated that fruit and vegetable markets, such as farmers markets, were typically absent in food desert counties (Blanchard & Matthews, 2007). According to Lang et al. (2009), food deserts may compound ongoing and severe nutritional problems for their residents. In this day and age, both within and outside of food deserts, more people globally suffer overweight and obesity than hunger. It has been argued that many of these health issues have been the result of cheap food created in mass quantities that typically lacks positive nutritional qualities. This cheap food, which is readily available at large chain supermarkets and super-centers, is the result of government subsidies on corn and soybeans, which allows for the production of high quantities of many different types of processed, and often poor quality, foods. While effects may vary between people, typically the frequent consumption of processed foods may lead to health-related illnesses, such as diabetes. In fact, even in developing countries, slight economic advancement can lead to changes in diet, which may in turn lead to the rapid onset of diabetes, even in the poorest communities.

Despite these widespread epidemiological transitions, policy-makers have been all too passive when it comes to cracking down on America's nutrition-related issues. One explanation for this seemingly unconcerned behavior is that nutritional issues create a complex picture in which there are several different approaches to understanding and implementing policies regarding this matter (Lang et al., 2009). However, one simple method for integrating more nutritious foods, which may in turn reduce the onset of obesity and diabetes, would be to establish more local food systems, such as farmers markets. These markets provide freshly grown, typically low-input foods that have been shown to be more nutritious than store-bought products of the same nature. Integrating more of these markets into local food systems across the country would not only boost local economies and directly support farmers, but would also provide an easy access to seasonal fruits and vegetables to people who may typically bypass these products in a supermarket.

The Local Food System from a Socioeconomic Perspective

In addition to ecological and human health issues, local food movements, including farmers markets, have a direct impact on the local economy and community well-being. These benefits include direct benefits for the farmer and consumer, positive externalities, increased job creation and providing equal access to healthier foods.

Commercial food production suppresses the local economy. In the transition towards a long-distance and industrialized food production system, farmers have begun to play an even smaller role in the production of our food, and are therefore paid less than they have been in the past. Local businesses have been squeezed out by larger chains, causing a net loss of local jobs. The homogeneity of food in the industrialized food system has caused people to get out of touch with their local growing seasons and foods, and communities have weakened as a result of decreased interaction between consumers and producers. The growing local food movement has raised awareness for the plight of the farmer and community, and has caused increased interest in farmers markets.

Shopping at a farmers market benefits the farmers and consumers directly. When farmers sell their produce wholesale, they have ‘middleman’ costs associated with grading produce, packing, shipping, handling, brokering, wholesaling, distributing, and retailing, which normally consume about 70 cents of every dollar spent on fruits and vegetables. By selling their produce at farmers market, farmers earn a greater share of the retail price, typically 40 to 80 percent more, while realizing their income immediately rather than waiting for payment from brokers (Andreatta & Wickliffe, 2002). Farmers can also offer more unique products, more heirloom varieties, and more opportunities to build relationships and learn about healthy eating (Farmers Market Coalition, 2012). Money spent at farmers markets also increases the multiplier, meaning that money circulates more times in the local area before leaving. Studies have shown that for every dollar we spend at a large chain about 15 cents stays in the area, while locally owned enterprises like farms trap 30 to 45 cents (Mitchell, 2012). This is especially beneficial in economically depressed communities, which are typically net exporters of financial capital (Bullock, 2000). Keeping money within an area is an important aspect of regeneration, and supporting local food initiatives is a good way to do that.

Farmers markets create positive externalities by strengthening links between local businesses and increasing the foot traffic to neighboring stores around the market. A 2010 study of the Easton Farmers Market in Pennsylvania, for example, found that 70% of farmers market customers are also shopping at downtown businesses, spending up to an extra $26,000 each week (Farmers Market Coalition, 2012). Farmers markets make a local area or region more attractive for tourism, which also increases the revenue at local business located near the market (Bullock, 2000). Overall, farmers markets are economically beneficial to the local business community, not just to the farmers who sell their produce at the market. As farmers markets grow, there will be more opportunities for these local businesses to grow, creating more local businesses.

In addition to helping to stimulate the local economy by keeping money spent in the community, farmer’s markets and local foods also increases local job creation. Farmers who produce for export typically tend to outsource services once provided by the community, included buying fertilizer, pesticides and land. This leads to a decline in local jobs and an increase in money spent on foods that have to be shipped across the country. In a study done by Ken Meter and Jon Rosales from the Crossroads Resource Center in Minneapolis on the economics of farming in southeastern Minnesota, it was found that the current structure of the food market extracts roughly $800 million from the area's economy each year (Halweil, 2002). In a study done by the Economic Research Service, it was found that in 2008 farms selling locally created thirteen jobs per $100 million in revenue earned, for a total of 61,000 jobs, as compared to three jobs created by farmers producing for export (Low & Vogel, 2011).

Furthermore, farmer's markets and the local foods movement provide equal access to healthier foods. Local foods tend to cost the same or less that equivalent food bought from wholesalers (Halweil, 2002), and by increasing the equality of access to these foods, inequalities in other parts of the community are decreasing, thus, creating a healthier community as a whole.

While stimulating the local economy and stabilizing equality within a community are two vital benefits to local farmer's markets, there is also an intrinsic value of human interaction and the local culture that stems from promoting local foods. Additionally, large-scale, long distance farming practices displaces local cuisines, "mom-and-pop" grocers, and decreases face-to-face interaction, therefore, diluting the local culture (Halweil, 2002). In a study done on the Piedmont Triad Farmers Market in North Carolina in 2000, 62% consumers identified both the atmosphere and the products as the reason why they attended the market (Andreatta & Wickliffe, 2002). To many of these consumers, going to the farmers market served the purposes of a social gathering as much as an opportunity to buy produce (Wirth, 2011). Coupled with the economic benefits, these social benefits are key in developing a thriving local community.

A Historical Context: Local Food in Gettysburg, PA

As a state, Pennsylvania has a rich agricultural heritage. In Lancaster, land was donated for the first communal marketplace in 1730 and by 1789 the average size of a farm in Chester or Lancaster County was about 130 acres; at the time, 75 acres of cleared land would have supported an average family of five and would have surplus for sale. As a result, as many as 80% of the farmers were involved in selling at markets. Lancaster County numbered between one to two-thirds of the taxable population (Lemon, 1967).

By 1936, production of field crops had dropped to only 28% of the cash income of PA farmers, while livestock and their byproducts accounted for 72% (Penn State University Libraries, 1997). Central markets became replaced with more dispersed markets and stalls. The central market in Philadelphia was demolished in 1859 and replaced by 35-40 separate buildings and shops at scattered locations (Pyle, 1971).

In the 20th century, with the rise of conventional large scale agriculture, markets became replaced by grocery stores as preservation techniques and transportation technology advanced. However, in the southeastern portion of the state, certain markets thrived. However, during the same time in York, Pennsylvania, it was estimated that public and private farmers markets supplied ten times as many people as private shops (Pyle, 1971).

The southeastern portion of the state, and more specifically Adams County, is a leading producer of fruit due to the soil and topography of the area. Soil of the region is low in clay content, which allows for ample drainage, necessary for tree fruits, which are otherwise susceptible to diseases such as "wet foot" where the roots of the trees begin to rot (Lesser, 2012). The topography of the region is characterized by rolling hills. This is helpful when trees are planted up on the hill, if a frost moves in, the cold air will settle to the bottom of the hill, saving the trees from possible damage and fruit loss (Lesser, 2012). The area has a high concentration of fruit-bearing trees, including apples, peaches, pears, and nectarines (Pennsylvania Historical & Museum Commission, 2012).

Gettysburg area farms participate in three different types of fruit production, each requiring different quality of products (Lesser, 2012). The first is processing, where low-grade fruit is used to make sauces, juices, and other processed foods. The second is fresh production, where crops are sold as-is to distributors such as supermarkets. These first two types are part of the conventional agricultural systems. The last type is local production, which can include Home Farmers Markets, where produce is sold at the farm site, Community Supported Agriculture (CSAs) where residents become buy a membership to a farm and receive produce throughout the growing season, and lastly farmers markets, where products are transported to a local area and sold directly from grower to consumer (Lesser, 2012). There are three types of farmers markets, and Adams County farmers participate in all three of these types (Lesser, 2012). The first is "Home Farm Markets" where products are sold at a stand located on the farm's premises. The second is Local Markets, where fruit is driven to a market, such as the three markets located in Gettysburg. The last type is Urban Famers Markets, where vendors from Adams County drive their fresh fruit to cities such as Philadelphia and D.C., allowing city residents access to quality products they might not otherwise find.

Other local markets include "Farmers on the Square" in Carlisle (Pennsylvania Farmers on the Square, 2012) and "Thoughtful Farmers Market" in Shippensburg, Pennsylvania (Thoughtful Farmers Market, 2012). The current market in Carlisle was started up 2009 and is home to thirty regular vendors, as well as weekly guest vendors, all located within 50 miles of the market. All vendors grow, raise, or make their own products, so that ingredients stay local.

The square's location in downtown Carlisle is a traditional venue for markets, open-air and closed farmers markets were a staple from 1751-1952 (Farmers on the Square, 2012). On the other hand, Shippensburg Market completed its first season this summer, opening Mid-May of this year (Ciccocioppo, 2012). This market as well has vendors from within a 50 miles radius, and places emphasis on supporting organic, local produce, and free-range animals, raised without hormones or antibiotics (Thoughtful Farmers Market, 2012). These two markets show the two spectrums of market trends in the United States and Pennsylvania, from the well-established, to the new up-and-coming.

Gettysburg is home to two different farmers markets that participate on three days of the week during the market season (Wirth, 2011). These are the Gettysburg Farmers Market located on the square, which was established in 1991, and the Adams County Farmers Market Association which are located at the Gettysburg Outlet Shoppes and Gettysburg Rec Park (Wirth, 2011). The last two locations participate in food assistance programs (EBT, SNAP, and WIC), which encourages those who may not have access to healthy foods to get involved in the local food movement (Wirth, 2011).

This study intends to strengthen local food systems, in particular the farmers markets of Gettysburg, Pennsylvania. To attain this goal this study seeks a better understanding of customer and vendor perspectives about the Adams County Farmers Market and Gettysburg Farmers Market. From surveys this study hopes to pinpoint customer and vendor preferences for produce and management, with a main goal of better equipping the current markets to create a stronger local food system.

Methods

Data Collection consisted of face-to-face interviews with 370 randomly selected customers and all 28 vendors. Surveying was conducted over a two week period at four farmer's markets in various locations within the town of Gettysburg, Pennsylvania. The first market is run by the Adams County Farmer's Markets Association (ACFMA), and is held on Wednesday at the Gettysburg Recreational Park from 1pm until 5pm. The layout is simple, with approximately four or five vendors set up tents on the grassy area next to the parking lot of the park. The surveying group kept count of the number of customers.

The second market, also run by the ACFMA, is held on Friday, from 9am until 5pm. It is held at The Outlet Shoppes at Gettysburg, in the parking lot behind the shopping center. This market is relatively small, with anywhere from three to eight vendors, depending on the day. It is relatively open, and customers are able to enter from any direction. The number of customers was recorded by the volunteers running the SNAP/EBT table.

On Saturday, two markets are held. The first is in the same location as the Friday market, with the same layout, from 9am to 2pm. It is the third market run by the ACFMA, and counting was tabulated as with the other two markets the aforementioned association runs. The second market is not an Adams County Farmer's Market, but one run by the town of Gettysburg through the Gettysburg Farmer's Market Association (GFMA). It is held on Lincoln Square, from 7am to 12pm. Lincoln Square is acknowledged to be the town center of Gettysburg, where Route 30 meets Carlisle Street/Baltimore Avenue. Farmers pulled their vehicles into parking spaces spread out around the square, and set up booths, with an average of two or three vendors on each of the four sidewalk areas. There are four exits/entrances to the square, and all were monitored for counting purposes.

