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Iowa agritourism consumer profile: demographics, preferences, and participation levels

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**Iowa agritourism consumer profile:
demographics, preferences, and participation levels**

by

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A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
MASTER OF SCIENCE

Major: Agricultural Education

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Ames, Iowa

2009

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TABLE OF CONTENTS

ABSTRACT.....	iv
CHAPTER I. GENERAL INTRODUCTION	1
CHAPTER II. LITERATURE REVIEW	6
Agritourism Niche	7
Agricultural Extension Education.....	8
Rural Community Development.....	11
Statement of the problem.....	12
Purpose and objectives.....	13
Need for the study.....	13
Definitions.....	14
CHAPTER III. METHODS AND PROCEDURES	16
Research Design.....	16
Subjects	17
Instrumentation	19
Data Collection	23
Thesis Organization	25
CHAPTER IV. IOWA CONSUMER TRENDS AND PARTICIPATION IN AGRITOURISM ACTIVITIES.....	26
Abstract.....	26
Introduction.....	27
Review of Literature	28
Purpose and Objectives.....	31
Methods and Procedures	31
Results.....	33
Conclusions.....	42
Implications.....	43
Recommendations.....	45
References.....	46
CHAPTER V. IOWA CONSUMER MOTIVATION AND PREFERENCES TOWARDS AGRITOURISM ACTIVITIES.....	49
Abstract.....	49
Introduction.....	50
Review of Literature	52
Purpose and Objectives.....	55
Methods and Procedures	55
Results.....	58
Conclusions.....	64

Implications.....	66
Recommendations.....	66
References.....	68
CHAPTER VI. GENERAL CONCLUSIONS	70
Implications.....	74
Recommendations.....	75
CHAPTER VII. REFERENCES.....	79
APPENDIX A: IOWA STATE UNIVERSITY’S INSTITUTIONAL REVIEW BOARD HUMAN SUBJECT PROTECTION REGULATIONS EXEMPTION LETTER.....	82
APPENDIX B. IOWA AGRITOURISM CONSUMER SURVEY INSTRUMENT.....	83
APPENDIX C. DATA COLLECTION TIME LINE AT 2008 IOWA STATE FAIR	90
APPENDIX D: SCRIPT FOR ORAL COMMUNICATION WITH POTENTIAL PARTICIPANTS	91
APPENDIX E. DATA TABLES	92

ABSTRACT

Agritourism is becoming increasingly popular across the country as agricultural producers open their farms to guests seeking entertainment or educational activities. This study obtained current information from prospective agritourism visitors to identify service and amenity preferences of consumers and explore the current level of participation in Iowa agritourism operations. Data were gathered through completion of a voluntary questionnaire handed out to a random sample of Iowa consumers, over the age of 18, attending the 2008 Iowa State Fair. The questionnaire data were analyzed using descriptive statistics. The information obtained will be used to aid in the continued development of the Iowa agritourism industry.

The results of this study illustrate the following conclusions: 1) a large proportion of Iowans have at least some understanding of agriculture and food production; 2) agritourism and other agriculture-related tourism terms are relatively unfamiliar to Iowans; 3) a large proportion of Iowans have previously participated in agritourism activities; 4) word-of-mouth is the most effective form of advertisement for agritourism activities; 5) Iowans are willing to travel and prefer to participate in agritourism activities in the fall with family and friends; 6) consumer motivation to participate in agritourism activities is influenced by the opportunity to purchase fresh products and support local farmers; 7) consumer-perceived importance of agritourism amenities is placed on a convenient location and on-site restrooms; 8) consumers view the availability of fresh products as highly important; 9) a large proportion of Iowans are interested in purchasing Iowa products, particularly fresh vegetables and fruits.

These findings have implications for the Iowa agritourism industry as Extension educators, state agricultural and economic development organizations, and agritourism owner/operators may use them to develop and organize marketing activities and educational resources based on the prospective agritourism visitor. These results are especially significant to Extension education, as the Extension system often plays the role of collaborator, working with various partners on research, education, and outreach to provide current information to producers. Extension educators should view the agritourism industry as an opportunity for agricultural, community, and economic development within the state and utilize this information in growing and developing the industry.

CHAPTER I. GENERAL INTRODUCTION

Agricultural producers are beginning to try their hand in the tourism industry by opening their farm to guests seeking entertainment or educational activities; this type of tourism is known as agritourism. In addition to agritourism, there are a number of alternate agriculture-related tourism terms which describe similar activities. These terms include, but are not limited to, rural tourism, ecotourism, green tourism, nature-based tourism, and farm tourism (McGehee & Kim, 2004). In the literature, these terms may be used interchangeably or referred to as separate forms of tourism.

Maetzold (2002) also includes agritainment and agrieducation within the scope of agritourism. Agritainment is defined as “the fun side of agritourism and includes mazes, petting farms, pumpkin picking, haunted houses, horseback riding, and the like” (p. 84). Agrieducation is defined as “teaching your visitors about agriculture production, how food and fiber are produced, rural values, and quality of life...building support for agriculture through educational experiences” (p. 84). For the purpose of this study, agritourism was defined using a broad definition provided by the Agricultural Marketing Resource Center at Iowa State University, which defines agritourism as “...activities that include visiting a working farm or any agricultural, horticultural or agribusiness operation to enjoy, be educated or be involved in what is happening at that locale” (Geisler, 2008, para.1).

Agritourism activities include visits to on-farm attractions or educational events such as roadside produce stands, farmers markets, bed-and-breakfasts, corn mazes, and hayrides.

Agritourism aids rural economic development by providing alternative use of farmland, increasing revenue of on-farm activities, improving business sustainability, and bringing economic revenue to rural areas both on-site and near the operation (Jensen, Lindborg, English, & Menard, 2006; Geisler, 2008). Agritourism also has the potential for informal agricultural education between the owner/operator and the general population which has little to no direct contact with agriculture (Jolly & Reynolds, 2005).

Nationwide, the 2007 U.S. Census of Agriculture showed that the number of farms, which are defined as any place with \$1,000 or more of agricultural products produced and sold in the year, grew by 4% since the 2002 Census. The 2007 Census also reported that new farms tend to be smaller in size, with an average size of 201 acres compared to the overall average farm size of 418 acres. The two largest types of farms included residential/lifestyle farms (36%), defined as farms that produced less than \$250,000 in sales and primary operator had another occupation, and retirement farms (21%), defined as farms that produced less than \$250,000 in sales and primary operator was retired. Both types are considered small farms by United States Department of Agriculture standards because they have less than \$250,000 in sales. The increase in small farms and the large number of residential/lifestyle and retirement farms support growth of the agritourism industry. In fact, the 2007 Census showed an increase in income from agritourism and recreational services nationwide, with incomes increasing from \$202 million in 2002 to over \$566 million in 2007.

Iowa's roots in agriculture also make agritourism a viable opportunity within the state. According to the 2007 U.S. Census of Agriculture, there are 92,856 farms in Iowa, an increase of 2% from the 2002 Census. The 2007 Census also showed that while there are more farms in Iowa, the number of acres of farmland has decreased 3% and the average size of farms has decreased by 5%. Farms under 100 acres increased by 19% and now comprise 41% of all Iowa farms (US Census of Agriculture, 2007). The 2007 Census also showed an increase in income from agritourism and recreational services in Iowa, incomes increased three and half times from \$880,000 in 2002 to over \$3.1 million in 2007.

The Iowa State University Extension system recognizes agritourism as a "...a growing segment of the rural economy in many areas of Iowa" and has developed a "Visit Iowa Farms" Web site to help promote agritourism throughout the state (Iowa State University Extension, 2009, np). The "Visit Iowa Farms" Web site developed by the Iowa State University Extension system (2009) offers information for consumers about various agritourism operations around the state as well as the services and amenities provided. The Web site also provides information to agritourism owner/operators regarding rules and regulations, legal considerations, and training resources. The owner/operators are also able to complete an online registration to include their agritourism operation on the Web site. In addition to the development of a Web site, the Iowa State University Extension Value Added Program is in the process of conducting a study which focuses on marketing and research strategies to promote on-farm retail enterprises in the Iowa agritourism industry (Leopold Center for Sustainable Agriculture, 2008). The study will

be directed by the Agritourism Working Group and will conduct workshops and surveys of more than 800 Iowa agritourism operators.

According to the Iowa Agritourism Working Group within the Iowa State University Extension system, the Iowa agritourism industry is supported by various departments within the Iowa State University Extension system including the Value Added Program as well as public and private organizations throughout the state. These organizations include the Iowa Farm Bureau Federation, Iowa Department of Agriculture and Land Stewardship, Iowa Department of Economic Development, Iowa Department of Natural Resources, Silos and Smokestacks, Iowa Winegrowers Association, Greater Des Moines Convention & Visitors Bureau, Des Moines Chapter of Buy Fresh, Buy Local, Leopold Center for Sustainable Agriculture and the Iowa Fruit & Vegetable Growers Association (Iowa State University Extension, 2009). With a number of organizations throughout the state interested in the potential for agritourism, timing is ideal for further research into the Iowa agritourism industry.

This study focused on Iowa consumers as prospective agritourism visitors. The study aimed to complement the current Web site developed to promote the Iowa agritourism industry and the study by the Iowa State University Extension system of Iowa agritourism operators. Based on previous studies, which have emphasized the importance of understanding the target market in order to plan and develop a promotional strategy (Lobo et al., 1999), this study will be used to provide insight to owner/operators and stakeholders within the Iowa agritourism industry regarding the current level of

participation and preferences of the typical Iowa consumer to help them in identifying their target market and developing appropriate marketing content.

As the Iowa State University Extension system and other stakeholders provide support of Iowa agritourism activities, continued research, education, and outreach is also needed to provide sustainable growth and development of the industry. The results of this study, which help to define target markets, provide needed support for the growth and development of the Iowa agritourism industry. Agritourism is not only economically beneficial through the diversification of farm operations and increased revenue, but it is also socially beneficial by providing a link between the owner/operator and consumer (Jensen et al., 2006; Geisler, 2008; Jolly & Reynolds, 2005).

CHAPTER II. LITERATURE REVIEW

This chapter addresses the literature related to agritourism which supports the growth and development of the agritourism industry. The chapter is divided into three sections: Agritourism Niche, Agricultural Extension Education, and Rural Community Development. The first section discusses recent trends within the agricultural industry that support the growth and development of agritourism. The second section illustrates the role and importance of informal agricultural Extension education within the agritourism industry. The final section highlights the opportunity for agritourism to generate rural community development both economically and socially.

Previous literature addressing agritourism suggests that agritourism is not a new idea; individuals have always visited farms and rural areas (Wicks & Merrett, 2003; Dane, 2001). The new idea is that agritourism can be promoted as a destination activity while serving as a form of community and economic development in rural areas (Wicks & Merrett; Wilson, Thilmany & Sullins, 2006; Lobo et al., 1999). A few themes exist within the literature which demonstrate the relationship agritourism has to local food systems, direct farm marketing, agricultural extension education, and rural community development (Wicks & Merret; Wilson et al.; Che, Veeck, & Veeck, 2005; McGehee & Kim, 2004; Nickerson, Black, & McCool, 2001).

Agritourism Niche

In the Midwest, increased size and production has been brought on by mechanization, which allows farmers to become more efficient in production (Benson, 2004; Dane, 2001). The change to larger-scale farms is a response to global competition, weakened commodity prices and rising production costs, thus making the traditional farm less visible (Dane; Che et al., 2005). Larger-scale farms that are part of the global food supply chain provide a majority of the food purchased by U.S. consumers, nevertheless, local foods, or foods that are produced and sold close to where the consumer lives, are becoming increasingly popular (Pirog, 2009). According to the 2007 U.S. Census of Agriculture, the number of farms nationally that sold agricultural products directly to individuals for human consumption increased by 17% from the 2002 Census. The increase in number of farms in Iowa that sold agricultural products directly to individuals showed an increase of 22%, rising from 2,455 farms in 2002 to 2,987 farm in 2007, according to the 2007 U.S. Census of Agriculture.

The increase in local food sales has been driven by "...an interest in knowing where food comes from and how it is grown, and a desire to support local farmers" (Pirog, 2009, p. 136). Previous research has shown that consumers like the flavor, freshness, and quality of local foods (Pirog). The local food system reestablishes the connection between the family farm and community (Pirog). Utilizing the promotion of agritourism provides a beneficial relationship for local food systems as it helps to enhance the appeal of local foods (Lobo et al., 1999).

'Local food' has become the unifying theme of a social movement to challenge and reshape the modern agri-food system. A "local food" paradigm, in contrast, emphasizes food quality and freshness, a personal connection to small and family scale farms, environmental protection, community self-reliance, and the economic multiplier effects of making local purchases (Ostrom, 2006, p. 66).

The demand for fresh produce continues to grow, offering producers the opportunity to increase their profits through direct marketing (Kuches, Toensmeyer, German, & Bacon, 1999). Lobo (n.d.) defines direct marketing as "any marketing method whereby farmers sell their products directly to consumers." Direct marketing provides a link between consumers seeking high-quality produce and producers who are seeking an opportunity to compete in the produce industry (Kuches et al.). In addition to linking the consumer to the producer, direct marketing allows the producer to bypass the traditional distribution network and earn a greater share of profits (Kuches et al.). As a form of direct marketing, agritourism creates opportunities for the producer to link with their consumer and directly market their products (Lobo et al., 1999).

Agricultural Extension Education

The guiding philosophy behind Extension education is to meet the needs of people through research, teaching, and practical problem solving (Seevers, Graham, & Conklin, 2007). The Extension system acts through partnerships with citizens, communities and university colleagues to extend the research of the public, land-grant university to respond to the changing needs of society (Bull, Cote, Warner, & McKinnie, 2004). The Extension system is a constantly evolving, market-driven organization that promotes

lifelong learning by providing existing and new university-based knowledge to local communities (Bull et al.).

