

**Iowa Community Food Assessment  
Project Report 2001-02  
Iowa State University Family Nutrition Program**

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## COMMUNITY FOOD ASSESSMENT PROJECT REPORT 2001-02

### Executive Summary

Food deserts are places with few or no food stores. Rural communities that have lost retail stores and low-income urban neighborhoods that are less profitable for retail food stores often lack adequate consumer food sources. When this happens elderly and persons with limited financial resources who live in these places risk not having access to affordable and nutritious foods. This in turn affects their diets and health. The Iowa State University Family Nutrition Program Community Food Assessment Project examines two rural counties and two urban neighborhoods in Iowa to learn the nature and extent of the impact of food deserts on vulnerable populations. In addition, the social organization of these communities and local efforts to solve food problems are evaluated for their ability to mediate the effects of food deserts on these populations.

In year one of this project, study sites were selected and focus groups of community leaders and low-income residents were conducted. The goal of the focus groups was to find out about the community food supply and how elderly and low-income populations are accessing affordable, healthy foods. Focus group findings suggest that both rural and urban low-income populations shop multiple stores to find affordable foods. Rural participants travel an average 22 minutes to a grocery store; urban participants travel on average almost 18 minutes. Participants thought that transportation was the greatest barrier to accessing affordable foods. There are many indications from the focus group discussions that the civic structure of the community does mediate limited food supplies. Farmer markets, personal and community gardens, congregate meal sites, the SHARE program, and food pantries are the result of multiple non-profit groups and public agencies efforts to expand the food supply of the community. Personal connections among persons with limited incomes are important sources of food and transportation. Rural focus groups discussed sharing and receiving food from gardens as well as fishing ponds and streams. One urban neighborhood study site boasted meal sites seven days a week leading one focus group participant to say, 'it's your own fault if you starve in this city.'

An analysis of the market basket of food items in summer 2002 indicates that among the four study sites, food prices on the USDA thrift plan selected item list at rural grocery stores, on average, cost more than the same items found in urban study sites' stores. However, on average, food prices on selected items at all four sites were lower than national prices reported by USDA in May 2002.

As a result of year one findings, a Food in My Community survey is being developed for year two. Focus group findings suggest the survey contain the following concepts: adequacy and affordability of local grocery stores, distance to travel to grocery stores, public and personal transportation resources to food stores, community safety, convenience store usage, gardens and sharing patterns of produce and other foods, food pantry use, community efforts to solve food insecurity problems, and cooperation among organizations, agencies, and local officials.

## **Situation Statement**

Rural and urban areas consist of places where food sources are not evenly distributed, leading to areas of concentration and food deserts – places where few or no consumer food sources are available (Lang and Rayner 2002). Low-income households, because of financial resource constraints, are particularly affected by how their food systems and community are organized. Further, a disproportionate number of low-income people “inhabit areas which have been abandoned by retailing” (Lang and Rayner 2002:20). In some food deserts, community institutions and social support systems mediate potential food insecurity and poor diets. These places have community leaders and multiple groups and organizations that are engaged in solving community problems. This civic structure provides the capacity for increasing limited food supplies, community food security, healthy diets, and the overall health of the population.

The consumer food supply is important because food is transformed through human diets into health. “Dietary factors are associated with 4 of the 10 leading causes of death: coronary heart disease, some types of cancer, stroke, and Type 2 diabetes mellitus” and estimated to cost over \$200 billion in lost productivity and medical charges (USDHHS 1998:2-3). There is convincing evidence that mortality is lowest in populations with the healthiest diets (Lino et al. 1998). Eighteen percent of Americans have poor diets and another seventy percent have diets that need improvement (Lino et al. 1998). Frazao (2000) notes that many people do not consume the recommended number of food guide pyramid servings of fruits, vegetable, grains, meat, or dairy. The rural poor have “fewer store choices and travel farther to supermarkets than do their urban counterparts” (Morris et al. 1992:55S). Further, small and medium rural grocery stores are more likely to have higher prices and lower selection and quality of foods than larger supermarkets (Morris et al. 1992). Low-income urban populations face many of these same

issues as supermarkets do not find it profitable to service low-income neighborhoods. Limited access to supermarkets, decreased availability of fresh foods, and higher costs of food increase the risk of food insecurity and poor diets (Olson et al. 1997).

In Iowa, many rural areas have lost population and are facing economic challenges (Hanson et al. 2000). Grocery stores, along with other retail businesses, have closed or are struggling to survive. Some urban Iowa inner city neighborhoods also have lost grocery stores despite growing and diverse populations. As the food environment changes, low-income households and elderly are at risk of losing easy access to affordable food supplies. This loss in turn affects their daily diets and health. In some of these food deserts, the community has mobilized to solve food supply problems by creating and supporting food assistance programs, emergency food sites, farmer markets for local producers, community and personal gardens, economic incentives for private food stores, and better systems of transportation. While Iowa has some of the lowest food insecurity rates in the country (7 percent for 1996-98 compared to the U.S. average of 9.7 percent) (Nord et al. 1999), areas with higher than average poverty rates are likely to have some of the highest rates of food insecurity and poor diets. Iowa's southern tier of rural counties are experiencing high rates of poverty (13.4-19.5 percent) as are some of the larger urban areas which have inner city neighborhoods with high densities of poor households. What is not known is how places in Iowa with few or no grocery stores and concentrated poverty affect the diets and health of their low-income residents. Further, it is not known to what extent the social connections and civic structure of these places can mediate the effects of limited food supplies.

## **Purpose of the Project**

The Community Food Assessment Project's *goal is to examine low-income rural and urban areas that have no or few grocery stores to determine how the food and social environment influence diets and health of limited income people.* A mixed methods process utilizing focus groups and surveys of grocery stores and residents will be used over a two-year period. This report summarizes the focus group and grocery store item pricing and availability methodologies used in year one (2001-02) of the project. Then, preliminary findings will be used to guide the development of a resident survey in year two are presented. Instruments used in data collection are located in Appendices A and B.

Areas with few or no grocery stores are used to define food desert areas for assessment in Iowa. Rural counties and city neighborhoods are the units of analysis. Civic structure is defined as multiple citizens, groups and organizations interacting to solve community problems such as food concerns of low-income residents. Food systems that offer consumer access to a food supply are categorized as retail food firms (e.g., grocery stores, supermarkets, convenience stores, eating out places), food production (e.g., farms), nutrition assistance programs (e.g., WIC, Food stamps, school lunch, congregate meals), and emergency food sources (e.g., food pantries, food banks). Social support systems and institutions that comprise civic structure include farmer markets, community gardens, food councils, and local groups whose mission is to solve food insecurity problems or increase exchanges among local food production and consumers.

We postulate that, in food deserts, strong personal connections among community members (social capital) and high levels of interaction among multiple organizations in the community (civic structure) reduce barriers to food access and increase the quality of healthy foods in diets.

## **Project Design**

During the first year of this project (2001-02), two urban neighborhoods and two rural counties with few or no grocery stores and high concentrations of low-income households were chosen for study (See Appendix A for methodology). Selected rural counties had two grocery stores, higher than state average poverty rates, and populations ranging from 8,016-8,689. One urban study site had no grocery stores in a neighborhood of 6,232 people, and another had one grocery store on the periphery of a neighborhood of 10,497 people. Focus groups of community professionals and low-income residents were conducted Fall 2001 through Summer 2002 (Appendix B). Each group was asked to map the consumer food supply of their neighborhood or county and to talk about the availability and quality of food sources in the place where they lived. This information will be used in year 2 (2002-03) to develop a survey that assesses perceptions of the consumer food supply, accessibility of food sources, diet, and health status information.

## **Preliminary Findings Year 1**

Iowa had 13 rural counties in 1998 with four or fewer grocery stores (Appendix A, Map 1). Two of these counties, Decatur and Monroe, were selected for study based on poverty rates and expert assessments of community activities to solve food problems. Two Iowa inner city neighborhoods in Des Moines and Davenport were chosen using poverty, lack of grocery stores, and community engagement in solving food problems based on expert assessments. Neighborhoods were delineated by streets based on physical boundaries (railroad tracks, major highways, river, and

business districts) that naturally divide neighborhoods and experts' assessment of concentrated poverty.

Table 1 offers a demographic and social description of populations at each of the four study sites. Rural study sites have higher concentrations of 65 years and older populations and more homogeneity of race and ethnicity. Urban sites have younger and more female-headed households. Forty-four percent of the selected Des Moines neighborhood is African American, 12 percent Asian, and 16 percent Latino. The Davenport neighborhood is 70 percent white, 12 percent Latino, 20 percent African American, and 4 percent Asian. Housing and health data for the urban neighborhoods for the year 2000 are currently not available.

