

A DEMAND DRIVEN ASSESSMENT OF FARMERS-TO-CONSUMER DIRECT MARKETING AGRI-TOURISM INDUSTRY IN THE MID-ATLANTIC UNITED STATES FY 2009

Agri-tourism, along with direct marketing and subsequent farm-related activities and locally produced goods, constitutes one of the more considerable industries in New Jersey, Pennsylvania, and Delaware, which jointly form the Mid-Atlantic region of the United States. The industry itself allows farmers to make a profitable living while providing goods and services that satisfy the wide range of consumers' needs and wants. This research study evaluates results from a survey administered to consumers in the three states and analyzes the current characteristics of the business, including which direct market outlet types appear to be the most utilized and most successful as well as consumer preferences and habits with respect to goods, services, and agricultural site visits. Farmers in the region will be able to improve their businesses and offer more to consumers based on the information provided by the study, and may also be used in similar farming states outside of the specified region.

FINAL REPORT

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A Demand Driven Assessment of Farmer-to-Consumer Direct Marketing and Agri-Tourism Industry in the Mid-Atlantic United States

Final Report Submitted to Agricultural Marketing Service, USDA

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EXECUTIVE SUMMARY

Agri-tourism, along with direct marketing and subsequent farm-related activities and locally produced goods, constitutes one of the more considerable industries in New Jersey, Pennsylvania, and Delaware, which jointly form the Mid-Atlantic region of the United States. The industry itself allows farmers to make a profitable living while providing goods and services that satisfy the wide range of consumers' needs and wants. This research study evaluates results from a survey administered to consumers in the three states and analyzes the current characteristics of the business, including which direct market outlet types appear to be the most utilized and most successful as well as consumer preferences and habits with respect to goods, services, and agricultural site visits. Consequently, farmers in the region will be able to improve their businesses and offer more to consumers based on the information provided by the study, and may also be used in similar farming states outside of the specified region.

More often than not, consumers demonstrated that they were generally happy with the current quality, quantity, and variety of goods and services offered at direct marketing outlets they visited. The study also indicates that most consumers were willing to pay for the goods and services from these sites. This is critical since respondents also claimed that they have begun to consume a wider variety and a greater amount of vegetables and fruits in the past five years, showing there is potential for outlets to grow by offering produce they currently do not supply. According to the survey, it seems many individuals do not know about certain agri-tourism concepts, like "ecotourism" and "green tourism," which they could be interested in, and thus shows that there is even further potential for businesses to expand and/or appeal to interested consumers.

Aside from these factors, study results suggest other steps that may be followed to improve business at direct marketing outlets. One suggestion is based on part of the survey where consumers were asked about the importance of additional amenities offered at agri-tourism locations, such as restrooms, shops, and classes. While only a minority claimed having these available would be 'extremely important,' adding these may provide markets with additional revenue as shops and classes could attract consumers interested in making purchases and/or who desire to learn about agricultural topics while restrooms allow customers to remain at a location for a longer period of time. Moreover, it was found that agri-tourism locations are not patronized as much during the winter season, so owners could capitalize on this shortfall

and develop ideas to attract audiences during slower periods in an effort to become more economically sustainable.

Based on survey responses, one can assume that consumers will continue to patronize these businesses in the future regardless of any changes being made. However, patronage could definitely increase if more goods and services that appeal to clientele were offered. Suggestions based on responses may encourage farmers and direct marketing outlet owners to develop new plans involving more crops, improve quality, offer events, and select appropriate advertising techniques to attract more consumers to their business. By having a better understanding of what consumers want and like, both patrons and owners will be able to benefit from these efforts and potential outcomes.

INTRODUCTION

In recent years, changes in agriculture, population, and urban development have occurred, significantly impacting the existing framework of agricultural businesses in the Mid-Atlantic region of the U.S. In response, farmers in these areas have turned to direct marketing and agri-tourism strategies in order to ensure that their farms remain profitable and viable. By using these alternative business methods, they have also increased the range of the goods and services they provide to consumers to satisfy their preferences and for themselves to remain key players in the agricultural market. In this region, as well as around the globe, agri-tourism and direct marketing are seemingly logical and imperative practices, allowing farmers and landowners to capitalize on new economic opportunities.

Direct marketing is a technique that allows farmers to sell their products directly to their targeted consumers, rather than having their goods pass through several hands before it reaches the consumer, as it often has. This practice typically results in the farmer receiving a greater profit for their goods. Products most commonly sold at direct markets include fruits, vegetables, bakery products, flowers, nursery products, eggs, and dairy products (Nayga et al., 1995; Govindasamy, 1996^b). By using direct marketing, producers can cut out the “middleman” in a lot of their operations and eliminate additional expenditures on services such as packaging, storing, transporting, and marketing the goods. There are several forms of farmer-to-consumer direct markets, including: pick-your-own operations (PYO), roadside stands, community supported agriculture (CSA) farms, community farmers’ markets, and on-farm markets. PYO operations enable consumers to harvest their own produce from the farmers’ fields, allowing them to choose and buy only the amount and quality of food they desire. Roadside stands are structures set up near roadways by farmers in order to sell their own seasonally grown produce.

CSA farms are supported by a group of members who create a relationship with the farmer by paying a fee and investing in the farm in exchange for a weekly assortment of produce. Community farmers' markets are establishments where farmers can bring their goods to be sold to consumers alongside those of other farmers. In contrast, on-farm markets are permanent structures built on the farmer's property where they sell their own produce to consumers. Each of these outlets provides opportunities for consumers to obtain the goods and services they desire.

Though not every direct marketing outlet type is currently recognized by the public, the idea of such establishments has been in practice for decades and is not a new practice for farmers. To help develop the industry in the past, the Farmer-to-Consumer Direct Marketing Act of 1976 was established to provide \$3 million in federal grants to initiate, promote, facilitate, develop, or coordinate methods of direct marketing from farmers to consumers. This act recognized the importance, potential, and promise of direct marketing operations in the future, especially in its role in improving the agricultural economy (Linstrom, 1978). To prove its success, the USDA's Agricultural Marketing Service recorded a growing number of farmers' markets in the U.S. in just recent years. It found an increase from 4,385 farmers' markets nationwide in August 2006 to 4,685 in August 2008 (AMS, 2008). Also in recent years, the Grow New York Enterprise Program was established to also help boost the industry by making loans to help develop and expand production agriculture and agribusinesses (GNYEP). In 2007, it invested nearly \$1.5 million in 88 projects specifically to develop farm business strategies, support innovative research projects, improve farmers' markets and assist in agri-tourism projects (NYSDAM, 2007). With the help of grants and loans to farm enterprises, agribusinesses

have clearly been successful over time, and have thus also prospered from individuals who visit the businesses nationwide.

Some of the more lucrative and popular agribusinesses are farms that offer agri-tourism. Agri-tourism can generally be described as any farm or agriculturally based operation that attracts visitors for recreational or educational purposes and generates additional income for the owner. In many cases, the infrastructure at these locations is not utilized year-round, and thus becomes the perfect stage for agri-tourism activities, such as corn mazes, hayrides, and food festivals. However, agri-tourism can also include activities that are also considered direct markets, such as PYO operations. Many consumers in the region take advantage of these offerings because of their interest in having agricultural experiences, making agri-tourism a general success.

Patrons from the Mid-Atlantic region patronize farms and farm-based activities, like agri-tourism, because they recognize the quality and value of fresh agricultural products that come directly from farms, rather than products that are packaged and shipped to other wholesale and retail markets. This, along with feeling that they can get fresh, high quality produce for a better price than products sold at supermarkets, while producers know that they can get a higher margin directly from the consumers, has stimulated a growth in direct marketing (Tracy et al., 1982). Also, the annual per capita consumption of fresh fruit and fresh vegetables increased by 21 percent and 14 percent, respectively, from 1980 to 1994, even when prices for the fresh produce was almost double than processed produce (Govindasamy et al., 1998). This has prompted consumers to patronize direct marketing outlets more frequently, and continues to provide opportunities for business growth. Even more importantly, the projected increase for per capita food expenditures between 2000 and 2020 are anticipated to be an increase of 8.1 percent

for fruits and 7.2 percent for vegetables (Blisard et al., 2002). Thus such outlets may provide even greater monetary value for consumers who frequent direct markets.

To give an idea of recent agri-tourism and direct markets successes, one may examine the volume of travelers that stop at the previously mentioned enterprises. Between 2000 and 2001, the U.S. Department of Agriculture estimated that more than 62 million Americans, who were at least 16 years of age or older, and 20 million children, under age 16, visited a farm (NSRE 2002; Wilson, Thilmany and Sullins 2006). Their genuine interest in agri-tourism and supporting direct marketing also fuels travel and tourism. In fact, prior to this study, the Purdue Tourism Hospitality Research Center had projected that between 1997 and 2007, nature and agricultural-based tourism would be the fastest growing segment of the travel and tourism industry (Industry Development, 2011). It is clear that the desire for tourism, along with value of quality goods and services, will continue to attract consumers in the future, assuming that demand will continue to be met by agribusinesses.

Not only are direct marketing and agri-tourism economically advantageous, but they also provide social benefits for business owners and consumers alike. Farmers can build relationships with the individuals using their resources and consuming their products, and may even form a community around their business by dealing directly with consumers. These aspects become critical in a business where customer satisfaction is highly impacted by the quality and freshness of products. The two practices may also enhance the overall quality of life in some areas, especially urbanizing areas, by offering recreational outlets for individuals and a business that would generate income and employment in that area, by preserving agricultural lands and open spaces, and by contributing to community development simultaneously (Henderson and Linstrom, 1982; Linstrom, 1978; Govindasamy, 1996^a). A cooperative relationship is essential

for agricultural businesses to succeed and thrive in an area where urbanization and changes are always taking place.

Since marketing has become a new challenge that faces many farmers in the Mid-Atlantic region of the U.S, this study was designed to investigate and document the characteristics, needs, motivations, and interests of direct marketing and agri-tourism consumers in order to make adjustments that would better serve consumers and allow farmers to enhance their agricultural businesses. However, agri-tourism is not limited to this region. It is becoming a nationwide practice, and thus the need for consumer demand information is imperative and could benefit all regions in the U.S. Existing literature shows that studies and data have been evaluated in specific states, as well as across the U.S., to determine factors that influence visitations to agri-tourism locations.

A recent study was completed on Colorado agri-tourism and factors that affect potential tourists' travel plans to visit agri-tourism sites within the state. Factors studied during implementation of the Colorado study, including participants' tastes and preferences, were based on similar activities to the Mid-Atlantic study, but topics investigated also included ranch related recreation, which is not as commonly found in the Northeastern region of the U.S. The Colorado study found that income level, urban influence, planned travel through either the Colorado Tourism Office or through magazines positively influenced travel and related expenditures (Gascoigne, Sullins, and McFadden, 2008). Characteristics of travelers who were more likely to visit were also defined. In particular, age, income, marital status, family composition, and race were all considered, with travelers from higher-income and white households being more likely to visit (Gascoigne, Sullins, and McFadden, 2008). Upon a closer look, one may find that some of these findings hold true across the U.S. as well as in the Mid-Atlantic region.

Research has also focused on the agri-tourism industry in Pennsylvania, providing a basis of information for states located in the Northeast. The study surveyed both visitors and operators of agri-tourism ventures to define the characteristics of agritourists and their visits. Results showed that visitors to Pennsylvania agri-tourism sites, especially lodging businesses, had a stable disposable income and leisure time to visit and stay at such places (Ryan, DeBord, and McClellan, 2006). Clientele at the selected agri-tourism venues were generally couples or families who drove two to three hours to Southeast Pennsylvania, or who were within 50 miles of the area (Ryan, DeBord, and McClellan, 2006). More importantly, they found that only 34% of respondents recognized the term agri-tourism, showing that even if they participated in such activities, they did not identify with the market itself.

On a national level, a group of researchers used data from the 2000 National Survey on Recreation and the Environment to define factors that affect visits to farms, and the corresponding consumer demands. Across the U.S., they found that the average farm visitor was more educated, had a higher family income, is younger, and belongs to a household with more family members than non-visitors (Carpio, Wohlgenant, and Boonsaeng, 2008). Like most studies, it also evaluated the likeliness of an individual to visit a farm based on their ethnicity and marital or family status. They found that whites were more likely to visit a farm, and Hispanics were less likely; however, independent of ethnicity, if children under six years old were present in the household, this would increase the likeliness of visiting an agri-tourism site (Carpio, Wohlgenant, and Boonsaeng, 2008). As evaluated in this study, the required travel distance to the farm, as well as the cost of travel, also impacted the decision to visit. Generally, in the U.S., the cost of the trip has a negative effect on the number of trips taken by individuals, and those who live in rural areas make more trips on average than those living in urban areas (Carpio,

Wohlgenant, and Boonsaeng, 2008). Many of the influencing factors and characteristics of visitors found in the nationally based study are very similar to those found in the research explained by this paper based on the Mid-Atlantic region.

Research has also found that visits to direct market types may vary by location and consumer economic and demographic characteristics (Govindasamy and Nayga, 1997). For example, a consumer may decide to buy from a roadside stand because of its convenient location, while a family may drive a longer distance to a PYO operation for its recreational qualities (Govindasamy, 1996^c; Govindasamy and Nayga, 1996^b). Or, a low-income consumer may shop at a farmers' market due to lower prices for products compared to supermarket prices, while high-income individuals could be motivated to patronize farm markets due to their desire to keep in touch with farm life (Govindasamy et al., 1995). However, these characteristics are constantly evolving, continually providing opportunities for entrepreneurial farmers to respond to consumers' changing food preferences and eating patterns, especially as the U.S. population ages and becomes more affluent and diverse (Ballenger and Blaylock, 2003).

Factors that derive demand for agri-tourism businesses and determine who will visit are imperative to know in order to further develop plans on an individual level. Since both direct marketing and agri-tourism are key regional business development strategies, all information that comes directly from consumers could motivate owners to plan, act, and improve their businesses in accordance with the findings. Results could also be applied to other regions, especially in areas where agriculture businesses are facing issues such as urbanization pressures, which could lead to a decline in the number of farms or direct markets.

METHODOLOGY

An Internet survey of consumers residing in Delaware, New Jersey, and Pennsylvania was conducted 21 to 29 June 2010 to document the characteristics of consumers who buy at farmer-to-consumer direct market outlets and/or visit agri-tourism operations in the Northeast and identify factors that influence their purchase behavior.

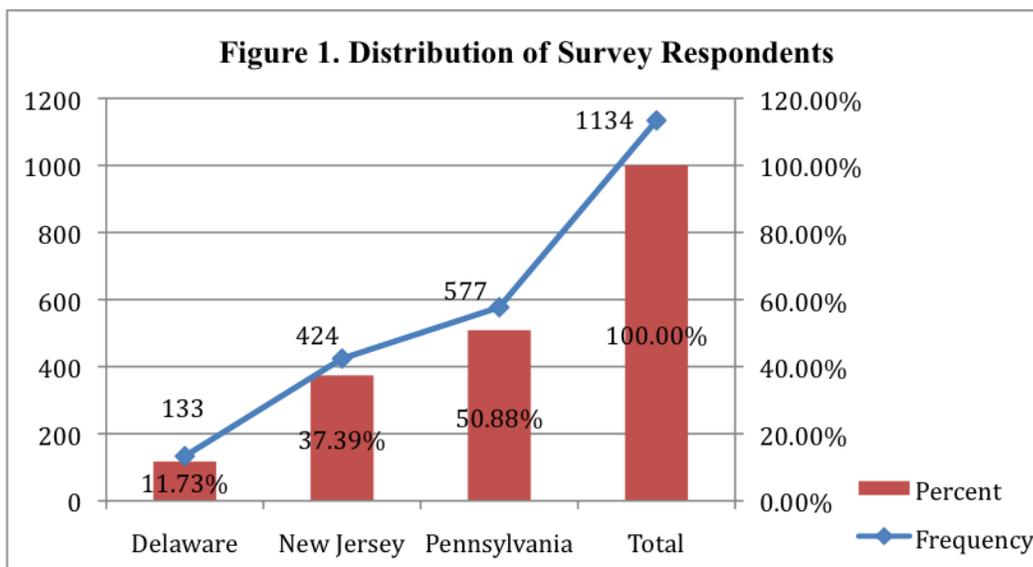
The survey instrument was developed using SurveyMonkey.com (Palo Alto, CA), an on-line survey tool that allows researchers to design and implement an on-line survey. The survey was pre-tested on a subset of the target consumer population (n=93) to refine and clarify misleading or misunderstood questions prior to full deployment of the survey. Participants were selected at random from a panel of participants managed by Survey Sampling International, LLC (Shelton, CT), a provider of sampling solutions for survey research. Panelists received a consent statement along with a link to the survey developed by researchers and approved by the Office of Research and Sponsored Programs at Rutgers Univ. and the Office of Research Protections at the Penn. State Univ. All potential participants were screened and asked to participate if they were: 1) age 18 and older, to ensure that only adults participated; 2) the primary food shopper for the household; and 3) had attended agri-tourism and direct marketing events or activities in the past. Panelists were informed of this criterion as well as their compensation, an entry into Survey Sampling International, LLC's quarterly \$25,000 sweepstakes and an instant win game play, which is standard compensation for these panelists, in the consent statement. To begin the survey, panelists clicked on a hyperlink at the bottom of the consent statement, which then directed them to the survey welcome screen.

Of the 2594 members who were registered with this panel and accessed the survey (309 from DE, 952 from NJ, and 1384 from PA), 1134 (1110) met the screener criteria and began the

questionnaire, with 993 (972) completing the 15-min survey (122 (121) from DE, 364 (358) from NJ, and 507 (493) from PA). Panelists were asked to quantify the amount of produce purchased at direct marketing outlets, type of produce bought, number of visits per month, and dollars spent during visits to each of the farmer-to-consumer direct market outlets and agri-tourism operations targeted, as well as demographic questions (e.g., age; gender; 2009 annual gross household income; household size). After participants submitted their completed survey they were directed to a thank you page.

SAMPLE DETAILS

Survey participants were selected randomly from direct marketing and agri-tourism consumers in the Mid-Atlantic region, specifically in the states of New Jersey, Delaware, and Pennsylvania. In order to develop a sample that would accurately capture agri-tourism operations in the specified geographic area, the total number of samples from each state was based accordingly on the current population of the respective state, meaning that Pennsylvania would have the most respondents, followed by New Jersey, and lastly Delaware. The distribution of survey respondents is shown in Figure 1 below.



This distribution and population numbers are not surprising given the size of each state and the corresponding number of farms. In 2007, the USDA reported 63,163 farms in Pennsylvania, 10,327 farms in New Jersey, and 2,546 in Delaware, supporting the apportionment of respondents (USDA). Having a large scope and variety of farms and participants involved in the study, as seen here, will ensure that data collected is appropriate and will be applicable to all interested individuals from the Mid-Atlantic region chosen for the study.

STUDY RESULTS

An important piece of information needed in order to properly apply any findings from the study is to know which direct market outlets are visited most. Participants were asked about all of the types of direct market outlets types they typically patronize. The survey included four of the outlet types described in the introduction: Pick-your-own (PYO) farms, community farmers’ markets, community supported agriculture (CSA) farms, and on-farm markets. Distribution of respondents per outlet type and per state is detailed in Table 1.

Table 1. Distribution of Respondents by Marketing Outlets

Direct Market Outlets	State						TOTAL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Pick-your-own farm	71	53.38%	225	53.07%	259	44.89%	555	48.94%
Community Farmers' Market	110	82.71%	340	80.19%	491	85.10%	941	82.98%
Community Supported Agriculture (CSA) farm	9	6.77%	49	11.56%	51	8.84%	109	9.61%
On-Farm Market	77	57.89%	241	56.84%	309	53.55%	627	55.29%
All	133	100.00%	424	100.00%	577	100.00%	1134	100.00%

Note: N = Frequency, % = Percent, since respondents selected more than one choice, total percentages do not add to 100%

Across the board, community farmers’ markets were the most frequented, with approximately 80 percent of respondents from each state saying they support this outlet type. CSA farms were the least popular outlet type, perhaps due to the more elaborate procedure it takes to participate and obtain goods from such operations. About 50 percent of respondents claim that they visited and shopped at both on-farm markets and PYO farms in the three states. Many times, on-farm markets also offer PYO resources, and vice versa, giving consumers the opportunity to do business with both outlets in one visit. For example, a shopper may visit a PYO farm to pick blueberries first, but then also shop around in the on-farm market retail area for something like jams and jellies before they leave.

Table 2 details what activities consumers participate in the most in terms of agri-tourism. Of the broad variety of activities, only about one-third to one-half of these leisure activities had a

significant consumer base. According to responses, consumers most frequently participated in hay rides (67 percent), purchased goods at on-farm markets (61 percent), visited pick-your-own farms (59 percent), attended Halloween activities at a farm (47 percent), and visited farm animals (47 percent) and corn mazes (46 percent).

Table 2. Respondents' Participation in Agri-tourism Activities and/or Events

Activities	State						TOTAL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Bed and breakfast	19	14.29%	80	18.87%	91	15.77%	190	16.75%
On-farm camping	4	3.01%	31	7.31%	34	5.89%	69	6.08%
Nature retreat	8	6.02%	41	9.67%	47	8.15%	96	8.47%
Hay rides	92	69.17%	281	66.27%	388	67.24%	761	67.11%
Corn maze	58	43.61%	186	43.87%	282	48.87%	526	46.38%
Nature walk	53	39.85%	167	39.39%	231	40.03%	451	39.77%
Horseback riding	27	20.30%	107	25.24%	138	23.92%	272	23.99%
Pick-your-own farm	81	60.90%	275	64.86%	318	55.11%	674	59.44%
Fishing	27	20.30%	77	18.16%	129	22.36%	233	20.55%
On-farm concerts	8	6.02%	34	8.02%	36	6.24%	78	6.88%
Wine tasting	41	30.83%	163	38.44%	205	35.53%	409	36.07%
Farm produce tasting	22	16.54%	63	14.86%	101	17.50%	186	16.40%
Farm tour	26	19.55%	81	19.10%	153	26.52%	260	22.93%
School field trip to a farm	50	37.59%	121	28.54%	185	32.06%	356	31.39%
Visit farm animals	60	45.11%	203	47.88%	271	46.97%	534	47.09%
Halloween activities at a farm	65	48.87%	196	46.23%	273	47.31%	534	47.09%
On-farm market to purchase fruits, vegetables, meat, and other farm products	86	64.66%	265	62.50%	341	59.10%	692	61.02%
Agricultural fairs/festivals	42	31.58%	125	29.48%	212	36.74%	379	33.42%
Visited a plant nursery to purchase ornamental plants	55	41.35%	156	36.79%	227	39.34%	438	38.62%
All	133	100.00%	424	100.00%	577	100.00%	1134	100.00%

Note: N = Frequency, % = Percent, since respondents selected more than one choice, total percentages do not add to 100%

Tables 3 and 4 measure changes in household consumption of fruits and/or vegetables between 2005 and 2010 in terms of quantity and variety. As Table 3 shows, consumption of

both fresh fruits and vegetables has generally increased in a majority of respondents' households since 2005. Specifically, nearly 74 percent of all survey participants increased their consumption of fruit, and about 68 percent increased vegetable consumption. About a quarter of respondents' consumption had stayed the same for both produce types, and very few (less than 2 percent for each) responded that their consumption decreased. This shows that there is little chance that demand for fresh produce will decrease, but rather it will either remain constant or increase.

Table 3. In General, in the Past Five Years (Since 2005), Changes in the Consumption of Fruits and/or Vegetables in Respondents' Household

Consumption	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Consumption of fresh fruits								
Increased	98	74.24%	294	70.84%	426	75.67%	818	73.69%
Stayed the same	31	23.48%	113	27.23%	129	22.91%	273	24.59%
Decreased	3	2.27%	8	1.93%	8	1.42%	19	1.71%
Total	132	100.00%	415	100.00%	563	100.00%	1110	100.00%
Consumption of fresh vegetables								
Increased	87	65.91%	277	66.75%	395	70.16%	759	68.38%
Stayed the same	41	31.06%	129	31.08%	159	28.24%	329	29.64%
Decreased	4	3.03%	9	2.17%	9	1.60%	22	1.98%
Total	132	100.00%	415	100.00%	563	100.00%	1110	100.00%

Note: N = Frequency, % = Percent

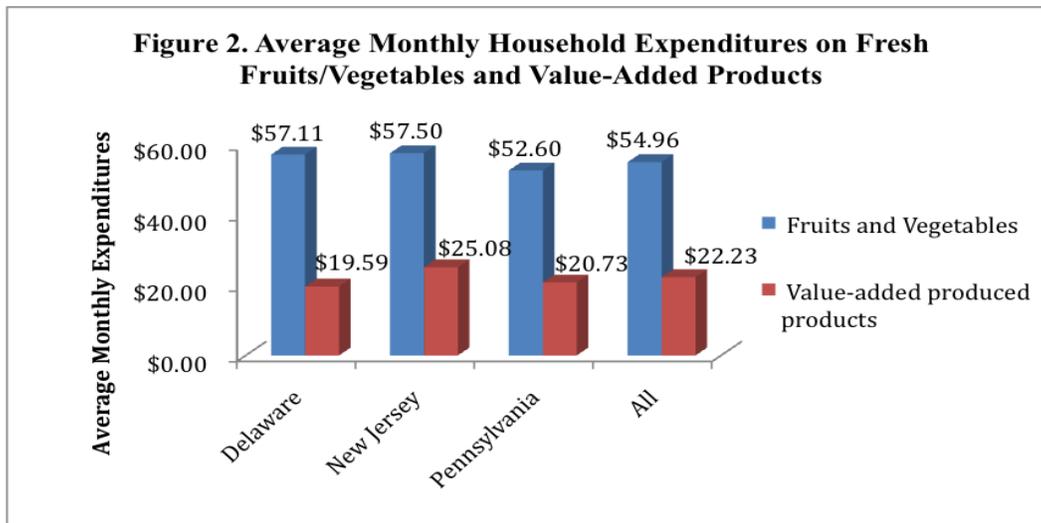
Table 4 shows that the majority of participants' households had incorporated a wider variety of fresh fruits and vegetables in their diet. Results show that respondents increased their fruit consumption only slightly more than their vegetable consumption, with a little over 2 percent difference between the pair.

Table 4. In General, in the Past Five Years (Since 2005), Changes in the Consumption of Wider Variety of Fruits and/or Vegetables in Respondents' Household

Consumption	State							
	Delaware		New Jersey		Pennsylvania		ALL	
	N	%	N	%	N	%	N	%
Wider variety of fresh fruits								
Yes	107	81.06%	364	86.46%	484	84.17%	955	84.66%
No	25	18.94%	57	13.54%	91	15.83%	173	15.34%
Total	132	100.00%	421	100.00%	575	100.00%	1128	100.00%
Wider variety of fresh vegetables								
Yes	104	78.79%	348	82.66%	479	83.30%	931	82.54%
No	28	21.21%	73	17.34%	96	16.70%	197	17.46%
Total	132	100.00%	421	100.00%	575	100.00%	1128	100.00%

Note: N = Frequency, % = Percent

Survey respondents were asked how much they spend on fresh fruits and vegetables, as well as value-added produced products per month. Value-added produced products can be defined as a product with a higher net worth that is derived from a raw product grown by the farmer, such as jams, jellies, baked goods, and apple cider. Hence, the “value added” being the farmers’ work preparation and extra ingredients beyond the raw farm-grown food. Figure 2 shows that the mean monthly expenditure on fresh fruits and vegetables between the three states is \$54.96, with New Jersey and Delaware’s individual state averages slightly higher than Pennsylvania’s. However, the average amount spent on the value-added products per month in all three states was only \$22.23.



To demonstrate how much consumers value direct marketing outlets and what they have to offer, respondents were asked several questions concerning visitations, expenditures, and accessibility to determine if there is a correlation between the patronization of one type of farm-direct marketing outlets over other types. Figure 3 shows that community farmers’ markets get the most visits per year in each state, approximately seven visits on average, with slightly more in Delaware and slightly less in New Jersey than Pennsylvania. However, respondents said that on average they only visit pick-your-own farms and on-farm markets about two and four times a year, respectively. Community supported agriculture farms are visited the least out of all the outlets, with a mere less than one visit per year in each state.

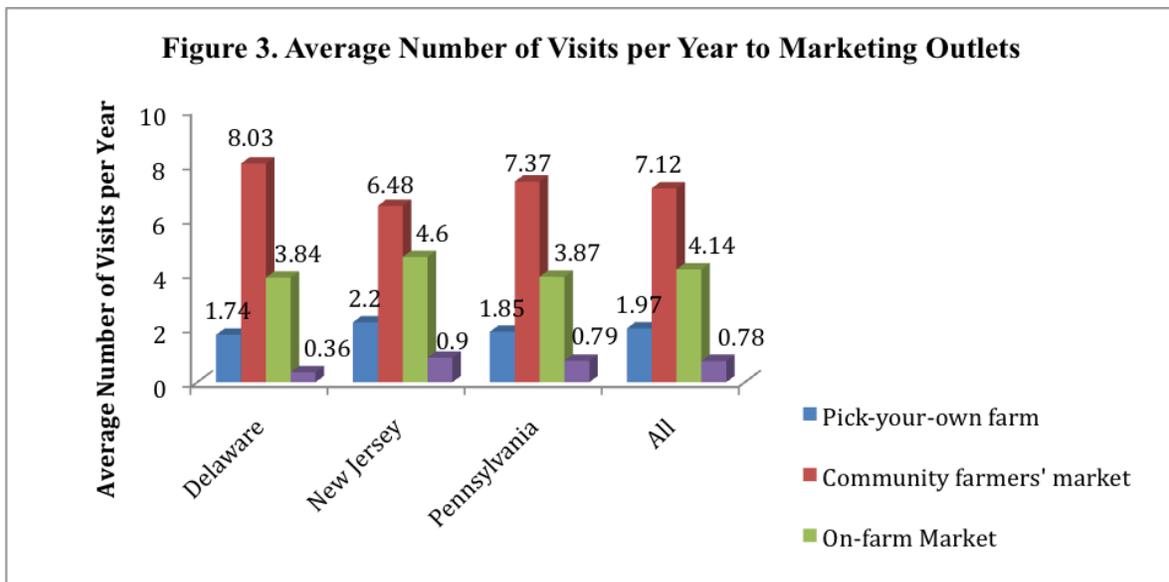


Figure 4 shows the combined per visit average market outlet expenditure as well as averages segmented by state. As results illustrate, consumers spent the most money at community farmers’ markets, with an overall average of \$21.18 per visit, followed by on-farm markets, where the average expenditure was \$17.38. However, there was some variation based on participant’s state of residence. New Jersey residents paid up to \$19.53 on average at on-farm market outlets, whereas Delaware residents only paid up to \$15.95 per visit. Pertaining to PYO operations, \$13.51 was the average amount; however, there was also some dissimilarity based on state of residence. Pennsylvania residents claimed they only spent \$11.79 per visit at PYO farms, while New Jersey residents spent up to \$15.45 per visit. In accordance with our previous

findings, consumers spent the least on CSA farms in the three states, averaging only \$4.84 per visit.