Two surveys were developed as the basis for the data in this report, one for customers and one for vendors (Appendix B & C). The customer survey was based upon a thorough review of related studies and practices, combined with the extensive input of the vendors at each market. The survey consisted of twenty questions and took approximately five minutes to administer. Questions examined customer shopping behavior and preferences, as well as basic demographic characteristics, including gender, age, average annual income, and level of education. The final question asked for suggestions as to what types of information customers would prefer in educational videos about farmer's markets (see Appendix for full survey text). The vendor survey collected data on types of merchandise sold, size and location of farms, and average daily sales, as well as assessments and preferences on market structure and management.

Each session of data collection included one to two persons counting the number of customers entering the market, two to six people surveying customers, and one to two persons surveying vendors[1]. There were 370 customer surveys collected, as well as 28 vendor surveys. There were two different methods used for counting. At the Gettysburg Farmer's Market, we employed Rapid Assessment techniques developed by the Oregon State Extension Service (Lev et al., 2008). Researchers began counting at the 20th minute of every hour, and counted only the customers that entered in the following 20 minutes. That value was then multiplied by three to represent the total number of customers for each hour. At smaller markets, the counter tallied the total number of people passing through.

Those collecting data were prepped beforehand in methods for engaging customers. A general script to enter into conversation was provided. Researchers wore college apparel to underscore their approachability as students and members of the Gettysburg community.

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[1] This occurred only at the first session at each market, and when a new vendor came to the market for the first time during our data collection period.

Customers that were deemed to be approachable[2] were given the choice of filling out the survey or having it read to them. When responding to the survey, in instances where customers and vendors expressed a desire to abstain from answering any particular question, surveyors reacted by simply moving on to the next question.

Data was analyzed by assigning a numerical value to each multiple choice response, and tallying these responses into frequency distributions and pie charts, depending on which form the data was more suited to. Some questions were analyzed for correlation to each other. Open-ended questions were considered for consumer education videos.

Findings

Customer Profiles

This section examines findings pertaining to basic demographic characteristics of farmers market customers. Data is first considered in aggregated form, before breaking it down to explore market to market results.

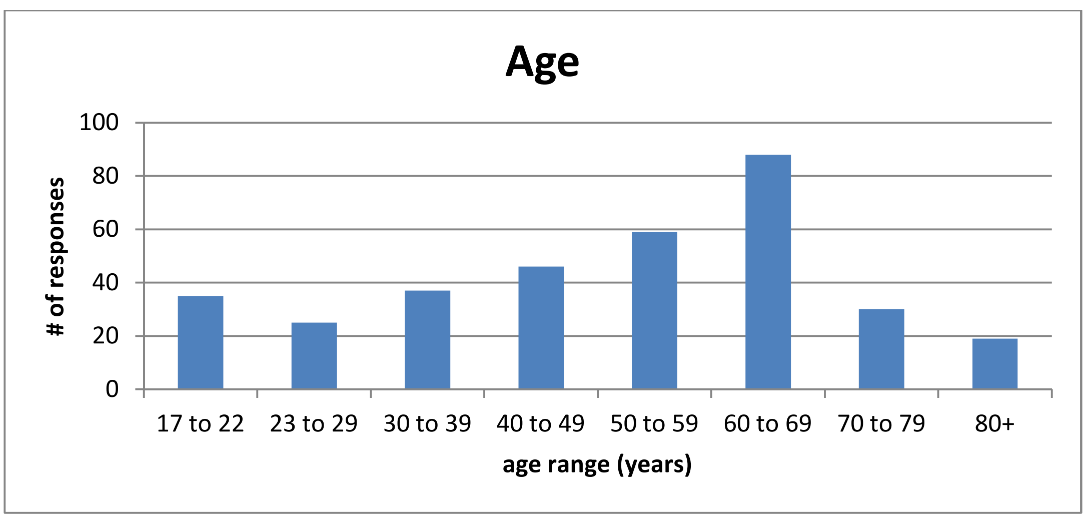

Figure 1. What is your age?

[2] The only group excluded completely from this study were younger children, as they do not have fiscal responsibility. Approachability was based off of the person's body language and attitude when asked to complete the survey. If researchers were met with resistance, they did not continue to push the issue, as the purpose of this study was to help the members of the Gettysburg community, not aggravate them.

The first data category addresses age. It appears that there is a strong generational emphasis in the customer base of the Gettysburg area farmers markets (Figure 1). Survey results display a high frequency of senior customers, with much lower values for younger cohorts.

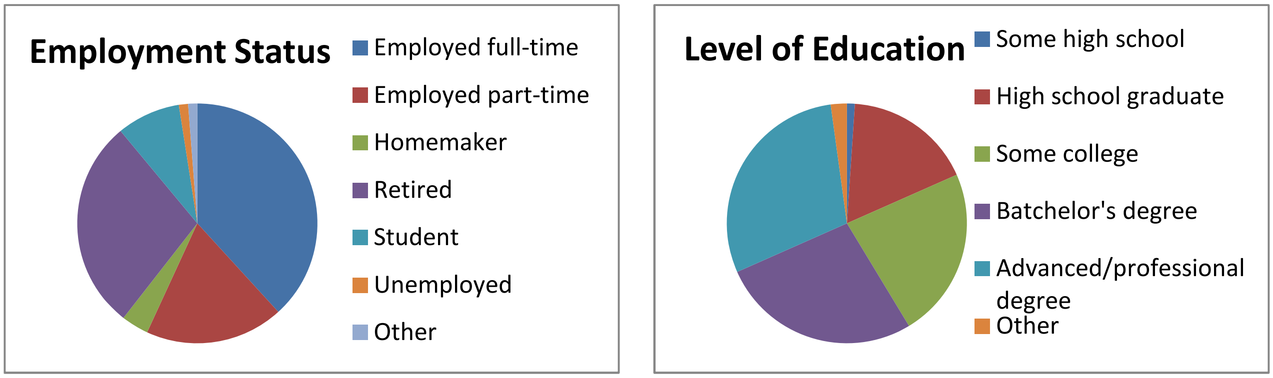

Figure 2. What is your primary employment status? What is your highest level of education?

In terms of emplyment, the majority of farmers market customers are either employed full time or part time. It is apparent in figure 2 that almost the entirety of the remaining customer share is comprised of retirees or students. More than 50% of the survey participants had acquired a bachelor's degree or higher, with over 75% having completed some form of collegiate achievement.

Table 1. What is your racial origin as classified by the U.S. Census?

Race	# of customers
White/Caucasian	343
Black/African-American	6
Asian or Pacific Islander/Asian America or PI-American	7
Native American	0
Bi-racial or Mixed Heritage	2

Other	12

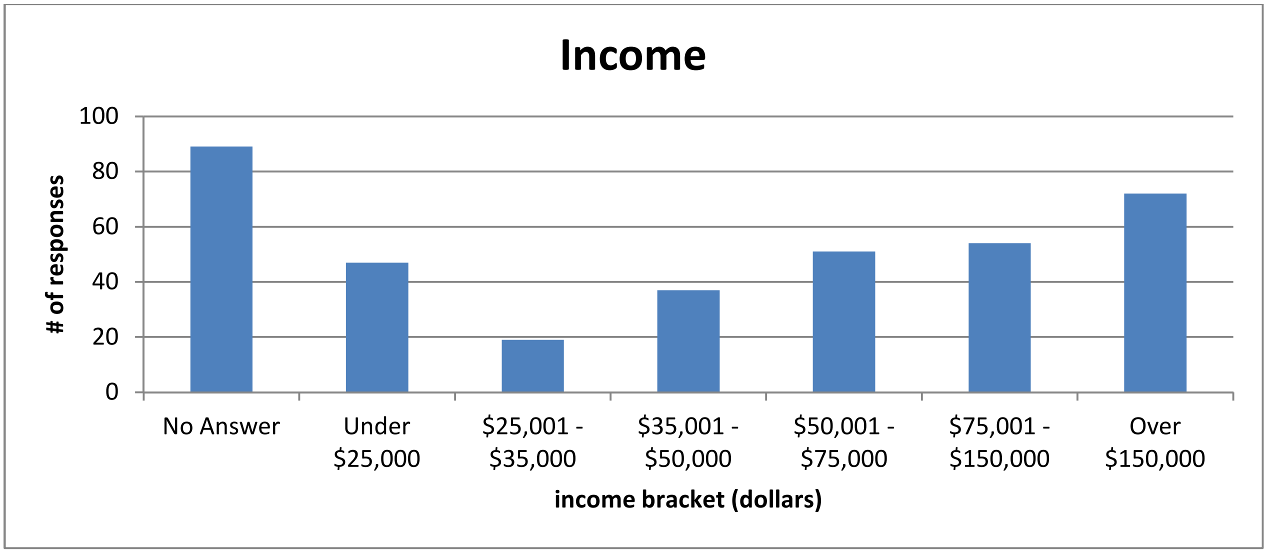

Figure 3. What is your annual household income?

As seen in table 1 there was very little racial diversity between those who completed the survey. Over 90% of the participants identified as white. This contrasted starkly with the range of customer income levels. While 89 participants elected to not answer the income question, the findings demonstrate an emphasis on higher income individuals (Figure 3). After comparing income data with the empolyment results, we found the relatively high number of customers in the under $25,000 income level to be reflective of the number of full-time students shopping at the market. Specifically, over 80% of the full time students reported to have incomes of less than $25,000. It should also be noted that 66% of the under $25,000 subjects identified as full time students.

The demographic data collected at the 2012 fall Gettysburg area farmers markets seems to show little difference from a similar study performed by St. Josephs University (Wirth et al., 2011). Although the St. Josephs study did not include the Gettysburg Recreation Park market site, the socioeconomic and racial customer background findings were similar. This is no surprise given the findings of other studies. Surveys on New Jersey farmers markets have also shown outstandingly similar results. 84% of patrons identifying as white, with the majority of customers being highly educated with professional backgrounds (K. J. A. Colasanti et al., 2010). We do however see certain disparities between the Gettysburg farmers markets and other studies. 58% of our respondents were female, which is notably lower than Byker et al's range of 64% to 77% of respondents being female (2012).

By examining the customer profile data gathered at the Gettysburg area farmers markets (Table 2), disparities can be observed between different market locations. The 17 to 22 age range was significantly higher at the Square than at the Outlets or Rec Park markets. An explanation for this may be the presence of college students due to the proximity of the Square to Gettysburg College. Full time employees were much more prevalent in the customer base at the Square, while Full time employees were approximately 20 percent less represented at the Outlets and Rec Park than those with a Retired employment status.