**Table 1. Demographic\* and Social Description of Iowa Community Food Assessment Study Sites.**

CHARACTERISTIC	RURAL				URBAN			
	DECATUR COUNTY		MONROE COUNTY		DES MOINES <sup>1</sup>		DAVENPORT <sup>2</sup>	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>Total Population (2000)</b>	8,689		8,016		6,232		10,497	
<b>Median Age</b>	36.4 years		39.7 years		33.1 years		29.5 years	
65 and over	1,535	17.7	1,566	19.5	513	8	1,077	10
Under 18 years	2,002	23	2032	25.3	2,216	36.7	3,058	30
<b>Race/Ethnicity (alone and combination)</b>								
White	8,468	97.5	7,925	98.9	1,821	29	7,372	70
Black/African American	101	1.2	33	.4	2,715	44	2,148	20
Asian	89	1.0	41	.5	755	12	449	4
Hispanic/Latino	148	1.7	40	.5	975	16	1,248	12
Native American Indian	65	.7	48	.6	43	1	163	2
<b>Number of Households</b>								
Female house with children under 18 years	173	5.2	178	5.5	369	6.0	517	5
Householder living alone	1,010	30.3	903	28.0	348	6.0	779	7
Average family size	2.96		2.97		2.80		2.50	
<b>Number of Grocery Stores</b>	2		2		0		1	
<b>County</b>					Polk County		Scott County	
<b>Per Capita Income</b> (State of Iowa \$25,598)	\$16,436		\$22,739		\$32,182		\$26,462	
<b>Food Stamps (2000)</b>								
Number of households	310		221		6,912		4,345	
Percent of all residents	7.1		6.0		4.3		6.8	
<b>School Lunches – Percent Free/Reduced</b>	47.9		37.4		26.6		30.7	
<b>Age-adjusted Mortality (1990-1998)</b>	888.5 per 100,000		864.6 per 100,000		846.6 per 100,000		894.1 per 100,000	
Heart disease mortality	282.8 per 100,000		291.8 per 100,000		287.9 per 100,000		297.4 per 100,000	
Cancer mortality	207.1 per 100,000		197.2 per 100,000		210.6 per 100,000		208.8 per 100,000	
Diabetes mortality	13.8 per 100,000		14.9 per 100,000		17.2 per 100,000		15.8 per 100,000	
<b>Housing</b>								
Total housing units	3,833		3,588		85,067		41,350	
Occupied housing units	3,337	87.1	3,228	90.0	80,504	94.6	39,124	94.6
Renter occupied	965	28.9	697	21.6	28,385	33.4	13,626	33.0
<b>Registered Voters</b>	5,127		4,977		225,149		93,874	
(President) % voted 2000 (November)	72.2		73.6		75.6		75.4	
<i>State of Iowa percent voted 71.6%</i>								
Percent voted 1998 (November)	58.3		53.8		56.3		50.4	

\* Iowa Census Services: <http://www.soc.iastate.edu/census/>

<sup>1</sup> East Martin Luther King to river; North University, South Hickman

<sup>2</sup> West Harrison, South Locust, North R.R. tracks

## **Focus Groups**

Five focus groups of community leaders and eight focus groups of residents were conducted at the four study sites in 2001-2002 (See Appendix B for methodology and demographic summary of participants). Community leaders provided agency and organizational information and perspectives about the county/neighborhood food supply and social organization. Participants for resident focus groups were drawn from neighborhood community centers, congregate meal sites, and clients of agencies and organizations whose missions are food assistance for low-income households. Preliminary findings are discussed below.

### *Preliminary Findings*

Community leaders. Community leaders who participated in focus group discussions included Food Stamps and WIC staff, local farmer market organizers, farmers, grocery store managers, owners/managers of local diners, area Office of Elder Affairs staff, school lunch dietitians and managers, ISU Cooperative Extension food and nutrition specialists and directors, congregate meal site managers, and food pantry and soup kitchen volunteer leaders. These community leaders had varying levels of intimate knowledge about the food supply and community support systems in their area. In rural study sites, several leaders had regional responsibilities for programs in a cluster of rural counties and did not live in the county. Many community leaders in both rural and urban focus groups did not shop the food stores in the study site and did not know the price, quality, or variety of foods available. At some study sites they were highly knowledgeable about what other agencies and organizations were doing to solve community food problems for low-income households; at other sites knowledge was fragmented and there seemed to be lower levels of coordination among public and private food sources.

Below are selected quotes from community leaders about their food supply and civic structure.

*On the Food Supply:*

One store manager says, “The selection of fruits and vegetables is a combination of availability, transportation and also market. A store can’t put food on the shelf there is no market for.”

Another store manager says, “I could care less whether someone’s paying in cash or food stamps. As far as I’m concerned, they’re a customer...”

One low-income urban neighborhood is undertaking the construction of a new grocery store. This neighborhood has a history of failed grocery stores – many believed that the high prices were the result of continued theft and neighborhood safety. Says one neighborhood leader, “the community viewed that [grocery store] as just another corporation coming in and then raising the prices. But I think if you’ve got that community ownership, you’re going to have a much better, more well-received facility.” Community leaders in this neighborhood think this new independent store financed by four Black businessmen has a better chance. “I think it’s the cumulative effect from years of work. I mean a lot of residents, people like [community leader’s name] and people who really started kind of the neighborhood watch to try to get rid of the prostitution” helped and “then the 5<sup>th</sup> judicial district placed a probation and parole office in the neighborhood. I think this neighborhood has more non-profits per square inch than other neighborhoods in the city. There are library programs, summer programs, a new senior center and a lot of government and community individuals working together in this neighborhood.”

At another study site, the WIC nutritionist talked about checking the grocery store in this neighborhood for WIC items. She said that the store only carried the minimum to stay qualified to be a WIC vendor. Despite discussions to offer a larger selection, the manager was clear he was not going to carry other WIC items. Thus, WIC clients for whom this is the only store they have access to experience a more limited selection of products despite having the financial means (WIC coupons) to purchase.

One farmer who sells produce and meats at the local farmers’ market says, “I’m not educated on how to accept food stamps. I noticed a lot of people, when I couldn’t accept the food stamps, they went somewhere else. Some came back and said mine was higher quality, could I take her food stamps and I said, ‘Ma’am I don’t want to go to jail over an ear of corn.’”

Another farmer commented on local food markets, “I am now the retailer instead of just the wholesale supplier. The broker infrastructure is just not in place in Iowa for local foods. The hospital here in [name of town], the school lunch program and restaurants could use local produce-but when the school lunch dietician gets ready to do menus for the next week, she needs to count on 50 pounds of potatoes. I might have ten and another farmer five, but there isn’t any broker to go in between to assure she can get 50 pounds of potatoes when she needs them.”

On preparing healthy foods for school children, the school lunch program director says, “We do not have a deep fat fryer to start with. Whatever I buy is all bakable as far as the main entrée is concerned.”

*On Civic Structure of Community:*

Concerning commodity supplemental food programs, one community leader noted the need for a matching investment by the local Board of Supervisors. She says, “I’ve sent the [county name] Board of Supervisors information about the supplemental program” and they haven’t done anything about it.

Fragmentation of knowledge among local leaders is illustrated by one comment, “How does that program work and who funds it? They do it at the community center but I’m not sure who has charge of it.”

Regarding the entire consumer food structure and solving food problems for limited income households, one community leader observed that transportation was the key. When households don’t have transportation they are trapped in their community and limited in their choice of stores that have affordable, good quality foods.

Low income resident focus groups. Two focus groups (daytime and evening) of local residents were held at each study site in the spring and summer of 2002. Participation was voluntary and individuals self-selected from seeing posters at senior citizen centers, community centers, food pantries, and other local agencies. Others came because friends, acquaintances, and agency staff told them about it and suggested they come. Most all groups had 2 or 3 friends that came together to the focus group. Three rural groups and one urban group were made up almost entirely of older women. One afternoon urban group had a number of disabled middle-aged men. Evening focus groups were predominantly working poor men and women with young families. Several worked in low wage service jobs including short-order cook and other food service occupations. See Appendix B, Table 1 for demographic breakdown of participants.

A number of common themes emerged across focus groups and study sites when participants discussed their perceptions and practices in accessing their food supply. Rural and urban participants generally go out of their neighborhoods/county to purchase food. The reasons they give are price and quality of meat or fruits and vegetables. Meat quality issues from local stores are usually perceptions of food safety, store cleanliness, and mass pre-packaging (not preferred). Fresh fruit and vegetable issues relate to high prices for highly perishable items.

Households using food stamps or receiving monthly income payments tend to do a big food purchase early in the month. Fresh fruits and vegetables have such a short shelf life that they are often not purchased or missing from diets at the end of the month. Participants in one rural focus group talked about growing their own produce and canning. However, many elder participants in rural and urban focus groups talked about having gardens in the past, but not currently.

