

**Iowa Food Security Report Card Project**

**Final Report**

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by

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## Table of Contents

Executive Summary .....	v
Food Security in Iowa .....	v
Indicators of Food Security in Four Counties .....	vii
Focus Group Findings .....	viii
Food Pantry Survey Findings .....	ix
Discussion and Conclusions .....	xii
Recommendations for Nutrition Education .....	xii
Iowa Food Security Report Card Project .....	1
1 Introduction .....	1
1.1 Purpose .....	2
1.2 Organization of the Report .....	2
2 An Iowa Food Security Report Card .....	3
2.1 Need .....	3
2.2 Development .....	3
2.3 Project Advisors .....	4
3 Review of Food Security Findings and Assessment of other States .....	4
3.1 Food Security Report Cards from Other States .....	4
3.2 Suggested Format for Iowa Security Report Card .....	5
3.3 Community Food Security Conducted by State Nutrition Education Networks .....	5
Arizona Community Food Security .....	6
North Carolina Nutrition Network .....	7
San Luis Valley (Colorado) Community Health and Nutrition Needs Assessment .....	8
Iowa Food Stamp Community Assessment Project .....	8
4 Food Security Study in Iowa .....	9
4.1 Overview of the Study .....	9
4.2 Review of Literature .....	10
Food Security and Health .....	10
A Study of Iowa’s Food Stamp Participants and Those Who Left Food Stamps .....	10
The Iowa WIC Survey .....	11
The Community’s Role in Promoting Food Security .....	12
4.3 Food Assistance and Nutrition Education Programs: Government Programs .....	14
Designed to Safeguard the Nutrition and Health of Low-income Families	
Food Stamp Program .....	15
Special Supplemental Nutrition Program for Women, Infants, and Children .	16
WIC	
National School Lunch Program .....	17
School Breakfast Program .....	18
Commodity Supplemental Food Program (CSFP) for Women, Infants, and	18
Children	
Elderly Commodity Food Program .....	18
Summer Food Service Program .....	19
Afterschool Snack Program .....	20
Child and Adult Care Food Program (CACFP) .....	21
Special Milk Program .....	22

	Nutrition Services Incentive Program (Elderly Nutrition Program).....	22
	Elderly Waiver Program .....	23
	Iowa Senior Farmers Market Nutrition Program (SFMNP) .....	23
	Expanded Food and Nutrition Education Program (EFNEP).....	23
	Food Stamp Nutrition Education Program: The Family Nutrition Program, ..	24
	and State Nutrition Network	
4.4	Findings.....	25
4.4a	Focus Group Interviews .....	25
	Overview .....	25
	Methodology and Data Analysis .....	26
	Household Food Security Findings .....	28
	Food security status .....	28
	Barriers to food security .....	29
	Social support .....	31
	Self-efficacy/personal control .....	32
	Strategies .....	33
	Community Food Security Findings .....	35
	Grocery stores.....	36
	Eating out .....	38
	Gardens and local food production .....	38
	Public food assistance programs .....	39
	Congregate meals .....	41
	SHARE program .....	41
	Emergency Assistance Food Programs .....	42
	Community Social Organization: Social Connections and Civic Structure....	43
	Food Security .....	46
4.4b	Secondary Data: State of Iowa and Counties .....	47
	Introduction .....	47
	State Demographic and Economic Indicators .....	47
	Food and Social Assistance Program Participation (State).....	48
	County Demographic and Economic Indicators .....	49
	Food and Social Assistance Program Participation (County) .....	49
4.5c	Food Pantry Survey Data .....	50
4.5d	Discussion and Conclusion .....	60
	References.....	64
Appendices		
	Appendix A: Initial Focus Group Questions .....	66
	Appendix B: Coding Scheme for Food Security Focus Groups .....	68
	Appendix C: Secondary Data: State of Iowa and Counties .....	74
	Appendix D: Food Security Survey Instrument.....	77
	Appendix E: Survey Analyses by County .....	81

## List of Tables

Table 1.	Review of Selected States’ Community Food Security Assessments .....	6
Table 2.	Food Security Assessment of WIC Participants .....	11
Table 3.	Iowa Data for the School Lunch Program .....	17
Table 4.	Iowa Data for Free or Reduced Price Meals.....	17
Table 5.	Iowa Data for the School Breakfast Program .....	18
Table 6.	Iowa Data for the Commodity Supplemental Food Program .....	19
Table 7.	Iowa Data for the Summer Food Service Program.....	20
Table 8.	Iowa Data for the Child and Adult Care Food Program .....	21
Table 9.	Iowa Data for the Special Milk Program .....	22
Table 10.	Iowa Data for the Elderly Nutrition Program .....	22
Table 11.	Iowa Data for the Elderly Waiver Program .....	23
Table 12.	Iowa Data for the Senior Farmers Market Nutrition Program.....	23
Table 13.	Iowa Data for the Expanded Food and Nutrition Education Program.....	24
Table 14.	Iowa Data for the Family Nutrition Program and Iowa Nutrition Network .....	25
Table 15.	Survey Distribution Totals.....	51
Table 16.	Food Pantry Information.....	51
Table 17.	Respondent Characteristics Based on Rural-Urban Classification.....	53
Table 18.	Employment by Rural-Urban Classification.....	54
Table 19.	Respondent Income Sources by Rural-Urban Classification.....	55
Table 20.	FIP and Food Stamp Program Participation by Rural-Urban Classification .....	56
Table 21.	Food Security by Rural-Urban Classification.....	58
Table 22.	Community Resources by Rural-Urban Classification.....	59

## Executive Summary

Hunger and food insecurity have increasingly become critical public health issues in the United States. Estimates indicate that currently over 11 million U.S. households containing over 33 million individuals experience food-related hardships due to insufficient resources; over 3 million of these households (nearly 9 million individuals) experience hunger (Nord et al., 2002).

Why should we be concerned about food security and hunger in Iowa, given the state's reputation as the "bread basket" of the world and its wealth of natural resources to produce food? The prevalence of food insecurity without hunger in Iowa is 7.67% and the prevalence of food insecurity with hunger is 2.0%. These percentages together represent 89,000 households and approximately 243,000 Iowans (Sullivan & Choi, 2002).

The objective of this project was to develop Iowa indicators of household and community food security. These indicators then could be benchmarked in counties and statewide to help assess and monitor food security in Iowa. The project employed a two-part strategy. First, the Iowa State University project team reviewed food security studies from other states, and identified, compiled, and analyzed data from relevant secondary data sources. Second, counties were identified with whom the project team could work more closely. Individuals and groups in four counties agreed to participate in aspects of the study. These counties were Decatur, Monroe, Polk and Scott. Focus group sessions were held in Albia (Monroe County), Davenport (Scott), Des Moines (Polk), Lamoni (Decatur) and Leon (Decatur). A project priority was to develop methodologies that could be replicated in local communities. Thus, only those data sources that could be accessed by individuals in local communities were included in the analyses for this report. Similarly, methodologies utilized in the study communities were selected with an eye toward being replicable at the local level. Surveys were distributed in food pantries in all four counties, however, not in all the communities in the counties. Communities where surveys were distributed at food pantries included Davenport, Des Moines, Albia, and Lamoni. A total of 569 completed surveys were received from focus group participants and food pantry clients. Based on the data gathered, a food security report was developed regarding low-income Iowans and low-income residents of four selected Iowa counties.

### Food Security in Iowa

National statistics suggest that Iowa is food secure in comparison to other states. It has been estimated that Iowa's 1998-2000 food insecurity rate was 7.67%, the second lowest in the U.S. (Sullivan & Choi, 2002). A key component of this project was to begin to understand how these broad estimates of state-level food insecurity are linked with other indicators, and vice versa. For this study, data and statistics from numerous secondary sources were used to provide indicators of food security, or insecurity, in Iowa at the state level (Table ES-1). Important for future work will be monitoring how these indicators fluctuate with estimates of food insecurity in Iowa.

*Poverty.* In 1999, over 9% of persons and 6% of families in Iowa were poor (i.e., lived in households with income at or below the poverty level). In 2001, the percentage of

Table ES-1. Summary of Iowa Food Security: 1998 – 2001

<b>Food Security Status</b>	<b>Statistic</b>
Percent of food insecure households (1998 – 2000 average)	7.67%
<b>Economic Statistics</b>	
Income per capita (2000)	\$26,431
Unemployment rate, August 2002	3.70%
<b>Poverty status</b>	
Percent of persons in poverty, 1999	9.10%
Percent of persons in poverty, 2001	7.8%
<b>Food and Social Assistance Program Participation</b>	
Family Investment Program recipients, August 2002	52,045
Family Investment Program benefits per person, August 2002	\$125.60
Food Stamp Program recipients (persons), July 2002	139,137
Food Stamp Program benefits per person, July 2002	\$76.15
Free and reduced eligible for grades 1-12 (2001-2002)	129,554
School Lunch Program (average monthly participation) (2000-2001)	380,864
School Breakfast Program (average monthly participation) (2000-2001)	65,743
Summer Food Service Program participation, average daily attendance2001	5,111
Child and Adult Care Food Program, average daily attendance, FY 2001	28,674
WIC participation (persons), July 2002	63,586
WIC food cost per person, FY 2001	\$29.64

persons in Iowa who were poor decreased to 7.8%. In 1999, among households headed by single females, the rate was higher (23.4%); almost one-half of all single female-headed families with children less than 5 years old lived in poverty. Because food insecurity is associated with poverty, members of poor households are more likely than others to experience food insecurity, and especially those in single female-headed families with young children.

#### *Social Assistance Program Participation*

*Family Investment Program (FIP) Participation.* In August 2002, the number of persons participating in the FIP program was 52,045, a number that represented an increase from the average levels of 2000 (46,307). This increase also reflected the deteriorating economic situation in Iowa and throughout the U.S. During the same month, the average monthly FIP grant amount per person was \$125.60.

*Food Stamp Program (FSP) Participation.* In July 2002, more than 60,400 households in Iowa, representing 139,137 persons, received food stamps. These levels marked an increase in participation from the previous year (52,000 in FY 2001). During the same month, the average household benefit per person was \$76.15. This also represented an increase from the previous year (\$70.69 in FY 2001).

*Free or Reduced-Price Meal program Participation.* In 2001-2002, approximately 130,000 students in Iowa in grades 1-12 were eligible to receive free or reduced-price school meals. Those eligible represented more than one-fourth (26.8%) of all children in these grades.

*The National School Lunch and School Breakfast Programs.* During 2001-2002, preliminary data indicated that, on average, 378,991 individuals per month participated in the School Lunch Program. During the previous year (2000-2001), 380,864 individuals per month participated in the School Lunch Program and 65,743 individuals per month participated in the School Breakfast Program.