Similar to Extension education's philosophy to educate and extend their resources to the public, there is also a common theme in the literature which echoes a similar desire behind agritourism owner/operators motivations, that of a desire to educate the public (McGehee & Kim, 2004; Nickerson et al., 2001; Putzel, 1984). Through agritourism, owner/operators are able to educate the general public about agriculture's contributions to the local economy and quality of life (Lobo et al., 1999).

The collaborative nature of Extension education provides an opportunity for inter-organizational cooperation among agritourism owner/operators and stakeholders, which is critical for the development of the agritourism industry (Burrows, Fennell, Redlin, & Verschoor, 2007). Across the country, Extension educators have collaborated with local, regional, and national organizations to develop the tourism industry for a number of years (Honadle, 1990; Burkhart-Kriesel & Francis, 2007; Burrows et al.). The challenge that faces Extension education is to go beyond the traditional role of educational programming and find new ways to gather and disseminate information regarding agritourism to assist in the growth and development of the industry (Burkhart-Kriesel & Francis).

The Extension system has already been identified as a catalyst for the agritourism industry. In North Dakota, Schroeder (2004) called for Extension educators to develop

materials and provide support to increase the success of the agritourism owner/operators, which in turn would positively impact the wider community. A second study in North Dakota by Burrows et al. (2007) noted the initial role Extension educators and university partners played in fostering the connections between the agricultural producers and stakeholders interested in agricultural- and cultural-related tourism across the state, which has now been developed and taken over by the stakeholders to continue to move the mission forward.

Che et al. (2005) addressed the need for inter-organizational marketing and quality control development for agritourism as marketing channels are currently underdeveloped outside of standardized, bulk commodity marketing; this has been a disadvantage to the development of the agritourism industry. Jolly and Reynolds (2005) also acknowledged the importance of providing owner/operators with information about consumers. Further research into agritourism will help to provide assistance to community specialists, like Extension educators and small business development centers, to aid them in providing information to agritourism entrepreneurs and visitors (McGehee & Kim, 2004).

Following their philosophy to meet the needs of people through research, teaching, and practical problem solving (Seevers, Graham, & Conklin, 2007), Extension educators can continue to conduct research and utilize their resources to help organize and disseminate information for the growth and development of the agritourism industry.

Rural Community Development

Community development both depends on and improves the quality of life within communities, contributing to improved social, economic, and environmental well-being within the community (Flora & Flora, 2008; Seevers, Graham, & Conklin, 2007). Within community development, there is the idea of collective agency which requires groups to work together to collectively to address their needs and make a difference (Flora & Flora). Extension educators have been working collectively with individuals, groups, organizations, and institutions, which are all interdependent components of community development, for a number of years (Seevers et al., 2007).

Serving as an extension of the University and a resource throughout Iowa, Extension education includes programming focused on community development which focuses on “...enhancing the value of Iowa's agricultural industry, increasing rural vitality...and stimulating new economic development opportunities” (2007, p. 2). Agritourism provides the opportunity for the Extension system to enhance Iowa’s agricultural industry and rural vitality while creating economic growth. Previous studies conducted focusing on the economic impact agritourism has on local communities have shown a positive impact for both the farm operation and host community (Jensen et al., 2006; Lobo et al., 1999).

Jensen et al. (2006) provided an example of the economic impact of agritourism in Tennessee. The study projected the economic impact of agritourism visitor expenditures to be between \$16 and \$17 million in direct economic activity. With multiplier effects

throughout the economy taken into account, the agritourism visitor expenditures stimulated a total of \$31 to \$32 million in economic activity in Tennessee (Jensen). Another study in San Diego County, California by Lobo et al. (1999) projected the farm level expenditures by visitors resulted in \$600,000 of additional revenue. At the community level, it was estimated that direct visitor expenditures resulted in over \$2 million of additional revenue (Lobo). With multiplier effects taken into account, the visitor expenditures resulted in over \$3 million of additional revenue within the host community (Lobo).

In addition to the economic benefits, there are also social and cultural benefits created through the relationships formed which aid in the long-term sustainability (Burkhart-Kriesel & Francis, 2007; Flora & Flora, 2008). Studies in North Dakota by Schroeder (2004) and in Montana by Nickerson et al. (2001) both found that the formation of personal relationships was a motivator behind the agritourism owner/operators motivation to start and stay in business. The interactions with guests and relationships formed were viewed as a life enriching experience (Schroeder). The agritourism owner/operator creates the link between the products or resources available and the experience they are providing the consumer, which in turn contributes to a positive economic and social environment in the local area to live, work, and play (Schroeder).

Statement of the Problem

Literature indicates that agritourism has the support and potential to positively and directly impact local farms and communities both socially and economically. However,

the lack of research, education, and outreach surrounding the Iowa agritourism industry leaves owner/operators and stakeholders unaware of consumer interest and motivation surrounding agritourism activities. Therefore, more information about the Iowa agritourism industry is needed; specifically focusing on the current level of participation and preferences of consumers.

Purpose and Objectives

The purpose of this study was to obtain current information from prospective Iowa agritourism visitors regarding participation and preferences. The specific objectives were to:

- Describe the current level of participation and Iowa consumer trends towards agritourism activities.
- Describe the agritourism attraction preferences of Iowa consumers.

Need for the Study

According to Lobo et al. (1999) the growth of the agritourism industry requires the coordination of institutions and organizations that can coordinate strategic planning, promotion, and information management. As the agritourism industry in Iowa begins to develop, the results of this study provide a valuable resource for owner/operators and stakeholders in identifying their target market through information about the demographics, preferences, expenditures, and participation levels of consumers in Iowa agritourism attractions. The information obtained from this study may serve as a guide for owner/operators as they develop their agritourism attractions in helping to decide

cost, location, activities and amenities. The study also provides the framework for more focused studies in individual counties or regions throughout the state of Iowa or for other states in the United States.

Definitions

Definitions of the following terms helped frame the study.

- Agritourism activities: activities included were based on examples from the Agricultural Marketing Resource Center and the New Jersey Agritourism survey, including farm tours, hands-on chores, self-harvesting of produce, hay or sleigh rides, and overnight stays in a bed and breakfast (Geisler, 2008; Komar, 2008).
- Demographics: statistical data gathered to determine respondent's age, gender, income range, population category, and level of education. This data were used to organize the responses and find any trends among subsets of the sample, such as preferences of those from an urban area versus preferences of those from a non-urban area.
- Preferences: refers to the respondent's interest level in activities, products, services, and amenities at an agritourism attraction.
- Participation: refers to the respondent's present (or anticipated) time spent visiting agritourism attractions.
- Stakeholders: refers to the group public and private organizations identified by the Agritourism Working Group that are in support of the Iowa agritourism industry. This group includes various departments within the Iowa State University Extension system including the Value Added Program as well as

public and private organizations throughout the state including the Iowa Farm Bureau Federation, Iowa Department of Agriculture and Land Stewardship, Iowa Department of Economic Development, Iowa Department of Natural Resources, Silos and Smokestacks, Iowa Winegrowers Association, Greater Des Moines Convention & Visitors Bureau, Des Moines Chapter of Buy Fresh, Buy Local, Leopold Center for Sustainable Agriculture and the Iowa Fruit & Vegetable Growers Association (Iowa State University Extension, 2009).

CHAPTER III. METHODS AND PROCEDURES

This chapter outlines the methods and procedures utilized in this study. Included in this chapter is a description of the research design, subjects, instrument development, and procedures used to collect data. Lastly, the organization of the thesis is also described.

Research Design

This study utilized a descriptive survey research design for the collection and analysis of data. The required data were gathered by directly administering a survey over the course of six days at the Iowa State Fair in August 2008. According to Ary, Jacobs, and Razavieh (2002), the strength of directly administering a questionnaire includes a higher response rate and fewer incomplete answers.

Survey research is frequently used in education, social and behavioral sciences, business and public administration, and communications (Alreck & Settle, 1985; Ary et al., 2002). The purpose and objectives of this study were appropriately addressed through survey research. A survey allows the researcher to gather information from a group and summarize group characteristics, attitudes, and opinions (Ary et al.). Survey research is designed to provide information to individuals, such as the owner/operators and stakeholders, to help in making decisions about products and services they provide to the public (Alreck & Settle). The results of the survey serve both the owner/operator and consumer, because the better the owner/operator understands their market, the better they are able to serve the consumer both economically and effectively (Alreck & Settle).

Subjects

This study's focus was on the preferences and participation levels of Iowa consumers in agritourism attractions. The sample population for this study consisted of Iowans visiting the 2008 Iowa State Fair. The Iowa State Fair was chosen as the location to administer the survey because it draws visitors from across the state, thus projected to provide a suitable representation of the Iowa population.

Prior to administering the survey at the Iowa State Fair, a pilot test of the survey was conducted at a local grocery store. According to Alreck & Settle (1985) a pilot test is conducted so that the results can be analyzed to reveal the degree of variance and confidence intervals to be expected from the actual survey, as well as the percentage distributions within categorical items. The pilot test had two purposes for the study. The first purpose was to find if any substantial revisions, including formatting, appearance or grammar, were needed to be made in the survey design prior to administering the survey at the Iowa State Fair. The second purpose was to use the results of the pilot test as a comparison to the actual survey results to confirm that the sample at the Iowa State Fair was indeed a random sample of Iowans. The results of the pilot test and survey were compared and analyzed to find any statistically different responses between the two samples.

The results of the pilot test and actual survey were compared and analyzed using a two independent sample t-test. The t-test was used to determine whether there were substantial differences between the means of the two groups (Ary et al., 2002). Ten

randomly selected questions were used to make a comparison between the pilot test and actual survey results. The level of significance was set at an alpha of 0.05. There were no statistically significant differences between the means of the two groups. Therefore, it can be assumed there were no significant differences between the pilot population and sample population and these results can be generalized to the population of Iowa.

Finding no statistical differences between the data from the pilot and study, the data from the groups were combined, increasing the total number of respondents in the study to 415. The sample population in the study was 415, however the number of responses reported may be less due to non-responses to individual questions.

Using the demographic data obtained from the respondents, the survey sample was evenly distributed and represented individuals from every region of the state. Of the 415 respondents, 45.54% were male and 54.46% were female ranging in age from 18 to 80. Even though the survey was administered in an urban location, a majority of the sample population reported the area they lived in a non-urban population (67.80%) versus an urban population (32.20%). The ethnic background closely represented the 2000 Iowa Census, as 93.69% were Caucasian or White, 2.67% were African American or Black, 2.43% were Asian or Pacific Islander, and 0.97% were Latino or Hispanic in the study.

The education levels and household incomes reported in the study included fewer lower education and income levels while including more graduate degrees and higher income levels than the information from the 2000 Iowa Census. However, the data were self-reported and contained individual question non-responses. Despite the differences

between the distribution of lower and higher income and education levels in the study and Census information, there were similar trends found among the center, as the 2000 Iowa Census reported 79.60% of Iowans have a high school to bachelor's degree, while 82.73% of respondents in the survey had a high school to bachelor's degree. Likewise, even though the survey reported household incomes contained a higher percentage of higher income levels than the 2000 Iowa Census, there were similar trends to the 2000 Iowa Census information found. The 2000 Census reported the largest percentage (21%) of household incomes between the \$50,000-\$74,999 income range, and in the sample population, the largest percentage of respondents (25.80%) were also in the \$50,000-\$74,999 household income range.

Instrumentation

A search of related literature revealed similar studies of consumer preferences and interest towards agritourism (Lobo et al., 1999; Jensen et al., 2006; Che, Veeck, & Veeck, 2007; Jolly & Reynolds, 2005; Komar, 2008). The instruments used by Komar and Jensen et al. were used as models to design an instrument for this study, which focused on prospective visitors' participation, preferences, and demographics. In order to develop an instrument which met the needs of the Iowa agritourism industry, additional information from the Iowa State University Extension system and the 2000 Iowa Census was utilized.

The questionnaire developed for this study addressed three areas: current level of participation and consumer trends towards agritourism activities, agritourism attraction

preferences, and demographics. The format of the questions related to participation and consumer trends towards agritourism activities was adopted from a New Jersey Agritourism Survey (Komar, 2008). The section consisted of eight questions. The first two questions addressed current understanding of agriculture and how food is produced, the third question addressed familiarity with the term agritourism and other related terms, the fourth question addressed participation in agritourism activities over the past five years, the fifth and sixth questions addressed frequency of participation, the seventh question addressed form of advertisement, and the eighth question addressed why individuals had not participated in agritourism activities. The previous knowledge and participation levels of the survey participants were estimated using a series of yes or no and check-all questions.

The second section of the questionnaire addressed consumer preferences towards agritourism activities. The format of the questions was adopted from the New Jersey Agritourism Survey (Komar, 2008) and Visitors to Tennessee Agri-tourism Attractions survey (Jensen et al., 2006). The questions regarding services and amenities preferences were tailored towards Iowa agritourism operations by using information available through the Iowa State University Extension (2009) “Visit Iowa Farms” Web site. The first three questions in this section were to determine consumer preferences towards possible agritourism services and amenities such as guided tours, restrooms, parking and for-sale items and their motivation for participating in agritourism activities. The response format for these questions was a Likert-type scale with five as extremely important, three as moderately important and one as not important. The next set of

questions in this section, questions twelve through sixteen, were to determine consumer preferences towards products bought, season visited, with whom they would visit, and how far they would travel.

The last section of the questionnaire contained demographic questions. This section was intended to provide demographic information about the respondents. The format of the questions was developed using the 2000 Iowa Census Information (U.S. Census Bureau, 2008). Participants were asked to provide basic demographic information about their gender, age, ethnicity, home area, highest education level attained, and household income.

The content and face validity of the instrument used in the study was insured by using Dillman's (2007) pre-testing approach, which includes the following stages:

Stage I: Review by knowledgeable colleagues and analysts;

Stage II: Interviews to evaluate cognitive and motivational qualities;

Stage III: A small pilot study;

Stage IV: A final check.