Table 2. Breakdown of Customer Profiles by Market in Percent Response

		Outlets	Rec Park	Square
Age Range	17 to 22	3.31	10.71	18.75
	23 to 29	10.60	3.57	5.00
	30 to 39	12.58	10.71	8.75
	40 to 49	13.25	7.14	15.00
	50 to 59	14.57	14.29	20.63
	60 to 69	28.48	21.43	23.13
	70 to 79	10.60	17.86	5.63
	80+	6.62	14.29	3.13
Employment Status	Full Time	33.53	36.36	51.18
	Part Time	12.57	6.06	8.82
	Homemaker	5.39	0.00	2.94
	Retired	40.72	42.42	19.41
	Student	3.59	15.15	15.88
	Unemployed	1.80	0.00	1.18
	Other	2.40	0.00	0.59

Level of Education	Advanced/Professional Degree	26.35	36.67	30.77
	Bachelor's Degree	29.34	20.00	26.04
	Some College	19.16	26.67	26.63
	High School Graduate	19.76	16.67	15.38
	Some High school	1.80	0.00	0.59
	Other	3.59	0.00	0.59
Racial Identity	White/Caucasian	93.29	100.00	92.35
	Black/African American	1.83	0.00	1.76
	Asian or Pacific Islander or PI-American	1.83	0.00	2.35
	Native American	0.00	0.00	0.00
	Bi Racial/Mixed Heritage	1.22	0.00	0.00
	Other	1.83	0.00	3.53
Income	No answer	31.74	16.67	17.75
	under $25,000	8.98	6.67	17.75
	$25,001 - 35,000	7.19	3.33	3.55
	$35,001 - 50,000	8.98	23.33	8.88
	$50,001 - 75,000	15.57	13.33	12.43
	$75,001 - 150,000	13.17	13.33	16.57
	$150,000+	14.37	23.33	23.08

Taken together these data allow us to construct a profile of the "typical" gettysburg area farmers market customer. The average Gettysburg area farmers market attendee is an older, well educated, white individual, who is earning a substantial amount of money for the Gettysburg area. These generalizations were brought to fruition once the data was analyzed and properly interpreted.

Adams County Residents versus Survey Responders: A Question of Representation

A comparison of demographics of the study's survey responders to the demographics of the entirety of Adams County residents was conducted in order to identify what type of customers are coming to the farmers markets and which people from the county may be under-represented. Race and age were analyzed at the census block level, while education status and income level were analyzed at the census block group level for Adams County. Census block groups were used only when census blocks were not available from the United States Census Bureau.

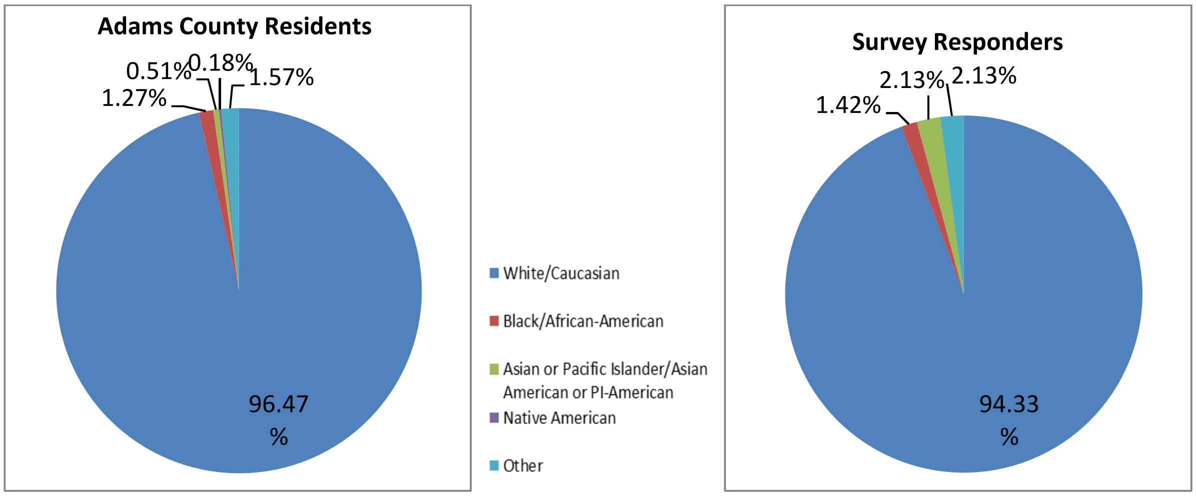

Figure 4. *Race distributions of Adams County residents and survey responders.*

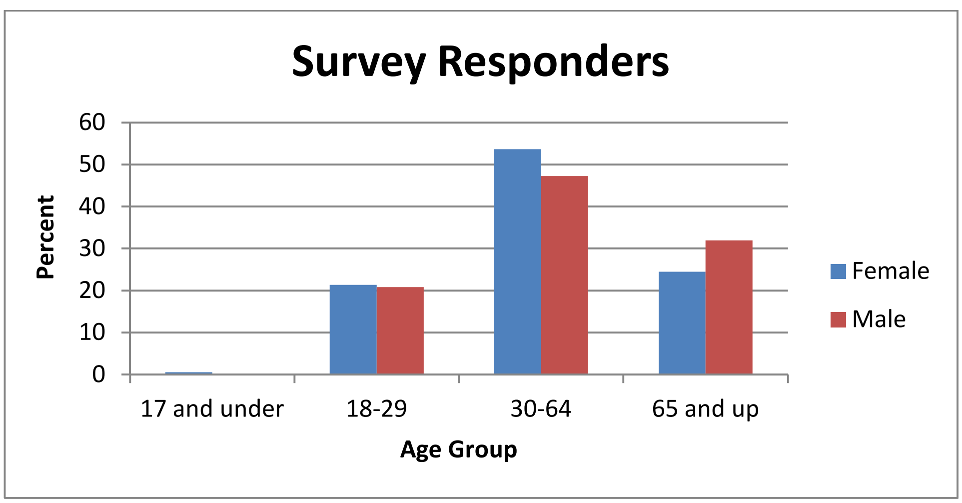

Figure 5. *Age distributions of Adams County survey responders.*

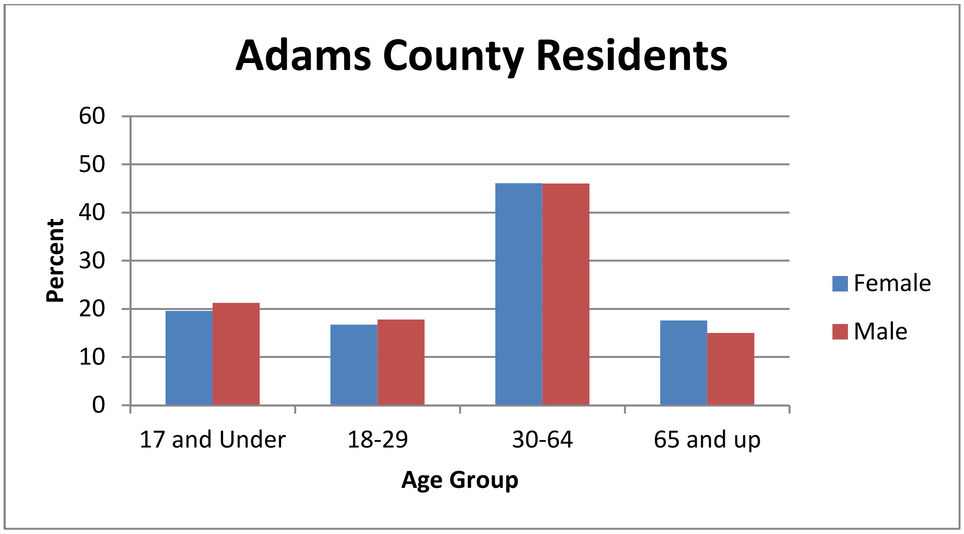

Figure 6. Age distributions of Adams County residents.

It was found that the survey responders and Adams County residents had very similar distributions of race (Figure 4). Both datasets had a population of over 94% white/Caucasian, with less than 2% of people identifying as Black/African-American. Excluding the 17 and under category, similar results were also found for the distribution of ages between the survey responders (Figure 5) and Adams County residents (Figure 6). The 17 and under category can be disregarded due to the fact that this study primarily surveyed household providers, or people shopping at the farmers market with the intent of purchasing food for their families. Again, it appears that both Adams County farmers market attendees and residents are slightly skewed to the older generations, especially between the ages of 30 and 64.

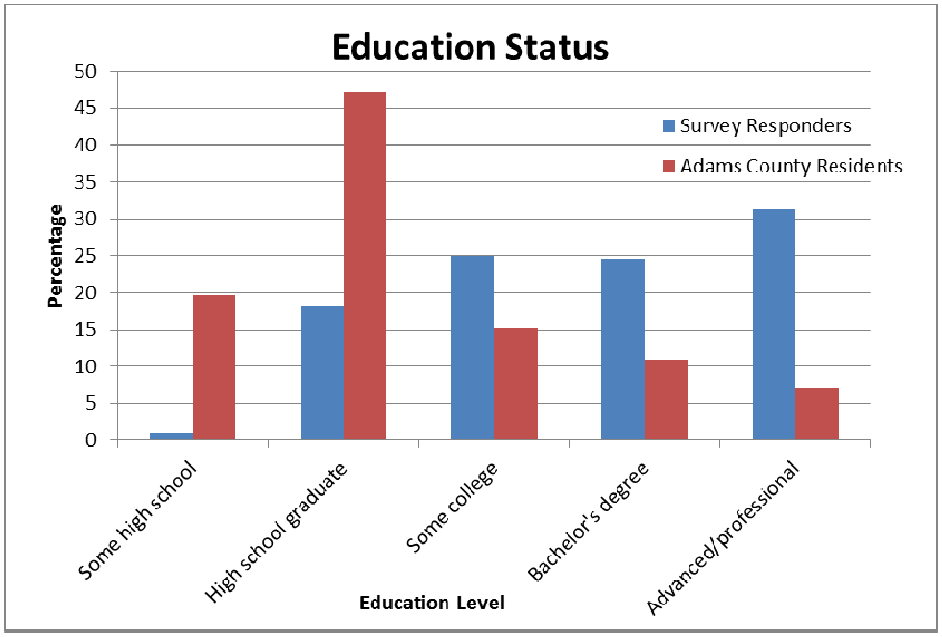

Figure 7. Education status of Adams County Residents over the age of 25 and survey responders.

A notable difference was found when comparing the education status of Adams County residents (over the age of 25) to the survey responders (Figure 7). There appears to be a distinct shift between the education status of the survey responders and Adams County residents between the level of high school graduate and having some college education. The majority of Adams County residents, about 68% total, have only had some high school education or obtained a high school degree. Conversely, the majority of the survey responders, about 31%, reported having received an advanced or professional degree, whereas only 7% of Adams County residents have this obtained level of education.

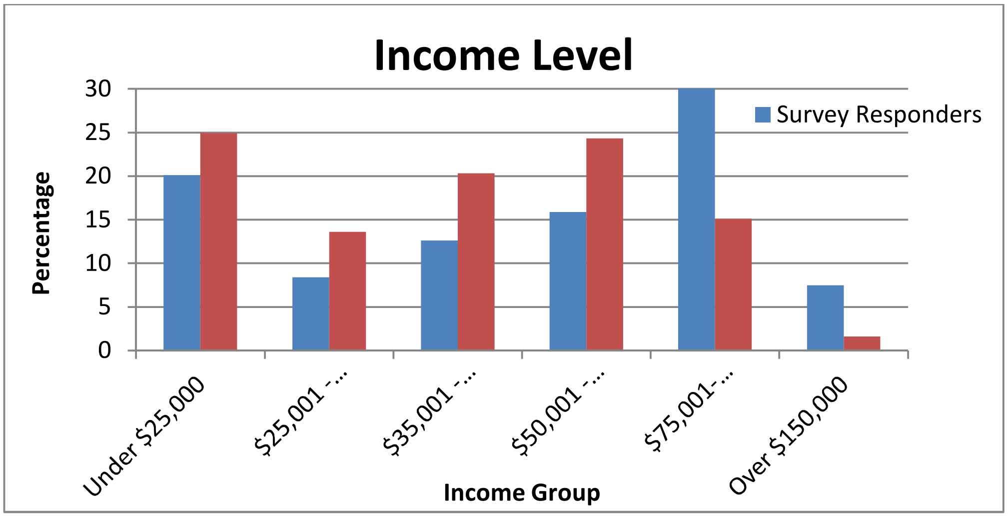

Figure 8. Income level of Adams County residents and survey responders.

