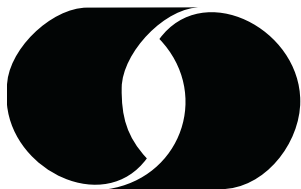


Ecolabel Value Assessment Phase II: Consumer Perceptions of Local Foods



A report of market research conducted and prepared by
the Leopold Center for Sustainable Agriculture and the
Iowa State University Business Analysis Laboratory

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IOWA STATE UNIVERSITY



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Special note: The ISU Business Analysis students in this project were all undergraduates. The market research conducted in this project was not intended to meet the standards for graduate academic research.

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Executive Summary

An ecolabel is a seal or logo indicating that a product has met a certain set of environmental and/or social standards or attributes. Ecolabels offer one important avenue to educate consumers about locally grown, sustainably-raised foods.

The Leopold Center for Sustainable Agriculture partnered with the Iowa State University Business Analysis Laboratory in the second phase of a pilot project to conduct consumer market research on food ecolabels and perceptions of locally grown foods. The specific objectives for Phase II were as follows:

- Analyze consumer reactions to different ecolabel options that focus on consumer interest in “freshness,”
- Ascertain the perceptions of consumers regarding how much of their food is produced locally and within their state,
- Determine the market power and appeal of the term “grown locally” within the context of other terms such as “organic” and “pesticide-free,”
- Better understand—from a consumer perspective—the strength of the relationship between the term “family farm” and how and where the food is grown, and
- Assess the ISU Business Analysis Lab’s ability and skill in providing marketing assistance to farmers and entrepreneurs selling locally grown foods.

An Internet-based survey was designed and conducted in November 2003 with consumers in the states of Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, and Wisconsin. Based on Phase I findings, four new ecolabels were created for study in Phase II. (A complete copy of the Phase I report is available at the Leopold Center’s web site, www.leopold.iastate.edu/pubs/staff/ecolabels/index.htm). Strawberries were selected as the food item for use in all the ecolabels. The first set of labels were designed with two tag lines (both with freshness messages) and a background picture to reinforce an appealing image of fresh strawberries. The second set of Phase II ecolabels used a single tag line (with a freshness message) without a background picture and compared locally grown strawberries with berries grown within the United States. Respondents were asked to respond to a series of questions regarding the ecolabels, as well as questions concerning their perceptions of locally grown foods.

A second Internet-based survey was designed and administered to a group of respondents in Iowa, the Omaha, Nebraska metropolitan area, and the Quad Cities metropolitan area (Illinois and Iowa). This survey focused on respondents' interest in learning more about how and where their food is produced, and their willingness to pay for foods produced in a way to improve the environment, community life, and livelihood of local farms.

PHASE II: ECOLABEL SURVEY

Comparing ecolabels

More than 70 percent of respondents viewing the set of simplified ecolabels with one tagline, which compared locally grown strawberries with those grown in the United States, thought of reasons why they would buy locally grown berries. More than 90 percent of this group preferred the locally grown label with the single tag line rather than the USA-grown strawberry label. By creating an image that equated grown locally with freshness, this set of ecolabels stimulated the desire of respondents to purchase local strawberries. It also provided them a clear choice between locally grown strawberries and USA-grown but generic berries.

Perceptions of local foods – ecolabels and no ecolabels

Consumer respondents have a basic understanding that local sources—whether local means grown several miles away in the same county or within one's state of residence—are responsible for a minority of the fresh meat and produce available for sale. Their interest in locally grown foods is intertwined with their wish to have more of these products readily available.

If price and visual appearance were the same and the package label for meat or produce items provided limited information as to how and where the product was grown, consumer respondents were much more likely to make locally grown, or locally grown without pesticides (pesticide-free) their first choice over certified organic choices, even if those choices were locally grown. These findings imply that the term locally grown commands a great deal of power and influence for consumers when purchasing meat or produce items. It also implies that consumers either do not fully understand the term organic, and/or do not perceive that the same sense of value applies to organic meat and produce items as to locally grown products.

If price and visual appearance were the same and respondents knew that the attribute information for the product was true, they were most likely to choose a locally grown and pesticide-free meat or produce item compared to certified organic options, including locally grown-organic. The option “grown locally—some pesticides used” received more than twice as many first choice selections than “certified organic—origin unknown.” This finding supports a common perception held by local food advocates that, given a choice, consumers are more likely to purchase locally grown over organic foods produced in a distant region, even if the local foods were produced using some pesticides.

When asked how closely the terms grown locally, pesticide-free, organic, grown in your state, product of USA, and humanely raised were related to the term “family farm,” the majority of respondents believed that grown locally was the most closely related term (68 percent for those who viewed ecolabels and 60 percent for those who did not). None of the other terms were viewed by more than 10 percent of respondents as being most closely related to the term family farm.

Consumer respondents (who viewed ecolabels and those that did not) were asked to rate a suite of options as to their potential to financially assist farmers within their state. Respondents were most likely to rate selling more food items to local and regional markets and having more in-state processing options (meat, poultry, produce) as having the highest income potential, compared to other options such as agri-tourism, farming more acres the same way, forming a marketing cooperative, and organic production. Study findings clearly reflect consumer respondent’s interest in local foods; which may be why respondents rated selling more food items to local and regional markets and having more in-state processing as the options most likely to financially assist farmers. If these options were successful, consumer respondents would have more local and regional food choices to access, while the other options may not necessarily impact availability of local foods. More than three-fourths of the respondents do not perceive that farming more acres in the same manner offers high potential for financial gains for farmers.

Marketing Implications

In marketing terms, the freshness, quality, taste, and price of the food product (in our ecolabel case, strawberries) are part of the core product to consumers. These four characteristics drive consumer respondents’ overall purchasing decisions. Respondents secondarily look for augmented food product benefits such as buying locally (supporting local farmers), promoting good health, protecting the environment, and supporting the local economy (in their community or state). Foods that are locally grown hold great appeal for consumer respondents provided those products consistently offer the taste, freshness, quality, and value consumers are looking for. Survey results confirm Phase I findings that the majority of consumer respondents do not have concerns with locally grown foods. Consumer respondents also are more interested in locally grown foods than they are foods that are produced in an environmentally sound manner (but not identified as local).

The most influential tag line (for purchase of local foods) among the five options offered to respondents was “Freshness-dated, so you know when it left the farm”—regardless of whether respondents viewed ecolabels or not. The responses to the tag lines support the premise first advanced in the Phase I study that the use of freshness dating on locally grown products is a concept with tremendous market potential. It appeals to consumer desires to understand the level of freshness of the food they buy. It also supports other U.S. food science research that shows consumer perception of freshness is determined in part by the time from harvest to sale. However, freshness dating should be extended beyond stating how long a product will retain quality to include how fresh (time from harvest) the product is when it arrives at the store or point of sale.

The concept of using freshness dating of food products (particularly produce, and in some cases, eggs, dairy, and meat) should be explored to enhance local farmers' competitive advantage over non-local products. Tag lines such as "from farm to your store's door in 24 hours" or "within an hour's drive from your store" evoke perceptions of local and fresh products that are easily accessible from nearby farms and offer a competitive advantage to farmers interested in local and regional markets.

This research has shown that consumer respondents in the upper Midwest are greatly influenced by market messages that equate locally grown products with freshness. Campaigns such as "Buy Fresh, Buy Local" initiated by the Food Routes Network (www.foodroutes.org) and other "buy local" efforts have discovered the advantages of this connection and place their message equating freshness with local origins—front and center—in all of their marketing materials.

PHASE II: IOWA-BASED WILLINGNESS TO PAY SURVEY

Nearly 30 percent of respondents in Iowa (and adjacent metropolitan areas in Nebraska and Illinois) indicated that they think frequently about where and how their food is produced. Respondents clearly were interested in locally grown foods, with more than 50 percent indicating high to very high levels of interest. On a relative basis, the respondents were more interested in local foods than food raised in an environmentally and socially responsible manner. This information supports findings from the larger Phase II ecolabel and no ecolabel study that shows consumer respondents have more of an interest in locally grown foods than they do foods that have environmental and social attributes but which are not produced locally.

Twelve to 18 percent of consumer respondents were willing to pay 30 percent or more for food products (depending on the food item) that combine the attributes of locally grown with environmental and community stewardship. Since this group of respondents was more interested in local food than food grown in an environmentally and socially responsible manner, it is likely that the locally grown attribute is a more important factor in the willingness to pay above conventional price than the two other factors (food grown in an environmentally and socially responsible manner). This information on willingness to pay is encouraging news to small and midsize farmers who are looking to grow and market their products using the attribute of locally grown to differentiate themselves. It is clear, however, that these consumer respondents want the farms where these foods are produced to be inspected and certified for the claims they are making, particularly if they are buying these products from food stores.

Introduction

The Leopold Center for Sustainable Agriculture is a research and education center with statewide programs to develop sustainable agricultural practices that are both profitable and conserve natural resources. It was established under the Groundwater Protection Act of 1987 with a three-fold mission: (1) to conduct research into the negative impacts of agricultural practices; (2) to assist in developing alternative practices; and (3) to work with ISU Extension to inform the public of Leopold Center findings. The Center is administered through the Agriculture and Home Economics Experiment Station at Iowa State University. Additional information about the Leopold Center can be found in Appendix 1.

Within the Center's Marketing and Food Systems Initiative, a major focus is developing food and fiber value chains that support farmers and rural communities. A value chain is a network of collaborating players who work together to satisfy market demand for a specific product or set of services. There are simple value chains, such as a farmer selling produce to an urban consumer at a farmers market. There also are value chains where farmers do not market directly to consumers, but share in the risks and rewards with other value chain partners to produce a quality product for consumers. An example is an organic dairy farmer who belongs to a cooperative. His milk is picked up by a tanker, brought to a processing plant, pasteurized, homogenized, and bottled, and then sent to the warehouse of a large natural food grocery store for eventual distribution to a store in a major city 350 miles from the farm.

The ISU Business Analysis Laboratory provides a unique learning experience at Iowa State University. Graduate and undergraduate students from the Colleges of Business, Education, and Engineering work together in cross-functional teams to solve real business and manufacturing problems. The Laboratory is designed to provide a setting within which students may apply their education to real world business situations. It serves as the academic equivalent of a technology business incubator with students as tenants. Students work part-time in the Laboratory in multidisciplinary teams, progressing to leadership positions with superior performance over the course of a semester. Faculty members - one each from the Colleges of Business, Education (Industrial Technology), and Engineering - provide support to students during their work in the Laboratory. Additional information on the ISU Business Analysis Laboratory can be found in Appendix 2.

ECOLABEL ONLINE CONSUMER STUDY - PHASE I

Ecolabels offer one avenue to educate consumers about locally grown, sustainably-raised foods. An ecolabel is a seal or logo indicating that a product has met a certain set of environmental and/or social standards. In the summer of 2003, the ISU Business Laboratory and the Leopold Center for Sustainable Agriculture conducted three focus groups followed by consumer and food business online (Internet) research of local foods and food ecolabels. The Leopold Center reported on this Phase I research in December 2003 in a document entitled “*Ecolabel Value Assessment: Consumer and Food Business Perceptions of Local Foods.*” A complete copy of the report is available at the Leopold Center’s web site: (<http://www.leopold.iastate.edu/pubs/staff/ecolabels/index.htm>).

Consumer respondents reacted positively to ecolabels that shared information on the time it took produce to travel from farm to store, equating shorter time periods with fresher produce. The factors driving consumers’ purchasing decisions for local foods were freshness, taste, quality, and value. Respondents also were concerned with environmental impact and pesticides used on foods but only in the relation to the key attributes of freshness, taste, quality and price. In other words, consumers will be motivated to purchase locally grown foods but the products also must have consistently superior taste, quality, freshness, and value.

Consumers who viewed ecolabels had a different perception than those who did not see ecolabels regarding how far their food traveled. The ecolabels influenced respondents to choose “grown within their state” as their most popular definition of locally grown. The no ecolabel respondents were most likely to perceive locally grown as “grown within 25 miles or less of purchase”, which was the shortest distance of all options offered.

In September 2003, the Leopold Center and the ISU Business Analysis Laboratory again agreed to work cooperatively to conduct consumer market research on a revised set of food ecolabel prototypes that would build on what was learned in the Phase I study. In addition, the Phase II research expanded the original questions on perceptions of local foods by consumers posed in Phase I. The specific objectives for Phase II were as follows:

- Analyze consumer reactions to different ecolabel options that focus on consumer interest in “freshness,”
- Ascertain the perceptions of consumers regarding how much of their food is produced locally and within their state,
- Determine the market power and appeal of the term “grown locally” within the context of other terms such as “organic” and “pesticide-free,”
- Better understand - from a consumer perspective - the strength of the relationship between the term “family farm” and how and where the food is grown, and
- Assess the ISU Business Analysis Lab’s ability and skill in providing marketing assistance to farmers and entrepreneurs selling locally grown foods.

Methodology

ECOLABEL VALUE ASSESSMENT – PHASE II

Based on Phase I findings, four new ecolabels were created for study in Phase II. Two labels were designed to offer a visual representation of a marketable image of freshness. The ISU Business Analysis Lab students developed a number of tag lines (short slogans used to help market products) for use with the ecolabels, and eliminated the least popular ones through short surveys administered to other College of Business students. Strawberries were selected as the food item for use in all the ecolabels. For the first label, the tag line “The road to freshness is a short one” was selected. This label included a picture of a road leading to a pair of strawberries. The second label included the tag line “There’s no place like home...grown.” It included a picture of the same large strawberries with a farm field scene as the backdrop. Both ecolabels included “At your store’s door within 24 hours of harvest” as a secondary tag line to further emphasize the impression of freshness, and a note indicating the farm was within one hour drive of the food store. Images of the labels are shown in Figures 1 and 2.



Figure 1. Ecolabel 1 (Set 1) with pictures and two tag lines.



Figure 2. Ecolabel 2 (Set 1) with pictures and two tag lines.

The second set of Phase II labels used less text than the first set, and compared locally grown strawberries with berries grown within the United States (but clearly not from local sources). Background pictures were not used. The first label of this second set was designed to portray locally grown food as fresh, again using “at your store’s door within 24 hours of harvest” as a tag line. The farm’s name was included to portray it as a family farm that seeks to build relationships with consumers. The statement “within an hour’s drive of your store” was included to reinforce that the product was local and that the farm could be easily accessed. A web site URL was included to encourage consumers to view the farm where the strawberries were grown. The second label was designed to portray food grown in the United States by a company rather than a family farm. This label also encouraged consumers to visit the company web site for product information. Images of these set 2 labels are shown in Figures 3 and 4.



Figure 3. Ecolabel 1 (Set 2) local product with single tag line.



Figure 4. Ecolabel 2 (Set 2) U.S. grown product with no tag line.

These two sets of labels along with additional survey questions were sent to consumers from the upper Midwest in the states of Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, and Wisconsin. It should be noted that the survey respondents were not representative of a random statistical sample for each of the included states. The online survey was administered to respondents by a third-party company, PostMasterDirect (www.postmasterdirect.com/), which manages the world's largest database of e-mail addresses. This database has been compiled using a double opt-in process whereby individuals who initially visit the company's web site and subscribe to one of its response lists must revisit the site in order to confirm the subscription prior to the delivery of any surveys or other forms of commercial contact.

From this database, a random selection process was employed by PostMasterDirect in order to develop a sample of e-mail addresses to which the online survey instrument was sent. The last step in the process was the collection of data by SurveyMonkey.com which allowed for review of individual responses to each question. A random sample of e-mail addresses per state was selected by the survey administrator. Surveys were developed using an online survey software platform provided by SurveyMonkey.com (www.surveymonkey.com). Printed versions of the survey are included in Appendices 4, 5, and 6.

Survey: Ecolabel Summary

Two groups of respondents viewed the ecolabels and one control group did not see ecolabels. The surveys began with a set of introductory comments and instructions. In order to create a situation similar to what consumer respondents would encounter while shopping for produce in a grocery store or farmers market, one group saw the label with two tag lines and image-evoking pictures and a second group saw simpler labels with a single tag line. Respondents were told that these labels would appear on boxes or containers of produce in their store. Respondents could click "next" for the subsequent page or "back" for the previous page at any time while taking the survey.

The two groups of respondents were asked to identify what first came to mind when viewing these labels (an open-ended question) and which label they preferred. A third question gauged how effective the label was in terms of understandability, influence, communicating an appropriate amount of information, and affecting food purchase behavior.