During Stage I, the instrument was evaluated by fifteen colleagues to ensure content and face validity. The group was compromised of two graduate students, Ms. Amy Burmeister and Ms. Elizabeth Gaskins, and one professor, Dr. Michael Retallick, from the Department of Agricultural Education and Studies at Iowa State University, three undergraduate students in agriculture-related fields, Ms. Megan Anderson (Animal

Science), Ms. Rachael Cox (Agronomy), and Mr. Brooks Nelson (Public Service and Administration in Agriculture), and three undergraduate students in non-agriculture related fields, Ms. Rachel Mullen (English), Ms. Teresa Krug (Journalism), and Mr. Benjamin Raveling (Logistics), from Iowa State University, two staff members, Ms. Laura Miller and Mr. Malcolm Roberts, and the director, Dr. Jerry DeWitt, from the Leopold Center for Sustainable Agriculture at Iowa State University, and two staff members involved in agritourism research from the Agricultural Marketing Resource Center at Iowa State University, Ms. Christa Hartsook and Ms. Malinda Geisler. Ms. Christa Hartsook also shared the instrument with the Iowa Agritourism Working Group along with other service providers, including the Iowa Departments of Agriculture, Economic Development, Tourism, Natural Resources, and the Iowa Farm Bureau. Informal interviews and feedback received required no major changes in the content, completeness and appearance of the instrument. This fulfilled the evaluation of cognitive and motivational qualities in Stage II of the process.

During Stage III, a pilot test of the survey was administered at a local Hy-Vee grocery store in Ames, Iowa. The purpose of the pilot test was to not only to determine differences in degree of variance and confidence intervals between the pilot test and survey, but also to determine whether any substantial revisions needed to be made in the survey design (Dillman, 2007). The only change resulting from the pilot test was that more emphasis was placed on the instructions, specifically on the question asking respondents to rank the seasons they would visit an agritourism attraction in order from

most likely to least likely. The instrument was adjusted so the instructions were typed in a bold font and highlighted.

The final step of the pretesting was to ask a small number of individuals who had nothing to do with the development, materials, or revisions of the instrument to individually complete the survey (Dillman, 2007). The researcher selected six colleagues of varying demographics, who had no role in the development of the instrument and had not previously been in contact with the instrument, to complete the survey questionnaire and provide feedback on the format, grammar, and appearance. The individuals were able to complete the survey without consulting the researcher with questions and expressed no need for revisions to be made.

Prior to development of the instrument and conducting this study, the researcher completed training in human subject research through the Iowa State University Office of Research Compliance. The final draft of the instrument, scripted introduction, and procedures proposed for use in this study were submitted to the Iowa State University's Institutional Review Board (IRB). IRB found the study exempt from the requirements of the University's Department of Health and Human Service regulations (see Appendix A).

Data Collection

The questionnaire developed for this study addressed three areas: current level of participation and consumer trends towards agritourism activities, agritourism attraction preferences, and demographics (See Appendix B). In order to collect the data for the

study, the survey administrator attended the 2008 Iowa State Fair on six separate occasions for a total of 28 hours which included both weekends and weekdays during the morning, afternoon, and evening hours (see Appendix C). The survey administrator approached groups of individuals randomly at the Iowa State Fair. To increase the number of completed surveys, the survey administrator waited in areas with high traffic flow and places where individuals would be standing in line. Upon asking the individuals to complete the survey, the survey administrator informed the individual that completion of the survey was voluntary and that they had the option to skip any question that they did not feel comfortable answering (See Appendix D). All subjects who participated in the study were over the age of 18 and modified informed consent was used, which assumed consent was given when the individual chose to complete the questionnaire.

Confidentiality was guaranteed through the subjects' names not being required which improved the likelihood of honest answers (Ary et al., 2002). Interviewer bias was eliminated as the survey administrator did not ask the questions, rather the subject was able to complete the survey by themselves, having direct contact with the administrator only when acknowledging they were an Iowa resident over the age of 18 and agreed to voluntarily complete the survey. If necessary, the survey administrator was also available to clarify any misinterpretation of the questions. The possibility of subject misinterpretation of questions was controlled by using Dillman's (2007) pre-testing approach prior to administering the survey at the 2008 Iowa State Fair.

In order to provide population specific data, the respondents were placed in either the non-urban or urban category based on their responses describing the area in which they lived. The U.S. Census Bureau defined an urbanized area as those locales with an urban nucleus of 50,000 or more people (Cromartie, 2007). Thus, for the purpose of this study, those individuals identifying the area they lived in with having a population of 49,999 or fewer were placed in the non-urban category and those identifying the area they lived in with having a population of 50,000 or more were placed in the urban category. By separating the responses into population categories, agritourism owner/operators and stakeholders may utilize the information to form a consumer profile based on the location of the agritourism attraction. Tables were generated to analyze and interpret the data based on the overall responses and population categories (See Appendix E).

Thesis Organization

This thesis is organized in the following chapters: a general introduction, literature review, procedures and methods, two papers for publication in scientific journals, general conclusions, general list of references, and appendices. The two papers were formatted according to individual journal guidelines for the Journal of Extension and Journal of Travel Research.

Iowa Consumer Trends and Participation in Agritourism Activities

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Abstract

The agritourism industry in Iowa is quickly growing and developing throughout the state. As the industry grows, it is important to identify the knowledge and participation levels of prospective agritourism consumers. This article focuses on current consumer trends and participation levels in Iowa agritourism activities. The results revealed a majority of Iowans have at least some understanding of agriculture and food production. While a majority of consumers were unfamiliar with agricultural-related tourism terms, most had previously participated in agritourism activities. They were most likely to hear about the agritourism activity by word-of-mouth and were most likely to participate in the fall with their family and friends. One-third of the respondents indicated they would be willing to travel 31-50 miles to participate in an agritourism activity. The results can be used by Extension educators, state agricultural and economic development organizations, and the

agritourism owner/operator to create a consumer profile and begin to target market their prospective audiences.

Introduction

Extension educators often collaborate with partners and stakeholders on research, education, and outreach. The collaborative nature of Extension education provides an opportunity for Extension educators to join with Iowa agritourism stakeholders, including agritourism owner/operators and state agricultural organizations, in providing necessary communication channels to develop the potential for agritourism growth and development.

A portion of the focus of the Iowa State University Extension system is towards increased rural vitality and stimulating new economic opportunities (2007). There is a need in rural areas to strengthen and diversify rural economies (Honadle, 1990). Agritourism addresses this need through the diversification of farm operations and increased revenue on-site and near the operations (Jensen et al., 2006; Geisler, 2008). In support of the growth and sustainability of the agritourism industry, Extension education can aid in the necessary programming for and education of community leaders and business operators (Honadle; Tweeten, Leistritz, & Hodur, 2008).

The challenge for Extension education is obtaining the necessary information to assist the growth and development of the Iowa agritourism industry. It was not until late 2006 that the Iowa Agritourism Working Group, supported by the Iowa State University Extension

system, was formed to increase overall awareness for Iowa agritourism (Geisler, 2008). Since forming the working group, two conferences have been held and a Web site has been developed. In addition, the Iowa State University Extension Value Added Program is currently in the process of conducting a study of agritourism operators which focuses on marketing and research strategies to promote on-farm retail enterprises in the Iowa agritourism industry (Leopold Center for Sustainable Agriculture, 2008).

Since the agritourism industry in Iowa is young and still growing and developing, there is a lack of available information from Extension education, especially information regarding the prospective visitors. Previous studies in California have emphasized the importance of understanding the target market in order to plan and develop a promotional strategy (Jolly & Reynolds, 2005; Lobo et al., 1999). The intent of this study is to understand potential levels of participation and consumer trends to provide insight to owner/operators and stakeholders within the Iowa agritourism industry in identifying and understanding prospective visitors.

Review of Literature

A few themes exist within the literature demonstrated the relationship agritourism has to local food systems, agricultural Extension education, and community development (Wicks & Merrett, 2003; Wilson, Thilmany & Sullins, 2006; Che, Veeck, & Veeck, 2005; McGehee & Kim, 2004; Nickerson, Black, & McCool, 2001). Local food systems and agricultural Extension education both aid in the growth and development of the

agritourism industry. The growth and development of the agritourism industry provides an opportunity to generate rural community development both economically and socially.

Larger-scale farms that are part of the global food supply chain provide a majority of the food purchased by U.S. consumers, however, foods that are produced and sold close to where the consumer lives are becoming increasingly popular (Pirog, 2009). According to the 2007 U.S. Census of Agriculture, the number of farms that sold agricultural products directly to individuals for human consumption increased by 17% nationally, while the number of farms in Iowa showed an increase of 22%, rising from 2,455 farms in 2002 to 2,987 farm in 2007.

The increase in local food sales has been driven by "...an interest in knowing where food comes from and how it is grown, and a desire to support local farmers" (Pirog, 2009, p. 136). The local food system reestablishes the connection between the family farm and community and enhances enhance the appeal of buying directly from the producer (Pirog; Lobo et al., 1999). Direct marketing provides a link between consumers seeking high-quality produce and producers who are seeking an opportunity to compete in the produce industry by allowing them to bypass traditional distribution networks and earn a greater share of profits (Kuches, Toensmeyer, German, & Bacon, 1999).

As farm families begin to directly market their products and diversify their operations to include activities such as agritourism, there is a common theme throughout the literature which confirmed a desire to educate the public about agriculture (McGehee & Kim,

2004; Nickerson, Black, & McCool, 2001; Putzel, 1984). Through agritourism, owner/operators are able to educate the general public about agriculture's contributions to the local economy and quality of life (Lobo et al., 1999).

The Extension system nationwide has been working with local communities and community development for a number of years. The goal of community development programs within the Extension system is to improve the economic, social, and environmental well-being of the community (Seevers, Graham, & Conklin, 2007).

Agritourism aids community development economically by bringing revenue to rural areas both on-site and near the operation (Jensen et al., 2006; Geisler, 2008). Purchasing local foods and products rather than products grown in distant locations decreases food miles and helps the local economy because more of the food dollar stays in the local community where the producer buys supplies and services for their operation (Pirog, 2009). Previous studies conducted focusing on the economic impact agritourism has on local communities have shown a positive impact for both the farm operation and host community (Jensen et al.; Lobo et al., 1999).

In addition to the economic benefits, there are also social benefits created through the relationships formed which aid in the long-term sustainability (Burkhart-Kriesel & Francis, 2007; Flora & Flora, 2008). Studies in North Dakota by Schroeder (2004) and in Montana by Nickerson, Black, and McCool (2001) both found that the formation of personal relationships was a motivator behind the agritourism owner/operators motivation to start and stay in business. The interactions with guests and relationships

formed were viewed as a life enriching experience (Schroeder). The agritourism owner/operator creates the link between the products or resources available and the experience they are providing the consumer, which in turn contributes to a positive economic and social environment in the local area to live, work, and play (Schroeder).

Purpose and Objectives

The overall purpose of this study was to describe the current level of participation and Iowa consumer trends towards agritourism activities based on their population category, either in a non-urban or urban location. The specific objectives were to 1) assess understanding of agriculture and how food is produced; 2) assess current familiarity with agritourism and related forms of tourism; 3) explore the type of agritourism activities consumers are participating in; 4) determine how consumers are becoming aware of agritourism activities; 5) and identify travel and seasonal preferences of consumers.

Methods and Procedures

This study utilized a directly-administered survey to obtain a higher response rate and fewer incomplete answers (Ary, Jacobs, & Razavieh, 2002). The survey was conducted over the course of six days at the Iowa State Fair in August 2008. The researcher served as the survey administrator. Individuals attending the 2008 Iowa State Fair were asked at random to voluntarily complete the survey. The primary locations targeted were areas with high traffic flow and places where individuals would be standing in line.

Participants in the survey were both males and females with ages ranging from 18 to 80 representing all regions of the state. In total, 385 individuals participated in the survey.

The survey was administered to 385 individuals based on the Iowa population and a 95% confidence interval with a margin of error of ± 5 (Ary et al.).

Prior to directly administering the survey at the Iowa State Fair, the researcher utilized a series of steps proposed by Dillman (2007) to insure the content and validity of the instrument. The format of the questions related to previous knowledge of and participation in agritourism activities was adopted from a New Jersey Agritourism Survey (Komar, 2008). These steps included review of the instrument by knowledgeable colleagues, informal discussions, a small pilot study of thirty random individuals at a grocery store, and a final check of the instrument prior to administering it at the state fair. The result of the Dillman process required no major changes in the content or design of the instrument.

The pilot test and survey data were compared using a two independent samples t-test (Ary et al., 2002). There were no statistically significant differences in the means of the two groups so the data from the groups were combined, increasing the total number of respondents in the study to 415. The sample population in the study was 415, however the number of responses reported may be less due to non-responses. The demographic data obtained from the 415 questionnaires was also compared with the 2000 Iowa Census data. The demographic information was well distributed and demonstrated similar trends as the 2000 Iowa Census data. Based on the number of surveys obtained and tests performed, the results of the survey may be generalized to the entire Iowa population.

In response to the purpose of the study, to utilize population specific data to describe participation and Iowa consumer trends towards agritourism activities, the respondents were categorized in either non-urban or urban based on their responses describing the area in which they lived. The U.S. Census Bureau defined an urbanized area as those locales with an urban nucleus of 50,000 or more people (Cromartie, 2007). Thus, for the purpose of this study, those individuals identifying the area they lived in with having a population of 49,999 or fewer were placed in the non-urban category and those identifying the area they lived in with having a population of 50,000 or more were placed in the urban category.

The results of the questionnaire data were analyzed using descriptive statistics. The data were reported utilizing frequency of responses and placed in order from the most common to least common response. The information obtained can be used by Extension educators and other stakeholders to aid in the continued development of the Iowa agritourism industry.

