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ORGANIC AND LOCALLY GROWN FOOD PREFERENCES OF ADULTS IN
KENTUCKY

THESIS

A thesis submitted in partial fulfillment of the requirements for the degree of
Master of Science in Career, Technical and Leadership Education in the
College of Agriculture, Food and Environment at the University of Kentucky

By

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Lexington, Kentucky

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Lexington, Kentucky

2014

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ABSTRACT OF THESIS

ORGANIC AND LOCALLY GROWN FOOD PREFERENCES OF ADULTS IN KENTUCKY

This study investigates the determinants that influence adult Kentuckians' preference to buy organic and/or locally grown food based on their age, gender, income, education level and metropolitan versus nonmetropolitan living status. Ajzen's theory of planned behavior (TPB) provides the conceptual framework of the research and the appropriateness of the theory. Data for this analysis are from a 2009 Kentucky statewide survey. The analysis shows that: There is a significant difference in food purchasing habits of Metropolitan and Nonmetropolitan adult Kentuckians; the factors associated with the purchase of organic and locally grown foods are different; and, those who purchased locally grown and organic foods shared similar beliefs.

Keywords: organic, locally grown, Ajzen's theory of planned behavior, food preference, food purchasing habits

Amanda Patton Roberts

August 17, 2014

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Chapter One

An Overview of Consumer Food Choices

Introduction

What types of foods do you prefer; organic or locally grown? Or, doesn't it matter? Where do you purchase such food products, a traditional supermarket, farmers market or grocery co-op? In the last several years, these consumer choices have emerged with increasing popularity in the food retailing marketplace (Dimitri and Oberholtzer 2009). Consumers have a variety of choices with the availability of fast food, grocery store chains, grocery co-ops, weekly farmers' markets as well as the rise in Community Supported Agriculture's (CSA) from local farms. Hsieh and Stiegert (2011) state, "The potential for sale expansion supported by the rapidly growing demand and positive image of organics has prompted U.S. food retailers to campaign around this relatively small segment, which represents less than 4% of total food expenses (specifically, 0.97% in 1997 rising to 3.59% in 2009)" (Organic Trade Association, 2009).

Some consumers prefer the convenience of their local supermarket. Many grocery store chains have greatly expanded their organic sections to the delight of these specific shoppers. But many others consumers choose and prefer to purchase food from vendors at the local farmers' market who may not necessarily carry certified organic products. Brown and Miller (2008) state that today's farmers markets are, "making a place for social activity and promoting a sense of community, in addition to providing fresh food for consumers and

positive economic impacts for local businesses.” What characteristics draw consumers to make such choices in food preferences? Do consumers even realize the differences between organic and local food produce or is it just assumed they are one in the same?

With all the available shopping choices comes making personal decisions. This research will focus primarily on the food preferences of adults in Kentucky with regards to organic and local foods. More specifically, this research will evaluate how consumer perception regarding labeling and costs, developing consumer food trends, and society’s intrinsic beliefs are related to food preferences.

Also, not only are some consumers thinking more about the types of products they consume, but so are some producers. “Several food service managers that were developing LGP buying programs mentioned that their interest in buying LGP was driven by “doing the right thing” rather than in response to requests from their clientele.” (Hardesty 2008). Does purchasing organic versus local food products make the consumer feel better about themselves? Thilmany, Bond and Bond state that, “Seyfang (2006) and Vermeir and Verbeke (2006), among others argue that individuals are more consumer savvy in using their money to make a public statement of activism and pursue “sustainable” consumption” (2008). Not only does this segment of consumers want to make these types of purchases, they want it to be known that they support the local and organic movement. Is this purely an altruistic intent or could the intrinsic benefits provide a moral pat on the back for doing, “the right thing?”

This information is important to analyze because marketing companies, grocers and farmers alike have begun to recognize consumers changing attitudes towards the organic versus conventional food. These findings are important to the producers who ultimately want to make a profit from selling their products. Research on these preferences can show the most effective ways for producers to market their food to reach the highest sales and profit.

Research Issue

This study will explore the factors that are related to the decisions consumers make as to where to purchase their food and the types of foods they purchase. A theory exists that some consumer food purchases are based on a person's own intrinsic belief system, perceptions and personal ethical values/concerns more than on scientific data on the nutritional value of how (organic vs. conventional) or where (local vs. global) a food product is grown. This suggests that some consumers may purchase organic foods based primarily on their perceived knowledge of nutrition rather than actual scientific nutritional evidence, while locally grown foods might also be purchased to benefit the local community and economy due to perception.

In Chapter Two, a brief overview of the literature will discuss how developing consumer food trends, cost, consumer perceptions of organic versus locally grown labeling, consumer food purchasing beliefs between metropolitan versus nonmetropolitan settings, and Ajzen's Theory of Planned Behavior is used to link each of these above factors regarding their particular influence on beliefs and behavior.

Chapter Two

A Brief Overview of the Literature

Developing consumer food trends

Why are some consumers so concerned with organic or locally grown foods? One explanation is offered by Beharrell and MacFie (1991): “A growing number of people have developed adverse attitudes towards the use of artificial chemicals in agriculture.” As research continues to expand these specific consumers are becoming more informed and savvy regarding the products they purchase. Some consumers want to know more details regarding where their food comes from, how it was produced and to what standards producers were held. Dimitri (2011) states, “Some consumers believe that local produce is superior to other domestic products.” It is this belief that needs to be examined regarding perception versus the value of scientific nutritional research. Further research on this developing food preference trend is valuable information for Kentucky farmers as well.

Costs

Some consumers feel passionate about their food preferences and how their choices to buy locally can impact their local economy. Dimitri states, “Other consumers prefer purchasing locally grown food and are willing to pay a premium for locally produced food (see also Zepeda and Leviten-Reid 2004, Darby et al. 2008, Loureiro and Hine 2002, Schneider and Francis 2005). Research on this willingness to pay for locally produced food products is important information for Kentucky farmers so that they can market their produce effectively as well as

selling the right foods to the right audience, including local foods targeted towards a farmers market type atmosphere.

Organically grown food has also become a big business, not just in the United States, but world-wide. Yue, et al. (2011) states, “Organically grown food products have become increasingly popular in recent years. Global sales of organic food products have increased at a rate of more than \$5 billion annually (Willer et al., 2008). Further research shows the benefits to producers who decide to launch a more organic-focused approach. Dimitri (2011) states that nationally, “The typical organic farm, at 285 acres, is smaller than the typical conventional farm at 418 acres, yet has average revenues approximately \$100K more than that of typical conventional farm.” This financial data is important for Kentucky farmers to understand if they want to begin or continue farming trends of organic and locally grown produce for market. Richards (2011) states, “Some of the most interesting issues regarding the organic supply chain concern the locus of market power. Determining who has pricing power, however, requires knowledge on the relative costs of producing organic and conventional foods.

Klonsky (2011) fills this void with important research into the differential costs of producing a wide range of organic and conventional crops in California. Using a carefully-constructed model of each production activity, she calculates the cost of providing fertility, weed control, pest control, disease control and other costs to each crop. Somewhat surprisingly, the total costs of producing two organic crops – lettuce and strawberries –are lower than the conventional alternative.” This powerful research shows that there is a significant cost

comparison in how food is produced. The demand for local and organic exists, but many producers have voiced concerns over the cost of start-up, labor demands, etc. This data shows that it might not be as huge of a commitment to become more locally or organically-focused as previously thought..