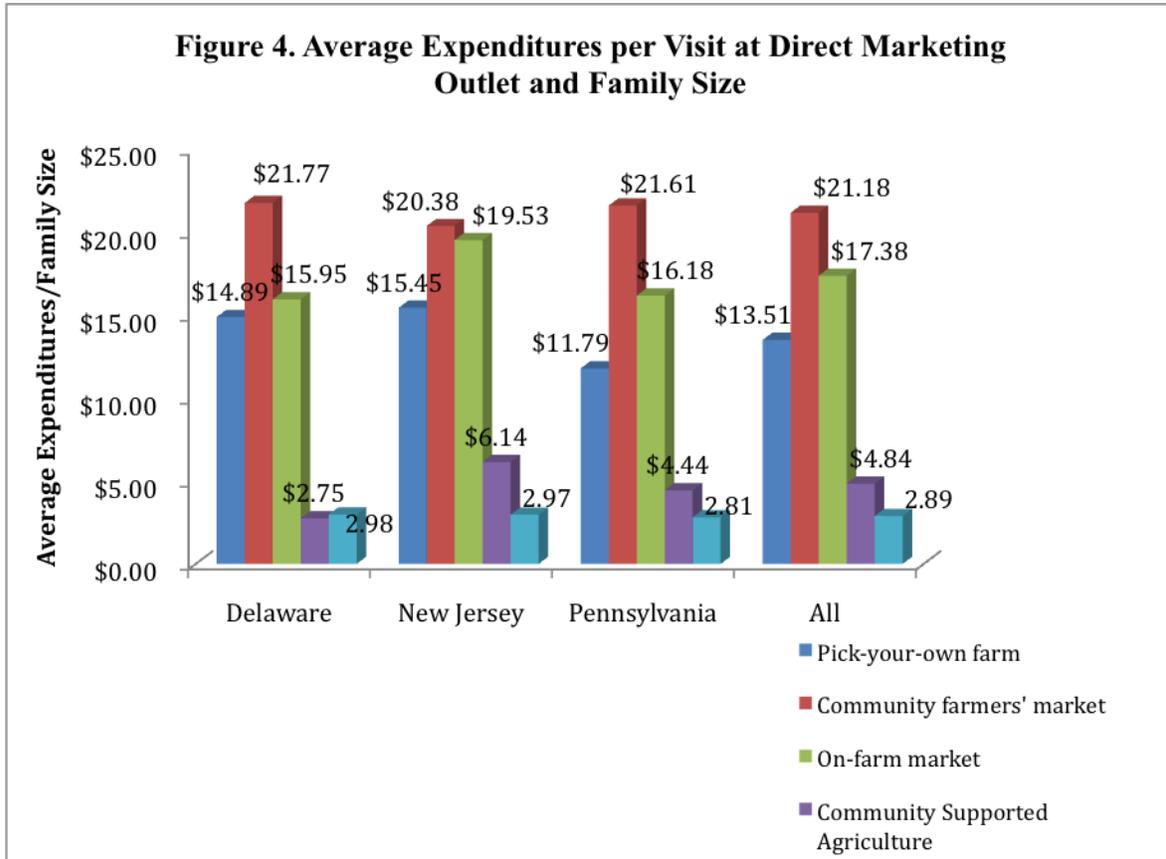
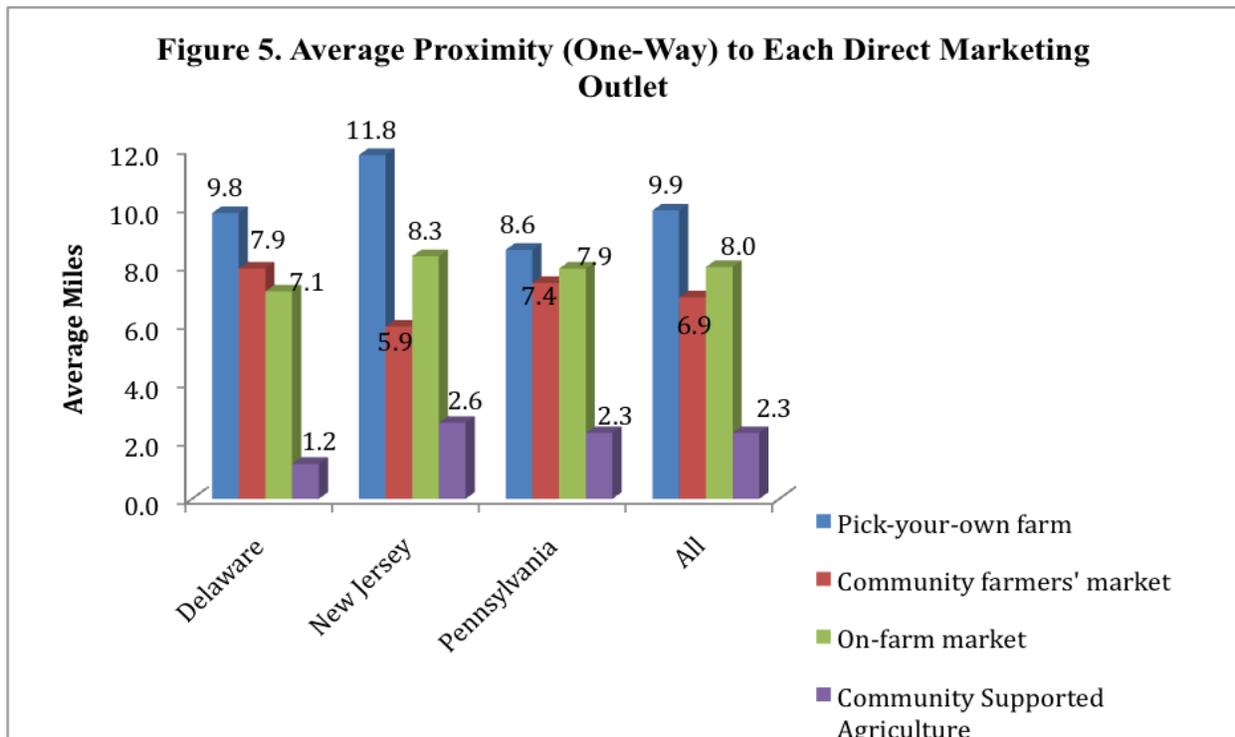


Figure 5 presents the average distance (one way) to each type of direct market outlet. The average number of miles traveled to reach a PYO farm was 9.90 miles, the furthest of all the direct market outlets for consumers in each state. Distance traveled to reach on-farm markets was slightly less, averaging 7.96 miles for all respondents. For consumers to reach community farmers’ markets, which seemed to be slightly more favored than the other three market types, they had to travel 6.92 miles on average. Interestingly, according to results, although consumers visit and spend the least amount of money at CSA farms, they are the closest direct marketing outlet type to consumers in each of the states, with an average travel distance of only 2.26 miles, leading one to conclude that other “unfavorable” factors far outweigh the “favorable” convenience of proximity for this type of farm-direct market.



Survey respondents were asked their opinions regarding produce bought from direct market outlets in comparison to produce bought from more common commercial food outlets (e.g., grocery stores/supermarkets). Participants were asked whether produce bought from direct market outlets were better, the same, or worse than produce bought from commercial food outlets. As shown in Table 5, the majority of respondents from each of the states, nearly 90% of them, concluded that the quality of produce from farm-direct marketing outlets is better, with only about 10% of respondents claiming that the quality was the same or worse. However, feedback on comparing the other two attributes was not as black and white. Only about 60 percent felt that the variety of produce found at direct marketing outlets was better. Thirty percent felt it was the same, and close to 11 percent thought the variety was worse than what they could purchase at other produce outlets. A similar perception was found with regard to the price attribute. Almost two-thirds (61%) of participants responded that direct marketing outlets have better prices, while nearly 25% said prices were the same, and around 14% responded that the prices were worse than other consumer outlets.

Table 5. Respondents' Opinion in Comparing Produce Among Direct Marketing Outlets

Produce Attributes	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Quality attribute								
Better	110	88.00%	350	88.16%	492	90.94%	952	89.56%
Same	15	12.00%	44	11.08%	47	8.69%	106	9.97%
Worse	.	.	3	0.76%	2	0.37%	5	0.47%
Total	125	100.00%	397	100.00%	541	100.00%	1063	100.00%
Variety attribute								
Better	69	55.20%	226	56.93%	327	60.44%	622	58.51%
Same	44	35.20%	131	33.00%	150	27.73%	325	30.57%
Worse	12	9.60%	40	10.08%	64	11.83%	116	10.91%
Total	125	100.00%	397	100.00%	541	100.00%	1063	100.00%
Price attribute								
Better	80	64.00%	211	53.15%	360	66.54%	651	61.24%
Same	22	17.60%	110	27.71%	129	23.84%	261	24.55%
Worse	23	18.40%	76	19.14%	52	9.61%	151	14.21%
Total	125	100.00%	397	100.00%	541	100.00%	1063	100.00%

Note: N = Frequency, % = Percent

Table 6, shown below, evaluates the percentage distribution of fresh fruits and vegetables that respondents and members of their households purchased from various outlets. The primary sources where fruits and vegetables are purchased are supermarket and grocery stores, from which consumers said they bought an average of 32% of their total produce. The second most utilized source was community farmers' markets, where they bought roughly 18% of their total desired produce. Other notable outlets reported included on-farm markets (9%), independent grocery stores (around 8%), PYO farms (7%), and roadside stands (6%). The rest of the outlet types were generally found to be statistically insignificant.

Table 6: Percentage Distribution of Fresh Fruits/Vegetables Purchased from Outlets

Outlets	State			TOTAL Average %
	Delaware Average %	New Jersey Average %	Pennsylvania Average %	
Pick-your-own farm	5.61%	7.79%	6.34%	6.79%
Community farmers' market	19.19%	16.65%	19.24%	18.28%
On-farm market	10.40%	8.99%	8.91%	9.12%
Roadside stand	6.62%	5.64%	6.49%	6.19%
Community Supported Agriculture (CSA)	1.25%	2.66%	1.98%	2.14%
Supermarket/grocery store (for example: Shop Rite, IGA, Giant Food)	31.52%	37.27%	28.53%	32.10%
Independent grocery store	9.08%	3.98%	11.44%	8.42%
Specialty food store (for example: Whole Foods, Trader Joe's)	1.08%	4.69%	2.36%	3.07%
Discounters (for example: Aldi, Big Lots, Dollar General)	1.35%	1.76%	3.24%	2.47%
Warehouse Club (for example: BJ's, SAM's Club, Costco)	5.09%	4.75%	3.28%	4.03%
Natural food store	0.86%	0.99%	0.71%	0.83%
Convenience store/gas station	0.34%	0.25%	0.25%	0.26%
Internet, catalog, or mail-order service	0.24%	0.26%	0.23%	0.24%
Friend/neighbor's garden	1.86%	0.88%	1.34%	1.23%
Own garden	4.86%	2.77%	4.79%	4.06%
Other source	0.64%	0.68%	0.87%	0.77%
Total	100.00%	100.00%	100.00%	100.00%

Note: N = Frequency, % = Percent

Tables 7.1 and 7.2 show participant responses concerning their plans to visit a variety of direct market outlets in 2010, with the first table evaluating the more commonly visited direct marketing outlets and/or markets participants intended to visit. Among all the consumers interviewed, roughly 34 percent planned on visiting PYO farms. Nearly 25 percent had already visited PYO farms and 40 percent answered that they would either not go or were unsure of their plans. Regarding plans to visit community farmers' markets, the majority of respondents (48 percent) claimed they had already visited one in 2010 and 37 percent said they would visit one within the year. Due to the ease and diversity associated with visiting community farmers' markets, perhaps this is why such a large percentage of those surveyed planned to and did visit

them. However, there was still a small percentage who did not plan on visiting in 2010, and about 8.5 percent who were unsure if they would visit or not. Slightly less than a third, 29 percent, had already visited an on-farm market in 2010; however, slightly more than 41 percent planned to visit at the time of the survey. Although most of the respondents had already visited these outlets or were planning to, there were still almost 30 percent who did not plan to visit an on-farm market or were unsure if they would visit. This can be a key finding for future use of this research as a reason for better promoting consumer-direct farm outlets. In general though, a majority of the participants had or said they would visit the direct marketing outlets.

**Table 7.1 Respondents' Plans to Visit Direct Marketing Outlets
(Pick-your-own, Community Farmers' Market and On-Farm Market) in 2010**

Direct Market Outlets	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Planning to visit pick-your-own farm								
I have already visited in 2010	33	27.27%	86	23.43%	125	24.56%	244	24.47%
Yes, I will visit	43	35.54%	142	38.69%	160	31.43%	345	34.60%
No, I will not visit	25	20.66%	51	13.90%	110	21.61%	186	18.66%
Unsure if I will visit	20	16.53%	88	23.98%	114	22.40%	222	22.27%
Total	121	100.00%	367	100.00%	509	100.00%	997	100.00%
Planning to visit community farmers' market								
I have already visited in 2010	66	54.55%	172	46.87%	241	47.35%	479	48.04%
Yes, I will visit	37	30.58%	129	35.15%	208	40.86%	374	37.51%
No, I will not visit	10	8.26%	24	6.54%	25	4.91%	59	5.92%
Unsure if I will visit	8	6.61%	42	11.44%	35	6.88%	85	8.53%
Total	121	100.00%	367	100.00%	509	100.00%	997	100.00%
Planning to visit on-farm market								
I have already visited in 2010	37	30.58%	116	31.61%	139	27.31%	292	29.29%
Yes, I will visit	44	36.36%	143	38.96%	224	44.01%	411	41.22%
No, I will not visit	22	18.18%	38	10.35%	53	10.41%	113	11.33%
Unsure if I will visit	18	14.88%	70	19.07%	93	18.27%	181	18.15%
Total	121	100.00%	367	100.00%	509	100.00%	997	100.00%

Note: N = Frequency, % = Percent

Table 7.2 shows participant responses when asked about their plans to visit smaller or less common forms of direct marketing outlets. Surprisingly, almost half (45 percent) of respondents had claimed that they would visit a roadside stand within the year and almost a quarter (23 percent) had said they already visited one. Roughly 1 in 5 of consumers reported that they were unsure about visiting a roadside stand, and 1 in 10 said they would not visit. As noted before, CSA farms still do not have as strong of a customer base as other investigated operations do, and this is seen clearly by the participants' future plans to visit. The majority (46 percent) answered that they had no intentions of visiting a CSA farm and nearly 35 percent said they were unsure, again not showing much support for this type of operation. Only a mere 5 percent confirmed that they had indeed visited a CSA farm. A similar outlook was found for plans to visit other, not specified direct marketing operations. Generally, most of the respondents said they would not or were unsure if they would visit, while very few respondents said that they had or would visit one.

**Table 7.2 Respondents' Plan to Visit Direct Marketing Outlets
(Roadside Stand, Community Supported Agriculture and Other) in 2010**

direct market outlets	State						all	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Planning to visit roadside stand								
I have already visited in 2010	15	25.86%	45	25.42%	51	20.99%	111	23.22%
Yes, I will visit	28	48.28%	72	40.68%	114	46.91%	214	44.77%
No, I will not visit	5	8.62%	21	11.86%	22	9.05%	48	10.04%
Unsure if I will visit	10	17.24%	39	22.03%	56	23.05%	105	21.97%
Total	58	100.00%	177	100.00%	243	100.00%	478	100.00%
Planning to visit Community Supported Agriculture (CSA)								
I have already visited in 2010	.	.	12	6.78%	12	4.94%	24	5.02%
Yes, I will visit	9	15.52%	22	12.43%	35	14.40%	66	13.81%
No, I will not visit	31	53.45%	80	45.20%	110	45.27%	221	46.23%
Unsure if I will visit	18	31.03%	63	35.59%	86	35.39%	167	34.94%
Total	58	100.00%	177	100.00%	243	100.00%	478	100.00%
Planning to visit other								
I have already visited in 2010	4	6.90%	12	6.78%	9	3.70%	25	5.23%
Yes, I will visit	1	1.72%	11	6.21%	15	6.17%	27	5.65%
No, I will not visit	32	55.17%	67	37.85%	108	44.44%	207	43.31%
Unsure if I will visit	21	36.21%	87	49.15%	111	45.68%	219	45.82%
Total	58	100.00%	177	100.00%	243	100.00%	478	100.00%

Note: N = Frequency, % = Percent

Regarding advertising these markets use to promote products to consumers, respondents were asked to identify the source through which they first learned and received information about direct marketing outlets, as shown in Table 8. Most commonly, information was shared by way of friends/family/word-of-mouth (two-thirds of all respondents) or by signs at the market's entrance (approximately 45 percent). Other significantly popular means included: newspaper sources, billboard or roadside signs, mailed farm advertisements, promotional flyers, and websites. Surprisingly, Internet based sources, such as email, blogs, and social networking sites generally were not sources which consumer used to first learn about and receive information from direct marketing outlets.

Table 8. Respondents First Time Sources of Marketing Outlets Information

Sources of Information	State						TOTAL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Billboard or Roadside sign	57	42.86%	138	32.55%	196	33.97%	391	34.48%
Sign at the market's entrance	69	51.88%	190	44.81%	251	43.50%	510	44.97%
Newspaper	58	43.61%	168	39.62%	218	37.78%	444	39.15%
Magazine	3	2.26%	25	5.90%	27	4.68%	55	4.85%
Friends/family/word-of-mouth	96	72.18%	265	62.50%	395	68.46%	756	66.67%
Television	7	5.26%	19	4.48%	33	5.72%	59	5.20%
School activity at the direct market outlet	8	6.02%	29	6.84%	39	6.76%	76	6.70%
Radio	10	7.52%	17	4.01%	47	8.15%	74	6.53%
Farm advertisement (sent through the mail to the home)	15	11.28%	51	12.03%	55	9.53%	121	10.67%
Promotional flyer	13	9.77%	52	12.26%	53	9.19%	118	10.41%
Agri-tourism map with direct markets listed	4	3.01%	15	3.54%	25	4.33%	44	3.88%
Tourism guide book	8	6.02%	12	2.83%	19	3.29%	39	3.44%
WIC program	3	2.26%	11	2.59%	35	6.07%	49	4.32%
Website	13	9.77%	44	10.38%	39	6.76%	96	8.47%
Email	8	6.02%	29	6.84%	18	3.12%	55	4.85%
Blogs	1	0.75%	12	2.83%	5	0.87%	18	1.59%
Social networking sites (for example: Facebook, Twitter, MySpace)	4	3.01%	16	3.77%	17	2.95%	37	3.26%
All	133	100.00%	424	100.00%	577	100.00%	1134	100.00%

Note: N = Frequency, % = Percent, since respondents selected more than one choice, total percentages do not add to 100%

Tables 9.1 through 9.4 present the purchasing behavior and rank of how often consumers buy various fresh fruits from direct marketing operations. Among the three states, buyers claimed that apples were purchased most often (Table 9.1). Strawberries were ranked second most often, with 29 percent of respondents across all three states. Also, when taking a closer look, residents of Delaware actually responded that strawberries were their primary purchases at outlets, followed by apples, whereas New Jersey and Pennsylvania had the opposite result.

Table 9.1 Respondents' Purchasing Behavior of Fresh Apples and Strawberries from Direct Marketing Outlets

Fresh Fruits	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Apples								
Do not purchase	2	1.77%	10	2.97%	9	1.89%	21	2.27%
Most often purchased	29	25.66%	137	40.65%	177	37.26%	343	37.08%
2 nd	17	15.04%	56	16.62%	89	18.74%	162	17.51%
3 rd	21	18.58%	42	12.46%	61	12.84%	124	13.41%
4 th	16	14.16%	22	6.53%	41	8.63%	79	8.54%
5 th	10	8.85%	34	10.09%	33	6.95%	77	8.32%
6 th	11	9.73%	24	7.12%	46	9.68%	81	8.76%
Least often purchased	7	6.19%	12	3.56%	19	4.00%	38	4.11%
Total	113	100.00%	337	100.00%	475	100.00%	925	100.00%
Strawberries								
Do not purchase	.	.	4	1.19%	8	1.68%	12	1.30%
Most often purchased	39	34.51%	79	23.44%	155	32.63%	273	29.51%
2 nd	26	23.01%	111	32.94%	145	30.53%	282	30.49%
3 rd	17	15.04%	56	16.62%	70	14.74%	143	15.46%
4 th	19	16.81%	50	14.84%	43	9.05%	112	12.11%
5 th	8	7.08%	19	5.64%	28	5.89%	55	5.95%
6 th	3	2.65%	10	2.97%	19	4.00%	32	3.46%
Least often purchased	1	0.88%	8	2.37%	7	1.47%	16	1.73%
Total	113	100.00%	337	100.00%	475	100.00%	925	100.00%

Note: N = Frequency, % = Percent

A quarter of the respondents, across all three states, ranked peaches as the third most frequently purchased fruit at direct marketing outlets (Table 9.2). However, almost the same percentage ranked it as the fourth most often bought, with only a few less participants ranking it there. Buyers expressed that generally blueberries are their fourth most often purchased fruit. However, consumers' feed back at this level became more "gray" with five of the eight response choices falling into a much narrower range of percentages. For example, fourth most often had nearly 20% of respondents choose this rank, while almost 19% chose third most often.

Table 9.2 Respondents' Purchasing Behavior of Fresh Peaches and Blueberries from Direct Marketing Outlets

Fresh Fruits	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Peaches								
Do not purchase	4	3.54%	10	3.13%	18	3.99%	32	3.62%
Most often purchased	11	9.73%	27	8.46%	43	9.53%	81	9.17%
2 nd	28	24.78%	53	16.61%	72	15.96%	153	17.33%
3 rd	20	17.70%	82	25.71%	119	26.39%	221	25.03%
4 th	22	19.47%	70	21.94%	85	18.85%	177	20.05%
5 th	14	12.39%	33	10.34%	60	13.30%	107	12.12%
6 th	7	6.19%	31	9.72%	43	9.53%	81	9.17%
Least often purchased	7	6.19%	13	4.08%	11	2.44%	31	3.51%
Total	113	100.00%	319	100.00%	451	100.00%	883	100.00%
Blueberries								
Do not purchase	5	4.42%	14	4.39%	28	6.21%	47	5.32%
Most often purchased	3	2.65%	35	10.97%	23	5.10%	61	6.91%
2 nd	15	13.27%	49	15.36%	58	12.86%	122	13.82%
3 rd	20	17.70%	65	20.38%	79	17.52%	164	18.57%
4 th	21	18.58%	64	20.06%	91	20.18%	176	19.93%
5 th	21	18.58%	47	14.73%	71	15.74%	139	15.74%
6 th	18	15.93%	36	11.29%	57	12.64%	111	12.57%
Least often purchased	10	8.85%	9	2.82%	44	9.76%	63	7.13%
Total	113	100.00%	319	100.00%	451	100.00%	883	100.00%

Note: N = Frequency, % = Percent

Following the same pattern, melons (e.g., cantaloupes and honeydews) are the fifth most often purchased fruit with around 28 percent of participants selecting that rank. Similarly, watermelons are the next most frequently purchased fruit with more than 21 percent of respondents choosing it as the sixth most often purchased (Table 9.3). The survey also considered other fresh fruits and grouped them into one category in Table 9.4. Here, results showed that consumers had little interest in these, as roughly 34 percent answered as 'least often', and 25% said they did not purchase other fruits at all.

Table 9.3 Respondent's Purchasing Behavior of Fresh Melons and Watermelon from Direct Marketing Outlets

Fresh Fruits	State							
	Delaware		New Jersey		Pennsylvania		ALL	
	N	%	N	%	N	%	N	%
Melons								
Do not purchase	3	2.70%	20	6.04%	19	4.04%	42	4.61%
Most often purchased	11	9.91%	14	4.23%	25	5.32%	50	5.48%
2 nd	16	14.41%	23	6.95%	51	10.85%	90	9.87%
3 rd	16	14.41%	44	13.29%	73	15.53%	133	14.58%
4 th	17	15.32%	59	17.82%	96	20.43%	172	18.86%
5 th	26	23.42%	102	30.82%	131	27.87%	259	28.40%
6 th	18	16.22%	51	15.41%	57	12.13%	126	13.82%
Least often purchased	4	3.60%	18	5.44%	18	3.83%	40	4.39%
Total	111	100.00%	331	100.00%	470	100.00%	912	100.00%
Watermelon								
Do not purchase	2	1.80%	20	6.04%	17	3.62%	39	4.28%
Most often purchased	15	13.51%	24	7.25%	41	8.72%	80	8.77%
2 nd	14	12.61%	31	9.37%	50	10.64%	95	10.42%
3 rd	12	10.81%	45	13.60%	62	13.19%	119	13.05%
4 th	17	15.32%	59	17.82%	89	18.94%	165	18.09%
5 th	24	21.62%	55	16.62%	80	17.02%	159	17.43%
6 th	21	18.92%	71	21.45%	102	21.70%	194	21.27%
Least often purchased	6	5.41%	26	7.85%	29	6.17%	61	6.69%
Total	111	100.00%	331	100.00%	470	100.00%	912	100.00%

Note: N = Frequency, % = Percent

Table 9.4 Respondents' Purchasing Behavior of Other Fresh Fruits from Direct Marketing Outlets

Fresh Fruits	State							
	Delaware		New Jersey		Pennsylvania		ALL	
	N	%	N	%	N	%	N	%
Other fruits								
Do not purchase	13	31.71%	21	16.94%	54	29.03%	88	25.07%
Most often purchased	6	14.63%	23	18.55%	14	7.53%	43	12.25%
2 nd	1	2.44%	7	5.65%	8	4.30%	16	4.56%
3 rd	1	2.44%	3	2.42%	6	3.23%	10	2.85%
4 th	.	.	2	1.61%	10	5.38%	12	3.42%
5 th	4	9.76%	8	6.45%	14	7.53%	26	7.41%
6 th	1	2.44%	18	14.52%	16	8.60%	35	9.97%
Least often purchased	15	36.59%	42	33.87%	64	34.41%	121	34.47%
Total	41	100.00%	124	100.00%	186	100.00%	351	100.00%

Note: N = Frequency, % = Percent

Similar to fresh fruit purchasing habits, respondents indicated fresh vegetables bought most often from direct marketing operations in order from most to least often purchased. Results, by vegetable type, are shown in Tables 10.1 through 10.5. Across all three states, respondents answered that tomatoes were purchased most often, with an overall average of 46 percent purchasing this item (Table 10.1). When responses were segmented by state, consumers in Pennsylvania ranked peppers as their second most often bought vegetable, and those from New Jersey and Delaware claimed that peppers were their third.

Table 10.1 Respondents' Purchasing Behavior of Fresh Tomato and Pepper from Direct Marketing Outlets

Fresh Vegetables	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Tomato								
Do not purchase	.	.	10	3.13%	17	3.83%	27	3.08%
Most often purchased	52	46.43%	161	50.31%	190	42.79%	403	46.00%
2 nd	32	28.57%	75	23.44%	90	20.27%	197	22.49%
3 rd	8	7.14%	16	5.00%	52	11.71%	76	8.68%
4 th	5	4.46%	15	4.69%	25	5.63%	45	5.14%
5 th	6	5.36%	9	2.81%	23	5.18%	38	4.34%
6 th	2	1.79%	9	2.81%	14	3.15%	25	2.85%
7 th	2	1.79%	6	1.88%	11	2.48%	19	2.17%
8 th	.	.	6	1.88%	10	2.25%	16	1.83%
9 th	4	3.57%	8	2.50%	4	0.90%	16	1.83%
Least often purchased	1	0.89%	5	1.56%	8	1.80%	14	1.60%
Total	112	100.00%	320	100.00%	444	100.00%	876	100.00%
Pepper								
Do not purchase	5	4.46%	7	2.19%	8	1.80%	20	2.28%
Most often purchased	4	3.57%	13	4.06%	12	2.70%	29	3.31%
2 nd	9	8.04%	64	20.00%	113	25.45%	186	21.23%
3 rd	20	17.86%	88	27.50%	102	22.97%	210	23.97%
4 th	19	16.96%	35	10.94%	57	12.84%	111	12.67%
5 th	15	13.39%	33	10.31%	46	10.36%	94	10.73%
6 th	14	12.50%	26	8.13%	36	8.11%	76	8.68%
7 th	5	4.46%	19	5.94%	23	5.18%	47	5.37%
8 th	10	8.93%	14	4.38%	15	3.38%	39	4.45%
9 th	4	3.57%	11	3.44%	18	4.05%	33	3.77%
Least often purchased	7	6.25%	10	3.13%	14	3.15%	31	3.54%
Total	112	100.00%	320	100.00%	444	100.00%	876	100.00%

Note: N = Frequency, % = Percent

When asked about sweet corn, consumers from each state generally showed that it is one of the vegetable varieties that they purchased most often. Interestingly, an equal number of Delaware participants responded that sweet corn was their first and second most often purchased

vegetable, clearly indicating its dominance in the small state (Table 10.2). Snap beans ranked fourth among all participants' responses in total.

Table 10.2 Respondents' Purchasing Behavior of Fresh Sweet Corn and Snap Beans from Direct Marketing Outlets

Fresh Vegetables	State							
	Delaware		New Jersey		Pennsylvania		ALL	
	N	%	N	%	N	%	N	%
Sweet corn								
Do not purchase	.	.	4	1.31%	2	0.46%	6	0.71%
Most often purchased	36	33.03%	93	30.49%	161	37.18%	290	34.24%
2 nd	36	33.03%	82	26.89%	106	24.48%	224	26.45%
3 rd	11	10.09%	56	18.36%	63	14.55%	130	15.35%
4 th	6	5.50%	17	5.57%	35	8.08%	58	6.85%
5 th	5	4.59%	17	5.57%	13	3.00%	35	4.13%
6 th	7	6.42%	11	3.61%	20	4.62%	38	4.49%
7 th	2	1.83%	7	2.30%	15	3.46%	24	2.83%
8 th	3	2.75%	11	3.61%	9	2.08%	23	2.72%
9 th	3	2.75%	6	1.97%	6	1.39%	15	1.77%
Least often purchased	.	.	1	0.33%	3	0.69%	4	0.47%
Total	109	100.00%	305	100.00%	433	100.00%	847	100.00%
Snap beans								
Do not purchase	9	8.26%	25	8.20%	34	7.85%	68	8.03%
Most often purchased	.	.	5	1.64%	4	0.92%	9	1.06%
2 nd	2	1.83%	12	3.93%	17	3.93%	31	3.66%
3 rd	18	16.51%	23	7.54%	41	9.47%	82	9.68%
4 th	14	12.84%	64	20.98%	74	17.09%	152	17.95%
5 th	9	8.26%	35	11.48%	55	12.70%	99	11.69%
6 th	8	7.34%	30	9.84%	41	9.47%	79	9.33%
7 th	10	9.17%	33	10.82%	45	10.39%	88	10.39%
8 th	14	12.84%	25	8.20%	49	11.32%	88	10.39%
9 th	14	12.84%	33	10.82%	40	9.24%	87	10.27%
Least often purchased	11	10.09%	20	6.56%	33	7.62%	64	7.56%
Total	109	100.00%	305	100.00%	433	100.00%	847	100.00%

Note: N = Frequency, % = Percent

As shown in Table 10.3, respondents ranked broccoli their fourth to seventh most purchased vegetable, in general. As for onions, most ranked it from fifth to seventh, making both vegetables appear to be some of the least often purchased vegetables compared to the previous samples.

Table 10.3 Respondents' Purchasing Behavior of Fresh Broccoli and Onion from Direct Marketing Outlets

Fresh Vegetables	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Broccoli								
Do not purchase	1	0.94%	11	3.68%	11	2.59%	23	2.77%
Most often purchased	2	1.89%	12	4.01%	12	2.82%	26	3.13%
2nd	7	6.60%	13	4.35%	22	5.18%	42	5.06%
3rd	4	3.77%	25	8.36%	35	8.24%	64	7.71%
4th	14	13.21%	43	14.38%	56	13.18%	113	13.61%
5th	14	13.21%	51	17.06%	66	15.53%	131	15.78%
6th	14	13.21%	42	14.05%	71	16.71%	127	15.30%
7th	19	17.92%	39	13.04%	57	13.41%	115	13.86%
8th	13	12.26%	31	10.37%	50	11.76%	94	11.33%
9th	14	13.21%	19	6.35%	27	6.35%	60	7.23%
Least often purchased	4	3.77%	13	4.35%	18	4.24%	35	4.22%
Total	106	100.00%	299	100.00%	425	100.00%	830	100.00%
Onion								
Do not purchase	3	2.83%	5	1.67%	11	2.59%	19	2.29%
Most often purchased	2	1.89%	3	1.00%	22	5.18%	27	3.25%
2nd	3	2.83%	20	6.69%	14	3.29%	37	4.46%
3rd	14	13.21%	24	8.03%	34	8.00%	72	8.67%
4th	16	15.09%	31	10.37%	45	10.59%	92	11.08%
5th	13	12.26%	40	13.38%	61	14.35%	114	13.73%
6th	21	19.81%	53	17.73%	77	18.12%	151	18.19%
7th	17	16.04%	47	15.72%	72	16.94%	136	16.39%
8th	11	10.38%	42	14.05%	43	10.12%	96	11.57%
9th	2	1.89%	24	8.03%	31	7.29%	57	6.87%
Least often purchased	4	3.77%	10	3.34%	15	3.53%	29	3.49%
Total	106	100.00%	299	100.00%	425	100.00%	830	100.00%

Note: N = Frequency, % = Percent

Table 10.4 shows purchasing behaviors for potatoes and squash. Potatoes ranked seventh most frequently bought vegetable, overall, with only a slight discrepancy from Delaware's customers (ranked fifth most often purchased by 19 percent). However, participants in all three states reported squash as their eighth most often purchased vegetable. Results of all ranking choices for both potatoes and squash, however, did not lean more heavily to a particular rank and were distributed more evenly than the other vegetables' ranks, making it hard to truly determine how high a priority purchasing those items were compared to others. This also applies to the findings in Table 10.5 for cucumbers. Although about 14% of participants ranked cucumbers as their fourth most purchased, many consumers also ranked it third, fifth, and eighth, with the differences in distribution only being a few participants in total. For any vegetables besides the ones specifically described consumers generally had either not purchased those items, or as the majority stated, they would purchase them least often.

