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**King County Department of Natural Resources and Parks**

**Water and Land Resources Division**

**SURVEY ON AGRICULTURE IN KING COUNTY**

**RESEARCH REPORT**

May 5, 2009

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**King County Department of Natural Resources and Parks  
Water and Land Resources Division  
SURVEY ON AGRICULTURE IN KING COUNTY  
RESEARCH REPORT**

May 5, 2009

In order to increase understanding of King County residents' opinions of and experiences with farms and farming in the county, the Water and Land Resources Division, King County Department of Natural Resources and Parks, conducted a survey of county residents. Research results will be used in the report on *Future of Agriculture, Realized Meaningful Solutions (FARMS)* and in policy and program planning relating to agriculture in the county.

This report describes the survey on agriculture in King County. Research objectives are discussed first, followed by research methods, results, and key findings and conclusions. The appendix contains a copy of the questionnaire used in the survey.

## **Objectives**

The information objectives of the survey on agriculture in King County included the following:

- Assess King County residents' opinions of the importance of having farms and farming in King County, and explore residents' impressions of farms and farming in the county;
- Assess residents' opinions of the importance being able to engage in selected activities related to local farms and farming, including purchasing farm food products and visiting farms;
- Examine the frequency with which residents purchase food produced on King County Farms, locations in which the food is purchased, and importance of selected factors in the decision to purchase food from local farms.
- Examine the frequency with which residents visit food-producing and horse farms in King County; and
- Assess residents' opinions of the importance of using and preserving land for agriculture in King County and continuing support for farmers in the county.

## **Research Methods**

Between March 16 and March 26, 2009, a total of 450 telephone interviews were completed with residents of King County. The first 400 interviews were completed with individuals who were randomly selected from lists of county residents; 360 interviews

were completed with residents of urban areas, and 40 with residents of rural areas. Then, an additional 50 interviews were completed with individuals who were randomly selected from zip codes in rural parts of the county and who said they lived in rural areas. Thus, interviews were completed with a total of 360 residents of urban areas and 90 residents of rural areas in King County. The additional interviews with rural residents permitted more accurate assessment of the views of rural residents and comparison between urban and rural residents.

The questionnaire used in the research sought information about residents' opinions of and experiences with farms and farming in King County. It was developed with the input and approval of the King County Water and Land Resources Division. A copy of the questionnaire used in the survey is included in the appendix.

### **Limitations**

If the 450 survey respondents comprised a random sample of all county residents, the maximum margin of error would be expected to be less than  $\pm 4.7$  percent at the 95 percent confidence interval ( $p < .05$ ). If the 360 residents of rural areas comprised a random sample of the 1,738,195 residents of rural areas, the maximum margin of error would be expected to be less than  $\pm 5.2$  percent for urban residents at the 95 percent confidence interval. If the 90 residents of rural areas comprised a random sample of the 144,000 rural residents, the maximum margin of error would be expected to be less than  $\pm 10.3$  percent for rural residents at the 95 percent confidence interval.<sup>1</sup>

### **Results**

The responses to the survey on agriculture in King County are presented below for each of the information objectives addressed by the survey

Since additional interviews were completed with rural residents, there was a higher proportion of rural residents among the survey respondents than is found among the population of county residents. Therefore, the responses of urban and rural residents were weighted according to their actual representation in King County (urban – 92.3%; rural – 7.7%), so that the overall survey results presented below reflect the actual composition of urban and rural residents in the county.

In addition, the survey responses of urban and rural residents were analyzed to identify statistically significant differences between the two groups. When survey results differed significantly between urban and rural residents, those differences are discussed below.<sup>2</sup> Tables detailing responses to all questions in the survey are available separately.

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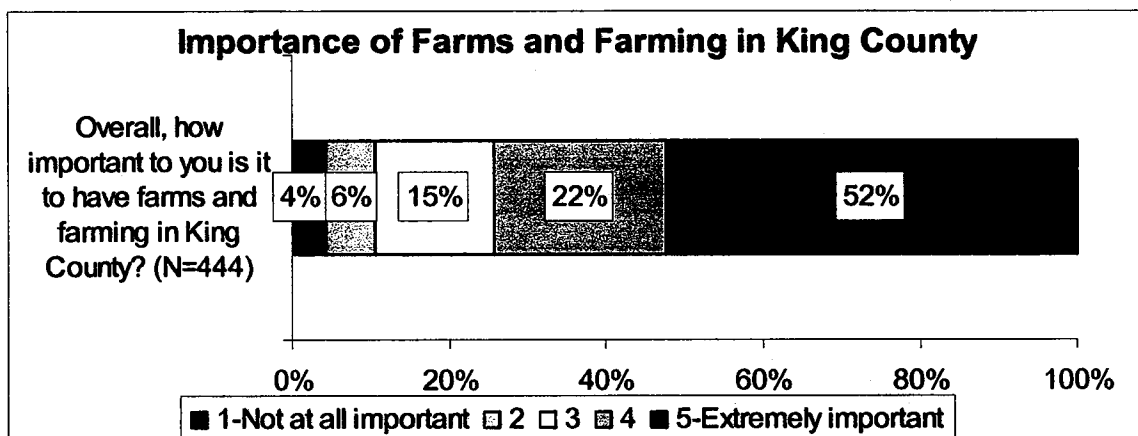
<sup>1</sup> Population estimates are taken from the 2008 Annual Growth Report.

<sup>2</sup> Differences between the responses of rural versus urban residents were tested using a t-test for independent samples or a chi-square test (*SPSS 15.0 for Windows*, Release 15.0.1.1, 3 July 2007). Results were considered statistically significant when the probability of that outcome occurring by chance was less than .05 ( $p < .05$ ).

All of the survey results presented below are based on the number of residents answering each question, which usually was less than 450 since not all respondents answered every question. The number of respondents answering each question is noted in the charts and tables (e.g., N=444).