Perceptions of locally grown

Next, a series of questions investigated respondents' perceptions of locally grown products and their willingness to pay increased prices for these products. The question "What do you consider 'local' when making a food purchase?" attempted to pinpoint consumers' definition of locally grown and an open-ended question explored concerns about buying locally grown products. A third question asked respondents to evaluate attributes such as taste, freshness, food security, and environmental concerns according to their importance in deciding to purchase locally grown foods. Another open-ended question attempted to quantify how much more respondents would be willing to pay for locally grown foods in four groups: fruits and vegetables, dairy products, eggs, and meat/poultry. On all surveys, respondents were queried about the levels of influence and appeal that five different product label tag lines statements provided.

The next question attempted to gauge the perception of the current relative market size for locally grown foods: "What percentage of the fresh produce, meat, and poultry for sale in your community do you perceive was grown/raised within your county?" This question was repeated for food grown and raised within the state. The next two questions asked respondents to rank food items based on specific attributes: grown locally, grown locally-certified organic, grown locally- pesticide free, grown in (your state) and certified organic, and certified organic, given that price and visual appearance were the same. The choices for the second question were grown locally-some pesticides used, grown locally-certified organic, grown locally-pesticide free, grown in your state-certified organic, and origin unknown-certified organic.

Perceptions of terms and options to increase profitability

Two questions explored respondents' perceptions of relationships of various terms and profitability of several options farmers could exercise. In particular, one question asked respondents to gauge how closely related the terms "grown locally," "pesticide-free," "organic," "grown in your state," "product of USA," and "humanely raised" were to the term "family farm." Respondents also were asked to rate the potential of various options for financially assisting local farmers. Finally, a series of questions gathered demographical information in order to evaluate linkages between consumer background and buying behavior.

A second round of surveys was administered after it was determined that an insufficient response rate had been received for the first round of three surveys. The second round contained two minor changes: the question "Which label do you prefer?" was added to the surveys that contained ecolabels, and "taste" replaced "other" on the list of attributes that respondents evaluated as important in the decision to purchase local foods. In total, 580 surveys were returned and analyzed.

IOWA-BASED STUDY FOCUSED ON WILLINGNESS TO PAY

As part of the work for Phase II study, the Leopold Center and the ISU Business Analysis Lab designed a shorter survey that was administered to a group of respondents in Iowa, Nebraska (living in and around Omaha), and Illinois residents from in and around the Quad Cities (Iowa/Illinois).

The questions examined the consumers' shopping and eating habits, their level of interest in food issues and the characteristics they look for when purchasing food. Consumers also were asked what attributes justify paying a premium for food items. Survey respondents were then asked about their willingness to pay for food that is produced in a manner shown to maintain or improve the environment, community life, and livelihood of local farms. Several demographic questions were asked to determine the backgrounds of the respondents.

Like the larger Phase II Ecolabel Survey sent to respondents in the upper Midwest, the online survey also was administered to respondents by a third-party company, PostMasterDirect (www.postmasterdirect.com). This database has been compiled using a double opt-in process whereby individuals who initially visit the company's web site and subscribe to one of its response lists must revisit the site in order to confirm the subscription prior to the delivery of any surveys or other forms of commercial contact.

From this database, a random selection process was employed by PostMasterDirect in order to develop a sample of 1,500 e-mail addresses to which the online survey instrument was sent. The last step in the process was the collection of data by SurveyMonkey.com which allowed for review of individual responses to each question. A random sample of e-mail addresses per state was selected by the administrator. Surveys were developed using an online survey software platform provided by SurveyMonkey.com (www.surveymonkey.com/). A printed version of the survey is included in Appendix 7. A total of 230 survey responses were received.

Consumer Survey Analysis

Ecolabel and No Ecolabel Consumer Respondents Demographics and responses by state

Tables 1 through 14 show the demographic data for those respondents who viewed ecolabels and those who did not. The demographic differences between the two data sets were small. Appendix 8 provides responses to each survey question for the ecolabel and no ecolabel data sets by state. Nearly 81 percent of the respondents were female.

Table 1

Ecolabels	
How many adults (19 and over) live in your household?	% Response
No response-0	0.0
1	22.9
2	59.2
3	13.7
4 or more	4.2

Table 2

No Ecolabels	
How many adults (19 and over) live in your household?	% Response
No response-0	0.0
1	20.0
2	56.0
3	20.0
4 or more	4.0

Table 3

Ecolabels	
How many children (18 and under) live in your household?	% Response
0	48.0
1	17.0
2	20.3
3	9.0
4	3.5
5 or more	1.6

Table 4

No Ecolabels	
How many children (18 and under) live in your household?	% Response
0	55.5
1	9.9
2	21.0
3	9.9
4	2.5
5 or more	1.2

Table 5

Ecolabels	
Are you male or female?	% Response
No response	0.0
Male	21.1
Female	78.9

Table 6

No Ecolabels	
Are you male or female?	% Response
No response	0.0
Male	19.3
Female	80.7

Table 7

Ecolabels	
What is your ethnicity?	% Response
No response	10.5
Caucasian-American (Non-Hispanic)	80.8
African American	2.1
Hispanic or Latino American	1.8
Asian American	0.5
Native American	1.8
Other	1.3
Choose not to disclose	1.1

Table 8

No Ecolabels	
What is your ethnicity?	% Response
No response	0.0
Caucasian-American (Non-Hispanic)	92.7
African American	1.3
Hispanic or Latino American	1.3
Asian American	0.7
Native American	1.3
Other	1.3
Choose not to disclose	1.3

Table 9

Ecolabels	
What is your annual household income?	% Response
No response	0.0
Under \$40,000	50.5
\$41,000-70,000	28.9
\$71,000-100,000	7.4
Over \$100,000	2.6
Choose not to disclose	10.5

Table 10

No Ecolabels	
What is your annual household income?	% Response
No response	0.0
Under \$40,000	54.0
\$41,000-70,000	23.3
\$71,000-100,000	8.0
Over \$100,000	2.7
Choose not to disclose	12.0

Table 11

Ecolabels:	
What is your highest level of education completed?	% Responses
Some high school or high school diploma	26.6
Some college	49.7
Bachelor's degree	19.5
Master's degree	3.4
Doctorate degree	0.8

Table 12

No Ecolabels:	
What is your highest level of education completed?	% Responses
Some high school or high school diploma	30.7
Some college	54.0
Bachelor's degree	10.0
Master's degree	5.3
Doctorate degree	0.0

Table 13

Ecolabels:	
In what type of area do you live?	% Responses
City with at least 50,000 people or metro area	30.8
Small city with 5,000 to less than 50,000 people	35.5
Small town with less than 5,000 people	18.4
Rural area or on a farm	15.3

Table 14

No Ecolabels:	
In what type of area do you live?	% Responses
City with at least 50,000 people or metro area	32.7
Small city with 5,000 to less than 50,000 people	30
Small town with less than 5,000 people	17.3
Rural area or on a farm	20

When asked what percentage of grocery shopping the respondents do for their households, more than 70 percent of the respondents indicated they did 76-100 percent of the grocery shopping (Figure 5). These results were similar both for those who viewed ecolabels in the survey and those who did not.

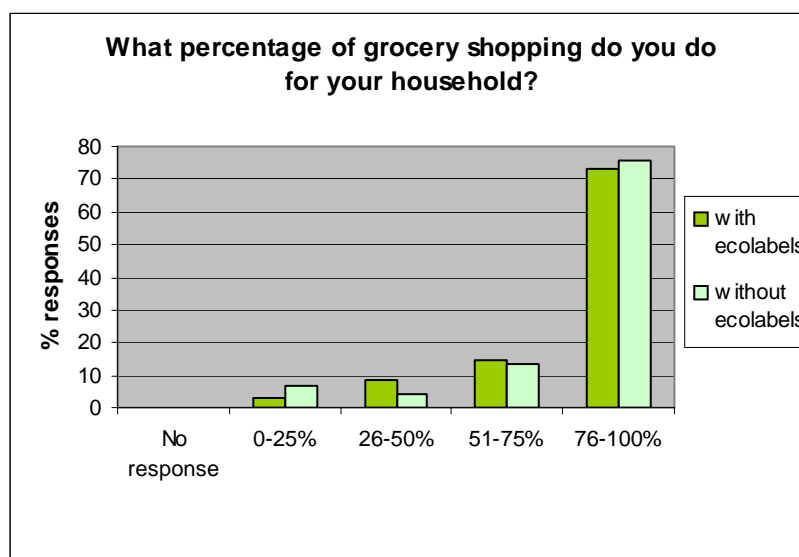


Figure 5. Percentage of grocery shopping for household.

DISCUSSION

Ecolabels and No Ecolabel Respondents

Respondents were asked to respond to the four different statements concerning the labels. The four statements were:

- “I clearly understand the labels.”
- “The labels did not make an impression on me.”
- “The labels contained too much information.”
- “As I looked at the labels, I thought of more reasons why I would buy locally grown strawberries.”

A majority of respondents understood the labels and disagreed that the labels did not make an impression or contained too much information. Figure 6 shows the response for the fourth statement “As I looked at the labels, I thought of more reasons why I would buy locally grown strawberries.” More than 50 percent of the respondents who viewed ecolabels with two tag lines and 68 percent of those who viewed labels with a single tag line agreed or strongly agreed that the labels influenced their thinking to buy local strawberries.

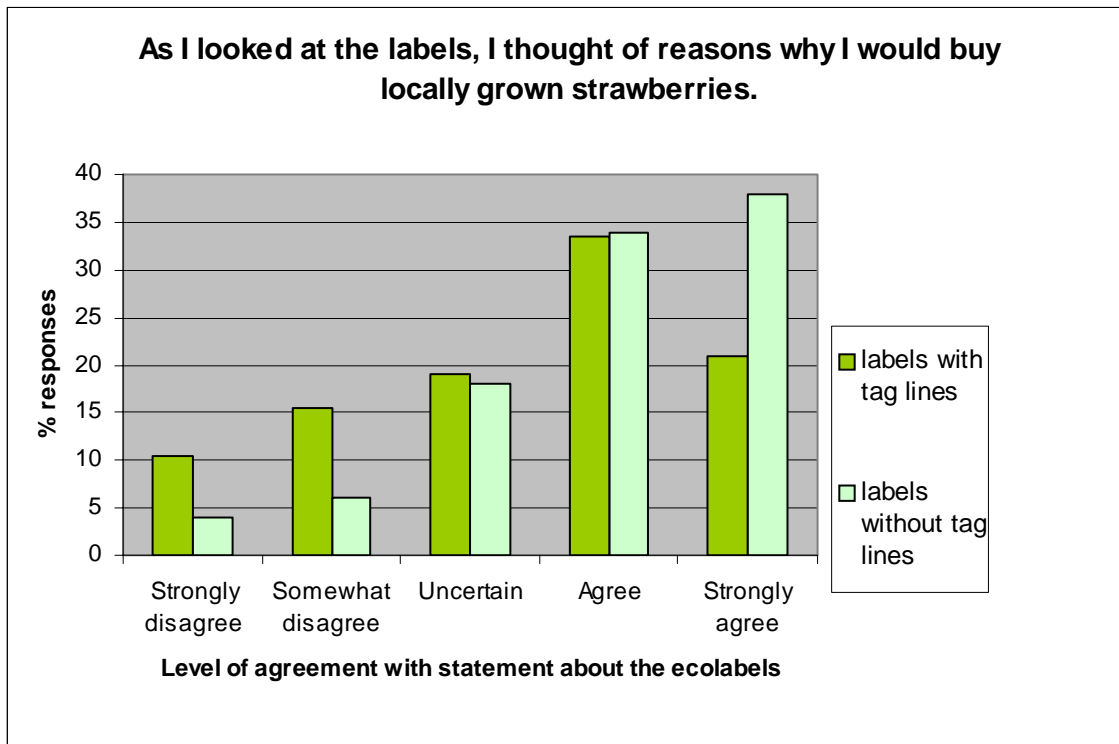


Figure 6. Reasons to buy locally grown strawberries.

Respondents who viewed labels with background pictures and two tag lines were asked (as an open-ended question) what first came to mind when looking at the labels. Figure 7 shows that the most popular response was “freshness,” indicating the labels and tag lines were successful in motivating respondents to think about the freshness of the strawberries. Responses categorized as “other” included summertime, colors, country or rural settings, baseball fields, and tasty.

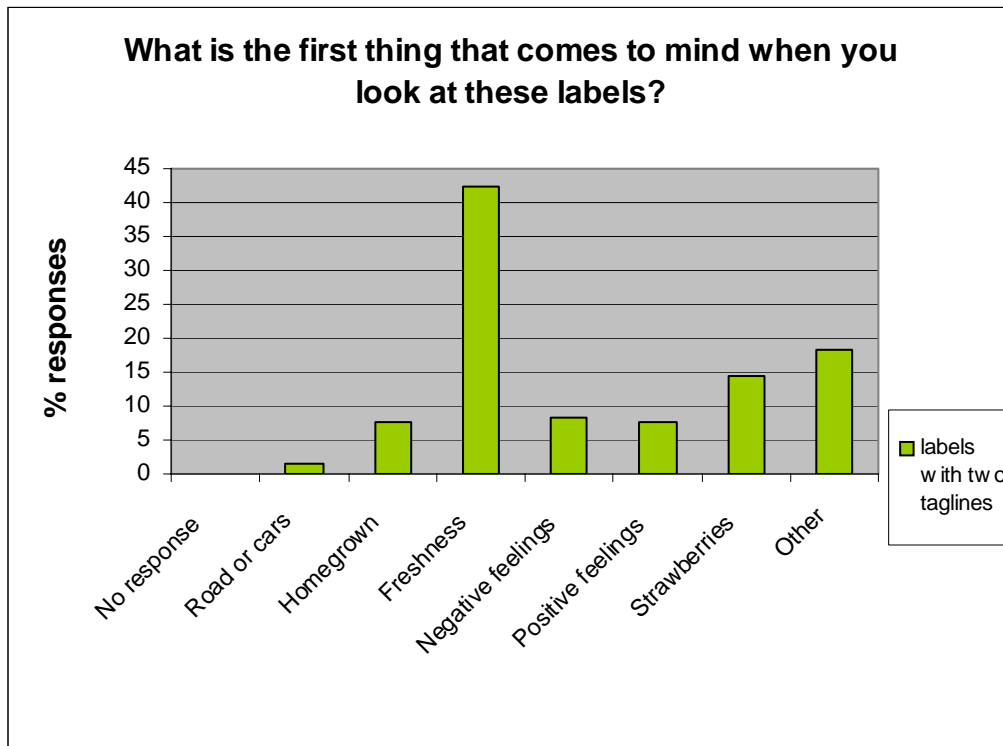


Figure 7. First thing that comes to mind when viewing labels.

When respondents who viewed ecolabels with single tag lines were asked what thing came to mind first when viewing the label, the majority of people replied “grown locally,” with “freshness” being the second most common response (Figure 8).

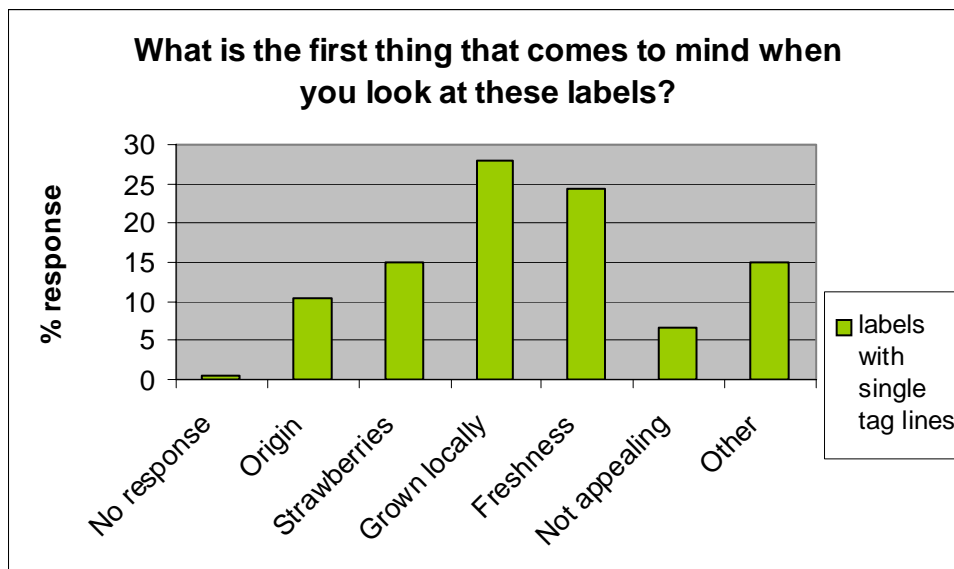


Figure 8. First thing that comes to mind when viewing labels?