*WIC Program Participation.* Based on administrative data, approximately 61,000 households in Iowa participated in the Women, Infants and Children (WIC) program in 2001, with an average monthly benefit of \$29.64 per qualifying person. In July 2002, 63,586 individuals participated in WIC.

## **Indicators of Food Security in Four Counties**

Direct estimates of food insecurity were not available at the sub-state (e.g., county) level for the four counties that are home to the communities that participated in this study. Secondary data sources, however, provide a glimpse of food insecurity. Data were examined for the four counties in which the four study communities are located (Table ES-2). Of the four counties, Decatur and Monroe are rural counties; Polk and Scott are metropolitan counties.

*Economic Indicators.* The income per capita in Decatur and Monroe was lower than the state average, while income per capita in Polk and Scott counties was greater. More than 10% of persons in Decatur and Scott counties were in poverty, while the poverty rates in Monroe and Polk were less than 10%.

*Family Investment Program (FIP) Participation.* As indicated in the larger population base of the metropolitan counties, Polk and Scott counties had many more FIP cases than did the rural counties of Monroe and Decatur. The average monthly FIP benefit per person in all counties except Decatur was higher than the state average of \$125.60 in August 2002.

*Food Stamp Program (FSP) Participation.* In July 2002, the average monthly benefit per person in Iowa was \$76.15. Based on data from 2000, the average monthly benefit per person was greater in Scott (\$74.36) and Polk (\$73.71) counties than in Monroe (\$60.34) and Decatur (\$65.25) counties, as well as for the state of Iowa as a whole (\$68.32).

*Free or Reduced-Price Meal Program Participation.* In 2001-2002, although the metropolitan counties had more students eligible to receive free or reduced price meals, the rural counties had higher percentages of students eligible (Monroe-48.35%; Decatur-49.62%; Scott-31.80%; Polk-28.53%).

*WIC.* In July 2002, 7,869 individuals participated in WIC in Polk County, 4,176 in Scott County, 158 in Decatur County, and 138 in Monroe County.

Table ES-2. Indicators of Food Security in Four Iowa Counties: 1999 – July 2002

Indicator	County			
	Decatur	Monroe	Polk	Scott
<b>Economic Statistics</b>				
Income per capita, 2000	\$17,305	\$24,503	\$32,388	\$27,586
Unemployment rate, August 2002	4.30%	3.60%	3.20%	3.70%
<b>Poverty status</b>				
Percent of persons in poverty, 1999	15.50%	9.00%	7.90%	10.50%
<b>Food and Social Assistance Program Participation</b>				
Family Investment Program recipients, August 2002	375	157	7,334	4,694
Family Investment Program benefits per person, August 2002	\$114.50	\$127.06	\$128.64	\$126.55
Food Stamp Program recipients (persons), July 2002	1,077	528	17,899	11,534
Food Stamp Program benefits (avg. monthly benefits per person) (2000)	\$65.25	\$60.34	\$73.71	\$74.36
Percent of students eligible to receive free or reduced-price meals (2001-2002)	49.52%	48.35%	28.53%	31.80%
Free and Reduced eligible for grades PK-12 (2001-2002)	910	414	20,669	9,134
WIC participation (July 2002)	158	138	7,869	4,176

Focus group sessions and a survey of food pantry clients were conducted to provide information to better understand the circumstances of households in geographic regions smaller than a county, a local community. Both techniques provided insights that were not available through secondary or administrative data sources.

### Focus Group Findings

Common issues identified by the low-income focus group participants about their food situation were:

- Will eat less food, less fresh fruit and vegetables, less meat, or lower quality food than desired because of limited resources.
- Paying bills (e.g., rent, utilities, prescription drugs) takes precedence over purchasing food.
- Public transportation is inconvenient and expensive.
- People will travel across town or out of town and shop at multiple stores in order to purchase food at the most affordable prices.
- Social support (i.e., food, transportation) from family, friends, and churches is key to household food security.

Issues identified that were unique to young parents with young children:

- It is more important to make sure children have enough food and are full than it is to provide children a “healthy diet”.
- Public food assistance (i.e., WIC, food stamps) is the primary source of food for families.
- Young parents have limited food preparation and resource management knowledge and skills (e.g., basic cooking, saving money, meal planning).
- “Work does not pay” - employment does not provide a big enough financial gain compared to the decrease in food stamps and other forms of public assistance (e.g., subsidized housing) associated with earning income.
- Young parents believe they have little control over their lives, and often “fall through the cracks” for needed public assistance.
- Nutrition education influences family food purchases and meal planning, and strengthens parents’ ability to feed their families.

Issues identified that were unique to elderly individuals

- Belief that there is a direct relationship with what they eat and their health.
- Perceive they would not qualify for public food assistance or financial support for prescription drugs, rent, utilities, etc.
- Pride prevents elderly individuals from participating in the Food Stamp Program.
- Congregate meals, Meals on Wheels, Farmers Market Senior Food Voucher Program, and the SHARE program are socially acceptable means to access affordable, nutritious food.
- Elderly individuals believe they can “make do” with the food they have (they know how to cook and stretch food dollars) and believe they can feed themselves adequately. Food is not wasted.

### **Food Pantry Survey Findings**

A pilot survey of food pantry clients was conducted as a means to obtain key indicator information that would be sensitive to changes in the status of local food security (Table ES-3). We elected to access respondents through food pantries because the pantries provided a cost effective means of contacting potentially food insecure individuals. The findings of these surveys should be viewed with an understanding that they are not representative of any broader population in these communities, these counties, or the state. The survey instrument included six questions developed by the USDA to assess food security. Additional questions were asked to broadly capture the conditions under which these households attempt to meet their nutritional needs.

The survey respondents (N=569) indicated that having enough to eat is a problem in their household. Overall, nearly half (41%) of the respondents reported that the quantity of food in their home in the last 12 months was not enough; 32% reported that their food often did not last; 23% reported they often could not afford a balanced meal; and 62% cut or skipped meals. Urban

Table ES-3. Food Pantry Survey Findings

Food Security Measure	Total N=569	Rural N=60	Urban N=477	Young Parents with Young Children N=18	Elderly N=50
Quantity of food in last 12 months:					
Enough (%)	18.8	35.6	16.1	23.5	47.8
Enough, but not the kinds wanted (%)	40.6	42.4	40.7	64.7	34.8
Sometimes not enough (%)	33.0	20.3	33.6	11.8	15.2
Often not enough (%)	8.4	1.7	9.6	0.0	2.2
Food did not last in last 12 months:					
Often (%)	31.6	17.2	32.6	29.4	13.3
Sometimes (%)	56.8	46.6	58.8	64.7	35.6
Never (%)	11.6	36.2	8.7	5.9	15.1
Could not afford balanced meals in last 12 months:					
Often (%)	23.4	8.8	24.5	25.0	17.8
Sometimes (%)	58.3	56.1	58.8	56.3	37.8
Never (%)	18.3	35.1	16.7	18.8	44.4
Cut or skip meals:					
Yes (%)	61.7	42.4	63.4	62.5	28.9
Eat less than should:					
Yes (%)	76.7	64.1	77.2	61.5	44.4

respondents reported greater difficulty obtaining enough to eat compared to rural respondents. Young parents ( $\leq 21$  years of age) with young children ( $\leq 5$  years of age) when compared to elderly respondents ( $\geq 65$  years of age) were more likely to report that could not afford balanced meals, cut or skipped meals, and ate less than they should.

Utilizing the survey questions and analysis methodology from the Community Food Security Assessment Toolkit developed by the United States Department of Agriculture (USDA), we estimated the degree of food insecurity experienced by respondent households (Table ES-4). We found that less than one-in-four (23%) respondent households are food secure (42% rural, 21% urban). The remaining households are food insecure. Among all households, 27% are food insecure without hunger (23% rural, 28% urban), while one-half (50%) are food insecure with hunger (35% rural, 51% urban). Overall, rural households appear to be more food secure than urban households among those that participated in this study. Elderly respondents compared to young parents with young children were much more likely to be food secure (58% versus 28%), although the proportion of each group that is food insecure with hunger is much more similar (young parents with young children 33%, elderly respondents 24%).

Table ES-4. Degree of Food Insecurity Experienced by the Respondents' Households

Food Security Measure	Total N=569	Rural N=60	Urban N=477	Young Parents with Young Children N=18	Elderly N=50
Food secure (%)	22.9	41.7	21.2	27.8	58.0
Food insecure without hunger (%)	27.3	23.3	28.3	38.9	18.0
Food insecure with hunger (%)	49.8	35.0	50.5	33.3	24.0

Regarding obtaining food, nearly one-half (43%) of all survey respondents indicated that they had visited a food pantry 4 or more times in the last 12 months (Table ES-5). Rural respondents were less likely to visit a food pantry. Only 6% of the rural respondents visited a pantry 4 times or more in the last year while half (49%) of the urban respondents visited a pantry 4 or more times. A third (31%) of the urban respondents had been to a pantry at least 7 times during this period. Survey respondents also reported that one-third (33%) currently receive Food Stamp benefits; 40% formerly received Food Stamp benefits, but no longer do; one-fourth (27%) reported never participating in the Food Stamp program.

Table ES-5. Food Pantry and Food Stamp Use Reported by Respondents

Food Security Measure	Total N=569	Rural N=60	Urban N=477	Young Parents with Young Children N=18	Elderly Respondents N=50
Pantry visits in last 12 months:					
1 (%)	28.9	67.3	24.0	43.8	45.9
2-3 (%)	27.8	26.5	27.3	37.5	16.2
4-6 (%)	16.7	6.1	18.1	12.5	21.6
7-9 (%)	11.3	0.0	13.2	0.0	8.1
10 or more (%)	15.4	0.0	17.4	6.3	8.1
Food stamp program:					
Participate now (%)	33.4	27.1	34.6		
Used to participate (%)	39.7	35.6	40.2		
Never participated (%)	26.9	37.3	25.2		

## **Discussion and Conclusions**

The project achieved the goal of creating materials and a methodology that local community groups could replicate to assess food security among area residents. In addition, the work provided an initial, preliminary assessment of food security in Iowa. Clearly, the findings from the focus groups and the Iowa Food Security Survey must be interpreted with care. Participation in this study was completely voluntary and was an option for Iowans in only a small number of selected areas. It is quite possible that our findings would be different had we worked with other communities, identified participants through other means, identified more participants, and/or conducted the focus groups and survey at a different time of the year.

Given the caveats noted previously as well as the general limitations of the study, the number of people living in households with poverty was simplified and most likely on the rise. We found that food insecurity was prevalent among the participants in this study. This finding was in contrast to statewide estimates of food insecurity that showed Iowa to have the second lowest food insecurity rate (7.67%) among all states. Survey respondents from urban areas were more food insecure when compared to rural respondents. Nearly 72% of young parents ( $\leq 21$  years of age) with young children ( $\leq 5$  years of age) were food insecure compared to 42% of elderly individuals ( $\geq 65$  years of age) surveyed. A key aspect of future work will be whether or not this extent of food insecurity is observed elsewhere in Iowa, or among other populations. These findings were consistent with other Iowa food insecurity studies that focused on low-income populations.