Results

Using the demographic data obtained from the respondents, the survey sample was evenly distributed and represented individuals from every region of the state. Of the 415 respondents, 45.54% were male and 54.46% were female ranging in age from 18 to 80. Even though the survey was administered in an urban location, a majority of the sample population reported the area they lived in a non-urban population (67.80%) versus an urban population (32.20%). The ethnic background closely represented the 2000 Iowa

Census, as 93.69% were Caucasian or White, 2.67% were African American or Black, 2.43% were Asian or Pacific Islander, and 0.97% were Latino or Hispanic in the study.

The education levels and household incomes reported in the study included fewer lower education and income levels while including more graduate degrees and higher income levels than the information from the 2000 Iowa Census. However, the data were self-reported and contained individual question non-responses. Despite the differences between the distribution of lower and higher income and education levels in the study and Census information, there were similar trends found among the center, as the 2000 Iowa Census reported 79.60% of Iowans have a high school to bachelor's degree, while 82.73% of respondents in the survey had a high school to bachelor's degree. Likewise, even though the survey reported household incomes contained a higher percentage of higher income levels than the 2000 Iowa Census, there were similar trends to the 2000 Iowa Census information found. The 2000 Census reported the largest percentage (21%) of household incomes between \$50,000-\$74,999, and in the sample population, the largest percentage of respondents (25.80%) were also in the \$50,000-\$74,999 household income range.

The first objective was to assess consumer understanding of agriculture and food production. Out of the 410 respondents, the majority reported some understanding of agriculture (72.68%) and food production (67.80%). The non-urban respondents were more likely to report they had an extensive understanding of agriculture (25.90%) and food production (34.89%) than the urban respondents (9.85% and 13.63%, respectively).

In total, few respondents reported having no understanding of agriculture (6.59%) or food production (4.15%).

The second objective was to assess the familiarity of respondents to agriculture-related tourism terms (Table 1). Less than half of the respondents were familiar with the agriculture-related tourism terms presented in the survey. Overall, the most familiar term to the respondents was agritourism, with 48.85% reporting they had heard the term prior to completing the survey. Familiarity with the other agriculture-related tourism terms including, ecotourism (42.93%), green tourism (36.59%), and nature-based tourism (35.61%), was slightly lower. However, based on the population categories, a larger percentage of urban respondents reported they had heard of ecotourism (48.48%), green tourism (43.18%), and nature-based tourism (38.64%) than the non-urban respondents.

Table 1

Familiarity with Agriculture-related Tourism terms by Population Category

Term		Non-urban (n= 278)		Urban (n= 132)		Total (n= 410)	
		N	%	N	%	N	%
Agritourism	Yes	130	46.76	58	43.94	188	45.85
	No	148	53.24	74	56.06	222	54.15
Ecotourism	Yes	112	40.29	64	48.48	176	42.93
	No	166	59.71	68	51.52	234	57.07
Green tourism	Yes	93	33.45	57	43.18	150	36.59
	No	185	66.55	75	56.82	260	63.41
Nature-based tourism	Yes	95	34.17	51	38.64	146	35.61
	No	183	65.83	81	61.36	264	64.39

Note. Non-urban includes areas with populations under 49,999 and urban includes areas with populations over 50,000.

The third objective of the study was to explore the type of agritourism activities in which consumers have participated. While the respondents may not have been familiar with agritourism or the other agriculture-related tourism terms, only 25 of the 410 respondents (6.10%) had not participated in any of the twenty agritourism activities listed in the survey. Table 2 represents the types of agritourism activities which the respondents reported participating in over the last five years. Overall, the most common agritourism activities that respondents had participated in included farmers markets (80.24%) and pick-your-own fruit/vegetable operations (66.34%). The least common agritourism

activities included hunting for a fee on private land (13.66%), on-farm concerts (13.90%), and on-farm weddings (14.88%). A higher percentage of urban respondents had participated in wine tasting at a vineyard and farmers markets than non-urban respondents. On the other hand, a higher percentage of non-urban respondents had participated in on-farm camping, 4-wheeling/ATV riding, cut your own tree, and farm tours than urban respondents. Of the total number of respondents that had participated in agritourism activities over the last five years, 214 out of the 410 total respondents (52.20%) reported they returned to visit the same farm or participate in the same agritourism activity during the year.

Table 2

Participation in Agritourism Activities by Population Category

Activity	Non-urban (n= 278)		Urban (n= 132)		Total (n= 410)	
	N	%	N	%	N	%
Farmers Market	210	75.54	119	90.15	329	80.24
Pick-your-own fruit/vegetables	191	68.71	81	61.36	272	66.34
Hay Ride	149	53.60	68	51.52	217	52.93
Wine tasting at a vineyard	122	43.88	70	53.03	192	46.83
Cut your own tree	129	46.40	46	34.85	175	42.68
4-wheeling/ATV riding (private land)	129	46.40	40	30.30	169	41.22
Corn Maze	98	35.25	40	30.30	138	33.66
Horseback riding (on private land)	91	32.73	38	28.79	129	31.46
Farm tour	102	36.69	26	19.70	128	31.22
Farm produce tasting	83	29.86	39	29.55	122	29.76
Petting zoo (on-farm)	76	27.34	32	24.24	108	26.34
Fishing for a fee (on private land)	73	26.26	33	25.00	106	25.85
Bed & Breakfast	65	23.38	38	28.79	103	25.12
Sleigh Ride	65	23.38	27	20.45	92	22.44
On-farm Camping	64	23.02	18	13.64	82	20.00
School field trip to a farm	63	22.66	18	13.64	81	19.76
Nature Retreat	48	17.27	29	21.97	77	18.78
Wedding (on-farm)	42	15.11	19	14.39	61	14.88
On-farm concerts	36	12.95	21	15.91	57	13.90
Hunting for a fee (on private land)	45	16.19	11	8.33	56	13.66

Note. Non-urban includes areas with populations under 49,999 and urban includes areas with populations over 50,000.

The fourth objective was to determine how consumers are becoming aware of agritourism activities (Table 3). Respondents that had participated in agritourism activities over the past five years were asked how they had learned about the farm or agritourism activity they had visited. Thirteen options were provided and respondents were able to select all that applied and write-in any additional items. The most popular form of communication surrounding the agritourism activities was through word-of-mouth, with 67.18% of respondents stating that they had learned about the farm or agritourism activity they visited through word-of-mouth. The other most common forms of communication included newspaper (30.77%) and radio (20.00%). The least common forms of communication included the Chamber of Commerce (3.85%) and a farm/agritourism Web site (2.56%). There were no common themes found among the write-in responses.

Table 3

Form of Communication to Learn about Agritourism Activities by Population Category

Communication Form	Non-urban (n= 264)		Urban (n= 126)		Total (n= 390)	
	N	%	N	%	N	%
Word of Mouth	171	64.77	91	72.22	262	67.18
Newspaper	76	28.79	44	34.92	120	30.77
Radio	56	21.21	22	17.46	78	20.00
Television	51	19.32	19	15.08	70	17.95
Brochures	42	15.91	19	15.08	61	15.64
Internet Search Engine	37	14.02	22	17.46	59	15.13
School activity	42	15.91	13	10.32	55	14.10
Farm Sign	34	12.88	9	7.14	43	11.03
Promotional flyer	25	9.47	11	8.73	36	9.23
Tourism/guide book	17	6.44	16	12.70	33	8.46
Church activity	18	6.82	15	11.90	33	8.46
Chamber of Commerce	12	4.55	3	2.38	15	3.85
Farm/agritourism Web site	7	2.65	3	2.38	10	2.56

Note: Non-urban includes areas with populations under 49,999 and urban includes areas with populations over 50,000.

The fifth objective of the study was to identify travel preferences of the consumers. As individuals are venturing to farms and participating in agritourism activities, information regarding travel preferences will help the owner/operator in developing their agritourism package experience. Respondents were asked to rank the seasons in order of the

likelihood they would visit a farm or participate in an agritourism activity. The respondents ranked fall as the most likely and winter as the least likely season they would visit a farm or participate in an agritourism activity. Out of the 351 respondents, 158 respondents (45.01%) reported they were most likely to visit or participate in the fall and 299 respondents (85.19%) reported they were least likely visit or participate in the winter.

Respondents were also asked to indicate with whom they would visit a farm or participate in an agritourism activity with. Eight options were provided and respondents were able to select all that applied and write-in any additional items. The most common responses included spouse or partner (72.53%), friends (66.27%), immediate family (65.54%), and extended family (40.48%). The least common responses included tour groups (8.92%), school groups (14.94%), church groups (14.70%), and alone (17.11%). There were no common themes found among the write-in responses.

The final question regarding consumer preferences towards agritourism activities included how many miles they would be willing to travel to visit a farm or participate in an agritourism activity (Table 4). Seven options were provided ranging from “I would not visit” to “Greater than 90 miles.” Only three urban respondents of the 410 total (0.73%) reported respondents indicated they would not visit. One-third of the total respondents (30.73%) indicated they would travel 31-50 miles to visit or participate in an agritourism activity and another one-third (29.02%) indicated they would travel 11-30 miles. The rest of the respondents indicated the following; 1-10 miles (9.02%), 51-70 miles (15.85%), and greater than 90 miles (10.00%).

Table 4.

Preferred Travel Distance to Agritourism Activities by Population Category

Distance	Non-urban (n= 278)		Urban (n= 132)		Total (n= 410)	
	N	%	N	%	N	%
Would not visit	0	0.00	3	2.27	3	0.73
1-10 miles	30	10.79	7	5.30	37	9.02
11-30 miles	71	25.54	48	36.36	119	29.02
31-50 miles	86	30.94	40	30.30	126	30.73
51-70 miles	51	18.35	14	10.61	65	15.85
71-90 miles	14	5.04	5	3.79	19	4.63
Greater than 90 miles	26	9.35	15	11.36	41	10.00

Note. Non-urban includes areas with populations under 49,999 and urban includes areas with populations over 50,000.

Conclusion

The results of this study reveal the following conclusions: 1) A majority of Iowans indicate some or extensive understanding of agriculture and food production; 2) Iowans are relatively unfamiliar with agritourism and other agriculture-related tourism terms; 3) regardless of their familiarity with agriculture-related tourism terms, a large percentage of Iowans have participated in agritourism related activities; 4) word-of-mouth remains to be an effective form of advertisement; 5) Iowa consumers are willing to travel and prefer to participate in agritourism activities in the fall with those to whom they are closest to including their spouses, immediate family, and friends.

Previous literature addressing agritourism suggested that agritourism is not a new idea; individuals have always visited farms and rural areas (Wicks & Merrett, 2003; Dane, 2001). However, the terms surrounding agriculture-related tourism are new and unfamiliar to consumers. The results of this study were similar to previous studies which demonstrated consumer preferences and interest towards agritourism activities (Jensen et al., 2006; Che, Veeck, & Veeck, 2007; Jolly & Reynolds, 2005; Hilchey & Kuehn, 1999). The findings of this study provide more insight into the preferences and travel trends of the typical Iowa consumer involved in agritourism activities. Similar to previous studies, participants in this study indicated a high level of previous involvement in agritourism activities and were likely to return to participate in the same agritourism activity (Che et al.; Jensen et al.; Jolly & Reynolds).

Word-of-mouth serving as the primary means of communication about agritourism activities was consistent with the results of previous studies (Hilchey & Kuehn, 1999; Che et al., 2007; Jensen et al., 2006). The low response to learning about the agritourism activity through the Internet was also consistent with previous literature (Che et al.). Results regarding who individuals were most likely to travel with were also similar to findings from previous studies in other states, with individuals most likely to participate in agritourism activities with family and friends (Hilchey & Kuehn; Che et al.).

Implications

The results of this study have implications for the Iowa agritourism industry as it has only recently begun to organize and develop. The results summarize the level of participation

and Iowa consumer trends towards agritourism activities. Previous studies addressing interest levels towards agritourism activities focused on surveys of visitors already visiting or actively participating in an agritourism activity, which yielded high levels of interest and participation in agritourism activities (Jensen et al., 2006; Che et al., 2007; Hilchey & Kuehn, 1999). The results of this study are particularly valuable as they assess the involvement and travel preferences of a random sample of Iowans, also yielding a high level of interest and participation in agritourism activities. The results provide valuable insight for agritourism owner/operators about prospective agritourism visitors.

A study in California by Jolly and Reynolds (2005) also targeted a random sample of residents in two California counties. However, they utilized a mailing list and had a low response rate of 15%. Jolly and Reynolds suspected bias of those who had participated in agritourism activities in the past being more likely to respond but they still found the information to be useful and acknowledged the importance of providing owner/operators with information about prospective consumers.

The information obtained from this study is useful information for Extension educators, agritourism owner/operators, and state agricultural organizations involved with the agritourism industry, as the results demonstrate that Iowans are interested in and willing to travel to participate in agritourism activities. This interest in agritourism provides an opportunity for rural community development by bringing revenue to rural areas both on-site and near the operation (Jensen et al., 2006; Geisler, 2008). Agritourism also benefits

the owner/operator as it provides alternative use of farmland and improves business sustainability (Jensen et al.; Geisler). Outside of the economic benefits, agritourism also has the potential for informal agricultural education between the owner/operator and the general population which has little to no direct contact with agriculture (Jolly & Reynolds, 2005).

Recommendations

As previous studies have demonstrated the importance of understanding the prospective visitor in order to plan and develop a promotional strategy (Jolly & Reynolds, 2005; Lobo et al., 1999), Extension educators and state agricultural organizations involved in the growth and development of the Iowa agritourism industry should consider these findings as they work with agritourism owner/operators in developing and promoting the agritourism activities. Continued research into agritourism will help to provide additional assistance to community specialists like Extension educators and small business development centers to aide them in providing information to agritourism entrepreneurs and visitors (McGehee & Kim, 2004). It is the role of Extension education to provide this existing and new university-based knowledge to local communities (Bull, Cote, Warner, & McKinnie, 2004).