Ecolabel Preference – Sets 1 and 2

For the first set of ecolabels with two tag lines, 41 percent of respondents chose ecolabel 1 (“the road to freshness is a short one” – picture of a road) while 59 percent of respondents preferred ecolabel 2 (“there’s no taste like home...grown” with picture of a field).

For the second set of ecolabels with a single tag line, 91 percent preferred ecolabel 1 (locally grown – “at your store’s door within 24 hours of harvest”) compared to only 9 percent for ecolabel 2 (“grown in the United States” – no tag line).

Perception of the term “local”

When respondents were asked what they consider to be “local” when making a food purchase, the most popular response for those who did not view ecolabels was “grown 25 miles or less from purchase point” which received 36 percent of responses compared to 32 percent for those who did view ecolabels (Figure 9). “Grown in your state” received a slightly higher percent of responses than “grown 25 miles or less from purchase” for those respondents who did view ecolabels. “Grown in the Midwest” received less than 15 percent of the total responses regardless of whether respondents viewed ecolabels or not.

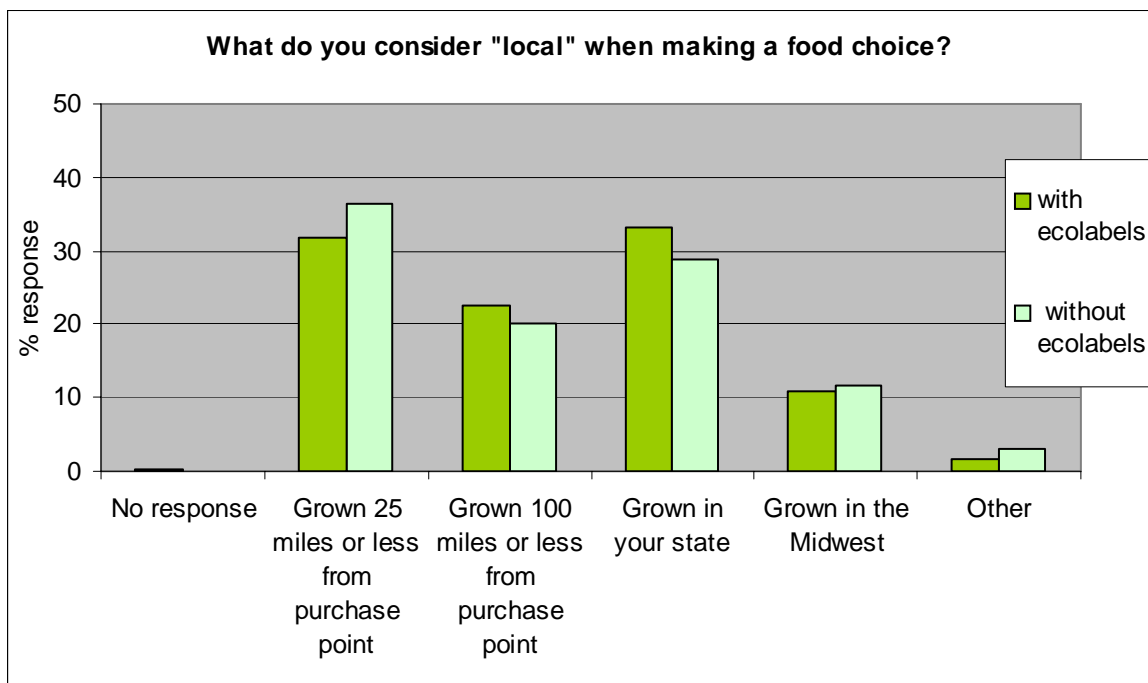


Figure 9. Respondent perception of “local” when making a food choice.

When respondents were asked, “Which of the following is important to you when you purchase local foods?” during the first set of surveys, more respondents cited quality, taste, and freshness as being “most important” than other possible attributes such as environmental concerns or healthier foods (Figure 10). Differences in responses between those who saw ecolabels and those who did not see ecolabels were minimal for nearly all of the value options. Those who viewed ecolabels were slightly more likely (in 8 of 9 cases) to rank the attributes as “most important” than those respondents who did not view ecolabels.



Figure 10. Percent attributes rated “most important” when purchasing local foods.

When respondents were asked if they had any concerns about purchasing local foods, 78 percent of those who saw ecolabels and 76 percent of those who did not see ecolabels had no concerns (Figure 11). Less than 7 percent of those who saw labels and 4 percent of those who didn’t see labels were concerned with possible pesticide use in the production of the locally grown foods. Fewer than 3 percent had food safety concerns, whether or not they viewed ecolabels. Specific responses that were placed in the “other” response category included availability, shortness of season, uncertainty whether local (purchased at a grocery store) really was from local producers, and lack of freshness (sitting on trucks too long).

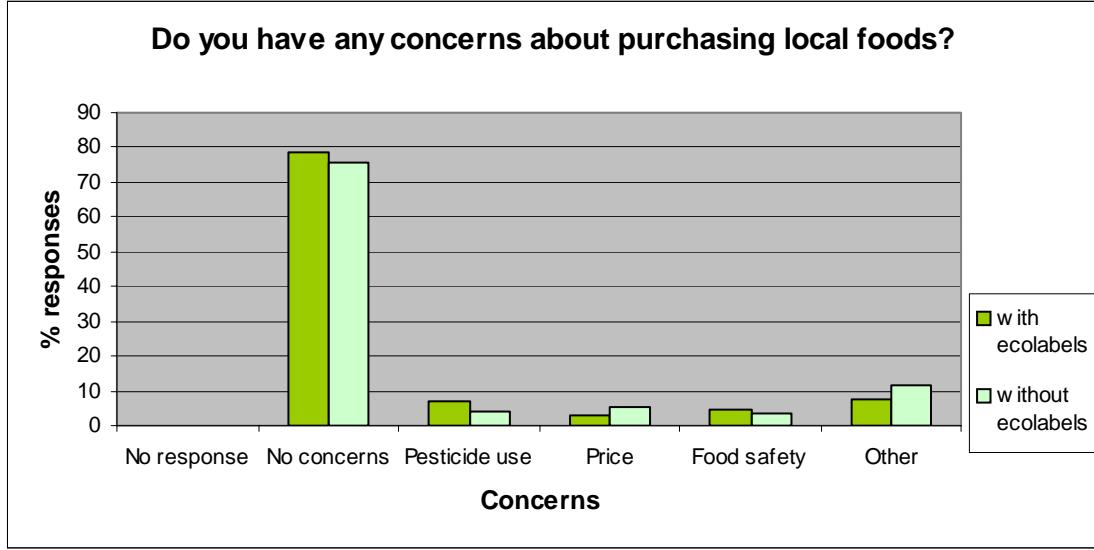


Figure 11. Concerns about purchasing local foods.

When respondents were asked what percentage of the fresh produce, meat, and poultry for sale in their respective communities they perceived to be grown or raised within their county of residence, responses were very similar regardless of whether ecolabels were viewed (Figure 12). More than two-thirds of consumer respondents believed that 25 percent or less of the fresh produce, meat, and poultry for sale in their respective communities was grown or raised within their county of residence – regardless of whether they viewed ecolabels. Less than 5 percent of respondents believed that more than 75 percent of food items was grown or raised within their county of residence.

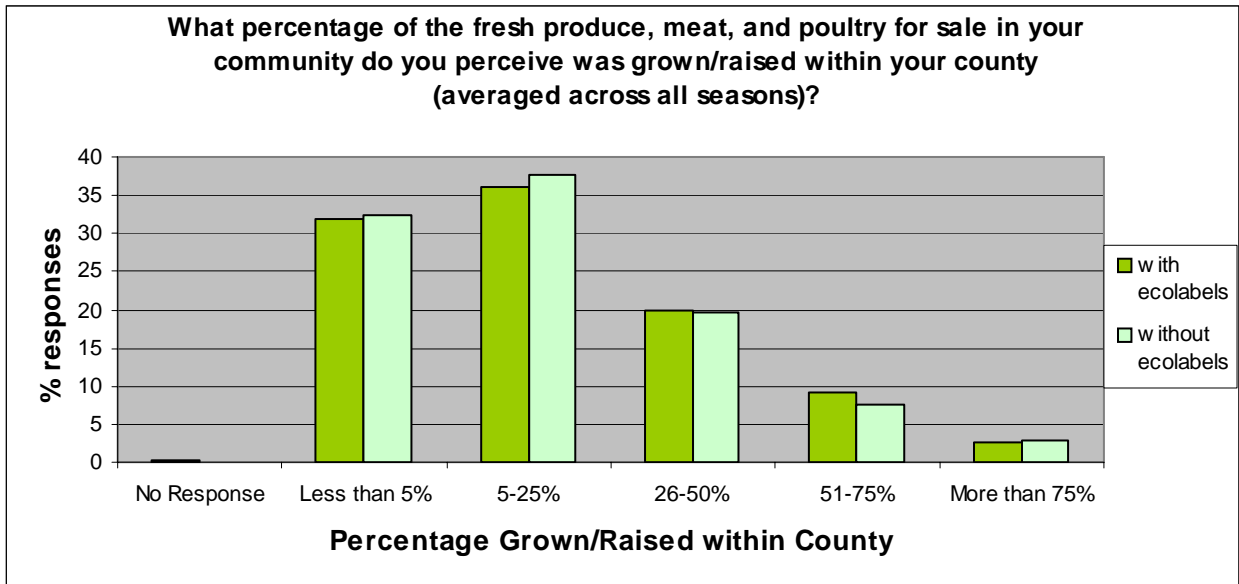


Figure 12. Percent of fresh produce, meat, and poultry perceived to be available for sale in county of residence.

When respondents were asked what percentage of the fresh produce, meat, and poultry for sale in their respective communities they perceived to be grown or raised within their respective states, more than 40 percent of respondents who saw ecolabels selected 5-25 percent compared with 36 percent for the respondents who did not see ecolabels (Figure 13). More than 35 percent of all respondents perceived that 26 to 50 percent of the produce and meat items for sale were grown or raised within their state; clearly respondents were more likely to view these food items as grown with their state rather than within their county of residence.

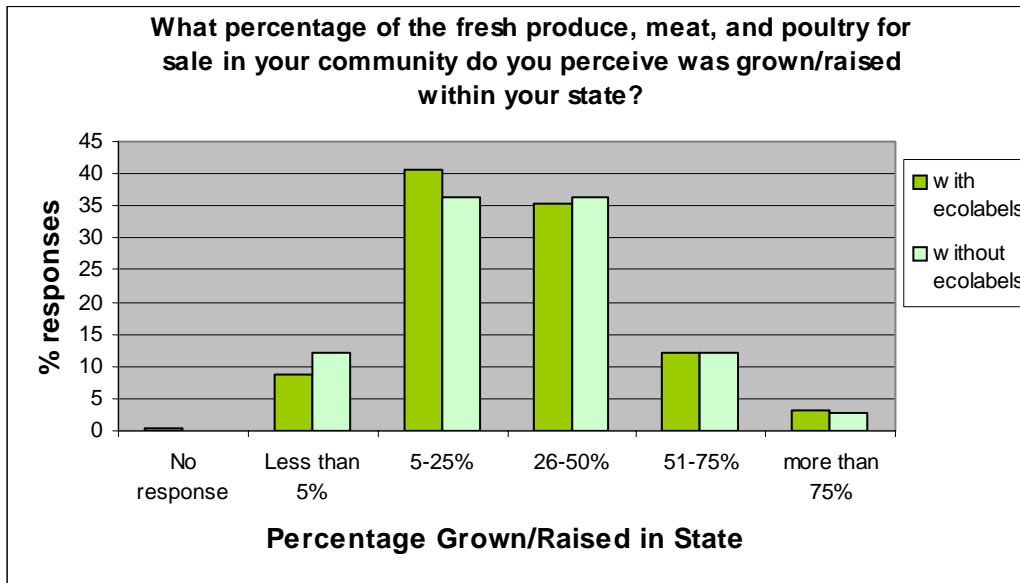


Figure 13. Percent of fresh produce, meat, and poultry perceived to be available for sale in state of residence.

Respondents views of grown locally

In the Phase I study more than 75 percent of consumer respondents (ecolabel or no ecolabel) chose “grown locally by family farmers” as their first choice for produce or meat products, compared to four different organic choices, even though the survey question stated that price and visual appearance would be the same for all choices. This was very surprising, given that “grown locally-organic” was one of the four organic choices. Feedback on this finding suggests that the phrase “by family farmers” provided a favorable bias toward the locally grown option; this phrase was not part of any of the four organic choices.

In Phase II this question was revised and became two separate questions:

1. If price and visual appearance for meat or produce were the same and the package label provided only the following information, how would you prioritize these selections (from first to fifth choice), and
2. If price and visual appearance for meat or produce were the same and you knew the following information to be true about the product, how would you prioritize your selections (from first to fifth choice).

Figure 14 indicates the percent of first choice responses for each of the attributes. “Grown locally” and “Grown locally – Pesticide Free” received the highest percent of first choice responses, regardless of whether the respondents viewed the ecolabels or not. The percentage of first choice responses for these two attribute choices was more than twice that of any of the organic attribute choices, including “grown locally organic.” “Certified Organic” (with no additional attribute information) and “Grown in your state (Certified Organic)” received the lowest percent of first choice responses.

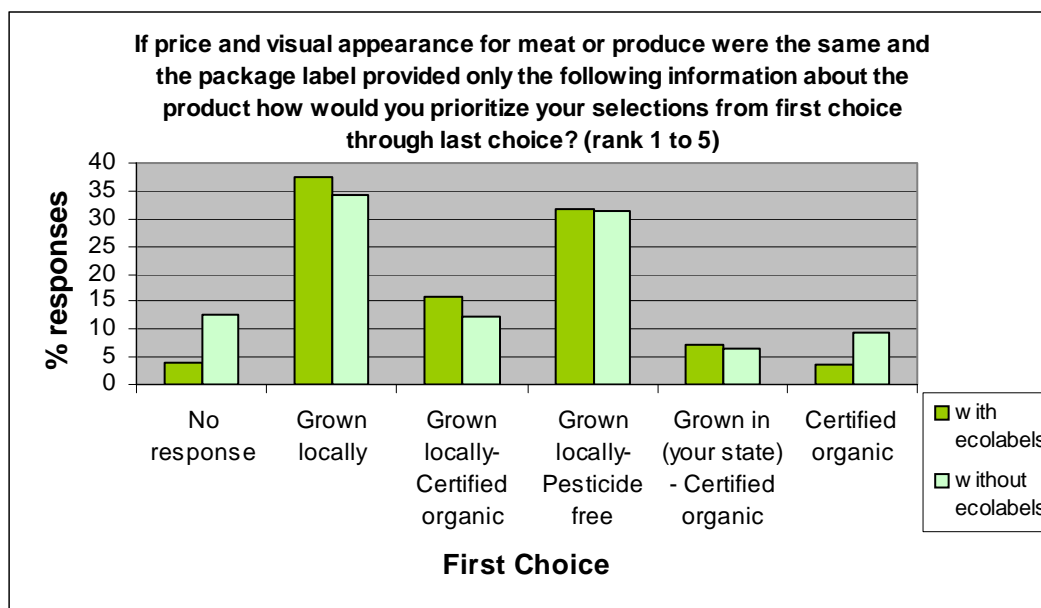


Figure 14. Percent of first choice responses for meat or produce attribute selections, if price and visual appearance were the same.

Respondents were asked to prioritize their selections from first choice through last (fifth) choice if they knew the attribute information to be true about the meat or produce item, given that the price and visual appearance for that item were the same. Figure 15 shows that more than 55 percent of respondents (whether or not they viewed ecolabels) chose “Grown locally – Pesticide free” compared to 20 percent of first choice responses for “Grown locally-Certified Organic” (23 percent for respondents who viewed ecolabels and 16 percent for those who did not). The option “Grown locally – some pesticides used” received only 8 percent of first choice responses, yet this was more than twice the percentage of first choice responses received for “Certified Organic – origin unknown,” and similar to the percentage for “grown in your state – certified organic.”