The findings from this study should be valuable to a variety of groups. We recommend disseminating it to professionals, volunteers, legislators, the Iowa Food Policy Council, and local groups that work with low-income individuals. Nutrition education coalitions and Cooperative Extension EFNEP and FNP/FSNEP staff may find the information useful as they try to target low-income parents with young children and elderly individuals for nutrition education interventions and social marketing messages. Cooperative Extension staff and other organizations interested in public policy education may also find this information useful as they continue to help increase public awareness of issues families in poverty face and help communities think through program and legislative policies that may or may not best support families. Given the attention that was paid to individuals who receive food from food pantries, we expect that food pantry coordinators and volunteers will find the results of this study helpful as they try to better serve families. Finally, we recommend that all or parts of this report be incorporated into training materials as the Department of Public Health, other state agencies, and other organizations seek to find better ways to educate individuals who work directly with families in need.

## **Recommendations for Nutrition Education**

1. Specific, targeted outreach efforts designed to increase elderly individuals' awareness of program eligibility requirements, and targeted messages developed to build on the pride that elderly have to help them perceive participating in food assistance programs as a means to remain healthy and independent.

2. Build awareness and acceptance of food assistance programs (i.e., Food Stamp Program, Farmers Market Senior Food Voucher Program) through socially acceptable food resource and meal programs (e.g., congregate meals, Meals on Wheels, SHARE program).
3. Include nutrition and food preparation information along with food resources.
4. Partner elderly individuals with young parents to share resources (e.g., information, transportation, food preparation skills).
5. Design nutrition education messages and interventions to educate about basic nutritional needs of children and adults, how to stretch food dollars, and parent influences on child eating habits.
6. Integrate nutrition education into group settings in which parents are already connected.

## Iowa Food Security Report Card Project

### 1. Introduction

Hunger and food insecurity have increasingly become a critical public health and social issue in the United States. Over 11 million households containing 33 million individuals in the United States experience food-related hardships due to insufficient resources, and almost 3.3 million of these households experience hunger (Nord et al., 2002).

Definitions associated with food security are stated as follows.

**Food Security** – refers to access to enough food for an active and healthy life. At a minimum, food security includes: 1) the ready availability of nutritionally adequate and safe foods, and 2) an assured ability to acquire acceptable foods in socially acceptable ways (e.g., without resorting to emergency food supplies, scavenging, stealing or other coping strategies).

**Food Insecurity** – occurs when there is limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways.

**Hunger** – is the uneasy or painful sensation caused by a recurrent or involuntary lack of food. Hunger is a potential, although not necessary consequence of food insecurity. Over time, hunger can lead to malnutrition. (Life Sciences Research Organization, 1990)

Almost 11% (10.8%) of U.S. households were food insecure during the three-year period 1998-2000. New Mexico experienced the highest rate of food insecurity (15.9%) and New Hampshire experienced the lowest (7.5%). Ten states extending from the Pacific Northwest through the Gulf of Mexico demonstrated higher than average food insecurity and hunger rates than the rest of the nation (New Mexico 15.8%; Texas, 14.87%; Oregon, 14.33%; Louisiana, 13.93%; Oklahoma, 13.50%; Arizona, 13.13%; Idaho, 13.10%; Mississippi, 13.10%; Montana, 13.00%; Washington, 12.93%). Food insecurity rates were lowest in three Midwestern states (Indiana, 7.87%; Minnesota, 7.83%; Iowa, 7.67%) and two eastern states (Delaware, 7.87%; New Hampshire, 7.50%). States whose food security status worsened the most (moved more than 10 places in the rankings) between 1996-1998 and 1998-2000 include (number in parenthesis is the ranking of the state): Utah (13), North Dakota (12), Vermont (11), and Idaho (11). States whose hunger status worsened the most (moved more than 10 places in the rankings) between 1996-1998 and 1998-2000 include: Utah (24), Montana (19), Idaho (17), Nebraska (16), West Virginia (13), and Alaska (12). States that experienced poorer rankings in both food insecurity and hunger include: Utah, Idaho, Nebraska, Alaska, Montana, and Wisconsin (Sullivan & Choi, 2002).

Why should we be concerned about food security and hunger in Iowa given the state's reputation as the "bread basket" of the world, its wealth of natural resources to produce food, and its relatively low level of food insecurity and hunger compared to other states? The answer lies in the premise that food is a basic human right (World Food Summit, 1996). The food insecurity and hunger rate of 7.67% in Iowa represents 89,000 households and 243,000 Iowans who have

uncertain access to nutritionally adequate and safe foods (Sullivan & Choi, 2002). Thus, over one quarter of a million Iowans do not have assured access to the basic human right of food.

In addition, at present, Iowa may not be on the forefront of the nation's mind when food security is discussed. However, the recent trends of significant increased food insecurity and hunger in neighboring rural Midwestern states (i.e., Nebraska, North Dakota, Wisconsin) suggest that the poor in Iowa are also vulnerable. In addition, the percentage of Iowans (7.67%) who are food insecure is similar to the percentages of Wisconsin's (8.83%) and North Dakota (8.57%) population who are food insecure. Researchers and policy makers are striving to understand the causes of these trends in these Midwestern rural states that are also known for their ability "to feed the world". Iowa may not be immune to the increases in food insecurity and hunger that its neighbors are facing.

## **1.1 Purpose**

The purpose of this project as outlined in the Request for Proposal (RFP) was to assess available data, conduct a survey, and prepare a report on the food security of low-income Iowans. An objective outlined in the RFP was to utilize the Community Food Security Assessment Toolkit developed by the United States Department of Agriculture (USDA) to complete a food security report card for low-income Iowans. The format of the report was to be adaptable for reports in future years. Topics included in the report were:

- Assessment of community characteristics
- Profile of community food resources
- Assessment of households' food security
- Assessment of food-resource accessibility
- Assessment of food availability and affordability
- Assessment of community food production
- Assessment of county/state/federal funding for food security

Four Iowa communities were selected to be researched. Communities were selected based on their involvement in the Iowa Food Stamp Community Assessment Project and their willingness to participate (i.e., distribute surveys and recruit focus group participants).

## **1.2 Organization of the Report**

This report consists of four sections. Section 1 details the purpose of the project and the organization of the report. Section 2 provides a rationale for the project and describes the process utilized in the study. Section 3 summarizes findings from other states related to their experiences in assessing the food security status of low income populations in their states, as well as their experiences developing and conducting community food security assessments. Finally, Section 4 describes and summarizes findings from this food security study.

## **2. An Iowa Food Security Report Card**

### **2.1 Need**

Food insecurity and hunger are related to individual characteristics and structural characteristics of communities including the adequacy of food systems where people live. Thus, food security has both household and community level meanings. A food security report card that incorporates both household and community indicators offers one way to assess current levels of food security and is a monitoring tool for identifying change in food security. Household food insecurity has accepted definitions and tested measures. Recently, a definition of community food insecurity has been established (all people in a community have access to culturally acceptable, nutritionally adequate diet through non-emergency food sources at all times) (USDA Community Food Security Assessment Toolkit, 2002).

Changes in policy, services, supports, and in the population across time can affect the food security status of Iowans and their communities. The food security report developed from this project can be used to identify domains of food security that should be benchmarked in local communities and statewide to help assess and monitor food security in Iowa.

### **2.2 Development**

To develop a food security report card for Iowa, the ISU project team identified what other states had done in relation to developing a food security report card. Through the process of contacting other states, the ISU project team learned that the concept of a state food security report card is a relatively new idea. Two states were identified (i.e., Connecticut and Wisconsin) who had compiled the type of information closest to what the team envisioned important for a food security report card. While reviewing the work of these two states, the team also contacted three state nutrition education networks to learn about their experiences in developing and conducting a community food security assessment. One state (i.e., Colorado) was identified that had conducted a community food security assessment and two states (i.e., Arizona, North Carolina) were identified that were in the process of developing community food security assessments. Information each of these states provided in regard to their assessments was helpful regarding decisions about what might be most useful for year 1 of the Iowa food security report card project. In addition, the Iowa Food Stamp Community Assessment Project was reviewed to learn about types of data and aspects in a community that were identified as important to understanding community food security.

Three individuals were identified to serve in an advisory capacity to this project. Due to the time limitation of this project the advisors were utilized in a limited way during year 1 of this project. The ISU project team project director met with the advisors via phone to gain information and contacts that would be useful for the project during year one. The ISU project team plans to share this report with the advisors to gather their feedback and helpful suggestions for year 2 of the project.

Secondary data were identified, compiled, and analyzed. Four counties were identified to assess household and community food security through the use of focus groups and surveys

at food pantries: Decatur County, Monroe County, Polk County, and Scott County. Focus group interviews with elderly individuals were held in Decatur County (the towns of Leon and Lamoni) and Polk County (the city of Des Moines). Focus group interviews with parents with young children were held in Monroe County (the town of Albia) and Scott County (the city of Davenport). Surveys were distributed in food pantries in all four counties. For Polk County, surveys were distributed only in pantries in Des Moines, and for Scott County, surveys were distributed only in pantries in Davenport.

Based on the data gathered, a food security report of low-income Iowans and the four selected Iowa counties was developed. This report provides suggestions for types of data to review for local food security assessments in the future.

### **2.3 Project Advisors**

Three individuals were contacted and agreed to serve in an advisory capacity for this project during year 1: Karen Ford, Director of the Food Bank of Iowa; Mary Swalla Holmes, USDA food security liaison for Iowa; and Heidi Peterson, Chair of the Iowa Nutrition Education Network. Karen Ford provided information related to recent research involving food banks and pantries across the nation (Hunger in America 2001), as well as information regarding food banks in Iowa. Mary Swalla Holmes provided information regarding the Iowa Food Policy Council and issues related to community food security. Heidi Peterson provided information pertaining to community nutrition education coalitions in Iowa funded through the Iowa Nutrition Education Network and agreed to help the ISU project team make connections with local coalitions as needed. This report will be shared with members of the advisory committee. They will be asked to review the report and provide input as to how the Food Security Report Card Project can be designed to be more meaningful during year 2 of the project.

## **3. Review of Food Security Findings and Assessments of Other States**

### **3.1 Food Security Report Cards from Other States**

The ISU project team contacted several individuals and organizations in order to identify food security report cards that had been produced in other states (Proposal Item Number 2.1).

Wisconsin: The state of Wisconsin has been actively examining the extent of hunger and food security among its residents. Three research products from Wisconsin that are relevant to this project were uncovered through contacts within the state and through the ISU project team's own research efforts. The complete references for these items are provided at the end of this draft report.