Consumer perception of organic versus locally grown labeling

Some consumers may go to great lengths to find organic products. “They firmly believe that organically grown food tastes better, is better nutritionally and is safer for health than conventionally grown processed and marketed food. Because of these beliefs, they are willing to pay a premium for organically grown foodstuff.” (Beharrell and MacFie, 1991).

But is this belief backed up by scientific evidence or a rationale that consumers truly understand where the food is coming from and how it is packaged? “The organic label addresses how food is produced, processed and distributed,” while the “local label provides information about the distance between production and point of sale.” (Dimitri 2011). These two distinctions do not always appear to be realized by many consumers.

An analysis by Wolf, Spittler, and Ahern (2005), shows consumers perceived produce at farmers markets to be fresher looking, fresher tasting, of higher quality, and a better value for the money. However, many consumers found shopping at farmers markets too inconvenient (Hardesty 2008). Reasons for this perception of inconvenience might be due to the days/times the farmers markets are offered conflict with a consumer’s personal work schedule or are dependent on weather conditions. Farmers markets are also traditionally very

seasonal, held throughout the spring and summer and as harvests change throughout the year, so do the offerings and even availability depending on a prosperous growing season or one that struggled with the elements including drought or too much rain. This may explain why some consumers choose the convenience of shopping at an organic section of a traditional supermarket, versus the community experience of shopping at an area farmers market for local produce.

Finally, it is important to remember that not all “organic” products are local and not all “local” products are organic. This is a distinction that may not be apparent to many consumers. As a result, some consumers might think by purchasing products at a farmers market or roadside stand they’re receiving organic foods, but in actuality, they’re purchasing local foods that may have been grown by organic standards, yet not have the official organically certified food label or the foods were still grown locally, but not be organic and grown with the use of more conventional farming techniques.

Food can also be grown under stringent regulations and considered certified organic, but was done so across the country and spent many days past harvest being transported to a local grocery store for purchase, thus greatly increasing the amount of farm to table time to reach the consumer for consumption.

Consumer food purchasing beliefs between Metropolitan versus NonMetropolitan settings

Several variables including age, gender, income, level of education and metropolitan versus nonmetropolitan residence were compared in this study to decide which, if any, showed a correlation to consumer food purchasing beliefs of local versus organic food products. Bisonnette and Contento (2001) analyzed the variables of gender, level of education and Metropolitan/NonMetropolitan residence in terms of adolescent food preferences in terms of their environmental impact. "Participants area of residence was estimated by the location of the school attended. Independent t-tests indicated that there were several statistically significant differences between Metropolitan and NonMetropolitan respondents, but the mean scores showed that there were only a few variables that showed differences of 10% or higher: NonMetropolitan teens were more likely to purchase organic (18% difference in mean scores: $p < .001$) and local foods (12% difference in mean scores: $p < .01$), whereas Metropolitan teens were more likely to report that their best friends think or talk about local foods (12% difference in mean scores; $p < .001$)." Based on these study's results, location of residence didn't appear to be an overwhelming contributing factor to the purchase of local or organic food products, however, "adolescents were generally quite positive about organic foods...but adolescents were less knowledgeable about the issue of locally grown foods." The participants surveyed represented a younger generation's perceptions of food and this is a valuable glance into the future of organic and locally grown foods. These teens

will soon be the next generation with extensive purchasing power and their beliefs will guide how they use their money to feed themselves and their families.

Ajzen's theory of planned behavior

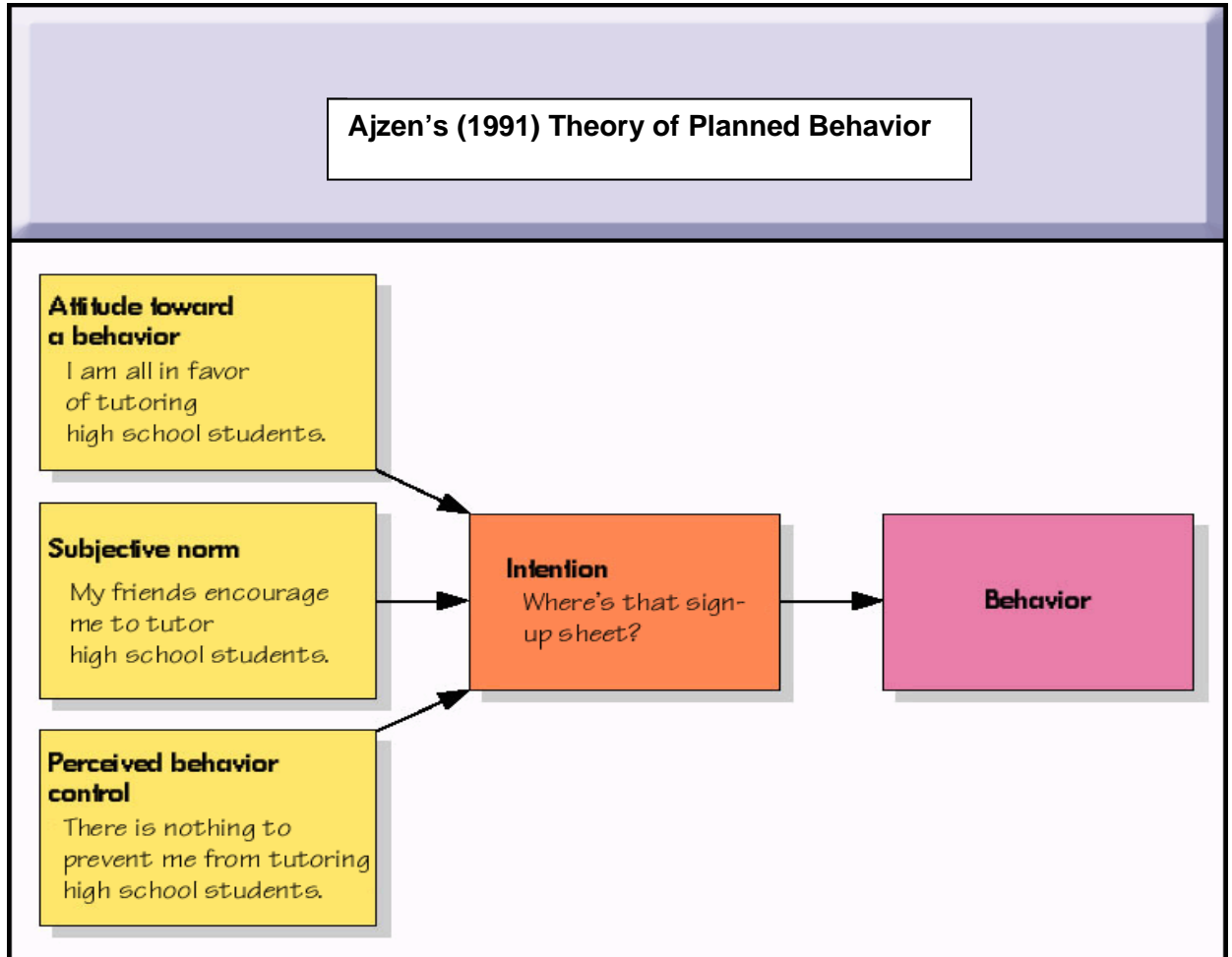
Ajzen's (1991) Theory of Planned Behavior illustrates the link between beliefs and behavior. The following diagram is often applied to the studies among personal beliefs, attitudes and behavioral intentions. The theory states that attitude toward behavior, subjective norms, and perceived behavioral control, together shape an individual's behavioral intentions and behaviors (Pickett, et.al, 2012). This theory will be used to look at food purchasing preferences of Kentuckians.