Table 10.4 Respondents' Purchasing Behavior of Fresh Potato and Squash from Direct Marketing Outlets

Fresh Vegetables	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Potato								
Do not purchase	5	4.81%	7	2.36%	6	1.40%	18	2.17%
Most often purchased	6	5.77%	11	3.70%	21	4.88%	38	4.57%
2 nd	6	5.77%	19	6.40%	35	8.14%	60	7.22%
3 rd	7	6.73%	21	7.07%	36	8.37%	64	7.70%
4 th	11	10.58%	26	8.75%	42	9.77%	79	9.51%
5 th	20	19.23%	38	12.79%	69	16.05%	127	15.28%
6 th	13	12.50%	48	16.16%	60	13.95%	121	14.56%
7 th	17	16.35%	59	19.87%	73	16.98%	149	17.93%
8 th	10	9.62%	39	13.13%	47	10.93%	96	11.55%
9 th	8	7.69%	18	6.06%	29	6.74%	55	6.62%
Least often purchased	1	0.96%	11	3.70%	12	2.79%	24	2.89%
Total	104	100.00%	297	100.00%	430	100.00%	831	100.00%
Squash								
Do not purchase	6	5.77%	26	8.75%	43	10.00%	75	9.03%
Most often purchased	2	1.92%	3	1.01%	6	1.40%	11	1.32%
2 nd	1	0.96%	12	4.04%	16	3.72%	29	3.49%
3 rd	9	8.65%	19	6.40%	25	5.81%	53	6.38%
4 th	9	8.65%	30	10.10%	34	7.91%	73	8.78%
5 th	14	13.46%	28	9.43%	46	10.70%	88	10.59%
6 th	13	12.50%	23	7.74%	39	9.07%	75	9.03%
7 th	16	15.38%	46	15.49%	56	13.02%	118	14.20%
8 th	17	16.35%	55	18.52%	78	18.14%	150	18.05%
9 th	11	10.58%	33	11.11%	46	10.70%	90	10.83%
Least often purchased	6	5.77%	22	7.41%	41	9.53%	69	8.30%
Total	104	100.00%	297	100.00%	430	100.00%	831	100.00%

Note: N = Frequency, % = Percent

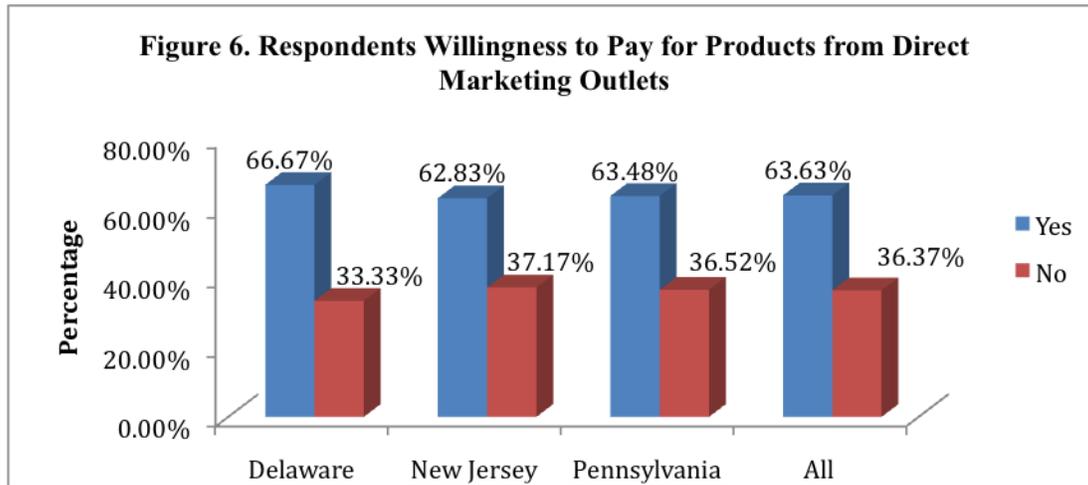
Table 10.5 Respondents Purchasing Behavior of Fresh Cucumber and Other Vegetables from Direct Marketing Outlets

Fresh Vegetables	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Cucumber								
Do not purchase	.	.	2	2.82%	2	1.68%	4	1.84%
Most often purchased	2	7.41%	4	5.63%	2	1.68%	8	3.69%
2 nd	3	11.11%	4	5.63%	10	8.40%	17	7.83%
3 rd	5	18.52%	7	9.86%	16	13.45%	28	12.90%
4 th	3	11.11%	12	16.90%	16	13.45%	31	14.29%
5 th	3	11.11%	11	15.49%	13	10.92%	27	12.44%
6 th	2	7.41%	6	8.45%	15	12.61%	23	10.60%
7 th	2	7.41%	6	8.45%	12	10.08%	20	9.22%
8 th	5	18.52%	9	12.68%	14	11.76%	28	12.90%
9 th	1	3.70%	9	12.68%	12	10.08%	22	10.14%
Least often purchased	1	3.70%	1	1.41%	7	5.88%	9	4.15%
Total	27	100.00%	71	100.00%	119	100.00%	217	100.00%
Other vegetables								
Do not purchase	8	29.63%	19	26.76%	38	31.93%	65	29.95%
Most often purchased	.	.	1	1.41%	5	4.20%	6	2.76%
2 nd	.	.	3	4.23%	.	.	3	1.38%
3 rd	2	7.41%	3	4.23%	4	3.36%	9	4.15%
4 th	.	.	3	4.23%	3	2.52%	6	2.76%
5 th	.	.	3	4.23%	5	4.20%	8	3.69%
6 th	2	7.41%	1	1.41%	6	5.04%	9	4.15%
7 th	1	3.70%	3	4.23%	3	2.52%	7	3.23%
8 th	.	.	5	7.04%	4	3.36%	9	4.15%
9 th	3	11.11%	4	5.63%	15	12.61%	22	10.14%
Least often purchased	11	40.74%	26	36.62%	36	30.25%	73	33.64%
Total	27	100.00%	71	100.00%	119	100.00%	217	100.00%

Note: N = Frequency, % = Percent

Additional survey questions asked participants about their willingness to pay more for products from direct marketing outlets versus products purchased from other providers. First, as shown in Figure 6, participants were simply asked if they were willing or unwilling to pay more.

Overall, nearly two-thirds of all respondents said that they would indeed be willing to pay more for products from direct marketing outlets. The distribution percentage of Delaware’s respondents was slightly higher than the other two states, showing that residents there are slightly more willing to pay than individuals residing in New Jersey and Pennsylvania.



Participants who replied ‘yes,’ that they would be willing to pay more, were asked to indicate what percentage increase they would be willing to accept, which is outlined in Table 11. The majority (41 percent) were willing to pay at least 6-10% more for products from direct marketing outlets, while 28 percent were willing to pay at least an additional 1-5% more. Around 14 percent of consumers were willing to pay an increase of 11-15%, while 9 percent would pay 16-20% more, and 4 percent would pay an increase of 21-25% more. Of note, a little over 5% of consumers from all three states would pay above 25% more for products from direct marketing outlets.

Table 11. Percentage Distribution of Respondents' Willingness to Pay for Products from Direct Marketing Outlets

Willingness to Pay (%)	State						TOTAL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
1 to 5%	22	26.83%	75	31.91%	88	26.43%	185	28.46%
6 to 10%	37	45.12%	91	38.72%	136	40.84%	264	40.62%
11 to 15%	9	10.98%	24	10.21%	54	16.22%	87	13.38%
16 to 20%	8	9.76%	18	7.66%	30	9.01%	56	8.62%
21 to 25%	4	4.88%	10	4.26%	11	3.30%	25	3.85%
26 to 30%	1	1.22%	6	2.55%	1	0.30%	8	1.23%
31 to 35%	.	.	3	1.28%	2	0.60%	5	0.77%
36 to 40%	.	.	2	0.85%	3	0.90%	5	0.77%
41 to 45%	.	.	2	0.85%	2	0.60%	4	0.62%
46 to 50%	.	.	1	0.43%	5	1.50%	6	0.92%
51 to 55%	.	.	.	.	1	0.30%	1	0.15%
66 to 70%	.	.	1	0.43%	.	.	1	0.15%
81 to 85%	.	.	1	0.43%	.	.	1	0.15%
86 to 90%	.	.	1	0.43%	.	.	1	0.15%
96 to 100%	1	1.22%	.	.	.	.	1	0.15%
All	82	100.00%	235	100.00%	333	100.00%	650	100.00%

Note: N = Frequency, % = Percent

Table 12 shows how willing participants would be to buy produce from direct marketing outlets under certain conditions. The majority of respondents from all the states (96 percent) reported that they would be willing to buy locally grown produce. Only 67 percent of those individuals said that they would be willing to buy certified organic produce. A significant number of respondents were unsure about buying certified organic produce (20 percent) or said they would not buy those items (13 percent). Surprisingly, a little over two-thirds (67 percent) of all the respondents claimed that they were willing to buy a new or unfamiliar produce item if it were offered; however, 23 percent were uncertain if they would buy an unfamiliar item. Provided with information about genetically modified products, almost one-half (49 percent) said

they would not buy such products, whereas roughly a third (35 percent) were unsure about buying these products.

Table 12. Respondents' Opinion Towards Willingness to Buy Specific Products from Direct Marketing Outlets

Willing to Buy	State							
	Delaware		New Jersey		Pennsylvania		ALL	
	N	%	N	%	N	%	N	%
WTB Locally grown								
Yes	118	97.52%	347	94.29%	503	97.67%	968	96.41%
No	1	0.83%	7	1.90%	5	0.97%	13	1.29%
Unsure	2	1.65%	14	3.80%	7	1.36%	23	2.29%
Total	121	100.00%	368	100.00%	515	100.00%	1004	100.00%
WTB Certified organic								
Yes	82	67.77%	262	71.20%	324	62.91%	668	66.53%
No	20	16.53%	47	12.77%	68	13.20%	135	13.45%
Unsure	19	15.70%	59	16.03%	123	23.88%	201	20.02%
Total	121	100.00%	368	100.00%	515	100.00%	1004	100.00%
WTB New fruits and vegetables, or those you are unfamiliar with								
Yes	84	69.42%	252	68.48%	343	66.60%	679	67.63%
No	9	7.44%	40	10.87%	47	9.13%	96	9.56%
Unsure	28	23.14%	76	20.65%	125	24.27%	229	22.81%
Total	121	100.00%	368	100.00%	515	100.00%	1004	100.00%
WTB Genetically modified								
Yes	13	10.74%	79	21.47%	74	14.37%	166	16.53%
No	62	51.24%	179	48.64%	248	48.16%	489	48.71%
Unsure	46	38.02%	110	29.89%	193	37.48%	349	34.76%
Total	121	100.00%	368	100.00%	515	100.00%	1004	100.00%

Note: N = Frequency, % = Percent

Presented with several agri-tourism terms, Table 13 shows if participants responded that they had heard of these concepts or if they were unfamiliar with the terms. In general, consumer awareness about each of the terms was split, and in most cases more people did not know about the concept than those who did. For example, roughly 56 percent of all respondents answered that they did not know about the concept of agri-tourism and green tourism. However, it seemed

that more residents of New Jersey and Delaware did know about ecotourism than those who did not.

Table 13. Respondents' Awareness About Agri-tourism Concepts

Agri-tourism Concepts	State						ALL	
	Delaware		New Jersey		Pennsylvania		N	%
	N	%	N	%	N	%		
Agri-tourism								
Yes	54	45.76%	171	47.11%	210	40.70%	435	43.63%
No	64	54.24%	192	52.89%	306	59.30%	562	56.37%
Total	118	100.00%	363	100.00%	516	100.00%	997	100.00%
Ecotourism								
Yes	68	57.63%	190	52.34%	228	44.19%	486	48.75%
No	50	42.37%	173	47.66%	288	55.81%	511	51.25%
Total	118	100.00%	363	100.00%	516	100.00%	997	100.00%
Green tourism								
Yes	56	47.46%	156	42.98%	222	43.02%	434	43.53%
No	62	52.54%	207	57.02%	294	56.98%	563	56.47%
Total	118	100.00%	363	100.00%	516	100.00%	997	100.00%

Note: N = Frequency, % = Percent

Tables 14.1 and 14.2 show if consumers purchased items commonly available for purchase during an agri-tourism event. Overall, the most popular products purchased were fresh fruits and vegetables, purchased by 87 percent of participants (Table 14.1), followed by locally made value-added products and pumpkin/corn stalks (72 and 69 percent, respectively; Table 14.2). Other considerably purchased products include honey products, agricultural decorations and crafts, locally produced wine, and fresh-cut flowers. Seasonal decorations were bought by half of consumers, while a little less than half bought farm festival products and Christmas trees. Vegetable transplants, plants grown from seeds in separate growing containers before the typical growing season starts and then later transplanted into a garden, were the least popular products purchased.

**Table 14.1. Different Products Purchased by Consumer During Agri-tourism Activity
(Fresh Fruits and Vegetables, Decorative/Crafts, Wine, Honey, Firewood and Ornamentals)**

Products	State							
	Delaware		New Jersey		Pennsylvania		ALL	
	N	%	N	%	N	%	N	%
Fresh fruits and vegetables								
Yes	101	89.38%	307	87.97%	431	85.52%	839	86.85%
No	12	10.62%	42	12.03%	73	14.48%	127	13.15%
Total	113	100.00%	349	100.00%	504	100.00%	966	100.00%
Agricultural decorations/crafts								
Yes	49	43.36%	161	46.13%	236	46.83%	446	46.17%
No	64	56.64%	188	53.87%	268	53.17%	520	53.83%
Total	113	100.00%	349	100.00%	504	100.00%	966	100.00%
Locally produced wine								
Yes	38	33.63%	155	44.41%	223	44.25%	416	43.06%
No	75	66.37%	194	55.59%	281	55.75%	550	56.94%
Total	113	100.00%	349	100.00%	504	100.00%	966	100.00%
Honey products								
Yes	62	54.87%	164	46.99%	242	48.02%	468	48.45%
No	51	45.13%	185	53.01%	262	51.98%	498	51.55%
Total	113	100.00%	349	100.00%	504	100.00%	966	100.00%
Fresh-cut flowers								
Yes	48	42.48%	143	40.97%	178	35.32%	369	38.20%
No	65	57.52%	206	59.03%	326	64.68%	597	61.80%
Total	113	100.00%	349	100.00%	504	100.00%	966	100.00%
Firewood								
Yes	9	7.96%	44	12.61%	52	10.32%	105	10.87%
No	104	92.04%	305	87.39%	452	89.68%	861	89.13%
Total	113	100.00%	349	100.00%	504	100.00%	966	100.00%
Ornamentals								
Yes	38	33.63%	100	28.65%	148	29.37%	286	29.61%
No	75	66.37%	249	71.35%	356	70.63%	680	70.39%
Total	113	100.00%	349	100.00%	504	100.00%	966	100.00%

Note: N = Frequency, % = Percent

**Table 14.2. Different Products Purchased by Consumer During Agri-tourism Activity
(Vegetable Transplants, Seasonal Decorations, Pumpkins/Corn Stalks, Christmas Trees, etc.)**

Products	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Vegetable transplants								
Yes	33	30.84%	74	22.84%	148	31.62%	255	28.36%
No	74	69.16%	250	77.16%	320	68.38%	644	71.64%
Total	107	100.00%	324	100.00%	468	100.00%	899	100.00%
Seasonal decorations								
Yes	56	52.34%	155	47.84%	241	51.50%	452	50.28%
No	51	47.66%	169	52.16%	227	48.50%	447	49.72%
Total	107	100.00%	324	100.00%	468	100.00%	899	100.00%
Pumpkins/corn stalks								
Yes	82	76.64%	225	69.44%	312	66.67%	619	68.85%
No	25	23.36%	99	30.56%	156	33.33%	280	31.15%
Total	107	100.00%	324	100.00%	468	100.00%	899	100.00%
Christmas Trees								
Yes	50	46.73%	146	45.06%	225	48.08%	421	46.83%
No	57	53.27%	178	54.94%	243	51.92%	478	53.17%
Total	107	100.00%	324	100.00%	468	100.00%	899	100.00%
Locally made value added products (for example: jams, honey, baked goods)								
Yes	79	73.83%	231	71.30%	335	71.58%	645	71.75%
No	28	26.17%	93	28.70%	133	28.42%	254	28.25%
Total	107	100.00%	324	100.00%	468	100.00%	899	100.00%
Farm festival products								
Yes	37	34.58%	122	37.65%	217	46.37%	376	41.82%
No	70	65.42%	202	62.35%	251	53.63%	523	58.18%
Total	107	100.00%	324	100.00%	468	100.00%	899	100.00%

Note: N = Frequency, % = Percent

Participants were then asked several questions concerning their personal experiences when attending or visiting agri-tourism locations for events and activities. Results are shown in the following four figures. As Figure 7.1 shows, participants from Pennsylvania visited more

agri-tourism sites, on average, than New Jersey and Delaware. New Jersey residents visited the least amount, on average, out of the three states; however, they spent the most money, on average, of consumers from the three states (Figure 7.2).

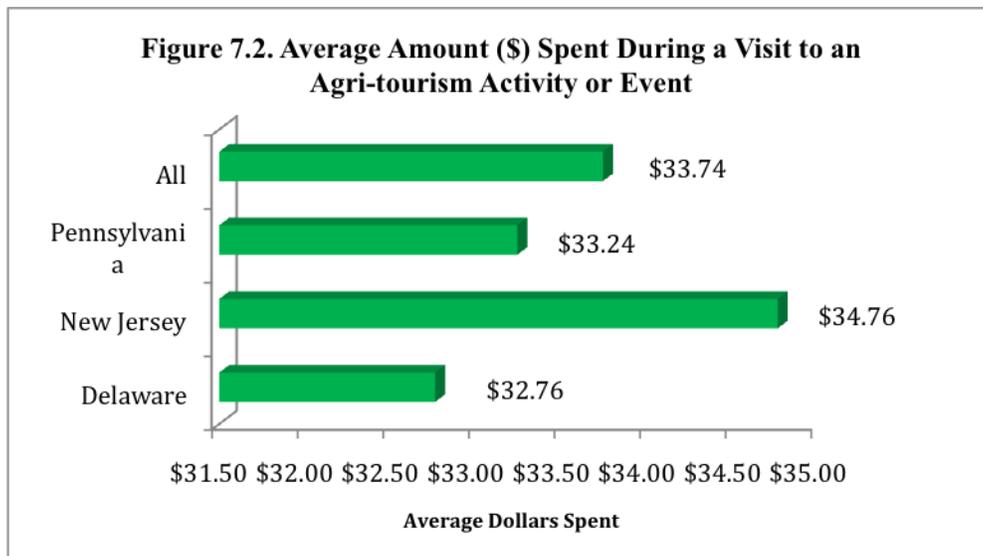
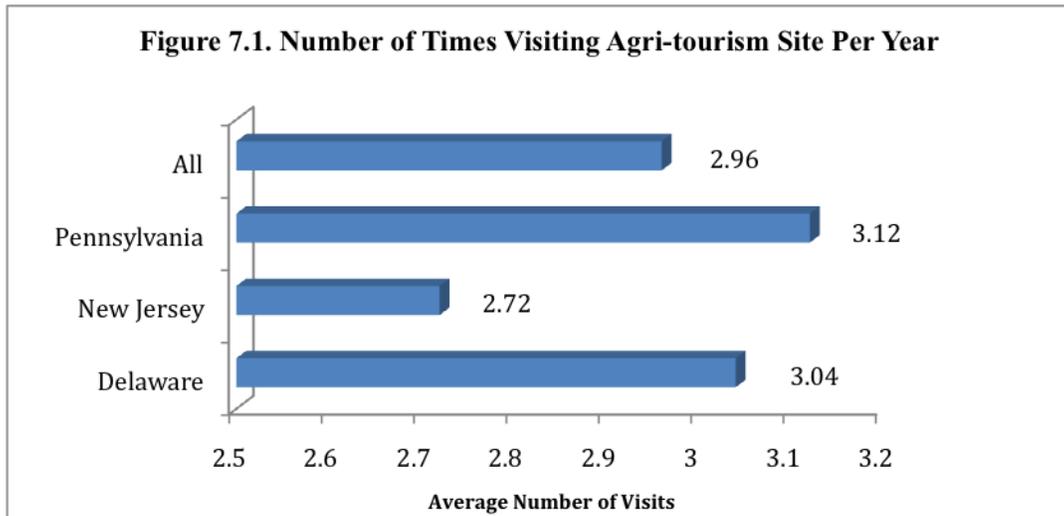
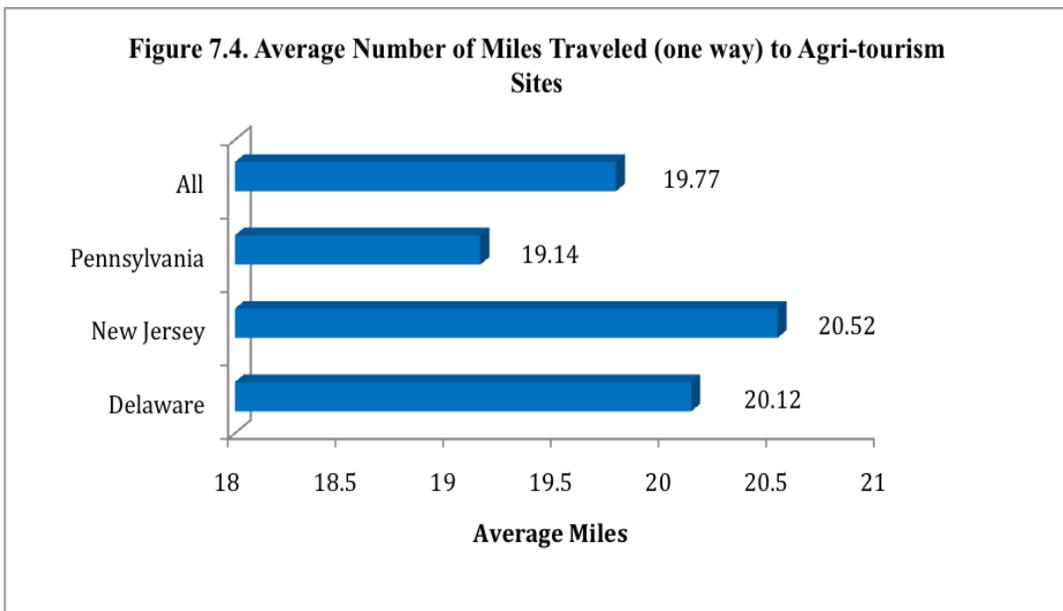
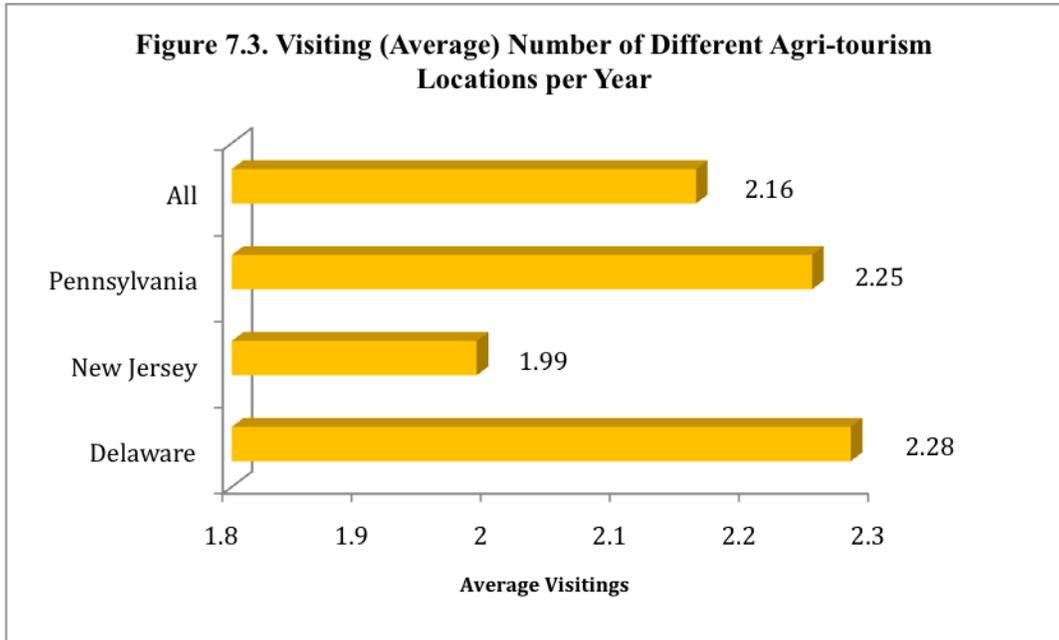


Figure 7.3 shows that residents from the Mid-Atlantic region visited approximately two different agri-tourism locations per year, with those from Pennsylvania and Delaware visiting slightly more than New Jersey residents. Regarding the distance traveled to an agri-tourism site, individuals from Pennsylvania traveled the least number of miles to a site, with an average of only 19.14 miles one way (Figure 7.4). New Jersey and Delaware residents; however, had to travel an average of 20 miles one way.



The survey continued with questions acknowledging more personal experiences and habits of consumers who attend agri-tourism events, as shown in the following three tables. Respondents indicated during which season(s) they had visited sites for agri-tourism events and activities. As expected, consumers visited locations the most during the fall months, as shown in Table 15. This is not surprising considering the number of activities available during that time of the year (e.g., hay rides, corn mazes). Many also visited during the summer and spring seasons, when many crops are harvested and other activities are hosted. Alas, only about 14 percent responded that they visited during the winter season.

Table 15. Respondents' Visiting Seasons for Agri-tourism Activity

Season	State						TOTAL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Spring (March - May)	59	44.36%	170	40.09%	212	36.74%	441	38.89%
Summer (June - August)	71	53.38%	227	53.54%	335	58.06%	633	55.82%
Fall (September - November)	115	86.47%	296	69.81%	432	74.87%	843	74.34%
Winter (December - February)	24	18.05%	50	11.79%	82	14.21%	156	13.76%
All	133	100.00%	424	100.00%	577	100.00%	1134	100.00%

Note: N = Frequency, % = Percent, since respondents selected more than one choice, total percentages do not add to 100%

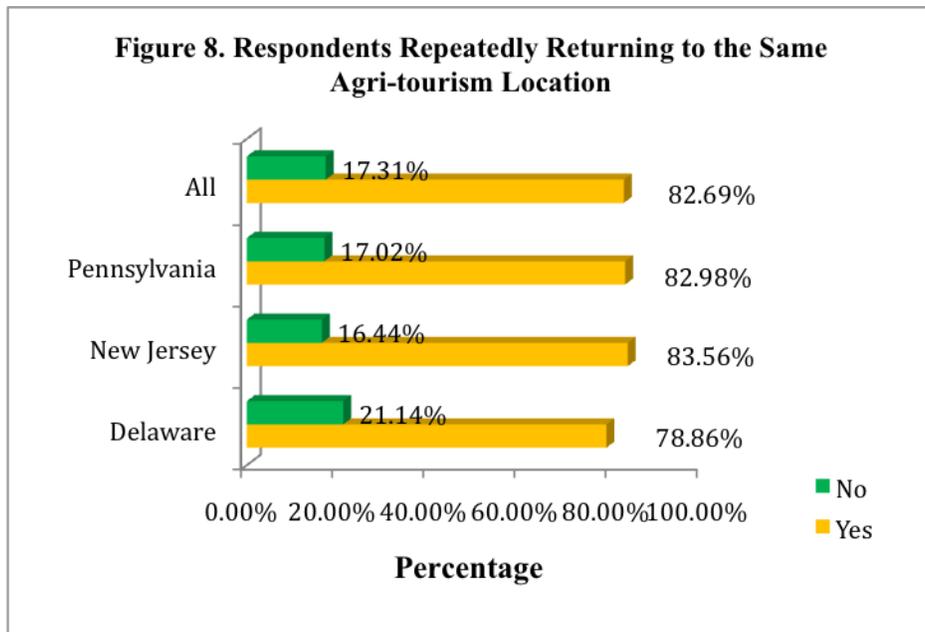
If consumers are planning to attend a specific event held at a farm or direct marketing outlet, they tend to decide to attend the activity during the week in which the event is held, as shown in Table 16. Many will also make plans to attend more than a week in advance. However, they generally don't prefer to wait and decide the day of or the day before an event to attend, so it seems logical, from the data, that marketing and promotional efforts should be implemented during the period when the greatest percentage of consumers decide to agri-tourism events.

Table 16. Respondents in Advance Planning to Attend Agri-tourism Activity

Event Planning	State						TOTAL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Advance Planning to Visit								
The day of the event or activity	15	12.20%	62	16.89%	81	15.61%	158	15.66%
One day before the event or activity	16	13.01%	48	13.08%	63	12.14%	127	12.59%
The week that the event or activity is held	59	47.97%	157	42.78%	240	46.24%	456	45.19%
More than a week in advance (7 days or more)	33	26.83%	100	27.25%	135	26.01%	268	26.56%
All	123	100.00%	367	100.00%	519	100.00%	1009	100.00%

Note: N = Frequency, % = Percent

A majority of respondents (more than 80 percent) reported that they usually return to the same agri-tourism location, perhaps even regularly, to purchase products over the course of the year (Figure 8 below).



What an agri-tourism site has to offer (e.g., activities, facilities, purchasing opportunities) consumers is key for attracting visitors. Respondents were asked to rank the importance of

certain factors and offerings as a matter of influencing their visit. Results are shown in the next three tables. In Table 17.1, consumers reported that the availability of comfort facilities for use on the premises was a ‘moderately important’ to ‘very important’ factor when determining if they would visit or not. Shops and markets to purchase farm products were also substantial factors, while educational functions were only a ‘neutral’ to ‘moderately important’ concern.

Table 17.1. Important Factors (Facilities, Farm Products and Educational Activities) Influencing Visit to Agri-tourism Location

Important Factors	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Facilities are available for use (for example: restrooms, picnic tables)								
Not at all important	6	4.92%	21	5.79%	28	5.44%	55	5.50%
Low importance	8	6.56%	22	6.06%	30	5.83%	60	6.00%
Slightly Important	13	10.66%	42	11.57%	42	8.16%	97	9.70%
Neutral	6	4.92%	29	7.99%	51	9.90%	86	8.60%
Moderately Important	29	23.77%	100	27.55%	129	25.05%	258	25.80%
Very important	36	29.51%	87	23.97%	146	28.35%	269	26.90%
Extremely important	24	19.67%	62	17.08%	89	17.28%	175	17.50%
Total	122	100.00%	363	100.00%	515	100.00%	1000	100.00%
Shops and markets to purchase farm products								
Not at all important	1	0.82%	13	3.58%	11	2.14%	25	2.50%
Low importance	7	5.74%	10	2.75%	16	3.11%	33	3.30%
Slightly Important	11	9.02%	31	8.54%	41	7.96%	83	8.30%
Neutral	13	10.66%	40	11.02%	66	12.82%	119	11.90%
Moderately Important	29	23.77%	93	25.62%	167	32.43%	289	28.90%
Very important	44	36.07%	132	36.36%	146	28.35%	322	32.20%
Extremely important	17	13.93%	44	12.12%	68	13.20%	129	12.90%
Total	122	100.00%	363	100.00%	515	100.00%	1000	100.00%
Educational demonstrations, classes, and workshops								
Not at all important	10	8.20%	35	9.64%	45	8.74%	90	9.00%
Low importance	22	18.03%	61	16.80%	61	11.84%	144	14.40%
Slightly Important	10	8.20%	36	9.92%	61	11.84%	107	10.70%
Neutral	35	28.69%	103	28.37%	145	28.16%	283	28.30%

Important Factors	State							
	Delaware		New Jersey		Pennsylvania		ALL	
	N	%	N	%	N	%	N	%
Moderately Important	31	25.41%	74	20.39%	133	25.83%	238	23.80%
Very important	11	9.02%	41	11.29%	46	8.93%	98	9.80%
Extremely important	3	2.46%	13	3.58%	24	4.66%	40	4.00%
Total	122	100.00%	363	100.00%	515	100.00%	1000	100.00%

Note: N = Frequency, % = Percent

Whether the prospective location had a view or natural setting and if the location was convenient to the individuals' home or work were both 'moderately important' to 'very important' factors for all Mid-Atlantic residents (Table 17.2). However, most consumers were 'neutral' about the presence of animal or petting zoos at an agri-tourism location, with more New Jersey participants feeling it was 'moderately important' to have them than respondents from Pennsylvania and Delaware.