### **Importance and Impressions of Farms and Farming in King County**

First, King County residents were asked, “Overall, how important to you is it to have farms and farming in King County?” Respondents used a five-point scale, where 1 means “not at all important” and 5 means “extremely important,” to answer this question. As the next chart shows, half (52%) of the residents stated that “to have farms and farming in King County” was “extremely important” to them, and almost three-fourths of the residents rated the importance of having farms and farming in King County a 4 or a 5 on the five-point scale where 5 means “extremely important.” Unless otherwise noted, percentages do not total 100 in this and subsequent charts due to rounding.



Ratings of the importance of farms and farming in King County provided by residents who live in rural areas did not differ significantly from the ratings provided by residents who live in urban areas.

Next, residents were asked, “When you think of farms and farming in King County, what comes to mind?” The most common responses to this question are summarized in the next table. As this chart shows, residents most frequently said that food crops or farms come to mind when thinking of farms and farming in King County, followed by milk, cheese, and dairy products or farms. Only 12 (3%) respondents said that they didn’t know King County had farms, and only 2 (<1%) said that “nothing” comes to mind when they think of farms and farming in King County. Percentages total more than 100 in the following table because some respondents gave more than one answer to this question.

**When you think of farms and farming in King County,  
what comes to mind?**

(N=444)

Food crops, farms (fruit, berries, vegetables)	49%
Milk, cheese, dairy products, farms	22%
Disappearing farm lands - concrete, development	18%
A specific town or area (Carnation, etc.)	17%
Small farms, family, not big business	16%
Fresh, local, sustainable products	15%
Open spaces - fields, pastures, acreage, rural areas	15%
Farmer's markets	11%
Livestock	11%
Organic farming, healthy, good for environment	8%
Truck farms - general	8%
Animals - general	7%
Horse farms, stables	6%
Plants, flowers	5%
Gardening - backyard, community	5%
Farm lifestyle, hard work	4%
Chicken farms	3%
Farming is of little, no concern to me	3%
Agriculture - general	3%
Wheat, hay, grain farms	3%
Didn't know King County had any farms	3%

## **Activities Relating to Farms and Farming in King County**

Residents were asked to rate how important it is to them personally to be able to do each of ten activities that relate to farms and farming in King County. As the next chart shows, the activity rated most important was, "Enjoy rural scenery and open spaces provided by the agricultural landscapes in King County." Over half (55%) of the residents rated this "extremely important," and three-fourths (77%) rated enjoying rural scenery and open spaces a 4 or a 5 on the five-point scale where 5 means "extremely important."

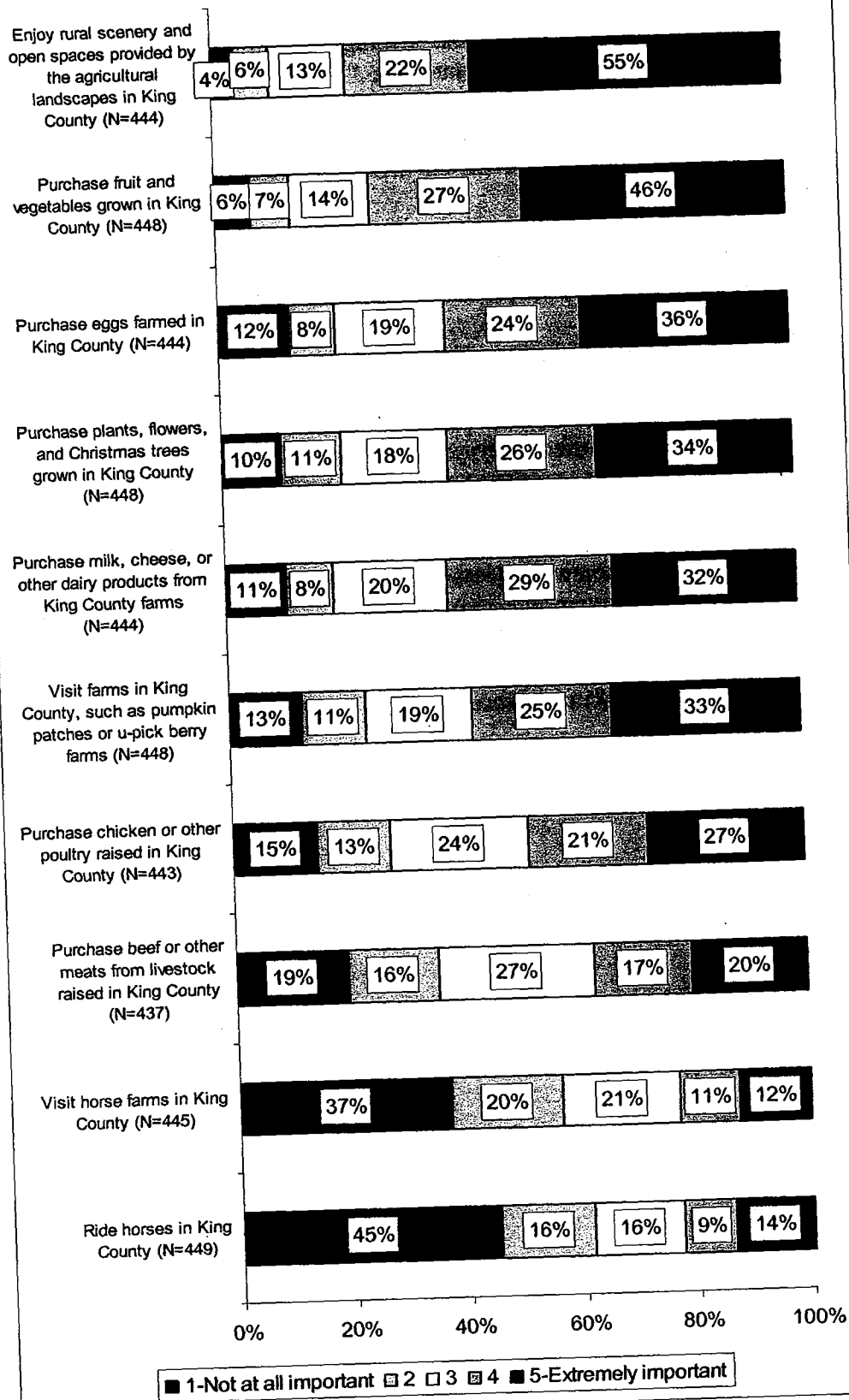
Almost three-fourths (73%) of the residents rated "purchase fruit and vegetables grown in King County" a 4 or a 5 on the five-point scale where 5 means "extremely important."