Ajzen's Theory of Planned Behavior has been used by several to assess consumer food preferences and behaviors. For example, in a study by Bissonette and Contento (2001), the perceptions of adolescents were studied to learn about their belief systems toward the environmental impacts of where food is grown and the association of these beliefs with their food choice behaviors, using psychosocial theory, or an ETPB (Explained Theory of Planned Behavior). These adolescents often had a greater involvement in family food purchases than previously realized, either for personal or family consumption and many of their purchases were made based on their perceived concern for the environment, increased health benefits of organic foods and a concern regarding how increased use of fuel and transportation costs negatively impacted local farms.

In a study by Sparks (2001) the ambivalence about health-related behaviors and their relation to food choice by consumers was also examined with an application to Ajzen's Theory of Planned Behavior. Research on consumer's attitudes that create a positive or negative reaction can also have a significant impact on how they perceive local or organic food. Implications for health and/or body image as well as food cravings and weight loss are all related to internal conflicts of interest, personal wants and changing preferences. These feelings of ambivalence towards particular food products or preferences can create a positive impact on the purchasing of local or organic food or a negative impact where consumer's internal beliefs might cause them to inadvertently choose a food product that doesn't necessarily support the local economy or was purchased out of moral concern to "do the right thing."

Each of these decisions made by consumers is directly related to a particular belief or behavior. To better understand the "why" behind consumer's purchases, we'll further examine Ajzen's Theory of Planned Behavior and how it relates to attitudes, the subjective norm and perceived behavior. Internal beliefs often begin with a motivation to comply. This motivation may come from the perception of friends, family, some outside social influence or even a perceived self-identity or perceived responsibility. All of these types of motivations create a particular attitude, which then leads to a behavioral intention. In turn, this intention creates a behavior. Particular behaviors are also motivated by the effect of consequences, "If I eat foods treated with pesticides my health might suffer."

Figure 2.1



Ajzen's (1991) Theory of Planned Behavior

In summary, an overview of the literature shows that previous researchers have found similarities in consumer's buying preferences. The three reoccurring themes for such purchases include: 1). the desire to eat healthy; 2.) perceived environmental benefits/reduced use of pesticides; and 3.) altruistic intent. These assumptions are based on previous surveys, informal interviews, focus groups and general observations made over time.

This literature on consumer food buying preferences fits into Azjen's theory of planned behavior or the ABC model of attitudes (Affect, plus Behavioral tendency, plus Cognitions about likely consequences of behavior).

This research will further explore the dynamics of these relationships by examining the factors that are associated with consumer food preferences.

Obviously, it is important to assess whether consumers understand the difference between locally grown and organic food products, but the specific research questions guiding this analysis are:

- 1.) What are people's perceptions of buying local and organic foods?
- 2.) What, if any, connection is there between indicators of sociodemographic status (i.e., age, gender, income, education, metropolitan versus nonmetropolitan) and where people shop, whether they buy organic or locally grown foods, and their attitudes and beliefs about different types of food?
- 3.) What are the main influences regarding consumer's purchasing behaviors, decision making and previous attitudes and beliefs?

More specifically, the research hypotheses to be tested in this study are:

- 1.) There is no difference in the food purchasing habits of metropolitan and nonmetropolitan Kentuckians.
- 2.) There are no sociodemographic differences in food purchasing decisions.
- 3.) Adult Kentuckians who purchase organic and locally grown foods express similar beliefs about food and have similar characteristics.

Chapter Three will review the Methods section of the thesis and review how the survey was conducted and analyzed.

Chapter Three

Methods

A survey was conducted by the University of Kentucky, College of Agriculture's Department of Community and Leadership Development entitled, "2009 Kentucky Communities Survey." Initially 4,000 survey questionnaires were mailed between March 6 -10, 2009. After that, 3,666 follow-up post cards were mailed on March 19, 2009. Then, a second survey was mailed to 3,123 non-respondents between May 6 - 8, 2009. The survey was closed on June 23, 2009, with 1,154 complete respondents. Out of the 4,000 residents, 184 were not eligible due to inaccurate address or no longer residing at the address. Therefore, the survey yielded a response rate of 30.2% based on 3,816 eligible residents.

While the survey encompasses various questions relating to one's community, for the purposes of this study, we will primarily focus on Section III: Perspectives on Food, questions 20-22:

- 1.) Question 20. How often do you shop for groceries at each of the following places? One means never and four means almost always. Choices included:
 - a. Superstores or warehouse stores
 - b. Large grocery stores/supermarkets
 - c. Small independent grocery stores
 - d. Convenience stores

- e. Farmer's markets
- f. Roadside stands

2.) Questions 21: How important is each of the following factors in your decision to purchase food? One means not at all important and three means very important.

- a. Cost
- b. Freshness
- c. Locally produced or grown
- d. Nutritious or healthy
- e. Organic
- f. Convenience

3.) Question 22: Please tell us how much you disagree or agree with each of the following statements. One means strongly disagree and five means strongly agree.

- a. Given the choice, I would prefer to buy locally grown food
- b. It is easy to find locally grown produce in this area during the growing season
- c. My home garden is an important source of food for my family
- d. I regularly buy locally grown food
- e. Locally grown food is healthier than food shipped in from elsewhere
- f. Given the choice, I would prefer to buy organically grown food
- g. It is easy to find organically grown food in this area
- h. I regularly buy organically grown food

- i. Organically grown food is healthier than conventionally grown food

Table 3.1 presents how each research hypothesis is operationalized in this study.