The first was a report entitled, "The State of Hunger and Food Security in Wisconsin: Annual Report – December 2000." The second was another report entitled, "Status Report on Hunger in Wisconsin: 2000." The third was a summary document produced by the University of Wisconsin – Extension entitled, "Summary of Findings from the Wisconsin Survey of Food

Pantry Clients.” Each of these papers offered insights into how groups in Wisconsin were attempting to quantify the extent of hunger in their state. While Wisconsin had yet to produce a “food security report card”, the methodologies followed in their research proved valuable for this project. Specifically, the Iowa Food Security Survey to be discussed later was developed from the survey of food pantry clients conducted in Wisconsin.

Connecticut: “Food Security in Connecticut: The 2000 Annual Report of the Connecticut Food Policy Council” provides a variety of information. The report is divided into two sections. The first section examines indicators for food security, and the second outlines the Food Policy Council’s accomplishments and initiatives for the future. As with Wisconsin, Connecticut clearly is studying the issue of food security. For example, the Connecticut General Assembly created the Food Policy Council. This Council receives funding for its activities from the Connecticut Department of Agriculture (\$32,356 for State Fiscal Year 1999-2000). Nevertheless, just as with Wisconsin, Connecticut’s food security report card is most similar to that being developed through this project.

### **3.2 Suggested Format for Iowa Food Security Report Card**

The information we reviewed from Wisconsin, Connecticut and other states provided the ISU project team with a starting point for developing a food security report card for Iowa. The materials from Wisconsin and Connecticut offered ideas related to gathering information and disseminating findings in ways that would be accessible to a wide range of audiences. As the ISU project team moved forward with the project, the materials from these studies, while not providing a template for a report card, did guide the team as it sought to achieve a methodology that could be replicated by local community groups. Specifically, the format of and the items in the state and county data profiles were inspired from these other materials. In addition, as noted previously, the Iowa Food Security Survey developed from the exemplary work in Wisconsin.

### **3.3 Community Food Security Assessments Developed by State Nutrition Education Networks**

(Proposal Item Number 3.1)

Prior to constructing and testing indicators that could be applied to an Iowa Food Security Report card, the ISU project team examined goals and measures of food security that nutrition networks in other states are using. Following is a summary (Table 1) of three states’ current efforts (i.e., Arizona, Colorado, North Carolina). Nutrition network measures include USDA-validated core household food insecurity questions, as well as community contextual referents, community infrastructure, and how groups and organizations work together to solve food security issues. In addition, the conceptual framework and methodologies of the Iowa Food Stamp Community Assessment project directed by Drs. Lois Wright Morton and Mary Jane Oakland were shared with the Food Security Report Card team.

Table 1. Review of Selected States' Community Food Security Assessments

	Arizona Community Food Security	North Carolina Nutrition Network	San Luis Valley (Colorado) Community Health and Nutrition Needs Assessment	Iowa Food Stamp Community Assessment Project
Established	2002	1997	1997	2001
Eligibility				
Children	X	X	Demographic Profile	X
Adults	X	X		X
Elderly	X			X
Strategic Plan				
Community				
Nutritional education	X	X	X	X
Infrastructure	X	X		
Policy and evaluation needs assessment	X	X	X	X
Socio-ecological model of behavior change		X		
Models of development/guidelines		X		
Maternal health			X	
Economic security	X	X		X
Community food production	X	X		X
Household				
Health status			X	X
Internal household food behaviors				X
Resource Sharing				
FSP	X	X	X	X
WIC	X	X	X	X
School Lunch Program	X	X	X	X
School Breakfast Program	X	X	X	X
Child Care Food Program	X	X		
Adult Care Food Program	X	X		
Commodity program	X	X		X
Emergency food assistance programs	X	X		X
Summer Food Service Program attendance		X		X
Sponsors, sites and after school snacks served		X		

### Arizona Community Food Security

The Arizona Community Food Security Assessment currently being drafted (2002) focuses on identifying factors related to community food security and community contextual factors. Community groups are charged with identifying geographic and other boundaries of the community prior to conducting a survey. Indicators related to the following themes are being evaluated for inclusion in the survey: local infrastructure, economic and job security, federal nutrition assistance programs, supplemental food provided by nonprofit groups, community food production, nutrition education and awareness, and policy and evaluation. Local Nutrition Network partners will complete the assessment using a community based planning group.

*Measures of local infrastructure* consist of characteristics of retail food stores (number, safety, healthy food variety, and price) and affordable, accessible transportation.

*Economic and social measures* examine household poverty level, unemployment, job opportunities, values and norms regarding support for elderly, disabled, and children, patterns of chronic disease and drug/alcohol abuse. *Federal nutrition assistance programs indicators* include the availability of WIC, Food Stamp Program, School Breakfast, School Lunch, Summer Food Service Program, Child and Adult Food Care Program, USDA commodity food programs, and congregate and home delivered meals for elderly. In addition, questions ask about the accessibility of food stamps, WIC, and multi-lingual capacities. *Supplemental food provided by nonprofit groups measures* consist of emergency food support availability and accessibility (food banks, food pantries, and soup kitchens), gleaned fruits and vegetables, food programs for children, buying cooperatives, and multi-lingual capacities. *Community food production and marketing indicators* consist of local foods available and purchased (farms, dairies, agriculture businesses), food manufacturing, wholesale food distributors, farmer markets, community gardens, and community-supported agriculture. *Nutrition education and awareness measures* are the availability of classes (food preparation, food safety, healthy eating), Cooperative Extension programs like Expanded Food and Nutrition Education (EFNEP), Team Nutrition, nutrition education and food preparation in schools, and level of activity of Arizona Nutrition Network in the community. *Policy and evaluation measures* represent the presence, activities, and cooperation of community groups (hunger council, food and nutrition coalition, faith based groups, agencies, businesses) around food security, connections between local and state groups, and attempts to gather data (focus groups and surveys) to create a knowledge base of food security in the community.

### **North Carolina Nutrition Network**

The North Carolina Nutrition Network, established in 1997, includes 22 networks, which target food stamp eligible adults and children. The Network's strategic plan is driven by their mission: "Working together to help people in North Carolina have enough food and make healthful and enjoyable food and physical activity choices." Their strategic plan based on the following concepts offers a framework for *organizational evaluation: unified voice of nutrition education, solid and efficient infrastructure, consistent operations and messages, integration of new information with existing projects, socio-ecological model of behavior change, clear focus, development of models/guidelines, and commitments to active partnerships*. Phase 2 of their strategic plan for food security focuses on decreasing competition and fragmentation and increasing cooperation and resource sharing among public agencies, faith based organizations, food banks, and private sector agencies. One way to *measure fragmentation/cooperation is to examine organizational structures and the systems across the community that are used to locate produce donors, recruit volunteers, fund transportation and packaging, and distribution of fresh produce*. In addition, their plan emphasizes the need for increased communication, stronger relationships among partner agencies and organizations, and multi-language capacity. Annual performance goals and indicators of increased participation in existing federally funded nutrition programs are increases in average monthly participants for FSP, WIC, school lunch, school breakfast, child

and adult care food program, commodity program, and emergency food assistance programs; percent of child and adult care food programs severe to low income children, summer food programs attendance, sponsors, sites, and after school snacks served.

### **San Luis Valley (Colorado) Community Health and Nutrition Needs Assessment**

This assessment is the result of a collaboration between three groups: the San Luis Valley Nutrition Network (SLVNN), Rocky Mountain Prevention Research center (RMPRC), and a group of students at the University of Colorado – Denver. The San Luis Valley consists of six counties in south central Colorado. The 1997 population estimates are that 43,000 to 44,000 people live in 8,000 square miles, an area larger than Connecticut. The SLVNN and the RMPRC are both concerned with improving the health of the residents of the San Luis Valley, particularly in relation to food availability and nutrition.

The assessment “included detailed interviews with people involved in nutrition education and food resources in the area to better understand the region, what health and nutrition services are available, who is served, and how these programs could be improved.” The assessment has four components. First, a *demographic profile* of the region is given to allow for an understanding of the characteristics of the residents being served. The profile “contains data on the age and ethnic breakdown of the six counties, along with information on income, education level, employment status, use of Food Stamps, disability and other characteristics.” Second, a *health status profile* includes summaries of the rates and causes of mortality, summaries of the patterns of disease, data on maternal and child health, and a discussion of the Behavioral Risk Factors Surveillance Survey that was administered. Third, a *needs assessment of nutrition education and services* begins with a summary of the interviews with service providers and then focuses specifically on nutrition education in the schools. Service provider interview participants included members of the SLVNN, as well as individuals who worked for food assistance and provision organizations, social service agencies, nutrition education programs, medical service practices and agencies, and many of the area’s schools. Informants were asked a series of 27 open-ended questions about the nutritional needs of the area as a whole, as well as about the program they worked for. Assessment team interviewers also spoke with school food service supervisors in order to understand how well nutrition was being addressed in the schools. Informants indicated that most school districts are unable to fit nutrition education into the curriculum as its own subject outside of the youngest grades. Food service supervisors such as cafeteria workers have tried to be innovative and find ways to educate students about nutrition. Fourth, a *summary of the strategic planning sessions* conducted to help SLVNN further refine their goals and objectives completed the assessment. The sessions were designed to clarify the SLVNN’s statement of mission, goals and objectives; further assess and prioritize project areas for future work; and facilitate a discussion about future directions.

### **Iowa Food Stamp Community Assessment Project**

The Iowa Food Stamp Community Assessment Project, begun in FY2001, is a two-year project designed to identify relationships among community food environments, social and civic support systems, and the diet and health of individuals with low incomes. The

assessment includes an analysis of five community level categories (retail food stores, food production, nutrition assistance, emergency food, and community civic structure) and two individual level categories (health status and internal household food behaviors). Multiple methods of data collection are planned: secondary data, focus groups, store surveys, and resident surveys.

In year 1, two rural low income counties and two urban low income neighborhoods that had few or limited retail food stores were selected using secondary data and a community expert process. Criteria for selection were: 1) 4 or fewer grocery stores (13 Iowa counties in 1998), 2) population above state poverty levels, and 3) high and low engagement in problem solving local food issues (civic structure). These criteria provided the framework for collecting data and analyzing food desert sites and impacts on individuals with limited incomes. Focus groups of community leaders (N=35) and individuals with low incomes (N=61) were conducted in Winter and Spring 2002 at each site. Store market basket surveys (N= 8) of grocery stores within the rural counties and within/close to urban neighborhoods will be carried out Summer 2002. Market basket surveys of prices per unit are based on the USDA thrift plan market basket list with additions of fruits, vegetables, grain products and evaluations of item quality. Data are currently being entered into quantitative and qualitative software programs for analysis. The goal of year 1 is to map the consumer food supply and civic structure of each study site.