Some participants cited cost and kids preferences as the reason they didn't purchase healthy foods. One single father said he prepares what his kids will eat. Cost and full stomachs are more important than nutrition.

The SHARE program was mentioned at all sites and is designed to help households overcome uneven monthly food distribution. Food boxes are purchased the beginning of the month and delivered at the end of the month. Boxes contain fresh fruits and vegetables as well as meats. Elderly participants talked about the food being very high quality but one box was too much food for them. Participants with families reported often purchasing more than one box each month. Those that knew about the program were very pleased and spoke highly of it. They considered it a food purchase, not a handout, and usually used a combination of food stamps and cash to purchase it. Several mentioned that membership in SHARE required community service, but it wasn't too hard or time consuming.

Focus group participants talked frequently about shopping different food stores for different products based on price and quality. One store chain across all sites was known for offering low prices on bulk staples. Focus group participants talked about frequently traveling out of their neighborhood/county to save money when purchasing food. On average, rural participants said they travel 22 minutes to regularly shop for groceries. Urban focus group members, on average, traveled almost 18 minutes to shop for groceries regularly. Rural sites had

participants that reported traveling as many as 40 to 87 minutes for groceries. The greatest times reported in urban sites were 26 and 27 minutes.

Other common themes are found in Figure 1.

- Quality meats are expensive; residents generally go out of their neighborhoods/county to purchase.
- Meat quality issues are usually food safety issues.
- Fresh vegetables are expensive and limited.
- Rural elderly use their personal connections to obtain food.
- Rural norms about accepting food stamps and using food pantries deter elderly from using them.
- Working poor in urban neighborhoods more likely to have access and affordability issues.
- Low-income urban neighborhoods with community programs are solving meal problems for disabled and unemployed.
- People living in low-income rural counties are less likely to acknowledge food security issues.
- Rural people expect to travel 22 minutes or more for their food.
- Both rural and urban households depend on friends and family a great deal for transportation to grocery stores.
- Transportation is frequently an obstacle to shopping the grocery store of choice

**Figure 1: General themes of resident focus group discussions**

Selected quotes of residents regarding their food systems and how the community works at solving food problems follow.

*Perceptions of rural residents*

*On Food Supply*

“I don’t go out of town shopping because I don’t have a car.”

“It costs you five bucks just to drive to the next town and get food and come back.”

“If you can’t get out of this town, you’re stuck with what they’ve got.”

“...look in their meat cases and you can even see it’s spoiled”

“We used to have two grocery stores, but they closed the other one.”

“If you go buy vegetables-I like to put different vegetables together-This store up here, they’d be so high you can’t [afford to buy]...”

“When you live in a small town, you’re limited to what everybody else considers healthy. And there again you’re talking price.”

“If it’s past nine o’clock, you have to go to a convenience store if you want milk or anything like that.”

“the school has been ...providing reduced lunches and breakfasts for children...breakfast in many cases were needed as much or more than the lunch. And that’s two meals the kids get.”

“I like the [name of senior center]. Oh, my Lord, I love their clam chowder. I walk from here to there to get some of their clam chowder.”

“...there are farms around where you can go and get milk and eggs, various different crops that they have...It’s generally cheaper, but not always.”

“one time we were going to go out there [to farmer’s market] and it was gone before we even got out there.”

*On Civic Structure:*

“My wife is on the local Weight Watchers...I’m amazed at that program...my wife has lost 45 pounds. And she eats with me wherever I go...it’s just that she can only eat so much...”

“I put in a garden, way too much fruit for the two of us, and I share, I give it to people...that don’t have gardens or are older and not able to get out. That’s done quite a bit in this town.”

“There’s some fishermen that will give to the meal site.”

“I think basically if the problem [food insecurity] is known, the community will work it out...if there are problems, it’s basically not general knowledge.”

“I don’t think we have enough [local producers at the market].”

The food pantry gives “anything that they think the family needs, from sugar, flour, canned goods, they have frozen food, canned goods, like I said, just about anything.”

Regarding food security “I don’t think so. I think the food is available and they could get it if they want it.”

Quotes from urban residents:

*On the Food Supply:*

“...basically there aren’t any small grocery stores [in our neighborhood].”

“The transportation is lousy.”

“I would have to walk the six blocks to number three [bus] and then take a bus to [name of grocery store] and then walk back...with enough groceries that would last three or four days, because my son is a chowhound. I couldn’t carry it all; it’s impossible.”

“...a lot of places...are not up to date on the building and building codes and the facilities of food. And a lot of that food comes in with, should I say, bugs and different things.”

“Thank God for the food pantry. We mix everything together. We do. We mix it all together and just see what we come up with.”

Some of these questions [about grocery stores] are dependent on if they cash in cans or not...If I go there and shop, if they’re not going to take all the cans I walk around town all day picking up.”

“...my whole check covers my rent. The lady told me, ‘oh well, you’re not qualified as emergency.’ So for two weeks thank God for the kitchen.”

*On Civic Structure:*

“Now of course the professionals were not on the other end of the [telephone] line, but just volunteer people just to keep that 24 hour number so that people could call for resources...It’s called a warming line, not a hotline...” [One participant had the number memorized and gave it to others in the group.]

“Every Sunday I volunteer my time down at [congregate meal site] and usually a church will bring in...there are a lot of people out there going hungry and they try to keep you from starving to death.”

“So communities have got to come together. And get on these big companies. ‘Hey, we helped you guys get up there by buying your food in the marketplace.’ You know, give back some.”

“But it’s the same problem, I believe, no matter where you go. It’s going to be more than just one thing; it’s not going to be just the food issue. It’s going to be transportation, childcare, ‘I can’t read, I can’t write, I don’t understand.’”

“In the wintertime it’s bad, but they’ll always stock you up...you can come home with enough to eat for a day if you want to...all you’ve got to do is go down there [soup kitchen] and ask for it...”

“There’s more caring people over here [compared to next state over] and there’s more funding. Iowa cares.”

“The churches take good care of us. It’s basically the community donating to the community.”

“There are three places a day you can eat, and on Wednesdays there are four places a day you can eat at. And if you’re going to starve in [name of city] it’s your own fault.”

### *Elderly*

One urban focus group was held at the senior center and drew a number of older persons. Three rural focus groups were predominantly older women. They frequently ate out at local places and especially delighted in talking about these places and the food that was served. Their assessments of quality eating-out places were often based on who owned the diner, the variety of foods they served, and reasonable price. Price was also an issue when grocery shopping. One older widow commented that, “Price makes all the difference when we’re at our age.”

Many in our focus groups in rural communities mentioned driving to other towns to shop for groceries at stores that they perceived as having lower prices than the local stores. However, among the elderly participants, several no longer owned a car or had the ability to drive so transportation was a major issue. In one rural community, participants mentioned that the senior citizen center operated a bus to the grocery store at the edge of town and the two grocery stores were willing to deliver groceries. However, this was not mentioned as an option in the other rural county. In one urban focus group, participants talked about a grocery store that delivered but charged \$5 plus 10 percent of the bill. This seemed very costly to them and not a viable option. Both rural and urban seniors mentioned relying on friends and family to purchase groceries for them.

In a previous analysis of the national data set of CSFII 1994-96, the relationships among food assistance programs, dietary quality and food sufficiency, and older Americans (Wooden, 2001) were examined. Study findings revealed that women who reported infrequent trips to the

grocery store, getting most of their food from a single grocery store, and reported poorer perceived health status, were at the highest risk of food insufficiency. Persons who obtained food from multiple food sources (multiple grocery stores, family, friends, restaurants, congregate meal site, or Meals on Wheels) had higher dietary quality scores and lower food insufficiency rates.

Several elders talked about trying to buy foods to fit into dietary restrictions to manage such chronic diseases as hypertension, coronary heart disease, and diabetes. One mentioned how long it takes to buy groceries because she reads labels carefully to avoid buying foods with high sodium levels because “people of color are more at risk of high blood pressure and strokes.”

### **Food Mapping**

Food stores in the county and near urban neighborhood study sites were listed on a food mapping chart as grocery stores, convenience stores, and eating out places. Focus group participants (both community leaders and residents) were asked to list additional stores and local eating out places they went to on a regular basis. The whole group discussed the food source and added it to their list before giving their quality ratings. Rural participants added out-of-county grocery stores they shopped frequently; urban participants added out-of-neighborhood stores they shopped (Table 2a). Residents, in general, gave their grocery stores much lower ratings than community leaders. Some of the differences in perceptions can be attributed to the fact that a number of community leaders didn't shop in the county or neighborhood.