Table 3.1 Research Hypotheses and Approach to Analysis		
Research Hypothesis	Survey Questions used to test hypothesis	Variables
1. There is no difference in the food purchasing habits of metropolitan and Metropolitan Kentuckians	<p>Question 23. What county do you live in?</p> <p>Question 20. How often do you shop for groceries at each of the following places?</p> <p>Large grocery stores/supermarkets</p> <p>Small independent grocery stores</p> <p>Convenience stores</p> <p>Farmer's markets</p> <p>Roadside stands</p>	<p>Constructed variable: 1 = Metropolitan 2 = Nonmetropolitan</p> <p>Location of food purchases 1 = Never 2 = Occasionally 3 = Often 4 = Almost Always</p> <p>Superstores or warehouse stores Large grocery stores/supermarkets Small independent grocery stores Convenience stores Farmer's markets Roadside stands</p>

Table 3.1 (continued)

<p>2. There are no sociodemographic differences in food purchasing decisions.</p>	<p>Question 20. How often do you shop for groceries at each of the following places?</p> <p>Large grocery stores/supermarkets</p> <p>Small independent grocery stores</p> <p>Convenience stores</p> <p>Farmer's markets</p> <p>Roadside stands</p> <p>Question 21: How important is each of the following factors in your decision to purchase food?</p> <p>Cost</p> <p>Freshness</p> <p>Locally produced or grown</p> <p>Nutritious or healthy</p> <p>Organic</p> <p>Convenience</p> <p>Question 22: Please tell us how much you disagree or agree with each of the following statements.</p> <p>Given the choice, I would prefer to buy locally grown food</p> <p>It is easy to find locally grown</p>	<p>Location of food purchases</p> <p>1 = Never</p> <p>2 = Occasionally</p> <p>3 = Often</p> <p>4 = Almost Always</p> <p>Superstores or warehouse stores</p> <p>Large grocery stores/supermarkets</p> <p>Small independent grocery stores</p> <p>Convenience stores</p> <p>Farmer's markets</p> <p>Roadside stands</p> <p>Factors influencing purchase decisions</p> <p>1 = Not at all Important</p> <p>2 = Somewhat Important</p> <p>3 = Very Important</p> <p>Cost</p> <p>Freshness</p> <p>Locally produced or grown</p> <p>Nutritious or health</p> <p>Organic</p> <p>Convenience</p> <p>Attitudes on food</p> <p>1 = Strongly Disagree</p> <p>2 = Disagree</p> <p>3 = Agree</p> <p>4 = Strongly Agree</p> <p>Prefer locally grown</p> <p>Easy to find locally grown</p> <p>Home garden</p> <p>Regularly buy local</p> <p>Local food healthier</p>
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Table 3.1 (continued)

	<p>produce in this area during the growing season</p> <p>My home garden is an important source of food for my family</p> <p>I regularly buy locally grown food</p> <p>Locally grown food is healthier than food shipped in from elsewhere</p> <p>Given the choice, I would prefer to buy organically grown food</p> <p>It is easy to find organically grown food in this area</p> <p>I regularly buy organically grown food Organically grown food is healthier than conventionally grown food</p> <p>Question 27. In what year were you born?</p> <p>Question 26. Are you: Female or Male</p> <p>Question 32. What is your highest level of education completed?</p>	<p>Prefer organic food Easy to find organic Regularly buy organic Organic healthier</p> <p>1 = 49 and under 2 = 50-64 3 = 65 and older</p> <p>1= Female 2 = Male</p> <p>1 = 8th grade or less and some High School, no diploma 3 = High School graduate or GED 4 = some college, no degree 5 = Associates degree 6 = Bachelor's degree 7 = Graduate or</p>
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Table 3.1 (continued)

	<p>Question 45. Which of the following comes closest to your family income before taxes from all sources last year (2008)?</p>	<p>Professional degree</p> <p>1 = Less than \$25,000 2 = \$25,000-\$49,999 3 = \$50,000-\$99,999 4 = \$100,000 or more</p>
<p>3. Kentuckians who purchase organic and locally grown foods express similar beliefs about food and have similar characteristics.</p>	<p>Questions 21: How important is each of the following factors in your decision to purchase food?.</p> <p>Cost Freshness Locally produced or grown Nutritious or healthy Organic Convenience</p> <p>Question 22: Please tell us how much you disagree or agree with each of the following statements.</p> <p>. Given the choice, I would prefer to buy locally grown food</p> <p>It is easy to find locally grown produce in this area during the growing season</p> <p>My home garden is an important source of food for my family</p> <p>I regularly buy locally grown food</p>	<p>Factors influencing purchase decisions: 1 = Not at all Important 2 = Somewhat Important 3 = Very Important</p> <p>Cost Freshness Locally produced or grown Nutritious or health Organic Convenience</p> <p>Attitudes on food 1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree</p> <p>Prefer locally grown Easy to find locally grown Home garden Regularly buy local Local food healthier Prefer organic food Easy to find organic Regularly buy organic Organic healthier</p>

Table 3.1 (continued)

	<p>Locally grown food is healthier than food shipped in from elsewhere</p> <p>Given the choice, I would prefer to buy organically grown food</p> <p>It is easy to find organically grown food in this area</p> <p>I regularly buy organically grown food</p> <p>Organically grown food is healthier than conventionally grown food</p>	
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Age is operationalized as a categorical variable constructed from year of birth to represent 1 = Under 49; 2 = 50-64 and 3 = 65 and older. Gender is simply 1= Female and 2 = Male. Education is operationalized as 1 = Less than a high school diploma; 2 = High school degree or GED; 3 = some college or an Associates degree and 4 = a Bachelor's degree or post-baccalaureate degree. Income is operationalized as 1 = Less than \$25,000; 2 = \$25,000 to \$49,999; 3 = \$50,000 to \$99,999; and 4 = \$100,000 or more.

For the purposes of this analysis, residence is county-based and is a recoding of USDA's ERS metropolitan-Metropolitan continuum codes. For this analysis, Bealer's metropolitan-Metropolitan continuum codes were recoded as follows:

1 = Metropolitan which encompasses the following Bealer codes:

1= Metropolitan (1,2,3)

All metropolitan counties

2 = Metropolitan Adjacent (4,6)

Counties with a nonmetropolitan population of 20,000 or more, adjacent to a metro area and counties with a metropolitan population of 2,500 to 19,999, adjacent to a metro area

3 = Metropolitan nonadjacent (5,7)

Counties with a nonmetropolitan population of 20,000 or more, not adjacent to a metro area and counties with a metropolitan population of 2,500 to 19,999, not adjacent to a metro area

2 = Nonmetropolitan which encompasses the following Bealer codes:

4 = NonMetropolitan adjacent (8)

Completely nonmetropolitan or less than 2,500 metropolitan population, adjacent to a metro area

5 = NonMetropolitan nonadjacent (9)

Completely nonmetropolitan or less than 2,500 metropolitan population, not adjacent to a metro area

¹ For a complete description of the codes see:

<http://www.ers.usda.gov/Briefing/Metropolitanity/MetropolitanUrbCon/>

We use county as the place of residence because Kentucky has the highest number of counties per population of any state, reflecting the combination of small geographic size and small population size that has historically meant that county is the political unit of community identity.

Finally, the evaluation of the difference in means will use ordinal measures because we cannot say that the interval among levels of the response are consistent or have the same meaning for all respondents. The next chapter provides both an overview of the distribution of respondents for all the key variables as well as an analysis of the data related to each of the hypotheses. Chapter Four will discuss an overview of the sample, as well as an analysis of the three hypotheses. It will conclude with a summary of the analysis.

Chapter Four

Analysis

Overview of the sample

The data will be analyzed using the following independent variables: 1) a descriptive analysis of the sociodemographic characteristics (e.g., metropolitan/non-metropolitan residence, age, income, education, gender) of the respondents to the 2009 Kentucky Communities Survey, Section III: Perspectives on Food. The dependent variables that will be evaluated include: a) where consumers purchase their produce; b) the factors that influence their purchasing decision; c) their perspectives on locally grown foods; as well as: d) their perspective on organically grown foods.