A marked difference was also found when comparing the income levels of Adams County residents to the survey responders (Figure 8). The majority of Adams County residents, about 83%, reported having annual incomes below $75,000, with the majority of that group reported having an annual income of under $25,000. Although the majority of survey responders, about 57%, also reported having an annual income of less than $75,000, it was significantly less than the Adams County residents. After this point, only 17% of Adams County residents reported having an income about $75,000, with only about 2% having an income above $150,000. Conversely, 43% of survey responders reported having an income about $75,000, with 7% having an income above $150,000.

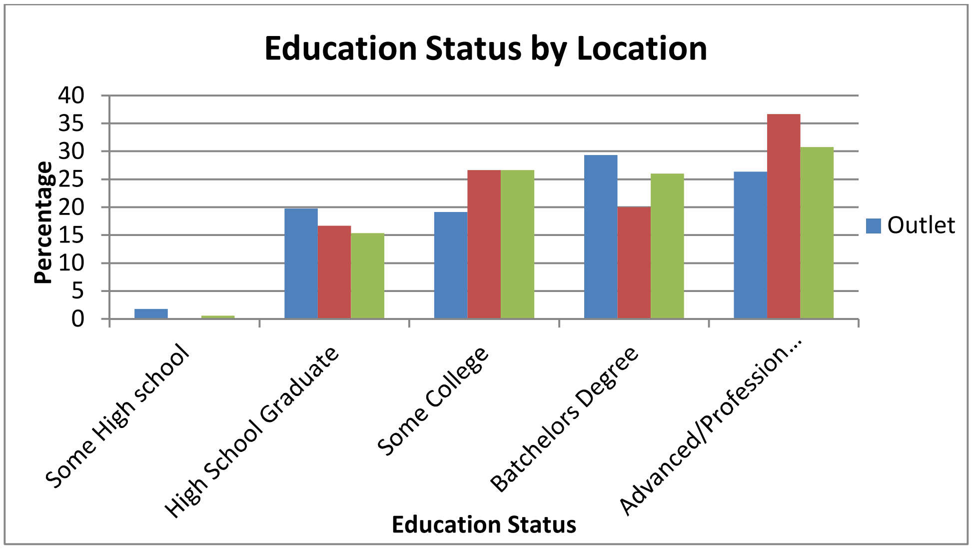

Figure 9. Education status by farmers market location.

The results of these comparisons indicate that the Adams County farmers markets may not be effectively reaching out to some of its residents. For example, it can be inferred that Adam's County residents with a lower income and education status are not being served by the Adam's county farmers markets. This could be due to a number of reasons, such as the locations of farmers markets, advertising, or hours and days of the week the markets are open.

In order to more effectively analyze why only a certain customer base is being serviced by the Adams County farmers markets, education status and income level were separated by market location. There does not appear to be a marked difference in education status of the survey responders between the three market locations (Figure 9). The vast majority of responders at all market locations had above a high school degree, with many having a bachelor's degree or higher. These results were similar to those found in a study done by St. Joseph's University of Gettysburg farmers markets (Wirth et al. 2011). This study found that there was no significant difference between the education status of the customers at the three market locations.

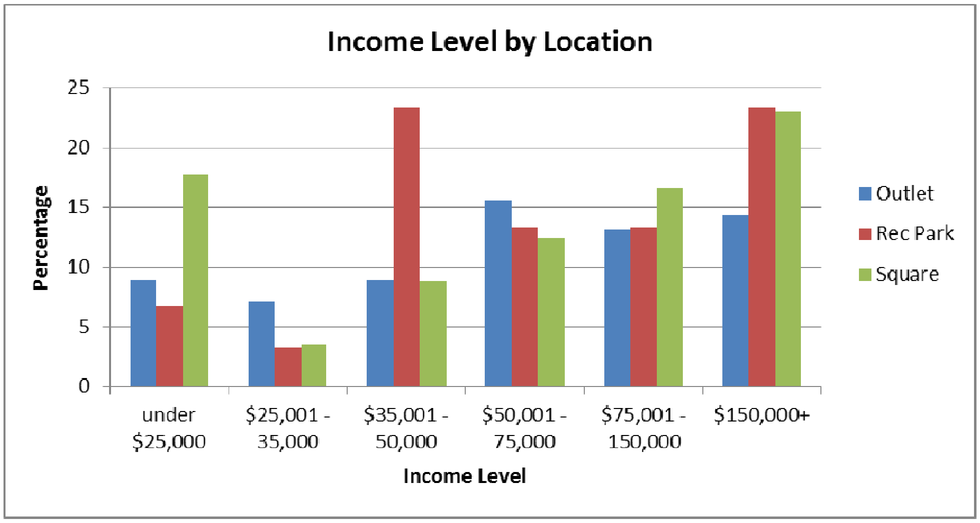

Figure 10. Income level by farmers market location.

It was found that the Gettysburg rec park market had customers that tended to report higher income levels (Figure 10). Conversely, the Lincoln Square and outlet markets tended to have customers whose income levels varied. For instance, the square had a relatively high percentage of customers with income levels under $25,000, while also having a relatively high percentage over $150,000 compared to the other income groups. Additionally, the outlet market appeared to have similar numbers of customers within all income categories. These results contrast those of the St. Joseph's University study, which found that the outlet markets were frequented by wealthier families more than the other markets (Wirth et al. 2011).

This analysis leads us to believe that there is a large customer base that the Adams County farmers markets are not reaching, and whose added business could greatly increase revenue, sustainability, and quality of the markets in this area. By working to expand their customer base, the markets will not only benefit the farmers, but the local economy as well.

It was hypothesized that greater numbers of lower-income people would shop at the rec park and outlet markets due to the fact that these markets offer EBT/SNAP benefits, whereas the square does not. However, this analysis determined that the square had the highest percentage of customers who earned under $25,000 a year. Further analysis should be conducted on the effectiveness of SNAP/EBT benefits at farmers markets. Additionally, an analysis of transportation methods would be useful in determining why some markets are frequented by a certain customer base while others aren't. For instance, increased public transportation to the outlet or rec park markets may increase their low-income customer base and EBT/SNAP benefit users.

Overall, this study provides a baseline of data for possible growth at the Adams County farmers markets.

Customer Behaviour

The following data represents the compiled survey responses on questions pertaining to customer behavior at the farmers market. Customer attendance, response to advertisement, products purchased and reasons for shopping at the farmers market are examined. Economic choices, including information on the food stamp programs in the Gettysburg area are discussed. Finally, data on market preferences in season length and hours as well as means of travel and distance traveled to market are examined.

Travel and Miles Traveled

About three quarters of the customers responded that they travel by car, while about a quarter walk to the market. About half of the customers at the square walk, while the rest drive and some take other forms of transportation. Ninety-nine percent of customers at the outlets drive since the market is far from the center of town and off of a main road. Eighty-three percent of the customers at the Rec Park drive, but most of them are elderly and prefer not to walk.

Though over 50% of people live less than five miles away from markets, many still drive to the market (Table 3). Alonso and O'Neill (2010) found that over 80% of the respondents live in the same county as the market. If we consider the distance people travelled to the Gettysburg area farmers markets, almost 80% of people live in or near Adams County.

Twenty-two percent of people at the square live more than 51 miles away; these people are most likely tourists that are passing through (Table 3). As mentioned, about half the customers at the market walk since it is at a central location to hotels and tourist attractions. Seventy percent of customers at the Rec Park live within five miles, which is higher than the customer base at the square and much higher than the customer base at the outlets. Most people from the outlets, however love less than 20 miles from the market.

Table 3. Customer Behavior in Terms of Attendance, Response to Advertisement, Products Purchased and Reason for Shopping at the Farmers Market

Question	Response	Outlets	Rec Park	Square	Total
Travel	Car	99	83	44	73
	Walk	1	13	52	25
	Bike	0	0	2	1
	Other	0	3	2	1
Miles Traveled	<5 miles	40	70	63	53
	6-20 miles	40	20	13	25
	21-35 miles	7	7	1	4
	36-50 miles	7	0	1	4
	>51 miles	8	3	22	14
Advertisement	Poster	19	9	2	11
	Brochure	2	9	5	4
	Newspaper	12	18	6	10
	Social Media	1	0	2	1
	Website	4	3	2	3
	Participating Vendor	1	6	4	2
	Passing By	43	24	54	46
	Friend	20	30	24	22
Attendance	Weekly	43	57	48	46
	Monthly	19	17	17	18
	Rarely	15	7	11	13
	First Visit	22	20	29	23

Advertisement

Forty-six percent of people responded that they found out about the market because they were passing by (Table 3). Other forms of advertisement that was useful were word of mouth and to a lesser degree posters and newspapers.

About half the people at the market of the square and the market at the outlets found out about the market by passing by, whereas a small percent of customers attending the market at the Rec Park responded this way. Because the Rec Park is not on a main road people are less likely to pass by the market. A higher percentage of people at the Rec Park found out about the market through friends and from the newspaper, which may speak to the customer base of mostly senior citizens as discussed in the customer profile section. The outlets had a higher percentage of people respond to the posters than the other two markets, but like the square almost half of the customers learned about the market by passing through.

From these results, we can see that the most effective methods of marketing including a central location, conversation/word of mouth, and to some effect posters and newspapers. The recreation park, which had a lower attendance all together, may do better with some more advertisement since they are not in a central location.

Attendance

Less than half of the people interviewed visit the markets weekly overall (Table 3). About 23% of people interviewed were at the market for the first time. Similar studies by Murphy (2011) and Ruelas et al. (2012) have shown that most people that answered the survey were those who visited the market weekly or at least monthly.

Slightly more than half of the customers attending the market at the Rec Park visit weekly. Though the other markets see about half of their customers weekly, the slight increase at the Rec Park may be due to the distance to the market, since 70% of the customers at the Rec Park live less than 5 miles away, to be discussed later. The square saw a higher percentage of first visits, which may be to its central location to tourist attractions in the town of Gettysburg.

Money Spent and Percent Budget

Most people shopping at the markets spend between $6 and $30 when visiting the market (Table 4). The same results were found by Ruelas et al. (2012) with people responding that they spend between $15 and $20. Spending over $30 or less than $6 was rare.

Forty-one percent of shoppers at the Rec Park spend between $6 and $10, whereas shoppers at the square and at the outlets spend slightly more money. Most people at the outlets responded that they spend between $6 and $20. Thirty-two percent of customers at the square responded that they spend between$16 and $20, a slightly higher percent than at the outlets and much higher than at the Rec Park for that range.

Most people spent less than 10% of their weekly food budget at the market. Ruelas et al. (2012) found that 80% to 85% of people surveyed in their two studies spend less money at the market than they would if they went to the super market for the same foods.

None of the shoppers at the recreation park and only a small percentage at the square and outlets responded that they spend more than 50% of their weekly food budget at the market. Two percent of customers at the outlets responded that they spend over 75% of their budget at the market, which is more than any other customer responded at the other two markets.

SNAP/EBT and FMNP/SFMNP

The Adams County Farmers markets and the Gettysburg Farmers Market accept FMNP (Farmers Market Nutrition Program) and SFMNP (Senior Farmer Market Nutrition Program) coupons. These programs provide discounts on edible market produce to low income families and senior citizens. These are programs established by the federal government under the Farm Bill of 2008 that supplement over $20.6 million annually to provide nutritious and locally grown produce at a more affordable price (USDA, 2012a,b).