Offering activities at agri-tourism locations was said to be a 'moderately important' to 'very important' factor for visiting (Table 17.3). Yet, most had just a 'neutral' opinion of whether the location offered events, like concerts and themed dinners, and having a restaurant or café there. Additionally, some responded that it was moderately important to have access to these features while at agri-tourism sites. Overall, out of all the supplemental factors considered, only a minimal number of respondents considered them 'extremely important' when deciding whether or not to visit a particular location.

**Table 17.2. Important factors (Natural Scenes, Petting Zoos and Proximity)
Influencing Visit to Agri-tourism Location**

Important Factors	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Scenery and view of natural settings								
Not at all important	2	1.65%	9	2.47%	14	2.74%	25	2.51%
Low importance	6	4.96%	25	6.85%	17	3.33%	48	4.81%
Slightly Important	4	3.31%	26	7.12%	33	6.46%	63	6.32%
Neutral	16	13.22%	41	11.23%	94	18.40%	151	15.15%
Moderately Important	40	33.06%	120	32.88%	165	32.29%	325	32.60%
Very important	33	27.27%	96	26.30%	129	25.24%	258	25.88%
Extremely important	20	16.53%	48	13.15%	59	11.55%	127	12.74%
Total	121	100.00%	365	100.00%	511	100.00%	997	100.00%
Animals or petting zoos								
Not at all important	21	17.36%	53	14.52%	70	13.70%	144	14.44%
Low importance	19	15.70%	48	13.15%	61	11.94%	128	12.84%
Slightly Important	12	9.92%	40	10.96%	56	10.96%	108	10.83%
Neutral	35	28.93%	77	21.10%	141	27.59%	253	25.38%
Moderately Important	24	19.83%	86	23.56%	105	20.55%	215	21.56%
Very important	8	6.61%	44	12.05%	57	11.15%	109	10.93%
Extremely important	2	1.65%	17	4.66%	21	4.11%	40	4.01%
Total	121	100.00%	365	100.00%	511	100.00%	997	100.00%
Convenience to where I live or work								
Not at all important	5	4.13%	15	4.11%	26	5.09%	46	4.61%
Low importance	4	3.31%	28	7.67%	25	4.89%	57	5.72%
Slightly Important	8	6.61%	35	9.59%	51	9.98%	94	9.43%
Neutral	14	11.57%	49	13.42%	79	15.46%	142	14.24%
Moderately Important	46	38.02%	108	29.59%	143	27.98%	297	29.79%
Very important	29	23.97%	88	24.11%	126	24.66%	243	24.37%
Extremely important	15	12.40%	42	11.51%	61	11.94%	118	11.84%
Total	121	100.00%	365	100.00%	511	100.00%	997	100.00%

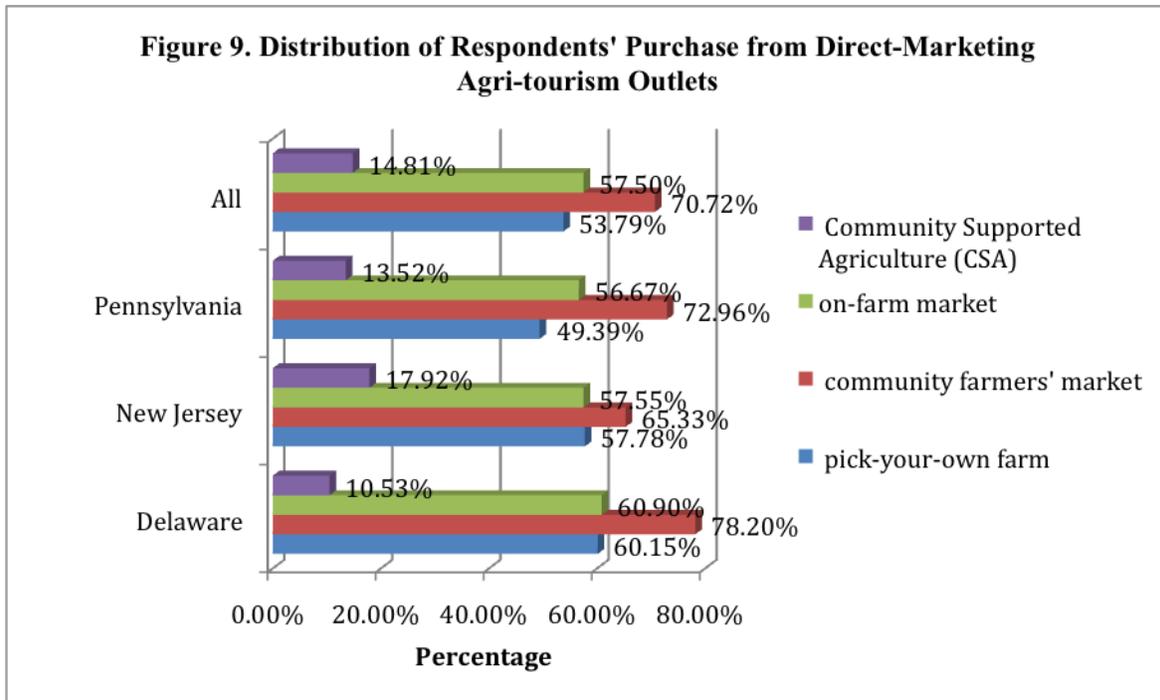
Note: N = Frequency, % = Percent

**Table 17.3. Important Factors (Events, Activities and Restaurants)
Influencing Visit to Agri-tourism Location**

Important Factors	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Events (for example: concerts, theme dinners)								
Not at all important	5	4.13%	28	7.65%	40	7.89%	73	7.34%
Low importance	11	9.09%	39	10.66%	47	9.27%	97	9.76%
Slightly Important	14	11.57%	31	8.47%	50	9.86%	95	9.56%
Neutral	34	28.10%	95	25.96%	143	28.21%	272	27.36%
Moderately Important	33	27.27%	97	26.50%	100	19.72%	230	23.14%
Very important	18	14.88%	60	16.39%	93	18.34%	171	17.20%
Extremely important	6	4.96%	16	4.37%	34	6.71%	56	5.63%
Total	121	100.00%	366	100.00%	507	100.00%	994	100.00%
Activities (for example: hay rides, farm tours)								
Not at all important	1	0.83%	18	4.92%	21	4.14%	40	4.02%
Low importance	9	7.44%	26	7.10%	28	5.52%	63	6.34%
Slightly Important	10	8.26%	29	7.92%	35	6.90%	74	7.44%
Neutral	12	9.92%	46	12.57%	82	16.17%	140	14.08%
Moderately Important	43	35.54%	108	29.51%	126	24.85%	277	27.87%
Very important	28	23.14%	99	27.05%	137	27.02%	264	26.56%
Extremely important	18	14.88%	40	10.93%	78	15.38%	136	13.68%
Total	121	100.00%	366	100.00%	507	100.00%	994	100.00%
Restaurant or cafe								
Not at all important	10	8.26%	25	6.83%	36	7.10%	71	7.14%
Low importance	19	15.70%	48	13.11%	52	10.26%	119	11.97%
Slightly Important	17	14.05%	43	11.75%	45	8.88%	105	10.56%
Neutral	31	25.62%	91	24.86%	155	30.57%	277	27.87%
Moderately Important	29	23.97%	88	24.04%	141	27.81%	258	25.96%
Very important	9	7.44%	50	13.66%	64	12.62%	123	12.37%
Extremely important	6	4.96%	21	5.74%	14	2.76%	41	4.12%
Total	121	100.00%	366	100.00%	507	100.00%	994	100.00%

Note: N = Frequency, % = Percent

Respondents were asked about the direct marketing and agri-tourism operations from which they made a purchase, not just fruits and vegetables. As the data in Figure 9 shows, results are generally the same as when asked about purchasing produce only. The majority buys from community farmers' markets, yet, a substantial number of consumers still made purchases from PYO and on-farm markets. Community Supported agriculture farmers were still the least patronized.



Based on what direct marketing or agri-tourism outlets respondents previously selected, they then rated them based on certain characteristics (e.g., quality of products, variety of products, price of products) as displayed in Tables 18.1 through 18.10. To start, from the four market types, almost every respondent said quality of products was either 'very good' or 'good' for an over 90 percent combined average for each market type (Table 18.1). For example, approximately 66 percent of respondents say the quality for on-farm markets was 'very good,' the most out of all outlet types investigated. Hardly any said that the quality from these markets was 'poor,' especially for on-farm and community farmers' markets where zero people claimed quality was 'poor.'

Table 18.1. Respondents' Rating the Quality of the Products from the Agri-tourism and Direct Marketing Outlets

Outlets/Rating	State							
	Delaware		New Jersey		Pennsylvania		ALL	
	N	%	N	%	N	%	N	%
Quality of products available - Pick-your-own farm								
Very good	16	66.67%	71	65.74%	98	67.59%	185	66.79%
Good	6	25.00%	35	32.41%	44	30.34%	85	30.69%
Fair	2	8.33%	2	1.85%	2	1.38%	6	2.17%
Poor	.	.	.	.	1	0.69%	1	0.36%
Total	24	100.00%	108	100.00%	145	100.00%	277	100.00%
Quality of products available - Community farmers' market								
Very good	14	58.33%	61	56.48%	95	65.52%	170	61.37%
Good	9	37.50%	44	40.74%	46	31.72%	99	35.74%
Fair	1	4.17%	3	2.78%	4	2.76%	8	2.89%
Total	24	100.00%	108	100.00%	145	100.00%	277	100.00%
Quality of products available - On-farm market								
Very good	15	62.50%	70	64.81%	99	68.28%	184	66.43%
Good	8	33.33%	33	30.56%	42	28.97%	83	29.96%
Fair	1	4.17%	5	4.63%	4	2.76%	10	3.61%
Total	24	100.00%	108	100.00%	145	100.00%	277	100.00%
Quality of products available - Community Supported Agriculture (CSA)								
Very good	7	29.17%	55	50.93%	63	43.45%	125	45.13%
Good	15	62.50%	42	38.89%	69	47.59%	126	45.49%
Fair	2	8.33%	10	9.26%	12	8.28%	24	8.66%
Poor	.	.	1	0.93%	1	0.69%	2	0.72%
Total	24	100.00%	108	100.00%	145	100.00%	277	100.00%

Note: N = Frequency, % = Percent

Table 18.2 shows responses regarding the number of products the outlets offered. Most customers were satisfied with what the markets had for sale, rating were primarily 'very good' and 'good.' More than half of all the participants rated PYO, community farmers' markets, and

on-farm markets ‘very good.’ CSA farms, however, were the only outlet type where less than half gave a ‘very good’ rating, and a higher percentage gave a rating of only ‘good’ or ‘fair.’

Table 18.2. Respondents’ Rating the Quantity of the Products from the Agri-tourism and Direct Marketing Outlets

Outlets/Rating	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Quantity of products available - Pick-your-own farm								
Very good	14	58.33%	60	57.14%	78	56.12%	152	56.72%
Good	8	33.33%	35	33.33%	48	34.53%	91	33.96%
Fair	2	8.33%	10	9.52%	12	8.63%	24	8.96%
Poor	.	.	.	.	1	0.72%	1	0.37%
Total	24	100.00%	105	100.00%	139	100.00%	268	100.00%
Quantity of products available - Community farmers' market								
Very good	14	58.33%	56	53.33%	81	58.27%	151	56.34%
Good	9	37.50%	44	41.90%	54	38.85%	107	39.93%
Fair	1	4.17%	5	4.76%	4	2.88%	10	3.73%
Total	24	100.00%	105	100.00%	139	100.00%	268	100.00%
Quantity of products available - On-farm market								
Very good	8	33.33%	57	54.29%	80	57.55%	145	54.10%
Good	14	58.33%	41	39.05%	50	35.97%	105	39.18%
Fair	2	8.33%	6	5.71%	8	5.76%	16	5.97%
Poor	.	.	1	0.95%	1	0.72%	2	0.75%
Total	24	100.00%	105	100.00%	139	100.00%	268	100.00%
Quantity of products available - Community Supported Agriculture (CSA)								
Very good	6	25.00%	51	48.57%	55	39.57%	112	41.79%
Good	16	66.67%	43	40.95%	69	49.64%	128	47.76%
Fair	2	8.33%	9	8.57%	14	10.07%	25	9.33%
Poor	.	.	2	1.90%	1	0.72%	3	1.12%
Total	24	100.00%	105	100.00%	139	100.00%	268	100.00%

Note: N = Frequency, % = Percent

In Table 18.3, respondents rated their satisfaction with the variety of products from these same markets. The majority responded, as with the quality and quantity ratings, that the variety was either ‘very good’ or ‘good.’ Similarly, the CSA ratings were slightly lower than the other outlets.

Table 18.3. Respondents’ Rating the Variety of the Products from the Agri-tourism and Direct Marketing Outlets

Outlets/Rating	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Variety of products available - Pick-your-own farm								
Very good	6	25.00%	50	48.08%	56	39.44%	112	41.48%
Good	12	50.00%	37	35.58%	55	38.73%	104	38.52%
Fair	5	20.83%	17	16.35%	28	19.72%	50	18.52%
Poor	1	4.17%	.	.	3	2.11%	4	1.48%
Total	24	100.00%	104	100.00%	142	100.00%	270	100.00%
Variety of products available - Community farmers' market								
Very good	10	41.67%	53	50.96%	70	49.30%	133	49.26%
Good	12	50.00%	44	42.31%	60	42.25%	116	42.96%
Fair	2	8.33%	6	5.77%	11	7.75%	19	7.04%
Poor	.	.	1	0.96%	1	0.70%	2	0.74%
Total	24	100.00%	104	100.00%	142	100.00%	270	100.00%
Variety of products available - On-farm market								
Very good	6	25.00%	55	52.88%	63	44.37%	124	45.93%
Good	16	66.67%	36	34.62%	65	45.77%	117	43.33%
Fair	2	8.33%	12	11.54%	12	8.45%	26	9.63%
Poor	.	.	1	0.96%	2	1.41%	3	1.11%
Total	24	100.00%	104	100.00%	142	100.00%	270	100.00%
Variety of products available - Community Supported Agriculture (CSA)								
Very good	5	20.83%	48	46.15%	49	34.51%	102	37.78%
Good	16	66.67%	45	43.27%	78	54.93%	139	51.48%
Fair	3	12.50%	11	10.58%	14	9.86%	28	10.37%
Poor	.	.	.	.	1	0.70%	1	0.37%
Total	24	100.00%	104	100.00%	142	100.00%	270	100.00%

Note: N = Frequency, % = Percent

The study found that most consumers felt the prices of products offered at the outlets were generally ‘good’ (approximately 45 percent for all outlet types), followed by ‘very good’ (approximately 30 to 40 percent), as shown in Table 18.4.

Table 18.4. Respondents’ Rating the Price of the Products from the Agri-tourism and Direct Marketing Outlets

Outlets/Rating	State							
	Delaware		New Jersey		Pennsylvania		ALL	
	N	%	N	%	N	%	N	%
Price of products available - Pick-your-own farm								
Very good	5	21.74%	41	39.42%	54	38.03%	100	37.17%
Good	10	43.48%	39	37.50%	73	51.41%	122	45.35%
Fair	8	34.78%	24	23.08%	14	9.86%	46	17.10%
Poor	.	.	.	.	1	0.70%	1	0.37%
Total	23	100.00%	104	100.00%	142	100.00%	269	100.00%
Price of products available - Community farmers' market								
Very good	5	21.74%	48	46.15%	52	36.62%	105	39.03%
Good	9	39.13%	42	40.38%	67	47.18%	118	43.87%
Fair	8	34.78%	13	12.50%	21	14.79%	42	15.61%
Poor	1	4.35%	1	0.96%	2	1.41%	4	1.49%
Total	23	100.00%	104	100.00%	142	100.00%	269	100.00%
Price of products available - On-farm market								
Very good	4	17.39%	45	43.27%	62	43.66%	111	41.26%
Good	12	52.17%	39	37.50%	68	47.89%	119	44.24%
Fair	7	30.43%	20	19.23%	10	7.04%	37	13.75%
Poor	.	.	.	.	2	1.41%	2	0.74%
Total	23	100.00%	104	100.00%	142	100.00%	269	100.00%
Price of products available - Community Supported Agriculture (CSA)								
Very good	3	13.04%	39	37.50%	40	28.17%	82	30.48%
Good	11	47.83%	41	39.42%	76	53.52%	128	47.58%
Fair	7	30.43%	23	22.12%	24	16.90%	54	20.07%
Poor	2	8.70%	1	0.96%	2	1.41%	5	1.86%
Total	23	100.00%	104	100.00%	142	100.00%	269	100.00%

Note: N = Frequency, % = Percent

Agri-tourism and direct marketing outlet visitors viewed the appearance of the establishments as ‘good’ and ‘very good’ on the whole, with slightly more leaning towards the ‘good’ rating, as conveyed in Table 18.5.

Table 18.5. Respondents’ Rating the Establishment Appearance of Agri-tourism and Direct Marketing Outlets

Outlets/Rating	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Appearance of establishment - Pick-your-own farm								
Very good	10	43.48%	50	47.62%	48	33.80%	108	40.00%
Good	9	39.13%	46	43.81%	74	52.11%	129	47.78%
Fair	4	17.39%	7	6.67%	19	13.38%	30	11.11%
Poor	.	.	2	1.90%	1	0.70%	3	1.11%
Total	23	100.00%	105	100.00%	142	100.00%	270	100.00%
Appearance of establishment - Community farmers' market								
Very good	9	39.13%	41	39.05%	49	34.51%	99	36.67%
Good	9	39.13%	51	48.57%	79	55.63%	139	51.48%
Fair	5	21.74%	13	12.38%	14	9.86%	32	11.85%
Total	23	100.00%	105	100.00%	142	100.00%	270	100.00%
Appearance of establishment - On-farm market								
Very good	10	43.48%	51	48.57%	51	35.92%	112	41.48%
Good	11	47.83%	40	38.10%	71	50.00%	122	45.19%
Fair	2	8.70%	14	13.33%	19	13.38%	35	12.96%
Poor	.	.	.	.	1	0.70%	1	0.37%
Total	23	100.00%	105	100.00%	142	100.00%	270	100.00%
Appearance of establishment - Community Supported Agriculture (CSA)								
Very good	6	26.09%	48	45.71%	46	32.39%	100	37.04%
Good	13	56.52%	42	40.00%	79	55.63%	134	49.63%
Fair	4	17.39%	13	12.38%	17	11.97%	34	12.59%
Poor	.	.	2	1.90%	.	.	2	0.74%
Total	23	100.00%	105	100.00%	142	100.00%	270	100.00%

Note: N = Frequency, % = Percent

In tandem with appearance, a majority of individuals rated the cleanliness as ‘good’ and ‘very good’ for all four types of establishments (Table 18.6). These two findings, perception of appearance and cleanliness, may offer owners an important view towards future improvement relative to visual appeal for increasing customer visits.

Table 18.6. Respondents’ Rating the Cleanliness of the Establishment of Agri-tourism and Direct Marketing Outlets

Outlets/Rating	State							
	Delaware		New Jersey		Pennsylvania		ALL	
	N	%	N	%	N	%	N	%
Cleanliness of establishment - Pick-your-own farm								
Very good	10	41.67%	46	43.81%	45	31.91%	101	37.41%
Good	9	37.50%	41	39.05%	72	51.06%	122	45.19%
Fair	5	20.83%	16	15.24%	23	16.31%	44	16.30%
Poor	.	.	2	1.90%	1	0.71%	3	1.11%
Total	24	100.00%	105	100.00%	141	100.00%	270	100.00%
Cleanliness of establishment - Community farmers' market								
Very good	8	33.33%	36	34.29%	48	34.04%	92	34.07%
Good	10	41.67%	55	52.38%	73	51.77%	138	51.11%
Fair	6	25.00%	14	13.33%	18	12.77%	38	14.07%
Poor	.	.	.	.	2	1.42%	2	0.74%
Total	24	100.00%	105	100.00%	141	100.00%	270	100.00%
Cleanliness of establishment - On-farm market								
Very good	10	41.67%	48	45.71%	49	34.75%	107	39.63%
Good	11	45.83%	41	39.05%	77	54.61%	129	47.78%
Fair	3	12.50%	15	14.29%	15	10.64%	33	12.22%
Poor	.	.	1	0.95%	.	.	1	0.37%
Total	24	100.00%	105	100.00%	141	100.00%	270	100.00%
Cleanliness of establishment - Community Supported Agriculture (CSA)								
Very good	4	16.67%	45	42.86%	43	30.50%	92	34.07%
Good	15	62.50%	46	43.81%	79	56.03%	140	51.85%
Fair	5	20.83%	12	11.43%	17	12.06%	34	12.59%
Poor	.	.	2	1.90%	2	1.42%	4	1.48%
Total	24	100.00%	105	100.00%	141	100.00%	270	100.00%

Consumers also rated how convenient both the operating hours/days and the locations of the four business types were, generally saying that they were either ‘good’ or ‘very good’ (Tables 18.7 and 18.8), but certainly indicating room for improvement as shown by a notable ‘fair’ ratings for each type. Community farmers’ markets seemed to be rated as more convenient than the other three outlet types. These ratings were somewhat expected, due to the nature of community farmers’ markets, whose purpose is to provide a large variety of products to consumers and convenience them by having many sellers in one location.

Table 18.7. Respondents' Rating Towards Convenience of Opening Days and Timings of the Establishment

Outlets/Rating	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Convenience of days and times the establishment is open - Pick-your-own farm								
Very good	8	33.33%	40	38.10%	51	36.69%	99	36.94%
Good	11	45.83%	42	40.00%	57	41.01%	110	41.04%
Fair	4	16.67%	21	20.00%	30	21.58%	55	20.52%
Poor	1	4.17%	2	1.90%	1	0.72%	4	1.49%
Total	24	100.00%	105	100.00%	139	100.00%	268	100.00%
Convenience of days and times the establishment is open - Community farmers' market								
Very good	6	25.00%	43	40.95%	41	29.50%	90	33.58%
Good	11	45.83%	33	31.43%	57	41.01%	101	37.69%
Fair	7	29.17%	22	20.95%	36	25.90%	65	24.25%
Poor	.	.	7	6.67%	5	3.60%	12	4.48%
Total	24	100.00%	105	100.00%	139	100.00%	268	100.00%
Convenience of days and times the establishment is open - On-farm market								
Very good	8	33.33%	40	38.10%	54	38.85%	102	38.06%
Good	11	45.83%	47	44.76%	61	43.88%	119	44.40%
Fair	5	20.83%	18	17.14%	24	17.27%	47	17.54%
Total	24	100.00%	105	100.00%	139	100.00%	268	100.00%
Convenience of days and times the establishment is open - Community Supported Agriculture (CSA)								
Very good	2	8.33%	36	34.29%	36	25.90%	74	27.61%
Good	15	62.50%	40	38.10%	69	49.64%	124	46.27%
Fair	7	29.17%	23	21.90%	30	21.58%	60	22.39%
Poor	.	.	6	5.71%	4	2.88%	10	3.73%
Total	24	100.00%	105	100.00%	139	100.00%	268	100.00%

Note: N = Frequency, % = Percent

Table 18.8. Respondents' Rating Towards Convenience of Location of Agri-tourism and Direct Marketing Outlets

Outlets/Rating	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Convenience of location - Pick-your-own farm								
Very good	8	33.33%	40	38.46%	45	32.14%	93	34.70%
Good	12	50.00%	37	35.58%	66	47.14%	115	42.91%
Fair	4	16.67%	24	23.08%	26	18.57%	54	20.15%
Poor	.	.	3	2.88%	3	2.14%	6	2.24%
Total	24	100.00%	104	100.00%	140	100.00%	268	100.00%
Convenience of location - Community farmers' market								
Very good	9	37.50%	53	50.96%	63	45.00%	125	46.64%
Good	12	50.00%	38	36.54%	60	42.86%	110	41.04%
Fair	3	12.50%	13	12.50%	15	10.71%	31	11.57%
Poor	.	.	.	.	2	1.43%	2	0.75%
Total	24	100.00%	104	100.00%	140	100.00%	268	100.00%
Convenience of location - On-farm market								
Very good	10	41.67%	48	46.15%	51	36.43%	109	40.67%
Good	12	50.00%	39	37.50%	65	46.43%	116	43.28%
Fair	1	4.17%	17	16.35%	23	16.43%	41	15.30%
Poor	1	4.17%	.	.	1	0.71%	2	0.75%
Total	24	100.00%	104	100.00%	140	100.00%	268	100.00%
Convenience of location - Community Supported Agriculture (CSA)								
Very good	4	16.67%	40	38.46%	36	25.71%	80	29.85%
Good	13	54.17%	38	36.54%	71	50.71%	122	45.52%
Fair	5	20.83%	20	19.23%	24	17.14%	49	18.28%
Poor	2	8.33%	6	5.77%	9	6.43%	17	6.34%
Total	24	100.00%	104	100.00%	140	100.00%	268	100.00%

Note: N = Frequency, % = Percent

Employee attitudes were given high ratings of ‘very good’ and ‘good’ from the entire Mid-Atlantic region, for an over 90 percent combined average for each market type as shown in Table 18.9.

Table 18.9. Respondents' Rating the Employee Attitude of Agri-tourism and Direct Marketing Outlets

Outlets/Rating	State							
	Delaware		New Jersey		Pennsylvania		ALL	
	N	%	N	%	N	%	N	%
Employee attitude - Pick-your-own farm								
Very good	13	54.17%	51	49.51%	78	56.52%	142	53.58%
Good	10	41.67%	43	41.75%	55	39.86%	108	40.75%
Fair	1	4.17%	9	8.74%	5	3.62%	15	5.66%
Total	24	100.00%	103	100.00%	138	100.00%	265	100.00%
Employee attitude - Community farmers' market								
Very good	10	41.67%	45	43.69%	73	52.90%	128	48.30%
Good	10	41.67%	48	46.60%	60	43.48%	118	44.53%
Fair	4	16.67%	9	8.74%	4	2.90%	17	6.42%
Poor	.	.	1	0.97%	1	0.72%	2	0.75%
Total	24	100.00%	103	100.00%	138	100.00%	265	100.00%
Employee attitude - On-farm market								
Very good	12	50.00%	59	57.28%	75	54.35%	146	55.09%
Good	11	45.83%	37	35.92%	59	42.75%	107	40.38%
Fair	1	4.17%	7	6.80%	4	2.90%	12	4.53%
Total	24	100.00%	103	100.00%	138	100.00%	265	100.00%
Employee attitude - Community Supported Agriculture (CSA)								
Very good	7	29.17%	47	45.63%	65	47.10%	119	44.91%
Good	14	58.33%	46	44.66%	63	45.65%	123	46.42%
Fair	3	12.50%	10	9.71%	8	5.80%	21	7.92%
Poor	.	.	.	.	2	1.45%	2	0.75%
Total	24	100.00%	103	100.00%	138	100.00%	265	100.00%

Note: N = Frequency, % = Percent

Finally, as might be expected, employee’s knowledge at all of the outlet types was either ‘very good’ or ‘good,’ with very few respondents claiming otherwise (Table 18.10). Interestingly, respondents rarely gave ‘poor’ or ‘fair’ ratings for most of the characteristics listed and for all of the outlet types.

Table 18.10. Respondents Rating the Employee Knowledge of Agri-tourism and Direct Marketing Outlets

Outlets/Rating	State						ALL	
	Delaware		New Jersey		Pennsylvania		N	%
	N	%	N	%	N	%		
Employee knowledge - Pick-your-own farm								
Very good	15	62.50%	61	59.80%	88	63.31%	164	61.89%
Good	8	33.33%	33	32.35%	45	32.37%	86	32.45%
Fair	1	4.17%	8	7.84%	6	4.32%	15	5.66%
Total	24	100.00%	102	100.00%	139	100.00%	265	100.00%
Employee knowledge - Community farmers' market								
Very good	9	37.50%	51	50.00%	73	52.52%	133	50.19%
Good	11	45.83%	43	42.16%	55	39.57%	109	41.13%
Fair	4	16.67%	7	6.86%	10	7.19%	21	7.92%
Poor	.	.	1	0.98%	1	0.72%	2	0.75%
Total	24	100.00%	102	100.00%	139	100.00%	265	100.00%
Employee knowledge - On-farm market								
Very good	15	62.50%	67	65.69%	83	59.71%	165	62.26%
Good	8	33.33%	30	29.41%	54	38.85%	92	34.72%
Fair	1	4.17%	5	4.90%	2	1.44%	8	3.02%
Total	24	100.00%	102	100.00%	139	100.00%	265	100.00%
Employee knowledge - Community Supported Agriculture (CSA)								
Very good	7	29.17%	49	48.04%	61	43.88%	117	44.15%
Good	13	54.17%	42	41.18%	67	48.20%	122	46.04%
Fair	4	16.67%	11	10.78%	9	6.47%	24	9.06%
Poor	.	.	.	.	2	1.44%	2	0.75%
Total	24	100.00%	102	100.00%	139	100.00%	265	100.00%

Note: N = Frequency, % = Percent

Each participant was asked to classify how important a set of reasons was when deciding whether to visit an agri-tourism location for an event or activity. A primary reason identified by all the respondents for wanting to visit was to purchase fresh fruit and vegetables, where more than half of the participants said it was either ‘very important’ or ‘extremely important,’ as shown in Table 19.1. Supporting local farmers was also among the ‘very important’ reasons to support local farmers, while purchasing value-added products were only ‘moderately important’ reasons. Aside from those, Table 19.2 shows that consumers felt spending time with family and friends was also a ‘very important’ deciding factor for wanting to visit an agri-tourism location or event. A significant number of individuals also felt that the opportunity to enjoy the rural scenery or nature was a deciding factor for them. However, being able to learn or to be taught how food is produced/grown at farm establishments did not appear to be a compelling reason for individuals who wished to visit. Table 19.3 shows that both wanting the experience of a farm visit and seeing where and how food is produced/grown were said to be a ‘neutral’ deciding factor for visiting an agri-tourism establishment; location, in terms of closeness and convenience of going there, was found to be a ‘moderately important’ to ‘very important’ reason.