The analysis will begin with an overview of the demographic characteristics of those who purchase organic and locally grown foods to identify the possible influence of individual and household characteristics on this food choice. Then the analysis will use T-Test, Chi square and Pearson R to

determine the significance of relationships among attitudes, perceptions and behaviors with regard to food choices.

Descriptive overview
Table 4.1

Variable	Percent Distribution	Number
Age	100.0	1,127
1. Under 49	28.0	315
2. 50 to 64	40.3	454
3. 65 and over	31.8	358
Education	100.0	1,154
Less than a high school degree	10.6	122
High school diploma or GED	25.9	299
Some college or an Associate's degree	33.4	386
Completed Bachelors degree or higher	30.1	347
Income	100.0	1154
Less than \$25,000	19.4	224
\$25,000-\$49,999	25.3	292
\$50,000-\$99,999	30.5	352
\$100,000 or more	24.8	286
Metropolitan/NonMetropolitan	100.0	1154
Metropolitan	57.0	648
NonMetropolitan	43.0	489
Gender	100.0	1154
Female	35.9	408
Male	64.1	729
How often do you shop at a Superstore?	100.0	1121
1. Never	13.6	152
2. Occasionally	33.8	379
3. Often	31.2	350
4. Almost Always	21.4	240
How often do you shop at a small independent grocery store?	100.0	1110
1. Never	17.7	197
2. Occasionally	53.8	597
3. Often	20.5	227
4. Almost Always	8.0	89
How often do you shop at a convenience store?	100.0	1115
1. Never	24.7	275
2. Occasionally	55.5	619
3. Often	15.7	175
4. Almost Always	4.1	46

Table 4.1 (continued)

How often do you shop at a farmer's market?	100.0	1124
1. Never	28.6	321
2. Occasionally	51.5	579
3. Often	15.8	178
4. Almost Always	4.1	46
How often do you shop at a roadside stand?	100.0	1123
1. Never	40.2	451
2. Occasionally	46.7	525
3. Often	10.2	114
4. Almost Always	2.9	33
How important is cost in the decision to purchase food?	100.0	1133
1. Not at all Important	1.9	21
2. Somewhat Important	27.0	306
3. Very Important	71.1	806
How important is freshness in the decision to purchase food?	100.0	1129
1. Not at all Important	0.4	4
2. Somewhat Important	7.6	86
3. Very Important	92.0	1039
How important is locally produced or grown in the decision to purchase food?	100.0	1131
1. Not at all Important	10.7	121
2. Somewhat Important	50.7	573
3. Very Important	38.6	437
How important is nutritious or healthy in the decision to purchase food?	100.0	1125
1. Not at all Important	1.8	20
2. Somewhat Important	32.2	362
3. Very Important	66.0	743
How important is organic in the decision to purchase food?	100.0	1103
1. Not at all Important	52.6	580
2. Somewhat Important	37.8	417
3. Very Important	9.6	106
How important is convenience in the decision to purchase food?	100.0	1126
1. Not at all Important	7.1	80
2. Somewhat Important	50.0	563
3. Very Important	42.9	483
Given the choice, I would prefer to buy locally grown food.	100.0	1129
1. Strongly disagree	1.6	18
2. Disagree	3.5	39
3. Neutral	20.1	227

Table 4.1 (continued)

4. Agree	24.6	278
5. Strongly Agree	50.2	567
It is easy to find locally grown produce in this area during the growing season.	100.0	1122
1. Strongly disagree	3.7	41
2. Disagree	9.4	106
3. Neutral	23.2	260
4. Agree	30.5	342
5. Strongly Agree	33.2	373
My home garden is an important source of food for my family.	100.0	1082
1. Strongly disagree	37.8	409
2. Disagree	16.3	176
3. Neutral	14.0	152
4. Agree	11.2	121
5. Strongly Agree	20.7	224
I regularly buy locally grown food.	100.0	1113
1. Strongly disagree	10.2	114
2. Disagree	21.6	240
3. Neutral	34.3	382
4. Agree	17.6	196
5. Strongly Agree	16.3	181
Locally grown food is healthier than food shipped in from elsewhere	100.0	1,4116
1. Strongly disagree	5.6	62
2. Disagree	9.4	105
3. Neutral	22.2	248
4. Agree	23.1	258
5. Strongly Agree	39.7	443
Given the choice, I would prefer to buy organically grown food.	100.0	1111
1. Strongly disagree	25.7	286
2. Disagree	22.8	253
3. Neutral	23.8	264
4. Agree	12.0	133
5. Strongly Agree	15.8	175
It is easy to find organically grown food in this area.	100.0	1100
1. Strongly disagree	23.6	260
2. Disagree	28.2	310
3. Neutral	28.8	317
4. Agree	12.7	140
5. Strongly Agree	6.6	73
I regularly buy organically grown food	100.0	1094
1. Strongly disagree	49.9	546

Table 4.1 (continued)

2. Disagree	26.8	293
3. Neutral	15.3	167
4. Agree	4.8	52
5. Strongly Agree	3.3	36
Organically grown food is healthier than conventionally grown food.	100.0	1076
1. Strongly disagree	19.1	205
2. Disagree	20.3	218
3. Neutral	28.1	302
4. Agree	15.2	164
5. Strongly Agree	17.4	187

Analysis of Hypothesis One - There is no difference in the food purchasing habits of Metropolitan and Nonmetropolitan Kentuckians.

Hypothesis One was analyzed using a T-test (2 tailed) for Equality of Means (equal variances assumed). The main statistically significant difference between metropolitan and nonmetropolitan respondents was that the metropolitan population showed significant preference towards purchasing locally grown or organic foods.

Analysis of Hypothesis Two – The factors associated with the purchase of organic and locally grown foods are different.

The sociodemographic characteristics of older age category, females, higher education status and higher income status were all significantly related to a preference towards purchasing locally grown foods. All of these variables were significantly related to a perception that locally grown food is healthier, while the older age category, higher income and females were significantly related to the purchase of locally grown foods on a regular basis.

However, the factors associated with the purchase of organic showed a higher preference for purchase in the categories for those with a higher income and higher education status. Limiting factors for lower income respondents include budgetary constraints and a decreased knowledge base of organic food practices and health advantages. However, females showed a more significant preference to purchase organic foods over males and females were the only category to purchase these foods regularly.

Both the decision to purchase locally grown food and the preference to purchase locally grown food were significantly related in all categories of older age, higher income, females and higher education. Yet, those with a higher education and higher income status were statistically related to the decision to purchase organic food. However, those with a higher income were the only category that was significantly related to the preference to buy organic foods.