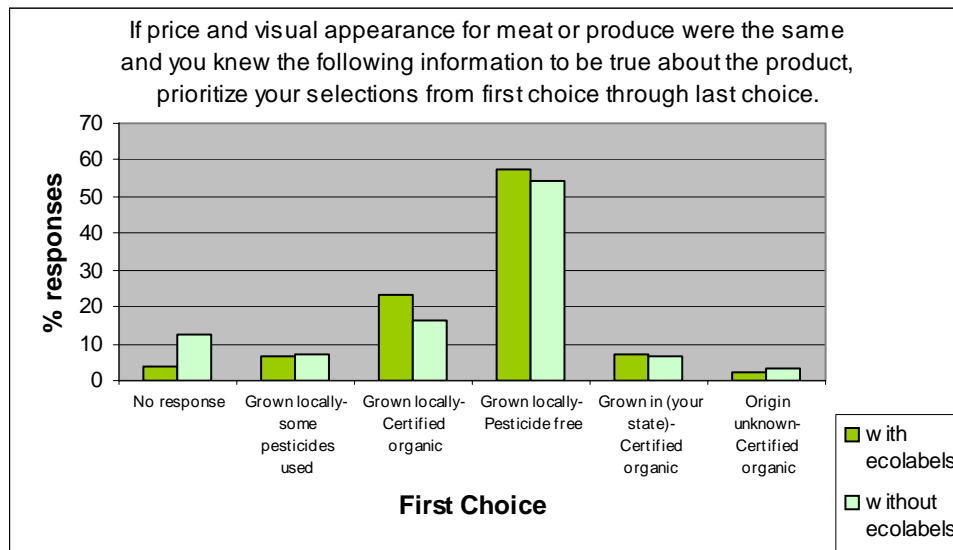


Figure 15. Percent of first choice responses for meat or produce attribute selections, if price and visual appearance were the same.

Willingness to pay

Consumer respondents were asked an open-ended question as to whether they would be willing to pay more for produce, meat, and dairy items if they were raised locally. Unfortunately, a number of respondents appeared to misunderstand the question phrasing and reported in terms of dollars while others reported in term of percent. Due to the lack of confidence in the true intention of their responses, those data will be excluded from this report.

Respondent reaction to market tag lines

Respondents were asked to read a set of five statements:

- There's no taste like home...grown,
- The road to freshness is a short one,
- Give back to the community and treat yourself to the exceptional taste and freshness,
- Vine ripened down the road, or box ripened from 1,000 miles away? The choice is yours, and
- Freshness-dates so you know when it left the farm.

Respondents were told that these statements would be found below the words “locally grown” on a large sign in the produce department of a grocery store where they usually shopped. Respondents were asked to rate each of the statements using a four-point scale from not influential to very influential. Figure 16 shows that more 45 percent of respondents who viewed ecolabels and 38 percent of those who did not perceived the statement “Freshness-dated so you know when it left the farm” to be very influential. The statement “There’s no taste like home...grown” was perceived to be very influential by nearly 34 percent of respondents who viewed the ecolabels. The statement that received the lowest percentage of very influential rankings was “The road to freshness is a short one.”

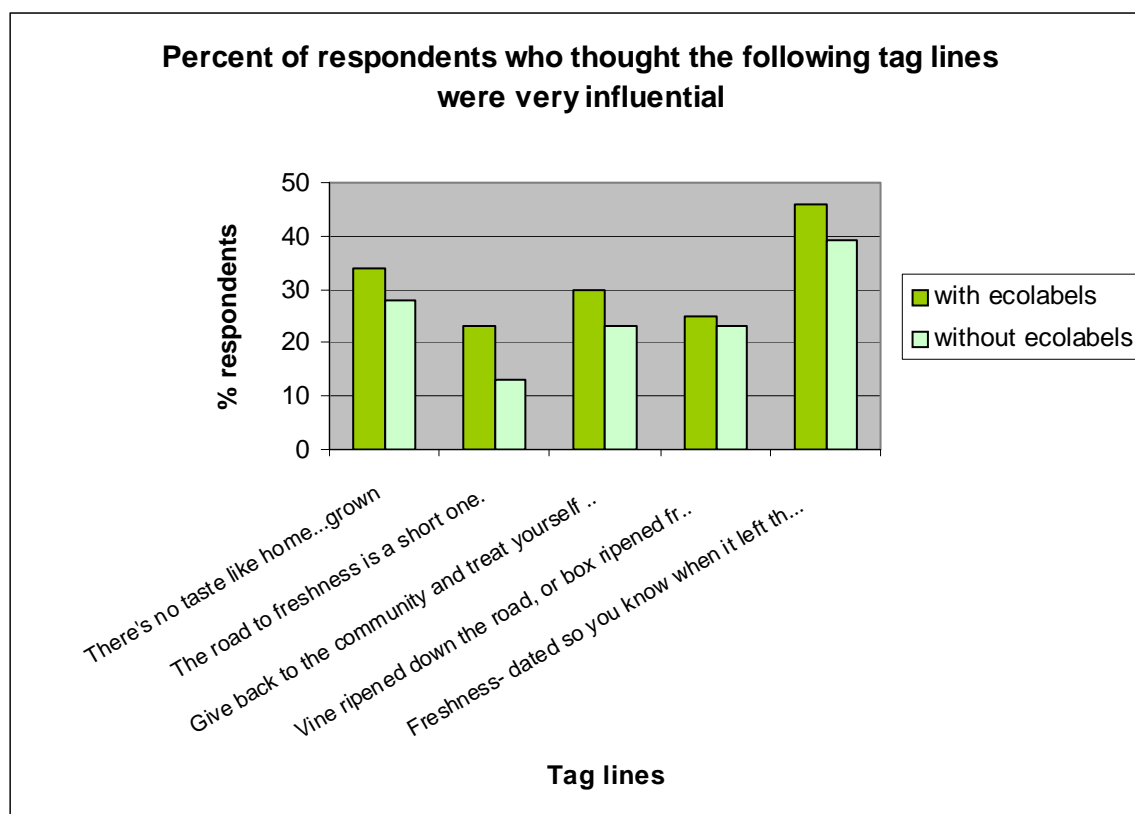


Figure 16. Percent of respondents who thought the tag lines were very influential.

Respondents also were asked to rate the same set of five statements in terms of the level of appeal – using a four-point scale ranging from not appealing to very appealing. Figure 17 shows that the phrase “Freshness-dated so you know when it left the farm” received the highest percent of “very appealing” ratings of the five statements for those who viewed ecolabels. For those who did not view ecolabels, “There’s no taste like home...grown” and “Freshness-dated so you know when it left the farm” both received approximately 35 percent of the very appealing ratings. The statement “The road to freshness is a short one” received the lowest percentage of very appealing ratings, regardless of whether the respondents viewed the ecolabels.

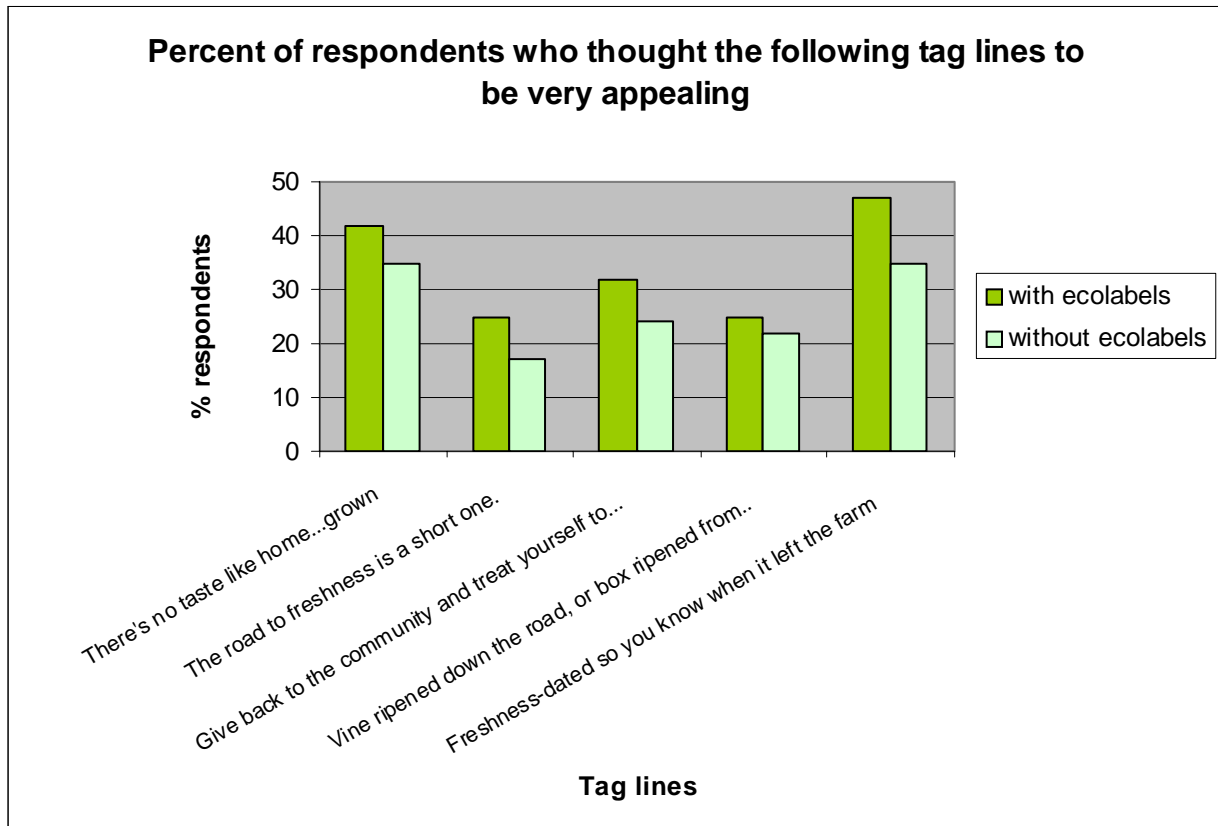


Figure 17. Percent of respondents who thought the tag lines to be very appealing.

How attributes relate to the term “family farm”

When asked how closely the terms grown locally, pesticide-free, organic, grown in your state, product of USA, and humanely-raised were related to the term family farm, the vast majority of respondents chose grown locally as the term most closely related (Figure 18). The term humanely-raised was the only other term chosen as being most closely related to “family farms” by at least 10 percent of respondents with or without ecolabels.

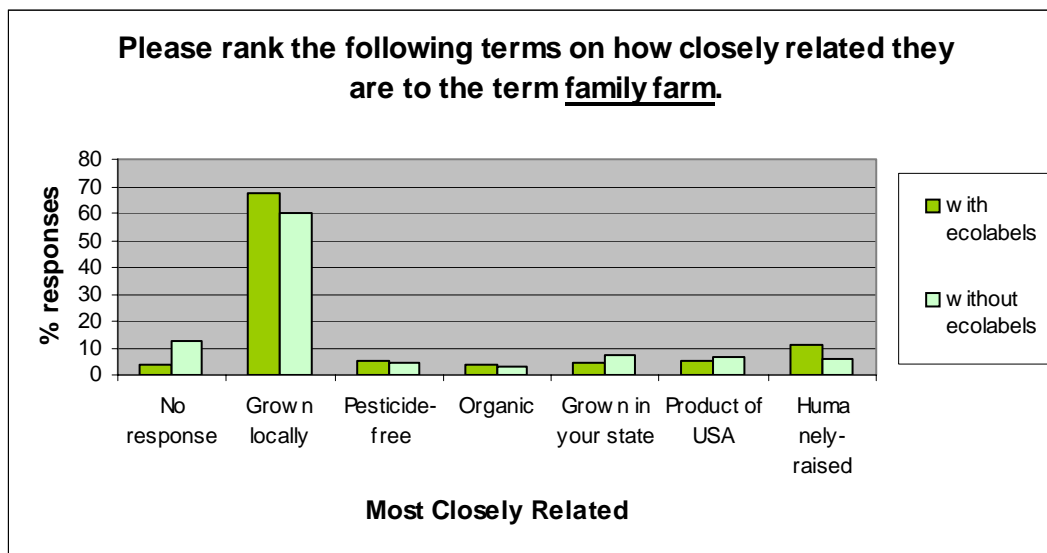


Figure 18. Ranking attributes in relation to the term family farm.

Consumer perceptions on which options will financially assist farmers

Respondents were asked to review and rate a set of six options for their potential to financially assist their state’s farmers. Those six options were:

- Selling more food items to local and regional markets,
- Converting to organic production,
- Offering agri-tourism opportunities for urban and suburban residents,
- Providing more in-state processing options (meat, poultry, produce) for farmers,
- Farming more acres in the same manner, and
- Joining a marketing cooperative or farm network.

Respondents were asked to rate these options on a four-point scale from “No Potential” to “High Potential.” Figure 19 indicates the percentage of respondents who selected “High Potential” for each of the six options. “Selling more food items to local and regional markets” received the highest percentage of “High Potential” responses of the six options (57 percent for those who viewed ecolabels and 48 percent for those who did not), followed by “Providing more in-state processing options for farmers” (45 percent for those who viewed ecolabels and 38 percent for those who did not).

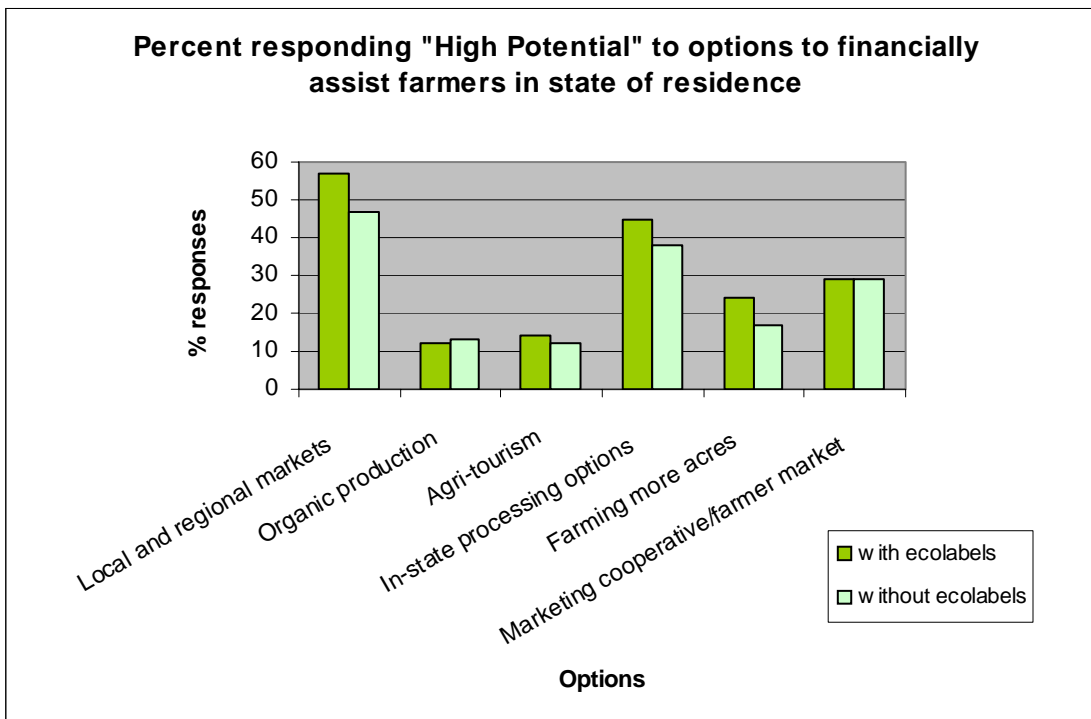


Figure 19. Percent responding “High Potential” to options to financially assist farmers in state of residence.

Iowa-based study focused on willingness to pay

Demographics

Tables 15 through 24 present the demographic data for the respondent population sample. Approximately 71 percent of the survey respondents resided in Iowa, 18 percent was from Nebraska (Omaha metropolitan area) and 11 percent from Illinois (Quad Cities metropolitan area). Respondents were 78 percent female and 22 percent male; nearly 92 percent of those respondents who chose to disclose their ethnicity listed themselves as white Caucasian. More than 76 percent of the respondents were responsible for more than half of the food shopping for the household; 9 percent were responsible for 25 percent or less.