In addition to the FMNP and SFMNP programs, the Adams County Farmers Markets accepts federal SNAP-EBT (Supplemental Nutrition Assistance Program- Electronic Benefit Transfer) cards. Part of the national food stamp program, these cards allow low income families and senior citizens (as defined by the U.S. Department of Agriculture (2012c)) to use their benefits to purchase healthy, locally grown foods while helping to stimulate the local economy. The Adams County Community Foundation augments this effort with a "Double Your Dollars" Program by adding up to an additional $10 to each customer that uses the SNAP-EBT card system. (ACFM, 2012).

Most customers do not use the SNAP/EBT, but this also includes data from the market on the square where it is not offered (Table 4). Many people left this question blank. Of the people who did respond, 41% of people at the square responded that they do use SNAP/EBT. This result is surprising given that the market on the square does not accept this form of payment.

Most customers do not use FMNP/SFMNP. Again, given that these payment options are not accepted at the square, it was surprising that 36% of shoppers answered yes to this question.

Table 4. Customer Behavior Based On Economic Choices

Question	Response	Outlets	Rec Park	Square	Total
Money spent	Less than $6	6	7	8	7
	$6-10	22	41	18	21
	$11-15	23	21	17	20
	$16-20	25	7	32	27
	$21-30	16	14	18	17
	Over $30	8	10	7	8
Percent budget	0-10%	60	64	67	64
	11-25%	27	28	24	26
	26-50%	8	8	7	8
	51-75%	2	0	2	2
	76-100%	2	0	0	1
SNAP/EBT	Yes	7	3	41	21
	No	93	97	59	79
FMNP/SFMNP	Yes	6	3	36	18
	No	94	97	64	82

Reason to Shop

Quality of food and buying directly were important motivations for shopping at each of the markets (Table 5). Alonso and O'Neill (2010) found that at markets in Alabama many people found that their interactions with producers, nutritional value, price, and experience were important aspect of the farmers market, with nutrition and interactions with producers being the most important similar to our study.

Customers at the outlet are there to buy direct and for the quality of the food, and less so for the other reasons. Price is more important for customers at the outlets and at the recreation park than for customers at the square. A probable cause for this outcome may be that customers at the square are buying more baked goods which tend to cost more though the quality is great. Though similar percentages can be seen at the other two markets, about 10% more customers at the square and at the recreation park show that they are also there for the experience.

Products Bought

By far the most popular purchase at the farmers market is fruits and vegetables (Table 5). Bake goods are also popular items. Specialty items like animal byproducts or prepared foods are less popular. Other studies by Ruelas et al. (2012) have shown that people eat more fruit and vegetables because of the farmers market. They also tend to try new foods and are more physically active.

The outlets see the highest percent of customers buying fruits and vegetables. Many people shopping on the square are tourists, so fresh produce is not practical to purchase. A higher percentage of customers at the square responded that they purchase baked goods whereas customers at the other two markets responded differently. People at the Rec Park bought more specialty items than people at the other two markets. Items purchased are highly correlated with what is sold, which will be covered in the next section.

Season Length and Market Hours

Most people did not care about the seasonal length of the market, but some mentioned that it is probably not feasible to make the market time longer (Table 5). Most people were fine with the hours. However, only a little over 30 people answered the question in total and no people answered it on the square. Because only two people responded to this question, the percentage of people who wanted the longer hours is not representative of the whole. Alonso and O'Neill (2010) asked people if the market should be open year round, two which most consumers responded yes. They also asked if there should be longer hours or more days open in the week and many people responded in the positive (Alonso and O'Neill 2010).

Table 5. Customer Behavior Based On Market Preferences and Travel Tendencies

Question	Response	Outlets	Rec Park	Square	Total
Reason to Shop	Buy Direct	36	34	32	34
	Quality	37	29	34	35
	Prices	13	14	8	11
	Experience	8	18	18	14
	Rare Products	6	5	8	7
Products Bought	Baked Goods	13	9	27	20
	Cheese	3	6	2	3
	Cut Flowers	5	9	5	5
	Fruits & Vegetables	59	42	38	48
	Honey/Jams/Jellies/Sauces	7	8	8	8
	Meat/Poultry	5	8	4	5
	Prepared Foods & Beverages	2	8	4	4
	Plants	6	6	4	5
	Other	1	5	7	2
Season Length	Fine	69	82	70	70
	Longer	30	18	28	28
	Shorter	1	0	2	1

Vendor Profile

The following data show vendor responses and display information for types of products sold, location and sizes of farms, age of business, average vendor incomes, alternative outlets for sale, and special product certifications and designations. It concludes with an assessment of vendor perspectives of advantages of participating in farmers markets, the values of working directly with consumers, and typical methods for advertising.

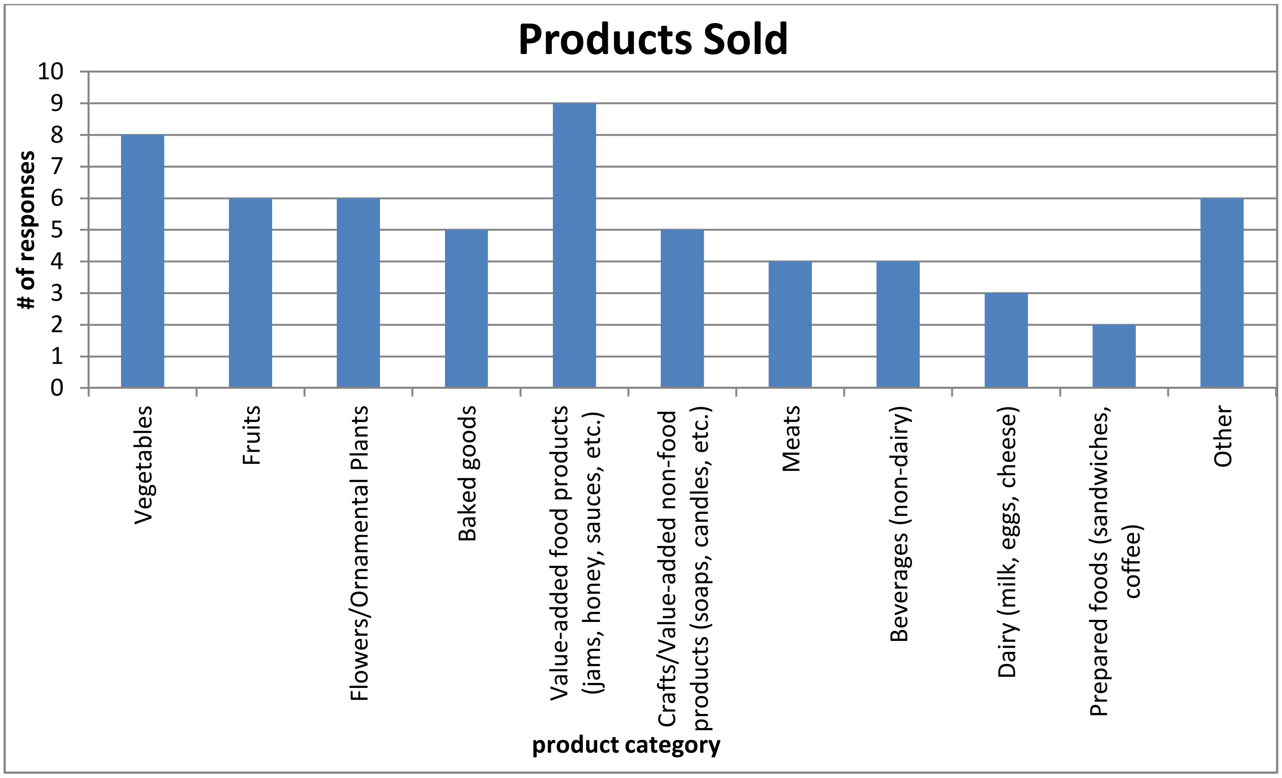

Figure 11. What kinds of products do you sell at the market throughout the year? (Select all that apply, even if only seasonal.)

Figure 11 illustrates the wide variety of products sold at the Gettysburg area farmers markets, which include: vegetables, fruits, flowers/ornamental plants, meats, beverages (non-dairy), dairy products, baked goods, value-added food products (jams, honey, sauces, spreads, etc.), prepared foods (sandwiches, coffee), crafts/value-added non-food products (bath soap, candles, etc.), and other more specified products (e.g. Alpaca wool). The most popular items for sale at the Gettysburg markets, shown in Figure 11, were the value-added food products, followed by vegetables, fruits, flowers/ornamental plants, and baked goods. These results showed a relatively similar trend to the results of Oberholtzer and Grow's (2003) survey of market managers. In both studies, the products most frequently sold by vendors are vegetables, fruits, flowers, baked goods, and value-added food products.

In the Gettysburg survey, however, value-added food products are the most frequently sold product, as compared to vegetables in Oberholtzer and Grow's survey. A survey performed by Cornell (Logozar & Schmit, 2009) also found that fruits and vegetables were the product most frequently sold by vendors, followed by plants and nursery products, and processed foods and beverages. Interestingly, according to the Penn State Extension Benchmark Survey (Berry, 2009), baked goods have been the most frequently noted potential new product for sale. While these are popular at the Gettysburg markets, they do not seem to be as popular as other value-added food products, like sauces and spreads, or the traditional fruits and vegetables.

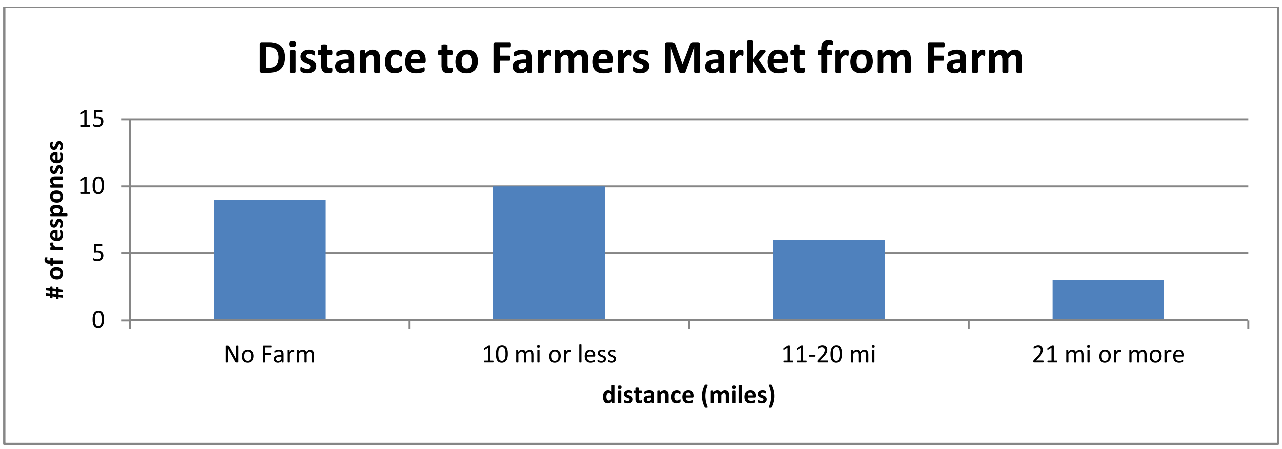

Figure 12. Where is your farm located? What is your approximate travel distance and time to this market?

The majority (53%) of agricultural vendors attending the Gettysburg Area Farmers Markets had farms located 10 miles or less from the market (Figure 12). Similarly, a University of Wisconsin Extension (UWEX) survey (Krokowski, 2009) also found that most vendors in Wisconsin live relatively close to the market, with 68% travelling less than 25 miles to reach the market. In a study by Brown and Miller (2008), 'local' food was defined as food that is grown or produced within 100 miles of where it is sold. Taking this into consideration, based on the results shown in Figure 12, the products sold at the Gettysburg markets could be described as ‘ultra-local’, since nearly 85% of the farms that produce the food are located within 20 miles of the market.