In Table 4.2, the cross tabs results are presented only for those relationships that are significant at the .05 level. For the full cross tabs, refer to Appendix 2

Table 4.2: Sociodemographic Characteristics and Beliefs Associated with Food Purchasing

	Number	Value	Df	Sign
Sociodemographic Characteristics and Where Food Purchased				
Superstore				
Age by Type of Store	1113	12.611	6	.050
Income by Type of Store	1043	15.362	6	.018
Large Grocery store				
Gender by Type of Store	1130	12.427	3	.006
Small Independent Grocery Store				
Age by Type of Store	1102	13.931	6	.030
Convenience Stores				
Gender by Type of Store	1115	16.453	3	.001
Education by Type of Store	1113	23.361	12	.025
Income by Type of Store	1037	15.322	6	.018
Farmers Markets				
Age by Type of Store	1116	22.626	6	.001
Roadside Stands				
Age by Type of Store	1115	30.321	6	.000
Education by Type of Store	1121	28.606	12	.005
Income by Type of Store	1044	18.266	6	.006
Sociodemographic Characteristics and Factors Associated with Food Purchase Decisions				
	Number	Value	Df	Sign
Cost				
Gender by Cost in Decision Purchase Food	1133	10.521	2	.005
Education by Cost in Decision Purchase Food	1130	49.592	8	.000
Income by Cost in Decision Purchase Food	1053	74.532	4	.000
Freshness				
Gender by Freshness in Decision Purchase Food	1129	8.913	2	.012

Table 4.2 (continued)

Nutritious or Healthy				
Gender by Decision Purchase Food	1125	11.799	2	.003
Age by Type of Decision Purchase Food	1115	21.573	4	.000
Convenience				
Gender by Decision Purchase Food	1126	7.107	2	.029
Education by Decision Purchase Food	1124	22.865	8	.004
Income by Decision Purchase Food	1048	21.794	4	.000
Home Garden				
Education by Home Garden	1080	93.372	16	.000
Income by Home Garden	1014	31.018	8	.000

Some key characteristics of those that preferred to buy organic foods were people with a higher income and higher education levels. Characteristics of those that preferred to buy local foods showed significance in all categories including age, gender, income and education.

Analysis of Hypothesis Three - Kentuckians who purchase organic and locally grown foods express similar beliefs about food and have similar characteristics.

For this hypothesis, initially, those who indicate that they purchase organic foods were compared to those who indicated that they purchased locally grown foods. Similar results were found regarding the statistical significance for females to be the primary purchaser of a household, as well as an older age category, higher education level and higher income level.

Table 4.3: Sociodemographic Characteristics and Purchasing of Locally Grown or Organic Foods

Sociodemographic Characteristics and Purchasing of Locally Grown or Organic Foods				
	Number	Value	Df	Sign
Locally Produced or Grown				
Gender by Locally grown in Decision Purchase Food	1131	13.546	2	.001
Age by Type of Decision Purchase Food	1120	37.058	4	.000
Education by Decision Purchase Food	1128	38.520	8	.000
Income by Decision Purchase Food	1051	31.469	4	.000
Preference to Purchase Locally Grown				
Gender by Preference Locally Grown	1129	9.564	4	.048
Age by Preference Locally Grown	1120	31.017	8	.000
Education by Preference Locally Grown	1127	31.166	16	.013
Income by Preference Locally Grown	1050	18.195	8	.020
Easy to Find Local Produce				
Gender by Find Local Produce	1122	15.910	4	.003
Income by Find Local Produce	1043	20.211	8	.010
Regularly Buy Locally Grown Food				
Age by Buy Locally Grown Food	1113	29.072	8	.000
Education by Locally Grown Food	1119	35.419	16	.003
Income by Locally Grown Food	1044	19.835	8	.011
Locally Grown Food Is Healthier				
Gender by Locally Grown Food Healthier	1116	26.888	4	.000
Age by Locally Grown Food Healthier	1107	23.879	8	.002
Education by Locally Grown Food Healthier	1113	54.175	16	.000
Income by Locally Grown Food Healthier	1038	39.684	8	.000
Organic				

Table 4.3 (continued)

Education by Organic in Decision Purchase Food	1111	18.877	8	.016
Income by Decision Purchase Food	1036	16.694	4	.002
Table 4.3 (continued)				
Given Choice Prefer to Buy Organic				
Income by Prefer to Buy Organic	1036	18.512	8	.018
Easy to Find Organically Grown Food				
Gender by Easy to Find	1100	13.823	4	.008
Education by Easy to Find	1098	29.614	16	.020
Regularly Buy Organically Grown Food				
Gender by Regularly Buy Organic	1094	15.380	4	.004
Organically Grown Food Is Healthier				
Gender by Organic is Healthier	1085	12.617	4	.013
Income by Organic is Healthier	1016	33.351	8	.000

But since it is possible for someone to purchase both organic and locally grown foods, the purchasing behavior variables were recoded as follows:

Q 168 (regularly buy locally grown foods) and Q 172 (regularly buy organic):

1 = Agree + Strongly Agree (codes 4,5)

2 = other (1 Strongly disagree, 2 disagree, 3 not sure)

Q 161 (the decision to buy locally grown) and Q163 (the decision to buy organic):

1 = Agree + Strongly Agree (codes 4,5)

2 = other (1 Strongly disagree, 2 disagree, 3 not sure)

The results indicate that 91 persons either agree or strongly agree that whether a food product is locally grown and organic are factors in their decision

to purchase food. Furthermore, of this group, 62 persons indicate that they regularly buy organic, locally grown foods.

Table 4.4: Decision to Buy Locally Grown and/or Organic

Decision to purchase locally grown foods	Decision to purchase organic foods	
	Agree	Disagree
Agree	96.8% (91)	56.2% (141)
Disagree	3.2% (3)	43.8% (110)
Total	100.0% (94)	100% (251)

Table 4.5: Regularly Buy Locally Grown and/or Organic

Regularly buy locally grown food	Regularly buy organic food	
	Agree	Disagree
Agree	68.9% (62)	30.7% (308)
Disagree	31.1% (28)	69.3% (694)
Total	100.0% (90)	100% (1002)

Crosstabs were then used to compare the beliefs and preferences of those who buy organic, locally grown foods. This crosstab shows significant relationship between the decision to purchase locally grown and/or organic foods. There were 91 participants that regularly decide to purchase both locally grown and organic foods.

This crosstab shows significant relationship between participants that regularly buy locally grown versus those that regularly buy organic. 62 participants showed they do.

**Table 4.6
Summary of Analysis**

Research Hypothesis	Results/Findings	Accept/ Reject?
<p>1. There is no difference in the food purchasing habits of Metropolitan and Nonmetropolitan adult Kentuckians.</p>	<p>There were significant differences between metropolitan and nonmetropolitan respondents for the following variables with respect to the importance of purchasing locally grown or organic foods. It was found that 57% or 648 of the survey participants within a Metropolitan population found it important to purchase locally grown or organic foods.</p>	<p>Reject</p>

Table 4.6 (continued)

<p>2. The factors associated with the purchase of organic and locally grown foods are different.</p>	<p>Several categories showed preference towards purchasing locally grown foods with all variables of older age, females, higher education status and higher income status showing significance.</p> <p>All variables perceived that locally grown food is healthier, and categories including older age, higher income and females purchased locally grown foods on a regular basis.</p> <p>However, the same variables examined associated with the purchase of organic showed a higher preference for purchase in the categories for higher income status and higher education status.</p> <p>Limiting factors for lower income respondents include budgetary constraints and a decreased knowledge base of organic food practices and health advantages.</p> <p>However, females showed a more significant preference to purchase organic foods over males and females were the only category to purchase these foods regularly.</p> <p>Therefore, the preponderance of the analysis</p>	<p>Accept</p>
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Table 4.6 (continued)

	showed significant relationships (i.e., age, gender, education and income) for preference to purchase local grown foods.	
3. Adult Kentuckians who purchase organic and locally grown foods express similar beliefs about food.	The crosstab shows significant relationship between participants that regularly buy locally grown versus those that regularly buy organic. 62 participants showed they do both, by regularly purchasing locally grown and regularly buying organic foods.	Accept

Chapter Five Conclusions and Future Opportunities

Conclusions

This study assesses the food preferences and purchasing decisions of participants in the 2009 Kentucky Communities survey. A particular focus of the study is those consumers who purchase locally grown and/or organic foods.