Between 58 and 61 percent of the residents rated four activities a 4 or a 5 on the five-point scale where 5 means "extremely important": "Purchase eggs farmed in King County," "Purchase plants, flowers, and Christmas trees grown in King County," "Purchase milk, cheese, or other dairy products from King County farms," and "Visit farms in King County, such as pumpkin patches or u-pick berry farms."

Purchasing chicken or other poultry and purchasing beef or other meats from livestock in King County were rated somewhat lower in importance (48% and 37%, respectively, rated these a 4 or 5 on the five-point scale).

Visiting horse farms and riding horses in King County were the activities rated lowest in importance by residents (23% rated these a 4 or a 5 on the five-point scale).

### Importance of Being Able To Do Each Activity



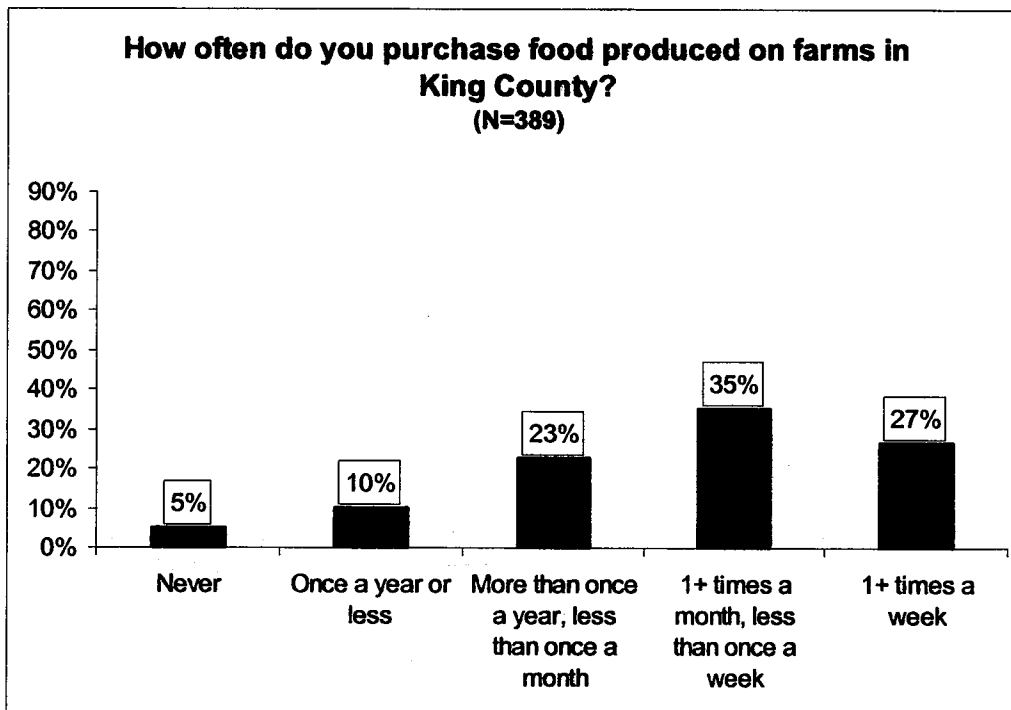


Six of the ten activities relating to farms and farming in King County were rated significantly higher in importance by rural residents than by urban residents:

- “Purchase plants, flowers, and Christmas trees grown in King County,”
- “Visit farms in King County, such as pumpkin patches or u-pick berry farms,”
- “Purchase chicken or other poultry raised in King County,”
- “Purchase beef or other meats from livestock raised in King County,”
- “Visit horse farms in King County,” and
- “Ride horses in King County.”

### **Purchasing Food Produced on King County Farms**

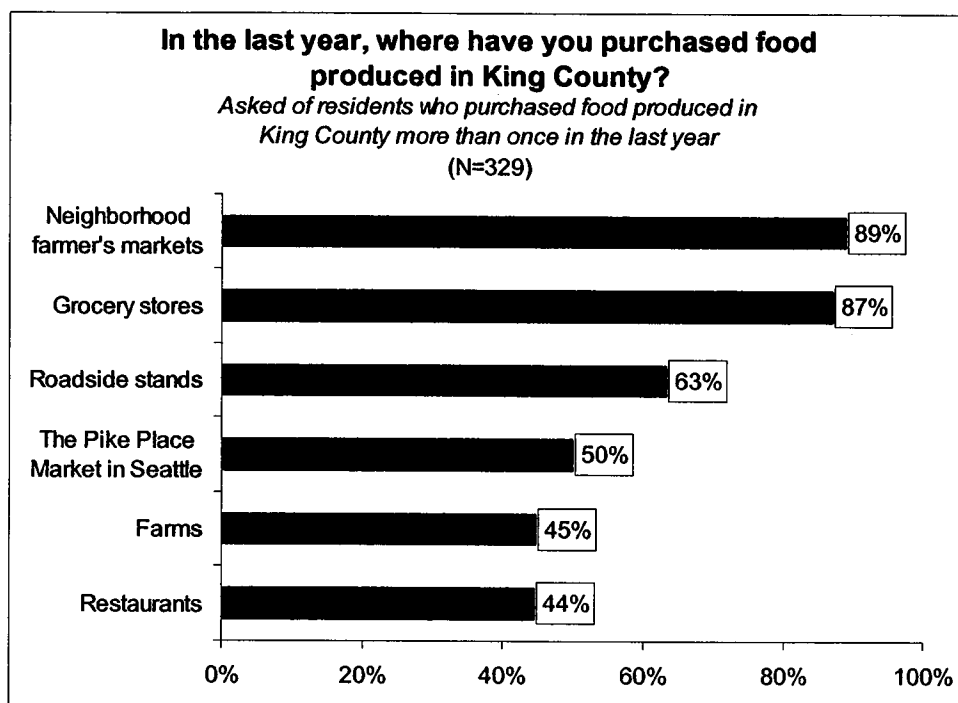
Residents were asked, “How often do you purchase food produced on farms in King County?” Eighty-five percent of the residents who answered this question said that they purchase food produced in King County more than once a year, and 62 percent purchase food produced in King County at least once a month, as shown in the next chart.