Table 19.1. Important Deciding Reasons (Purchase Produce/Value-Added Products and Support Local Farmers) to Visit an Agri-tourism Location for an Activity or Event

Important Reasons	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
To purchase fresh fruits and vegetables								
Not at all important	3	2.46%	8	2.20%	15	2.97%	26	2.63%
Low importance	3	2.46%	11	3.03%	18	3.56%	32	3.23%
Slightly Important	3	2.46%	20	5.51%	27	5.35%	50	5.05%
Neutral	13	10.66%	24	6.61%	37	7.33%	74	7.47%
Moderately Important	16	13.11%	81	22.31%	109	21.58%	206	20.81%
Very important	43	35.25%	123	33.88%	183	36.24%	349	35.25%
Extremely important	41	33.61%	96	26.45%	116	22.97%	253	25.56%
Total	122	100.00%	363	100.00%	505	100.00%	990	100.00%
To purchase value-added products (for example: jams, honey, baked goods)								
Not at all important	7	5.74%	22	6.06%	24	4.75%	53	5.35%
Low importance	15	12.30%	44	12.12%	38	7.52%	97	9.80%
Slightly Important	6	4.92%	38	10.47%	42	8.32%	86	8.69%
Neutral	26	21.31%	59	16.25%	113	22.38%	198	20.00%
Moderately Important	41	33.61%	106	29.20%	161	31.88%	308	31.11%
Very important	18	14.75%	64	17.63%	91	18.02%	173	17.47%
Extremely important	9	7.38%	30	8.26%	36	7.13%	75	7.58%
Total	122	100.00%	363	100.00%	505	100.00%	990	100.00%
To support local farmers								
Not at all important	2	1.64%	11	3.03%	7	1.39%	20	2.02%
Low importance	1	0.82%	7	1.93%	8	1.58%	16	1.62%
Slightly Important	5	4.10%	16	4.41%	20	3.96%	41	4.14%
Neutral	14	11.48%	37	10.19%	56	11.09%	107	10.81%
Moderately Important	22	18.03%	100	27.55%	118	23.37%	240	24.24%
Very important	36	29.51%	116	31.96%	160	31.68%	312	31.52%
Extremely important	42	34.43%	76	20.94%	136	26.93%	254	25.66%
Total	122	100.00%	363	100.00%	505	100.00%	990	100.00%

Note: N = Frequency, % = Percent

Table 19.2. Important Deciding Reasons (Enjoy the Rural Scenery/Nature, Spend Time with Family/Friends and Learn How Food is Grown) to Visit an Agri-tourism Location for an Activity or Event

Important Reasons	State							
	Delaware		New Jersey		Pennsylvania		ALL	
	N	%	N	%	N	%	N	%
To enjoy the rural scenery/nature								
Not at all important	2	1.67%	9	2.51%	8	1.58%	19	1.93%
Low importance	2	1.67%	14	3.90%	9	1.78%	25	2.54%
Slightly Important	4	3.33%	20	5.57%	18	3.55%	42	4.26%
Neutral	18	15.00%	36	10.03%	76	14.99%	130	13.18%
Moderately Important	28	23.33%	99	27.58%	159	31.36%	286	29.01%
Very important	36	30.00%	109	30.36%	133	26.23%	278	28.19%
Extremely important	30	25.00%	72	20.06%	104	20.51%	206	20.89%
Total	120	100.00%	359	100.00%	507	100.00%	986	100.00%
To spend time with family and friends								
Not at all important	2	1.67%	12	3.34%	6	1.18%	20	2.03%
Low importance	4	3.33%	9	2.51%	17	3.35%	30	3.04%
Slightly Important	6	5.00%	12	3.34%	17	3.35%	35	3.55%
Neutral	16	13.33%	55	15.32%	68	13.41%	139	14.10%
Moderately Important	19	15.83%	77	21.45%	107	21.10%	203	20.59%
Very important	34	28.33%	108	30.08%	155	30.57%	297	30.12%
Extremely important	39	32.50%	86	23.96%	137	27.02%	262	26.57%
Total	120	100.00%	359	100.00%	507	100.00%	986	100.00%
To learn or be taught how food is produced/grown								
Not at all important	12	10.00%	39	10.86%	49	9.66%	100	10.14%
Low importance	22	18.33%	50	13.93%	40	7.89%	112	11.36%
Slightly Important	12	10.00%	35	9.75%	59	11.64%	106	10.75%
Neutral	27	22.50%	95	26.46%	150	29.59%	272	27.59%
Moderately Important	20	16.67%	66	18.38%	111	21.89%	197	19.98%
Very important	16	13.33%	49	13.65%	67	13.21%	132	13.39%
Extremely important	11	9.17%	25	6.96%	31	6.11%	67	6.80%
Total	120	100.00%	359	100.00%	507	100.00%	986	100.00%

Note: N = Frequency, % = Percent

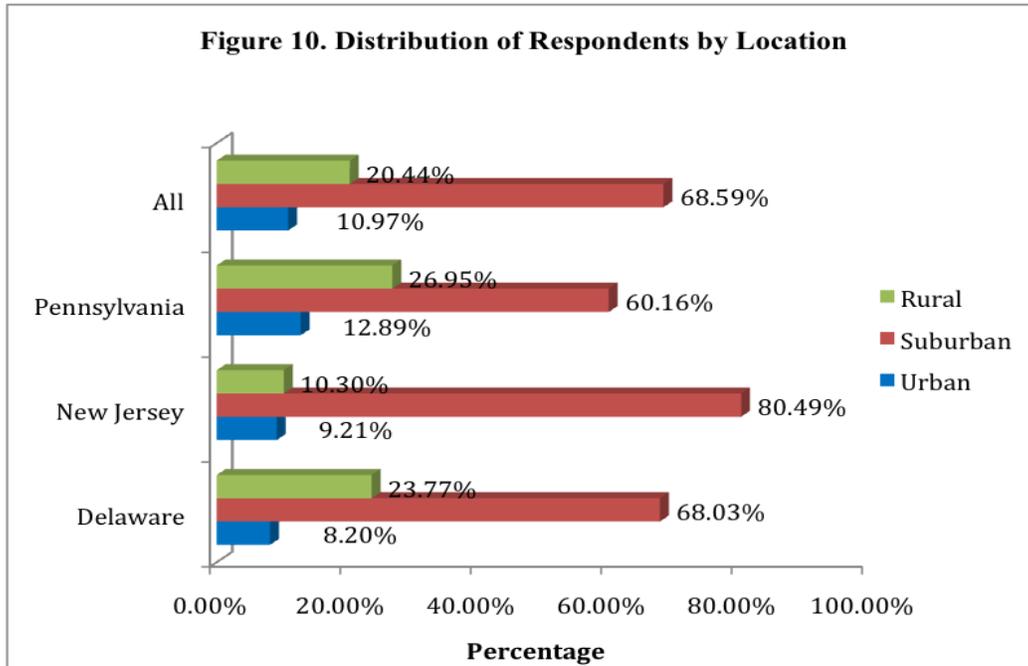
Table 19.3. Important Deciding Reasons (To See How Food is Produced, Convenient Location and Experience of Farm Visit) to Visit an Agri-tourism Location for an Activity or Event

Important Reasons	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
To see where and/or how food is produced/grown								
Not at all important	9	7.56%	31	8.86%	38	7.71%	78	8.11%
Low importance	21	17.65%	34	9.71%	45	9.13%	100	10.40%
Slightly Important	11	9.24%	35	10.00%	42	8.52%	88	9.15%
Neutral	20	16.81%	77	22.00%	134	27.18%	231	24.01%
Moderately Important	26	21.85%	88	25.14%	110	22.31%	224	23.28%
Very important	19	15.97%	57	16.29%	84	17.04%	160	16.63%
Extremely important	13	10.92%	28	8.00%	40	8.11%	81	8.42%
Total	119	100.00%	350	100.00%	493	100.00%	962	100.00%
Conveniently located near my home or work								
Not at all important	1	0.84%	17	4.86%	17	3.45%	35	3.64%
Low importance	4	3.36%	14	4.00%	22	4.46%	40	4.16%
Slightly Important	14	11.76%	24	6.86%	29	5.88%	67	6.96%
Neutral	14	11.76%	60	17.14%	98	19.88%	172	17.88%
Moderately Important	40	33.61%	90	25.71%	143	29.01%	273	28.38%
Very important	25	21.01%	102	29.14%	113	22.92%	240	24.95%
Extremely important	21	17.65%	43	12.29%	71	14.40%	135	14.03%
Total	119	100.00%	350	100.00%	493	100.00%	962	100.00%
Want the experience of a farm visit								
Not at all important	9	7.56%	24	6.86%	34	6.90%	67	6.96%
Low importance	15	12.61%	22	6.29%	36	7.30%	73	7.59%
Slightly Important	6	5.04%	32	9.14%	36	7.30%	74	7.69%
Neutral	23	19.33%	80	22.86%	125	25.35%	228	23.70%
Moderately Important	29	24.37%	78	22.29%	121	24.54%	228	23.70%
Very important	17	14.29%	88	25.14%	90	18.26%	195	20.27%
Extremely important	20	16.81%	26	7.43%	51	10.34%	97	10.08%
Total	119	100.00%	350	100.00%	493	100.00%	962	100.00%

Note: N = Frequency, % = Percent

Characteristics of Survey Respondents

As Figure 10 shows, the majority of individuals from all three states (69 percent) lived in suburban type areas. The least number of participants, only 11 percent, lived in urban areas in the Mid-Atlantic region.



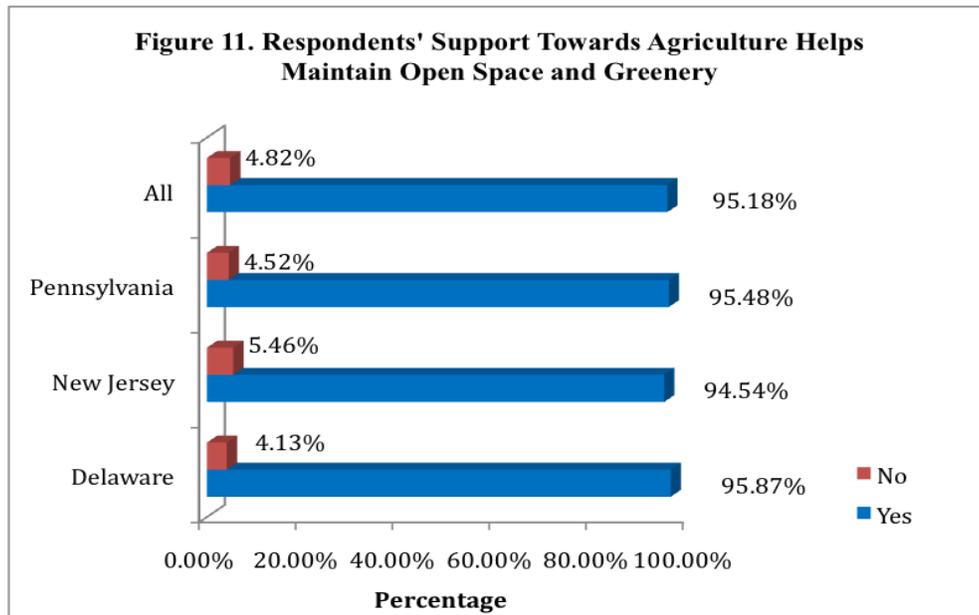
Interestingly, over 26 percent of these individuals have been living in their current locations for more than 21 years, and a majority have been living in their respective areas for over six years, with more details shown in Table 30 below.

Table 20. Number of Years Living at Current Location

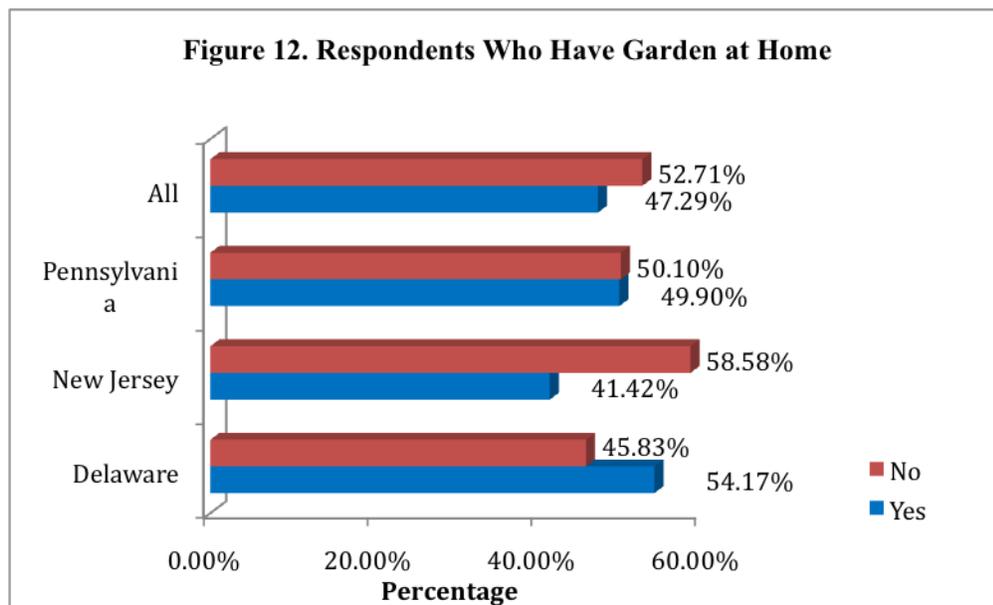
Years Living	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Less than 1 year	8	6.61%	22	6.01%	37	7.23%	67	6.71%
1 to 3 years	20	16.53%	53	14.48%	78	15.23%	151	15.12%
4 to 5 years	15	12.40%	48	13.11%	53	10.35%	116	11.61%
6 to 10 years	30	24.79%	69	18.85%	97	18.95%	196	19.62%
11 to 20 years	26	21.49%	78	21.31%	105	20.51%	209	20.92%
More than 21 years	22	18.18%	96	26.23%	142	27.73%	260	26.03%
Total	121	100.00%	366	100.00%	512	100.00%	999	100.00%

Note: N = Frequency, % = Percent

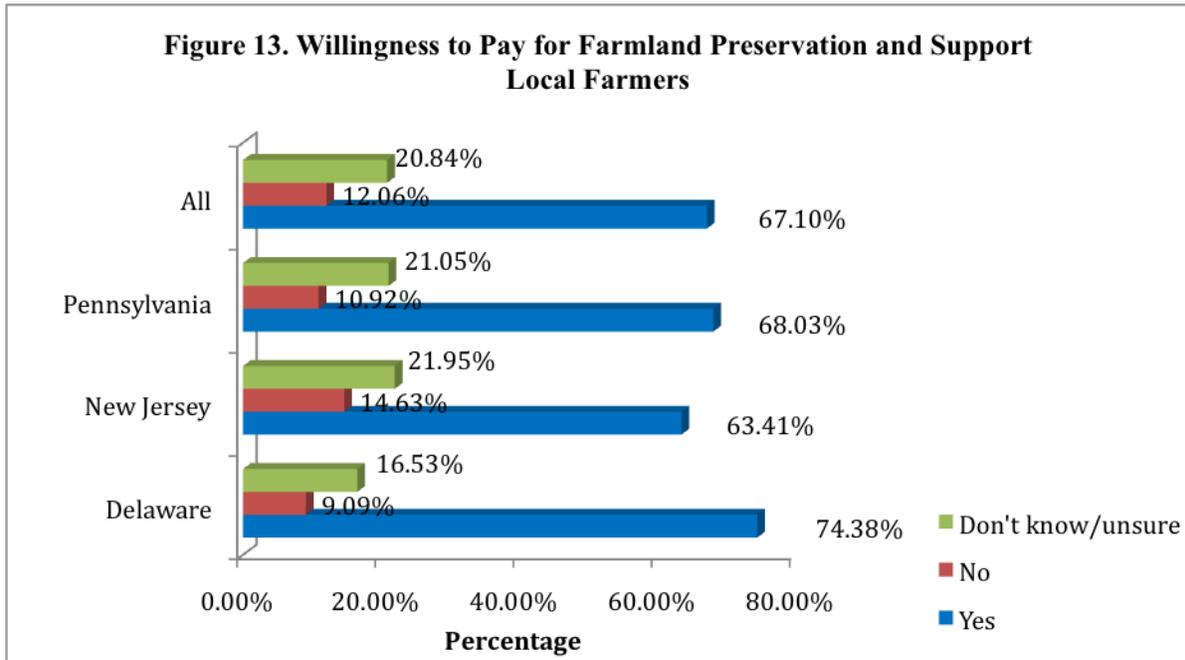
As the data in Figure 11 suggests, these individuals, almost unanimously, believe that agriculture business will help maintain greenery and open space in their respective states, and would support it.



When asked if they had a garden at home where they grew produce for consumption, less than half of the respondents said that they have their own personal gardens. This is shown in Figure 12.



Although most seem to be in favor of agriculture and recognize its benefits, only two thirds of them (67 percent), overall, were willing to pay higher prices to support farmland preservation and local farmers, as seen in Figure 13.



The most frequently found family size of all the participants was two members, followed sequentially by three and four people per household, as shown in Table 21. Interestingly, data shows that, aside from single person households, as family size increases, the number of respondents drops significantly. From those family sizes, the survey showed that more than half (59%) of the households had at least one person under the age of 17 living there (Table 22).

Table 21. Distribution of Respondents' Household Size

Family Size	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
1	16	13.11%	49	13.35%	73	14.23%	138	13.77%
2	38	31.15%	114	31.06%	187	36.45%	339	33.83%
3	27	22.13%	79	21.53%	109	21.25%	215	21.46%
4	22	18.03%	76	20.71%	83	16.18%	181	18.06%
5	16	13.11%	30	8.17%	43	8.38%	89	8.88%
6	1	0.82%	13	3.54%	11	2.14%	25	2.50%
7	1	0.82%	5	1.36%	5	0.97%	11	1.10%
8	.	.	.	.	1	0.19%	1	0.10%
9	1	0.82%	1	0.27%	1	0.19%	3	0.30%
Total	122	100.00%	367	100.00%	513	100.00%	1002	100.00%
Average	2.98	-	2.97	-	2.81	-	2.89	-

Note: N = Frequency, % = Percent

Table 22. Number of People Under Age 17 in Respondents' Household

Number of people under age 17	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
1	70	57.85%	216	58.70%	308	60.39%	594	59.46%
2	20	16.53%	79	21.47%	94	18.43%	193	19.32%
3	21	17.36%	53	14.40%	72	14.12%	146	14.61%
4	7	5.79%	14	3.80%	23	4.51%	44	4.40%
5	1	0.83%	5	1.36%	6	1.18%	12	1.20%
6	1	0.83%	1	0.27%	5	0.98%	7	0.70%
8	1	0.83%	.	.	1	0.20%	2	0.20%
9	.	.	.	.	1	0.20%	1	0.10%
Total	121	100.00%	368	100.00%	510	100.00%	999	100.00%
Average	1.82	-	1.68	-	1.73	-	1.72	-

Note: N = Frequency, % = Percent

Approximately 75 percent of the respondents from all the states were female, with roughly the same distribution in each state individually (Figure 14). As Table 23 shows, more than 90 percent of the respondents were between the ages of 21 and 65, with slightly over one-third of participants in the 51-65 age bracket. Both of these statistics gives a good snapshot of an important target market segment.

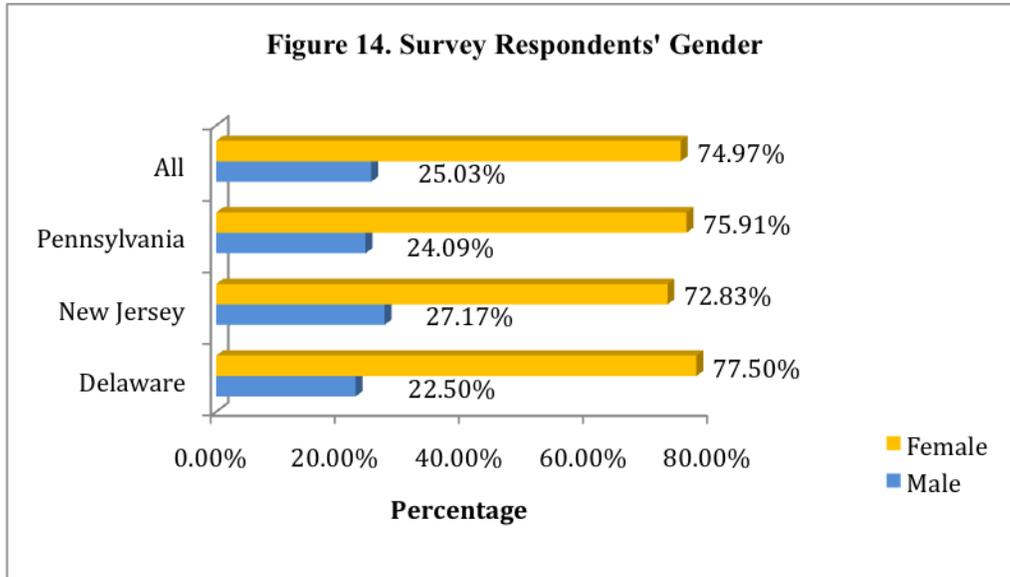


Table 23. Survey Respondents' Age Distribution

Age	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
18 to 20 years of age	1	0.82%	7	1.92%	16	3.14%	24	2.41%
21 to 35 years of age	41	33.61%	116	31.78%	135	26.52%	292	29.32%
36 to 50 years of age	29	23.77%	111	30.41%	149	29.27%	289	29.02%
51 to 65 years of age	43	35.25%	101	27.67%	174	34.18%	318	31.93%
Over 65 years of age	8	6.56%	30	8.22%	35	6.88%	73	7.33%
Total	122	100.00%	365	100.00%	509	100.00%	996	100.00%

Note: N = Frequency, % = Percent

Almost every participant had earned at least their high school diploma, while over 70 percent had earned some level of a college degree (Table 24). On the whole, this indicates that a large majority of college-educated consumers (67 percent) frequent local farm outlets.

Table 24. Survey Respondents' Education Status

Education	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
No formal Education	.	.	1	0.27%	3	0.59%	4	0.40%
Elementary school	.	.	.	.	3	0.59%	3	0.30%
High school graduate	32	26.23%	85	23.10%	164	32.03%	281	28.04%
Two year college or technical degree	40	32.79%	83	22.55%	145	28.32%	268	26.75%
Four year college degree	30	24.59%	123	33.42%	136	26.56%	289	28.84%
Graduate degree	20	16.39%	76	20.65%	61	11.91%	157	15.67%
Total	122	100.00%	368	100.00%	512	100.00%	1002	100.00%

Note: N = Frequency, % = Percent

Table 25 shows the respondents' employment status. Roughly 59 percent were employed, while almost 14 percent were retired, and 16 percent were homemakers.

Table 25. Survey Respondents' Employment Status

Employment Status	State						ALL	
	Delaware		New Jersey		Pennsylvania			
	N	%	N	%	N	%	N	%
Retired	22	18.18%	41	11.52%	71	14.29%	134	13.76%
Self-employed	9	7.44%	24	6.74%	41	8.25%	74	7.60%
Employed by others	56	46.28%	185	51.97%	260	52.31%	501	51.44%
Homemaker	21	17.36%	67	18.82%	74	14.89%	162	16.63%
Student	8	6.61%	21	5.90%	34	6.84%	63	6.47%
Unemployed	4	3.31%	11	3.09%	10	2.01%	25	2.57%
Other	1	0.83%	7	1.97%	7	1.41%	15	1.54%
Total	121	100.00%	356	100.00%	497	100.00%	974	100.00%

Note: N = Frequency, % = Percent

More than 84 percent of respondents were of the White/Anglo ethnicity, by far the dominant ethnic group, while almost 7 percent were African American, and less than 2 percent were Hispanic or Latino, further detailed in Table 26. New Jersey interestingly shows a most diverse ethnic population among the three states by the numbers reported.

Table 26. Survey Respondents' Ethnic Distribution

Ethnicity	State							
	Delaware		New Jersey		Pennsylvania		ALL	
	N	%	N	%	N	%	N	%
White/Anglo	101	85.59%	307	84.81%	461	91.29%	869	88.22%
African American	11	9.32%	27	7.46%	27	5.35%	65	6.60%
Hispanic or Latino	1	0.85%	9	2.49%	7	1.39%	17	1.73%
American Indian or Alaska Native	2	1.69%	2	0.55%	3	0.59%	7	0.71%
Asian American	1	0.85%	17	4.70%	7	1.39%	25	2.54%
Native Hawaiian other Pacific Islander	2	1.69%	.	.	.	.	2	0.20%
Total	118	100.00%	362	100.00%	505	100.00%	985	100.00%

Note: N = Frequency, % = Percent

Except for the lowest income range (under \$20,000), the other five income ranges are fairly evenly distributed, with the majority of respondents (over 50 percent) reporting a household income of over \$60,000 per year, as shown in Table 27. However, the largest distribution of participants earned an annual income in the \$40,000 to \$59,999 income bracket.

Table 27. Household Annual Income Distribution

Income	State							
	Delaware		New Jersey		Pennsylvania		ALL	
	N	%	N	%	N	%	N	%
Less than \$20,000	6	4.92%	23	6.30%	56	10.94%	85	8.51%
\$20,000 - 39,999	33	27.05%	53	14.52%	104	20.31%	190	19.02%
\$40,000 - 59,999	19	15.57%	69	18.90%	130	25.39%	218	21.82%
\$60,000 - 79,999	24	19.67%	58	15.89%	105	20.51%	187	18.72%
\$80,000 - 99,999	17	13.93%	57	15.62%	59	11.52%	133	13.31%
\$100,000 or more	23	18.85%	105	28.77%	58	11.33%	186	18.62%
Total	122	100.00%	365	100.00%	512	100.00%	999	100.00%

Note: N = Frequency, % = Percent

CONCLUSION

In the end, survey results demonstrated that direct marketing and agri-tourism outlets across the Mid-Atlantic region generally appeal to consumers, with a few areas needing improvement. Many consumers seemed to be satisfied with features of products offered by the businesses, such as quality, variety, and price. Patrons also made it clear that they were almost all willing to buy locally grown products from the outlets, which perhaps should become the markets' main promotional focus. Moreover, consumers responded that between 2005 and 2010, they had begun to consume a greater amount and a wider variety of both fruits and vegetables. This seems to be very much aligned with the overall trend in health-conscious consumers to eat healthier and to consume no or little processed food products, particularly by reducing meat consumption and considering organic options. All of these factors are important because they ensure that consumers will continue to purchase products from the selected outlet types – even though there was some evidence in the data that higher prices at the direct markets, as opposed to those generally offered at supermarket type retailers, may pose a competitive barrier.

There are several courses of actions direct marketing or agri-tourism outlet owners can take to possibly increase their consumer base. For one, farmers could invest in growing crops (in either greater quantities and/or increased quality) of the fruits and vegetables bought most often, as stated by the survey, if they do not already. Business owners could also offer the different “value-added” products, aside from fresh fruits and vegetables, which are often bought by visitors in their markets. This could potentially attract more consumers to a particular business if they know that the items they want will be available there. For example, if individuals plan to attend a hayride at an agri-tourism location during the fall, they may expect apple cider and baked goods to also be available for purchase at the site during that time. Knowing that these

complimentary goods and services would both be offered at the same outlet may encourage consumers to do business there rather than another location.

Aside from offering products to increase patronization, using different promotion tactics could also work. Currently, participants responded that they first learned about an event from sources other than the Internet. With ever increasing growth of using these sites to market companies and products, many direct marketing or agri-tourism outlets have the potential to increase knowledge about their businesses and increase the popularity of similar agri-tourism ventures through the Internet. In particular, blogs and social networking sites would seem to be the most beneficial and practical. Also, according to the survey, many individuals do not know about some of the related agri-tourism concepts mentioned. If word and/or information is spread about these concepts through increased marketing efforts, such as an article, blog post or brochure advertising ecotourism, perhaps more people would be interested in visiting the operation sites, and also become repeat customers for the locally-grown produce.

Regarding how produce from direct marketing outlets compared to non-direct marketing outlet types, survey participants felt that the quality, variety, and prices at the direct marketing outlets was superior to the others, such as local grocery stores and chain supermarkets. Perhaps even more importantly, the study revealed that a majority of consumers are willing to pay more for products from the direct marketing outlets, even if only a small to medium percentage. However, some individuals made it clear that the proximity and convenience is an important factor in deciding whether to visit a direct marketing outlet and that visiting is, in fact, not always convenient for them. The study also showed that consumers generally visit agri-tourism sites during the fall, summer, and spring, which is logical. This, however, leaves an opportunity to incorporate and capitalize on agri-tourism activities during the winter in creative new ways,

such as offering educational programs and workshops, to boost visitation and sales. Perhaps offering winter functions and incorporating new agri-tourism events and activities year-round will incentivize patrons and help attract patrons to particular outlets, regardless of how convenient it is to visit.

Aside from offering more or better goods and services, owners should also take the opportunity to improve their outlets by focusing on factors that respondents considered to be most important when taking a trip to an outlet. For one, better facilities for comfort and convenience, such as restrooms, picnic tables, easy parking, and easy road/drive way access may help to draw even more customer traffic. These fairly simple supplements may make a world of difference to individuals, especially those who travel from far away or who travel under special circumstances. Additions like shops and markets also may compel individuals to visit, but are not as feasible to erect if not already established as part of the outlet.

Overall, it seemed that a majority of consumers were pleased with how agri-tourism and direct marketing outlets were operated and with what they offered at the time. This probably stems from a rich history of local farms and farm markets in the areas surveyed and their successes over the years. Research and data provided by this research study may bring about a useful understanding of consumers' perceptions, behaviors, and actions concerning their purchases, decisions to visit, and general preferences, as individual states and as a composite whole. It may also generate conversation on how to advance businesses in order to benefit consumers and owners alike in the Mid-Atlantic region, and perhaps may extend to similar nearby farming states outside of the region studied.

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Appendix-1

Demographic Characteristics of Consumers Who Participated in Hayride Event of an Agritourism Activity: A Predictive Model Approach

ABSTRACT

An internet survey pertaining to direct marketing and agritourism was conducted to document characteristics of consumers who buy at farmer-to-consumer direct market outlets and/or visit agritourism operations from Mid-Atlantic States during June and July 2010. A facet of the study analyzed the influence of demographic characteristics on the likelihood of a consumer participating in hay rides event during an agritourism visit. A total of 1,134 participants from Delaware, New Jersey, and Pennsylvania completed the survey. One of the survey questions asked respondents to indicate whether they participated in hay ride events during agritourism visits. Based on responses, a logit model was developed to predict demographic characteristics of respondents who participated in hay rides. As survey results indicated, approximately 67% of respondents participated in hay rides during agritourism farm visits. According to model results, participants are more likely to participate in hay rides if they reside in suburban areas, are male, between 21 and 35 years of age and between 36 and 50 years age, completed a two year college degree, and have an annual household income between \$40,000 and \$59,999. Consumers who are less likely to participate in hay rides can be described as living in urban areas, have lived at their current residence for more than 20 years, were under age 20 and who completed a graduate degree.

Keywords: Mid-Atlantic States, Agritourism, Hayrides, Logit Model

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INTRODUCTION

In the current agricultural system, small and medium farmers with limited land and capital resources may be unable to compete in national commodity markets (Gale, 1997). Direct marketing and agritourism, including pick-your-own farm, community farmers' markets, community support agriculture (CSA), agricultural fairs/festivals, corn maize, on-farm markets, and wine tastings, are used by small and medium sized farms to increase farm income. Growth of direct marketing has been spurred by the fact that producers capture a greater portion of the marketing margin by selling directly to the consumer, and consumers understand that they can get fresh, high quality produce for a better price compared to supermarkets (Tracy et al., 1982). These economic opportunities can motivate farmers to identify consumer trends, desires, shopping habits, and value-added product purchasing demands and focus on efforts that provide profitable on-farm agricultural activities.

In 2007, 23,350 farms offered on-farm recreational activities and generated income of \$566 million in the United States (Thessen, 2010). In 2005, \$57.53 million in income was generated in New Jersey from agritourism (Schilling et al., 2006). Govindasamy et al. (1998) found that New Jersey farm operators who engaged in direct marketing and agritourism were likely to attain higher income levels than farmers who did not undertake these activities. A Pennsylvania agritourism study also found that 43% of farmers were unable to support their family and/or farm without the income they made from agritourism (Ryan et al., 2006)

In addition to the potential to generate revenue by bringing visitors to the farm, direct marketing and agritourism provide farmers with other benefits. Agritourism and direct marketing can create positive interactions between farmers and consumer's, contributing to a

“culture of understanding” that is necessary for both to coexist (Shilling, 2006). The diversification of farm activities also contributes to the well-being of local people in rural areas and expands recreational opportunities (Henderson and Linstrom, 1982; Linstrom, 1978; Govindasamy et al., 1999). In addition, they also promote, income, and sustainability of rural communities (Hall and Mitchell, 2003; Kneafsey, 2000), development of industrial and service activities. (Feher, 2007).

With the growing number of consumers interested in supporting local farmers, as is the case in New Jersey (Govindasamy et al., 2002), Mid-Atlantic consumers interested in sourcing fresh agricultural products directly from the farmer can also choose to patronize other unique farm based activities, which provide agricultural knowledge, pleasure, and fun (Schilling, 2006).

Past agritourism studies have focused on outcomes and benefits that encourage farmers to start agritourism and other on-farm activities (Polovitz-Nickerson et al., 2001; McGehee and Kim, 2004), whereas, other studies focused on demand for on-farm agritourism activities such as pick-your-own (Govindasamy et al., 1997), farm visits, and on-farm recreational trips (Carpio et al., 2008). In order to promote direct marketing and agritourism as a method for increasing on-farm income, it is necessary to explore consumer interests, needs, and preferences pertaining to these activities and opportunities. Agritourism opportunities in the Mid-Atlantic have not yet been fully realized. Though a 2005 survey revealed that 63% of New Jersey farms offered hay rides (Schilling, 2006), it is necessary to identify the consumers who are more likely to participate in hay rides, one agritourism event.