There were significant differences between metropolitan and nonmetropolitan respondents for the following variables with respect to the importance of purchasing locally grown or organic foods. It was found that 57% or 648 of the survey participants within a Metropolitan population found it important to purchase locally grown or organic foods. Additional factors that showed significance beyond being locally grown or organic included the cost, freshness and convenience of the food.

It was found that several variables (older age, females, higher income status and higher education status) played a role in survey participants' preferences for purchasing locally grown and/or organic food as well as the actual purchase on a regular basis. Moreover, with respect to whether locally grown food is healthier, the study showed that females and older age categories were the only characteristics that showed statistical significance.

However, the same variables examined associated with the purchase of organic showed a higher preference for purchase in the categories with higher income status and higher education status.

Finally, a special analysis of those who regularly buy locally grown foods found that the categories of older age, higher income status and higher education status had the belief that locally grown foods are healthier, yet all categories showed statistical significance that locally grown foods were healthier. Similarly, those who regularly buy organic foods found that females were the only category that showed statistical significance, yet females with a higher income status were the only two categories that showed significance towards organic foods actually being healthier.

The results of this survey reflect Ajzen's Theory of Planned Behavior in that an individual's personal beliefs and attitudes lead to one's behavioral intentions. The study showed that only three characteristics of older age, higher income status, and higher education status were related to the belief that locally grown foods were healthier, but all categories of older age, higher income, higher

education and females actually were significantly related to purchasing locally grown foods. It was also interesting to note that only those in a higher income and women had a belief that organic was actually healthier, yet females were the only category that actually showed the behavior to purchase organic foods. Survey participants had specific beliefs about and intentions to buy organic foods, however, only females showed a strong statistical significance in behavior of purchasing such foods.

With all of this information, some explanations for these specific categories making these specific food purchasing choices might be due in part to older shoppers have had a longer life span to realize which foods might be healthier or have grown home gardens throughout their childhood. Those with higher education levels likely have had increased access to various nutritional information through healthcare access, computer access and reading capabilities. Those with higher income levels have greater purchasing powers than those with less income. Lastly, females are typically the ones that do the food purchasing for a household, which might explain the gender category.

Limitations of this study

There is much more that could be analyzed within this study, however, for this study, I chose to examine the questions (20, 21 and 22) directly related to food consumption and purchasing decisions. One limitation of the study is the higher proportion of metropolitan residents in the sample than in the Kentucky population as a whole. The effects of this may ripple through the analysis in several ways.

For example, each participant's behavioral and socioeconomic background is likely to influence their particular beliefs related to types of foods and sources of foods and these typically vary by residence. Furthermore, budgetary concerns might also influence a person's food purchasing and decisions and their food preferences and both household and family incomes are higher in metro than in nonmetro counties. Finally, the accessibility of super stores and large grocery stores is geographically limited, so persons living in metro areas have access to a much broader range of food stores than those residing in nonmetro areas. Connected to this is the emphasis placed on offering customers locally grown or organic foods by different types of food stores. Yet, the survey did not determine how far respondents were to particular types of food stores.

Implications of results

By analyzing the data from the 2009 Kentucky Communities Survey and comparing these results to current research on the topic we have a better understanding of the food perceptions and behaviors of adult Kentuckians. Consumer perception, food labeling and intrinsic beliefs combine to produce two of the fastest growing agriculture trends within the last several decades: locally grown and organically labeled foods. Assessing whether this is also true in Kentucky will benefit local Kentucky farmers and sustainable growers with valuable knowledge regarding the consumers' preferences and beliefs.

Future research opportunities

Other areas of interest for future research include examining the same participants today to see if there had been any increase in behavior to purchase locally grown and organic foods. The original study was launched in 2009 and with the growth and marketing of locally grown and organic food, it is quite possible that many respondents might have changed their preferences or even increased their purchasing habits of locally grown and organic foods since 2009.

It would also be interesting to examine the role of the marketing that has taken place over the last five years since the launch of this study to see how it has affected the perception of locally grown and organic food throughout Kentucky. Many nonmetropolitan respondents might now be more aware of the availability, economic impact and overall general health benefits of purchasing and consuming such food. Also, it would be interesting to explore the impact of distance to different types of stores for purchasing food items as well as determining when it is that people typically do their food shopping—as a part of their general shopping or as a specific trip just for locally grown or organic products.

Future outreach opportunities

Education and marketing opportunities abound for promoting the purchase and consumption of locally grown and organic foods. The more people learn about the health and economic benefits of these two food movements, the more likely they will be interested in playing a role in their community. Women should also be a large focus of various nutritional education campaigns and marketing

efforts since this survey shows they are the primary purchasers. This would be a great economic boost to Kentucky's local farmers, as well as the general community's economy. Local grocery stores would also benefit from the increased marketing efforts and recognizing the importance of increasing the availability of locally grown products. This increased availability provides shoppers with more choices as well as educating them about how their purchasing habits impact the local economy and beyond.

It would also be important to share this information with Farmer's market operators such as Kentucky Proud, the Kentucky Department of Agriculture for their various locally grown programs, as well as various health or nutrition educators who need to understand the dynamics of consumer food purchasing so that these factors can be considered when working with their clients. Lastly, this information could also be shared with local school systems. Educating children early on regarding healthy food choices could help continue to develop their understanding of organic and local food.

The results of this survey show the increasing importance of the local food movement and organic food movement and their positive effect on American consumer's food purchasing beliefs and behaviors. "Shoppers largely embrace the increase in local food options because they believe it helps local economies (66 percent), delivers a broader and better assortment of products (60 percent), and provides healthier alternatives (45 percent)." (http://www.atkearney.com/paper//asset_publisher/dVxv4Hz2h8bS/content/buying-into-the-local-food-movement/10192#sthash.hdp2JROL.dpuf)

These beliefs were also evident in this study. Another interesting statistic regarding the organic food movement showed, "U.S. sales of organic food and beverages have grown from \$1 billion in 1990 to \$26.7 billion in 2010. Sales in 2010 represented 7.7 percent growth over 2009 sales. Experiencing the highest growth in sales during 2010 were organic fruits and vegetables, up 11.8 percent over 2009 sales" (Organic Trade Association's 2011 Organic Industry Survey). With this type of growth in both locally grown and organic foods, farmers and grocers alike are taking notice. The statistical information found in this study along with other similarly focused studies show that Americans believe that locally grown and organic foods are overall healthier than conventionally grown foods and are backing up their beliefs by making those purchases at their local farmers market or grocery store. Both of these movements have the potential to reshape the food landscape in America over the next several years. If these trends continue, farmers will continue to adjust their growing practices to meet consumer's demands and similarly, grocery stores will take note of their consumer's purchasing preferences and offer these specific types of food products. Today's American dinner table is quickly undergoing a food revolution from higher processed foods, to the healthier, more traditionally grown foods of generations past.