Urban and rural residents of King County did not differ significantly in how often they purchase food produced on farms in the county.

The survey respondents who purchase food produced in King County more than once a year also were asked about the places in which they have purchased the food and the importance of several considerations in their decision to purchase food from local farms.

As the next chart shows, most of the residents who have purchased food produced in King County more than once in the last year said that they have purchased it at neighborhood farmer's markets (89%) or in grocery stores (87%). Sixty-three percent said that have purchased food produced in King County at roadside stands, 50 percent at the Pike Place Market, 45 percent on farms, and 44 percent at restaurants.

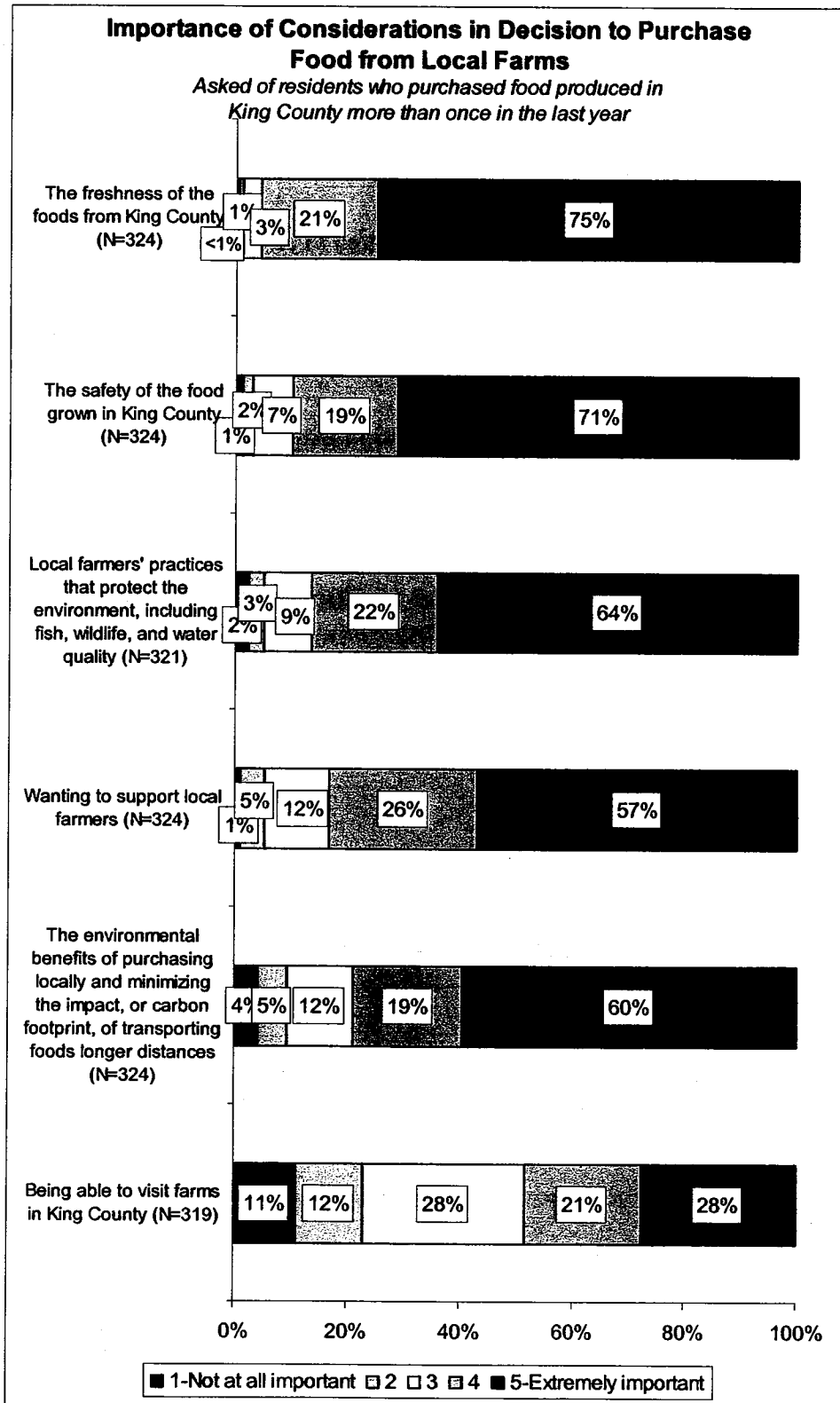


Urban residents were significantly more likely than rural residents to say that they have purchased food produced in King County at the Pike Place Market. On the other hand, rural residents were significantly more likely than urban residents to say that they have purchased food produced in King County at roadside stands. Rural and urban residents' responses did not differ significantly for the other purchase locations.

At least 79 percent of the residents who purchase food produced in King County more than once a year rated five of the six considerations in the decision to purchase food from local farms a 4 or a 5 on the five-point scale where 5 means "extremely important":

- "The freshness of the foods from King County,"
- "The safety of the food grown in King County,"
- "Local farmers' practices that protect the environment, including fish, wildlife, and water quality,"
- "Wanting to support local farmers," and
- "The environmental benefits of purchasing locally and minimizing the impact, or carbon footprint, of transporting foods longer distances."