Further research is also needed to determine other types of assistance that are needed by the agritourism owner/operators. In order to find even more detailed information about prospective agritourism visitors, future studies may be conducted which focus on specific

areas or counties within the state. This study provides the initial framework for such studies to be conducted in individual counties throughout the state.

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Iowa Consumer Motivations and Preferences Towards Agritourism Activities

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Abstract

The purpose of this study was to describe the agritourism attraction preferences of Iowa consumers based on population category, urban and non-urban. Respondents were asked questions regarding their motivation and preferences surrounding their participation in agritourism activities. The results revealed that individuals enjoy participating in agritourism activities to spend time with family and friends while supporting their local farmer. They placed high importance on the availability of fresh produce, on-site restrooms, and a convenient location. A majority of the respondents also stated interest in purchasing Iowa products. The information regarding consumer motivation and preferences may be used by Extension educators, state agricultural and economic development organizations, and the agritourism owner/operator to create a consumer profile and target market prospective audiences.

Introduction

Forms of agricultural-related tourism are becoming increasingly popular across the country, serving as a form of entertainment or an educational activity. The activities may include visits to on-farm attractions or educational events such as roadside produce stands, farmers markets, bed-and-breakfasts, vineyard wine tastings, corn mazes, and hayrides. There are a number of terms which describe these activities and forms of tourism, including, but not limited to, agritourism, rural tourism, ecotourism, green tourism, nature-based tourism, and farm tourism (McGehee & Kim, 2004). The Iowa State University Extension system recognizes agritourism as a meeting between agriculture and tourism and views it as "...a growing segment of the rural economy in many areas of Iowa" (Iowa State University Extension, 2009, np).

Agritourism is beneficial to rural areas as it provides alternative use of farmland, increases revenue of on-farm activities, and improves business sustainability (Jensen et al., 2006; Geisler, 2008). Agritourism also has the potential for informal agricultural education between the owner/operator and the general population which has little to no direct contact with agriculture (Jolly & Reynolds, 2005).

Nationwide, the 2007 U.S. Census of Agriculture showed that the number of farms had increased by 4% since the 2002 Census. The 2007 Census also showed that new farms tended to be smaller in size, with more residential/lifestyle farms (36%) and retirement farms (21%). The increase in small farms and the larger number of residential/lifestyle and retirement farms support growth of the agritourism industry. The 2007 Census also

reported an increase in income from agritourism and recreational services nationwide, with incomes increasing from \$202 million in 2002 to over \$566 million in 2007.

Iowa's roots in agriculture make agritourism a practical growth and rural economic development opportunity within the state. According to the 2007 U.S. Census of Agriculture, there are 92,856 farms in Iowa, an increase of 2% from the 2002 Census.

While the number of farms has increased, the average size of farms has decreased by 5% according to the 2007 Census. Farms with less than 100 acres now compromise 41% of all Iowa farms, an increase of 19% from 2002 (US Census of Agriculture, 2007).

According to the 2007 Census, agritourism and recreational services in Iowa also exhibited an increase in incomes, increasing three and half times from \$880,000 in 2002 to over \$3.1 million in 2007.

Currently the Iowa agritourism industry is supported by various departments within the Iowa State University Extension system including the Value Added Program as well as public and private organizations throughout the state. The Iowa State University Extension system (2009) has developed a "Visit Iowa Farms" Web site which offers information for consumers about various Iowa agritourism operations and provides owner/operators information regarding rules and regulations, legal considerations, and training resources. In addition to the development of a Web site, the Iowa State University Extension Value Added Program is in the progress of conducting a study of agritourism owner/operators which focuses on marketing and research strategies to

promote on-farm retail enterprises in the Iowa agritourism industry (Leopold Center for Sustainable Agriculture, 2008).

With the current research and growth in the number of organizations throughout the state interested in the potential for agritourism, timing is ideal for organized efforts to build the Iowa agritourism industry. However, to do so, more research is needed, particularly focusing on obtaining information regarding prospective agritourism visitors.

In order to develop the agritourism industry, it is important to have an understanding of the agritourism target market (Lobo et al., 1999). This study focused on Iowa consumers as prospective agritourism visitors. The study also aimed to complement the current activities being done by the Iowa State University Extension system. It is the intention of this study that the results obtained will be used to provide insight to owner/operators and stakeholders within the Iowa agritourism industry in identifying consumer preferences, which will help in planning and developing promotional strategies.

Review of Literature

There are a number of trends within the agricultural industry which support the growth and development of the agritourism industry. Currently larger-scale farms provide a majority of the food purchased by U.S. consumers; however, local foods are becoming increasingly popular (Pirog, 2009). According to the 2007 U.S. Census of Agriculture, the number of farms in Iowa that sold agricultural products directly to individuals showed an increase of 22%, rising from 2,455 farms in 2002 to 2,987 farm in 2007. Consumers

are becoming more interested in knowing where their food is coming from and reestablishing the connection to the family farm and community (Pirog).

Previous studies have indicated that consumers choose to purchase produce through direct markets for the selection, opportunity to purchase locally grown produce, and to help local farmers (Kuches, Toensmeyer, German, & Bacon, 1999). Agritourism creates opportunities for the owner/operator to link with their consumer and directly market their products (Lobo et al., 1999). In addition to linking the consumer to the owner/operator, direct marketing allows the owner/operator to bypass the traditional distribution network and earn a greater share of profits (Kuches et al.).

Besides increasing the economic benefits, there is a common social theme throughout the literature that shows owner/operators have a desire to educate the public about agriculture's contributions to the local economy and quality of life (McGehee & Kim, 2004; Nickerson et al., 2001; Putzel, 1984; Lobo et al., 1999). Similarly, it is also the goal of Extension education to partner with citizens, communities and university colleagues to extend the research of the public, land-grant university (Bull, Cote, Warner, & McKinnie, 2004). Extension education must constantly evolve to provide existing and new university-based knowledge to local communities (Bull et al.). The challenge that faces Extension education is to go beyond the traditional role of educational programming and find new ways to gather and disseminate information surrounding agritourism (Burkhart-Kriesel & Francis, 2007). Further research into agritourism will

help to provide assistance to community specialists to aid them in providing information to agritourism entrepreneurs and visitors (McGehee & Kim).

The relationship between the agritourism industry and the Extension system is mutually beneficial as the Iowa State University Cooperative Extension for Agricultural and Natural Resources system (2007) emphasizes increasing rural vitality and stimulating new economic development opportunities. Agritourism aids rural community development by creating business sustainability and bringing revenue to rural areas (Jensen et al., 2006; Geisler, 2008). Previous studies conducted focusing on the economic impact agritourism has on local communities have shown a positive impact for both the farm operation and host community (Jensen et al.; Lobo et al., 1999).

In addition to the economic benefits, there are also social benefits created through the relationships formed which aid in the long-term sustainability (Burkhart-Kriesel & Francis, 2007; Flora & Flora, 2008). The formation of personal relationships has shown to be an influencer behind the agritourism owner/operators motivation to start and stay in business (Schroeder, 2004; Nickerson et al., 2001). The agritourism owner/operator creates the link between the products and experience they are providing the consumer, which in turn contributes to a positive economic and social environment (Schroeder).

The literature demonstrates the current trends within the agricultural industry as well as the economic and social benefits of agritourism which support the continued growth and development of the agritourism industry.

Purpose and Objectives

The overall purpose of this study was to describe the agritourism attraction preferences of Iowa consumers based on population category, which was categorized as either non-urban or urban. The specific objectives were to 1) define consumer motivation behind participation in an agritourism activity; 2) distinguish the importance among agritourism amenities; 3) distinguish the importance among agritourism services; 4) explore consumer interest in purchasing Iowa products.

Methods and Procedures

This study utilized a directly-administered survey to obtain a higher response rate and fewer incomplete answers (Ary, Jacobs, & Razavieh, 2002). The questionnaire was developed to assess consumer motivation and preferences towards agritourism activities. The format of the questions was adopted from the New Jersey Agritourism Survey by Komar (2008) and Visitors to Tennessee Agri-tourism Attractions survey by Jensen et al. (2006). The questions were tailored towards Iowa agritourism operations by utilizing information available through the Iowa State University Extension (2009) "Visit Iowa Farms" Web site. The three sections regarding consumer motivation and preferences towards services and amenities utilized a Likert-type scale with five as extremely important, three as moderately important and one as not important. An additional section addressed consumer preferences towards the purchase of Iowa products. Respondents were asked whether or not they would be interested in Iowa products and if so, asked to select what types of Iowa products they would purchase.

In addition to the agritourism-related questions, the last section of the questionnaire contained demographic questions. The format of the questions was developed using the 2000 Iowa Census Information (U.S. Census Bureau, 2008). Participants were asked to provide basic demographic information about their gender, age, ethnicity, home area, highest education level attained, and household income. The demographic data obtained from the study was compared with the 2000 Iowa Census demographic data to determine the extent to which the sample population in the study was representative of the Iowa population. The demographic information from the study was well distributed and closely mirrored the 2000 Iowa Census demographic data.

In response to the purpose of the study, the demographic information obtained from the respondents was utilized to place respondents in either the non-urban or urban category. The U.S. Census Bureau defined an urbanized area as those locales with an urban nucleus of 50,000 or more people (Cromartie, 2007). Thus, for the purpose of this study, those individuals identifying the area they lived in with having a population of 49,999 or fewer were placed in the non-urban category and those identifying the area they lived in with having a population of 50,000 or more were placed in the urban category.

To insure the content and validity of the instrument, the researcher utilized a series of steps proposed by Dillman (2007). These steps were completed prior to directly administering the survey at the Iowa State Fair and included review of the instrument by knowledgeable colleagues, informal discussions, a small pilot study of thirty random

individuals at a grocery store, and a final check of the instrument. The result of the Dillman process required no major changes in the content or design of the instrument.

The researcher served as the survey administrator and administered the survey over the course of six days at the 2008 Iowa State Fair to a random sample of individuals. The survey administrator asked individuals at random to voluntarily complete the survey. The primary locations targeted were areas with high traffic flow, such as free entertainment stages and exhibit buildings, as well as places where individuals would be standing in line. Participants in the survey were both males and females with ages ranging from 18 to 80 representing all regions of the state. In total, 385 individuals participated in the survey. The survey was administered to 385 individuals based on the Iowa population and a 95% confidence interval with a margin of error of ± 5 (Ary et al., 2002).

The pilot test and survey data were compared using a two independent samples t-test (Ary et al., 2002). There were no statistically significant differences in the means of the two groups so the data from the groups were combined, increasing the total number of respondents in the study to 415. The sample population in the study was 415, however the number of responses reported may be less due to non-responses to individual questions. Based on the number of surveys obtained and tests performed, the results of the survey may be generalized to the entire Iowa population.

The results of the combined questionnaire data were analyzed using descriptive statistics. The questions which utilized a Likert-type scale were reported by individual means and standard deviations. The final question regarding preferences towards purchasing Iowa products was reported by frequency and products were ranked from highest to lowest. The information obtained from this study can be used by Extension educators and other stakeholders to aid in the continued development of the Iowa agritourism industry.

Results

Using the demographic data obtained from the respondents, the survey sample was evenly distributed and represented individuals from every region of the state. Of the 415 respondents, 45.54% were male and 54.46% were female ranging in age from 18 to 80. Even though the survey was administered in an urban location, a majority of the sample population reported the area they lived in a non-urban population (67.80%) versus an urban population (32.20%). The ethnic background closely represented the 2000 Iowa Census, as 93.69% were Caucasian or White, 2.67% were African American or Black, 2.43% were Asian or Pacific Islander, and 0.97% were Latino or Hispanic in the study.

The education levels and household incomes reported in the study included fewer lower education and income levels while including more graduate degrees and higher income levels than the information from the 2000 Iowa Census. However, the data were self-reported and contained individual question non-responses. Despite the differences between the distribution of lower and higher income and education levels in the study and Census information, there were similar trends found among the center, as the 2000 Iowa

Census reported 79.60% of Iowans have a high school to bachelor's degree, while 82.73% of respondents in the survey had a high school to bachelor's degree. Likewise, even though the survey reported household incomes contained a higher percentage of higher income levels than the 2000 Iowa Census, there were similar trends to the 2000 Iowa Census information found. The 2000 Census reported the largest percentage (21%) of household incomes between \$50,000-\$74,999, and in the sample population, the largest percentage of respondents (25.80%) were also in the \$50,000-\$74,999 household income range.

The results of the survey met the overall purpose of this study, which was to describe the agritourism attraction preferences of Iowa consumers based on population category. The first objective was to define consumer motivation behind participation in an agritourism activity. The respondents were presented with six options as well as space to write-in any additional reasons they have or would participate in an agritourism activity. In the end, all of the options were ranked as important, with mean rankings ranging from 4.02 (highly important) to 3.01 (moderately important) (Table 1). The opportunity to spend time with family and friends was ranked the highest (4.02) and the opportunity to learn about local agriculture was ranked the lowest (3.01). Non-urban respondents ranked supporting local farmers (3.99) and spending time with family and friends (3.98) as the most important reasons for participating in an agritourism activity. Urban respondents ranked spending time with family and friends (4.10) and purchasing fresh products (3.89) as the most important reasons for participating in an agritourism activity.

Table 1

Importance of Reasons for Participating in an Agritourism Activity by Population Category

Reason	Non-urban (n= 278)		Urban (n= 132)		Total (n= 410)	
	Mean	SD	Mean	SD	Mean	SD
Spend time with family/friends	3.98	0.98	4.1	0.88	4.02	0.95
Support local farmers	3.99	0.93	3.85	0.97	3.94	0.94
Purchase fresh products	3.79	0.91	3.89	0.88	3.82	0.90
Enjoy rural scenery	3.78	1.02	3.8	1.05	3.79	1.03
Short distance for vacation	3.15	1.24	3.05	1.22	3.11	1.23
Learn about local agriculture	3.08	1.15	2.86	1.05	3.01	1.13

Note. Non-urban includes areas with populations under 49,999 and urban includes areas with populations over 50,000. Scale: 1= not important, 2= little importance, 3= moderately important, 4= highly important, 5= extremely important.