In year 2 (FY 2002-03), a survey of 800 individuals in the study sites will ask health status, food access, personal food behaviors, and civic engagement questions. The survey instrument will be developed and pilot tested Fall 2002. Then the survey will be conducted in two rural counties and two urban neighborhoods using mail and in-person handouts at grocery store sites. A full report of findings will incorporate the consumer food supply and civic structure findings from year 1 with the survey results of year 2.

#### **4. Food Security Study in Iowa**

##### **4.1 Overview of the Study**

This project identified, compiled, and analyzed secondary data at the state level in order to pull together indicators of food security in Iowa. In addition, two high poverty, rural counties (Decatur, Monroe) and two low income, urban communities (Des Moines, Davenport) were selected for in-depth analysis. Secondary data and primary data from these sites were obtained to better understand statewide and local community trends. Secondary data for four identified counties (i.e., Decatur, Monroe, Polk, Scott) also were identified, compiled, and analyzed. In these four counties, household and community food security was explored using selected strategies from the USDA Community Food Security Assessment Toolkit (i.e., focus group interviews with targeted groups of low-income Iowans such as the elderly and parents who have young children; surveys distributed at food pantries).

## **4.2 Review of Literature**

### **Food Security and Health**

Food insecurity is a problem that affects primarily low-income households. Thirty-two million people are poor in the United States (Dalaker & Proctor, 2000) and over 33 million individuals live in households that are food insecure (Nord et al., 2002, reporting data for 2000). These individuals have difficulty accessing nutritionally adequate, safe food in socially acceptable ways (Anderson, 1990). Even participation in federal food assistance programs does not always prevent hunger. Nationwide, 20% of families with children who participated in the Food Stamp Program report that their children sometimes go hungry (Lewit & Kerrebrock, 1997).

### **A Study of Iowa's Food Stamp Participants and Those Who Left Food Stamps**

In 1998, the Economic Research Service of the U.S. Department of Agriculture (USDA) funded several state-level studies in order to better understand the circumstances of those who left the Food Stamp Program (FSP) in 1997, the period shortly after significant changes to the federal and state welfare program rules. Because of the importance of program linkages and the role of the FSP as a program to support those leaving the Temporary Assistance to Needy Families (TANF) program, there was a need to evaluate whether the new program rules were effective in moving households and individuals toward economic self-sufficiency, and to evaluate whether the FSP was effective in meeting the needs of low-income households for obtaining food. One of the state-level studies was conducted in Iowa (Jensen et al., 2002). The Iowa Food Stamp Leavers survey was based on a representative sample of FSP participants in 1997. The FSP case-heads were surveyed in 1999.

The study findings revealed that, although FSP participation fell dramatically during the two-year period (1997-1999), other measures of well-being indicated that the FSP families studied continued to struggle, even though nearly 60% of the sample had left the FSP by the time of the survey in 1999. The majority (67%) of the 1997 FSP participants had household incomes below the poverty level in 1999. Over one-half (55%) of the FSP families were food insecure at some time in the previous 12 months, and one-fourth (28%) of Iowa's FSP families experienced food insecurity with hunger during the previous year. These relatively high levels reflect the unmet basic needs of the Food Stamp population. Use of other community resources, such as visiting emergency shelters or receiving county relief benefits, was relatively common (42% of the full FSP sample). Over one-half of the sample (57%) received privately-provided food assistance during the past year, 44% had sought help from friends or relatives to buy food, 29% had sought help from food pantry/church to obtain food, and nearly 3% had received food from a soup kitchen in the last year.

This survey, representative of the FSP population in Iowa, revealed that Iowa's food stamp recipients and recent food stamp recipients combine earnings and public and

private assistance in an effort to meet basic needs. However, their efforts were often not successful. Assistance programs, including private food assistance, remained important resources to many of these families.

### The Iowa WIC Survey

A recent survey of 2,731 WIC participants, conducted by the Iowa WIC Program, indicated that WIC participants (who responded to the survey) experienced a greater degree of household food insecurity in 2000, than in 1997 (Table 2). Spanish-reading respondents experienced a greater extent of household food insecurity than English-reading respondents and respondents who were single experienced a greater degree of food insecurity than married respondents (IDPH - Bureaus of Nutrition & WIC, 2001). Recent estimates based on the national Current Population Survey indicated that 7.67% of Iowa’s total population was food insecure without hunger, slightly less than the national average of 10.8% (Sullivan & Choi, 2002). Ten questions relating to food security were asked in the WIC survey. On all questions, more individuals reported being food insecure in 2000 than in 1997 (Table 2).

Table 2. Food Security Assessment of WIC Participants

Survey Question	WIC Iowans Food Insecure – 1997 (%)	WIC Iowans Food Insecure – 2000 (%)
I am worried about whether my food will run out...	43.3 %	56.9 %
I feel that the food that I bought didn’t last...	30.1 %	44.5 %
I ran out of foods I needed to put together a meal...	27.5 %	42.2 %
I eat the same thing for several days in a row...	21.8 %	36.3 %

Source: Iowa Department of Public Health Bureau of Nutrition & WIC, 2000 Iowa WIC Survey: Executive Summary (2001)

The research indicates that inadequately nourished children are at risk for developmental delays and increased health problems (Kleinman et al., 1998; Murphy et al., 1998), leading to increased health care costs, absenteeism from school, and decreased educational performance. Poverty also constrains the food budget and influences food choices and meal planning decisions (Morton & Guthrie, 1997). Reducing the food budget without adequate consideration of the impact on nutrition may result in increased short- and long-term medical costs for families (Dinkins, 1997; Morton, & Guthrie, 1997). Thus, poverty positions families to have less access to resources leading to a greater likelihood of food insecurity and poorer health outcomes than for people who are not poor (USDHHS, 1998).

The shift of welfare reform policy from focusing on income security to work and self-sufficiency (Olson & Pavetti, 1996) has affected the ability of some low-income families to meet their food and nutrition needs. Movement into the workforce and obtaining low-wage jobs has resulted in some families having access to fewer resources (e.g. food stamps) to feed their family, than they did before they were employed (Edin & Lein, 1997).

## **The Community's Role in Promoting Food Security**

Communities are food insecure when there are limited and inadequate resources from which people can purchase food. Rural poor have fewer grocery store choices and must travel greater distances to supermarkets than their urban counterparts (Morris et al. 1992). While urban poor may be more proximate to food stores, transportation, food quality, selection, and prices may limit accessibility to nutritious and safe foods. Further, small “Ma-Pa” grocery stores and convenience stores not only lack variety but also often have higher food prices. Limited access to supermarkets, decreased availability of fresh foods, and higher costs increase the risk of food insecurity and poor diets (Olson et al., 1997). Inadequate food assistance resources also contribute to a food insecure community infrastructure. These resources include a variety of public agencies and private organizational efforts designed to help at risk populations solve their personal food insecurity problems. Community programs range from WIC and food stamps to congregate meal sites, food pantries and banks, farmer markets, community gardens, and roadside stands. When individual group efforts are non-existent or fragmented and the community lacks a strong civic structure, the community's ability to solve food security issues is hampered.

Findings from year 1 of the Iowa Community Food Assessment Project (funded jointly by the Iowa Department of Public Health - Iowa Nutrition Education Network and Iowa State University) provided insight into community food security issues.

The goal of the Iowa Community Food Assessment Project was to assess the community food supply of places with few or no grocery stores (i.e., food deserts) to ascertain how and if personal connections and civic structure of rural and urban low-income areas mediate food insecurity, diet and health status. In year 1, community leaders and low-income residents participated in focus groups discussing their community food supply. In addition, a market basket survey of grocery store prices was conducted in Summer 2002. Focus group findings will be used to develop a survey instrument in Year 2. The preliminary results follow.

### *Community Food Focus group preliminary findings*

Focus group discussions with community leaders and residents suggested that the community food supply affects which foods are available and whether low-income households are able to obtain affordable foods. Furthermore, the overall community environment—safe neighborhoods and transportation—were important factors in the selection of grocery stores. When participants had transportation, they shopped at multiple grocery stores to obtain the best prices on groups of items. They usually talked about three categories: staples, meat, and other groceries. The purchase goal helped them decide which store to visit. One chain store was known in all four sites as the cheapest source of staples. Participants would travel great distances to go to that store. Many shopped their local store for general groceries but found that meat was either too expensive or very poor quality. As a result, they seldom bought meat; but when they did, they preferred meat counters that customized rather than offered prepackaged meats. In the rural counties with only two grocery stores, there were small towns without a grocery store; the convenience store was the main source of food items. As

a result, elderly without self-transportation or adequate social supports had limited access to a variety of food choices at affordable prices.

Participants with young families were less likely to eat out than elder, single family households. This is probably because the cost of eating out for one person costs less than for a family of four or more. 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 often lacking in flexibility. Several rural elderly talked about eating out and selecting grocery stores based on supporting local businesses. Many respondents did not 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, because congregate meals for all ages 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 these sites lacked competitive grocery stores, most participants perceived they had adequate access to food. Transportation to enable them to travel out of the neighborhood was the main factor that concerned them.

Based on these findings, the community food supply survey for year 2 of this project should include the following food and social infrastructure domains: 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. Individual consumption patterns and health status must also be measured to link the food and social environment to diet and health. Questions on nutritional quality of personal diet, and consumption of healthy foods such as fruits and vegetables, milk, and meats, offer assessments of diets.

### *Grocery store surveys*

The focus group discussions provided insight into local food availability, affordability and quality. A survey of local grocery stores provided 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. In addition, a number of fruits and vegetable 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. Fifteen out of 24 items were, on average, more expensive in rural grocery stores than urban ones. A market basket of all 24 items would cost \$3.66 more, on average, in the rural grocery stores (\$24.02) than urban ones (\$20.36). Rural meats, on average, were always higher than urban meats. Fruits and vegetables prices were mixed, with some having prices higher in urban sites and others having higher prices, on average, in rural sites. In general, the four Iowa rural and urban study sites had lower food prices. on average, on most items compared to the USDA average

prices for similar items in May 2002. The major exceptions were bananas, navel oranges, white potatoes and lettuce, which were more expensive in Iowa study sites' grocery stores.

The principal investigators for this project were: Dr. Lois Wright Morton, Iowa State University, Sociology Department and Dr. Mary Jane Oakland, Iowa State University, Food Science & Human Nutrition Department. The project assistants were Annette Bitto, PhD candidate in College of Agriculture, Sustainable Agriculture Program; Mary Sand, Instructor Food Science and Human Nutrition Department; and Beth Michaels, undergraduate Food Science and Human Nutrition Department.