About half (49%) of the residents rated “being able to visit farms in King County” a 4 or a 5 on the five-point scale where 5 means “extremely important.” These results are shown in the next chart.



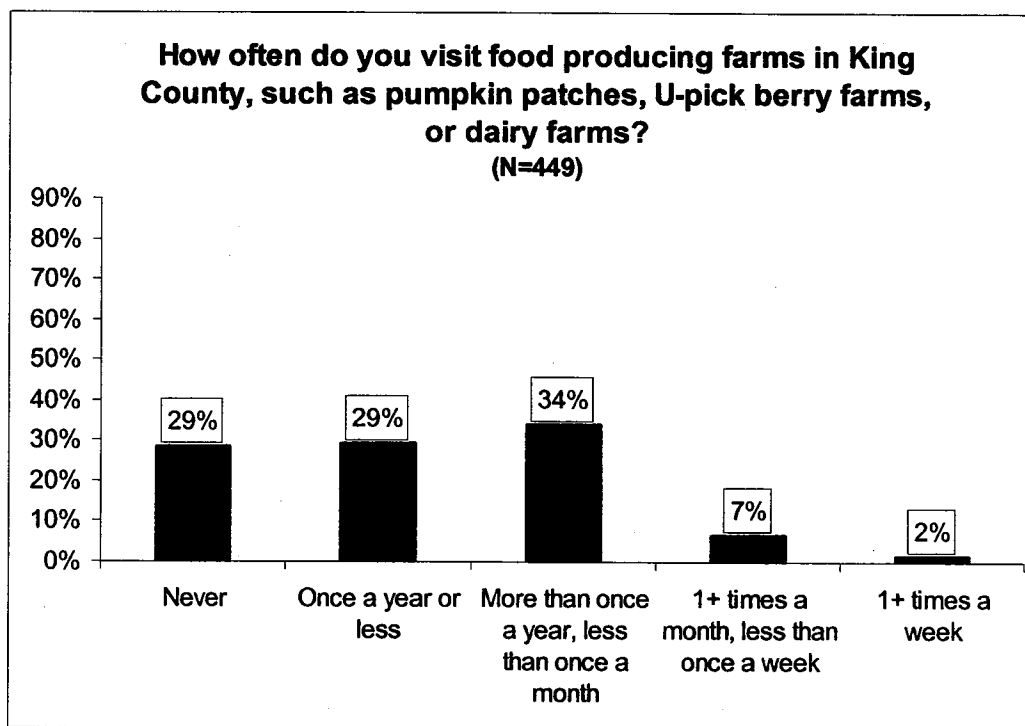
Four of the considerations in decisions to purchase food from local farms were rated significantly higher in importance by rural residents than by urban residents:

- “The freshness of the foods from King County,”
- “The safety of food grown in King County,”
- “Wanting to support local farmers,” and
- “Being able to visit farms in King County.”

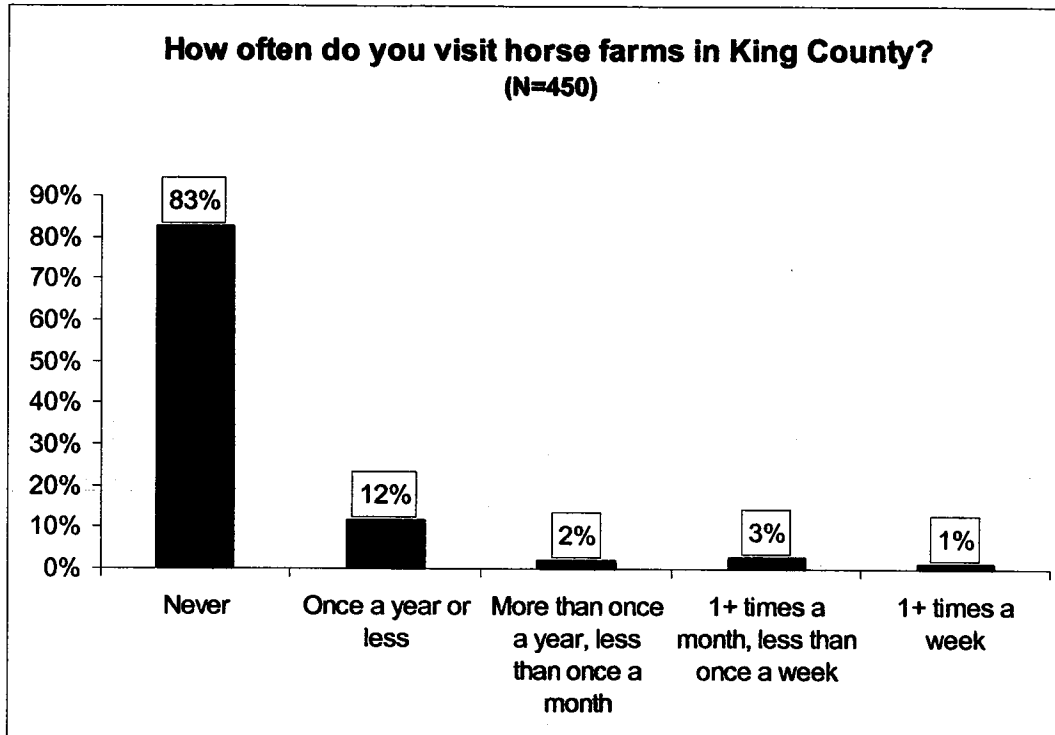
Ratings of the other two considerations, which related to environmental considerations, in decisions to purchase food from local farms did not differ significantly between rural and urban residents.

### **Visiting Farms in King County**

Residents were asked how often they visit food-producing farms and horse farms in King County. As the next chart shows, over 40 percent of the residents said that they visit food producing farms in King County more than once a year.