The second objective was to distinguish the consumer perceived importance among agritourism amenities. The respondents were presented with eight options and asked to individually rank the importance of each when participating in an agritourism activity. Each of the options was ranked as important, with rankings ranging from 3.67 (highly important) to 2.52 (moderately important) (Table 2). The highest ranked amenities overall, and in both categories, included the availability of on-site restrooms and a convenient location. Overall, the lowest ranked amenities were handicap accessibility (2.52) and availability of crafts or souvenirs for purchase (2.53).

Table 2

Importance of Availability of Amenities at Agritourism Site by Population Category

Amenity	Non-urban (n= 278)		Urban (n= 132)		Total (n= 410)	
	Mean	SD	Mean	SD	Mean	SD
On-site restrooms	3.67	1.16	3.67	1.18	3.67	1.17
Convenient location	3.64	0.95	3.60	0.77	3.63	0.89
Adequate parking	3.49	1.12	3.37	1.13	3.45	1.12
Food/drink for purchase	3.17	1.16	3.44	1.03	3.25	1.12
Credit card accepted	2.79	1.27	2.98	1.21	2.85	1.25
Picnic area available	2.82	1.18	2.70	1.07	2.78	1.15
Crafts/souvenirs for purchase	2.56	1.19	2.48	1.15	2.53	1.17
Handicap accessible	2.66	1.48	2.23	1.36	2.52	1.45

Note. Non-urban includes areas with populations under 49,999 and urban includes areas with populations over 50,000. Scale: 1= not important, 2= little importance, 3= moderately important, 4= highly important, 5= extremely important.

The third objective of the study was to distinguish the consumer perceived importance of agritourism services. The respondents were presented with seven options and asked to rank the importance of each when participating in an agritourism activity. Overall, the responses ranged from 3.87 (highly important) to 2.41 (little importance) (Table 3).

Overall, the availability of fresh products was ranked the highest and the availability of group tours was ranked the lowest.

While the availability of fresh products was ranked the highest, it is interesting to note the distributions of the importance of certified organic products versus naturally-raised (not-

organic) products. Of the total respondents, 43.17% ranked the importance of products being organically certified as not important to little importance versus 26.83% ranking it as highly to extremely important. The availability of naturally-raised (not organic) products was ranked as more important. Of the total respondents, 40.49% ranked the importance of products being naturally-raised (not organic) as highly to extremely important versus 27.56% ranking it as not important to little importance.

Table 3

Importance of Availability of Services at Agritourism Site by Population Category

Service	Non-urban (n= 278)		Urban (n= 132)		Total (n= 410)	
	Mean	SD	Mean	SD	Mean	SD
Fresh products for purchase	3.86	0.92	3.88	0.90	3.87	0.91
Opportunity to pick-your-own fruit/vegetables	3.26	1.17	3.22	1.07	3.25	1.14
Naturally-raised products for purchase	3.17	1.19	3.07	1.15	3.14	1.18
Opportunity to learn about products	3.00	1.20	2.87	1.09	2.96	1.17
Organic products for purchase	2.73	1.22	2.90	1.17	2.79	1.21
Opportunity to care for animals	2.78	1.24	2.55	1.17	2.71	1.22
Group tours available	2.44	1.12	2.34	1.05	2.41	1.10

Note. Non-urban includes areas with populations under 49,999 and urban includes areas with populations over 50,000. Scale: 1= not important, 2= little importance, 3= moderately important, 4= highly important, 5= extremely important.

The fourth objective was to explore consumer interest in purchasing Iowa products (Table 4). Out of the 410 total respondents, only 14, or 3.41%, reported they would not be interested in purchasing Iowa products. Of the 14 who were not interested in

purchasing Iowa products, 13 were non-urban respondents (92.86%) and one was an urban respondent (7.14%). Those who were interested in purchasing Iowa products were provided a list of ten products as well as space to write-in any additional responses to show the types of Iowa products they would be interested in purchasing. Out of the 398 respondents who were interested in purchasing Iowa products, the most common products were fresh vegetables (96.48%) and fresh fruit (95.23%). A higher percentage of urban respondents were interested in purchasing specialty foods and flowers and plants than the non-urban respondents while a higher percentage of non-urban respondents were interested in purchasing traditional meats and eggs than urban respondents. The least popular products overall included clothing (25.88%) and exotic meats (19.60%). There were no overwhelming trends found in the write-ins as only 11 individuals (2.8%) provided write-ins. The write-ins did reveal products that may have been forgotten, including wine and honey.

Table 4

Interested in Purchasing Iowa Products at Agritourism Site by Population Category

Product	Non-urban (n= 267)		Urban (n= 131)		Total (n= 398)	
	N	%	N	%	N	%
Fresh vegetables	256	95.88	128	97.71	384	96.48
Fresh fruit	252	94.38	127	96.95	379	95.23
Specialty products	179	67.04	109	83.21	288	72.36
Traditional meats	172	64.42	71	54.20	243	61.06
Dairy products	159	59.55	79	60.31	238	59.80
Flowers/plants	141	52.81	79	60.31	220	55.28
Eggs	155	58.05	59	45.04	214	53.77
Homemade crafts	110	41.20	52	39.69	162	40.70
Clothing	64	23.97	39	29.77	103	25.88
Exotic meats	54	20.22	24	18.32	78	19.60

Note. Non-urban includes areas with populations under 49,999 and urban includes areas with populations over 50,000.

Conclusion

The results of this study reveal the following conclusions: 1) consumer motivation behind participating in agritourism activities is influenced by the opportunity to purchase fresh products and support local farmers; 2) when traveling to agritourism activities, consumers place high importance on a convenient location and on-site restrooms; 3) consumers rank it as highly important to have fresh products available at agritourism activities, less importance is placed on whether or not the products are naturally-raised and even less

importance is placed on whether or not the products are certified organic; 4) consumers are very interested in purchasing Iowa products, particularly fresh vegetables and fruits.

The findings of this study provide more insight into the preferences and motivations of the typical Iowa consumer towards agritourism activities. Similar to previous studies, consumers participated in agritourism activities to purchase fresh products and support local farmers (Jolly & Reynolds, 2005; Jensen et al., 2006). However, unlike the study by Jolly and Reynolds in California, consumers in this study placed the most emphasis on the importance of spending time with family and friends as a motivation to participate in an agritourism activity.

Similar to previous studies, respondents indicated that on-site restrooms and a convenient location were highly important amenities when participating in an agritourism activity (Jensen et al., 2006). Also, consistent with previous studies, respondents indicated that the availability of fresh products were highly important (Jolly & Reynolds, 2005; Jensen et al.). There was also an overwhelming support of purchasing Iowa products during an agritourism activity with 96.59% responding they would be interested in purchasing Iowa products while visiting an agritourism activity. The importance placed on the availability of fresh products was also confirmed in their response to the types of products they would be interested in purchasing as a majority would purchase fresh vegetables (95.88%) and fresh fruits (94.38%).

Implications

The results of this study are useful as the Iowa agritourism industry is in the early stages of development and organization. The results summarize the motivations and preferences of Iowa consumers towards agritourism activities. The results provide valuable insight for agritourism owner/operators about prospective agritourism visitors.

The information obtained from this study may be useful for Extension educators, agritourism owner/operators, and state agricultural organizations involved with the agritourism industry, as it suggests that Iowans are interested in participating in agritourism activities. The results of this study help to define consumer preferences and provide needed support for the growth and development of the Iowa agritourism industry. As the agritourism industry grows, it not only aides in rural economic development through the diversification of farm operations and increased revenue on-site and near the operations, but it is also socially beneficial by providing a link between the owner/operator and consumer (Jensen et al., 2006; Geisler, 2008; Jolly & Reynolds, 2005).

Recommendations

The tourism industry continues to grow in Iowa, with over \$6.3 billion in generated expenditures in Iowa in 2007 (Iowa Department of Economic Development, 2009). Not only does the growth of tourism within the state support the agritourism industry, but also the fact that 50.3% of Iowa travelers in 2007 were from Iowa (Iowa Department of Economic Development). As the results of the study indicated, a majority of consumers

are interested in traveling 31-50 miles to participate in an agritourism activity, meaning that a majority of the visitors will be in-state visitors. The Iowa State University Extension system and other stakeholders should work with the tourism industry to encourage continued research, education, and outreach of agritourism activities. This collaborative effort is needed to ensure sustainable growth and development of the agritourism industry.

As previous studies have demonstrated the importance of understanding the prospective visitor in order to plan and develop a promotional strategy (Jolly & Reynolds, 2005; Lobo et al., 1999), Extension educators along with state agricultural and tourism development organizations should consider these findings as they work with agritourism owner/operators in developing and promoting the agritourism activities. Continued research into agritourism will help to provide additional assistance to community specialists like Extension educators and small business development centers to aide them in providing information to agritourism entrepreneurs and visitors (McGehee & Kim, 2004). It is the role of the Extension system to provide this existing and new university-based knowledge to local communities (Bull et al., 2004).

Further research is also needed to determine other types of assistance that is needed by the agritourism owner/operators. In order to find even more detailed information about prospective agritourism visitors, future studies may be conducted, which focus on specific areas or counties within the state. This study provides the initial framework for such studies to be conducted in individual counties throughout the state.

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CHAPTER VI. GENERAL CONCLUSIONS

To summarize the findings, it was discovered: 1) a large proportion of Iowans indicate at least some understanding of agriculture and food production; 2) agritourism and other agriculture-related tourism terms are relatively unfamiliar to Iowans; 3) a large proportion of Iowans have previously participated in agritourism activities; 4) word-of-mouth is the most effective form of advertisement for agritourism activities; 5) Iowans are willing to travel and prefer to participate in agritourism activities in the fall with family and friends; 6) consumer motivation is influenced by the opportunity to purchase fresh products and support local farmers; 7) consumer perceived importance of agritourism amenities is placed on a convenient location and on-site restrooms; 8) consumers view the availability of fresh products as highly important, however, less importance is placed on whether or not the products are naturally-raised or certified organic; 9) a large proportion of Iowans are interested in purchasing Iowa products, particularly fresh vegetables and fresh fruits.

These conclusions provide more insight regarding consumer understanding, participation, and preferences towards agritourism activities. The findings can be used to form a profile of the prospective agritourism visitor, which in turn supports the focused development of marketing resources and educational activities for the agritourism operation. Also, using the demographic data of the respondents, the results can be differentiated by population category which would allow agritourism owner/operators to better target their audience based on their location.

Iowans, both non-urban and urban, are familiar with agriculture and food production; it is not a new concept. The concept of agritourism is also not a new idea; individuals have always visited farms and rural areas (Wicks & Merrett, 2003; Dane, 2001). However, agriculture-related tourism terms are new and unfamiliar to the everyday consumer. In this study, less than half of the respondents were familiar with the agriculture-related tourism terms. Interestingly, in a comparison between urban and non-urban respondents, a larger percentage of urban respondents reported they had heard of ecotourism (48.48% versus 40.29%), green tourism (43.18% versus 33.45%), and nature-based tourism (38.64% versus 34.17%) than the non-urban respondents while the non-urban respondents were more likely to have heard of agritourism (46.76% versus 43.94%). These findings show a large number of Iowans are already participating in agritourism activities and yet are relatively unfamiliar with the terms describing the activities. Based on that finding, it is recommended that promotional and educational materials promote agricultural-related tourism with consistent terminology.

The findings of this study provide insight into the participation levels and travel trends of the typical Iowa consumer towards agritourism activities. Compared to other studies (Che, Veeck, & Veeck, 2007; Jensen et al., 2006; Jolly & Reynolds, 2005), a large majority of the total respondents, 93.90%, had participated in one or more agritourism activities over the past five years and indicated they were likely to return to participate in the same activity within the year. The most common activities which respondents had previously participated in included farmers markets and pick-your-own fruit or vegetables. Urban respondents were more likely to have participated in wine tasting at a

vineyard and farmers markets than non-urban respondents while the non-urban respondents were more likely have participated in on-farm camping, 4-wheeling/ATV riding, cut your own tree, and farm tours than urban respondents. As a result of these findings, it is recommended that promotion and advertising of agritourism activities is based on the location of the agritourism attraction and types of activities which the prospective visitor is most likely to participate in.

Consistent with prior studies and clearly identifiable among population categories (Hilchey & Kuehn, 1999; Che et al., 2007; Jensen et al., 2006), word-of-mouth is a primary means of communication of promoting agritourism activities, while few respondents indicated they had learned about the agritourism activity through the Internet. Also, consistent among the population categories and previous studies (Hilchey & Kuehn; Che et al.), respondents reported they were most likely to participate in agritourism activities with family and friends in the fall. In regards to travel, only 2.27% indicated they would not be interested in visiting an agritourism activity. Among non-urban and urban respondents, the largest majority of non-urban respondents (30.94%) reported they would be willing to travel 31-50 miles, while the largest majority of urban respondents (36.36%) reported they would be willing to travel 11-30 miles to participate in an agritourism activity. Based on these findings, stakeholders in the agritourism industry should consider the location of the agritourism attraction and the travel preferences of the prospective visitor in the development of agritourism activities.

Consumer motivation behind participating in agritourism activities surrounded the opportunity to purchase fresh products and support local farmers, which was consistent with previous studies (Jolly & Reynolds, 2005; Jensen et al., 2006). However, unlike the study by Jolly and Reynolds in California, respondents in Iowa considered the opportunity to spend time with family and friends as highly important when choosing to participate in an agritourism activity. There were also slight differences found between non-urban and urban respondents. Non-urban respondents ranked supporting local farmers and spending time with family and friends as the most important, while urban respondents ranked spending time with family and friends and the opportunity to purchase fresh products as the most important.