Table 15

What is your Age?	% Response
27 and Under	13.6
28-47	43.9
48-70	39.3
71 and Over	3.3

Table 17

How many children (18 and under) live in your household?	% Response
0	55.1
1	18.2
2	15.9
3	6.1
4	1.4
5 or more	3.3

Table 19

What is your ethnicity?	% Response
Caucasian-American (Non-Hispan)	91.6
African American	0.9
Hispanic or Latino American	1.9
Asian American	0.5
Native American	1.4
Other	1.4
Choose not to disclose	2.3

Table 22

Percentage of Grocery Shopping You Do for Your Household	% Response
0-25%	9.3
26-50%	14.5
51-75%	11.2
76-100%	65.0

Table 16

How many adults (19 and over) live in your household?	% Response
1	18.2
2	60.7
3	15.0
4 or more	6.1

Table 18

Are you male or female?	% Response
Male	22.0
Female	78.0

Table 20

What is your annual household income?	% Response
Under \$40,000	61.6
\$41,000-70,000	27.5
\$71,000-100,000	7.6
Over \$100,000	3.3
Choose not to disclose	

Table 21

What state do you live in?	% Responses
Iowa	70.6
Nebraska	18.2
Illinois	11.2

Table 23

In what type of area do you live?	% Responses
City with at least 50,000 people or metro area	39.3
Small city with 5,000 to less than 50,000 people	20.6
Small town with less than 5,000 people	22.9
Rural area or on a farm	17.3

Table 24

What is your highest level of education completed?	% Responses
Some high school or high school diploma	25.7
Some college	51.9
Bachelor's degree	16.8
Master's degree	5.1
Doctorate degree	0.5

DISCUSSION

Iowa-based study on willingness to pay

Nearly 30 percent of respondents frequently thought (whenever they purchased food) about how and where their food was produced (Figure 20). Only 24 percent thought rarely or not at all about how and where their food was produced.

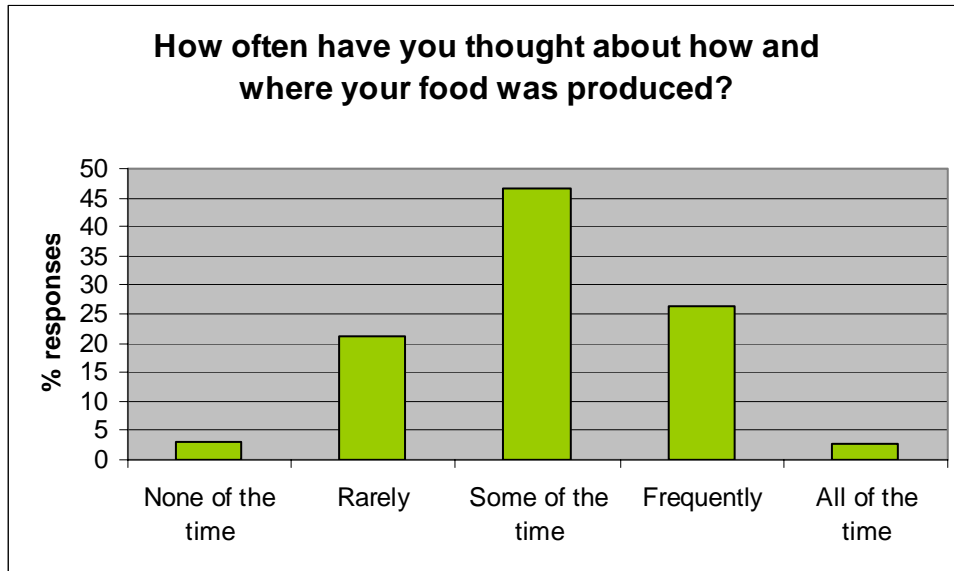


Figure 20. Frequency of thinking about how and where food was produced.

When asked whether they would like to learn more about where and how their food is produced, more than 55 percent of respondents indicated that they would be interested or very interest (Figure 21).

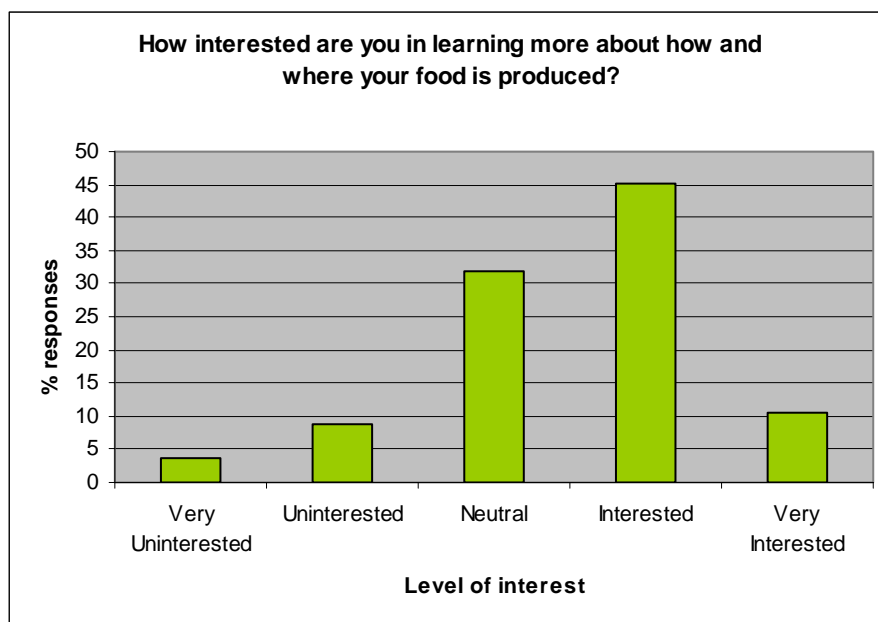


Figure 21. Level of interest in learning more about how and where food is produced.

Respondents were asked to rate their level of interest (ranging from very low to very high) in foods that were raised locally, grown in a socially responsible manner, or in an environmentally responsible manner. Figure 22 shows that more than 50 percent of respondents had a high or very high interest in foods that were grown locally compared to 24 percent for foods raised in a socially responsible manner, and 36 percent for products raised in an environmentally responsible manner.

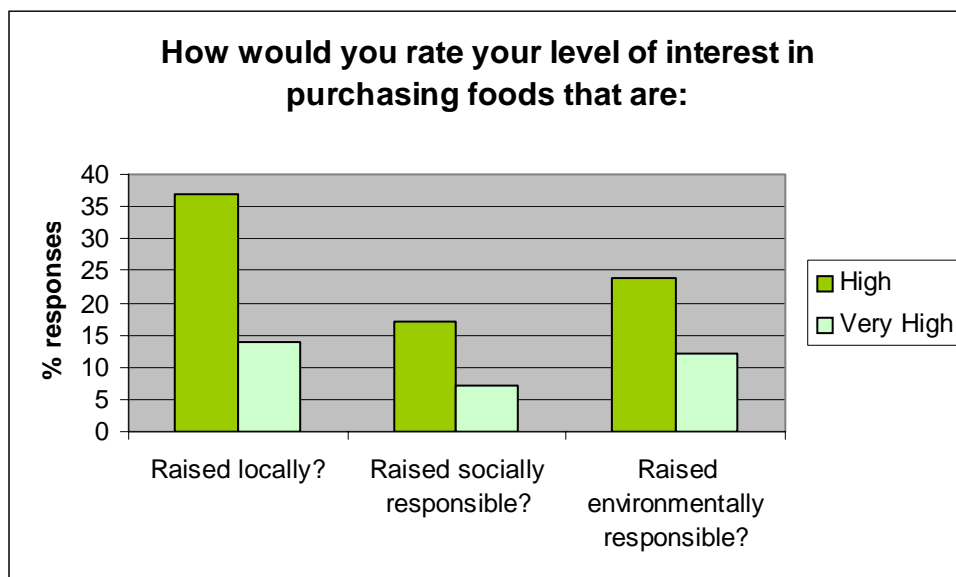


Figure 22. Level of interest in purchasing foods that are raised locally, raised socially responsible, and raised environmentally responsible.

Consumer respondents were asked about their willingness to pay (above conventional price) for foods that were produced in a way to maintain or improve the environment, community life, and the livelihood of local farms. Respondents were given a range from 0 percent to more than 50 percent in 10 percent intervals (with an additional choice for more than 50 percent). Figure 23 shows the percent of respondents willing to pay 30 percent or more for foods produced with these attributes in mind. Respondents willing to pay 30 percent or more above conventional price ranged from 18 percent for produce to 12 percent for beans/legumes. It is important to note that from 25 to 34 percent of respondents (depending on food type) were not willing to pay any amount above conventional price for foods produced in a way to improve the environment, community life, or the livelihood of local farms.

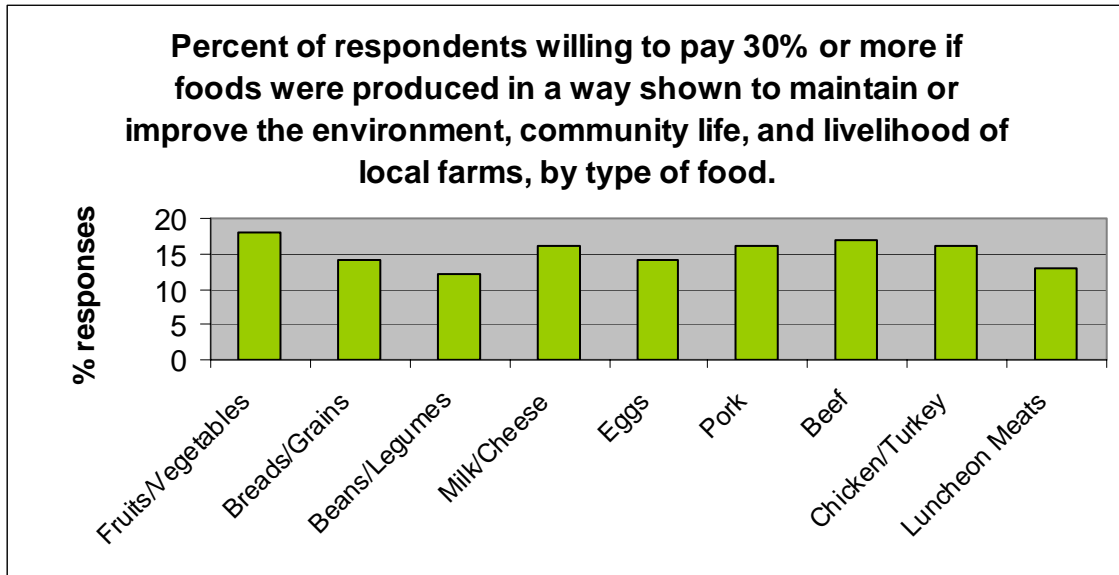


Figure 23. Willingness to pay 30% or more if foods were produced in a way shown to maintain or improve the environment, community life, and livelihood of local farms, by type of food.

Some concerns had been raised in the Phase I study as to whether the claims were indeed authentic for products touted as organic, pesticide free, or locally grown. For this reason, a question was added to the Iowa-based study to determine how important it is for farms that make such claims to be certified and inspected. Figure 24 shows that approximately 70 percent of respondents believe that it is important or very important that farms be inspected and certified for the claims made about food raised in environmentally and socially responsible manners.

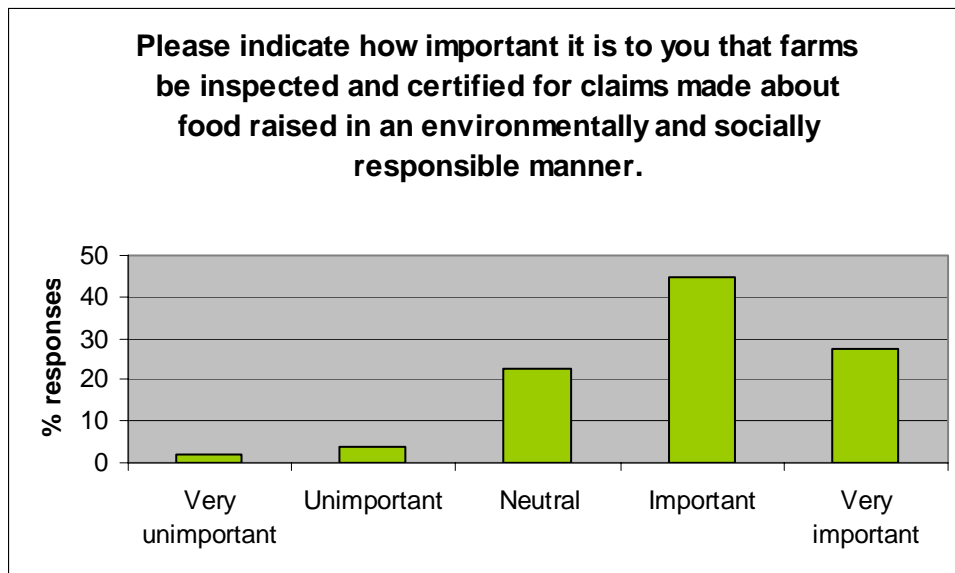


Figure 24. Level of importance that farms be inspected and certified for claims made about food raised in an environmentally and socially responsible manner.

Conclusions



ECOLABEL VALUE ASSESSMENT: ECOLABELS AND NO ECOLABELS

More than 70 percent of respondents who viewed the simplified set of ecolabels with one tagline comparing locally grown strawberries delivered to the food store within 24 hours of harvest with strawberries grown in the United States without such a “freshness” claim thought of reasons why they would buy the locally grown berries. In addition, more than 90 percent of these respondents preferred the locally grown label with the “freshness” claim over the more generic strawberry label stating the product was grown in the U.S.A.

In contrast, only 52 percent of respondents viewing the more text-heavy set of ecolabels with two taglines thought of reasons why they would buy local strawberries. These respondents were more equally split between the two ecolabel choices, which differed in secondary tagline and background scene in which the strawberry was placed. The respondents who viewed this set of ecolabels immediately thought about freshness, while the respondents who viewed the simplified set of ecolabels with one tagline combined their thoughts of freshness with “grown locally.” By creating a perspective that equated grown locally with freshness, the simplified ecolabel set stimulated more impetus to purchase local strawberries, and provided a clearer choice between a locally grown product and a more generic one grown in the United States.

PERCEPTIONS OF LOCAL FOODS: ECOLABELS AND NO ECOLABELS

In the Phase I survey, viewing of ecolabels appeared to strongly influence the geographic perception of “local” when making a food purchase among consumer respondents. A higher percentage of respondents saw local as “grown in your state” rather than “grown 25 miles or less from purchase,” with the reverse being true for those who did not view ecolabels. The same trends held in Phase II; however, the contrast was not nearly as stark between those who viewed ecolabels and those who did not. Nearly 37 percent of those respondents who did not view ecolabels selected “grown 25 miles or

less from purchase point” compared to 32 percent for those who did view ecolabels. Thirty-four percent of respondents who viewed ecolabels selected “grown in your state” compared to 29 percent who did not see the ecolabels. This contrast in perceptions between Phase I and II may be due to additional emphasis placed on the term locally grown (rather than state) in the Phase II ecolabels.

Phase II survey findings showing which product attributes are important when purchasing local foods corroborated Phase I findings, with the attributes of freshness, taste, quality, and value ranked as “very important” when purchasing foods. As in Phase I, respondents viewed support of local farmers as more important than environmental concerns when purchasing local foods. As was the case in Phase I, the vast majority of consumer respondents do not have concerns with local foods. It is important, however, to note that concern over possible pesticide use, (higher) price, and food safety are issues for a small segment of these local food shoppers.

Consumer respondents clearly have a basic sense of where their food comes from, as evidenced by their responses in choosing the percentage of fresh produce, meat, and poultry that they perceive is grown/raised within their state or county. Only 12 percent of respondents who viewed ecolabels (compared to 10 percent who did not) perceived that more than 50 percent of fresh meat, poultry, and produce available for sale in their community were raised within their county of residence. Upon widening the question from county to state, respondents’ perceptions of the percent for sale grown locally in the 26 to 50 percent range increased by more than 15 percent. Still, less than 16 percent of respondents believed that more than 50 percent of those food items available were grown within their state. This suggests that respondents clearly understand that local sources – whether local means grown several miles away or within one’s state of residence – are responsible for a minority of the fresh meat and produce available for sale.