Just six percent of the residents said that they visit horse farms in King County more than once a year.



Rural residents said that they visit food producing and horse farms in King County significantly more often than urban residents.

### **Using and Preserving Land for Agriculture**

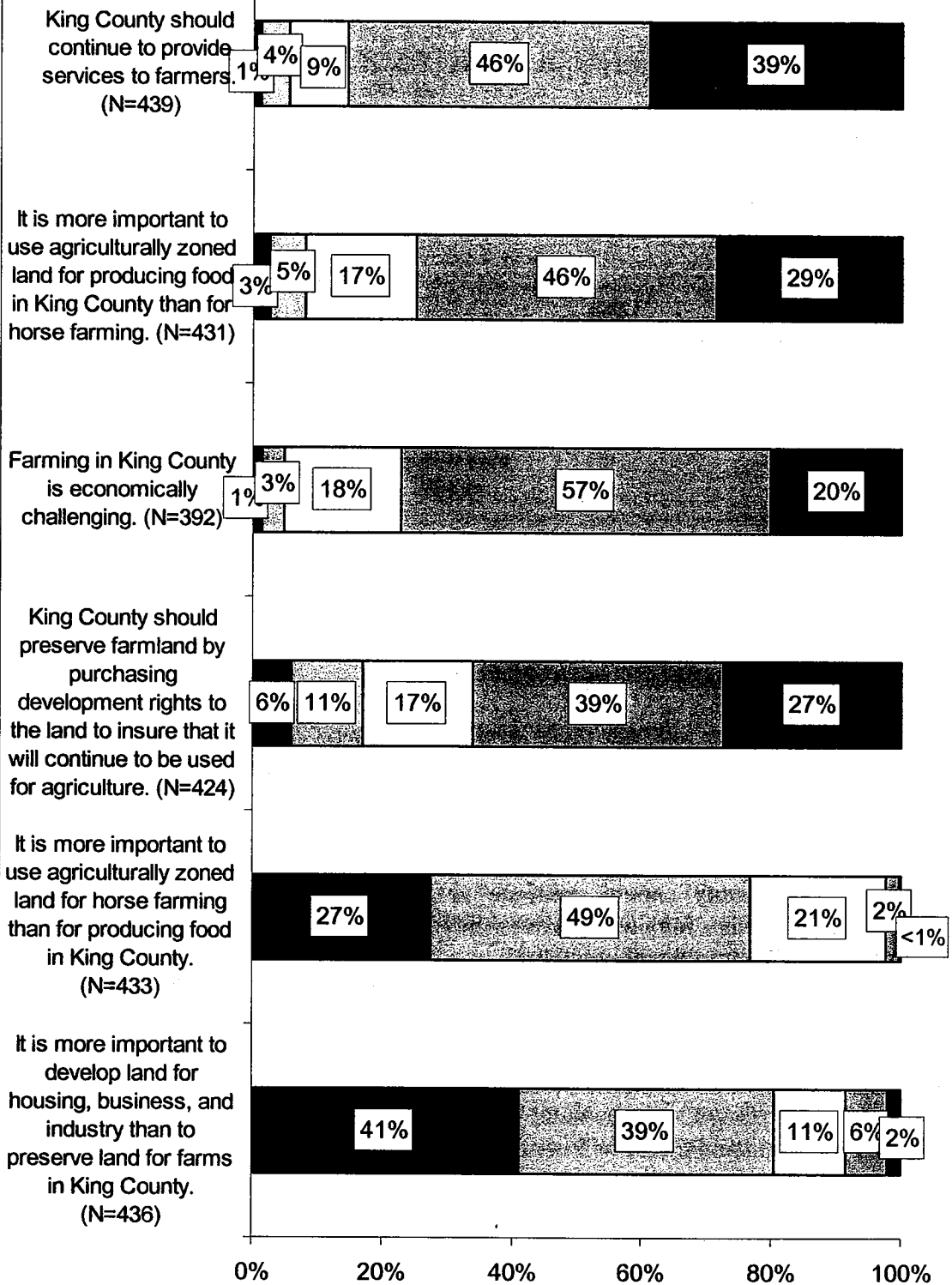
Residents were asked to indicate their level of agreement (“Strongly agree,” “agree,” “neither agree nor disagree,” “disagree”, or “strongly disagree”) with six statements about agriculture in King County, which are shown in the next chart.

Eighty-five percent of the residents said that they “agree” or “strongly agree” with the statement, “King County should continue to provide services to farmers, such as assistance with permits, drainage improvements, promotion of local farm products, and grants to improve environmental practices.”

Between 66 and 77 percent of the residents said that they “agree” or “strongly agree” with the statements, “It is more important to use agriculturally zoned land for producing food in King County than for horse farming,” “Farming in King County is economically challenging,” and “King County should preserve farmland by purchasing development rights to the land to insure that it will continue to be used for agriculture.”