Similar to Jensen et al. (2006), respondents indicated that on-site restrooms and a convenient location were highly important amenities when participating in an agritourism activity. Also, similar to previous studies, both urban and non-urban respondents indicated that the availability of fresh products was highly important (Jolly & Reynolds, 2005; Jensen et al.). Respondents showed particular support towards the purchase of Iowa products. Of the 410 total respondents, 96.59% responded they would be interested in purchasing Iowa products, particularly fresh vegetables (95.88%) and fresh fruits (94.38%). Of the total respondents, 43.17% ranked the importance of products being organically certified as not important to little importance versus 26.83% ranking it as highly to extremely important. The availability of naturally-raised (not necessarily organic) products was ranked as more important. Of the total respondents, 40.49%

ranked the importance of products being naturally-raised (not organic) as highly to extremely important versus 27.56% ranking it as not important to little importance.

Overall, these findings reinforce the findings of previous studies which indicate that individuals have and continue to be interested in participating in agritourism activities (Che et al., 2007; Jensen et al., 2006; Jolly & Reynolds, 2005). Based on the findings and results of previous studies, stakeholders in the agritourism industry should focus on the consumer motivations behind participating in agritourism activities. Extension educators and other stakeholders in the agritourism industry ought to work with agritourism owner/operators in assisting them to develop the types of agritourism activities and experiences that the prospective visitor desires.

Implications

The information obtained from this study suggests Iowans, both non-urban and urban, are interested in and willing to travel to participate in agritourism activities. These findings have implications for Iowa agritourism stakeholders, particularly for Extension educators, state agricultural and tourism development organizations, and agritourism owner/operators as they may use the findings to develop targeted marketing and promotional strategies to aid in the development of the Iowa agritourism industry. The findings provide a profile of the prospective agritourism visitors which allows Extension educators and interested stakeholders to set priorities when determining the types of resources and information that are most important to the visitor in effectively promoting Iowa agritourism activities.

The results from this consumer-based study are useful as the Iowa agritourism industry is in early stages of development and organization. The results of the study complement the current activities of the Iowa State University Extension Value Added Program and provide additional information to Extension educators to utilize when working with agritourism owner/operators in promoting and developing agritourism activities.

Changes in programming and reduced budgets have resulted in value differences and conflict within Extension education causing them to update and reflect contemporary conditions (Seevers, Graham, & Conklin, 2007). Agritourism is a new opportunity within the state, not only within the agricultural industry but also within community development. In order to provide information regarding agritourism, Extension educators must remain up-to-date on the current trends and interests of the consumer. This study provides a view of consumer participation and interest levels to begin to define target markets within the agritourism industry. The information obtained also provides much needed support for the growth and development of the Iowa agritourism industry based on consumer interest.

Recommendations

In addition to consumers, Extension educators, state agricultural and tourism development organizations, and agritourism owner/operators, the Iowa agritourism industry also impacts local community and area businesses. The growth and development of the Iowa agritourism industry requires a collaborative effort between Extension educators, state agricultural and tourism development organizations, and

agritourism owner/operators. As a result of this study, five specific recommendations can be made for agritourism owner/operators, Extension educators, and state agricultural and tourism development organizations.

First, it is recommended that agritourism owner/operators and Extension educators focus on the consumer motivations behind participating in agritourism activities. Extension educators ought to work with agritourism owner/operators in assisting them to develop the types of agritourism activities and experiences that the prospective visitor desires. The prospective visitor is less interested in learning about local agriculture. However, it is vital that there is an educational component and owner/operators should subtly incorporate learning activities while placing less direct emphasis on learning as the primary means of participation. Prospective visitors are drawn to agritourism activities based on the opportunity to support their local farmers and spend time with family and friends. The owner/operator should focus on creating an atmosphere that supports the social motivators which draw the consumer, therefore creating a family-friendly environment. The results of the study show that visitors are likely to return to participate in the same agritourism activity again and word-of-mouth is the most effective form of communication, thus creating a positive experience ensures they return again as well as share their experience with others. The agritourism owner/operators should also take notice of the types of amenities and services which the consumer places high importance on, such as on-site restrooms, convenient location, and availability of fresh produce.

Because a large number of Iowans are already participating in agritourism activities and yet are relatively unfamiliar with the terms describing the activities, the second recommendation for the Extension educator plan of work should include the development of educational materials which promote agricultural-related tourism with consistent terminology. Promotional materials may be developed for the consumer to educate them on agritourism opportunities. The materials should visibly emphasize the motivators which draw consumers to agritourism activities, such as their desire to support their local farmers and spend time with family and friends, while subtly including the educational component.

As a third recommendation, in response to the promotion of agritourism activities, Extension educators should develop an organized communication tool, such as the “Visit Iowa Farms” Web site they have developed (Iowa State University Extension, 2009), however they must also promote the use of such tools as a method to gather information about Iowa agritourism activities. As shown in the results, very few consumers had learned about the agritourism activity through a Web site which shows that consumers are relatively unaware of such tools. In addition, Extension educators can work with the owner/operators and local community organizations to create a regional agritourism package which promotes and combines a number of agritourism activities under a day or weekend experience for the consumer.

The fourth recommendation is for state agricultural organizations to create educational resources and encourage small and beginning farmers to consider diversifying their

operation to include agritourism activities in addition to their working farm operation. The resources provided by the state agricultural organizations should contain the necessary rules and regulations as well as “start-up” information to help the owner/operator begin their agritourism operation. The agritourism activities will aid in supplementing their incomes and creating a sustainable operation. The fifth recommendation is for state tourism development organizations to encourage rural communities to embrace and promote agritourism, which in turn adds to the “experience” for the consumer while providing an opportunity for additional revenue both on-farm and within the community. Along with Extension educators, the state tourism development organizations can encourage the promotion and development of regional agritourism activities which allow the consumer to spend an entire day or weekend exploring agritourism.

As a result of this study, additional areas for future research have been found. While this study provides the initial framework, future studies should become more targeted towards population-specific data, such as targeting only urban or non-urban respondents or selecting a particular region or county within the state. In addition, additional studies should be used to estimate farm, community, and state economic impacts as a result of visitor expenditures while participating in agritourism activities.

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APPENDIX A: IOWA STATE UNIVERSITY'S INSTITUTIONAL REVIEW BOARD HUMAN SUBJECT PROTECTION REGULATIONS EXEMPTION LETTER

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office of Research Assurances
Vice President for Research
1138 Pearson Hall
Ames, Iowa 50011-2207
515 294-4566
FAX 515 294-4267

DATE: July 11, 2008

TO: Melissa Nasers
412 Welch Ave., Apt. 1, Ames, IA 50014

CC: Dr. Michael Retallick
206 Curtiss Hall

FROM: Jan Canny, IRB Administrator
Office of Research Assurances

TITLE: Iowa Agritourism Consumer Profile: Demographics, Preferences and Participation Levels

IRB ID: 08-266 **Study Review Date:** 11 July 2008

The Institutional Review Board (IRB) Chair has reviewed this project and has declared the study exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b). The IRB determination of exemption means that:

- **You do not need to submit an application for annual continuing review.**
- **You must carry out the research as proposed in the IRB application**, including obtaining and documenting (signed) informed consent if you have stated in your application that you will do so or if required by the IRB.
- **Any modification of this research should be submitted to the IRB on a Continuing Review and/or Modification form, prior to making any changes**, to determine if the project still meets the Federal criteria for exemption. If it is determined that exemption is no longer warranted, then an IRB proposal will need to be submitted and approved before proceeding with data collection.

Please be sure to **use the documents with the IRB approval stamp** in your research.

Please note that you must submit all research involving human participants for review by the IRB. **Only the IRB may make the determination of exemption**, even if you conduct a study in the future that is exactly like this study.

APPENDIX B: IOWA AGRITOURISM CONSUMER SURVEY INSTRUMENT

Iowa Agritourism Consumer Profile: Demographics, Preferences, and Participation Levels

This survey is being conducted as part of a graduate research project at Iowa State University in the Department of Agricultural Education and Studies. The purpose is to obtain current information related to the demographics, preferences, and participation levels of consumers in Iowa agritourism attractions. This study is for research purposes only. Participation is entirely voluntary and personal information will be kept confidential and will not be shared with any other party or organization. Any questions which you do not wish to answer may be skipped. Please do not provide your name or any other identifying information in the survey.

The Agricultural Marketing Resource Center at Iowa State University states, “agritourism is generally defined as activities that include visiting a working farm or any agricultural, horticultural or agribusiness operation to enjoy, be educated or be involved in what is happening at that locale”¹.

1. Please select the statement which best represents **your understanding of agriculture**. (Please check one)

I have no understanding of agriculture.

I have some understanding of agriculture.

I have extensive understanding of agriculture.

2. Please select the statement which best represents **your understanding of how your food is produced**. (Please check one)

I have no understanding of how my food is produced.

I have some understanding of how my food is produced.

I have extensive understanding of how my food is produced.

3. Please indicate if you had ever heard of the following terms **before** completing this survey. (Please check yes or no for each term)

Agritourism	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Ecotourism	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Green tourism	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Nature-based tourism	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Please continue to next page →

¹ Geisler, M. (2008). *Agritourism profile*. Retrieved March 18, 2008, from Agricultural Marketing Resource Center Web site: <http://www.agmrc.org/agmrc/commodity/agritourism/agritourism/agritourismprofile.htm>

4. Please indicate if you have been to or participated in any of the following **agritourism activities in the last five years.** (Please check yes or no for each item)

Accommodations

- | | | |
|---|------------------------------|-----------------------------|
| <input type="radio"/> Bed and Breakfast | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="radio"/> On-farm camping | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="radio"/> Nature retreat | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Recreation

- | | | |
|---|------------------------------|-----------------------------|
| <input type="radio"/> Hay Ride | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="radio"/> Sleigh Ride | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="radio"/> Corn Maze | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="radio"/> Horseback riding (on private land) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="radio"/> Pick-your-own fruit/vegetables | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="radio"/> 4-wheeling/ATV riding (on private land) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="radio"/> Hunting for a fee (on private land) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="radio"/> Fishing for a fee (on private land) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="radio"/> Cut your own tree | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Entertainment/Education

- | | | |
|---|------------------------------|-----------------------------|
| <input type="radio"/> On-farm concerts | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="radio"/> Wine tasting at a vineyard | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="radio"/> Farm produce tasting | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="radio"/> Farm tour | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="radio"/> School field trip to a farm | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="radio"/> Petting zoo (on-farm) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="radio"/> Wedding (on-farm) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="radio"/> Farmers Market | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Please continue to next page →

Agritourism Visits

If you answered "Yes" to any of the options in question 4, please answer questions 5-7.

If you answered "No" to all options in question 4, SKIP to question 8.

5. Please indicate how many visits you made **in the past year** to the following types of agritourism activities.

Accommodations 1 2 3 4 5+

Recreation 1 2 3 4 5+

Entertainment/Education 1 2 3 4 5+

6. In general, do you return to visit the same farm or participate in the same agritourism activity during the year?

Yes No

7. How did you learn about the farm or agritourism activity that you visited? (Please check **all** that apply)

Newspaper Brochures School activity

Radio Farm Sign Church activity

Television Tourism/guide book Chamber of Commerce

Internet Promotional flyer Other: _____

Word of mouth Farm/agritourism Web site _____

8. If you have not participated in agritourism activities, please indicate any reasons why you **have not** participated. (Please check **all** that apply)

Did not know about them Too expensive

Too far away/inconvenient Other:

Not interested

Please continue to next page →

9. Please rate the importance of each reason why you have or would participate in an agritourism activity. (Please circle your answer. 1 = Not important to 5 = Extremely important)

	Not important	Little importance	Moderately important	Highly important	Extremely important
To purchase fresh products	1	2	3	4	5
To support local farmers	1	2	3	4	5
To enjoy the rural scenery/nature	1	2	3	4	5
To spend time with family/friends	1	2	3	4	5
To learn about local agriculture	1	2	3	4	5
Short travel distance for vacation	1	2	3	4	5

If there are additional reasons why you have or would participate in an agritourism activity, please write your comments here:

10. Please rate the importance of the availability of each of the following amenities when you participate in an agritourism activity. (Please circle your answer. 1 = Not important to 5 = Extremely important)

	Not important	Little importance	Moderately important	Highly important	Extremely important
Convenient location	1	2	3	4	5
On-site restrooms	1	2	3	4	5
Ability to use credit card	1	2	3	4	5
Food and drink for purchase	1	2	3	4	5
Crafts or souvenirs for purchase	1	2	3	4	5
Picnic area	1	2	3	4	5
Adequate parking	1	2	3	4	5
Handicap accessible	1	2	3	4	5

Please continue to next page →

11. Please rate the importance of the availability of each of the following services when you participate in an agritourism activity. (Please circle your answer. 1 = Not important to 5 = Extremely important)

	Not important	Little importance	Moderately important	Highly important	Extremely important
Offer fresh products	1	2	3	4	5
Offer certified organic products	1	2	3	4	5
Offer naturally raised (not organic) products	1	2	3	4	5
Offer group tours	1	2	3	4	5
Opportunity to care for animals	1	2	3	4	5
Learning about how products are grown or made	1	2	3	4	5
Opportunity to pick your own fruit/vegetables	1	2	3	4	5

12. Have you or would you be interested in purchasing Iowa products while visiting a farm or participating in an agritourism activity?