Appendix 1

Definitions

Organic farming- is a production system which avoids or largely excludes the use of synthetically compounded fertilizers, pesticides, growth regulators and livestock feed to the maximum extent feasible. Organic farming relies on crop rotation, crop residues, off-farm organic wastes, mechanical cultivation, mineral bearing rocks and aspects of biological pest control to maintain soil productivity and tillth to supply plant nutrients, insects, weeds and other pests. (Beharrell & MacFie, 1991).

Community Supported Agriculture (CSA) - is a marketing strategy where consumers buy “shares” in the farm before planting begins and receive a portion of whatever is available each week of the growing season. (Brown and Miller, 2008).

Locally grown produce (LGP) Based on a study, a large proportion (30%) considered “locally grown” to mean 50 miles or less and one-fourth defined it to be a 150-mile radius. (Hardesty 2008).

Appendix 2

Crosstabulations for all variables in the analysis

	Number	Value	Df	Sign
Superstore				
Gender by Type of Store	1121	6.051	3	.109
Female	NUMBER (%)			
Male				
Age by Type of Store	1113	12.611	6	.050
Education by Type of Store	1119	14.254	12	.285
Income by Type of Store	1043	15.362	6	.018
Large Grocery store				
Gender by Type of Store	1130	12.427	3	.006
Age by Type of Store	1121	9.1156	6	.165
Education by Type of Store	1127	13.252	12	.351
Income by Type of Store	1049	7.987	6	.239
Small Independent Grocery Store				
Gender by Type of Store	1110	.600	3	.896
Age by Type of Store	1102	13.931	6	.030
Education by Type of Store	1107	15.937	12	.194
Income by Type of Store	1034	7.739	6	.258
Convenience Stores				
Gender by Type of Store	1115	16.453	3	.001
Age by Type of Store	1106	3.548	6	.738
Education by Type of Store	1113	23.361	12	.025
Income by Type of Store	1037	15.322	6	.018
Farmers Markets				
Gender by Type of Store	1124	2.699	3	.440
Age by Type of Store	1116	22.626	6	.001
Education by Type of Store	1122	8.351	12	.757
Income by Type of Store	1045	3.576	6	.734
Roadside Stands				
Gender by Type of Store	1123	5.789	3	.122
Age by Type of Store	1115	30.321	6	.000
Education by Type of Store	1121	28.606	12	.005
Income by Type of Store	1044	18.266	6	.006
Cost				
Gender by Decision Purchase Food	1133	10.521	2	.005
Age by Type of Decision Purchase Food	1123	7.737	4	.102
Education by Decision Purchase Food	1130	49.592	8	.000

Appendix 2 (continued)

Appendix 2 (continued)				
Income by Decision Purchase Food	1053	74.532	4	.000
Freshness				
Gender by Decision Purchase Food	1129	8.913	2	.012
Age by Type of Decision Purchase Food	1119	4.760	4	.313
Education by Decision Purchase Food	1126	3.765	8	.878
Income by Decision Purchase Food	1050	1.311	4	.859
Locally Produced or Grown				
Gender by Decision Purchase Food	1131	13.546	2	.001
Age by Type of Decision Purchase Food	1120	37.058	4	.000
Education by Decision Purchase Food	1128	38.520	8	.000
Income by Decision Purchase Food	1051	31.469	4	.000
Nutritious or Healthy				
Gender by Decision Purchase Food	1125	11.799	2	.003
Age by Type of Decision Purchase Food	1115	21.573	4	.000
Education by Decision Purchase Food	1122	9.756	8	.283
Income by Decision Purchase Food	1046	6.752	4	.150
Organic				
Gender by Decision Purchase Food	1113	1.724	2	.422
Age by Type of Decision Purchase Food	1103	8.500	4	.075
Education by Decision Purchase Food	1111	18.877	8	.016
Income by Decision Purchase Food	1036	16.694	4	.002
Convenience				
Gender by Decision Purchase Food	1126	7.107	2	.029
Age by Type of Decision Purchase Food	1116	5.442	4	.245
Education by Decision Purchase Food	1124	22.865	8	.004
Income by Decision Purchase Food	1048	21.794	4	.000
Preference to Purchase Locally Grown				
Gender by Preference Locally Grown	1129	9.564	4	.048
Age by Preference Locally Grown	1120	31.017	8	.000
Education by Preference Locally Grown	1127	31.166	16	.013
Income by Preference Locally Grown	1050	18.195	8	.020
Easy to Find Local Produce				
Gender by Find Local Produce	1122	15.910	4	.003
Age by Find Local Produce	1114	11.704	8	.165
Education by Find Local Produce	1120	23.579	16	.099
Income by Find Local Produce	1043	20.211	8	.010
Appendix 2 (continued)				

Home Garden				
Gender by Home Garden	1082	5.466	4	.243
Age by Home Garden	1076	12.976	8	.113
Education by Home Garden	1080	93.372	16	.000
Income by Home Garden	1014	31.018	8	.000
Regularly Buy Locally Grown Food				
Gender by Buy Locally Grown Food	1121	9.323	4	.054
Age by Buy Locally Grown Food	1113	29.072	8	.000
Education by Locally Grown Food	1119	35.419	16	.003
Income by Locally Grown Food	1044	19.835	8	.011
Locally Grown Food Is Healthier				
Gender by Locally Grown Food Healthier	1116	26.888	4	.000
Age by Locally Grown Food Healthier	1107	23.879	8	.002
Education by Locally Grown Food Healthier	1113	54.175	16	.000
Income by Locally Grown Food Healthier	1038	39.684	8	.000
Given Choice Prefer to Buy Organic				
Gender by Prefer to Buy Organic	1111	5.025	4	.285
Age by Prefer to Buy Organic	1102	11.704	8	.165
Education by Prefer to Buy Organic	1109	15.728	16	.472
Income by Prefer to Buy Organic	1036	18.512	8	.018
Easy to Find Organically Grown Food				
Gender by Easy to Find	1100	13.823	4	.008
Age by Easy to Find	1091	4.894	8	.769
Education by Easy to Find	1098	29.614	16	.020
Income by Easy to Find	1026	13.864	8	.085
Regularly Buy Organically Grown Food				
Gender by Regularly Buy Organic	1094	15.380	4	.004
Age by Regularly Buy Organic	1085	10.802	8	.213
Education by Regularly Buy Organic	1092	17281	16	.368
Income by Regularly Buy Organic	1020	11.542	8	.173
Organically Grown Food Is Healthier				
Gender by Organic is Healthier	1085	12.617	4	.013
Age by Organic is Healthier	1076	5.079	8	.749

Appendix 2 (continued)

Appendix 2 (continued)				
Education by Organic is Healthier	1084	20.722	16	.190
Income by Organic is Healthier	1016	33.351	8	.000

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