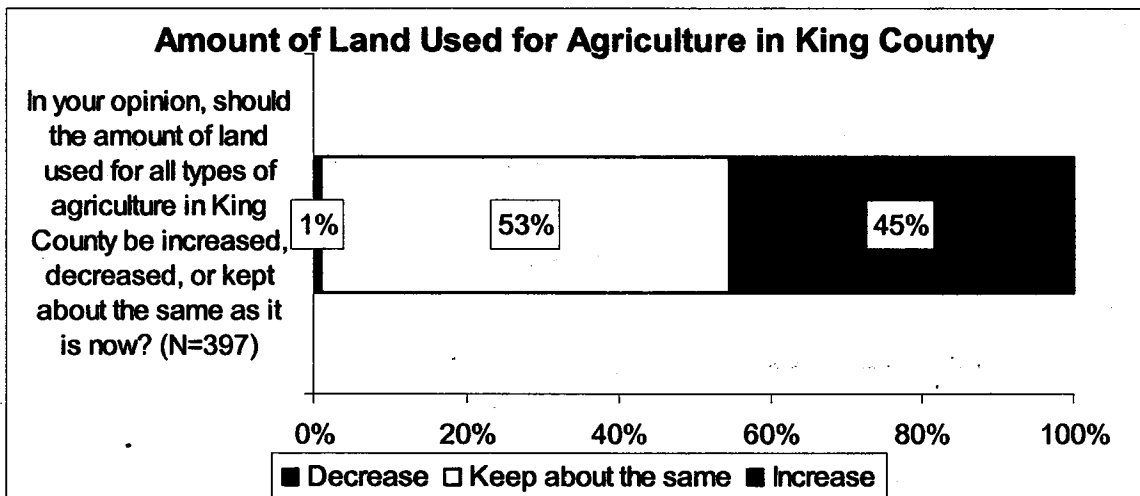
Conversely, 75 and 80 percent of the residents said that the “disagree” or “strongly disagree” with the statements, “It is more important to use agriculturally zoned land for horse farming than for producing food in King County,” and “It is more important to develop land for housing, business, and industry than to preserve lands for farms in King County,” respectively.

### Agreement with Statements About Agriculture in King County



Larger proportions of rural than urban residents said that they “agree” and “neither agree nor disagree” with the statement, “It is more important to use agriculturally zoned land for horse farming than for producing food in King County,” while a larger proportion of urban residents said that they “strongly disagree” with this statement. Agreement with the other statements about agriculture in King County did not differ significantly between rural and urban residents.

Forty-five percent of residents said that the amount of land used for all types of agriculture in King County should be increased, and 53 percent said that the amount of land used for all types of agriculture should be “kept about the same as it is now.” Only one percent of the residents said that they thought the amount of land used for agriculture in King County should be decreased, as shown in the next chart.



Responses to the question about whether the amount of land used for agriculture in King County should be increased, decreased, or kept about the same did not differ significantly between rural and urban residents.

### Key Findings and Conclusions

The results of the survey on agriculture in King County suggest the following key findings and conclusions:

*Having farms and farming in King County and being able to purchase food produced on farms in King County are important to most county residents.*

- Almost three-fourths of King County residents rated having farms and farming in King County a 4 or a 5 on a five-point scale where 5 means “extremely important.”

- When asked about the importance of being able to do specific activities relating to farms and farming in King County, about three-fourths of the county residents rated being able to “enjoy rural scenery and open spaces provided by the agricultural landscapes in King County” and being able to “purchase fruit and vegetables grown in King County” a 4 or a 5 on the five-point scale where 5 means “extremely important.” Being able to “visit horse farms in King County” and “ride horses in King County” were the activities rated least important, and 23 percent of the residents rated these a 4 or a 5 on the five-point scale where 5 means extremely important.
- Asking about “farms and farming in King County” brought a variety of images to mind for county residents, but food crops and farms were mentioned most often, followed by dairy products and farms.

*Purchasing food produced on farms in King County is a fairly common practice for many residents.*

- Sixty-two percent of the residents said that they “purchase food produced on farms in King County” at least once a month, and 85 percent said that they “purchase food produced on farms in King County” more than once a year.
- These residents most often purchase food produced in King County at neighborhood farmer’s markets or grocery stores.
- Between 57 and 75 percent of the residents said that the freshness, safety, and environmental benefits associated with foods produced in King County, as well as wanting to support local farmers, were “extremely important” (5 on the five-point scale) considerations in the decision to purchase food from local farms.

*Most residents support continuing county support for farmers in King County and using land for food-producing agriculture in King County.*

- Eighty-five percent of the residents said that they “agree” or “strongly agree” with the statement, “King County should continue to provide services to farmers, such as assistance with permits, drainage improvements, promotion of local farm products, and grants to improve environmental practices.”
- Between 66 and 77 percent of the residents said that they “agree” or “strongly agree” with the statements, “It is more important to use agriculturally zoned land for producing food in King County than for horse farming,” “Farming in King County is economically challenging,” and “King County should preserve farmland by purchasing development rights to the land to insure that it will continue to be used for agriculture.”
- Forty-five percent of residents said that the amount of land used for all types of agriculture in King County should be increased, and 53 percent said that the



amount of land used for all types of agriculture should be “kept about the same as it is now.”

*Rural residents rated some activities and considerations as more important and more frequently engage in some activities that relate to farms and farming in King County than do urban residents.*

- Rural residents engage in some activities relating to farms and farming more often and rate these activities as more important than do urban residents, including visiting food-producing and horse farms; the importance of being able to purchase plants, poultry, and meats from King County; and the importance of visiting farms and riding horses in King County.
- The freshness and safety of foods grown in King County, wanting to support local farmers, and being able to visit farms in King County were more important considerations in decisions to purchase foods produced in King County for rural than for urban residents.

**Appendix**

**Questionnaire**

### Survey on Agriculture in King County

Phone: (      ) -      -	Zip Code (from list) _____	Zip Type (see list) Urban 1 Rural 2 Both 3
Name:		Gender Male 1 Female 2
Interviewer _____ Date _____		Area Type (Q. 2) Urban 1 Suburban 2 Rural 3

Hello, this is \_\_\_\_\_ with Consumer Opinion Services, a research firm in Seattle. I am calling on behalf of King County as part of a research study. For this study I need to speak with the [male/female] head of this household. Would that be you?

- CONTINUE -- Yes 1  
ASK TO SPEAK TO PERSON/FOR TIME TO CALL BACK -- No 2  
ASK TO SPEAK TO PERSON/FOR TIME TO CALL BACK -- DK/REF 3

[REPEAT FIRST PARAGRAPH IF NECESSARY.] I am calling on behalf of King County strictly for research purposes. Your answers will be completely anonymous and confidential and will be used by King County in developing policies and programs relating to agriculture in the county. This is not a sales call, and no sales calls or solicitations will result from this call. King County is very interested developing the best possible programs and policies that relate to agriculture.