The most influential tag line (for purchase of local foods) among the five options offered to respondents was “Freshness-dated, so you know when it left the farm” – regardless of whether respondents viewed ecolabels or not. However, this term was perceived to be just as appealing as the term “There’s no taste like home...grown” by respondents who did not view ecolabels (and was only 5 percent more appealing among those who did view the labels). These findings support the premise first advanced in the Phase I study that the use of freshness dating on locally grown products is a concept that could have tremendous appeal and influence on consumers. It also supports other earlier research that shows consumer perception of freshness is determined in part by the time from harvest to production.¹

After produce is harvested, physiological processes such as water loss and oxidation occur. As a result of oxidation, the loss of vitamin C is considerable in produce, especially if the produce is stored at room temperature. More research could be done examining content of vitamin C, folic acid, and presence of nitrite as possible freshness parameters in fruits and vegetables.²

¹ Schutz, H.G., A.V. Cardello, and G. Babdogan, 2002. “Factors influencing consumer perceptions of freshness.” International Food Technologists Annual Meeting Technical Program – Anaheim, CA. Found at (http://ift.confex.com/ift/2002/techprogram/paper_10200.htm)

² Steinhart, H., 2002. “Freshness parameters of vegetables.” International Food Technologists Annual Meeting Technical Program – Anaheim, CA. Found at (http://ift.confex.com/ift/2002/techprogram/paper_10200.htm)

If price and visual appearance were the same and the package label provided limited information as to how and where the product was grown, consumer respondents were much more likely to make locally grown, or locally grown and pesticide-free meat and produce items their first choice over certified organic choices, even if those choices were locally-grown. These findings suggest that either consumers do not understand the term organic or perhaps do not value organic meat and produce items as they do locally grown items. These suggestions only apply to organic as it relates to locally grown; the demand for organic products continues to increase in the United States.

If price and visual appearance were the same and respondents knew that the attribute information for the product was true, they were most likely to choose a locally-grown and pesticide-free meat or produce item compared to certified organic options, including locally grown-organic. The option “grown locally – some pesticides used” received more than twice the first choice selections than “certified organic – origin unknown.” The findings on this comparison support a common perception held by local food advocates that, given a choice, consumers are more likely to purchase locally grown over organic foods produced in a distant region, even if the local foods were produced using some pesticides.

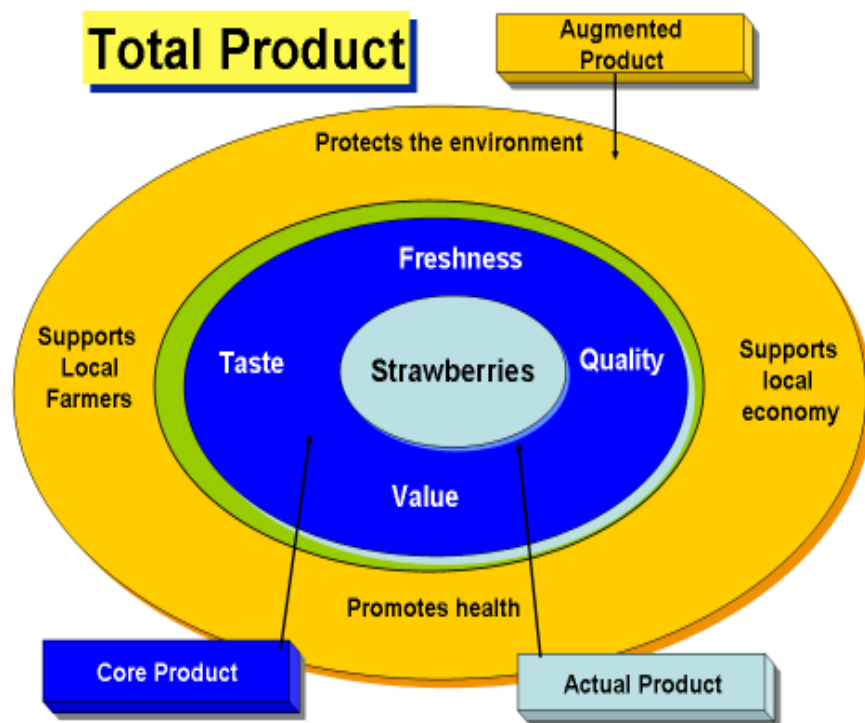
When asked how closely the terms grown locally, pesticide-free, organic, grown in your state, product of USA, and humanely-raised were related to the term family farm, the majority of respondents believed that grown locally was the most closely related term (68 percent for those who viewed ecolabels and 60 percent for those who did not). None of the other terms were viewed by more than 10 percent of respondents as being most closely related to the term family farm. These findings imply that consumers are more likely to believe that locally grown food came from family farms than foods grown within the USA, their state of residence, or foods grown in an environmentally responsible manner.

When consumer respondents were asked to rate a suite of options designed to financially assist farmers within their state, they were most likely to rate selling more food items to local and regional markets and having more in-state processing options (for meat, poultry, and produce) as having the highest potential compared to other options such as agri-tourism, farming more acres the same way, and organic production. The two options with the highest perceived potential received slightly higher ratings among those participants who viewed ecolabels compared to those who did not. These two options also appear to have the most direct impact on consumer respondents’ food purchases, and respondents in the survey were quite interested in local foods. If these options were successful consumer respondents would have more local and regional food choices to access, while the other options do not necessarily impact product availability. It also is interesting to note that more than three-fourths of the respondents do not perceive that farming more acres in the same manner offers high potential for financial gains for farmers.

Marketing perceptions of local foods

In marketing terms, the freshness, quality, taste, and price of the food product (in our ecolabel case, strawberries) are part of the core product to consumers (Figure 25). As we confirmed in the Phase I findings, these four characteristics drive consumer respondents overall purchasing decisions.

Respondents secondarily look for augmented food product benefits such as buying locally (supporting local farmers), promoting health, protecting the environment, and supporting the local economy (in their community or state). They are not likely to buy locally grown foods, or foods produced with environmental or community stewardship, unless those products consistently deliver great taste, quality, freshness, and value.



Potential to build contextual bridges between freshness and locally grown attributes

This research has shown that consumer respondents in the upper Midwest are greatly influenced by market messages that equate locally grown products with freshness. Campaigns such as “Buy Fresh, Buy Local” coordinated by the Food Routes Network (www.foodroutes.org) and underway in Iowa, have discovered the advantages of this connection and place their message equating freshness with locally grown front and center in all of their marketing materials. The consumer respondents in this study found the concept of “freshness dating” particularly influential and appealing. For farmers to increase market access and appeal in retail and wholesale venues, the concept of using freshness dating of food products (particularly produce and in some cases, eggs, dairy, and meat) should be explored to enhance their competitive advantage over non-local products. However, freshness dating should extend beyond its current use of how long a product will retain its quality to include how fresh the product is when it arrives at the store. Tag lines such as “from farm to your store’s door in 24 hours” or that the farm is “within an hour’s drive from your store” evoke perceptions of local and fresh food products that are easily accessible from nearby farms.

IOWA-BASED STUDY FOCUSED ON WILLINGNESSTO PAY

Nearly 30 percent of respondents in Iowa (and adjacent metropolitan areas in Nebraska and Illinois) indicated they are frequently mindful about where and how their food is produced. This group of respondents is clearly interested in locally grown foods, with more than 50 percent indicating high to very high levels of interest. On a relative basis, the respondents were more interested in local foods than food raised in an environmentally and socially responsible manner. This information supports findings from the larger Phase II ecolabel and no ecolabel study that shows consumer respondents have more interest in locally grown foods than they do foods that have environmental and social attributes (but may not be produced locally).

Twelve to 18 percent of consumer respondents were willing to pay 30 percent or more for food products (depending on the food item) that combine the attributes of locally grown with environmental and community stewardship. This is encouraging news to small and midsize farmers who are looking to grow and market their products using these attributes to differentiate themselves. It is clear, however, that these consumers want the farms where these foods are produced to be inspected and certified for the claims they are making.

Leopold Center and ISU Business Analysis Lab Collaboration



The fall 2003 collaboration between the ISU Business Analysis Laboratory and the Leopold Center is a continuation of the relationship initiated in the summer through the Ecolabel Value Assessment project, which published its Phase I results in December 2003. The objectives of the fall project were to research consumer reactions to different ecolabel options and their perceptions regarding local foods.

Comments on process used

Beginning in September 2003, the Business Lab team and faculty scholar Tom DeCarlo met weekly with Rich Pirog to create and revise surveys about the pasture-raised dairy and beef products, Iowa-based willingness-to-pay, and ecolabels. Additionally, the Business Lab team designed the ecolabels used in the surveys. The team administered the surveys through an online market research site, surveymonkey.com. Finally, the Business Lab team collected and analyzed the data, compiled a preliminary report, and presented findings to the Leopold Center.

Challenges

Most of the students had little knowledge of sustainable agriculture at the beginning of the semester; however, they quickly grasped the concept by researching and reading articles provided by Pirog. The students also learned to use statistical analysis and graphic design software. Each week from September through November Pirog engaged the students in taste tests of local foods to further enhance their understanding of local food products and their perceived taste and freshness advantages compared to conventional products.

How to increase linkages

In order to increase the linkages between sustainable agriculture groups, farmers, and the Business Analysis Lab, these groups and individuals could be invited to watch Business Lab presentations of projects dealing with sustainable agriculture or could request copies of the preliminary reports compiled by the Lab.

The Business Analysis Lab could hold informational meetings about possible collaboration in order to support projects with additional sustainable agriculture groups. Finally, a video detailing the projects sponsored by the Leopold Center could be created and used as a marketing tool for the Lab and the Center.

Suggested Improvements

Student team members could learn more about sustainable agriculture and related issues by attending events such as the Iowa Organic Conference, by visiting local farms, and by visiting stores or markets that sell locally grown foods. Additionally, assembling more background information about the European ecolabel system may help the ISU Business Lab team in future market research. This background information could be gathered in a variety of ways, including interviewing foreign language or agriculture professors with knowledge of European agriculture and consumer issues. In conducting surveys, direct collaboration between the Business Lab and the parties involved would increase efficiency and relieve some of the burden on the project sponsor. In addition to the Business Lab, sustainable agriculture groups could consult with marketing research classes such as Marketing 491X, *Marketing Experiential Learning*. It also is important to maximize the time available to the students and begin research at the start of the semester to allow the Business Lab team to ensure the quality of their research. Finally, to facilitate continued collaboration, a long-term strategic analysis plan that outlines semester-by-semester objectives could be developed.

Value of Experience

The Business Analysis Lab's collaboration with the Leopold Center was of great value to all the students involved. Many students became familiar with sustainable agriculture and learned the importance of assisting local family farms. This experience increased the students' awareness of current events surrounding local foods and farmers in Iowa and in the Midwest. Conceptually students learned how to conduct online surveys and became familiar with statistical software. In the future, the students who conduct these studies will be able to apply the education they receive from collaborating with the Leopold Center to practical applications in helping sustainable agricultural-based businesses.

Appendices

APPENDIX I. THE LEOPOLD CENTER for SUSTAINABLE AGRICULTURE

The Leopold Center is a research and education center with statewide programs to develop sustainable agricultural practices that are both profitable and conserve natural resources. It was established under the Groundwater Protection Act of 1987 with a three-fold mission: (1) to conduct research into the negative impacts of agricultural practices; (2) to assist in developing alternative practices; (3) to work with ISU Extension to inform the public of Leopold Center findings. The Center is administered through the Agriculture and Home Economics Experiment Station at Iowa State University.

In late 2002, a vision statement was adopted: The Leopold Center for Sustainable Agriculture explores and cultivates alternatives that secure healthier people and landscapes in Iowa and the nation. As part of the Center's new orientation, three research initiatives have replaced the more general competitive grants research program. Each of the three research programs—marketing and food systems, ecology, and policy—are responsible for its own projects and educational events. This report is coordinated by the marketing and food system initiative.

A 17-member advisory board, established in the 1987 legislation, advises the director on funding of research proposals, policies and procedures, budget development, and program review. In 1994, four *ex-officio* members active in farming and agribusiness were added to the board. They received full voting privileges in 1999.

State fees on nitrogen fertilizer and pesticides provide an estimated \$1,100,000 annually to support research, education, and administration of Center programs. A state appropriation of approximately \$500,000 supports many of the Center's competitive grants.

As of July 1, 2002, the Leopold Center has awarded more than 250 competitive grants totaling more than \$10 million. Leopold Center competitive grants are available to researchers and educators at all Iowa colleges and universities, and to investigators at private nonprofit agencies and foundations in the state. These awards often act as seed money to initiate work for which other larger sources of funding then become available.

The Center's mission includes an educational component of informing the agricultural community and the general public about its research findings. The Center collaborates with ISU Extension and other university, state, and local organizations to communicate research findings. It also supports conferences, seminars, and special events related to the three research initiatives.

For additional information, contact the Leopold Center for Sustainable Agriculture, 209 Curtiss Hall, Iowa State University, Ames, IA 50011-1050; (515) 294-3711, fax (515) 294-9696, e-mail leocenter@iastate.edu, and web site <http://www.leopold.iastate.edu/>

APPENDIX 2. ISU BUSINESS ANALYSIS LABORATORY



The Business Analysis Laboratory is a unique learning experience at Iowa State University. Graduate and undergraduate students from the Colleges of Business, Education, and Engineering work together in cross-functional teams to solve real business and manufacturing problems, many involving the 3M Corporation.

Our Purpose and Mission

The Laboratory is designed to provide a setting within which students may apply their education to real world business situations. It is essentially the academic equivalent of a technology business incubator with students as tenants. Students work part-time in the Laboratory in multidisciplinary teams, progressing to leadership positions with superior performance over the course of a semester. Faculty members - one each from the Colleges of Business, Education (Industrial Technology), and Engineering - provide support to students during their work in the Laboratory.

Instructional Components

Faculty team-teach an undergraduate Business Administration course (BusAd 392x) associated with the Lab experience. The course is offered in seminar format and is comprised of instructional components designed to provide students with some of the skills they require for technological problem solving, innovation, and integration.

History

The ISU Business Analysis Laboratory is an outgrowth of 3M efforts during the early 1990s to investigate innovative ways of partnering with academic institutions. The Lab was opened at Iowa State University in 1997.

Goals & Objectives

- Provide students with practical business experience that benefits both the students and the corporate partners.
- Expose students to the cross-functional nature of real projects.
- Put students in situations that require them to move outside of their academic comfort zones.
- Present semester projects to key members of their sponsoring organizations.

APPENDIX 3. EXECUTIVE SUMMARY: PHASE I

Ecolabel Value Assessment: Consumer and Food Business Perceptions of Local Foods (December 2003)

An ecolabel is a seal or a logo indicating that a product has met a certain set of environmental and/or social standards or attributes. Ecolabels offer one avenue to educate consumers about locally grown, sustainably-raised foods.

The Leopold Center for Sustainable Agriculture partnered in a pilot with the Iowa State University Business Analysis Laboratory to conduct consumer and food business market research related to ecolabels.

Project Goals

1. Gauge understanding and perceptions of consumers and food businesses regarding ecolabels and local foods, and
2. Assess ISU Business Analysis Laboratory's role to assist in addressing challenges found in value chains where food production is rooted in the principles of sustainable agriculture.

Objectives for Goal One

- ◆ Analyze different opinions and perceptions of several ecolabel prototypes.
- ◆ Understand the perception of buying local as viewed by consumers and businesses.
- ◆ Identify attitudes and perceptions of food labeling issues.
- ◆ Ascertain the perceptions of consumers and food businesses on how far fresh produce, meat, and poultry travels from farm to point of sale.
- ◆ Identify the additional monetary value businesses and consumers are willing to pay for locally grown foods.
- ◆ Based on the consumer web survey results, further developing the ecolabel prototypes.

An Internet-based survey was conducted of consumers and food businesses in the states of Illinois, Indiana, Iowa, Kansas, Massachusetts (Boston-area), Minnesota, Missouri, Nebraska, Wisconsin, and Washington (Seattle-area). The consumer survey questions and ecolabel prototypes were refined based on comments provided at three Iowa focus groups. Consumers were asked to respond to one of three sets of ecolabel prototypes for fresh produce (table grapes) that conveyed information on product origin, distance from farm to point of sale, mode of transportation, and amount of carbon dioxide (CO₂) emitted during transport. They also were asked a series of questions to assess their perceptions about locally grown/raised produce and meats. One group of consumer respondents did not view any ecolabels.

Responses reflect food values

The consumer survey results showed that consumers were most responsive to the set of ecolabel prototypes that had the least amount of information, that did not focus on the CO₂ emission/ environmental impacts, and connected the consumers' core value of product freshness with the time (in days) it took for the product to travel from farm to store. With this information, the majority of consumer respondents expressed that they thought of reasons to buy local grapes, in part because of a perception that local grapes were fresher.