Yes

No If no, please explain and SKIP to question 14: _____

13. Which of the following types of products did you or would you purchase? (Check **all** that apply)

Fresh fruits

Fresh vegetables

Specialty foods (examples are jams and jellies, baked goods, condiments)

Flowers or plants

Clothing (t-shirts, hats)

Homemade crafts

Traditional meats (examples are beef, pork, chicken, lamb)

Exotic meats (examples are goat, buffalo, llama, rabbit)

Dairy products (examples are milk, cheeses, yoghurt)

Eggs

Other: _____

Please continue to next page →

14. Please indicate the season you are most likely to visit a farm or participate in an agritourism activity. (Please **rank from 1 to 4** which one is your most likely with **1= most likely to 4= least likely**)

Spring (March-May)
 Summer (June-August)
 Fall (September-November)
 Winter (December-February)

15. Please indicate with whom you would visit a farm or participate in an agritourism activity with. (Please check **all** that apply)

Alone Spouse or partner Immediate family
 Extended family Friends School group
 Tour group Church group Other:

16. On average, how many miles would you be willing to travel to visit a farm or participate in an agritourism activity? (Please choose one)

I would not visit 31-50 miles Greater than 90 miles
 1-10 miles 51-70 miles
 11-30 miles 71-90 miles

Demographics

The information obtained in this section is for research purposes only and will be kept confidential.

17. Please indicate your gender.

Male Female

18. What year were you born? _____

19. What population group best describes you? (Please choose one)

African American or Black
 Alaskan Native or American Indian
 Asian or Pacific Islander
 Caucasian or White
 Latino or Hispanic

Please continue to next page →

20. In what Iowa county do you live?

_____ Iowa county

21. Which best describes the area or city in Iowa you live? (Place an 'X' by the answer)

- | | |
|--|--|
| <input type="checkbox"/> Rural/farm (agriculture) | <input type="checkbox"/> City with population of 10,000-19,999 |
| <input type="checkbox"/> Rural/acreage (non-agriculture) | <input type="checkbox"/> City with population of 20,000-49,999 |
| <input type="checkbox"/> City with population of less than 2,500 | <input type="checkbox"/> City with population of 50,000-99,999 |
| <input type="checkbox"/> City with population of 2,500-4,999 | <input type="checkbox"/> City with population of 100,000-149,999 |
| <input type="checkbox"/> City with population of 5,000-9,999 | <input type="checkbox"/> City with population of 150,000 or more |

22. What is your highest education level you attained? (Place an 'X' by the answer)

- Less than 9th grade
- 9th to 12th grade, no diploma
- High school graduate (includes equivalency)
- Some college, no degree
- Associate degree
- Bachelor's degree
- Graduate or professional degree

23. What was your household's income (before taxes) in 2007? (Place an 'X' by the answer)

- | | | |
|---|--|--|
| <input type="checkbox"/> Less than \$10,000 | <input type="checkbox"/> \$35,000-\$49,999 | <input type="checkbox"/> \$150,000-\$199,999 |
| <input type="checkbox"/> \$10,000-\$14,999 | <input type="checkbox"/> \$50,000-\$74,999 | <input type="checkbox"/> \$200,000 or more |
| <input type="checkbox"/> \$15,000-\$24,999 | <input type="checkbox"/> \$75,000-\$99,999 | |
| <input type="checkbox"/> \$25,000-\$34,999 | <input type="checkbox"/> \$100,000-\$149,999 | |

End of Survey. Thank you for your time and effort!!

If you have any questions or comments regarding the survey, please contact:

melissan@iastate.edu

Department of Agricultural Education & Studies

223 Curtiss

Iowa State University

Ames, IA 50011

STOP. End of Survey.

APPENDIX C: DATA COLLECTION TIME LINE AT 2008 IOWA STATE FAIR

Date	Time	Location	Total hours
Thursday, August 7, 2008	5:30-7:00 pm	Food stands and tents	3.5 hours
	7:00-9:00 pm	Free performance stages	
Friday, August 8, 2008	5:30-6:30 pm	Livestock barns	3.5 hours
	6:30-8:00 pm	In front of Grandstand	
	8:00-9:00 pm	Food stands and tents	
Sunday, August 10, 2008	10:00 am-12:30 pm	Livestock barns	7.0 hours
	12:30-1:30 pm	4-H Exhibit Building	
	1:30-3:30 pm	Free performance stages	
	3:30-5:00 pm	Food stands and tents	
Monday, August 11, 2008	4:00-6:00 pm	Commercial Exhibit Building	3.5 hours
	6:00-7:30 pm	Free performance stages	
Thursday, August 14, 2008	5:30-6:30 pm	Livestock barns	2.5 hours
	6:30-8:00 pm	Food stands and tents	
Saturday, August 16, 2008	10:00 am-11:30 am	4-H Exhibit Building	8.0 hours
	11:30 am-2:30 pm	Free performance stages	
	2:30-3:30 pm	Livestock barns	
	3:30-4:00 pm	Food stands and tents	
	4:00-6:00 pm	Free performance stages	
TOTAL			28 hours

APPENDIX D: SCRIPT FOR ORAL COMMUNICATION WITH POTENTIAL PARTICIPANTS

SCRIPT USED DURING DATA COLLECTION:

(Only the principal investigator will have contact with the subjects)

Good morning/Good afternoon/Good evening! I was hoping that I could have a few minutes of your time. I am currently a graduate student at Iowa State University. As a part of my graduate research project, I am interested in finding more information about consumer preferences and participation levels in Iowa agritourism activities. Would you be interested in completing a voluntary survey?

If individual says no:

Thank you for your time. I hope you enjoy your visit to the Iowa State Fair.

If individual says yes:

Are you an Iowa resident over the age of 18?

If individual is not an Iowa resident over the age of 18:

Thank you for your willingness to participate in my survey. Unfortunately at this time I am strictly gathering information from Iowa residents over the age of 18.

If individual is an Iowa resident over the age of 18:

I would like to remind you that participation in this survey is voluntary. I would also ask that you do not put your name on the survey. If there are any questions you wish not to answer, please feel free to skip them. All the information you provide will be kept confidential and will not be shared with any other party or organization.

Thank you for your participation. Here is the survey. It will take approximately ten to fifteen minutes to complete.

After individual is finished completing survey:

Thank you for your time. I hope you enjoy your visit to the Iowa State Fair.

APPENDIX E: DATA TABLES

Table A

Familiarity with Agriculture-related Tourism terms by Population Category

Term		Non-urban (n= 278)		Urban (n= 132)		Total (n= 410)	
		N	%	N	%	N	%
Agritourism	Yes	130	46.76	58	43.94	188	45.85
	No	148	53.24	74	56.06	222	54.15
Ecotourism	Yes	112	40.29	64	48.48	176	42.93
	No	166	59.71	68	51.52	234	57.07
Green tourism	Yes	93	33.45	57	43.18	150	36.59
	No	185	66.55	75	56.82	260	63.41
Nature-based tourism	Yes	95	34.17	51	38.64	146	35.61
	No	183	65.83	81	61.36	264	64.39

Note. Non-urban includes areas with populations under 49,999 and urban includes areas with populations over 50,000.

Table B

Participation in Agritourism Activities by Population Category

Activity	Non-urban (n= 278)		Urban (n= 132)		Total (n= 410)	
	N	%	N	%	N	%
Farmers Market	210	75.54	119	90.15	329	80.24
Pick-your-own fruit/vegetables	191	68.71	81	61.36	272	66.34
Hay Ride	149	53.60	68	51.52	217	52.93
Wine tasting at a vineyard	122	43.88	70	53.03	192	46.83
Cut your own tree	129	46.40	46	34.85	175	42.68
4-wheeling/ATV riding (private land)	129	46.40	40	30.30	169	41.22
Corn Maze	98	35.25	40	30.30	138	33.66
Horseback riding (on private land)	91	32.73	38	28.79	129	31.46
Farm tour	102	36.69	26	19.70	128	31.22
Farm produce tasting	83	29.86	39	29.55	122	29.76
Petting zoo (on-farm)	76	27.34	32	24.24	108	26.34
Fishing for a fee (on private land)	73	26.26	33	25.00	106	25.85
Bed & Breakfast	65	23.38	38	28.79	103	25.12
Sleigh Ride	65	23.38	27	20.45	92	22.44
On-farm Camping	64	23.02	18	13.64	82	20.00
School field trip to a farm	63	22.66	18	13.64	81	19.76
Nature Retreat	48	17.27	29	21.97	77	18.78
Wedding (on-farm)	42	15.11	19	14.39	61	14.88
On-farm concerts	36	12.95	21	15.91	57	13.90
Hunting for a fee (on private land)	45	16.19	11	8.33	56	13.66

Note. Non-urban includes areas with populations under 49,999 and urban includes areas with populations over 50,000.

Table C

Form of Communication to Learn about Agritourism Activities by Population Category

Communication Form	Non-urban (n= 264)		Urban (n= 126)		Total (n= 390)	
	N	%	N	%	N	%
Word of Mouth	171	64.77	91	72.22	262	67.18
Newspaper	76	28.79	44	34.92	120	30.77
Radio	56	21.21	22	17.46	78	20.00
Television	51	19.32	19	15.08	70	17.95
Brochures	42	15.91	19	15.08	61	15.64
Internet Search Engine	37	14.02	22	17.46	59	15.13
School activity	42	15.91	13	10.32	55	14.10
Farm Sign	34	12.88	9	7.14	43	11.03
Promotional flyer	25	9.47	11	8.73	36	9.23
Tourism/guide book	17	6.44	16	12.70	33	8.46
Church activity	18	6.82	15	11.90	33	8.46
Chamber of Commerce	12	4.55	3	2.38	15	3.85
Farm/agritourism Web site	7	2.65	3	2.38	10	2.56

Note: Non-urban includes areas with populations under 49,999 and urban includes areas with populations over 50,000.

Table D

Preferred Travel Distance to Agritourism Activities by Population Category

Distance	Non-urban (n= 278)		Urban (n= 132)		Total (n= 410)	
	N	%	N	%	N	%
Would not visit	0	0.00	3	2.27	3	0.73
1-10 miles	30	10.79	7	5.30	37	9.02
11-30 miles	71	25.54	48	36.36	119	29.02
31-50 miles	86	30.94	40	30.30	126	30.73
51-70 miles	51	18.35	14	10.61	65	15.85
71-90 miles	14	5.04	5	3.79	19	4.63
Greater than 90 miles	26	9.35	15	11.36	41	10.00

Note. Non-urban includes areas with populations under 49,999 and urban includes areas with populations over 50,000.

Table E

Importance of Reasons for Participating in an Agritourism Activity by Population Category

Reason	Non-urban (n= 278)		Urban (n= 132)		Total (n= 410)	
	Mean	SD	Mean	SD	Mean	SD
Spend time with family/friends	3.98	0.98	4.1	0.88	4.02	0.95
Support local farmers	3.99	0.93	3.85	0.97	3.94	0.94
Purchase fresh products	3.79	0.91	3.89	0.88	3.82	0.90
Enjoy rural scenery	3.78	1.02	3.8	1.05	3.79	1.03
Short distance for vacation	3.15	1.24	3.05	1.22	3.11	1.23
Learn about local agriculture	3.08	1.15	2.86	1.05	3.01	1.13

Note. Non-urban includes areas with populations under 49,999 and urban includes areas with populations over 50,000. Scale: 1= not important, 2= little importance, 3= moderately important, 4= highly important, 5= extremely important.

Table F

Importance of Availability of Amenities at Agritourism Site by Population Category

Amenity	Non-urban (n= 278)		Urban (n= 132)		Total (n= 410)	
	Mean	SD	Mean	SD	Mean	SD
On-site restrooms	3.67	1.16	3.67	1.18	3.67	1.17
Convenient location	3.64	0.95	3.60	0.77	3.63	0.89
Adequate parking	3.49	1.12	3.37	1.13	3.45	1.12
Food/drink for purchase	3.17	1.16	3.44	1.03	3.25	1.12
Credit card accepted	2.79	1.27	2.98	1.21	2.85	1.25
Picnic area available	2.82	1.18	2.70	1.07	2.78	1.15
Crafts/souvenirs for purchase	2.56	1.19	2.48	1.15	2.53	1.17
Handicap accessible	2.66	1.48	2.23	1.36	2.52	1.45

Note. Non-urban includes areas with populations under 49,999 and urban includes areas with populations over 50,000. Scale: 1= not important, 2= little importance, 3= moderately important, 4= highly important, 5= extremely important.

Table G

Importance of Availability of Services at Agritourism Site by Population Category

Service	Non-urban (n= 278)		Urban (n= 132)		Total (n= 410)	
	Mean	SD	Mean	SD	Mean	SD
Fresh products for purchase	3.86	0.92	3.88	0.90	3.87	0.91
Opportunity to pick-your-own fruit/vegetables	3.26	1.17	3.22	1.07	3.25	1.14
Naturally-raised products for purchase	3.17	1.19	3.07	1.15	3.14	1.18
Opportunity to learn about products	3.00	1.20	2.87	1.09	2.96	1.17
Organic products for purchase	2.73	1.22	2.90	1.17	2.79	1.21
Opportunity to care for animals	2.78	1.24	2.55	1.17	2.71	1.22
Group tours available	2.44	1.12	2.34	1.05	2.41	1.10

Note. Non-urban includes areas with populations under 49,999 and urban includes areas with populations over 50,000. Scale: 1= not important, 2= little importance, 3= moderately important, 4= highly important, 5= extremely important.

Table H

Interested in Purchasing Iowa Products at Agritourism Site by Population Category

Product	Non-urban (n= 267)		Urban (n= 131)		Total (n= 398)	
	N	%	N	%	N	%
Fresh vegetables	256	95.88	128	97.71	384	96.48
Fresh fruit	252	94.38	127	96.95	379	95.23
Specialty products	179	67.04	109	83.21	288	72.36
Traditional meats	172	64.42	71	54.20	243	61.06
Dairy products	159	59.55	79	60.31	238	59.80
Flowers/plants	141	52.81	79	60.31	220	55.28
Eggs	155	58.05	59	45.04	214	53.77
Homemade crafts	110	41.20	52	39.69	162	40.70
Clothing	64	23.97	39	29.77	103	25.88
Exotic meats	54	20.22	24	18.32	78	19.60

Note. Non-urban includes areas with populations under 49,999 and urban includes areas with populations over 50,000.