*Note: If respondents ask, they can direct any questions about the survey to Steve Evans, King County Water and Land Resources Division, 206-296-7824.*

1. First, do you live in King County?

- CONTINUE - Yes 1  
THANK & TERMINATE - No 2  
THANK & TERMINATE - DK/REF 3

2. Would you say that you live in an area that is mostly urban, suburban, or rural?

- CONTINUE - Urban 1  
CONTINUE - Suburban 2  
CONTINUE - Rural 3  
THANK & TERMINATE - DK/REF 4

3. Overall, how important to you is it to have farms and farming in King County? Please rate the importance of farms and farming on a five-point scale, where 1 means "not at all important" and 5 means "extremely important." Would you rate having farms and farming in King County a 1, meaning "not at all important," a 5, meaning "extremely important," or some number in between?

DK/REF 6

4. When you think of farms and farming in King County, what comes to mind? What else? **PROBE FULLY.**

5. Next I'm going to read a list of activities. Please tell me how important it is to you personally to be able to do each of the activities. Please use a five-point scale where 5 means "extremely important" and 1 means "not at all important." First, how important is it to \_\_\_\_\_ : **READ AND ROTATE.**

	Not at all important					Extremely important	DK/REF
	1	2	3	4	5	6	
Purchase fruit and vegetables grown in King County	1	2	3	4	5	6	
Purchase eggs farmed in King County	1	2	3	4	5	6	
Purchase chicken or other poultry raised in King County	1	2	3	4	5	6	
Purchase beef or other meats from livestock raised in King County	1	2	3	4	5	6	
Purchase milk, cheese, or other dairy products from King County farms	1	2	3	4	5	6	
Purchase plants, flowers, and Christmas trees grown in King County	1	2	3	4	5	6	
Visit farms in King County, such as pumpkin patches or u-pick berry farms	1	2	3	4	5	6	
Visit horse farms in King County	1	2	3	4	5	6	
Ride horses in King County	1	2	3	4	5	6	
Enjoy rural scenery and open spaces provided by the agricultural landscapes in King County	1	2	3	4	5	6	

6. How often do you purchase food produced on farms in King County? Please include vegetables, fruits, meat, chicken, eggs, and dairy products. Would you say:

- SKIP TO Q. 9 - You never purchase food produced on farms in King County 1
- SKIP TO Q. 9 - You purchase food produced on farms in King County once a year or less 2
- CONTINUE - More than once a year but less than once a month 3
- CONTINUE - One or more times a month but less than once a week 4
- CONTINUE - One or more times a week 5
- DO NOT READ, SKIP TO Q. 9 - DK/REF 6

7. In the last year, where have you purchased food produced in King County? Have you purchased food at least once during the last year at \_\_\_\_\_: READ AND ROTATE.

	Yes	No	DK/REF
Neighborhood farmer's markets	1	2	3
The Pike Place Market in Seattle	1	2	3
Roadside stands	1	2	3
Farms	1	2	3
Grocery stores	1	2	3
Restaurants	1	2	3

8. How important to you are the following considerations in your decision to purchase food from local farms? Please use a five-point scale where 5 means "extremely important" and 1 means "not at all important." First, how important is \_\_\_\_\_: READ AND ROTATE

	Not at all important					Extremely important	DK/REF
	1	2	3	4	5	6	
The safety of the food grown in King County	1	2	3	4	5	6	
The freshness of the foods from King County	1	2	3	4	5	6	
The environmental benefits of purchasing locally and minimizing the impact, or carbon footprint, of transporting foods longer distances	1	2	3	4	5	6	
Local farmers' practices that protect the environment, including fish, wildlife, and water quality	1	2	3	4	5	6	
Being able to visit farms in King County	1	2	3	4	5	6	
Wanting to support local farmers	1	2	3	4	5	6	

9. How often do you visit food producing farms in King County, such as pumpkin patches, U-pick berry farms, or dairy farms? Would you say:

- Never 1
- Once a year or less 2
- More than once a year but less than once a month 3
- One or more times a month but less than once a week 4
- One or more times a week 5
- DO NOT READ - DK/REF 6

10. How often do you visit horse farms in King County? Would you say:

- Never 1
- Once a year or less 2
- More than once a year but less than once a month 3
- One or more times a month but less than once a week 4
- One or more times a week 5
- DO NOT READ - DK/REF 6

11. Next, I'm going to read several statements about agriculture in King County. Please tell me whether you agree or disagree with each statement. First, \_\_\_\_\_.  
Do you strongly agree, agree, neither agree nor disagree, disagree or strongly disagree with this statement? READ AND ROTATE.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	DK/REF
It is more important to develop land for housing, business, and industry than to preserve land for farms in King County.	1	2	3	4	5	6
It is more important to use agriculturally zoned land for horse farming than for producing food in King County.	1	2	3	4	5	6
Farming in King County is economically challenging.	1	2	3	4	5	6
King County should preserve farmland by purchasing development rights to the land to insure that it will continue to be used for agriculture.	1	2	3	4	5	6
It is more important to use agriculturally zoned land for producing food in King County than for horse farming.	1	2	3	4	5	6
King County should continue to provide services to farmers, such as assistance with permits, drainage improvements, promotion of local farm products, and grants to improve environmental practices.	1	2	3	4	5	6

12. In your opinion, should the amount of land used for all types of agriculture in King County be increased, decreased, or kept about the same as it is now?

- Increase 1
- Decrease 2
- Keep about the same 3
- DK/REF 4

13. This last question is for classification purposes only. What is your home zip code?

\_\_\_\_\_ DK/REF 99999

14. Thank you very much for your time and opinions. Your input will be very helpful to King County as it works to develop the best possible policies and programs for agriculture.

15. Record gender (DO NOT ASK):

- Male 1
- Female 2