DATA

A 15-min Internet survey was conducted 22 to 29 June, 2010, to gather information from consumers who reported participating in direct marketing and agritourism activities in the United States Mid-Atlantic region. A total of 1134 participants who resided in Delaware (133), New Jersey (424) and Pennsylvania (577) completed the survey. Participants were selected at random from a panel managed by a survey research company (Sampling International, LLC, Shelton, CT). Potential participants were screened and asked to participate if they were: 1) age 18 and older; 2) primary food shopper for the household; and 3) had previously attended agritourism and direct marketing events or activities. Of the questions asked, participants indicated whether they participated in hay rides, an agritourism activity, and based on this question, a logit model was developed to predict participation in this activity.

MODEL

Logistic regression analysis is an econometric modeling method and often used to examine the relationship between binary responses and a set of dependent variables or covariates. For binary response models, the response variable (Y) can take one of two possible values as 1 and 0 (for example, 1 if respondent participated in agritourism activity of hay rides; 0=otherwise). Suppose x is a vector of dependent variables denotes that the respondent's demographic attributes of $\pi = \text{Pr}(Y=1/x)$ is the response probability to be modeled and the logistic model can be expressed as:

$$\text{logit}(\pi) = F = \frac{e^{\beta'x_i}}{1+e^{\beta'x_i}} = \Lambda(\beta'x_i), \quad f = \Lambda(\beta'x_i)[1 - \Lambda(\beta'x_i)] \quad (1)$$

The notation $\Lambda(\cdot)$ indicates the logistic cumulative distribution function and $\beta'x_i$ can be defined as:

$$\beta'x = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \dots + \beta_n x_{in} + \varepsilon, \text{ where } i = 1, 2, \dots, n \quad (2)$$

Where x_{ij} denotes the j^{th} demographic attributes of the i^{th} respondent, β is the parameter vector to be estimated and ε is the disturbance term associated with the i^{th} consumer. Since the equation 1 does not provide marginal effects of the independent variables on the probability E that a respondent who participated in agritourism activity of hay rides. In the case of dummy variable (z), the marginal effect can be computed as:

$$\Delta F_z = F(\beta'x + \alpha z | z = 1) - F(\beta'x + \alpha z | z = 0) \quad (3)$$

If the explanatory variable is continuous variable the marginal effects computed as:

$$\frac{\partial F[y|x]}{\partial x} = f(\beta'x)\beta \quad (4)$$

The description of means and standard deviation of explanatory variables are shown in Table 1. The vector of explanatory variables in equation (2) included Mid-Atlantic agritourism consumers' demographic attributes. Respondents' demographic attributes used were similar to a Govindasamy and Nayga (1997) study relating to New Jersey farmer-to-consumer direct market visit by type of facility and quantified the effects of different factors influencing customers decisions to visit farms and to provide an estimation of rural landscape recreational value in the United States (Carpio et al., 2008). The model framework and computed results were based on the LIMDEP Econometric Software (Econometric Software Inc., 2007). The following model was developed to predict demographic characteristics of respondents participated in agritourism activity of hay rides.

$$\begin{aligned}
\text{HAY_RIDES} = & \beta_0 + \beta_1 \text{URBAN} + \beta_2 \text{SUBURBAN} + \beta_3 \text{LIVE6TO10} + \beta_4 \text{LIVE11TO20} \\
& + \beta_5 \text{LIVE>20} + \beta_6 \text{HSIZE} + \beta_7 \text{GENDER} + \beta_8 \text{AGE<20} + \beta_9 \text{AGE21TO35} \\
& + \beta_{10} \text{AGE36TO50} + \beta_{11} \text{2YEAR_DEG} + \beta_{12} \text{4YEAR_DEG} \\
& + \beta_{13} \text{GRAD_DEG} + \beta_{14} \text{INC<\$20K} + \beta_{15} \text{INC\$20K_40k} + \beta_{16} \text{INC\$40K_60k}
\end{aligned}$$

RESULTS

Data Description

Demographic attributes were used as explanatory variables to construct the logit model. Dependent and independent variables used in the logit model to predict which consumers are willing to participate in hay ride event are presented in Table 1. Approximately 67% of agritourism survey respondents participated in hay rides (HAY_RIDES) during their agritourism farm visit. Of these consumers, 11% resided in urban settings (URBAN) while 69% lived in suburban area (SUBURBAN). Participants were asked to indicate the number of years they lived at their current residence. Twenty percent responded that they lived at their current residence between six and 10 years (LIVE6TO10), 21% of them lived at their residence between 11 and 20 years (LIVE11TO20), and 26% had lived more than 20 years (LIVE>20) at their current location.

Table 1: Descriptive statistics of dependent and independent variables

Variable	Variable Description	Mean Units/ %	SD Units/ %	Number of Cases
HAY_RIDES (dependent variable)	1 if respondent participated in hay rides; 0=otherwise	67%	47%	1134
URBAN	1 if respondent resided in an urban area; 0=otherwise	11%	31%	1003
SUBURBAN	1 if respondent resided in a suburban area; 0=otherwise	69%	46%	1003

LIVE6TO10	1 if respondent lived in their current residence for six to 10 years; 0=otherwise	20%	40%	999
LIVE11TO20	1 if respondent live in their current residence for 11 to 20 years; 0=otherwise	21%	41%	999
LIVE>20	1 if respondent lived in their current location for more than 10 years; 0=otherwise	26%	44%	999
HSIZE	Household Size	2.89	1.40	1002
GENDER	1 if respondent was male; 0=otherwise	25%	43%	971
AGE<20	1 if respondent was less than 20 years old; 0=otherwise	2%	15%	996
AGE21TO35	1 if respondent was between age 21 and 35 years; 0=otherwise	29%	46%	996
AGE36TO50	1 if respondent was between age 36 and 50 years; 0=otherwise	29%	45%	996
2YEAR_DEG	1 if respondent completed a two year college or technical degree; 0=otherwise	27%	44%	1002
4YEAR_DEG	1 if respondent completed a four year college degree; 0=otherwise	29%	45%	1002
GRAD_DEG	1 if respondent completed a graduate degree; 0=otherwise	16%	36%	1002
INC<\$20K	1 if respondent's income was less than \$20,000;0=otherwise	9%	28%	999
INC\$20K_40k	1 if respondent's income was between \$20,000 and \$39,999;0=otherwise	19%	39%	999
INC\$40K_60k	1 if respondent's income was between \$40,000 and \$59,999;0=otherwise	22%	41%	999

Participants were asked to respond to questions pertaining to their demographic status. Data revealed that 25% of participants were male (MALE) and that the average household size was 2.89 persons (HSIZE). In terms of respondents' age distribution, 2% of were less than 20 years of age (AGE<20) and 29% were between 21 and 35 years (AGE21TO35) and between 36 and 50 years of age (AGE36TO50), respectively. In the case of respondents' education, 27% of completed a two year college degree (2YEAR_DEG), 29% had a four year college degree (4YEAR_DEG) and 16% accomplished graduate education (GRAD_DEG). Lastly, regarding respondents' annual household income, only 9% had an annual income of less than \$20,000 (INC<\$20K), 19% of had an annual income between \$20,000 and \$39,999 (INC\$20K_40K), and

22% of had an annual income between \$40,000 and \$59,999 (INC\$40K_60K). No a priori sign expectations were made on the coefficients of these demographic variables while conducting the logit model.

Logit Model Results

Logit model analysis results (Table 2 and 3) and predict the likelihood that a respondent participation in agritourism activity of hay rides. Of the 1134 observations that were used in this model, 760 (67%) respondents participated in hay ride events, while 374 (33%) did not. The goodness of fit for this model, shown by the McFadden's R^2 , was 0.04 and the chi-squared value was reported as 56.07. The overall model was significant at 0.00 level and 67.5% of survey participants were correctly classified as having participated in hay rides. The predictive accuracy of the logit model is shown in Table 2. Based on the percentage change in marginal effects for each significant variable the model results analyzed are shown in Table 3. In the logit model, all the explanatory variables are defined as binary dummy variables. A total of 17 explanatory variables were used in the logit model, of which, six variables were positively significant and four were negatively significant. A positive sign indicates that the variable was estimated to have a positive coefficient with a positive marginal effect, and hence had a positive impact on the dependent variable. A negative sign indicates that the variable was estimated to have a negative coefficient with a negative marginal effect, and hence had a negative impact on the dependent variable. The star symbol represents the significance level of the variable at 1%, 5% and 10% level, which is interpreted at the bottom of the Table 3.

Table 2: Predictive accuracy of logit model

Actual Value	Predicted		Correct Total
	0	1	
0	37 (3.3%)	336 (29.6%)	373 (32.9%)
1	31 (2.7%)	730 (64.4%)	761 (67.1%)
Total	68 (6%)	1066 (94%)	1134 (100%)

Number of correct predictions: 767

Percentage of correct predictions: 67.64%

McFadden R²: 0.04;

Chi squared: 56.07;

Degrees of freedom: 16

P-value= 0.38 with degrees of freedom = 8;

Overall Model Significance: 0.00.

Table 3: Logit model results

Variable	Coefficient	Standard Error	t-ratio	Probabilities	Change in Marginal Effects
Constant	0.4341	0.1071	4.051	0.00	0.0948
URBAN**	-0.2256	0.0997	-2.262	0.02	-0.0493
SUBURBAN**	0.2139	0.0994	2.151	0.03	0.0467
LIVE6TO10	0.1674	0.1266	1.323	0.19	0.0366
LIVE11TO20	0.1554	0.1237	1.257	0.21	0.0339
LIVE>20***	-0.3224	0.1154	-2.793	0.01	-0.0704
HSIZE	0.0009	0.0014	0.599	0.55	0.0002
GENDER**	0.0008	0.0004	2.214	0.03	0.0002
AGE<20***	-0.5520	0.2173	-2.54	0.01	-0.1205
AGE21TO35**	0.3013	0.1435	2.1	0.04	0.0658
AGE36TO50*	0.2509	0.1433	1.751	0.08	0.0548
2YEAR_DEG***	0.4037	0.1189	3.397	0.00	0.0882
4YEAR_DEG	-0.0746	0.1128	-0.661	0.51	-0.0163
GRAD_DEG***	-0.3228	0.1270	-2.542	0.01	-0.0705
INC<\$20K	-0.1492	0.1643	-0.908	0.36	-0.0326
INC\$20K_40k	-0.1283	0.1363	-0.941	0.35	-0.0280
INC\$40K_60k**	0.2799	0.1364	2.052	0.04	0.0611

*** Significant at 1%; ** Significant at 5%; * Significant at 10%

As can be seen in Table 3, participants are more likely to participate in hay rides if they reside in suburban areas (SUBURBAN), are male (GENDER), between 21 and 35 years of age (AGE21TO35) and between 36 and 50 years age (AGE36TO50), completed a two year college degree (2YEAR_DEG), and have an annual household income between \$40,000 and \$59,999 (INC\$40K_60K). Consumers who are less likely to participate in hay rides can be described as living in urban areas (URBAN), have lived at their current residence for more than 20 years (LIVE>20), were under age 20 (AGE<20) and who completed a graduate degree.

Those who reside in suburban (SUBURBAN) areas were 5% more likely to participate in hay rides event than those who resided in rural areas. Except for some regions in New Jersey and Pennsylvania, a majority of Mid-Atlantic consumers reside in suburban areas. With a smaller number of entertainment options available in suburban areas compared to urban regions, consumers residing in these areas may be more likely to participate in agritourism activities. With respect to gender (GENDER), males are 0.02% more likely to participate in hay rides than females. Though the GENDER variable is significant at 5% level, the percentage of impact on dependent variable is not sizable. Individuals who were between 21 and 35 years of age (AGE21TO35) were 7% more likely to participate in hay rides than those who were 51 years age or older. Consumers between 36 and 50 years of age (AGE36TO50) were 6% more likely to participate in hay rides than those 51 years age and older.

Additionally, individuals who completed a two year degree (2YEAR_DEG) were 9% more likely to participate in hay rides than those who attained some level of high school education and those who graduated. Finally, those with an annual household income between \$40,000 and \$59,999 (INC\$40K_60K) 6% more likely to participate in hay rides event compared to those whose annual household incomes are over \$60,000. This indicates that the low income

people are more attracted by low cost entertainment and recreational activities. Those who reside in urban areas (URBAN) are 5% less likely to participate in hay rides compared to those who resided in rural areas. This might be due to the greater availability of recreational choices available in urban areas compared to rural areas. Carlos et al. (2008) obtained the same results when analyzing the demand for agritourism in the United States.

Lastly, those who lived in their current residence for more than 20 years (LIVE>20) were 7% less likely to participate in hay rides than those who lived in their residence for less than six years. Those who were younger than 20 years (AGE<20) were 12% less likely to participate in hay rides than those aged 51 years and older. Those who completed a graduate degree were also 7% less likely to participate in hay rides than those who attained some level of high school education and those who graduated.

CONCLUSIONS

This paper analyses the influence of demographic characteristics on the likelihood of consumer participation in hay rides. Among respondents, 67% participated in hay rides during their agritourism farm visit. As model results indicate participants are more likely to participate in hay rides if they reside in suburban areas, are male, between 21 and 35 years of age and between 36 and 50 years age, completed a two year college degree, and have an annual household income between \$40,000 and \$59,999. Consumers who are less likely to participate in hay rides can be described as living in urban areas, have lived at their current residence for more than 20 years, were under age 20 and who completed a graduate degree. . Survey results errand the resulting logit model should provide valuable information for those developing marketing strategies to increase agritourism participation and future interest in support of local agriculture. However,

some mechanism must be developed to educate the public about agritourism, and the importance of supporting local agriculture.

The e logistic regression analyses findings were consistent with past agritourism marketing research. According to these data, a majority of agritourism visitors in the Mid-Atlantic States had participated in hay rides. Due to higher land values and higher population density, agritourism farmers in the Mid-Atlantic States may be able to realistically increase the portion of their land devoted to agritourism events as a method for increasing revenue. Agritourism farmers should also consider selling value added products to further maximize revenue and compensate for the amount of land devoted to agritourism use as opposed to using the land for only agritourism. To encourage farmers to consider such opportunities, they should be educated about the usefulness of direct marketing and agritourism and the resulting benefits. Additionally, to encourage stakeholder participation, consumers should be informed about applicable benefits and how direct marketing and agritourism can be of value to their community.

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Appendix-2

Uncovering success attributes for the direct farmers markets and agri-tourism in the Mid-Atlantic region of the United States: A Factor Analysis

Abstract

Direct farmers' markets and agri-tourism operations continue to play significant roles in many rural economies; however, capacity under- utilization plagues most of them, threatening viability. Results from factor, cluster and regression analyses show that bundling of farmers' markets activities/site attributes will spur diverse and steady patronage beyond the traditional fresh produce and value added products. Additionally, segmentation/customer profiling can be used by farmers' markets / agri-tourism operators to market position better in a competitive environment. The regression results show that a number of socio economic variables are related with the patronage experience.

Keywords: Farmers' markets, Agri -tourism, Factor analysis, Product bundling, Consumer profiling, Market segmentation

Introduction

As federal farm support programs become increasingly untenable, farmers are being reminded and encouraged to innovatively address farming risks and rely less on government support. Some of the innovative approaches cutting across many of the farming communities are direct (farmer-consumer) market alternatives. These markets are fast growing in popularity as they confer more returns to producers while offering consumers a wide array of farm products at affordable prices. These alternative marketing outlets are known to many as direct agricultural markets. Other terms used to describe the markets are pick-your-own (PYO), on farm markets, road side stands and community supported agriculture (CSA). Among many of their advantages are: buffering farm incomes, providing marketing avenues and addressing price volatilities beyond what futures markets or any other vestiges of government support programs can do. Major challenges confronting many of farmer-to-consumer market operations are capacity underutilization and a narrow consumer base needing expansion to attract a more diverse customer base beyond fresh produce buyers. It is very clear that farmer-to-consumer market operators may need additional activities to attract a clientele that may not necessary be produce buyers.

While these market alternatives provide establishments to sell locally grown produce directly to consumers, some researchers view these alternatives as a practical rural development strategy. Various farmers' market economic impact studies demonstrate that farmers' markets are good for local economies, farmers, and consumers (Conner, et al 2010; Che, et al, 2005; Das and Rainey, 2010). These markets provide growers with extra income, since many farmers and local citizens must work full-time either off the farm or outside the local area to support their families. Farmers' markets, by selling directly to consumers, also facilitate higher producer prices by displacing brokers/middlemen. The benefits do extend to consumers as well, in terms

of providing a broader choice of fresh produce and value added products (Bond, et al 2006). Communities, in which these businesses operate, gain from more money spent in the local economy, creating spending, re-spending, and higher multiplier effects. Yet, still retail spending by consumers promotes business development and expansion locally. Additionally, in the recent past, USDA and other government agencies are recognizing farmers-to-consumer markets a better vehicle to promote public good of affordable healthy living by increasing consumption of fruits and vegetables.

Notwithstanding many benefits associated with farmers' markets/agri-tourism, issues of capacity utilization require strategic thinking on part of the operators; what is it that they can do to attract diverse and steady patronage to their businesses. We consider this a void to which our study seeks to contribute by extending the discourse. The broad objective of this study is uncovering some of the success strategies farmers' markets/agri-tourism operators would initiate to sustain and expand capacity utilization. Specifically, (i) identify and estimate the relative importance of the factors underlying success of a direct farmers market/agri-tourism site; (ii) identify distinct consumer segments based on important drivers/forces for visiting direct market/agri-tourism sites; (iii) develop a profile of these distinct consumer groups; and (iv) explore the relationship between consumers' socio-economic characteristics and patronage of direct farmers markets/agri-tourism sites.

The information generated by this study will be useful not only to farmers but also to policy makers in improving effectiveness of farmer-to-consumer market channels as well as agri-tourism activities; it may also contribute toward development of efficient and effective business strategies. A unique contribution of this study is a better understanding of what underlies successful operations of farmers' market/agri-tourism sites.

The remainder of this article proceeds with the following section on literature review followed by a section on data and methods, then a section on results will follow. A final section will offer concluding thoughts.

Literature

Majority of small to medium scale farmers more often find farmers' markets a predictable and less costly outlet absorbing a larger proportion of their production. This market segment has been growing steadily over time. Hand et al, (2010) findings demonstrate that direct market sales accounts for a higher percentage of smaller farms sales than for larger farms. According to USDA's Agricultural Marketing Service, the number of farmers' markets rose from 2,756 in 1998 to 5,274 in 2009, over a 90% growth. Direct (farmer)-to-consumer marketing amounted to \$1.2 billion in current dollar sales in 2007, according to the 2007 Census of Agriculture, compared with \$551 million in 1997.

While serving as sure market outlet for small to medium scale farmers, farmers markets have been hailed as a development strategy. Hughes et al., (2008) view farmers' markets as a means to enhance retention of local dollars. Along similar lines, Brown, (2003) puts a psychological spin to the functionality of these markets in the sense that consumers feel good by supporting small scale local agriculture, thereby helping to retain dollars in the local economy. Other studies have focused more deeply on the much greater untapped potential of farmers' markets/agri-tourism (Jensen et al. 2005; Jolly and Reynolds, 2005). The potential is premised on the fact that customers are willing to pay more for products from farmers markets and is an industry that can be operated all year round. The Tennessee study on one hand, shows that visitors to farmers market or agri-tourism site spend an average of \$15.00 with the Californian agri-tourism study revealing that about 67% of the respondents who purchased products at farm-

related tourism sites indicated a willingness to pay a price equal to or more than what they would pay for the same or similar products in conventional outlets.

Direct marketing and agri-tourism ventures are not only economically advantageous, but also provide social benefits for business owners and consumers (Tracy et al., 1982). Indeed, a study by Das and Rainey (2010) strongly collaborates this view that farmers' markets and agri-tourism ventures as complimentary in opening up new, profitable markets for farm products and services, as well as in providing travel experience for part of the public. On the other hand, Veeck et al., (2006) finds that Agri-tourism gives people opportunity to better understand the hard work and skill that go into producing the food and fibre we all enjoy.

While profitability and market access are significant functions of farmers/agri-tourism businesses need for strategy in attracting continuous flow customers for sustainability is necessary. Tracy et al., (1982) work demonstrates that patronizing farmers markets and agri-tourism sites is driven by attributes such as superior quality and freshness of produce coming directly from farms compared to those offered by wholesale and retail markets. Whereas, other studies overwhelmingly see farmers markets as a better mechanism for rural revitalization and development (Henderson and Linstrom, 1982; Linstrom, 1978; Govindasamy, 1996). The studies point out a striking of relationships/community building through direct interaction with consumers; the relationships are seen as a critical success factor in a business where customer satisfaction is highly valued. The interaction enhances overall quality of life, more especially for the urbanized, by offering recreational outlets for individuals and a business that would generate income and employment in that area, by preserving agricultural lands and open spaces, and by contributing to community development simultaneously. Additionally, such interaction allows

consumers to question farmers freely about pesticide use and production methods and may ensure that the product is “chemical-free” (Gale, 1997).

Some studies isolate success factors specific to the recreation business portion, here referred to as agri-tourism. Brown and Reeder, (2007), Ryan, DeBord, and McClellan, (2006) have shown that agri-tourism is partly driven by such factors as location (region), flow of visitors, and proximity to urban areas(shorter travel distances). In terms of socioeconomic factors, such business should target, households with higher education, higher family income, relatively younger, and have more family members (Carpio, Wohlgenant, and Boonsaeng, 2008). A Colorado study on agri-tourism found that income level, urban influence, visit promotion (via Tourism Office and Magazines positively influenced travel and related expenditures (Gascoigne, Sullins, and McFadden, 2008). Their study further finds that travelers from higher-income and Caucasian households were more likely to visit agri-tourism sites (Gascoigne, Sullins, and McFadden, 2008). The business should be better informed that the socioeconomic factors are constantly evolving as the U.S. population ages and becomes more affluent and diverse , yet this should provide opportunities for entrepreneurial farmers to respond in terms of consumers’ changing food preferences and eating patterns(Ballenger and Blaylock, 2003).

In addressing capacity underutilization Brown and Reeder, (2007) suggest joint ventures-farmers markets and recreation-agri-tourism, with recreation naturally fill in for the slack. This is due to the fact that infrastructure at these locations are not utilized year-round, hence a perfect stage for agri-tourism activities, such as corn mazes, hayrides, and food festivals.

Data and Methods

An Internet survey of consumers residing in Delaware, New Jersey, and Pennsylvania was conducted between June 21 to 29, 2010 to capture consumer purchasing behavior and other characteristics relating to visiting agri-tourism operations and shopping from direct (farmer-to-consumer) market outlets in the Northeast. The survey instrument was developed using SurveyMonkey.com (Palo Alto, CA), an on-line survey tool that allows researchers to design and implement an on-line survey. The survey was pre-tested on a subset of the target consumer population (n=93) to refine and clarify misleading or misunderstood questions prior to full deployment of the survey. Survey participants were randomly drawn from a panel of participants managed by Survey Sampling International, LLC (Shelton, CT), a provider of sampling solutions for survey research. The selected panelists received a consent statement along with a link to the survey developed by researchers from Rutgers, the State University of New Jersey, and Pennsylvania State University. All potential participants were screened and asked to participate if they were: 1) age 18 and older, to ensure that only adults participated; 2) the primary food shopper for the household; and 3) had attended agri-tourism and direct marketing events or activities in the past. Panelists were informed of this criteria as well as their compensation, an entry into Survey Sampling International, LLC's quarterly \$25,000 sweepstakes and an instant win game play, which is standard compensation for these panelists, in the consent statement. To begin the survey, panelists clicked on a hyperlink at the bottom of the consent statement, which then directed them to the survey welcome screen.

Of the 2594 members who were registered with this panel and accessed the survey (309 from DE, 952 from NJ, and 1384 from PA), 1134 met the screener criteria and began the questionnaire (133 from DE, 424 from NJ, and 577 from PA), with 993 completing the 15 minute survey (122 from DE, 364 from NJ, and 507 from PA). Panelists were asked to quantify

the amount of produce purchased at direct marketing outlets, type of produce bought, number of visits per month, and dollars spent during visits to each of the farmer-to-consumer direct market outlets and agri-tourism operations targeted. In addition, panelists also responded to demographic questions (age; gender; 2009 annual gross household income; and household size). On submission of a completed survey, participants were directed to a thank you page.

The study analysis is based on responses to 17 questions relating factors/motivations/reasons for visiting an agri-tourism site/farmers' market. Respondents were asked to rate on a scale of 1 through 7 the factors/motivations/reasons for their visit. Where, 1= the reason/factor was not at all important and 7 = the reason/factor was extremely important with a score =4 denoting an indifferent or neutral response. Two sets of question utilizing the same Likert scale were applied on site attributes and motivating factors for visiting a farmer's market/agri-tourism site rated utilizing on the above scale. The respondents were asked ... *"How important are the following factors/attributes/reasons in your decision to visit agri-tourism site for an activity or event[factors/attributes included hay rides, wine tasting, agricultural festival/fairs, produce purchases, availability of picnic tables, and other related farmers' markets and agri-tourism activities,]"*

Principal components factor analysis (PCA) was used to reduce the 17 questions exploring consumer motivations for visiting a farmers' market/agri-tourism site to a smaller set of dimensions (factors). A standard latent root equal to one and a scree test were used to establish the number of factors to retain, followed by a confirmatory analysis to ensure internal reliability of the factors. Next, a two-stage cluster analysis was employed to identify clusters of respondents with similar motivations for visiting a direct market/an agri-tourism site. ANOVA tests were applied to examine inter-cluster heterogeneity. Finally, a regression analysis was applied on the

standardized factor scores obtained from principal component analysis to explore the relationship between the identified dimensions and the socioeconomic attributes of the consumers.

Empirical Results: Motivation for visiting direct farmer’s market or agri-tourism sites

Table 1 presents the mean, standard deviation, and factor loadings from the principal component factor analysis obtained after a Varimax rotation of consumer responses to the 17 questions exploring reasons/motivation for patronizing a farmers market/ and agri-tourism site.

Factors are ranked in order of the proportion of variance explained, and are labeled to reflect the latent stimuli underlying consumer motivation for the visit. With the exception of one, all the estimated means of >4, on questions relating to the importance of motivations/reason for the visit suggest relevance of the variables in defining the latent dimensions on the bundle of factors underlying the visit. As reported in table 1, the analysis identified five factors underlying the visit to a farmer’s market/agri-tourism site. Together, these factors accounted for 66% of the variance, and are summarized in the discussion below

Table 1: Varimax Rotated Factor Loadings Public Motivations/factors For Visiting Farmers’ Market/Agri-tourism Sites						
Description	Mean (Std. Dev.)	Factors				
		1	2	3	4	5
FACTOR 1:Learners Experience						
Learn how food is grown	4.03 (1.66)	.865				
See where food is produced	4.29 (1.66)	.846				
Experience Farm visit	4.51 (1.61)	.633				
Educational class	3.88 (1.57)	.576				
FACTOR 2: Naturalist Experience						
Enjoy rural scenery	5.33 (1.34)		.778			
Spend time with family & friends	5.44 (1.42)		.764			
Appreciate scenery and natural settings	5.00 (1.42)		.577			

FACTOR 3: Leisurely Experience						
Events (e.g., concerts)	4.24 (1.59)				.768	
Activities(Hayrides, farm tours)	4.90 (1.56)				.745	
Has restaurants & cafes	4.08 (1.53)				.593	
Has animal pet zoo	3.75 (1.69)				.547	
FACTOR 4:Purchasing/marketing Experience						
Buy fruits and vegetables	5.48 (1.45)				.767	
Support local farmers	5.51 (1.34)				.664	
Buy value added products	4.44 (1.55)				.646	
Located near my home	4.93 (1.49)				.606	
FACTOR 5: Entertainment/Partying Experience						
The site has facilities: picnic tables and restrooms	4.94 (1.68)					.725
The site has shops	5.09 (1.40)					.711
Percent of total variance explained		15.8%	13.9%	13.3%	12.5%	10.8%
Total Variance Explained by Factors 1-5=66.39						

FACTOR1: *Learners Experience* (scale of 1-7, where 1 = not at all important and 7 = extremely important). This dimension captures the importance the Mid-Atlantic public places on agricultural education. Most of the American people reside in urban areas; it may, therefore, not be farfetched that basic agricultural knowledge is remote to many. In this respect, a visit to the farmers' market/agri-tourism site provides valuable opportunity to tap in to some of the knowledge first-hand. It may be more pertinent, particularly, to the school going children who may learn something about agriculture. Some of the questions that may seem obvious but may be of great interest to children will be: "how food is grown and produced." The learning experience for some of the visitors would involve enjoying a farm visit experience. No wonder the learning experience is the most important of the five factors, accounting for approximately 16% of the variance.

FACTOR 2: *Naturalist Experience* (scale of 1-7, where 1 = not at all important and 7 = extremely important). Naturalist experience is for that consumer segment that sets aside some time to reconnect with nature. These consumers can be seen driving around in rural farms for the mere joy of the rural scenery. It will not be surprising to see naturalists in groups of friends or families just having a good time. One compelling reason for naturalists to go rural is in an attempt to get away from the clutter of cities to the countryside to refresh. This naturalist experience dimension accounts for approximately 14% of the variance.

FACTOR 3: *Leisurely Experience* (scale of 1-7, where 1 = not at all important and 7 = extremely important). Accounting for about 13% of the variation is the dimension capturing leisure aspects motivating a visit to farmers' market/agri-tourism site. For this segment of consumers, agri-tourism sites offering such attractions as concerts; hay rides; farm tours; or petting zoos are winners. One important consideration for this consumer segment is the value they attach to the eating experience, therefore a good restaurant or café is a major factor for visiting.

FACTOR 4: *Purchasing/marketing Experience* (scale of 1-7, where 1 = not at all important and 7 = extremely important). This dimension reflects the well established reason of existence of farmers' markets; to provide consumers a better shopping alternative for fresh and value added products. The dimension explains another 13% of the variation. The main attraction for a successful purchase/market experience is the knowledge that the products will be fresh in addition to knowing some farmers personally; the more reason to buy local. Interestingly, support for the local farmers variable correlates highly with the purchasing experience. With hindsight, this connection makes a lot of sense as expenditures made go a long way to support the local economy. Additionally, the proximity variable, adds more economic rationale in the light of rising gas prices that make driving long distances to supermarkets less attractive.

FACTOR 5: *Partying/ Entertainment Experience* (scale of 1-7, where 1 = not at all important and 7 = extremely important). This dimension captures the importance the Mid- Atlantic public places on away- from- home activities (e.g., potlucks) and shopping. Although explaining about 11% of the variation, in terms of business strategy it reflects importance of facilities and shops. In this respect, entertainment facilities (picnic tables and restrooms) and shops should be bundled or developed simultaneously to make a visit a fulfilling customer experience.

Cluster Analysis

The means and standard deviations of the standardized factor scores and the number of respondents in each cluster are reported in table 2. The analysis identified four clusters on the basis of importance respondents placed on the factors identified in the principal component factor analysis. The results were obtained by subjecting individual cases to non-hierarchical clustering. The number of clusters was determined on the basis of interpretability and external validity using the criteria of increases in cluster coefficients as clusters merge. The ANOVA tests suggest significant inter-group heterogeneity on the importance the Mid-Atlantic public placed on each of the five factors. In result, four consumer segments were identified and named describing the dominant issue/bundle of attributes characterizing each segment. For example, respondents in cluster three, “*Buyers*”, are significantly different from the other clusters in that they were more likely to be impacted by the purchasing experience ($F [3, 1,130] = 296.10, p < 0.05$), as shown by a relatively higher mean score (0.751) on purchasing experience compared to the other clusters.

Table 2: Characteristics of the Consumer groupings identified through Cluster Analysis (Means and Standard Deviations)					
Dimensions/Factors: farmer-consumer/agri-tourism	Naturalists N=453 40%	Learners N=189 17%	Buyers N=164 14%	Partiers N=328 29%	F-Statistic
FACTOR 1: Learners Experience	-.389 .778	.425 .665	-.884 .901	.734 .598	253.38*
FACTOR 2: Naturalist Experience	.539 .689	-.712 .860	-.964 .884	.148 .666	232.82*
FACTOR 3: Leisurely Experience	.201 .764	.085 .812	-.484 1.026	-.085 1.097	23.93*
FACTOR 4: Purchasing/marketing Experience	-.062 .669	-1.243 .932	.751 .710	.427 .604	296.10*
FACTOR 5: Partying/entertainment Experience	-.226 .791	-.154 .981	-.222 1.240	.511 .736	51.31*
<i>Notes:</i> values in the table are means and standardized factor scores, with standard deviations in parenthesis-statistic are from the ANOVA inter-cluster differences, where the asterisk (*) denotes significance at the 5% level or better.					