Additional convenience stores added to the list were in county or very close to the neighborhood study site. Focus group low-income residents more often rated their convenience stores higher quality than did community leaders (Table 2b). All groups added a number of eating out places. Responses on quality varied by site (Table 2c). In one urban site, residents were likely to rate their eating out places as very good or great compared to lower ratings by

community leaders. The other urban site had a lot of residents who marked “don’t know” or skipped rating the eating out places completely, suggesting they ate out less frequently than participants of other focus groups. Rural focus group residents were more likely to give eating out places “great” ratings than community leaders. However, they were also more likely to give a poor rating to other places compared to community leaders. Rural focus group members often talked about going into the next biggest city to eat at name brand chain restaurants. Almost all focus group participants at all four study sites rated their senior site meal program as good, very good, or great. Urban resident participants who were not elderly usually skipped this section rather than marking “don’t know.”

**Table 2a. Perceptions of Food Store Quality.**

	Community Leaders						Residents					
	Poor %	Fair %	Good %	Very Good %	Great %	N	Poor %	Fair %	Good %	Very Good %	Great %	N
<b>Grocery Stores</b>												
<b>Davenport</b>												
Store 1		43	43		14	7		19	44	37		16
Store 2		33	45	11	11	9		13	27	40	20	15
Store 3		50			50	2			23	31	46	13
Store 4		50	25		25	4	17	17	33	33		6
Store 5					100	1	14		29	57		7
Store 6	DK	DK	DK	DK	DK	0				67	33	3
Store 7				100		2				100		3
Store 8	DK	DK	DK	DK	DK				100			1
Store 9	DK	DK	DK	DK	DK			25		63	12	8
Store 10	DK	DK	DK	DK	DK						100	1
<b>Des Moines</b>												
Store 1			60	40		5	50	50				2
Store 2				100		1	50		50			2
Store 3				100		1	50		50			2
Store 4	DK	DK	DK	DK	DK			25	25	50		4
Store 5	DK	DK	DK	DK	DK			25	50	25		4
<b>Decatur County</b>												
Store 1	12.5		50	38		8	6	25	44	19	6	16
Store 2			57	29	14	7		13	25	31	31	16
Store 3					100	1		50	50			2
Store 4				100		2		57	29		14	7
Store 5	DK	DK	DK	DK	DK				33	33	33	3
<b>Monroe County</b>												
Store 1				25	75	4			62	23	15	13
Store 2			20	60	20	5		10	30	40	20	10
Store 3				100		2				100		1
Store 4				100		1				100		2

DK = Don't know/Don't use

**Table 2b. Quality of Convenience Stores.**

	Community Leaders						Residents					
	Poor %	Fair %	Good %	Very Good %	Great %	N	Poor %	Fair %	Good %	Very Good %	Great %	N
<b>Convenience Stores</b>												
<b>Davenport</b>												
Store 1	60	40				5		71	29			7
Store 2	50	50				4	20	60	20			5
Store 3	60	40				5		89	11			9
Store 4	50		50			4		17	58	17	8	12
Store 5	DK	DK	DK	DK	DK				75	25		4
Store 6	DK	DK	DK	DK	DK		100					1
<b>Des Moines</b>												
Store 1	33	33	33			3	33	33	33			3
Store 2	33	33	33			3	25	25	50			4
Store 3	20	40	40			5	14	43	43			7
<b>Decatur County</b>												
Store 1		12.5	75	12.5		8	16	17	42	8	17	12
Store 2		33	67			6		50	30	20		10
Store 3		17	67	17		6		11	45	22	22	9
Store 4			80	20		5	9	46	18	9	18	11
Store 5			100			1		100				1
Store 6		33	67			3		23	46	8	23	13
Store 7		60	20	20		5	14	14	43	29		14
Store 8		100				1		40	40	20		5
Store 9	DK	DK	DK	DK	DK			33	67			3
Store 10	DK	DK	DK	DK	DK					100		1
<b>Monroe County</b>												
Store 1			33	50	17	6			67	33		3
Store 2		20	80			5			67	33		3
Store 3		67	33			3			100			2
Store 4			80	20		5			75	25		4
Store 5			67	33		3			100			1
Store 6			50	50		4			67	33		3
Store 7			75	25		4	DK	DK	DK	DK	DK	

DK = Don't know/Don't use

**Table 2c. Quality of Eating Out Places.**

	Community Leaders						Residents					
	Poor %	Fair %	Good %	Very Good %	Great %	N	Poor %	Fair %	Good %	Very Good %	Great %	N
<b>Eating out places</b>												
<b>Davenport</b>												
Store 1		20	60	20		5		29	14	43	14	7
Store 2		13	50	37		8		13	37	50		8
Store 3		33	50	17		6		17	17	66		6
Store 4			20	80		5		8	54	23	15	13
Store 5			80	20		5	9		27	46	18	11
Store 6				80	20	5	11	11	33	33	11	9
Store 7			100			5	25		50	25		4
Store 8		20	80			5		33	33	33		3
Store 9		40	60			5		33	67			3
Store 10		50	50			5	20			40	40	5
Store 11	100					2	17		50	33		6
Store 12		100				1				100		1
Store 13		100				1					100	2
Store 14		100				1					100	1
Store 15			100			2		50		50		2
Store 16			50	50		2		50			50	2
Store 17	DK	DK	DK	DK	DK						100	1
Store 18	DK	DK	DK	DK	DK						100	1
Store 19	DK	DK	DK	DK	DK					100		1
Store 20	DK	DK	DK	DK	DK				100			1
Store 21	DK	DK	DK	DK	DK				100			1
<b>Des Moines</b>												
Store 1			67	33		3			100			1
Store 2			100			2	DK	DK	DK	DK	DK	
Store 3			100			1	DK	DK	DK	DK	DK	
Store 4			100			1	DK	DK	DK	DK	DK	
Store 5	DK	DK	DK	DK	DK					100		1
Store 6	DK	DK	DK	DK	DK					100		1
Store 7			100			1	DK	DK	DK	DK	DK	
Store 8	DK	DK	DK	DK	DK					100		1
Store 9	DK	DK	DK	DK	DK						100	1

DK = Don't know/Don't use

**Table 2c. Quality of Eating Out Places, cont.**

	Community Leaders						Residents					
	Poor %	Fair %	Good %	Very Good %	Great %	N	Poor %	Fair %	Good %	Very Good %	Great %	N
<b>Decatur County</b>												
Store 1			80	20		5		15	31	23	31	13
Store 2			83	17		6		20	33	33	14	15
Store 3			50	50		4	25	50		25		4
Store 4		29	57	14		7	60	40				5
Store 5				50	50	2		100				1
Store 6			67	33		3		33	50	17		6
Store 7			25	75		4		15	23	15	47	3
Store 8			50	50		2		25	50	25		4
Store 9				100		2	DK	DK	DK	DK	DK	
Store 10			33	67		3		8	50	17	25	12
Store 11			50	50		2		13	56	25	6	16
Store 12			33	67		3		30	40	30		10
Store 13			50	50		4		20	27	33	20	15
Store 14	DK	DK	DK	DK	DK		10	40	20	20	10	10
Store 15			100			2		33	67			3
Store 16	DK	DK	DK	DK	DK			50	50			2
Store 17			67	33		3		17	50	25	8	12
Store 18		33	67			3			50	50		6
Store 19				100		2	13	37	13	37		8
Store 20	DK	DK	DK	DK	DK					100		1
Store 21	DK	DK	DK	DK	DK				33	67		3

DK = Don't know/Don't use

**Table 2c. Quality of Eating Out Places, cont.**

	Community Leaders						Residents					
	Poor %	Fair %	Good %	Very Good %	Great %	N	Poor %	Fair %	Good %	Very Good %	Great %	N
<b>Monroe County</b>												
Store 1			57	43		7	8		58	17	17	12
Store 2			40	40	20	5	14		57	29		7
Store 3		17	33	33	17	6		13	37	25	25	8
Store 4				67	33	3			33	33	33	3
Store 5		14	29	43	14	7			33	33	33	3
Store 6		33	67			3		45	22	33		9
Store 7		14	28	58		7			38	38	24	8
Store 8			28	28	44	7			100			2
Store 9	14		58	14	14	7		20	60	20		5
Store 10			75	25		4			50		50	2
Store 11			17	66	17	6	33		33	33		3
Store 12		25		50	25	4			50		50	2
Store 13				67	33	3					100	1
Store 14					100	1		20	40	20	20	5
Store 15			50	50		4			63	25	12	8
Store 16			50	50		2				100		2
Store 17	DK	DK	DK	DK	DK					50	50	2
Store 18	DK	DK	DK	DK	DK					100		1
Store 19	DK	DK	DK	DK	DK			50		50		2

DK = Don't know/Don't use

**Table 2d. Quality of Senior Meals**

	Community Leaders						Residents					
	Poor %	Fair %	Good %	Very Good %	Great %	N	Poor %	Fair %	Good %	Very Good %	Great %	N
<i>Senior Centers' Meals</i>												
Davenport			33	67		3				100		1
Des Moines			50	50		2	50			50		2
Decatur			50	50		2			60	20	20	5
Monroe				25	75	4			22	45	33	9

## **Implications of Focus Group Findings for Survey Development**

Focus group discussions with community leaders and residents suggest that the community food supply does affect what foods are available and whether low-income households can obtain affordable, healthy foods. Further, the overall community environment (safe neighborhoods and transportation) is an important factor in the selection of grocery stores. When transportation is available, low-income participants shop multiple grocery stores to get the best prices on groups of items. Three categories (staples, meat, and other groceries) help them decide which store to go to. One chain store is known in all four sites as the cheapest source of staples. Participants travel great distances to go to that store. Many shop their local store for general groceries but find that meats are either too expensive or poor quality. As a result, they seldom purchase meat; when they do they prefer meat counters that customize rather than offer prepackaged meats. In the rural counties with only two grocery stores, there are small towns without a grocery store; the convenience store is a main source of food items. As a result, elderly and poor households without self-transportation or adequate social supports have limited access to a variety of food choices at affordable prices.