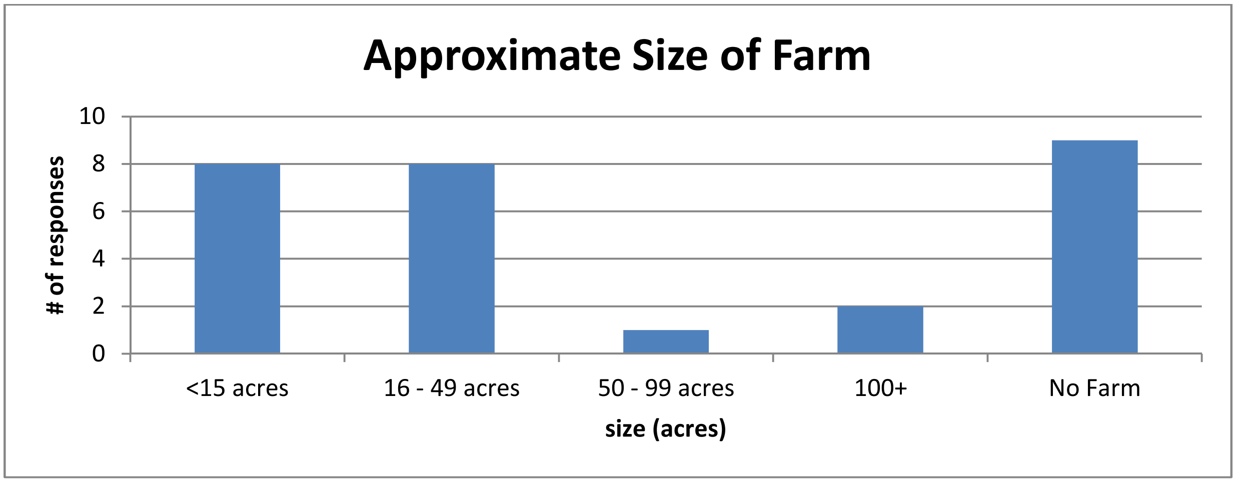

Figure 13. What is the size/acreage of your farm?

Vendors reported that their farms were typically either 15 acres or less (42%) or 16-49 acres (42%), in size (Figure 13), however, 32% of vendors reported not owning a farm, and participating in another type of business instead. In a survey by UWEX (Krokowski, 2009) it was found that 42% of Wisconsin vendors are not traditional ‘farmers. Their study revealed that this was because many either choose not to farm or are unable to make a living farming because of other circumstances. In the case of this study, however, many vendors are selling the products of their businesses or just recreationally created products.

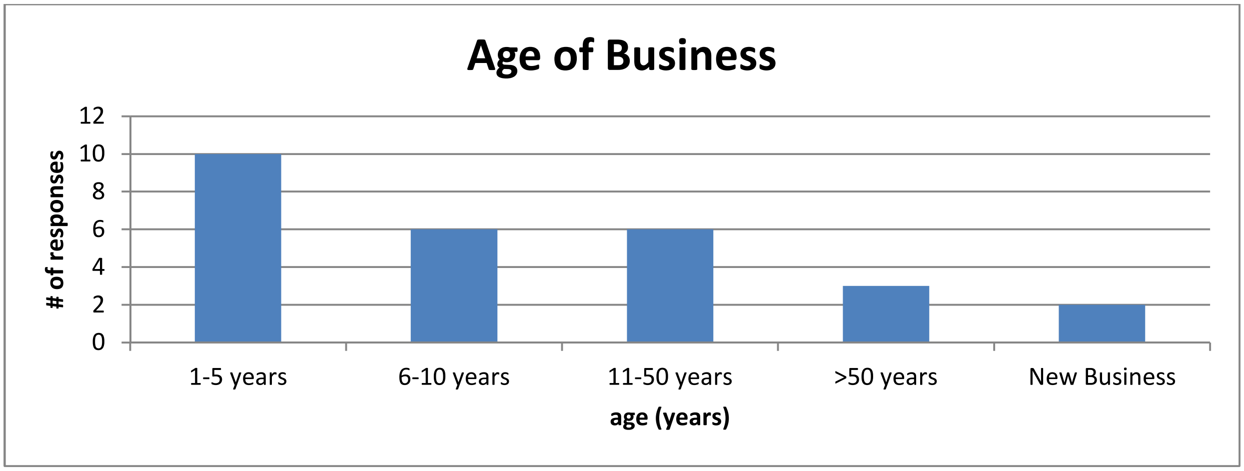

Figure 14. Are you a new business or farm? If no, how long have you been operating your current business?

Most of the vendors consisted of relatively young businesses, 1-5 years in age (37%), and only 7% of vendors classified themselves as a new business (Figure 14). The survey performed by Cornell (Logozar & Schmit, 2009), however, found that 41% of vendors had been selling their products for one year or less. Similarly, they found that 31% had been selling for 1-5 years, but this did not compose the majority of the vendors as it did in this study. For the most part, the vendors participating in the Gettysburg area markets consist of more established businesses and farms.

A little more than half of the vendors surveyed (54%) also participate in other farmers markets, with the Carlisle Market being the market most frequently participated in, outside of the Gettysburg Area markets. UWEX (Krokowski, 2009) found that only a third of vendors participate in only one market. They explain that this is likely because vendors selling at only one market are typically either part-time vendors or full-time vendors who have other sales outlets; but most full-time farmers are more likely to sell at multiple markets.

Table 6. What are your approximate/average total sales for one day at each market where you participate?

Location	Vendor	Average Daily Earnings
Outlets	A	$600
	B	$50
	C	$80
	D	$450
	E	$150
Square	F	$500
	G	$550
	H	$350
	I	$120
	J	$250
	K	$250
	L	$100
	M	$250
	N	$225
Rec Park	O	$175
	P	$850
	C	$50
	Q	$45
	D	$375
	R	$200
	S	$300

Table 6 shows the average reported amount of money earned by vendors at each of the three Gettysburg Area markets. It bears noting that these reported earnings are notoriously difficult to confirm, a fact that should be kept in mind when interpreting the above data. The results shown in Table 8 are also somewhat flawed for a few reasons that were unavoidable during the survey process. Unfortunately, there was a lack of consistency in answering this question, and many of the vendors did not report their average daily earnings for the market at which they were being surveyed, or did not answer this question at all. For these reasons, the results shown in Figure F are potentially inaccurate. Moreover, the data reflect a 68% response rate. There was an overall range of $45 to $850, and the average daily sales were $288 at the Gettysburg Square, $285 at the Recreational Park, and $266 at the Outlets. The greatest variation in reported earnings was seen at the Rec Park, and the Square showed the least amount of variance. These data are relatively consistent with a Cornell survey, which found that average weekday sales were $195 per vendor and average weekend sales were $225 (Logozar & Schmit, 2009).

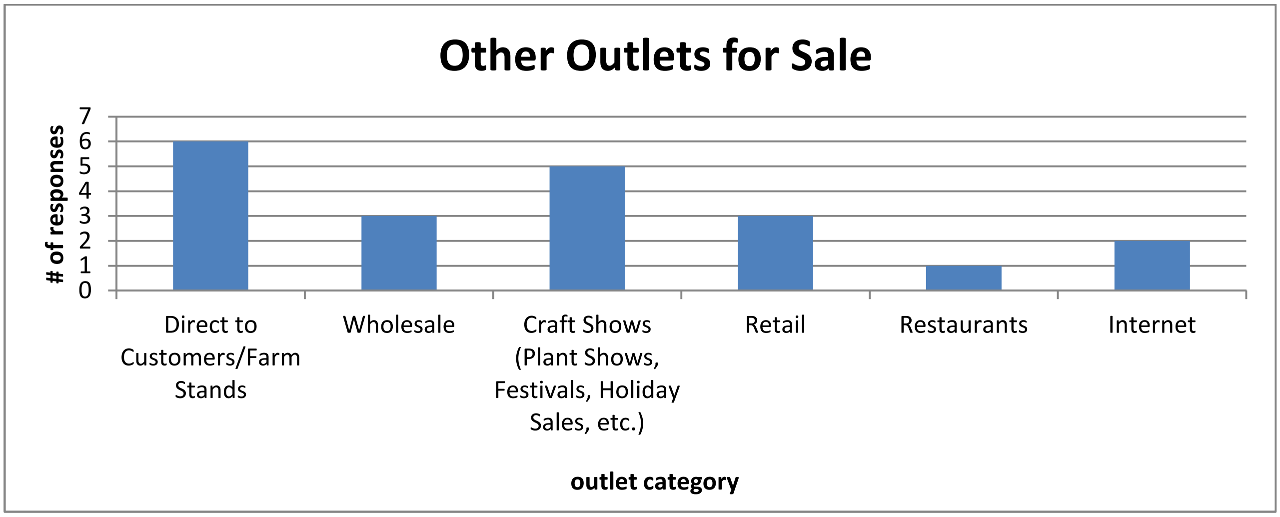

Figure 15. What are your other outlets for sale?

The two most common alternative outlets for sale were direct to consumers and through farm stands (30%) and at craft shows (25%) (Figure 15). Wholesale (15%) and retail (15%) were also popular alternative outlets for sale. As stated by Brown (2002), an increase in the wholesale network supports the economic expansion of the local businesses that take part in these farmers markets, thus local economic expansion can be further supported through these alternative marketing channels. This compares favorably with the Cornell survey (Logozar & Schmit, 2009) that found that, on average, vendors utilized 2 channels (either retail or wholesale), but some used up to 6 different outlets.

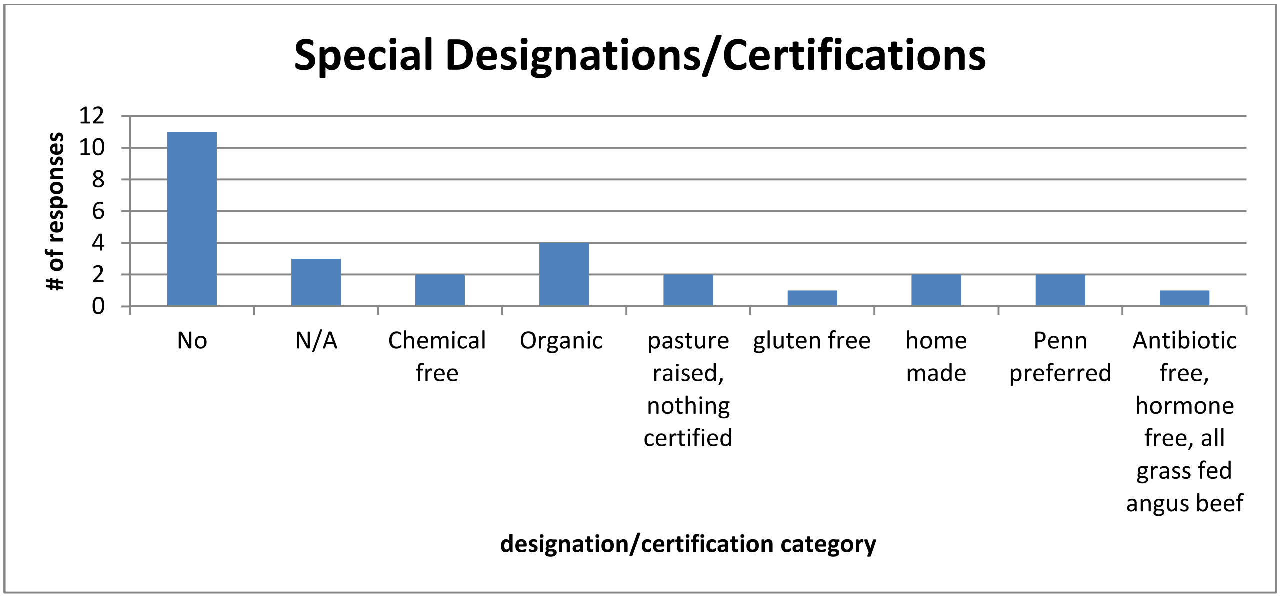

Figure 16. Do your products have any special designations, such as certified USDA organic, chemical free, etc.?