Findings from the study, *A grounded theory to understand how low-income families meet their food and nutrition needs* (Greder, 2000), also provided insight into food security issues of low income Iowans. In this study, 49 women with low incomes and young children were interviewed via focus groups, in-depth interviews, and case study interviews between 1998-2000. Findings revealed that low-income families used five primary strategies: 1) reliance on others; 2) adjusting resources 3) reducing food consumption; 4) making trade-offs and 5) acquiring nutrition and shopping knowledge and skills to help them meet their food and nutrition needs. Findings also revealed that individuals can try to make behavior changes that lead to increased food security and healthy food choices; however, unless the community in which that individual lives has systems, programs, and policies in place to help support these changes, the individual may find it extremely difficult to maintain these changes, and may revert back to previous behaviors. For example, an individual may have participated in nutrition education (e.g., Expanded Food and Nutrition Education Program, Food Stamp Nutrition Education Program, WIC); however, if he/she does not have a grocery store, farmers market, or food pantry nearby, access to reliable transportation, or even a small plot of land on which to grow some vegetables, he/she may likely be dependent upon the convenience store that is within walking distance for his/her food supply. It is likely that his/her food dollars will not stretch as far, the food choices he/she may make will not be as nutritious (e.g., nutrient dense), and the variety of food he/she consumes will not be as great as it would be if she had access to other food resources.

#### **4.3 Food Assistance and Nutrition Education Programs: Government Programs Designed to Safeguard the Nutrition and Health of Low-income Families**

Studies of food assistance and nutrition education programs have demonstrated that they play a large role in lessening food insecurity among low-income families. However, despite these efforts, many low-income families are food insecure.

Forty billion dollars are dedicated annually through fourteen government food assistance programs to combat food insecurity and help one out of six Americans (Kramer-LeBlanc & McMurry, 1998). An additional \$160 million annually is spent on nutrition education targeting low-income families through the Expanded Food and Nutrition Education Program (EFNEP), the Family Nutrition Program (FNP), and state nutrition education networks (Virginia Cooperative Extension, 1999; USDA-FNS, 2000). These programs provide low-income families with foods, additional means to purchase foods, and nutrition education.

Following is an overview of selected food assistance and nutrition education programs, and highlights of their proven successes in nutrition and health.

### **Food Stamp Program**

The Food Stamp Program (FSP) is America's first line of defense against hunger. The FSP assists low-income Americans who are at 130% of the federal poverty level or below to purchase food to improve their diets. More than half of all food stamp participants are children, and nearly 4 out of 5 participants are children, the elderly and women (Center on Hunger, Poverty and Nutrition Policy, 1998). In Iowa, in July 2002, 139,137 persons in 60,411 households on a monthly average participated in the FSP. The average monthly benefit per person was \$ 76.15, and the average monthly benefit per household was \$175.38 in July 2002 (Iowa Department of Human Services, August 2002).

The Food Stamp Program is an entitlement program, available only to persons with U.S. residency status. Food stamp benefits are adjusted for a household's total income, including cash welfare assistance. Any household meeting the eligibility requirements is entitled to receive food stamps. Eligibility and allotments are based on household size, income, assets, work registration requirements, and other factors (USDA-Food and Nutrition Service, Food Stamp Program, September 2002). Food stamps are a vital source of food for both working and nonworking poor families. Many households that receive food stamps use the program to supplement earnings from jobs that do not pay well. Food stamps also serve as an emergency measure during periods of temporary unemployment (Center on Hunger, Poverty & Nutrition Policy, 1996). After analyzing consumption data from the 1989–1991 CSFII (Continuing Survey of Food Individual Intakes) and USDA's Healthy Eating Index (HEI), Basiotis et al. (1998) reported that the FSP contributed significantly to maintaining and improving the nutritional well-being of low-income households, considering both quantity and quality of diet components.

A recently released USDA report revealed that, during the time period 1994-1999, food stamp participation declined nationally from 71% to 57% of those individuals eligible to receive food stamps (Schirm & Castner, 2002). However, by September 2000, participation rates had climbed to 59% nationwide and it has been indicated that rates may now be higher. In September 1999, the percentage of eligible people who participated in the FSP in Iowa was 56%. The report suggested that the decline in food stamp participation during the period 1994-1999 was due partially to the robust U.S. economy as well as changes in eligibility rules, and perceptions about the changes in eligibility rules. The fact that the food stamp participation rates have decreased faster than the poverty rate may imply that many people who are eligible for food stamps are not receiving them. These individuals may be living with inadequate food and nutrition (Schirm & Castner, 2002).

Fletcher et al. (1999) reported that participation in the Food Stamp Program declined between 1993-1997 in the seven Iowa communities where they conducted interviews with low-income families, but the use of food pantries has dramatically increased. Thus,

food pantries are helping to fulfill the need for food where food stamps are unavailable or inadequate.

### **Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)**

The WIC Program is targeted to pregnant and post-partum women (including breastfeeding women), infants, and children up to five years of age who are at or below 185% of the federal poverty level. WIC is not an entitlement program. Each state receives an annual appropriation from Congress to deliver WIC services to families. Given that there are more families who are eligible to receive WIC than there are funds to deliver services, all families who are eligible to participate in WIC do not receive services (Iowa Department of Public Health, Bureau of Nutrition & WIC, 2000). Iowa WIC provides benefits to over 62,000 women, infants, and children in Iowa each month (Iowa Department of Public Health, Bureau of Nutrition and WIC, 2002). Approximately 33% of all pregnant women, 40% of all infants, and 20% of all children in Iowa participate in the program. (Iowa Department of Public Health Bureau of Nutrition & WIC, 2000 Iowa WIC Survey – Executive Summary, 1, 2001). Food packages are tailored to the nutritional needs of participants and consist of specific healthy foods such as dry milk; instant potatoes, rice or macaroni; cereal; peanut butter or beans; canned fruits, juice, and vegetables; cheese.

Recipients of WIC must have household incomes below 185% of the federal poverty level and demonstrate one or more nutritional risks based on criteria such as anemia, inadequate diet or abnormal weight. The majority of people receiving WIC benefits belong to working families (Center on Hunger, Poverty and Nutrition Policy, 1996). WIC has gained the reputation as a premier public health nutrition program because of its cost-effective, scientifically documented health successes. Studies have shown that pregnant women who participate in WIC have longer pregnancies leading to fewer fetal and infant deaths; seek prenatal care earlier; and consume more iron, protein, calcium and vitamin C (National Association of WIC Directors, 1998). In 1990, a USDA study showed that WIC spending on pregnant women was related to Medicaid cost savings for newborns and their mothers during the first 60 days after birth. For every \$1 spent on the prenatal component of WIC, \$3 was saved in Medicaid (Center on Hunger, Poverty & Nutrition Policy, 1998).

Nutrition education is also a key component of WIC. WIC dietitians provide participants with one-on-one nutrition counseling when they receive their food packages. In Iowa, WIC also partners with local Expanded Food and Nutrition Education Program (EFNEP) and Family Nutrition Program (FNP) personnel to provide “second education” teachings to participants.

The WIC Farmer’s Market Nutrition Program (FMNP) provides eligible families vouchers for fresh fruits and vegetables that can be used at authorized farmers’ markets. During FY 2002 over 50,000 individuals received WIC Farmer’s Market food vouchers (Iowa Department of Agriculture and Land Stewardship, Sept. 2002).

## National School Lunch Program

The National School Lunch Program is a federally funded program that assists schools and other agencies in providing nutritious lunches to children at reasonable prices. In addition to financial assistance, the program provides donated commodity foods to help reduce lunch program costs. Public and private nonprofit schools are eligible to participate in the National School Lunch Program. Also eligible are public and private nonprofit licensed residential child care institutions (e.g., group homes, juvenile halls). The United States Department of Agriculture is responsible for overseeing the program nationally. In Iowa, the program is administered by the Iowa Department of Education, Bureau of Food and Nutrition.

Children from households at 130% of the federal poverty level receive free meals, and children from households between 130% and 185% of the federal poverty level receive meals at a reduced cost.

For children, the National School Lunch Program provides a nutritious meal that contains 1/3 of the Recommended Dietary Allowance of necessary nutrients. For parents, the program offers a convenient method of providing a nutritionally balanced lunch at the lowest possible price. For schools, the program enhances children's learning abilities by contributing to their physical and mental well being.

The lunch program must be open to all enrolled children. Free or reduced price meals must be provided to those children who qualify for such benefits according to specified household size and income standards. Data for participation of Iowans in the School Lunch Program and Free or Reduced Price Meals are shown in Tables 3 and 4.

Table 3. Iowa Data for the School Lunch Program

	FY 2000	FY 2001	FY 2002
Average monthly participation	382,630	380,864	378,991*
Total lunches served	63,424,530	62,796,031	--

\*Preliminary data; Source: USDA Food and Nutrition Services 2002 [online]  
<http://www.fns.usda.gov/pd/slfypart.hrm>; <http://www.fns.usda.gov/pd/slmeals.htm>

Table 4. Iowa Data for Free or Reduced Price Meals

	2000-2001	2001-2002
Total free or reduced price meal eligible students (Pre-K through 12)	131,577	129,554
Percentage of total students eligible for free or reduced price meals	26.7%	26.66%
Number of free and reduce priced meals	19,448,928	20,019,706
Percentage of meals served that are free or reduce priced	30.7%	31.58%

## School Breakfast Program

The School Breakfast Program is a federally funded program that assists schools and other agencies in providing nutritious breakfasts to children at reasonable prices. The United States Department of Agriculture is responsible for overseeing the program nationally. In Iowa, the program is administered by the Iowa Department of Education, Bureau of Food and Nutrition.

There are many similarities between the School Breakfast Program and the National School Lunch Program. Both programs must be open to all enrolled children. If a child already qualifies for free or reduced price lunches, then the child would also qualify for free or reduced price breakfasts in the school district where they are enrolled. Data for participation of Iowans in the School Breakfast Program are shown in Table 5.

Table 5. Iowa Data for the School Breakfast Program

	FY 2000	FY 2001
Average monthly participation	64,365	65,743
Total breakfasts served	--	11,263,700

Data source: USDA Food and Nutrition Services: <http://www.fns.usda.gov/pd/sbfypart.htm>

## Commodity Supplemental Food Program (CSFP) for Women, Infants, and Children

The Commodity Supplemental Food Program for Women, Infants, and Children is a “companion” program to WIC and provides individuals with specific nutritious supplemental foods and nutrition education at no cost. In Iowa, this program is operated through the Polk County Department of Social Services and the United States Department of Agriculture and serves residents of Polk county. The primary differences between this program and WIC is the CSFP: serves children to the age of six (WIC serves up to age 5), serves postpartum women for 1 year after birth (WIC serves for 6 months unless the mother is breastfeeding), foods are issued at one central shopping facility (WIC distributes vouchers), and appointments are not needed- CSFP certifies and issues food during the initial visit. Families can participate in both CSFP and WIC, but the same person cannot be on both programs. CSFP is available regardless of any other services a family receives (Polk County Community and Family Services Center, 2002)

## Elderly Commodity Food Program

The Elderly Commodity Food Program serves persons 60 years of age or older (and handicapped persons under 60 years of age). Residents of the following counties who meet the income eligibility guidelines established by USDA may participate in the program: Boone, Clarke, Dallas, Jasper, Warren, Madison, Polk, and Wapello.