Participants with young families are less likely to eat out compared to older focus group participants in single-family households. This may be because the cost of eating out for one person is quite different than a family of four. Seniors were very complimentary about their congregate meal sites praising the food and enjoying the social interaction. Food assistance programs and emergency food supplies were highly valued but sometimes perceived as lacking flexibility. Several rural elderly talked about eating out and selecting grocery stores based on supporting local businesses. Many respondents didn't think there was a food security issue in their community. Participants in general thought that their communities were doing a good job of

coordinating food assistance programs. One focus group agreed that if a person starved in their city, it was their own fault – free meals were offered in their neighborhood seven days a week. Participants used their relationships of kin and friendship as well as knowledge of local institutions to put food on their tables on a regular basis. Although our study sites lacked competitive grocery stores, most participants thought they had adequate access to food. Transportation to travel out of the neighborhood was the main factor that concerned them.

These findings are not generalizable to other low-income households in the community. A random sample survey of rural residents and a sample of convenience in urban neighborhoods will be conducted in year two in order to learn the extent to which these findings are experienced widely in these food desert areas. The Community Food Supply survey in year two should include the following food and social infrastructure concepts: adequacy and affordability of local grocery stores, distance to travel to grocery stores, public and personal transportation sources to food stores, community safety, convenience store use, gardens and sharing patterns of produce and other foods, food pantry use, community efforts to solve food insecurity problems, and cooperation among organizations, agencies, and elected officials. To link the food and social environment to diet and health, individual consumption patterns and health status must also be measured. Focus group discussions suggest questions on nutritional quality of personal diets, consumption of healthy foods such as fruits and vegetables, milk, and meats, and frequency of drinking soda.

### **Grocery Store Surveys**

Focus group discussions offer perceptions of local food availability, affordability, and quality. A survey of local grocery stores provides an objective measure of food prices. The USDA thrift

plan list of food items was used as the foundation of the market basket price survey (Bowman 1997). In addition, a number of fruits and vegetables and other items were added to the list. Two stores in each of the rural counties and a mainline chain grocery store that residents frequently mentioned in each of the urban sites were surveyed in summer 2002. In addition, an ethnic grocery store in one urban neighborhood was surveyed. Table 3 summarizes the list of food items and average prices for rural and urban study sites. An Iowa average item price was computed combining rural and urban store prices. United States Department of Agriculture (USDA) national food item prices in May 2002 are included in the table as reference points.

Fifteen out of 24 items (62 percent) were, on average, more expensive in rural grocery stores than urban ones. A market basket of all 24 items cost \$3.66 more, on average, in the rural grocery stores (\$24.02) than in the urban stores (\$20.36). Rural meats, on average, were always higher than urban meats. Oranges, white potatoes, lettuce, broccoli, and onions were more expensive in rural stores than urban ones. In general, the four Iowa rural and urban study sites had lower food prices on average on most items compared to the national average prices for similar items reported by USDA in May 2002. The major exceptions were bananas, white potatoes, lettuce, and ground beef. These items were more expensive in Iowa study sites' grocery stores than the national averages.

**Table 3. Price Per Pound for Selected Food Items from USDA Thrifty Food Plan, Iowa, Summer 2002.**

<b>Food</b>	<b>USDA May 2002</b>	<b>IA Avg</b>	<b>Urban Avg</b>	<b>Rural Avg</b>
Flour, white, all purpose	0.32	0.26	0.26	0.25
Rice, white, long grain, uncooked	0.47	0.49	0.54	0.43
Spaghetti and macaroni	0.90	0.84	0.73	0.94
Spaghetti		0.83	0.77	0.89
Bread, white	1.01	0.61	0.55	0.66
Beef, ground, uncooked	1.74	1.94	1.78	2.10
Pork chops, center cut, bone-in	3.49	NA	NA	NA
Chicken, fresh, whole	1.09	0.90	0.86	0.94
Tuna, light, chunk	1.96	1.52	1.48	1.56
Eggs, grade A, large per dozen	1.00	0.61	0.61	0.61
Milk, fresh, lowfat, per gallon	2.62	2.28	2.00	2.56
Butter, salted, grade AA, stick	3.22	1.74	1.69	1.78
Apples, red delicious	0.92	0.68	0.71	0.65
Bananas	0.52	0.60	0.66	0.54
Oranges, navel	0.85	0.82	0.66	0.98
Potatoes, white	0.51	0.46	0.38	0.54
Lettuce, iceberg (green or red leaf in IA)	0.72	1.33	0.99	1.67
Tomatoes, field grown	1.33	1.02	1.06	0.97
Broccoli	1.04	0.91	0.80	1.01
Carrots, short trimmed and topped	NA	0.60	0.64	0.55
Onions, dry yellow	NA	0.53	0.45	0.61
Orange juice, frozen concentrate per 16 oz.	1.82	1.15	1.01	1.29
Sugar, white, 33-160 oz pkg.	0.41	0.31	0.33	0.29
Margarine, stick	NA	0.42	0.37	0.47
Peanut butter, creamy	1.98	1.42	1.07	1.76
Total number of items	21	24	24	24
<b>Total Cost</b>	<b>27.92</b>	<b>22.27</b>	<b>20.36</b>	<b>24.02</b>

NA = Data not available

USDA prices from selected items from CPI Detailed Reports, Bureau of Labor Statistics, various issues from Family Economics and Nutrition Review, Vol. 14(1)91.

Price changes for all urban consumers and food prices are U.S. city averages.

N= 8 Iowa grocery stores

## **Next Steps**

This report offers preliminary findings based on analysis of focus group transcripts and grocery store surveys. Focus group themes are not generalizable to other people in the community or other communities. However, they do provide insight into consumer food supply concerns and challenges community leaders and low-income households are experiencing. The year 2 random survey in rural counties and a purposeful survey of urban residents at their neighborhood grocery store and meal sites will give a more complete picture of these four study sites. A final report in year 2 (2002-03) will integrate focus group themes, grocery store surveys, and resident surveys.

Principal investigators for this project are Dr. Lois Wright Morton, Department of Sociology and Dr. Mary Jane Oakland, Department of Food Science & Human Nutrition, Iowa State University. Project assistants are Annette Bitto, Ph.D. candidate in College of Agriculture Sustainable Agriculture Program, Mary Sand, Instructor, Department of Food Science & Human Nutrition, and Beth Michaels, undergraduate, Department of Food Science & Human Nutrition, Iowa State University.

## References

- Bowman, S.A. 1997. "A methodology to price food consumed: Development of a food price database." *Family Economics and Nutrition Review* 10(1):Appendix 2.  
<http://www.cnpp.usda.gov/foodplans/ftp99/ftp99report.pdf>
- Frazao, E. 2000. "Few individuals consumer recommended number of food guide pyramid servings." Presentation to the Rural Sociological Society Annual meeting. Washington, DC. August 16, 2000.
- Hanson, M., M. Balmer, M. Imerman, S. Padgitt, S. Huntington, and J. Knox. 2000. Preliminary Social, Cultural, Economic Assessment of Central Great Plains within EPA Region VII. Ames: Iowa State University, Department of Sociology.
- Lang, T. and G. Rayner. 2002. *Why Health is the Key to the Future of Food and Farming*. United Kingdom Health Development Agency. <http://www.ukpha.org.uk>.
- Lino, M., S.A. Gerrior, and P. P. Basiotis. 1998. *The Healthy Eating Index 1994-96*. USDA Center for Nutrition Policy and Promotion. CNPP-5.
- Morris, P.M., L. Neuhauser, and C. Campbell. 1992. "Food security in rural America: A study of the availability and costs of food." *Journal of Nutrition Education* 24(1):52S-58S.
- Nord, M., K. Jemison, and G. Bickel. 1999. *Measuring Food Security in the United States*. USDA ERS Food Assistance and Nutrition Research Report Number 2. Washington, DC.
- Olson, C.M., B.S. Rauschenbach, E.A. Frongillo, and A. Kendall. 1997. "Factors contributing to household food insecurity in rural upstate New York County." *Family Economics and Nutrition Review* 10(2):2-17.
- USDHHS. 1998. *Healthy People 2010*. US Department of Health and Human Services. Washington, DC: Office of Public Health and Science.
- Wooden, J.F. 2001. "Food label use among older Americans and food assistance program use and other factors affecting dietary quality of older Americans: Barriers and mediators of food sufficiency." Unpublished M.S. thesis. Ames: Iowa State University.