The overall majority of the vendor products had no special certifications or designations (39%), but the most frequently seen certification was organic (14%) (Figure 16). Even though these vendors reported having organic products, it is likely that these products are not actually certified USDA organic, since this certification is often too costly for small farmers to acquire. It is more likely that these farmers use organic practices and market the products as organic, even without the USDA certification, to make them more appealing to customers. It was surprising that none of these vendors instead reported their products as Certified Naturally Grown, especially since this is a free certification that refers to using organic and natural practices even when not officially certified as organic.

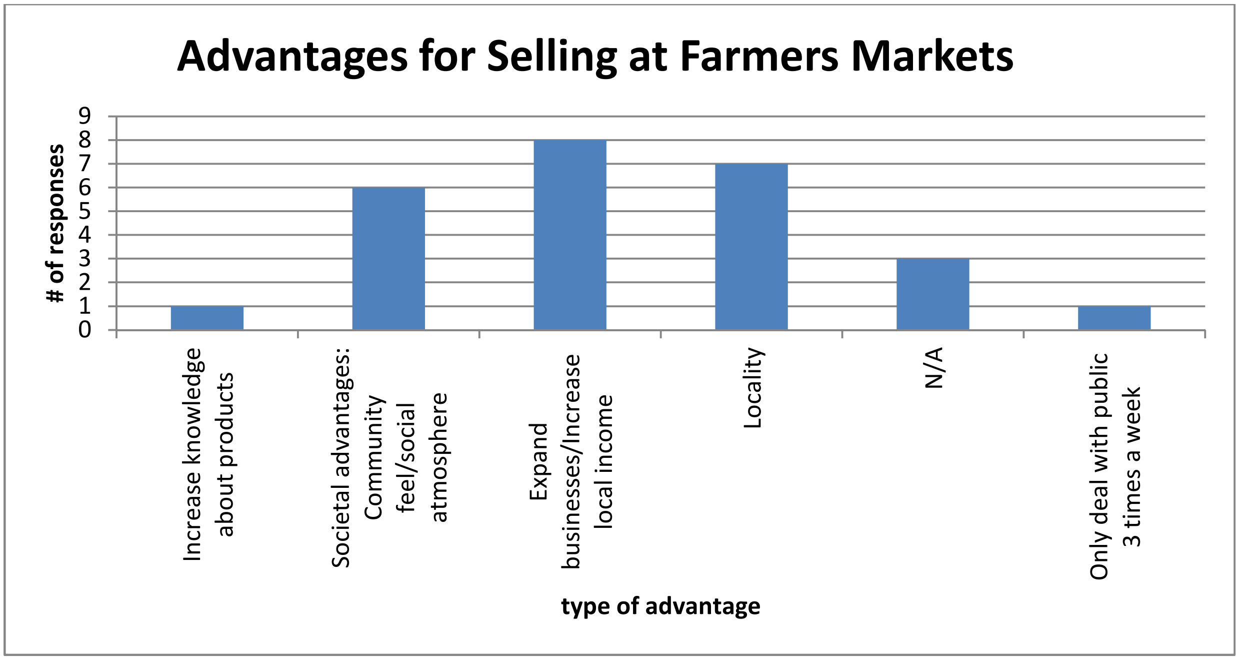

Figure 17. Can you list the advantages of selling at a farmers market from your personal business perspective?

Figure 17 shows the advantages of selling products at farmers markets, as listed by vendors participating in the Gettysburg area markets. Based on the survey responses, expanding businesses and increasing local income was considered the greatest advantage, followed by locality and societal advantages. Successful farmers markets can generate an economic influx alone, as well as create more business for the surrounding local businesses that are not directly involved with the market. A study performed by Oregon State University (2002) found that the extent of spillover sales depends on the attractiveness of the adjoining businesses, but, in several markets, spillover sales were “as high as 80% of in-market sales.”

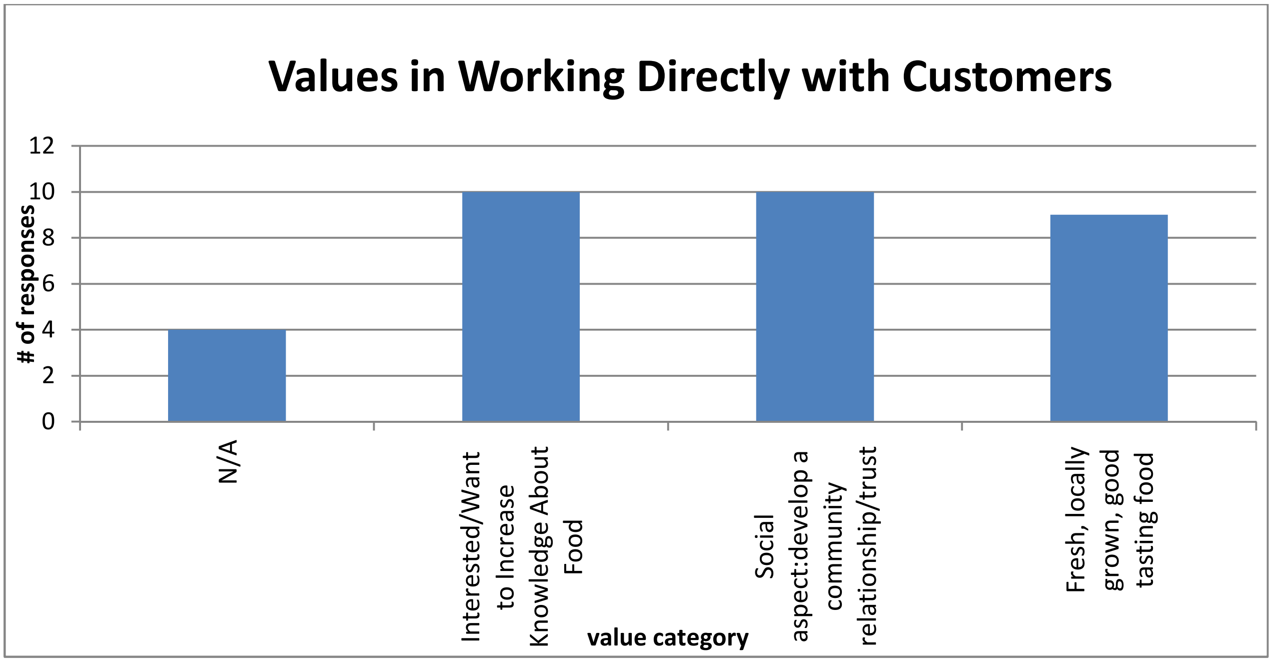

Figure 18. What value do you see in working and communicating directly with customers when selling your products in a market setting?

Figure 18 illustrates that benefits that vendors believe they gain by working directly with customers in the farmers market atmosphere. The most popular of these benefits were the social aspects of developing and strengthening a community relationship, and the interest to increase the consumers' knowledge about the foods they consume. Congruently, a UWEX report (2009) discusses how farmers markets give farmers the "chance to advertise products, make contacts and receive feedback" from the customers who visit their stands. The friendly, social atmosphere experienced by both consumers and vendors provides an enjoyable workplace environment; and gives vendors opportunities to improve their products based on the consumers' recommendations, while giving consumers the opportunity to have a voice in the products they consume.

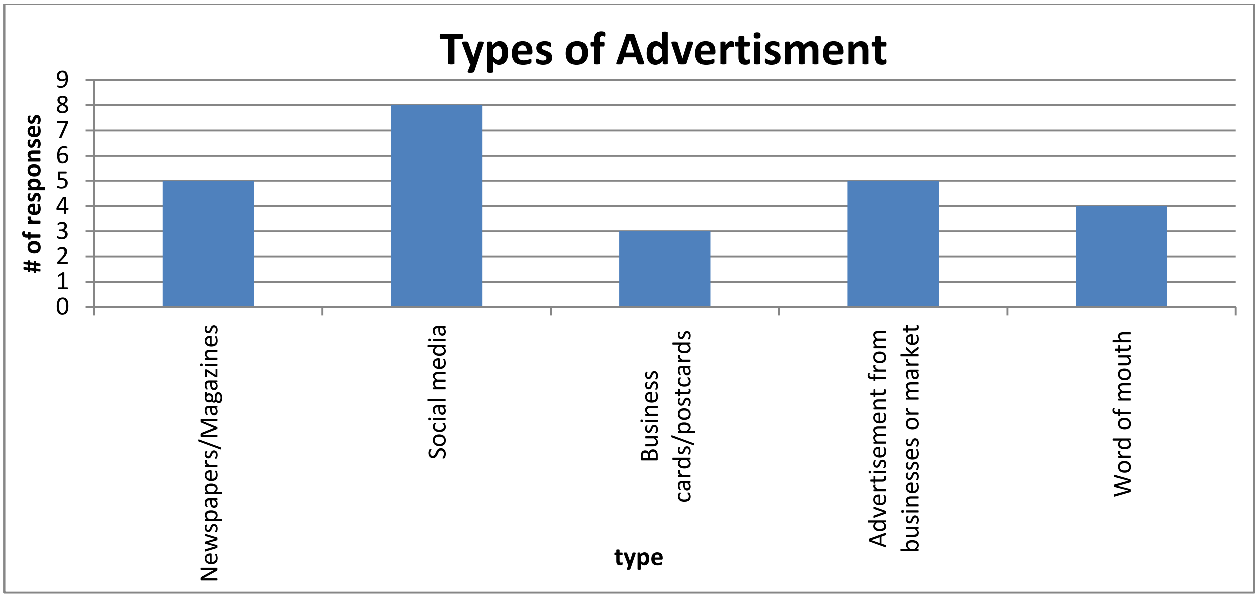

Figure 19. What types of advertising do you use annually?

Figure 19 illustrates the different marketing channels applicable to the local Gettysburg farmers markets. Social media is the most used resource, however, newspapers/magazines, and advertisement from businesses or markets were two other commonly used marketing channels. Word of mouth is also heavily relied upon, and reinforces the strong, local relationships formed within farmers markets. Lastly, business cards and postcards were utilized as a method for marketing; however, this was the technique least employed by the Gettysburg vendors. Findings from the UW Extension Cooperative Extension slightly differ from our results. Word of mouth was found to be the most common draw for consumers to visit farmers markets in the United States (Krokowski, 2009). Newspapers, flyers, and postcards were marketing instruments commonly used within the UWEX Report; these were similar to those used by the vendors at the local Gettysburg farmers markets.

Conclusion

The Farm Bill has been an important pace-setter for the continued shaping of the local food system. The impact of this legislation on the agricultural ecology, human health and nutrition, and local socioeconomic inputs demonstrates the complexity of farmers markets within food politics. The case study of Adams County and Gettysburg, Pennsylvania suggests that Gettysburg markets are providing predominately “ultra-local” products produced within a 20 mile range, and primarily offer value-added products, vegetables, and fruits. These markets foster the growth of young businesses between 1-5 years and represent the largest alternative sale outlet for vendors, whose primary reasons to participate are to expand the local economy and build community relationships.