Regardless of whether or not they viewed ecolabels, consumer respondents exhibited basic knowledge about the seasonality of produce by shifting their selection as to how far produce traveled (from farm to point of sale) from a longer distance across all four seasons to a shorter distance when considering the summer months only. They (especially the Midwest consumer respondents) also identified that meat and poultry products travel shorter distances from farm to point of sale than produce items over the course of the year, as well as during the summer.

Freshness was the most important reason selected for buying local foods for consumer respondents across all three geographic regions, with more than 40 percent of Boston and Seattle-area respondents, and 39 percent of Midwest respondents selecting this option. However, "supporting family farmers" received the second highest percentage for the Midwest respondents, although it was the fourth highest choice for Boston respondents, and tied for third among Seattle-area respondents.

Approximately 25 percent of the ecolabel and no ecolabel respondents were willing to pay from 5 to 15 percent more for locally grown meat and produce items, than the same items that were not local. A follow-up set of willingness to pay questions will be posed in a future study because the pay range posed in this study (0 to 15 percent)—although based on focus group input—was not wide enough to get an accurate portrayal of respondents' intentions.

More than 75 percent of consumer (ecolabel and no ecolabel) and 55 percent of food business respondents chose "grown locally by family farmers" as their first choice for produce or meat products, compared to four different organic choices, even though the survey question stated that price and visual appearance would be the same for all choices. This selection was consistent across all three of the geographic regions.

This is surprising, considering that one of the options was "grown locally-organic" (this choice received the second highest percentage of first choice selections). It is possible that "grown locally-organic" would have received a higher percentage of first choice selections had the words "by family farmers" been added. However, the results do suggest that "grown locally" combined with "by family farmers" has a more compelling story to consumer and food business respondents than organic produce or meat products that may or may not be locally grown—with price and appearance being equal.

Marketing implications

In marketing terms, this study determined that the freshness, quality, taste, and price (value) attributes of the food product are part of the core product to consumer respondents. When these consumers shop for foods, the characteristics of the core product are what drive their overall purchasing decision. Consumers secondarily look for secondary or augmented benefits, such as supporting local farms, low environmental impacts, and supporting the local economy. The survey results indicate—regardless of whether they viewed the ecolabels—that consumer respondents do place a high value on their perception that purchasing local foods supports local farms. It is unlikely, however, that these consumers would buy the local food product a second time if it were not fresh, or did not have the taste and quality that they are seeking.

The secondary benefits of low environmental impacts, supporting the local economy and supporting local farmers, can be more closely linked to the core product benefits through education and market messages that build contextual bridges to these core product benefits. For example, consumer respondents in this set of surveys placed a high priority on the freshness of local foods. Information on the time involved in transport and storage from farm to point of sale can be used to develop a concept parallel to “freshness dates” often found on perishable and semi-perishable items such as milk, orange juice, and yogurt.

Responses to survey questions were compared for food business respondents and the one set of consumer respondents who did not view the ecolabels. When making a purchase decision on carrying a food product, the food business respondents were much more likely to view “local” as being “grown in my state” (38 percent) than the no ecolabel consumer respondents, who selected “grown 25 miles or less from purchase” as their definition of “local.” This disparity may have been influenced by the high percentage of Iowa food businesses surveyed, a number of whom participate in the state’s *A Taste of Iowa* state marketing program.

Food business respondents selected “grown locally” as the most frequent consumer request for produce and meat items over four organic choices that included “organic grown locally.” Fifty-two percent of the responses were for produce and 40 percent for meat items. In this case, the words “by family farmers” were not part of the “grown locally” option. The choice receiving the second highest percentage for both produce and meat was “organic grown within my state.”

Future collaboration and ecolabel research

Prior to the summer of 2003, the Leopold Center had not collaborated with any department, center or group within the ISU College of Business. The ISU Business Analysis Laboratory had never undertaken a project that focused on sustainable agriculture and the marketing of food products. An important goal of this project was to assess the ISU Business Analysis Laboratory's role in supporting market research and business development in food value chains where the farm production practices were rooted in the principles of sustainable agriculture.

This pilot project has successfully demonstrated that ISU College of Business students can—with appropriate mentoring and guidance—conduct ecolabel market research with consumers and food businesses. The Leopold Center is currently working with the ISU Business Analysis Laboratory on a second phase of ecolabel market research. Once the work is completed, the two groups will coordinate a forum to share results with a group of students, faculty, farmers, and sustainability-oriented food businesses who may be interested in contracting with the ISU Business Analysis Laboratory to conduct market and product development research.

APPENDIX 4. ECOLABELS WITH PICTURES AND TWO SETS OF TAG LINES -- SURVEY

Today, we'd like you to participate in a brief consumer survey about food labels consisting of 23 questions. First you will be shown two labels; then you will be asked some questions about these labels. Next we will ask some questions about your shopping habits. There are no right or wrong answers; we are interested only in your opinions. Click on "Next" at the bottom of each page to advance to the next page of the survey. Also, all of your responses will be kept confidential. Thank you in advance for participating. To continue with the survey, please click "Next".

Below are pictures of two labels that would be in the produce section of the supermarket. These labels would be on boxes or containers of produce in the store. Please look at these labels as you normally would if you were shopping for strawberries on the shelf in the store. To view both labels, you will need to scroll down the screen using your scroll wheel on your mouse or by using the scrollbar on the right side of your screen. When you have finished answering the questions on a page, please go to the next page by clicking "Next." At any time while taking this survey, you can click "Back" on the bottom of the page and return to a previous page. Remember that you can change your responses at anytime during the survey before you click "Done."

Label 1



Label 2



1. What is the first thing that comes to mind when you look at these labels?
2. On a scale of 1 to 5, with 1 being “strongly disagree” and 5 being “strongly agree,” please select a response for each of the following statements:

	1 Strongly Disagree	2	3 Uncertain	4	5 Strongly Agree
I clearly understand the labels.					
The labels did not make an impression on me.					
The labels contained too much information.					
As I looked at the labels, I thought of more reasons why I would buy locally grown strawberries.					

3. Which label do you prefer?
 (When finished, please click “Next” to go to the next page of the survey.)

Please answer the following questions by clicking on the appropriate response

4. What percentage of grocery shopping do you do for your household?
 (When finished, please go to question #5.)
- A. 0-25%
 - B. 26-50%
 - C. 51-75%
 - D. 76-100%

5. What do you consider “local” when making a food purchase?
- A. Grown 25 miles or less from purchase point.
 - B. Grown 100 miles or less from purchase point.
 - C. Grown in your state.
 - D. Grown in the Midwest.
 - E. Other (please specify)

6. Which of the following are important to you when you purchase local foods?

	1 Not Important	2	3 Neutral	4	5 Very Important
Environmental concerns					
Healthier foods					
Quality					
Food security					
Helps local economy					
Supports local farmers					
Taste					
Price					
Freshness					

7. Do you have any concerns about purchasing local foods?
8. Assuming that you were planning to buy \$1.00 worth of each of the products below, how much more than \$1.00 (expressed as a dollar value) would you be willing to pay for these items if they were grown locally?
 Fruits and Vegetables _____
 Dairy Products _____
 Eggs _____
 Pork, Beef, and Chicken/Turkey _____
9. What percentage of the fresh produce, meat, and poultry for sale in your community do you perceive was grown/raised within your county? (averaged across all seasons)
- A. Less than 5%
 - B. 5-25%
 - C. 26-50%
 - D. 51-75%
 - E. more than 75%
10. What percentage of the fresh produce, meat, and poultry for sale in your community do you perceive was grown/raised within your state?
- A. Less than 5%
 - B. 5-25%
 - C. 26-50%
 - D. 51-75%
 - E. more than 75%
11. If price and visual appearance for meat or produce were the same and the package label provided only the following information about the product how would you prioritize your selections from 1st choice through last choice? (rank from 1 to 5).

	1 st Choice	2 nd Choice	3 rd Choice	4 th Choice	5 th Choice
Grown locally					
Grown locally – Certified Organic					
Grown locally – Pesticide free					
Grown in (your state) – Certified Organic					
Certified Organic					

12. If price and visual appearance for meat or produce were the same and you knew the following information to be true about the product, prioritize your selections from 1st choice through last choice. (Number your choices 1 through 5.)

	1 st Choice	2 nd Choice	3 rd Choice	4 th Choice	5 th Choice
Grown locally – some pesticides used					
Grown locally – Certified Organic					
Grown locally – Pesticide free					
Grown in (your state) – Certified Organic					
Origin unknown - Certified Organic					

13. Please rank the following terms on how closely related they are to the term family farm with 1 being “least closely related” and 6 being “most closely related.”

	1 Least closely related	2	3	4	5 Most closely related
Grown locally					
Pesticide-free					
Organic					
Grown in your state					
Product of USA					
Humanely-raised					

14. How interested are you in environmental issues?

- A. Very interested
- B. Somewhat interested
- C. Not interested

15. Please rank the following choices as to their potential to financially assist farmers in your state.

	1 No Potential	2 Little Potential	3 Some Potential	4 High Potential
Selling more food items to local and regional markets				
Converting to organic production				
Offering agri-tourism opportunities for urban and suburban residents				
Providing more in-state processing options for farmers (meat, poultry, and produce)				
Farming more acres in the same manner				
Joining a marketing cooperative or farmer market				

Please answer the following questions by clicking on the appropriate response within the pop-up menu.

16. What is your age?

- A. 27 and under
- B. 28-47
- C. 48-70
- D. 71 and over

17. How many adults (19 and over) live in your household?

- A. 1
- B. 2
- C. 3
- D. 4 or more

18. How many children (18 and under) live in your household?

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4
- F. 5 or more

19. Are you male or female?

- A. Male
- B. Female

20. What is your ethnicity?

- A. Caucasian-American (Non-Hispanic)
- B. African American
- C. Hispanic or Latino American
- D. Asian American
- E. Native American
- F. Other
- G. Choose Not to Disclose

21. What is your annual household income?

- A. Under \$40,000
- B. 41,000-70,000
- C. 71,000-100,000
- D. Over 100,000

-
22. What is your highest level of education completed?
- A. Some high school or high school diploma
 - B. Some college
 - C. Bachelor's degree
 - D. Master's degree
 - E. Doctorate degree
23. What state do you live in?
- A. Iowa
 - B. Illinois
 - C. Indiana
 - D. Kansas
 - E. Minnesota
 - F. Missouri
 - G. Nebraska
 - H. Wisconsin
24. In what type of area do you live?
- A. City with at least 50,000 people or metropolitan area
 - B. Small city with 5,000 to less than 50,000 people
 - C. Small town with less than 5,000 people
 - D. Rural area or on a farm

APPENDIX 5. SIMPLE ECOLABELS WITH SINGLE TAG LINES -- SURVEY

This survey was identical to the Labels With Two Tag Lines survey, with these exceptions:

- Respondents saw a different set of labels:

Label 1



Label 2



APPENDIX 6. NO LABELS SURVEY

This survey was identical to the Labels With To Tag Lines survey, with these exceptions:

- Respondents did not see labels
- The following question was added:

Imagine that you are in a grocery store planning to purchase your favorite produce items. There is a sign over a section of the produce department that reads “locally grown.” One of the following statements is immediately below the words “locally grown.” For each statement, check the response that most accurately reflects your feelings.

	1 Not Influential	2	3 Neutral
There’s no taste like home...grown			
The road to freshness is a short one.			
Give back to the community and treat yourself to exceptional taste and freshness.			
Vine ripened down the road, or box ripened from a thousand miles away?			
The choice is yours.			
Freshness-			

Respondents Who Viewed Ecolabels Responses to Questions by State

QUESTIONS AND POSSIBLE RESPONSES	RESPONDENT CATEGORIES
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On all questions: No response on State n=20

Which of the following are important to you when you purchase local foods?

Supports local farmers

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
No response-0	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%
Not Important-1	0.0%	4.3%	0.0%	4.8%	2.4%	2.3%	0.0%	2.3%
2	0.0%	2.2%	0.0%	2.4%	0.0%	4.7%	2.2%	7.0%
Neutral-3	11.5%	30.4%	12.2%	16.7%	12.2%	9.3%	8.7%	9.3%
4	25.6%	23.9%	31.7%	23.8%	26.8%	27.9%	45.7%	32.6%
Very Important-5	62.8%	39.1%	56.1%	50.0%	58.5%	55.8%	43.5%	48.8%

Which of the following are important to you when you purchase local foods?

Environmental Concerns

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
No response-0	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%
Not Important-1	2.6%	2.2%	2.4%	4.8%	4.9%	11.6%	2.2%	2.2%
2	6.4%	6.5%	7.3%	28.6%	12.2%	18.6%	6.5%	9.3%
Neutral-3	24.4%	32.6%	26.8%	26.2%	14.6%	25.6%	30.4%	34.9%
4	29.5%	32.6%	19.5%	38.1%	39.0%	44.2%	32.6%	27.9%
Very Important-5	37.2%	26.1%	43.9%	38.1%	29.3%	44.2%	28.3%	27.9%

Which of the following are important to you when you purchase local foods?

Food security

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
No response-0	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%
Not Important-1	6.4%	2.2%	0.0%	4.8%	0.0%	0.0%	0.0%	4.7%
2	2.6%	4.3%	2.4%	0.0%	9.8%	0.0%	2.2%	4.7%
Neutral-3	19.2%	34.8%	22.0%	16.7%	26.8%	25.6%	17.4%	23.3%
4	30.8%	19.6%	29.3%	33.3%	31.7%	14.0%	43.5%	27.9%
Very Important-5	41.0%	39.1%	46.3%	42.9%	31.7%	60.5%	37.0%	39.5%

Respondents Who Viewed Ecolabels
Responses to Questions by State

QUESTIONS AND POSSIBLE RESPONSES **RESPONDENT CATEGORIES**

On all questions: No response on State n=20

Do you have any concerns about purchasing local foods?

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
No response	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%
No concerns	79.5%	73.9%	73.2%	85.7%	65.9%	81.4%	71.7%	86.0%
Pesticide use	5.1%	10.9%	12.2%	0.0%	12.2%	7.0%	6.5%	4.7%
Price	3.8%	4.3%	2.4%	0.0%	7.3%	0.0%	0.0%	4.7%
Food safety	3.8%	6.5%	2.4%	7.1%	2.4%	4.7%	6.5%	2.3%
Other	7.7%	4.3%	9.8%	4.8%	12.2%	7.0%	15.2%	2.3%

What percentage of the fresh produce, meat, and poultry for sale in your community do you perceive was grown/raised within your county? (averaged across all seasons)

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
No Response-1	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%
Less than 5%-2	26.9%	34.8%	41.5%	31.0%	36.6%	27.9%	37.0%	27.9%
5-25%-3	33.3%	41.3%	31.7%	40.5%	26.8%	37.2%	34.8%	44.2%
26-50%-4	26.9%	10.9%	22.0%	19.0%	17.1%	18.6%	19.6%	18.6%
51-75%-5	9.0%	10.9%	4.9%	4.8%	17.1%	9.3%	8.7%	9.3%
more than 75%-6	3.8%	2.2%	0.0%	2.4%	2.4%	7.0%	0.0%	0.0%

What percentage of the fresh produce, meat, and poultry for sale in your community do you perceive was grown/raised within your state? (averaged across all seasons)

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
No Response-1	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%
Less than 5%-2	3.8%	10.9%	17.1%	11.9%	7.3%	7.0%	10.9%	7.0%
5-25%-3	35.9%	37.0%	48.8%	35.7%	43.9%	37.2%	45.7%	48.8%
26-50%-4	39.7%	41.3%	24.4%	28.6%	36.6%	39.5%	30.4%	34.9%
51-75%-5	12.8%	8.7%	9.8%	19.0%	12.2%	11.6%	10.9%	9.3%
more than 75%-6	7.7%	2.2%	0.0%	2.4%	0.0%	4.7%	2.2%	0.0%

Respondents Who Viewed Ecolabels Responses to Questions by State

QUESTIONS AND POSSIBLE RESPONSES RESPONDENT CATEGORIES

On all questions: No response on State n=20

Imagine that you are in a grocery store planning to purchase your favorite produce items. There is a sign over a section of the produce department that reads "locally grown." One of the following statements is immediately below the words "locally grown." For each statement, check the response that most accurately reflects your feelings.