Naturalists: This group is comprised of respondents who appreciate and enjoy the natural setting of rural scenery. Most likely the group/segment comprises of urban residents, who in their weekend-get away, visit agri-tourism sites to spend time with family and friends (note the high mean score of 0.539 for factor 2). About 40% of the respondents belong to this group/segment making it the largest of the clusters. The lure of events though minimally associated with this cluster may suggest that to capture this consumer segment, business operators may bundle entertainment attractions such as concerts along with rural scenery visits. Interestingly, the group is not driven by purchasing /buying experience, but by an attraction to rural scenery. Arguably, farmland preservation becomes a very important component of agricultural sustainability in the Mid-Atlantic region to continue attracting naturalists. It may therefore be prudent for farmers' market/agri-tourism business operators to do more in this area to retain and attract this caliber of clients.

Partiers/Entertainment lovers: This is the second largest consumer group/segment, comprising about 30% of the respondents. The group may be described as a people interested in having a good time away from home. To realize their objectives of such a consumer group, business operators may invest more on facilities such as picnic tables and restrooms. Availability and immediate access to shops will enhance entertainment/good times as customers don't have to leave their chosen spots to run somewhere to buy whatever is missing for a potluck or picnic event. Experience tells us that even good planners sometimes may miss out on something. Operators will, therefore, place reasonable priority on making their sites attractive, making return visits compelling by providing what their customers need to make their stay enjoyable.

Learners: The third consumer segment is learners, comprising about 17% of the respondents. This group may be described as those seeking to have an intimate knowledge of agriculture and farmland. Although this group may be largely school going children, the group may also be representative of those people seeking to know more about agriculture. For example, these people are seeking to know what it takes to produce food and what a farm and those who work in the farm look like. Do their life styles differ from those in other sectors of the economy? Organizing a site activity along the interests of this group will be promoting not only the market aspect but also the touristic aspects of such sites.

Buyers: This is the smallest consumer segment taking about 14% of the respondents. The segment is basically the traditional customers of the farmers' markets who patronize the sites to take advantage of fresh produce and value added products priced reasonably. However, survival of business will depend on expanding range of activities and attractions, while serving the primary farmers market' objective. The operators will, therefore, provide enough in terms of variety and quality and the right price must be right so that the customers don't end up shopping

in the next retail/wholesale outlet. Of course one of the drivers of buyers group is proximity and support of local farmers; to these consumers this is a preferable tradeoff.

Explaining factors underlying visits to farmers' markets/agri-tourism sites

Multiple regressions were carried out on the five factors identified in the principal factor analysis. The regression analysis identified and estimated the relationships between socioeconomic variables and direct farmers' markets/agri-tourism sites patronage. The regression results provide operators of farmers' markets/agri-tourism sites segmentation information to develop promotional strategies in an effort to sustain their businesses. Table 3 presents the socioeconomic variables used in the regression analysis and their relevant statistics. The dependent variables in the regression analysis are the standardized factor scores that were obtained from the principal component analysis. As observed from the regression results reported in table 4, the adjusted R^2 ranged between 0.011 and 0.050 and the F-statistic was significant across all the models signifying better model performance. Results on significant factors impacting the five dimensions on direct farmers' markets/agri-tourism sites patronage are summarized below.

Variable	Definition	Mean	Std. Deviation
MALE	=1 if respondent is male;0 otherwise	.250	.433
UND_20YEAR	=1 if respondent is under 20 years; 0 otherwise	.024	.153
A21_35YEAR	=1 if respondent is 21-35 years of age; 0 otherwise	.293	.455
A36_OLDER*	=1 if respondent is 36 years of age and older; 0 otherwise	.683	.394
LTHISCH	=1 if respondent level of education is below high school; 0 otherwise	.007	.059
HSC_GRAD	=1 if respondent is a high school graduate; 0 otherwise	.280	.449
COL_GRAD*	=1 if respondent is a college graduate and above; 0 otherwise	.713	.420
U_17SIZE	=average number of children under 17 in a family	1.7	1.087
URBAN	=1 if respondent resides in an urban area; 0 otherwise	.11	.313
S_URBAN	=1 if respondent resides in a sub- urban area; 0 otherwise	.69	.464
RURAL*	=1 if respondent resides in a rural setting ; 0 otherwise	.20	.403
ETHNICITY	=1 if respondent is Caucasian; 0 otherwise	.88	.322
INCBLW_80K*	=1 if respondent is in the income bracket below \$ 80,000 and below; 0 otherwise	.68	.369
INC80_99K	=1 if respondent is in the income bracket \$ 80,000-\$99,000 and below; 0 otherwise	.13	.340
INCAB_100K	=1 if respondent is in the high income bracket \$ 100,000 and above; 0 otherwise	.19	.389
RETIRED*	=1 if respondent is either retired or homemaker; 0 otherwise	.32	.365
EMPLOY	=1 if respondent is employed; 0 otherwise	.54	.499
SELF-EMPLOY	=1 if respondent is self-employed; 0 otherwise	.08	.270
STUDENT	=1 if respondent is a student ; 0 otherwise	.07	.251
*These variables were dropped during estimation to avoid the dummy variable trap			

Learners Experience: General interest in agriculture and farming in particular was the most important motivation for visiting farmers’ markets/agri-tourism sites for the Mid-Atlantic population. Variables relating to urban residences compared to rural; number of children 17 years of age and below in a family; adult youths between the ages of 25 to 35 years compared to those who are 35 years and older positively impacted learning experience. The ethnicity variable

(Caucasians compared to other races) had a negative impact on the learning experience. The ethnicity finding may be explained by the predominance of Caucasians in agriculture in general.

Naturalist Experience: The major attraction defining naturalist experience was interest in rural scenery and farming. Variables on number of children 17 years of age and below in a family, and Caucasian compared to other races was positively related to the naturalist experience. On the other hand, youths 20 years and younger compared to those who are 35 years and older, males compared to their female counterparts perceived the naturalist experience negatively.

Leisurely Experience: The public motivation for patronizing farmers' markets/agri-tourism sites was activities offered, including events such as concerts, hay rides and farm tours, among others. As expected, variables relating to number of children 17 years of age and below in a family, adult youths between the ages of 25 to 35 years compared to those who are 35 years and older, and employed compared to retired positively viewed the leisure experience.

Table 4: Regression Results: Socioeconomic variables impacting farmer-consumer markets/agri-tourism					
	1. Learners Experience	2. Naturalist Experience	3. Leisurely Experience	4. Buying Experience	5. Partying Experience
Constant	.107 (.649)	-.615 (-3.751)	-.443 (-2.700)	.144 (.867)	.626 (3.828)
Urban residence(vs. Rural)	.320 (2.352)**	-.050 (-.371)	.116 (.861)	-.139 (-1.022)	.077 (.575)
Suburban residence(vs. Rural residence)	-.068 (-.755)	.085 (.955)	.085 (.948)	-.076 (-.839)	-.003 (-.036)
Number of children under 17 years of age in a family	.112 (3.286)**	.134 (3.989)**	.094 (2.782)**	-.044 (-1.300)	-.086 (-2.555)**
Male(vs. Female)	.105 (1.270)	-.322 (-3.934)**	-.040 (-.486)	-.175 (-2.115)*	-.102 (-1.247)
Age, under 20 years(Vs. 36 years and older)	-.205 (-.791)	-.519 (-2.025)*	.081 (.315)	-.202 (-.779)	-.691 (-2.699)**
Age 21-35(Vs. 36 years and older)	.175 (2.082)*	-.014 (-.163)	.209 (2.510)**	-.073 (-.873)	-.291 (-3.506)**

Below high school education(Vs. college and above)	.085 (.115)	-.111 (-.151)	-.037 (-.050)	-1.046 (-1.407)	.009 (.012)
High school education(Vs. college and above)	.001 (.009)	.062 (.753)	-.008 (-.100)	.010 (.119)	-.004 (-.053)
Employed(vs. retired)	-.068 (-.837)	.099 (1.226)	.163 (2.012)*	-.023 (-.285)	-.162 (-2.005)*
Self employed(vs. retired)	-.147 (-1.009)	-.011 (-.074)	.063 (.439)	.066 (.456)	-.042 (-.293)
Student(vs. retired)	-.025 (-.143)	.081 (.464)	.202 (1.160)	-.338 (-1.925)*	-.175 (-1.007)
Caucasian(vs. other races)	-.369 (-3.196)**	.387 (3.382)**	.094 (.818)	.077 (.667)	-.261 (-2.287)**
Income, 80_99K(vs. Income below 80K)	.044 (.412)	-.085 (-.811)	-.001 (-.007)	.084 (.791)	-.032 (-.304)
Income over,100K(Vs. Income below 80K)	-.110 (-1.176)	.089 (.963)	-.127 (-1.365)	.118 (1.265)	-.073 (-.794)
Adjusted R Square	.046	.050	.017	.011	.035
Model F-Statistic	4.024**	4.316**	2.084*	1.693*	3.260**
Notes: Single and double asterisks (*) denote significance at 5% level or better, the values in the parentheses are t-ratios. The variable categories in the brackets are excluded to avoid the dummy variable trap.					

Purchasing/marketing Experience: The purchasing experience may be premised on a consumer's cost/benefit comparisons on prices, and product attributes such as quality, freshness and a variety offered by farmers' markets compared to supermarkets and other retail outlets. Our guess is that those patrons who emerge better off in their decisions will consider purchasing experience successful. As expected, students compared to those retired and the males compared to females viewed the buying/purchase experience negatively. Females compared to males will be more likely to patronize farmers' markets to make grocery purchases.

Entertainment/Eat away from home/Partying/Experience: As in the purchasing experience, the major consideration is presence of facilities to make entertainment, partying and eating out

experience successful. Variables relating to ethnicity(Caucasians compared to other races), adult youths between the ages of 25 to 35 years compared to those who are 35 years and older , and employed compared to retired negatively perceived the partying experience. It may be generally plausible that young adults will be less keen to carry food from home to eat out somewhere because they would rather eat out in a fast food outlet and are therefore unlikely candidates for potlucks. While for consumers 35 years and older, having potlucks away from home is a way of connecting with family and friends.

Concluding remarks

Although farmers' market/agri-tourism business operations have proved to be critical for income stability for majority of small to medium scale farmers, capacity utilization and sustainability remain challenges that need action on part of business operators. Results from this study show that bundling of farmers' markets activities/site attributes, is a workable business strategy. The study suggests that if implemented, it will spur diverse and steady patronage beyond the traditional fresh produce and value added products. Patronage to agri-tourism sites/ farmers' markets may be broken down into five distinct dimensions/experiences: learning, naturalist, purchasing, leisurely, and entertainment experiences. This is useful information that operators will capitalize on in their business strategy. Information on the experiences, via cluster analysis yielded four market segments: (1) those with a strong affection with the rural scenery, (2) a segment interested in knowing more about agriculture, (3) consumers who visit just to buy the farmers' produce and value added products, and finally (4) a group of consumers who visit just to connect and have fun.

Segmentation/customer profiling stands out as a valuable piece of information that farmers' markets/agri-tourism business operators could use to position them better for the future.

The business operators now know who their customers are and what it takes to attract them. The regression results show that a number of socio economic variables are related with the patronage experience. The study finds that there is potential for generating activity all year round by bundling attributes/activities to tap on a wider market beyond traditional fresh produce buyers.

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Appendix-3

Agritourism Consumer's Participation in Wine Tasting Events: An Econometric Analysis

Abstract

Purpose = To determine the likelihood of a United States Mid-Atlantic region consumer's willingness to partake in a wine tasting event, an example of an agritourism activity, based on their responses to an Internet survey conducted 22 to 29 June 2010.

Design/methodology/approach = Potential participants were screened and asked to participate if they resided in one of the states targeted (Delaware, New Jersey, or Pennsylvania); were age 21 and older; the primary food shopper for the household; and had previously attended an agritourism and/or direct marketing events or activities.

Findings = A logit model was developed based on responses from 972 consumers who participated in the 15-minute Internet survey to predict participation in wine tasting activity. Consumers who are more likely to attend an on-farm wine tasting event include those who: learn about agritourism events through newspapers, think that the variety and price of produce is better at direct markets than supermarkets, are older than 50 years, have a graduate degree, and are self-employed.

Research implications = Empirical results will help agritourism operators enhance marketing efforts and develop profitable on-farm agricultural activities by identifying consumer segments likely to participate in wine tourism activities.

Practical implications = This paper helps identify consumer segments more likely to participate in a wine tasting event and provides marketers with the ability to target likely buyers based on corresponding demographic characteristics.

Originality/value = This paper identifies likely wine tasting participants based on demographic, psychographics, and behavioral characteristics.

Keywords Agritourism, Consumer behavior, Logit model, Marketing strategy, Mid-Atlantic states, Wine tasting

Paper type Research paper

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INTRODUCTION

Across the United States, small family farmers (annual sales of less than \$250,000; Hoppe and Banker, 2010) recognize the need to broaden their offerings in an attempt to remain or become economically sustainable. To do so, Tubene and Hanson (2002) indicated that small farmers must be creative and diversify their farm activities through value-added products and/or services as well as identify new markets. One such activity is agritourism.

Agritourism is an agriculturally-based direct marketing operation or educational experience such as pick-your-own farm, agricultural fairs/festivals, and school field trips that brings visitors to a farm or ranch. Agritourism is becoming an important activity that promotes employment, income, and sustains rural communities (Hall and Robert, 2003; Kneafsey, 2000). It is an attractive option for farm operators to increase returns on their on-farm activities (Bernardo *et al.*, 2004; Small Farm Center, 2006), is also a source of economic strength for farms and businesses in rural areas, and provides higher margins from sales of value-added goods and services. For example, one third of all farm operations in the United Kingdom support agritourism activities and the percentage is even greater in France and Italy (Bernardo *et al.*, 2004). In the U.S., New Jersey Farmers have increasingly received public support for their on-farm activities (Govindasamy *et al.*, 2002).

Research; however, has shown that agritourism may not be feasible and appropriate for every agricultural farm since there is an increased level of record keeping, marketing strategies, labor requirements, and other tasks. Furthermore, diversifying the farm operation to include agritourism may lead to safety issues, loss of privacy, liability issues, and extra responsibilities (Tavernier *et al.*, 1992; Schilling *et al.*, 2006).

Consumer interest in agritourism

As a natural extension of direct marketing, growers are finding that in addition to fresh agricultural products, their customers have a genuine interest in the agricultural experience. This consumer interest can create additional income opportunities for farmers who utilize existing farm infrastructure in the provision of farm-related agritourism. Furthermore, since consumers understand the quality and value of sourcing fresh agricultural products directly from farmers, they are also open to patronizing other unique farm-based activities.

In 2007, approximately 23,350 farms received over \$566 million in income from agritourism and recreational services including hunting, fishing, horseback riding, and other on-farm activities (Thessen, 2007). U.S. farms providing agritourism and recreational services generated an average income of \$24,276 in 2007, an increase of 236 percent from 2002 (NASS, 2007). Based on NSRE (2000-2002), a total of 82 million people visited farms one or more times, which included 20 million school children, and spent an average \$45 per trip and traveled an average of 80 miles. In 2002, 2,200 Vermont farms received \$19.5 million from agritourism activities that represented approximately four percent of the total gross farm income and was 86percent percent higher than agritourism income in 2000 (NASS, 2002). New Jersey farms obtained a total of \$57.53 million in income from agritourism activities in 2006 (Schilling *et al.*, 2006); while, agritourist in Pennsylvania spent approximately \$120 per visit in 2004 (Ryan *et al.*, 2006).

Wine tasting as an agritourism activity

Visiting a winery tasting room, or wine tourism, is a recognized agritourism activity (Gold and Thompson, 2011; Wicks and Merrett, 2003) and allows consumers to enjoy a farm-

produced product and learn about and further understand the farming experience (Dodd, 1995; Peters, 1997; Skinner, 2000). From 1999 to 2010 the number of wineries in the U.S. grew from 2,688 to 6,668 (Hodgen, 2011). The number of wineries reported in November 2010 was 6,785, a 9% increase in the number reported the previous November. The growth in number of wineries in Pennsylvania (144) and New Jersey (45) has matched the U.S. trend with Pennsylvania ranked seventh out of the 50 states in terms of number of wineries and New Jersey placing 20th (Fisher, 2011).

In Pennsylvania, one of two states with “exclusive control over both the distribution and retail components” pertaining to alcohol sales, 81 percent of wine is sold directly at the winery or winery outlet; hence dependence on wine tourism is significant (Dombrosky and Gajanan, 2013). Data from 2005 indicate that more than 800,000 winery visits occurred in Pennsylvania alone (MKF Research LLC, 2007).

In Europe, as well as in the U.S., wine tourism has developed into wine roads or wine routes (Hall *et al.*, 2000). Farms that maintain vineyards can host vineyard tours, winemaking demonstrations, wine tastings, wine classes, or events and festivals for visitors or local businesses. On-farm wineries bring guests to rural areas where they spend the day or weekend tasting wine, which can evolve into an even greater experience for visitors and provide opportunities for complementary businesses such as bed-and-breakfast facilities and restaurants (Collins, 2006). Therefore, incorporating wine tasting into businesses practices and experiential offerings can assist farmers with diversify their farming operations which may in turn bring more economic activity to rural areas.

Visiting a winery to sample wines, learn about grape production, the wine making process, and to purchase wines (Tassiopoulos *et al.*, 2004) are widely recognized as being important wine tourism component. Consumer and industry interest in tasting rooms is logical as wine consumption in the United States (U.S.) is well recognized as being an integral part of the mainstream culture and is enjoyed by many on a daily basis (Wine Intelligence LTD, 2011). According to the 2010 Wine Market Council's Consumer Tracking Study (Wine Market Council, n.d.), just over a third (34.3%) of U.S. adults reported drinking wine with a per capita adult consumption of 3.6 gallons (Hodgen, 2011). Consumption frequency can be segmented even further into those who consume wine at least once a week (Core wine drinkers, 20.4% of the U.S. adult population) and those who consume wine less frequently (Marginal wine drinker, 13.9%).

Attracting consumers who are likely to visit wineries is crucial to the industry. Several efforts have been initiated by individual states to attract the wine tourist and encourage this consumer to visit one or more wine regions or trails in the region. In 2012, Sonoma County, California, viticulture, winery, and tourism agencies and associations received \$600,000 in funding to develop a logo and campaign to "experience-seekers, people who value events and are genuine, independent and adventurous," based on data collected from wineries and surveying consumers (Bussewitz, 2012).

Why investigate wine tourism trends in the mid-Atlantic?

The mid-Atlantic region of the United States has been, and will continue to, experiencing impressive population growth. Based on 2010 U.S. Census data, Pennsylvania (12.7 million) ranked 6th, New Jersey (8.8 million) 11th in population and the population of Delaware was

897,934. In total, the population of the three states was roughly 7.25% of the total U.S. population. Despite this small combined percentage, each of these states experienced growth since 2000 (3.4 to 14.6 percent) and U.S. Census projections, based on 2000 data, indicate that the collective population of these three states will increase over two million people by 2030 (U.S. Census Bureau, 2005). Additionally, the three states, in part, contain two of the most populous metropolitan statistical areas (New York-Northern New Jersey-Long Island, NY-NJ-PA and Philadelphia-Camden-Wilmington, PA-NJ-DE-MD) in the country (Mackun and Wilson, 2011). In regards to percentage of residents in each of the three state that live in urban areas, New Jersey ranks the highest (92.24%) with Pennsylvania (70.68%) and Delaware (68.71%) ranking lower (U.S. Census Bureau, n.d.). It is suggested that as urban populations grow the “divide between farmers and urban consumers” increases as well and there is a greater risk of “misunderstandings and misconceptions about faming and agriculture” (Brieser Stout, 2007).

A report published by researchers in Michigan suggested that urban and suburban consumers who visit farms could transition into “long-term customers” and become advocates for the industry (Che *et al.*, n.d.). Farmers have tremendous opportunities in regards to introducing new goods and services in an attempt to appeal to interested consumer segments. These activities, particularly in urbanizing areas, contribute to and enhance the overall quality of life by expanding recreational opportunities, diversify the economic base, promoting retention of agricultural lands and open spaces, and contribute to community development (Henderson and Linstrom, 1982; Linstrom, 1978; Govindasamy *et al.*, 1999).

LITERATURE REVIEW

Wine Tourism Motivations and Barriers

The positive impact of wine tourism on farmer's economic sustainability, the potential to benefit the greater community and encourage regional development (Hall and Mitchell, 2000), and what motivates consumers to travel to a winery have been investigated on a national and international scale. Data collected from Spanish wine consumers indicated that being able to taste wines produced at wineries, visiting wineries, wineries hours of operation were "long," and to buy wine at the winery were the main incentives to participate in wine tourism (Marzo-Navarro and Pedraja-Iglesias, 2012). Others have examined whether visiting wineries was a day activity or if the visit spanned two or more days. For some, as was discovered by Tassiopoulos *et al.* (2004) who focused South African residents, a majority of respondents (73.2%) treated that activity as a day trip.

It has been suggested that "wine tourism is rarely a discrete activity" (Charters and Ali-Knight, 2002). Knowledge gained from Cohen and Ben-nun (2009) showed that participants who had children under age 18 "strongly prefer family activities" compared to those residing in households without children. Tassiopoulos *et al.* (2004) reported a similar research outcome with the presence of children age six to 15 having an impact on wine tourism, due to lack of "appropriate facilities." Hence a greater percentage of participants with children in this age range were "low users," and were first time wine tourism or visited wineries less than once a year.

Wine Tourist Segmentations

Authors recognize that smaller producers may be well versed in growing grapes and making wine but know less about who does/could consume their wine and what could inhibit

wine-tourism development (Hall and Mitchell, 2000). For example, Houghton (2008) analyzed survey participant's attitudes and behaviors to learn whether events such as wine festivals attract or deter a winery's core customer or if these activities appeal to just the "novice."

Segmenting survey participants based on responses to survey questions allows winery managers and operators to determine if differences exist between groups, based on segmenting variables, and to use as the basis for identifying and marketing to audiences in an effort to attract audiences to the winery or wine region (Cohen and Ben-nun, 2009). Wine tourists have been segmented based on a number of variable: interest in wine, wine purchasing behavior, prior participating in wine tourism, (Charters and Ali-Knight, 2002), how often the visit wineries, demographic characteristics, (Cohen and Ben-nun, 2009) and even whether participants had previously participated in wine tourism (Cohen and Ben-nun, 2009; Marzo-Navarro and Pedraja-Iglesias, 2009).

Tassiopoulos *et al.* (2004) found that a greater percentage of consumers who were age 25 to 34 were "medium users" and "high users," which related to a) consumers who visited a wine route up to three times a year and b) those who visited more than four times a year, respectively. The authors indicate that these consumers have a greater disposable income and have devoted more time to wine tourism activities than their counter parts. "High users" also include individuals who had higher levels of education, were professional or selected "other profession," were married, had children under six years of age, and male.

Marzo-Navarro and Pedraja-Iglesias (2009) found only one socio-demographic significant difference, which was income level, between wine tourists and non-wine tourists. Their data revealed that wine tourists had a much higher income level than their counterparts

which can assist with developing programs and activities for which a higher price can be charged.

Marzo-Navarro and Pedraja-Iglesias (2009) stated that defining the wine tourist is “even more necessary” in regions where wine tourism is still in its “infancy.” A study conducted by Charters and Ali-Knight (2002) was initiated to better understand the wine tourist in Australia. The authors site work by others, who segmented survey respondents based on demographic and psychographics characteristics, and indicated that wine tourism in Europe may “exhibit different features” than in “new producing regions.” In particular, the authors analyze outcomes of research conducted in Italy which segmented consumers based on attitudes, behaviors, and age range. Charters and Ali-Knight suggest that consumption behaviors and attitudes for 50 to 60 year old Australia and New Zealanders wine drinkers may differ from the classification bestowed on Italian wine tourists in this age range.

Even within a country wine tourists can exhibit differences. Wine tourists in two separate regions of Australia who participated in a study were demographic and psychographics different pertaining to age, career level, and interest and knowledge about wine (Charters and Ali-Knight, 2002). Differences could very well assist winery tasting room staff make assumptions about level of engagement or involvement during the visit. Charters and Ali-Knight suggest that since one group appeared to be “less eager to learn about wine” that they may be “less likely to expect a winery tour, or to meet the winemaker.”

National data is available as to demographics and psychographics of the U.S. wine consumer: an affluent consumer (64 percent have a household income over \$100,000), homeowner (87 percent of wine consumers), married (75 percent), between the ages of 35 and 65

years (74 percent), college educated (47 percent compared to 34 percent of the general public), with a greater percent have management positions (28 percent) and professional or technical occupations (51.3 percent) compared to the general public (10.2 and 37.9 percent, respectively) (Insel, 2009).

The question arises as to whether demographics and psychographics of U.S. wine tourists mirror this data. Additionally, could demographics and psychographics for wine tourists who reside in the eastern U.S. differ from those who reside in California? Little, if any, research data has been published which provide response to these questions. Therefore, this study was initiated to investigate behaviors, attitudes, and demographic attributes that influence consumers to participate in on-farm wine tasting as a component of agritourism.

METHODOLOGY

Study design

From 22 to 29 June, 2010, a 15 minute Internet survey was conducted to gather information from United States mid-Atlantic consumers who reported participating in direct marketing and agritourism activities. Participants were selected at random from a panel managed by a survey research company (Sampling International, LLC, Shelton, CT). Potential participants were screened and asked to participate if they: 1) resided in either Delaware, New Jersey, or Pennsylvania; 2) were age 21 and older; 3) primary food shopper for the household; and 4) had previously attended agritourism and direct marketing events or activities.

Panelists received an electronic consent statement along with a link to the survey developed by researchers and approved by the Office of Research and Sponsored Programs at Rutgers University (New Brunswick, NJ) and Office of Research Protections at The

Pennsylvania State University (University Park, PA). After clicking on the hyperlink at the bottom of the statement, panelists were directed to www.surveymonky.com where they responded to the four screener questions, after which they initiated the survey if they met the criteria. Of the questions asked, participants indicated whether they participated in wine tastings, an agritourism activity, and based on this question, a logit model was developed to predict participation in wine tasting activity.

Upon completion of the survey, each participant was entered into Survey Sampling International, LLC's \$12,000 quarterly drawing to compensate them for their time. Survey questions were pre-tested and administered to a sample of 93 randomly selected Survey Sampling International, LLC panelists.

Model framework

This study focuses to identify consumers who are more likely to participate in on-farm wine tasting activities. The paper analyzes consumers' likelihood to participate in on-farm wine tasting activities within the random utility discrete choice framework. Following the random utility framework, it is assumed that a consumer faces a choice in participating in on-farm wine tasting activities. The logit model was selected because of its asymptotic characteristics that constrain the predicted probabilities to a range of zero to one. Additionally, the logit model is favored given its mathematical simplicity and is often used in a setting where the dependent variable is binary. The estimation method utilizes the maximum likelihood estimation procedures (MLE) characterized as they provide consistent parameter estimates that are asymptotically efficient (Gujarati, 1992; Pindyck and Rubinfeld, 1991).

The relationship between a dependent variable (consumer's participation in on-farm wine tasting activity) and socioeconomic characteristics is explored by modeling the indicator variable Z_i for the i th consumer as a function of his/her socioeconomic characteristics as follows:

$$Z_i = \beta \mathbf{X}_i = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \dots + \beta_k x_{ik} + v_i, \quad i = 1, 2, \dots, n \quad (1)$$

where x_{ij} denotes the j th demographic attribute of the i th respondent, $\beta = (\beta_0, \beta_1, \dots, \beta_k)$ is the parameter vector to be estimated and v_i is the random error or disturbance term associated with the i th consumer. Under the logistic distributional assumption for the random term, the probability P_i (that the i th consumer participation in on-farm wine tasting activity) can be now be expressed as:

$$P_i = F(Z_i) = F\left(\beta_0 + \sum_{j=1}^k \beta_j x_{ij}\right) = F(\beta \mathbf{X}_i) = \frac{1}{1 + \exp(-\beta \mathbf{X}_i)} \quad (2)$$

The estimated β -coefficients of equation (2) do not directly represent the marginal effects of the independent variables on the probability P_i that a consumer will participate in on-farm wine tasting activities. In the case of a continuous explanatory variable, the marginal effect of x_j on the probability P_i is given by:

$$\frac{\partial P_i}{\partial x_{ij}} = \left[\beta_j \exp(-\beta \mathbf{X}_i) \right] / \left[1 + \exp(-\beta \mathbf{X}_i) \right]^2 \quad (3)$$

However, if the explanatory variable is qualitative or discrete in nature $\frac{\partial P_i}{\partial x_{ij}}$ does not exist. In such a case, the marginal effect is obtained by evaluating P_i at alternative values of x_{ij} . For example, in the case of a binary explanatory variable x_{ij} that takes values of 1 and 0, the marginal effect is determined as:

$$\partial P_i / \partial x_{ij} = P(x_{ij} = 1) - P(x_{ij} = 0) \quad (4)$$

For estimation purposes, in this model, one classification was eliminated from each group of variables to prevent perfect co linearity.

Based on past literature, hypotheses were constructed to predict which behavioral and demographic characteristics increased the likelihood of a consumer participation in on-farm wine tasting activity. Those who participate in on-farm wine tasting activities were predicted to be more likely to determine and quantify the effects of different factors influencing customers' decisions to visit farms and to provide an estimation of the recreational value of the rural landscape in the United States (Carpio *et al.*, 2008). The following empirical model is specified to capture the relationship between consumers' behavioral and demographic variables and participating in on-farm wine tasting activities.

$$\begin{aligned} \text{WINE_TST} = & \beta_0 + \beta_1 \text{FVEXPMONTH} + \beta_2 \text{MILESPYO} + \beta_3 \text{MILESFMKT} + \beta_4 \text{MILESOFMKT} \\ & + \beta_5 \text{MILESCSA} + \beta_6 \text{BILLBOARD_RSADV} + \beta_7 \text{NEWSPAPERADV} \\ & + \beta_8 \text{NOFVISITS} + \beta_9 \text{EXPAGRITOURISM} + \beta_{10} \text{NOFLOCATIONS} \\ & + \beta_{11} \text{MILESAGRITOURISM} \\ & + \beta_{12} \text{QUALITY} + \beta_{13} \text{VARIETY} + \beta_{14} \text{PRICE} + \beta_{15} \text{WTBLOCAL} \\ & + \beta_{16} \text{WTBORGANIC} + \beta_{17} \text{WTBGM} + \beta_{18} \text{SAMEDAY} + \beta_{19} \text{SAMELOCATION} \\ & + \beta_{22} \text{10YEARS LIVE} + \beta_{23} \text{GARDEN} + \beta_{24} \text{WTPPRESERVE} \\ & + \beta_{20} \text{URABN} + \beta_{21} \text{SUBURBAN} + \beta_{25} \text{NOFPEOPLE} + \beta_{26} \text{MALE} \end{aligned}$$

+ β_{27} 50YEARSOLD + β_{28} HIGHSCHOOL+ β_{29} 2YEARCOLLGE
+ β_{30} 4YEARCOLLEGE + β_{31} GRADUATE+ β_{32} SELFEMPLOY
+ β_{33} HOMEMAKER + β_{34} CAUCASIAN + β_{35} INC100KPLUS

RESULTS

Participant demographics

Of the 1,110 who met the screener criteria, a total of 972 participants completed the survey with 942 included in the analysis based on being of legal drinking age in the U.S., which is age 21 and older. Of these consumers, 121 resided in Delaware, 358 in New Jersey, and 493 in Pennsylvania (Table 1). In regards to demographics, survey respondents mean household size was 2.86 persons (HSIZE) with 24.8 percent of participants indicating that they were males (GENDER) (Table 1). Pertaining to age distribution, 29.7 percent of respondents were between 36 and 50 years of age (AGE36-50), and 40.2 percent were older than 50 (AGE>50), and the remaining 30.1 percent were age 35 and younger. In terms of education, 27.1 percent of respondents had graduated from high school (HSCHL_GRAD), 27 percent completed a two-year college degree (2Y_COLLEGE), and 45.4 percent completed either a four year college or graduate degree (4Y_COLLEGE). Slightly over half, 54.5 percent, of respondents were employed by others (EMP_OTH). Over half of participants reported having incomes of \$60K and greater: 18.8 percent between \$60K and \$80K (INC60-80K), 13.2 percent between \$80K and \$100k (INC80-100K) and 18.8 percent over \$100k (INC>100K). No priori expectations were made towards behavioral and demographic variables.