Individuals can either pick up the foods at a designated site in their county, or have the foods delivered to their homes if they do not have transportation to pick up the foods (Polk County Community and Family Services Center, 2002). Data for participation of Iowans in the Commodity Supplemental Food Program are shown in Table 6.

Table 6. Iowa Data for the Commodity Supplemental Food Program

Participation per month	FY 2001	FY 2002
Elderly	3736 (Polk plus 7 outlying counties)*	4500 (elderly and children)/month**
Children	560 (Polk County only)*	--

Data sources:

\*Roberts, Susan, Drake Agricultural Law Center, April 2002, Hunger in Iowa

\*\*Juhl, MaryAnn, Polk County Community and Family Services Center, September 2002

### **Summer Food Service Program**

Iowa children have the opportunity for nutritious meals in the summer. Iowa's Summer Food Service Program is the single largest resource available to local sponsors who want to combine a feeding program with a summer activity program. Several types of agencies can offer Summer Food Service Programs including public or private nonprofit schools; units of local, municipal, county, tribal, or state government; private nonprofit organizations; public or private nonprofit camps; and public or private nonprofit universities or colleges.

Summer Food Service Program feeding sites operate either as "open" or "enrolled" sites. Open sites operate in low-income areas where half or more of the children are from households with income at or below 185% of the Federal poverty guidelines (currently \$31,543 a year for a family of four). Meals are provided at no charge to any child at the open site. Enrolled sites provide meals only to children who are enrolled in an activity program, such as a day camp at the site. In order for an enrolled site to participate in the program, at least 50% of the children must be from households with incomes at or below 185% of the poverty level. Residential camps and nonresidential camps may participate regardless of the location and are reimbursed only for eligible participants. Data for participation of Iowans in the Summer Food Service Program are shown in Table 7.

The following information is provided for sites in three (Decatur, Scott and Polk) of the four counties identified for this study. The Summer Food Service Program currently does not operate in Monroe County.

*Decatur county:* Graceland Upward Bound (1 site, for participants enrolled in the Upward Program)

Table 7. Iowa Data for the Summer Food Service Program

	State of Iowa, for the month of June 2002
Total meals served	157,985
Total breakfast meals served	44,048
Total lunch meals served	104,704
Total supper meals served	9,062
Total snacks served	171
Number of sites	98

Data source: Patti Harding, Iowa Department of Education, September 2002

*Scott county (Davenport):* St. Ambrose Upward Bound (for participants enrolled in the Upward Program)

Davenport Community Schools (16 open sites)

St. Ambrose University NYSP (for participants enrolled in the National Youth Sports Program)

*Polk county (Des Moines):* Des Moines Independent Schools (19 open sites and enrolled sites)

*Polk county (West Des Moines):* West Des Moines Community School District (1 open site)

### **Afterschool Snack Program**

The Afterschool Snack program was established by Section 102(d) of Public Law 105-336 to provide nutritious snacks for children involved in after-school programs. Snacks can be provided by Child and Adult Care Food Programs (CACFP) or schools through the National School Lunch Programs (NSLP). Reimbursement for snacks served in after-school care programs became effective October 1, 1998.

Programs that provide care after the school day ends may be eligible for USDA reimbursement for snacks served to children through age 18. To be eligible for reimbursement, after-school care programs must meet the criteria listed under each program.

In order for a site to participate, it must be “area eligible” and provide children with regularly scheduled educational or enrichment activities in a supervised environment. An after-school care program site is “area eligible” if it is located in the attendance area of a school where at least 50 percent of the enrolled children are eligible for free or reduced price meals.

## Child and Adult Care Food Program (CACFP)

CACFP is a federally funded program that reimburses child care and Head Start centers, afterschool programs, adult centers, and family day care homes for meals and snacks meeting the USDA minimum nutritional requirements provided to children (12 years and younger) and adults in day care. Child care centers and family daycare home providers are reimbursed for their meal costs, as well as provided with commodity foods and nutrition education materials. Family daycare home providers are reimbursed for administrative expenses. The objectives of CACFP are to:

- Improve the diets of children by providing nutritious meals.
- Help children develop good eating habits that will last through the years.
- Help adults maintain good diets by providing nutritious meals.

CACFP serves:

- Children age 0 through 12 years.
- Children through age 18 in at risk after school programs.
- Children of migrant workers, through age 15.
- Physically and mentally handicapped persons receiving care in a center or home where most children are 18 years old and younger.
- Elderly or impaired adults in non-residential day care settings.

The funds provided for CACFP are from the United States Department of Agriculture (USDA). The Program is operated in Iowa through the Bureau of Food and Nutrition in the Department of Education. Data for participation of Iowans in the CACFP are shown in Table 8.

Table 8. Iowa Data for the Child and Adult Care Food Program

	FY 2001	FY 2002
Participation/day	28,674	Requested
Total meals served	17,579,572	Requested

Data source: USDA Food and Nutrition Services; <http://www.fns.usda.gov/pd/ccfypart.htm>

## Special Milk Program

The Special Milk Program (SMP) provides milk to children in schools and non-profit child care institutions that do not participate in other Federal child nutrition meal service programs. The program reimburses institutions for the milk they serve. Schools in the National School Lunch or School Breakfast Programs may also participate in the SMP to provide milk to children in half-day pre-kindergarten and kindergarten programs where children do not have access to the school meal programs. The milk program must be open to all enrolled children. All children are offered the same milk at the same charge, or at no charge if the agency does not sell milk to children. Data for participation of Iowans in the Special Milk Program are shown in Table 9.

Table 9. Iowa Data for the Special Milk Program

	FY 2001
Total ½ pints served	987,175

Data source: USDA Food and Nutrition Services;  
<http://www.fns.usda.gov/pd/smhpfy.htm>

## Nutrition Services Incentive Program (Formerly the Elderly Nutrition Program)

This program provides cash and commodity foods to States to provide meals for senior citizens. The food is served in senior citizen centers where socialization is also an extremely important goal of the program. If a senior cannot make it to a congregate meal site, the meals are delivered by Meals-on-Wheels programs. Data for participation of Iowans in the Elderly Nutrition Program are shown in Table 10.

Table 10. Iowa Data for the Elderly Nutrition Program

	FY 2001	FY 2002
Congregate meals/year	2,213,700	Requested
Delivered meals/year	1,683,414	Requested
Number of Sites	442	Requested

Data source: Susan Roberts, Drake Agricultural Law Center, April 2002, Hunger in Iowa)

### **Elderly Waiver Program**

This program is a Medicaid elderly waiver case management project for frail elderly to keep them in their homes. It includes nutrition services. The cost is \$380/month versus \$1976/month if the recipient is in a nursing home. Data for participation of Iowans in the Elderly Waiver Program are shown in Table 11.

Table 11. Iowa Data for the Elderly Waiver Program

	FY 2001	FY 2002
Number served/year	3,943	Requested

Data source: Susan Roberts, Drake Agricultural Law Center, April 2002, Hunger in Iowa)

### **Iowa Senior Farmers Market Nutrition Program (SFMNP)**

The Iowa Senior Farmers Market Nutrition Program is designed to encourage seniors to consume fresh fruits and vegetables and to purchase directly from farmers. This program also helps to financially support local farmers who participate in the program. In 2001, the SFMNP was implemented. Eligibility requirements include being over the age of 60, and having an income less than 185% of the poverty level. Data for participation of Iowans in the Senior Farmers Market Nutrition Program are shown in Table 12.

Table 12. Iowa Data for the Senior Farmers Market Nutrition Program

	FY 2001	FY 2002
Number served	13,682	Requested
Program benefit	\$28	Requested
Participating Farmers	734	Requested

Data source: Susan Roberts, Drake Agricultural Law Center, April 2002, Hunger in Iowa)

### **Expanded Food and Nutrition Education Program (EFNEP)**

EFNEP is a nutrition education program administered by the Cooperative Extension Service across the United States and in U.S. territories. EFNEP has a rich history of 30 years delivering nutrition education to low-income parents with young children (0-10 years of age) and to school-age children. In Iowa, the EFNEP program reaches families in nine counties (Black Hawk, Clinton, Dubuque, Johnson, Linn, Polk, Scott, Sioux City, Woodbury). The EFNEP model ("paraprofessional as teacher") was created based on the

conclusions of a pilot study by Cooperative Extension in the 1960s, and continues to be affirmed by numerous studies since then. Two primary conclusions were drawn from the pilot studies: 1) educational programs tailored to the interests, needs, competencies, and economic and educational levels of families could be effective in changing the eating habits of poor families; and 2) indigenous paraprofessional teachers supervised by professional home economists could be used to teach low-income families (Leidenfrost, 1975).

During 1998, a cost-benefit analysis of the Virginia EFNEP was conducted. The cost-benefit analysis revealed that for every \$1 invested in EFNEP, \$10.64 was saved in future health care costs. These savings were due to fewer unsafe food storage and preparation practices, fewer low birth-weight babies, more mothers initiating breastfeeding and breastfeeding longer, and improved diets reducing the risks of chronic diseases (Virginia Cooperative Extension, 1999). In 1999, this study was replicated in Iowa and revealed that for every \$1 invested in EFNEP in Iowa, \$10.75 was saved in future health care costs (Wessman et al., 2000). Data for participation of Iowans in the EFNEP are shown in Table 13.

Table 13. Iowa Data for the Expanded Food and Nutrition Education Program

	FY 2002
Number of families served in Iowa	2077
Number of youth served	10,952

Source: Iowa State University Extension Administrative data, September 2002.

### **Food Stamp Nutrition Education Program: The Family Nutrition Program and State Nutrition Network**

In accordance with the Food Stamp Act of 1977, as amended, the primary purpose of the Food Stamp Program is to promote the general welfare and to safeguard the health and well being of the nation's population by raising levels of nutrition among low-income households. Goals of the Food Stamp Program, as a result of funding allocated for nutrition education, were expanded to include improving the dietary intake of food stamp recipients through nutrition education activities that enhance self-sufficiency.

In 1981, funds for nutrition education became available as part of the federal Food Stamp Program budget. Funding is provided as part of the state Food Stamp Administrative budget and has a 50% match requirement. States are required to contribute 50% of the total cost of the nutrition education plan for their state.

In FY 2000, 48 states developed nutrition education plans and accessed federal food stamp dollars to implement their plans. Expenditures for state plans have increased from \$661,000 in FY 1992 to \$99 million in FY 2000 (USDA-FNS; [http://www.fns.usda.gov/fsp/nutrition\\_education/fsheet.htm](http://www.fns.usda.gov/fsp/nutrition_education/fsheet.htm)).