Vine ripened down the road, or box ripened from a thousand miles away? The choice is yours.

	Iowa n=43	Illinois n=15	Indiana n=10	Kansas n=23	Minnesota n=19	Missouri n=19	Nebraska n=34	Wisconsin n=17
No response-0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Not Influential-1	14.0%	13.3%	0.0%	8.7%	5.3%	10.5%	8.8%	0.0%
2	4.7%	0.0%	0.0%	0.0%	10.5%	5.3%	11.8%	0.0%
Neutral-3	20.9%	40.0%	30.0%	21.7%	26.3%	15.8%	32.4%	47.1%
4	37.2%	26.7%	20.0%	34.8%	31.6%	31.6%	26.5%	29.4%
Very Influential-5	23.3%	20.0%	50.0%	34.8%	26.3%	36.8%	20.6%	23.5%

Imagine that you are in a grocery store planning to purchase your favorite produce items. There is a sign over a section of the produce department that reads "locally grown." One of the following statements is immediately below the words "locally grown." For each statement, check the response that most accurately reflects your feelings.

Freshness-dated so you know when it left the farm

	Iowa n=43	Illinois n=15	Indiana n=10	Kansas n=23	Minnesota n=19	Missouri n=19	Nebraska n=34	Wisconsin n=17
No response-0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Not Influential-1	2.3%	0.0%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%
2	4.7%	6.7%	0.0%	8.7%	0.0%	5.3%	5.9%	0.0%
Neutral-3	9.3%	13.3%	10.0%	13.0%	0.0%	26.3%	26.5%	17.6%
4	25.6%	20.0%	10.0%	34.8%	21.1%	31.6%	32.4%	41.2%
Very Influential-5	58.1%	60.0%	80.0%	43.5%	73.7%	36.8%	35.3%	41.2%

Imagine that you are in a grocery store planning to purchase your favorite produce items. There is a sign over a section of the produce department that reads "locally grown." One of the following statements is immediately below the words "locally grown." For each statement, check the response that most accurately reflects your feelings.

There's no taste like home...grown.

	Iowa n=43	Illinois n=15	Indiana n=10	Kansas n=23	Minnesota n=19	Missouri n=19	Nebraska n=34	Wisconsin n=17
No response-0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Not Appealing-1	0.0%	0.0%	0.0%	8.7%	15.8%	5.3%	0.0%	5.9%
2	9.3%	0.0%	0.0%	8.7%	5.3%	0.0%	0.0%	5.9%
Neutral-3	16.3%	33.3%	20.0%	13.0%	15.8%	21.1%	29.4%	11.8%
4	37.2%	13.3%	30.0%	8.7%	31.6%	21.1%	23.5%	35.3%
Very Appealing-5	37.2%	53.3%	50.0%	60.9%	31.6%	52.6%	47.1%	41.2%

Respondents Who Viewed Ecolabels Responses to Questions by State

QUESTIONS AND POSSIBLE RESPONSES	RESPONDENT CATEGORIES
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On all questions: No response on State n=20

Imagine that you are in a grocery store planning to purchase your favorite produce items. There is a sign over a section of the produce department that reads "locally grown." One of the following statements is immediately below the words "locally grown." For each statement, check the response that most accurately reflects your feelings.

Freshness-dated so you know when it left the farm

	Iowa n=43	Illinois n=15	Indiana n=10	Kansas n=23	Minnesota n=19	Missouri n=19	Nebraska n=34	Wisconsin n=17
N=380								
No response-0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Not Appealing-1	4.7%	6.7%	0.0%	8.7%	5.3%	5.3%	0.0%	0.0%
2	7.0%	0.0%	0.0%	8.7%	0.0%	0.0%	5.9%	5.9%
Neutral-3	7.0%	20.0%	0.0%	13.0%	5.3%	21.1%	26.5%	11.8%
4	27.9%	13.3%	30.0%	13.0%	21.1%	31.6%	32.4%	41.2%
Very Appealing-5	53.5%	60.0%	70.0%	56.5%	68.4%	42.1%	35.3%	41.2%

If price and visual appearance for meat or produce were the same and the package label provided only the following information about the product, how would you prioritize your selections from 1st choice through last choice? (rank from 1 to 5).

Grown locally

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
N=380								
No response - 0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1st Choice - 1	39.7%	30.4%	29.3%	4.8%	34.1%	30.2%	47.8%	46.5%
2nd Choice - 2	23.1%	17.4%	22.0%	2.4%	17.1%	14.0%	10.9%	18.6%
3rd Choice - 3	19.2%	23.9%	9.8%	19.0%	14.6%	9.3%	10.9%	16.3%
4th Choice - 4	7.7%	6.5%	19.5%	11.9%	19.5%	14.0%	13.0%	9.3%
5th Choice - 5	10.3%	21.7%	19.5%	14.3%	14.6%	32.6%	17.4%	9.3%

If price and visual appearance for meat or produce were the same and the package label provided only the following information about the product, how would you prioritize your selections from 1st choice through last choice? (rank from 1 to 5).

Grown locally - certified organic

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
N=380								
No response - 0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1st Choice - 1	15.4%	17.4%	17.1%	21.4%	31.7%	11.6%	13.0%	9.3%
2nd Choice - 2	33.3%	26.1%	31.7%	31.0%	24.4%	37.2%	32.6%	25.6%
3rd Choice - 3	34.6%	32.6%	34.1%	33.3%	26.8%	27.9%	41.3%	44.2%
4th Choice - 4	14.1%	17.4%	12.2%	11.9%	9.8%	20.9%	10.9%	4.7%
5th Choice - 5	2.6%	6.5%	4.9%	2.4%	7.3%	2.3%	2.2%	16.3%

Respondents Who Viewed Ecolabels
Responses to Questions by State

QUESTIONS AND POSSIBLE RESPONSES **RESPONDENT CATEGORIES**

On all questions: No response on State n=20

If price and visual appearance for meat or produce were the same and you knew the following information to be true about the product, prioritize your selections from 1st choice through last choice. (Number your choices 1 through 5.)

grown locally - some pesticides used

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
No response - 0	0.0%	2.2%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%
1st Choice - 1	6.4%	2.2%	7.3%	9.5%	2.4%	4.7%	8.7%	11.6%
2nd Choice - 2	7.7%	13.0%	9.8%	9.5%	12.2%	7.0%	15.2%	11.6%
3rd Choice - 3	20.5%	13.0%	4.9%	11.9%	14.6%	7.0%	6.5%	14.0%
4th Choice - 4	25.6%	28.3%	12.2%	19.0%	24.4%	16.3%	30.4%	11.6%
5th Choice - 5	39.7%	41.3%	65.9%	50.0%	43.9%	65.1%	39.1%	51.2%

If price and visual appearance for meat or produce were the same and you knew the following information to be true about the product, prioritize your selections from 1st choice through last choice. (Number your choices 1 through 5.)

grown locally - certified organic

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
No response - 0	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%
1st Choice - 1	28.2%	21.7%	17.1%	31.0%	31.7%	23.3%	28.3%	14.0%
2nd Choice - 2	50.0%	43.5%	48.8%	33.3%	34.1%	51.2%	43.5%	46.5%
3rd Choice - 3	16.7%	23.9%	22.0%	19.0%	12.2%	14.0%	19.6%	30.2%
4th Choice - 4	3.8%	10.9%	7.3%	14.3%	17.1%	9.3%	6.5%	7.0%
5th Choice - 5	1.3%	0.0%	4.9%	2.4%	2.4%	2.3%	2.2%	2.3%

If price and visual appearance for meat or produce were the same and you knew the following information to be true about the product, prioritize your selections from 1st choice through last choice. (Number your choices 1 through 5.)

grown locally - pesticide free

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
No response - 0	1.3%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1st Choice - 1	57.7%	60.9%	65.9%	52.4%	51.2%	62.8%	60.9%	67.4%
2nd Choice - 2	23.1%	17.4%	14.6%	28.6%	31.7%	9.3%	19.6%	18.6%
3rd Choice - 3	14.1%	13.0%	14.6%	16.7%	7.3%	16.3%	19.6%	11.6%
4th Choice - 4	3.8%	2.2%	2.4%	2.4%	7.3%	11.6%	0.0%	0.0%
5th Choice - 5	0.0%	4.3%	2.4%	0.0%	2.4%	0.0%	0.0%	2.3%

**Respondents Who Viewed Ecolabels
Responses to Questions by State**

QUESTIONS AND POSSIBLE RESPONSES **RESPONDENT CATEGORIES**

On all questions: No response on State n=20

Please rank the following terms on how closely related they are to the term family farm with 1 being "least closely related" and 6 being "most closely related."

Pesticide-free

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
N=380								
No response-0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Least Closely Related-1	10.3%	13.0%	12.2%	11.9%	17.1%	20.9%	10.9%	14.0%
2	12.8%	10.9%	24.4%	23.8%	34.1%	23.3%	23.9%	27.9%
3	24.4%	21.7%	19.5%	19.0%	14.6%	16.3%	15.2%	18.6%
4	25.6%	19.6%	17.1%	23.8%	14.6%	14.0%	28.3%	11.6%
5	20.5%	32.6%	17.1%	19.0%	19.5%	16.3%	13.0%	25.6%
Most Closely Related-6	6.4%	2.2%	9.8%	2.4%	0.0%	9.3%	8.7%	2.3%

Please rank the following terms on how closely related they are to the term family farm with 1 being "least closely related" and 6 being "most closely related."

Organic

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
N=380								
No response-0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Least Closely Related-1	6.4%	10.9%	14.6%	4.8%	14.6%	14.0%	13.0%	14.0%
2	17.9%	13.0%	24.4%	9.5%	22.0%	16.3%	19.6%	25.6%
3	23.1%	28.3%	26.8%	42.9%	24.4%	25.6%	43.5%	16.3%
4	35.9%	26.1%	17.1%	23.8%	29.3%	23.3%	15.2%	27.9%
5	15.4%	15.2%	12.2%	16.7%	9.8%	16.3%	4.3%	9.3%
Most Closely Related-6	1.3%	6.5%	4.9%	2.4%	0.0%	4.7%	4.3%	7.0%

Please rank the following terms on how closely related they are to the term family farm with 1 being "least closely related" and 6 being "most closely related."

Grown in your state

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
N=380								
No response-0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Least Closely Related-1	0.0%	2.2%	0.0%	0.0%	4.9%	9.3%	6.5%	4.7%
2	9.0%	13.0%	12.2%	16.7%	9.8%	4.7%	8.7%	4.7%
3	21.8%	30.4%	22.0%	19.0%	22.0%	37.2%	8.7%	20.9%
4	19.2%	21.7%	34.1%	19.0%	19.5%	18.6%	26.1%	23.3%
5	44.9%	30.4%	26.8%	35.7%	41.5%	27.9%	43.5%	41.9%
Most Closely Related-6	5.1%	2.2%	4.9%	9.5%	2.4%	2.3%	6.5%	4.7%

**Respondents Who Viewed Ecolabels
Responses to Questions by State**

QUESTIONS AND POSSIBLE RESPONSES **RESPONDENT CATEGORIES**

On all questions: No response on State n=20

Please rank the following choices as to their potential to financially assist farmers in your state.

Offering agritourism opportunities for urban and suburban residents

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
No response-0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
No Potential-1	14.1%	15.2%	14.6%	9.5%	9.8%	11.6%	13.0%	4.7%
Little Potential-2	29.5%	26.1%	22.0%	28.6%	36.6%	23.3%	30.4%	34.9%
Some Potential-3	35.9%	45.7%	41.5%	54.8%	34.1%	60.5%	41.3%	46.5%
High Potential-4	20.5%	13.0%	22.0%	7.1%	19.5%	4.7%	15.2%	14.0%

Please rank the following choices as to their potential to financially assist farmers in your state.

Providing more in-state processing options for farmers (meat, poultry, and produce)

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
No response-0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
No Potential-1	1.3%	2.2%	2.4%	0.0%	2.4%	0.0%	2.2%	0.0%
Little Potential-2	1.3%	8.7%	2.4%	7.1%	12.2%	9.3%	4.3%	4.7%
Some Potential-3	47.4%	52.2%	41.5%	45.2%	39.0%	34.9%	54.3%	48.8%
High Potential-4	50.0%	37.0%	53.7%	47.6%	46.3%	55.8%	39.1%	46.5%

Please rank the following choices as to their potential to financially assist farmers in your state.

Farming more acres in the same manner

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
No response-0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
No Potential-1	6.4%	10.9%	7.3%	2.4%	12.2%	4.7%	0.0%	0.0%
Little Potential-2	30.8%	21.7%	22.0%	9.5%	29.3%	39.5%	26.1%	20.9%
Some Potential-3	41.0%	41.3%	41.5%	52.4%	39.0%	27.9%	58.7%	55.8%
High Potential-4	21.8%	26.1%	29.3%	35.7%	19.5%	27.9%	15.2%	23.3%

Please rank the following choices as to their potential to financially assist farmers in your state.

Joining a marketing cooperative or farmer market

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
No response-0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
No Potential-1	6.4%	10.9%	12.2%	4.8%	9.8%	11.6%	4.3%	4.7%
Little Potential-2	23.1%	10.9%	12.2%	21.4%	12.2%	20.9%	15.2%	9.3%
Some Potential-3	48.7%	45.7%	26.8%	47.6%	53.7%	37.2%	56.5%	53.5%
High Potential-4	21.8%	32.6%	48.8%	26.2%	24.4%	30.2%	23.9%	32.6%

Respondents Who Viewed Ecolabels
Responses to Questions by State

QUESTIONS AND POSSIBLE RESPONSES **RESPONDENT CATEGORIES**

On all questions: No response on State n=20

What is your ethnicity?

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
No response	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	93.0%
Caucasian-American (Non-Hispanic)	93.6%	80.4%	95.1%	85.7%	100.0%	86.0%	89.1%	7.0%
African American	0.0%	10.9%	0.0%	4.8%	0.0%	2.3%	0.0%	0.0%
Hispanic or Latino American	0.0%	2.2%	0.0%	2.4%	0.0%	4.7%	6.5%	0.0%
Asian American	0.0%	2.2%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%
Native American	3.8%	0.0%	4.9%	4.8%	0.0%	0.0%	0.0%	0.0%
Other	2.6%	4.3%	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%
Choose not to disclose	0.0%	0.0%	0.0%	0.0%	0.0%	4.7%	4.3%	0.0%

What is your annual household income?

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
No response	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Under \$40,000	52.6%	47.8%	48.8%	57.1%	46.3%	62.8%	47.8%	39.5%
\$41,000-70,000	28.2%	23.9%	29.3%	31.0%	29.3%	23.3%	30.4%	37.2%
\$71,000-100,000	3.8%	13.0%	7.3%	2.4%	9.8%	7.0%	8.7%	9.3%
Over \$100,000	2.6%	6.5%	2.4%	4.8%	0.0%	0.0%	2.2%	2.3%
Choose not to disclose	12.8%	8.7%	12.2%	4.8%	14.6%	7.0%	10.9%	11.6%

What is your highest level of education completed?

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
No response-0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Some high school or high school diploma-1	25.6%	15.2%	51.2%	31.0%	17.1%	30.2%	19.6%	25.6%
Some college-2	47.4%	60.9%	34.1%	50.0%	61.0%	53.5%	47.8%	44.2%
Bachelor's degree-3	20.5%	19.6%	12.2%	16.7%	17.1%	14.0%	26.1%	27.9%
Master's degree-4	6.4%	2.2%	2.4%	0.0%	4.9%	2.3%	4.3%	2.3%
Doctorate degree-5	0.0%	2.2%	0.0%	2.4%	0.0%	0.0%	2.2%	0.0%

In what type of area do you live?

	Iowa n=78	Illinois n=46	Indiana n=41	Kansas n=42	Minnesota n=41	Missouri n=43	Nebraska n=46	Wisconsin n=43
No response-0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
City with at least 50,000 people or metropolitan area-1	16.7%	34.8%	26.8%	33.3%	34.1%	30.2%	37.0%	44.2%
Small city with 5,000 to less than 50,000 people-2	42.3%	34.8%	36.6%	35.7%	39.0%	27.9%	32.6%	30.2%
Small town with less than 5,000 people-3	28.2%	15.2%	24.4%	11.9%	14.6%	18.6%	10.9%	16.3%
Rural area or on a farm-4	12.8%	15.2%	12.2%	19.0%	12.2%	23.3%	19.6%	9.3%