Table 1: Participant responses (frequency and percentages) to demographic (e.g. gender, educational level, geographic (e.g. state of residence), and behavioral questions (wine tasting participation).

Demographic characteristics		Frequency	Percentage
Female		708	75.2
Male		233	24.8
Participants' age range			
	21 to 35 years	292	30.0
	35 to 50 years	289	29.7
	51 to 65 years	318	32.7
	Over 65 years of age	73	7.5
Education level			
	Less than a high school education	5	0.5
	High school graduate	263	27.1
	Two year college degree	262	27.0
	Four year college degree or graduate degree	440	45.4
2009 Household income level			
	Less than \$20,000	75	7.8
	\$20,000 to \$39,999	185	19.1
	\$40,000 to \$59,999	215	22.2
	\$60,000 to \$79,999	182	18.8
	\$80,000 to \$99,999	128	13.2
	\$100,000 or more	182	18.8
Household size			
	Single adult household	134	13.8
	Two individuals	335	34.5
	Three or more individuals	501	51.7
Number of children in the household			
	No children	576	59.5
	One child	188	19.4
	Two or more children	204	21.1
Employment			
	Retired	133	14.7
	Self-employed	72	8.0
	Employed by others	493	54.5
	Homemaker	161	17.8
	Student	45	5.0
State of residence			
	Delaware	121	12.4

	New Jersey	358	36.8
	Pennsylvania	493	50.7
Community			
	Urban	105	10.8
	Suburban	668	68.8
	Rural	198	20.4
Number of years at current residence			
	Less than one year	59	6.1
	One to three years	148	15.3
	Four to five years	113	11.7
	Six to 10 years	192	19.9
	11 to 20 years	198	20.5
	More than 21 years	257	26.6
Has participated in a wine tasting activity		361	38.2

Over one-third (38.2 percent) of respondents had participated in an on-farm wine tasting activity (Table 1). Participants were also asked to indicate what other direct marketing and agritourism activities they participated (Table 2). The activities that were selected by more than half of participants included: Nature walk (53.6 percent selecting this activity), visit a Pick-Your-Own farm (62.2 percent), participant in hay rides (67.1 percent) and travel to on-farm markets to purchase fruits, vegetables, meat, and other farm products (67.1 percent). Activities that were selected by less than a quarter of participants included: On-farm camping (7.2 percent), nature retreat (11.3 percent), on-farm concerts (12.7 percent), farm produce tasting (22.1 percent), and farm tour (24.9 percent).

Table 2: Other agritourism activities wine tasting room visitors (n = 362) reported participating.

Agritourism activity	Frequency	Percentage
On-farm camping	26	7.2
Nature retreat	41	11.3
On-farm concerts	46	12.7
Farm produce tasting	80	22.1
Farm tour	90	24.9
Fishing	95	26.2

School field trip to a farm	109	30.1
Bed and breakfast	110	30.4
Horseback riding	117	32.3
Agricultural fairs/festivals	161	44.5
Visit a plant nursery to purchase ornamental plants	170	47.0
Corn maze	174	48.1
Halloween activities at a farm	174	48.1
Visit farm animals	177	48.9
Nature walk	194	53.6
Pick-your-own farm	225	62.2
Hay rides	243	67.1
On-farm market to purchase fruits, vegetables, meat, and other farm products	243	67.1

On average, each respondent visited an agritourism site 2.97 times per year (VISITS) and traveled approximately 19.81 miles one-way (DISTANCE) to reach an agritourism site (Table 3). Specific to wine tasting activities, results indicated that 37.2 percent of respondents had previously participated in wine tasting activity (WINE_TST) as a part of an agritourism visit. Among survey respondents, 10.8 percent and 20.4 percent lived in urban (URBAN) and rural (RURAL) areas, respectively. Approximately 19.9 percent of respondents lived at their current residence between six and 10 years (LIVE_6TO10), whereas, 47.1 percent lived at their residence for more than 10 years (LIVE_GT10). When respondents were asked if they were willing to pay a higher price for products and attend events or activities if the money was used to help preserve farmland and local agricultural producers, 66.9 percent responded positively (WTP_PRESERVE).

Table 3: Description of Explanatory Variables

Variable	Description	Mean Units/ Percentage	Standard Deviation Units/ percentage
WINE_TST	1 if respondent participated in wine tasting agritourism activity; 0=otherwise	0.37	0.48
FVEXPMONTH	Fruits and vegetable expenditure per month	56.13	50.98
MILESPYO	Average miles traveled to a Pick-Your-Own operation	9.90	10.62
MILESFMKT	Average miles traveled to a farmers' market	6.94	6.37
MILESOFMKT	Average miles traveled to an on-farm market	8.07	8.02
MILESCSA	Average miles traveled to a Community Supported Agriculture location	2.15	4.63
BILLBOARD_RSADV	1 if the respondent learned through billboard and roadside sign advertisements; 0=otherwise	0.38	0.49
NEWSPAPERADV	1 if the respondent learned through newspaper advertisements; 0=otherwise	0.53	0.50
NOFVISITS	Number of times an agritourism operation was visited in a year	2.97	2.42
EXPAGRITOURISM	Average amount spent at an agritourism site in a year	33.93	24.12
NOFLOCATIONS	Number of agritourism locations visited in a year	2.18	1.31
MILES AGRITOURISM	Average miles traveled to an agritourism location	19.81	16.55
QUALITY	1 if the respondent thought that the quality of produce was better at direct markets than supermarkets; 0=otherwise	0.90	0.30
VARIETY	1 if the respondent thought that the variety of produce was better at direct markets than supermarkets; 0=otherwise	0.58	0.49
PRICE	1 if the respondent thought that the price of produce was better at direct markets than supermarkets; 0=otherwise	0.61	0.49
WTBLOCAL	1 if the respondent was willing to buy locally grown produce at direct markets; 0=otherwise	0.97	0.18
WTBORGANIC	1 if the respondent was willing to buy organic	0.67	0.47

	produce at direct markets; 0=otherwise		
WTBGM	1 if the respondent was willing to buy genetically modified produce at direct markets; 0=otherwise	0.16	0.37
SAMEDAY	1 if the respondent made agritourism visitation decisions on the day of the event; 0=otherwise	0.15	0.35
SAMELOCATION	1 if the respondent visited the same agritourism locations every year; 0=otherwise	0.83	0.38
10YEARS LIVE	1 if the respondent lived in their current location for more than 10 years; 0=otherwise	0.47	0.50
GARDEN	1 if the respondent had a vegetable garden at home; 0=otherwise	0.48	0.50
WTPPRESERVE	1 if the respondent was willing to pay more to attend agritourism events to preserve farmland; 0=otherwise	0.67	0.47
URABN	1 if the respondent lived in an urban location; 0=otherwise	0.11	0.31
SUBURBAN	1 if the respondent lived in a suburban location; 0=otherwise	0.69	0.46
NOFPEOPLE	Number of people in the household	2.86	1.38
MALE	1 if the respondent was a male; 0=otherwise	0.25	0.43
50YEARSOLD	1 if the respondent was more than 50 years old; 0=otherwise	0.40	0.49
HIGHSCHOOL	1 if the respondent is a high school graduate; 0=otherwise	0.27	0.44
2YEARCOLLGE	1 if the respondent had a two-year college education; 0=otherwise	0.27	0.44
4YEARCOLLEGE	1 if the respondent had a four-year college education; 0=otherwise	0.29	0.46
GRADUATE	1 if the respondent had a graduate degree; 0=otherwise	0.16	0.37
SELFEMPLOY	1 if the respondent was self-employed; 0=otherwise	0.08	0.27
HOMEMAKER	1 if the respondent was a homemaker; 0=otherwise	0.18	0.38
CAUCASIAN	1 if the respondent was Caucasian; 0=otherwise	0.89	0.31
INC100KPLUS	1 if the respondent made more than 100K per year; 0=otherwise	0.19	0.39

The logistic regression model results are presented in Table 4 and 5. In the process of model prediction, the explanatory variables were subsequently dropped or added in an attempt to increase the number of significant variables and the goodness of fit. At the same time, to minimize error relating to omission of relevant variables, although some variables were not significant, they were left in the model. The maximum likelihood results as well as prediction success rates are presented in Table 4 and the coefficients, t-ratio and change in marginal probabilities are shown in Table 5. Except FVEXPMONTH, MILESPYO, MILESFMKT, MILESOFMKT, MILESCSA, NOFVISITS, EXPAGRITOURISM, NOFLOCATIONS, MILESAGRITOURISM, and NOFPEOPLE, all other explanatory variables included in the logit model are binary dummy variables generated from categorical questions of the survey. Significance of the independent variables were tested at 1 percent, 5 percent, and 10 percent levels and are marked with stars, as noted in Table 5. The goodness of fit for the model is shown by McFadden's R² of 0.06. R² Values are not high for cross sectional data (Kennedy, 1992; Nayga and Capps, 1994; Kementa, 1971). Approximately 66 percent of survey respondents were correctly classified as respondents who participated in wine tasting, an agritourism activity.

Table 4: Logit Model Predictive Accuracy

Actual Value	Predicted		Correct Total
	0	1	
0	552(57%)	58 (6%)	610 (63%)
1	276 (28%)	86 (9%)	362 (37%)
Total	828(85%)	144 (15%)	972 (100.00%)

Number of correct predictions: 638

Percentage of correct predictions: 77%

McFadden R²: 0.06

Chi squared: 75.28

Degrees of freedom: 35

Overall Model Significance: 0.00

Table 5: Respondents Agritourism Participation in Wine Tasting: Logit Model Estimates

Variable	Coefficient	Standard Error	t-ratio	Probability	Marginal Change
Constant	-0.9394	0.4686	-2.0050	0.0450	
FVEXPMONTH	0.0009	0.0007	1.3390	0.1807	
MILESPYO	.32D-04	0.0004	0.0930	0.9261	
MILESFMKT	0.0004	0.0004	1.0080	0.3136	
MILESOFMKT*	-0.0005	0.0003	-1.6340	0.1022	-0.0001
MILESCSA	0.0002	0.0003	0.6510	0.5148	
BILLBOARD_RSADV*	-0.2132	0.1159	-1.8390	0.0659	-0.0517
NEWSPAPERADV*	0.2133	0.1159	1.8400	0.0658	0.0517
NOFVISITS	-0.0003	0.0004	-0.6960	0.4866	
EXPAGRITOURISM	-0.0004	0.0004	-1.0460	0.2956	
NOFLOCATIONS*	-0.0007	0.0004	-1.7770	0.0755	-0.0002
MILESAGRITOURISM*	0.0009	0.0005	1.8060	0.0710	0.0002
QUALITY	0.3907	0.2698	1.4480	0.1476	
VARIETY*	0.2668	0.1530	1.7440	0.0812	0.0646
PRICE**	0.3022	0.1530	1.9750	0.0483	0.0732
WTBLOCAL	-0.3098	0.3944	-0.7850	0.4322	
WTBORGANIC	-0.0010	0.0008	-1.3190	0.1870	
WTBGM	0.0001	0.0008	0.1300	0.8966	
SAMEDAY	0.0006	0.0010	0.6050	0.5449	
SAMELOCATION	-0.0002	0.0011	-0.1580	0.8742	
10YEARS LIVE	.37D-04	0.0010	0.0380	0.9693	
GARDEN	-0.0013	0.0009	-1.3980	0.1622	
WTPPRESERVE	0.0400	0.1543	0.2590	0.7953	
URABN**	-0.5575	0.2790	-1.9980	0.0457	-0.1351
SUBURBAN	-0.2155	0.1773	-1.2150	0.2243	
NOFPEOPLE	0.0033	0.0049	0.6820	0.4951	
MALE	0.0002	0.0004	0.4810	0.6307	
50YEARSOLD**	0.3452	0.1455	2.3730	0.0177	0.0839
HIGHSCHOOL**	-0.2318	0.1230	-1.8850	0.0594	-0.0562
2YEARCOLLGE**	-0.2397	0.1208	-1.9840	0.0472	-0.0581
4YEARCOLLEGE	0.1656	0.1164	1.4220	0.1550	
GRADUATE**	0.3057	0.1430	2.1380	0.0325	0.0741
SELFEMPLOY**	0.3143	0.1478	2.1270	0.0334	0.0762
HOMEMAKER**	-0.3142	0.1478	-2.1260	0.0335	-0.0761
CAUCASIAN	0.0007	0.0006	1.2380	0.2158	
INC100KPLUS	0.0010	0.0012	0.8630	0.3884	

*** Significant at 1%; **Significant at 5%; * Significant at 10%

As can be seen in Table 5, of the 35 explanatory variables used in the logit model, 14 were significant. Among significant variables, seven positively contribute towards on-farm wine tasting activity and seven negatively impact wine tasting activities. Explanatory variables can be broadly classified under three categories, namely, behavioral attributes, preference attributes and demographic attributes.

Behavioral Attributes

Eleven explanatory variables can be grouped under behavioral attributes classification. They are fruit and vegetable expenditure per month (FVEXPMONTH), average miles traveled to a Pick_Your_Own operation (MILESPYO), average miles traveled to a farmers' market (MILESFMKT), average miles traveled to an on-farm market (MILESOFMKT), average miles traveled to a community supported agriculture location (MILESCSA), those who learn about agritourism through billboards and roadside sign advertisements (BILLBOARD_RSADV), those who learn about agritourism through newspaper advertisement (NEWSPAPERADV), number of visits to an agritourism location per year (NOFVISITS), average amount spent at an agritourism location per year (EXPAGRITOURISM), number of agritourism locations visited in a year (NOFLOCATIONS), and average miles traveled to an agritourism location (MILESAGRITOURISM).

Among these 11 variables, five significantly contributed towards willingness to participate in on-farm wine tasting activities. Those who learn about agritourism events through newspapers and the number of miles traveled to an agritourism location positively contributed towards likelihood of participating in on-farm wine tasting event. Miles traveled to on-farm market, learning about agritourism thorough billboards and roadside signs, and number of agritourism

locations visited in a year negatively contributed towards likelihood of participating in a wine tasting agritourism event. Although the variables miles traveled to on-farm market, number of agritourism locations visited per year and miles traveled to an agritourism location significantly influenced likelihood of participating in a wine tasting event, the magnitude of marginal change was small. Those who learned about agritourism through billboards and roadside signs were 5 percent less likely to participate in a wine tasting agritourism event compared to those who learned through other advertisements.

Preference Attributes

Explanatory variables that come under preference attributes were those who thought that the quality of the produce was better at direct markets than supermarkets (QUALITY), those who thought that the variety of produce was better at direct markets than at supermarkets (VARIETY), those who thought that the price of produce was better at direct markets than at supermarkets (PRICE), those who were willing to buy locally grown produce at direct markets (WTBLOCAL), those who were willing to buy organic produce at direct markets (WTBORGANIC), those who were willing to buy genetically modified produce at direct markets (WTBGM), those who made agritourism visitation decisions on the day of the event (SAMEDAY), those who visited the same agritourism location every year (SAMELOCATION), those who lived in their current location for more than 10 years (10YEARS LIVE), those who had a garden at home (GARDEN), and those who were willing to pay more for agritourism events to preserve farmland (WTPPRESERVE).

Among the 11 explanatory variables that come under preference attributes, two significantly influenced willingness to participate in a wine tasting agritourism event. Those who thought

that the variety of produce was better at direct markets than at supermarkets were 6.5 percent more likely to participate in a wine tasting agritourism event compared to those who thought otherwise. Similarly, those who thought that the price of produce at direct markets was better than at supermarkets were 7.3 percent more likely to participate in a wine tasting agritourism event compare to those who thought otherwise.

Demographic Attributes

Thirteen explanatory variables, namely, those who lived in an urban location (URBAN), were male (MALE), were more than 50 years old (50YEARSOLD), had a high school education (HIGHSCHOOL), those with a two-year college education (2YEARCOLLEGE), a four-year college education (4YEARCOLLEGE), had a graduate degree (GRADUATE), were self-employed (SELFEMPLOY), those who are homemakers (HOMEMAKERS), Caucasians (CAUCASIAN), and those who earned more than \$100,000 per year (INC100KPLUS) were classified under demographic attributes.

Among these 13 variables, seven significantly influenced willingness to participate in a wine tasting agritourism event. Three variables: 50YEARSOLD, GRADUATE, and SELFEMPLOY positively influenced participation. On the other hand, four variables: URBAN, HIGHSCHOOL, 2YEARCOLLEGE, and HOMEMAKER negatively contributed towards willingness to participate in a wine tasting event. In particular, those who lived in urban areas were 13.5 percent less likely to participate in on-farm wine tasting events compared to those who lived in rural areas.

On the other hand, variables 50YEARSOLD, GRADUATE, and SELFEMPLOY positively contributed towards participation in a wine tasting agritourism event. Specifically, those who

were older than 50 years were 8.4 percent more likely to participate in a wine tasting event. Older consumers may have the money to spend at an agritourism event as well as the time available to attend, compared to younger generations. Similarly, college graduates were 7.4 percent more likely to participate in a wine tasting event compared to those who have an elementary or no education. Self-employed persons were also 7.6 percent more likely to participate in a wine tasting event compared to retired participants, students and those who were employed by others.

CONCLUSIONS

According to The Lang Research Inc. (2001) survey index, 12.9 percent of adult Canadians and 17.9 percent of adult Americans had a high level of interest in wine and cuisine related travel, while an additional 17.2 percent of Canadians and 17.2 percent of Americans had moderate interest. As the percentage of consumers who consume wine increases so might the percentage of those who have an interest in participating in an on-farm wine tasting activity. Therefore, it is imperative to investigate consumer behaviors and attitudes pertaining to this agritourism activity to help farmers understand if they should and how they could incorporate this activity into their business model.

This study was conducted to explore consumer participation in wine tasting activity based on participants' behavioral and demographic characteristics. Survey results indicated that 38.4 percent of respondents participated in on-farm wine tasting activities. Based on the logit model, farmers, marketers, and others involved in planning on-farm wine tasting events and activities should further investigate what appeals to and could attract individuals who were more likely to participate in this activity: those who learn about agritourism events through newspapers, those

who travel more miles to visit an agritourism activity, those who think that the variety of produce is better at direct markets than supermarkets, those who think that the price of produce at direct markets is better than supermarkets, consumers older than 50 years, college graduates, and self-employed individuals.

Quite a bit can be learned from both what positively and negatively influences likelihood to participate in an on-farm wine tasting activity. How consumers learn about or become aware of wine tastings and the wineries location, hours of the event, or related leisure activities is important. Based on this study, participants who learned about a wine tasting event through billboards and roadside stands were likes likely to participate. While billboards are often positioned along interstate roads it may be possible that due to speed limits or traffic that survey participants took less notice of these advertisements. Pertaining to roadside signs, these signs are typically located at the farm and therefore only seen by those who drive by the actual farm. On the other hand, those who learned about the agritourism through newspapers were 5 percent more likely to participate in an agritourism event.

In a densely populated state, like New Jersey, many consumers commute hours to work which reduces time to participate in leisure activities. As a result, participants who lived in urban areas, who may consider time as being a scarce commodity, were less likely to participate possibly due to being required to travel distances to attend.

Participants who had a high school education and those who had a two-year college education were less likely to have participated in wine tasting agritourism event compared to those who had less than high school education. College educated consumers may have an income level that allows them to spend money on agritourism activities compared to those who have less than

high school education, if these individuals have a lower level of income. Their counterparts, who might be more price conscious consumers, often look for less expensive entertainment and on-farm wine tasting activities, where a price is charged for samples, may not offer such opportunities.

While participants who were older than 50 years of age and were self-employed were more likely to participate. Perhaps participants older than 50 years are more established in their careers, than their younger counter parts, and could quite possibly have a higher level of income. Those who are self-employed may have flexible schedules that can be rearranged to attend leisure activities. While retirees may also have flexibility in scheduling time commitments, if they are on a fixed income they may not have the income that allows them to participate in an on-farm wine tasting.

Results can help local winery tasting facilities and agritourism operators enhance their on farm profitability and offer programs and activities that best appeal to these audiences. There are; however, a few limitations to data presented: 1) whether profiles and behaviors of winery tasting room visitors in other regions of the U.S. mimics what was discovered in this study and 2) the use of an Internet survey might result in some selection bias. According to the Pew Internet & American Life Project (2013); however, 81% of U.S. consumers age 18 and older have Internet access.

Further research into the demographic profiles and consumer behavioral characteristics and their perceptions towards the complete wine tasting experience will benefit the entire agritourism industry and provide farmers with ideas on how to enhance marketing efforts and develop profitable on-farm agricultural activities. As with research conducted by Tassiopoulos

et al. (2004) who studied attitudes and behaviors of survey participants who visited wine regions in South Africa, this study also “provides critical information” in that little, if any, information is available that describes the wine tourist in Delaware, New Jersey, and Pennsylvania.

Additional studies should be conducted to continue investigating what promotions, including social media or efforts initiated by the winery itself, appeal to wine tourists and what specific wine tasting activities and complementary activities should be offered to encourage wine consumers to travel to the farm for this activity. Other possible research studies could investigate likelihood to participate in an event at eastern U.S. wineries based on wine knowledge, as has been reported by researchers mentioned in the literature review. As data collection pertaining to understanding needs and wants of wine consumers who reside in Delaware, New Jersey, and Pennsylvania, as well as surrounding states, is in its infancy there is a great deal of information to collect, analyze, and disseminate to stakeholders.

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Appendix-4

FSMIP Direct Marketing and Agritourism Consumer Survey

1. Did you purchase any fruits and/or vegetables at any of the following locations
(Please select all that apply)?

1. Pick your own
2. Community Farmers Markets
3. On Farm Market
4. Community Supported Agriculture (CSA)

Farmers Market Definition: Farmers' markets are common facilities or areas where several farmers gather on a regular basis to sell various fresh, fruit, vegetables, meat and other on farm products directly to consumers.

Community Support Agriculture: Consists of a community of individuals who pledge support to a farm operation where the growers and consumers share the risks and benefits of food production. CSAs usually consist of a system of weekly delivery or pick-up of vegetables and fruit in a vegetable box scheme, sometimes including dairy products and meat.

On-Farm Market: A market or a retail outlet on the farm.

2. Please indicate the following reasons for not participating at any of the above types of direct markets.

Reasons

1. Did not know about them
2. Too far away/ inconvenient
3. Too expensive
4. Not of interest
5. Activities not appropriate for me and or those who accompany me.
6. Other _____

Agritourism: Any agriculturally-based operation or educational experience such as pick-your own, farm animals, hay rides, farm touring, on-farm camping, wine tasting, agricultural fairs/festivals, school field trip etc. that brings visitors to a farm or ranch.

3. Please indicate if you have been to or participated in any of the following agritourism activities.

- | | | |
|---|--------|-------|
| a) Bed and Breakfast | 1. Yes | 2. No |
| b) On-farm camping | 1. Yes | 2. No |
| c) Nature Retreat | 1. Yes | 2. No |
| d) Hay rides | 1. Yes | 2. No |
| e) Corn maze | 1. Yes | 2. No |
| f) Nature walk | 1. Yes | 2. No |
| g) Horseback riding | 1. Yes | 2. No |
| h) Pick-your-own | 1. Yes | 2. No |
| i) Fishing | 1. Yes | 2. No |
| j) On-farm concerts | 1. Yes | 2. No |
| k) Wine tasting | 1. Yes | 2. No |
| l) Farm produce tasting | 1. Yes | 2. No |
| m) Farm tour | 1. Yes | 2. No |
| n) School field trip | 1. Yes | 2. No |
| o) Farm Animals | 1. Yes | 2. No |
| p) Halloween activities | 1. Yes | 2. No |
| q) On farm market | 1. Yes | 2. No |
| r) Agricultural fairs/festivals | 1. Yes | 2. No |
| s) Visiting Nursery for Ornamental plants | 1. Yes | 2. No |
| t) Other (please list) _____ | | |

11. How much do you spend on fruits and vegetables on average per month? \$ _____

12. How much do you spend on value added products such as bakery items, jams, honey etc. on average per month? \$ _____

13. Are you planning to visit local direct markets in 2010?

	Yes	No	Not
Sure			
1. Pick your own	_____	_____	_____
2. Farmers Markets	_____	_____	_____
3. Direct Farm Markets	_____	_____	_____
4. Roadside Stand	_____	_____	_____
5. Community Supported Agriculture (CSA)	_____	_____	_____
6. Other	_____	_____	_____

14. How did you find the information about direct markets?(Check all that apply)

1. Roadside sign 2. Newspaper 3. Passing by
 4. Magazine 5. Friends/Word of mouth 6. Television
 7. Radio 8. Farm advertisement (sent to home)
 9. Website 9. Email 10. Blogs
 11. Social media (e.g. Facebook, twitter) 12. Other: _____ please

specify

15. How would you rate the following characteristics about direct markets? Please write the appropriate number in the blanks for each characteristic and each type of direct market. Please use following rating.
 4= very good 3=good 2=fair 1=poor

PYO=Pick your own **CFM**=Community Farmers Markets **OFM**=On Farm

Market

CSA=Community Supported Agriculture

<u>Characteristics</u>	PYO	CFM	OFM	CSA
a. Quality of Products	_____	_____	_____	_____
b. Quantity of products	_____	_____	_____	_____
c. Variety of products	_____	_____	_____	_____
d. Appearance of establishment	_____	_____	_____	_____
e. Cleanliness of establishment	_____	_____	_____	_____
f. Convenience of establishment	_____	_____	_____	_____
g. Convenience of location	_____	_____	_____	_____
h. Employee attitude	_____	_____	_____	_____
i. Prices	_____	_____	_____	_____
j. Other (Specify) _____	_____	_____	_____	_____

16. Please indicate the commodities you buy most from direct markets in a 1, 2, 3 . . . order (with 1 being bought most frequently).

Fruits: _____ Apples Vegetables: _____ Tomato _____ Squash
 _____ Strawberries _____ Pepper _____ Cucumber
 _____ Peaches _____ Sweet Corn _____ Other
 _____ Blueberries _____ Snap Beans
 _____ Melons _____ Broccoli
 _____ Watermelon _____ Onion
 _____ Other _____ Potato

17. Are you willing to pay more for products from direct market outlets than the comparable supermarket or conventional grocery store, and if so, what percent more? _____ percent

18. If made available to you, would you be "willing to buy" fruits and vegetables from direct market outlet that are: (please indicate "Yes" or "No" or "Unsure").

	Yes	No	Unsure
a) Locally Grown	1	2	3
b) Certified Organic	1	2	3
c) New/unfamiliar Products	1	2	3
d) Genetically Modified	1	2	3

Genetically Modified: Any possible alteration of genetic material, in agriculture products to make them capable of producing new products or performing new functions or increasing production.

Agritourism:

19. Please indicate if you had ever heard of any of the following terms.

a) Agritourism	1.Yes	2.No
b) Ecotourism	1.Yes	2.No
c) Green Tourism	1.Yes	2.No

20. Please indicate any purchases you have made during an agritourism activity.

a) Fresh fruits and vegetables	1.Yes	2.No
b) Processed or canned foods	1.Yes	2.No
c) Agricultural decorations/crafts	1.Yes	2.No
d) Locally produced wine	1.Yes	2.No
e) Honey products	1.Yes	2.No
f) Fresh-cut flowers	1.Yes	2.No
g) Firewood	1.Yes	2.No
h) Ornamentals	1.Yes	2.No
i) Vegetable transplants	1.Yes	2.No
j) Seasonal decorations	1.Yes	2.No
k) Pumpkins/corn stalks	1.Yes	2.No
l) Christmas Trees	1.Yes	2.No
m) Locally made value added products	1.Yes	2.No
n) Farm festival	1.Yes	2.No

21. Please indicate how many visits you made in the past year to the agritourism locations for Agricultural entertainment/educational purpose: _____ times/year

22. If you have visited an agritourism site/farm in the past year, how much do you typically spend each trip? \$_____ /trip.

23. How many different sites/farms did you visit in the past year? _____

24. Please indicate the season in which you mostly visit a farm or agritourism site (please check all that apply).

1. <input type="checkbox"/> Spring (March - May)	2. <input type="checkbox"/> Summer (June-August)
3. <input type="checkbox"/> Fall (September-November)	4. <input type="checkbox"/> Winter (December-February)

25. How far in advance do you typically plan an activity?

1. That day	2. One day before
3. That week	4. In advance (7 days or more)

26. Please rank the following reasons why you have or would visit an agritourism site or farm. (1= most important, 7 = least important).

1) _____ To purchase fresh fruit and vegetables.

- 2) _____ To purchase value added products
 3) _____ To support local farmers.
 4) _____ To enjoy the rural scenery/nature.
 5) _____ To spend time with family and friends.
 6) _____ To learn or be taught how food is produced/grown.
 7) _____ To know where my food is produced/grown.
 8) _____ It is convenient and located near my home.
 9) _____ Experience of a farm visit
27. On average, how many miles do you travel to participate in an agritourism activity _____miles (one way)?
28. Do you in general return to the same agritourism/farm site to purchase products repeatedly during the year? 1.Yes 2.No
29. I am willing to pay a higher price for products and events if it helps to preserve farmland and local agricultural producers. 1.True 2.False 3.I do not know
30. If you have or would consider visiting an agricultural tourism destination, how important are the following factors:
- | | Very
Important | Somewhat
Important | Not
Important |
|--|---------------------------|-------------------------------|--------------------------|
| a) Facilities (rest rooms, picnic tables etc.) | 1 | 2 | 3 |
| b) Shops/markets | 1 | 2 | 3 |
| c) Educational experience | 1 | 2 | 3 |
| d) Scenery | 1 | 2 | 3 |
| e) Animals or petting zoo | 1 | 2 | 3 |
| f) Convenience. | 1 | 2 | 3 |
| g) Events (demonstrations, concerts etc.) | 1 | 2 | 3 |
| h) Activities (hay rides, farm tours etc.) | 1 | 2 | 3 |
| i) Restaurant | 1 | 2 | 3 |
31. If you have visited an agritourism site or farm, how did you learn about it? (please check all that apply).
- | | | |
|--|--------------------------|--------------|
| 1.Friends/word of mouth | 2.School activity | 3.Farm sign |
| 4.Farm advertisement (mailed home) | 5.Billboard or Road sign | |
| 6.Tourism/guide book | | |
| 7.Agritourism map | 8.Websites | 9.E-mail |
| 9.TV | 10.Magazine | 11.Newspaper |
| 12.Radio | 13.Promotional flyer | 14.Blogs |
| 15.Social media(ex.Facebook and Twitter) | 16.other: _____ | |

Demographics:

32. Please select the best description of the community you live in.
 1. Urban 2.Suburban 3.Small town 4.Rural
33. How many years have you been living at current place or residence? _____years
34. Do you believe that agriculture will help maintain open space/greenery in the state?
 1. Yes 2. No
35. Do you have a garden at your home where you grow fruits and vegetables for your household to consume?
 1. Yes 2. No
36. Number of persons, including yourself in your household _____

37. Number of persons who are age 17 and younger in your household _____
38. Please indicate your gender 1. Male 2. Female
39. Please indicate your age category
 1. Under 20 2. 21-35 3. 36-50 4. 51-65 5. Over 65
40. Please indicate the highest level of education you have completed.
 1. No Formal Schooling 2. Elementary school 3. Up to High school
 4. 2 year college degree 5. 4 year college degree 6. Graduate degree
41. Which of the following best describes your current occupation?
 1. Retired 2. Self-employed 3. Employed by others
 4. Homemaker 5. Others
42. Please indicate your ethnicity.
 1. White 2. African American 3. Hispanic or Latino
 4. American Indian and Alaska Native 5. Asian
 6. Native Hawaiian and other Pacific 7. Others _____
43. Please indicate Annual-Income category of your household before taxes.
 1. \$ Less than 20,000 2. \$ 20,000 - 39,999 3. \$ 40,000 - 59,999
 4. \$ 60,000 - 79,999 5. \$ 80,000 - 99,999 6. \$ 100,000 or more