Our study shows that these markets are adequately servicing race and age demographics consistent with the county census data, but lower income and lower education levels are not sufficiently represented at all the markets. Additionally, SNAP/EBT programs are being underutilized by the Gettysburg market.

Based on the findings and noted distinctions between the various markets, it is our recommendation that additional marketing targeting underrepresented demographic groups may prove beneficial to both the market vendors and local consumers. In particular, our analyses suggest that the population near the Square market has a higher percentage of lower income customers than the other two markets but does not utilize a supplemental food stamp program.

We recommend that the acceptance of such a program, like SNAP/EBT, may expand the customer base while simultaneously increasing access to healthy, local foods for less advantaged citizens. Additionally, increasing public transportation to the Outlets and the Rec Park would facilitate low income groups without access to a vehicle and may render similar effects to both the community and local markets. Further spatial data and trends in the Adams County farmers markets need to be analyzed in order to determine the feasibility of these proposed programs and further delineate the issues of access which these markets currently face.

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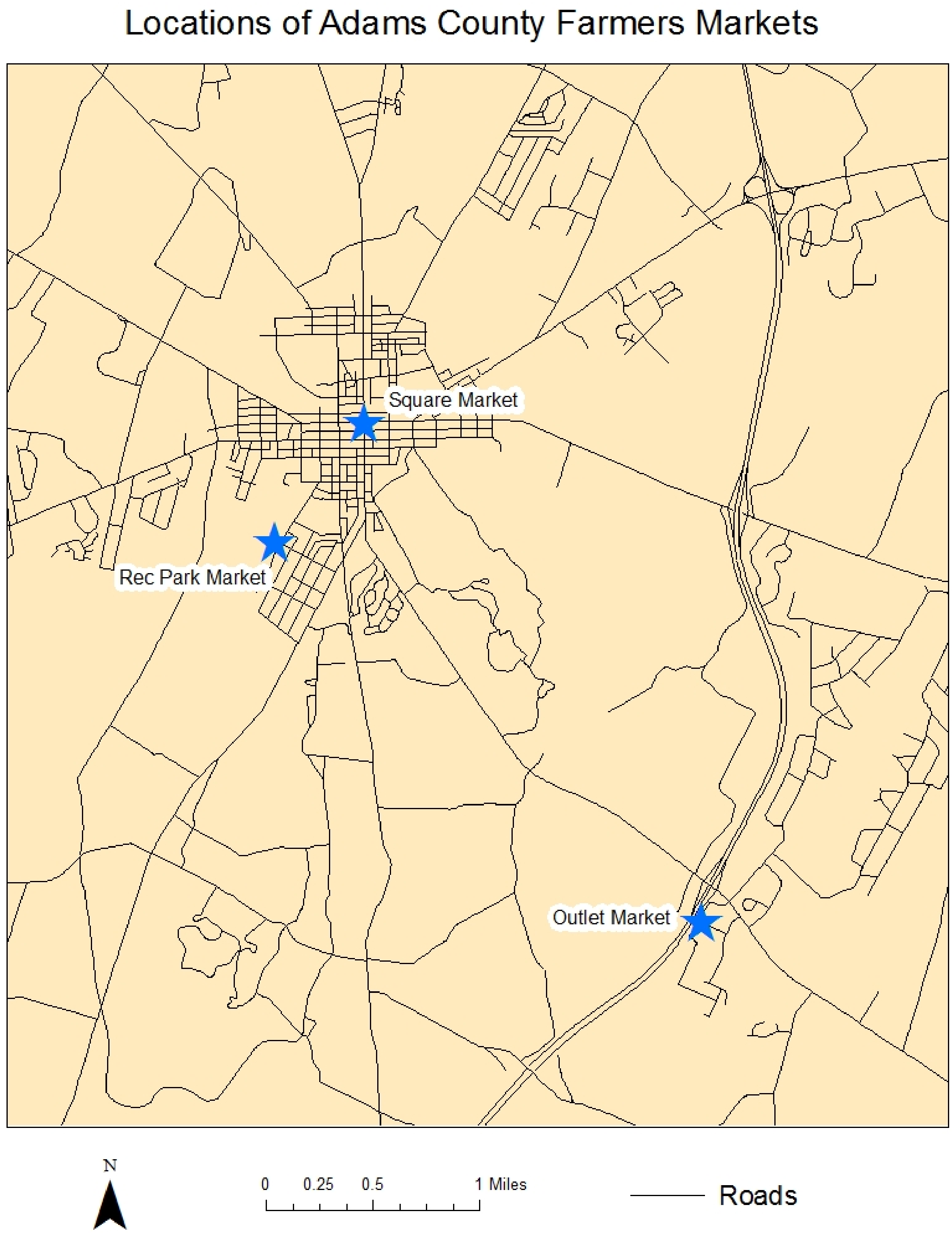
Appendix A


Locations of Adams County Farmers Markets
Square Market
Rec Park Market
Outlet Market
N
0
0.25
0.5
1 Miles
Roads

Appendix B

Gettysburg COLLEGE

Department of Environmental Studies

300 North Washington St.
Campus Box 2455
Gettysburg, Pennsylvania
17325-1486

717.337.6077 f 717.337.8550
www.gettysburg.edu

Farmers Market Customer Survey

Gettysburg College ES Department is conducting a study to help make farmers markets more efficient and effective. Would you mind answering a couple of questions to help us get customers' perspectives?

1. How often do you visit the Farmers' Market? *(check one)*
   - □ Weekly
   - □ Monthly
   - □ Rarely
   - □ It's my first visit

2. How did you hear about the Farmers' Market?
   - □ Poster/Banner/Signage
   - □ Brochure
   - □ Newspaper
   - □ Facebook/Social Media
   - □ Website
   - □ Participating Vendor
   - □ Noticed Driving or Walking Past
   - □ Through a Friend/Neighbor

3. What do you typically purchase when visiting the Market? *(check all that apply)*
   - □ Baked goods
   - □ Cheese
   - □ Cut Flowers
   - □ Fruits & Vegetables
   - □ Honey/Jams/Jellies/Sauces
   - □ Meat/Poultry
   - □ Prepared foods & beverages
   - □ Plants
   - □ Other________________________

4. Why do you shop at a farmers' market *(check all that apply)?*
   - □ Buy direct from grower/producer
   - □ Quality of products
   - □ Reasonable prices
   - □ The experience
   - □ To find products I cannot find elsewhere

5. On average, how much money do you spend at the Market per visit?
   - □ Less than $6
   - □ 6-$10
   - □ 11-$15
   - □ 16-$20
   - □ 21-$30
   - □ Over $30

6. What percentage of your weekly food budget do you spend at the Market on average?
   - □ 0 – 10%
   - □ 11-25%
   - □ 26-50%
   - □ 51-75%
   - □ 76-100%

7. Do you pay for market purchases using a SNAP/EBT card?
   - □ Yes
   - □ No

8. Do you pay for your Market Purchases using FMNP or SFMNP coupons?
   - □ Yes
   - □ No

9. How do you feel about the length of the Market season? (late April to Oct. 30).
   - □ Season length is fine
   - □ Season should be longer
   - □ Season should be shorter

10. How do you normally travel to the Market?

    ____

11. How far do you live from the Market?
_________________ (*in miles*)

12. What is your zip code?
____

13. What is your age? __________

14. What is your gender?
- ☐ Female
- ☐ Male
- ☐ Other

15. What is your primary employment status?
- ☐ Employed full-time
- ☐ Employed part-time
- ☐ Homemaker
- ☐ Retired
- ☐ Student
- ☐ Unemployed

16. What is your educational status?
- ☐ Some high school
- ☐ High school graduate
- ☐ Some college
- ☐ Bachelor's degree
- ☐ Advanced/professional degree

17. What is your current marital status?
Single/separated
- ☐ Married
- ☐ Divorced
- ☐ Widowed

18. How many people live in your household?
- ☐ One
- ☐ Two
- ☐ Three
- ☐ Four or more

19. Of those who live there, including yourself, how many are:
- ☐ 10 and under
- ☐ 11 to 18
- ☐ 19 and over

20. What is your racial origin as classified by the U.S. Census? *(check one)*
- ☐ White/Caucasian
- ☐ Black/African-American
- ☐ Asian or Pacific Islander / Asian American or PI-American
- ☐ Native American
- ☐ Bi-Racial or Mixed Heritage
- ☐ Other ____________________

21. Are you of Hispanic, Latino or Spanish ethnicity? *(check one)*
- ☐ Yes
- ☐ No

22. What is your annual household income? *(check one)*
- ☐ Under $25, 000
- ☐ $25,001 - $35,000
- ☐ $35,001 - $50,000
- ☐ $50,001 - $75,000
- ☐ $75,001 - $100,000
- ☐ $100,001 - $150,000
- ☐ Over $150,000

23. We're developing a short video series for customer education. What questions do you have while shopping a farmers' market?

____
____
____
____
____

Appendix C

Gettysburg COLLEGE

Department of Environmental Studies

300 North Washington St.
Campus Box 2455
Gettysburg, Pennsylvania
17325-1486

717.337.6077 f 717.337.8550
www.gettysburg.edu

Farmers' Market Vendor Survey

1. What kinds of products do you sell at the market throughout the year? *(Select all that apply, even if only seasonal.)*
    a. Vegetables
    b. Fruits
    c. Flowers and Ornamental Plants
    d. Meats
    e. Beverages (non-Dairy)
    f. Dairy (Milk, Eggs, Cheese, etc.)
    g. Baked Goods (Pies, Cookies, Crackers, etc.)
    h. Supplementary Food Items (Sauces, spreads, condiments, etc.)
    i. Prepared Foods (Sandwiches, coffee, etc.)
    j. Crafts and Personal Goods (Bath soap, candles, decorations, etc.)
    k. Other (specify): ____

2. Where is your farm located? What is your approximate travel distance and time to this market?

3. What is the size/acreage of your farm? ________________________

4. If you are **not** an agriculture/farm based business, what is the nature of your business?

5. Are you a new business or farm? **Yes** or **No** If you answered *No*, how long have you been operating your current business? (months or years)

6. Do you sell at **other** farmers markets? **Yes** or **No** What are your other outlets for sale (wholesale, retailers, etc)?

7. What are your approximate/average total sales for one day at each market where you participate?

    Location: _________________________ Average Daily Sales: _____________

    Location: _________________________ Average Daily Sales: _____________

8. Do your products have any **special designations**, such as certified USDA organic, chemical free, etc.?

9. What are **common questions** you hear from customers buying your products at this market? *(This data will be used in the making of a series of informational videos to engage and inform customers about the products they purchase at the market).*

10. What **value** do you see in working and communicating directly with customers when selling your products in a market setting?

11. Can you list **any other advantages** of selling at a farmers' market from your personal business perspective?
    1. ______________________________
    2. ______________________________
    3. ______________________________

12. Have you seen **residual business** from participating at the farmers' market? (i.e. Increase in special orders, bulk orders, large orders for meats, special event orders, etc.)

13. Does **weather** have an effect on your overall sales at the farmers' market? Please be specific.

14. What **level of assistance** do you need in the set up of your vending station at the market? (For example, do you need assistance with the actual physical set up/break down?)

15. Do you **advertise** your stand at the farmers' market? **Yes** or **No** If Yes, what types of advertising **methods** do you use annually?

16. Would you be interested in attending an **educational course** on how to better advertise yourself at a farmers' market? **Yes** or **No**

17. Do you meet new potential customers by participating at the farmers' markets? **Yes** or **No**

18. Are there any recommendations you may have for **vendor rules and regulations** at the market? Please be specific.