## **Appendix A: Criteria for Selecting Study Sites**

Four sites, two rural and two urban, were selected for assessment. The intersection of four criteria were used to select the sites: few or no grocery stores, high poverty rates, mortality rates above the state average, and community leaders' perceptions of civic structure. The average rural county in the U.S. has 3.8 grocery stores (Morris et al. 1992). The 1998 Standard Industrial Classification (SIC) codes for retail grocery stores and supermarkets (54) was used to find Iowa counties with 4 or fewer stores. Map 1 shows the 13 counties that had four or less grocery stores. Number of eating out places was also examined and those counties with fifteen or less eating out places are noted on Map 2. Eleven counties overlapped with counties having four or fewer grocery stores.

Next, 1997 estimates of poverty rates for people of all ages were overlaid on the 13 counties with limited grocery stores (Map 3). There were 8 counties with poverty rates higher than the state average (9.9 percent). High poverty rates were found in 5 of the 13 counties with less than 4 grocery stores. These counties are in Iowa's southern tier (Decatur, 19.5 percent; Ringgold, 16.0 percent; Monroe, 13.9 percent; Davis, 13.9 percent; and Clarke, 13.1 percent). In addition, the 13 counties were evaluated for the percent of enrolled students who received free or reduced price school meals in 1998-99 (Map 4). The highest rates were found in Decatur (47.9 percent), Ringgold (42 percent), Clarke (39 percent), and Monroe (37.4 percent). The state average for that period was 27.2 percent.

Then, 1988-96 all cause adjusted mortality rates were overlaid in the 13 counties (Map 5). Four of the counties had mortality rates higher than the state average of 835.7 per 100,000 (Mills, 914.0; Monroe, 892.8; Decatur, 865.0; and Clarke, 848.1). Lastly, four community leaders familiar with food issues for elderly and low-income households were asked to rate their

county on its civic structure. To assess the level of civic structure, leaders were asked seven questions (see Community Experts' Perceptions of High and Low Civic Community questionnaire in Appendix A).

Urban study sites were selected on similar criteria as rural sites: few or no grocery stores, high poverty, and variations in civic structure. Block level health data were not available. Two cities were purposefully chosen: Des Moines (the largest city in Iowa – 198,682 population) and Davenport (a city of 98,359 people on the eastern border of Iowa). Davenport is part of a cluster of urban cities called the Quad Cities (Bettendorf and Davenport in Iowa and Moline and Rock Island in Illinois) with a total regional population of 213,095. Community leaders in the area were asked to identify neighborhoods in Davenport and Des Moines that had a concentration of low-income households and few or no grocery stores. In Davenport, community leaders (representing WIC, Food Stamps, Office of Elder Affairs, and ISU Cooperative Extension) identified an area adjacent to the downtown business district delineated by railroad tracks to the east and south, and two major artery roads on the north and west. In Des Moines, two neighborhoods were suggested: one on the east side and the other on the west side of the river just north of downtown. The neighborhood on the west side of the river had only an ethnic grocery store but the community was undertaking a number of activities to make the neighborhood more safe. In addition, investors have broken ground to build a new grocery store on the south border of the neighborhood. Discussions with community leaders and completion of the expert questionnaire suggest this neighborhood is working at building a strong civic structure.

**NOTE: Maps 1-5 have confidential information.  
Please do not copy or distribute these maps.**

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**Map 1. Iowa Counties with Limited Numbers of Grocery Stores (4 or fewer) \***

**CONFIDENTIAL**

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**Map 2. Number of Eating Places in Selected Iowa Counties**

**CONFIDENTIAL**

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**Map 3. County Estimates for People of All Ages in Poverty in Iowa (1997)**

**CONFIDENTIAL**

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**Map 4. Percent Enrolled Students Who Received Free or Reduced-price School Meals in Selected Months in Iowa Counties, 1998-1999**

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**Map 5. All Causes – Adjusted Mortality by County, 1988-1996**

**CONFIDENTIAL**

## APPENDIX A

### Community Experts' Perceptions High and Low Civic Community

Potential Project Site: \_\_\_\_\_

Total Score: \_\_\_\_\_

Expert: \_\_\_\_\_

Date: \_\_\_\_\_

On a scale of 1 to 7 (one being the lowest, seven being the highest), how does your community relate to the following questions? Note to interviewer: in addition to the score, write down the comments and examples that are offered in support of a selected score.

1. How active are civic groups and organizations within the neighborhood/county?
2. To what extent do communities and the county engage in solving food problems? For example, are there any groups or organizations whose goals and activities revolve around the following: food security, food banks, food pantries, farmer's markets, food coalitions, planning groups, alternative food systems such as CSAs, food cooperatives, or community gardens?
3. To what extent have grants, projects, and programs helped alleviate food insecurity?
4. How easy is it for at-risk groups (elderly and low-income) to have access to public transportation particularly to access food resources?
5. Are WIC Clinics available and, if so, how frequently are they held?
6. To what extent has your community undertaken initiatives to increase the food infrastructure? For example, using community economic development to work with supermarket location, farmer's markets, community gardens, etc.?
7. What is the availability of food programs to senior citizens, such as congregate meal programs, availability of Meals on Wheels (is there a waiting list in cities)? Is there a senior service center in your area, and, if so, what type of services do they offer?

## APPENDIX B

**Table 1. Demographic Information on Focus Group Participants, Iowa, 2001-2002.**

	Community Leaders	Residents	N
<b>Focus Group Participants</b>			
Des Moines			
Focus Group 1	8	7	
Focus Group 2		4	
Davenport			
Focus Group 1	6	11	
Focus Group 2	6	8	
Decatur County			
Focus Group 1	8	10	
Focus Group 2		10	
Monroe County			
Focus Group 1	4	10	
Focus Group 2	3	6	
N	35	66	101
<b>Ages</b>			
18-34	0		
35-49	16		
50-64	10		
65-74	0		
75+	1		
N	27		27
<b>Ages</b>			
18-29		12	
30-49		19	
50-64		8	
65-74		9	
75+		17	
N		65	65
<b>Gender</b>			
Male	9	22	
Female	25	43	
N	34	65	99
<b>Education</b>			
Completed Grade school	0	1	
Some High School	0	23	
Completed High School/GED	2	28	
Some College/Associates Degree	2	4	
Bachelor's Degree	7	6	
Advanced Degree/Technical Degree	15	2	
N	26	64	90

**Table 1. Demographic Information on Focus Group Participants, Iowa, 2001-2002, cont.**

	<b>Community Leaders</b>	<b>Residents</b>	<b>N</b>
<b>Number of People in Household</b>			
One	4	29	
Two-Three	11	27	
Four - Five	8	6	
Five or More	3	2	
N	26	64	90
<b>Number of Children in Household</b>			
None	12	1	
One - Two	9	44	
Three - Four	4	15	
Five or More		4	
N	25	64	89
<b>Food Program Assistance</b>			
None	35	12	
Food Stamp Program		17	
Free or Reduced School Meals		3	
WIC		9	
Mac-Naps			
Elderly Meal Programs		16	
Other		6	
N	35	63	98
<b>Health at Focus Group</b>			
Excellent		7	
Very Good		14	
Good		24	
Fair		18	
Poor		2	
N		65	65
<b>Income</b>			
Less than \$10,000		28	
\$10,000 - \$19,999		15	
\$20,000 - \$39,999		5	
\$40,000 - \$59,999		2	
\$60,000 +		1	
No Response		10	
N		61	61

## **Food Stamp Project Focus Group Questions Community Leaders**

Before the meeting starts, place name tents on the table and the following handouts at each spot; Informed Consent; map of neighborhood/county; map worksheet; demographic sheet; food pyramid, colored pencils/markers and regular pencils. On the wall, tape up an enlarged map of the area under discussion. Set up tape recorder and microphone; check sound quality in room before meeting starts.

1. *Focus Group facilitator:* Welcome everyone, introduce yourself and other colleagues with you.
2. Introduce the project using the Informed Consent handout and then move to summary of main points of Informed Consent.
3. *Icebreaker:* **Please tell us your name and where you work. Then, tell us your favorite place to eat out.**
4. *Mapping food in the community*

We need your help to map out where food is available in this neighborhood/county. You have a map and a mapping worksheet in front of you that lists many of the major places in your county/neighborhood where people can buy food.

Each food source is numbered on the worksheet. What other food sources should be on this worksheet? Have we missed grocery stores, convenience stores, eating out places, food pantries, or roadside markets? Please give these food sources a number and name on your worksheet.

When you have finished identifying all the food sources, complete your worksheet by rating each food source on quality, healthiness, price range, and accessibility. If you have never been to a food source and don't know what it is like, just mark, "DK." Some of the food program items, like where you pick up food stamps, don't have a food quality or price range so skip those sections that don't apply. However, access to transportation is important and should be checked.

We will take about 15 minutes for you to individually complete the worksheet; then we will discuss the area food supply.

*Discuss maps and worksheets.* **I know some of you have not completed the map worksheet, but let's take a few minutes and talk about the food supply in this area.**

**First, were there places we missed that should be on the map? If you don't have the place on your map worksheet, would you add it and give it a rating?**

**Now, tell me about the grocery stores in this area. What kind of food quality do they have and how are their prices? What do you mean by the word quality?**

What kind of foods do the convenience stores sell? What foods in the food pyramid are predominately sold in these convenience stores?

What, if any, foods in the food pyramid are missing from the convenience store products?

We began this session talking about our favorite place to eat out.

What kinds of foods do the eat-out places in this neighborhood/county serve? Which places would be the healthiest to eat at? What do you mean by healthy?

Next, let's look at the food programs list. Tell me about the quality of the food and how easy it is to get. Who's using these programs?

The last group on our map worksheet is other food sources. Many places have food co-ops, roadside vegetable stands, community gardens, and community supported agriculture farms. Think about this area: are there roadside stands or farms that consumers can get food from that aren't on our map? Tell me about the kinds of food you can get at these places and how expensive it is.

[Transition from the map worksheet to other food questions.]

5. When you think about the food sources in this area, to what extent would you say there is a wide variety and quality of foods available to people who live here?

*Prompts:* How easy would it be for a low-income family to eat from the food pyramid based on the food supply of this area?

What are the foods you think need to be more readily available?

6. What are some of the barriers that prevent low-income residents from consuming healthy foods?

*Prompts:* To what extent do you think personal behaviors, such as preferences, beliefs, or time management are barriers to healthy eating?

To what extent do you think external factors, such as available foods, cost, religion, employment, or transportation are barriers to healthy eating?

7. How frequently do you think the low-income residents in this area purchase foods that are locally grown?

*Prompts:* Where would they get them and what foods are available? Does WIC have a farmers market voucher program?

**8. To what extent do low-income residents obtain foods from gardens?**

*Prompts:*        **Are there community gardens available for low-income residents?**

**How often do they or family members garden themselves?**

**9. How much of a problem is food security in this neighborhood/county?**

*Prompts:*        **Who seems to be most affected and how severe is it?**  
[ethnicity, race, income, ages, geographic location]

**10. As you think of the people your agency/organization/company come in contact with, how do you think food access and food type and quality affect their health status?**

*Prompts:*        **Does your organization make diet recommendations?**

**Are area doctors and health professionals recommending healthy changes?**

**11. What motivates the people you work with to make changes in their diets?**

*Prompts:*        **What kind of internal and external factors influence these decisions?**

**12. How easy do you think it is for low-income people to make diet changes?**

*Prompts:*        **What kinds of support do you think they need for making health related food changes and where could they go in this area to get that support?**

**What kind of medical or public health services are available?**

**13. Some communities appear to do a better job at solving food problems than other communities. Why do you think this happens? Why do some places have a lot of community efforts directed toward solving food problems and others not?**

**14. Before we conclude this session, would each of you choose two or three words that you think sum up local food sources?**

**15. We will be asking local residents to meet with us to talk about how they think about the food supply of this area. What do you think would be the best way to recruit participants for our survey and how could you help?**

**Lastly, you have a demographics sheet in front of you that we'd like you to complete.**

**Thanks for your time.**

## Food Stamp Project Focus Group Questions

### Community residents

Before the meeting starts, place name tents on the table and the following handouts at each spot: Informed Consent; map of neighborhood/county; map worksheet; demographic sheet; colored pencils/markers and regular pencils. On the wall, tape up an enlarged map of the area under discussion. Set up tape recorder and microphone; check sound quality in room before meeting starts.

1. *Focus group facilitator:* Welcome everyone, introduce yourself and other colleagues with you.
2. Introduce the project using the Informed Consent handout and then move to summary of main points of Informed Consent.
3. ***Icebreaker:* Please tell us your first name, where you live, and who lives in your household. Then, tell us your favorite place to eat out and how frequently you eat out.**
4. ***Mapping food in the community:* We need your help to map out where food is available in this neighborhood/county. You have a worksheet in front of you that lists the major places in your county/neighborhood where you can buy food.**

**Help us complete the map by rating the food supply on quality, healthiness, price range, and accessibility. If you have never been to a food source and don't know what it is like, just mark "DK." Some of the food program items, like where you pick up food stamps, don't have a food quality or price range so skip those sections that don't apply. However, access to transportation is important and should be checked.**

**Add to your map worksheet any food sources we have missed.**

**We will take about 15 minutes for you to individually complete the worksheet; then we will discuss the area food supply.**

***Discuss maps and worksheets.* I know some of you have not completed the map worksheet, but let's take a few minutes and talk about the food supply in this area.**

**First, were there places we missed that should be on the map worksheet?  
If you don't have the place on your worksheet, would you add it and give it a rating?**

**Now, tell me about the grocery stores in this area. What kind of food quality do they have and how are their prices? What do you mean by the word "quality?"**

**To what extent do you use convenience stores to buy food for your family? What are your convenience stores like?**

We began this session talking about our favorite place to eat out. Is it on this map? What kinds of foods do the eat-out places in your neighborhood/county serve? To what extent are these foods healthy? What do you mean by the word “healthy?”

Let’s look at the food programs list. Tell me about the quality of the food and how easy it is to get.

The last group on our map worksheet is other food sources. Many places have food co-ops, roadside vegetable stands, and community supported agriculture farms. Think about your area – are there roadside stands or farms that consumers can get food from that aren’t on our map? Tell me about the kinds of food you can get at these places and how expensive it is.

Before we leave the map worksheet, be sure to note on the last page of your worksheet the grocery store where you usually purchase food and how many minutes it is from your home.

5. What kind of food, if any, do you get from a garden? Where is the garden? Is it your garden? a family, friend or neighbors’ garden? or community garden? What efforts, if any, do you make to preserve any garden produce for the winter season?

*Prompts:* Do any of you participate in the WIC or Elderly Farmer Market Program? How do these programs work? What can you buy? How much produce can you purchase with the vouchers?

6. When you think about the food sources in your area, to what extent would you say there is a wide variety of foods available to you? What kind of variety and quality are available?

*Prompts:* How healthy are the foods available to you? What are the foods you would like to eat but are unable to obtain?

7. What prevents you from or keeps you eating healthy foods?

*Prompts:* What are some personal reasons – like your tastes and cultural preferences or time available? What are some external reasons that seem beyond your control, such as kinds of food available, cost and transportation?

8. What kind of dietary changes have you tried because of your health? Who or what event motivated you to make changes?

*Prompts:* What did a doctor, dietitian or health professional recommend? What did a friend or family member recommend?

9. How easy was it to make changes? What were some strategies you used (or maybe others helped you) to make changes?

*Prompts:* How easy was it to really stick with the changes you made? What helped you stay with a healthy eating program?

**Sometimes, we try to make changes but do not succeed. Has that ever happened to you? Why couldn't you make the change?**

- 10. Even when there are places to buy food, people who live in our communities may not be getting the food they need. How do households with limited incomes meet their food needs? What is the role of food stamps in solving people's food problems?**

*Prompts:*      **How can you tell if someone isn't getting the food they need?  
Have you or your children ever gone to bed hungry?**

- 11. Some communities appear to do a better job at solving food problems than other communities. Why do you think this happens? Why do some places have a lot of community efforts directed toward solving food problems and others not?**

*Prompts:*      **What are some of the food problems in your community that you think need to be solved?**

- 12. Before we conclude this session, would each of you sum up in one or two words what you think about your local food sources.**

**Lastly, you have a demographics sheet in front of you that we'd like you to complete.**

Thanks for coming.

Turn off tape recorder. Ask participants to leave their demographics, maps and worksheets at the table.

Date \_\_\_\_\_  
First Name \_\_\_\_\_

## FOCUS GROUP PARTICIPANT QUESTIONNAIRE

### 1. AGE

- a. 18-34
- b. 35-49
- c. 50-64
- d. 65-74
- e. 75 years or older

### 2. GENDER

- a. female
- b. male

### 3. RACE

- a. Caucasian
- b. African American
- c. American Indian
- d. Hispanic
- e. Asian
- f. Other: \_\_\_\_\_

### 4. EDUCATION

- a. completed grade school
- b. some high school
- c. completed high school/GED
- d. some college, no degree
- e. bachelor's degree
- f. Advanced professional/technical degree

### 5. INCOME

- a. less than \$14,999
- b. 15,000-24,999
- c. 25,000-34,999
- d. 35,000-49,999
- e. 50,000 +

### 6. TOTAL NUMBER OF PEOPLE IN HOUSEHOLD

- 1. 1
- 2. 2-3
- 3. 4-5
- 4. 5 or more

### 7. NUMBER OF CHILDREN IN HOUSEHOLD

- a. 0
- b. 1-2
- c. 3-4
- d. 5 or more

## CONSUMER INFORMATION SHEET

Please circle the best choice  
(Resident Focus Group Questionnaire)

1. AGE:
  - a. 18-29
  - b. 30-49
  - c. 50-64
  - d. 65-74
  - e. 75+
  
2. SEX:
  - a. male
  - b. female
  
3. RACE
  - a. African American
  - b. Asian
  - c. Caucasian
  - d. Hispanic
  - e. Native American
  - f. Other
  
4. EDUCATION
  - a. less than 8<sup>th</sup> grade
  - b. 8<sup>th</sup>-12<sup>th</sup>
  - c. high school diploma, GED
  - d. Associate degree
  - e. BA or BS completed
  - f. MS or PhD completed
  
5. FOOD ASSISTANCE (circle as many as apply)
  - a. Food stamp program
  - b. Free or reduced School Meal Program
  - c. WIC
  - d. MAC-NAPS
  - e. Elderly Meal Programs
  - f. Other
  
6. In general would you say that your health is:
  - a. Excellent
  - b. Very good
  - c. Fair
  - d. Poor
  
7. Total number of people living in your household:\_\_\_\_\_

8. Total number of children living in your household:\_\_\_

9. Household Income:

- a. Less than \$10,000
- b. \$10,000-\$19,999
- c. \$20,000-\$39,999
- d. \$40,000-\$59,999
- e. greater than \$60,000
- f. unemployed

## **STATEMENT OF INFORMED CONSENT**

### Community Residents

This project is funded by the Iowa Family Nutrition Program and is conducted by Lois Wright Morton, PhD., Mary Jane Oakland, PhD., RD, Mary Sand, RD, and Annette Bitto, PhD. student, Iowa State University.

You have been asked to take part in a focus group to talk about sources of food in your community, their impacts on foods people select, and effects of diet on health. This discussion will include grocery stores, convenience stores, farmer markets and eating out places as well as community gardens, food pantries, congregated meals, and food stamps. You were asked to be a participant because of your knowledge of the local community and experiences in purchasing foods for yourself and your family.

Please read this form carefully and ask any questions you may have before agreeing to this project.

#### **Risks and Benefits:**

There are no risks involved in this project. Participation will give you an opportunity to discuss with others the need for additional food sources and community activities to assure food availability.

#### **Confidentiality:**

The tapes and records for this project will be kept private, locked in Dr. Morton's office. No identifiers other than your first name will be attached to your transcript. Only project staff will have access to this file. If the information becomes published, your identity will not be given out, it will remain confidential.

#### **Voluntary Nature of the Project:**

Your decision to participate (or not) will not affect any present or future relations with Iowa State University, the Iowa Food Stamp Program or any other community public program. If you decide to participate in the project, you are free to withdraw at any time.

#### **Contacts and Questions:**

You may ask any questions you have now and if you have questions later you may contact Lois Wright Morton, ISU Sociology Department at (515) 294-2843, Mary Jane Oakland, ISU Food Science and Human Nutrition Department at (515) 294-2536, Mary Sand ISU Food Science and Human Nutrition Department (515) 294-1499 or Annette Bitto, ISU Sociology Department at (515) 294-8031. This form is for you to keep for your own record.

Your participation in this focus group implies consent. Thank you for your time! 1/2002

**Mapping Your Food Supply**  
**Community Leader**

First Name: \_\_\_\_\_  
 Study Site: \_\_\_\_\_  
 Date: \_\_\_\_\_

**Please put a φ (star) on the map where your office/place of work is located.**

Below is a list of many sources of food in your area. Their number corresponds to a map location. Please help us complete the map and rate the food supply on accessibility and quality. Add any places we have missed.

If any item is 'not appropriate' or you 'don't know,' please indicate by using **NA** or **DK**.

	Quality of Food (circle only one)					Do they accept food stamps?	Price Range of Food (circle only one)					Do they accept food stamps?	% of foods that are healthy	Access to Transportation [ (check <u>ALL</u> that apply)					
	Poor	Fair	Good	Very Good	Great		Inexpensive	→			Very Expensive			Drive	Walk	Bus	Taxi	Public Van	Delivery Service
	*	**	***	****	*****		\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$			_____ %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Grocery stores:</b>																			
1. _____	*	**	***	****	*****	Y N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	_____ %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. _____	*	**	***	****	*****	Y N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	_____ %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. _____	*	**	***	****	*****	Y N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	_____ %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. _____	*	**	***	****	*****	Y N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	_____ %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Are there others? Please list, rate, and put on map.</i>																			
_____	*	**	***	****	*****	Y N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	_____ %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	*	**	***	****	*****	Y N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	_____ %	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Convenience stores where food can be purchased:	Quality of Food (circle only one)					Do they accept food stamps?		Price Range of Food (circle only one)					% of food sales that is healthy	Access to Transportation [ (check <u>ALL</u> that apply)						
	Poor *	Fair **	Good ***	Very Good ****	Great *****			Inexpensive \$	Expensive \$\$\$\$\$	Drive	Walk	Bus		Taxi	Public Van	Delivery Service				
5. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Are there others? Please list, rate, and put on map.</i>																				
_____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Places to eat out / take out in the area:	Quality of Food (circle only one)					Do they accept food stamps?		Price Range of Food (circle only one)					% of food sales that is healthy	Access to Transportation [ (check <u>ALL</u> that apply)					
	Poor *	Fair **	Good ***	Very Good ****	Great *****			Inexpensive \$	Expensive \$\$\$\$\$	_____>	_____>	_____>		_____>	_____>	Drive	Walk	Bus	Taxi
20. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	____%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	____%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	____%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	____%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	____%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	____%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	____%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	____%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	____%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	____%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	____%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	____%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	____%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	____%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. _____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	____%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Are there others? Please list, rate, and put on map.</i>																			
_____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	____%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	____%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Food programs:	Quality of Food (circle only one)					Do they accept food stamps?		Price Range of Food (circle only one)					% of food sales that is healthy	Access to Transportation [ (check <u>ALL</u> that apply)					
	Poor	Fair	Good	Very Good	Great			Inexpensive	→			Very Expensive		Drive	Walk	Bus	Taxi	Public Van	Delivery Service
	*	**	***	****	*****			\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$		___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Food Stamps (where they are picked up)	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. WIC (where they are picked up)	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. School lunch programs (mark school locations)	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. <i>Summer</i> lunch programs (mark locations)	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. Special milk program (mark locations available)	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. Senior meal program (mark locations available)	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. School breakfast program (mark locations available)	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42. Commodity supplemental food program	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43. Child and adult care food program	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. WIC farmer market vouchers (where to get them)	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. EFNEP (group sites)	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. Food shelf, food pantries	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Are there others? Please list, rate, and put on map.</i>																			
_____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Quality of Food (circle only one)					Do they accept food stamps?		Price Range of Food (circle only one)					% of food sales that is healthy	Access to Transportation [ (check <u>ALL</u> that apply)					
	Poor *	Fair **	Good ***	Very Good ****	Great *****			Inexpensive \$	→	Expensive \$\$\$\$\$	Drive	Walk		Bus	Taxi	Public Van	Delivery Service		
<b>Other food sources:</b>																			
47. Health food store	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. Food co-op	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49. Farmer markets	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50. Roadside stands/retail farm market	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51. Community supported ag (CSA's) farms	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52. Specialty food stores	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Are there others? Please list, rate, and put on map.</i>																			
_____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	*	**	***	****	*****	Y	N	\$	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$\$	___%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Are there other places people in the area can obtain food? Please list them, give them a number, and locate them on the map.**

**[Community resident: How many minutes are you from the grocery store where you most often shop? \_\_\_\_\_ minutes]**

**Appendix B, continued**

**Table 2. Minutes to Grocery Store Where You Most Often Shop.**

	<u>Mean</u>	<u>Median</u> ----- <i>minutes</i> -----	<u>Range</u>
Davenport	16.75	17.50	0-27
Des Moines	19.55	17.50	0-25
Decatur	20.53	20.00	0-41
Monroe	25.00	12.50	0-85
Urban	17.88	20.00	0-27
Rural	22.19	15.00	0-85
ALL	20.04	17.50	0-85