In Iowa, over \$2 million in Food Stamp Administrative funds are projected to be spent to deliver nutrition education in over 27 counties to families with low incomes and young children through the Family Nutrition Program, as well as through several community-based nutrition education coalitions in FY 2003 (Iowa Food Stamp Nutrition Education Plan for FY 2003). Data for participation of Iowans in the Family Nutrition Program are shown in Table 14. Data have been requested for the number of individuals served through the Iowa Nutrition Education Network, which is served by the Iowa Department of Public Health.

Table 14. Iowa Data for the Family Nutrition Program and Iowa Nutrition Network

	FY 2002
<b>Iowa Family Nutrition Program</b>	
Number of families served	1,560
Number of youth served	4,014
<b>Iowa Nutrition Network</b>	
	October 2001 – March 2002
Direct contacts	111,508
Indirect contacts	463,610
Media impressions (Pick a Better Snack Campaign)	487,994

Data source: Iowa State University Extension, Administrative data, September 2002; Iowa Department of Public Health – Iowa Nutrition Network, Administrative data, October 2002.

#### 4.4 Findings

Three primary methods (reviewing secondary data, focus group interviews, and food pantry surveys) were used to learn about food security in four identified counties in Iowa. The specific procedures with each method will be explained in the next section as each method is described.

##### 4.4a. Focus Group Interviews

###### Overview

Food security and hunger assessments must be measured at the household and community levels in order to benchmark adequacy of resources and changes over time. An Iowa Food Security Report card must include both of these domains to fully capture food insecurity and hunger. Thus, our community food security project has gathered data on Iowa households with limited resources and also examined the food resources of the communities in which these households are located.

Household food security has a standard conceptual definition: “access by all people at all times to enough food for an active, healthy life” (USDA Community Food Security Toolkit, 2002) Food security at minimum includes: 1) the ready availability of nutritionally adequate and safe foods, and 2) an assured ability to acquire acceptable foods in socially acceptable ways” (USDA Community Food Security Toolkit, 2002; Anderson 1990). Community food security does not have a similarly universally recognized definition. At the foundation of community food security is the concept of adequate and affordable resources from which households can obtain food. USDA notes that the social, economic, and institutional organization of communities and regions affect the quality and quality of adequate resources (USDA Community Food Security Toolkit, 2002).

### **Methodology and Data Analysis**

Through the use of focus group interviews during the month of June 2002, the ISU project team gathered information related to both household and community food security in four targeted Iowa counties: Scott (Davenport), Decatur (Lamoni and Leon), Polk (Des Moines), and Monroe (Albia). Two of these counties are considered urban (i.e., Scott and Polk) whereas two are considered rural (i.e., Decatur and Monroe). The use of focus groups provided opportunities for individuals to interact with one another to share experiences and beliefs, as well as challenge each other’s perceptions; thus, furthering understanding of attitudes, behaviors and contexts from several points of view (Patton, 1990). Each focus group consisted of three to twelve individuals. Focus groups were held in locations familiar to the participants (e.g., senior center, church hall, family serving agency, public library), and had child-care facilities as needed.

Elderly individuals who had low incomes were interviewed in Polk and Decatur counties (towns of Des Moines, Lamoni and Leon), and young parents with young children were interviewed in Scott and Monroe counties (towns of Davenport and Albia). A total of 47 individuals participated in the focus groups (33 elderly individuals and 14 parents with young children).

Purposive sampling was used to select individuals who were information-rich and who could communicate both depth and breadth of experience (Morgan, 1988). Key characteristics most relevant to the research problem were identified. Characteristics included enough diversity to provide a range of responses, and sufficient homogeneity so respondents had characteristics in common to share and build upon. Key characteristics of the individuals selected included those who: 1) were 60 years of age and older and who had low incomes (185% of poverty or below); 2) were parents with children below the age of ten and had low incomes (185% of poverty or below); 3) lived in one of the four targeted counties; and/or 4) represented various family structures, and use of community food resources. Iowa State University Extension field staff (County Extension Education Directors and Nutrition and Health Field Specialists) in the four counties identified were asked to help identify and recruit individuals who met the criteria stated above. ISU Extension field staff contacted local public assistance programs to identify potential focus group participants, placed flyers promoting the

focus groups in locations where individuals who have low incomes might reside or visit (e.g., subsidized housing, congregate meal locations, family resource centers), and made individual contacts with current or past program participants of the Family Nutrition Program, and Expanded Food and Nutrition Education Program administered by Iowa State University Extension.

A protocol (Brotherson & Goldstein, 1992) including procedures and questions (see Appendix A) for conducting the interviews was developed based upon a review of the literature and prior research experience. Adaptations for subsequent interviews were made based upon debriefing discussions of issues that were most salient. A moderator and an assistant moderator conducted each focus group. All focus groups were audiotaped and transcribed verbatim.

Line-by-line and paragraph-by-paragraph, the project team scrutinized the transcripts for discrete ideas, which were labeled and organized into overarching themes for each household and community food security.

The coding scheme of this study (see Appendix B) relied on three basic elements: 1) pre-developed coding structure of previous studies' results, 2) new codes developed through this study, and 3) structured questions of the present interviews, such as "What would you do if you have 50 dollars more a month?" Below is the step-by-step process that was used to code the data.

*Step 1.* Audio tapes and transcripts were reviewed and preliminary themes emerged.

*Step 2.* The interview transcriptions were examined thoroughly and coded with the previously developed coding scheme. The themes emerging from previous steps were examined with the coding scheme. The pre-developed coding scheme included a hierarchy system (i.e., main theme and several related sub-themes) and was based on several issues identified in the interviews such as food purchasing issues, food production, public nutrition assistance, emergency food, health status, civic structure of community, and food security. Each issue had several sub-issues. For example, food purchasing included sub-issues of transportation, geography, store type, etc.

*Step 3.* Creating new codes

Some limitations were found during this process: some frequent words and themes were not covered with the pre-developed scheme. Thus, new coding nodes were added as needed (see Appendix B, Coding Scheme...italized letters indicate new codes).

Example: Out of town shopping was a major phenomena of these interviews since, in the rural communities in this study, the out-of-town grocery stores had more variety and cheaper prices than grocery stores within town. However, the pre-structured coding scheme only had one code 1.1.3. Location. Thus, more

detailed new codes were developed, such as 1.1.4. *Reasons for shopping in out-of-towns* / 1.1.4.1. *Price of shopping of out of town* / 1.1.4.2. *Varieties of shopping out of town*, as well as sub-codes such as 1.1.3.1. *Within town shopping* or 1.1.3.2. *Out of town shopping* (as sub codes of 1.1.3. *Location*).

*Step 4.* The transcripts were coded and recoded based on a continuously modified coding scheme. Team members reviewed the initial coding to ensure its validity, and made modifications as new issues and themes were identified.

*Step 5.* The transcripts were initially coded on paper, and then the coding was entered into the computer software program, NVIVO. The transcripts were transformed as a text file and then imported into a project file. The project file includes the node tree based on the modified coding scheme and several free nodes (see Appendix B, coding scheme.).

The imported transcripts were coded using NVIVO, and then several relevant codes were merged to create overarching themes. Each overarching theme and the accompanying coded data were printed on paper. Team members reviewed the overarching themes and accompanying codes to draw conclusions from the findings.

## **Household Food Security Findings**

This project defined household food security as access to enough food for an active and healthy life. At a minimum, food security includes: 1) the ready availability of nutritionally adequate and safe foods, and 2) an assured ability to acquire acceptable foods in socially acceptable ways.

The findings are reported around the following themes: food security status, barriers to food security, social support, self-efficacy/personal control, and strategies. Quotations from the participants are used to illustrate the key findings.

**Food security status.** Parents with young children perceived themselves as having less access to enough food in socially acceptable ways than did the elderly (this cut across rural/urban lines). Parents with young children reported that they would place their pride aside and go to the food pantry, sign up for the Food Stamp Program and for the WIC Program in order to try to ensure that their children had enough food. “...*I got a kid...if I ever have to go there...I don't care if I am proud or not, if my kid needs food, I will go there...*”

Both parents with young children and elderly individuals reported eating less than desired due to limited resources. “*I don't hardly eat much anyway...I just eat when I can...*” Parents reported eating less to make sure their child(ren) had enough food, and rationing food among family members. “...*it is harder*”

*because he (husband) eats more...he has to cut down...we have to get through the week.”*

Parents with young children reported that it was more important to make sure their child(ren) had enough food and was full than it was to provide their child(ren) a “healthy diet”. They were willing to make a trade-off between quantity of food versus nutritional quality of food. “...*the healthier foods are expensive and there are foods that you can’t afford to buy...*”; “...*I want to make sure that they get full.*” “...*I have to make sure that my kids are full before bedtime...*” “*I make my children eat what we have...I don’t have the money to be choosy.*”

**Barriers to food security.** Rural residents (regardless of age) spoke of transportation as being essential to access affordable food. Nearly all of the focus group participants in rural communities stated that they had access to some means of transportation (commonly a friend or family member) to purchase groceries at discount grocery stores in larger communities where prices were cheaper than the grocery stores in town. Several focus group participants in the rural counties identified specific foods (e.g., milk, meat, cereal) and household items (e.g., tissues, toilet paper) that were cheaper at specific grocery and discount stores located in larger communities than the stores in their smaller communities.

Elderly focus group participants stressed the importance of friends to help them access food. “*She is always there it help me. Anytime you need groceries or anything...she takes me to the doctor...and dentist appointments...she is always there. Not everyone is fortunate enough to have a friend like her.*”

*“...she doesn’t have a car or anything...they have to rely on friends to go wherever they need to go...I’ve found in this community...there are so many generous people who are generous with their time and their vehicles.”*

A primary concern of elderly participants in both rural and urban communities was the cost of medications and its effect on their food dollar. Many elderly participants reported eating less food or less-desired food in order to pay for their prescription drugs. Elderly participants commonly shared the concern that they did not believe they qualified for public assistance to help acquire food or financial support for prescription drugs, rent, utilities, etc. “...*you either buy your medicine or you buy your food, it’s just that simple. You do without the medicine or you eat the food. You do without the food and you can get the medicine...*”

*“...I think the medication versus food is probably the biggest”*

*“I pay the bills first, those that have to be paid.”*

*“The necessities for your family food, I mean even though it is important, that is always a second...”*

Public and private transportation in both rural (e.g., shuttle, taxi) and urban (e.g., bus, taxi) communities was perceived as inconvenient and expensive.

*“...they have a bus but it is \$0.75 one way...that is kind of expensive.”*

*“...it is like \$6.00 and it's not very convenient.”*

The elderly repeatedly mentioned “pride” as a major reason why they chose not to participate in the Food Stamp Program. *“... when you go in there by the time you are done getting a food basket it's not even worth it because you feel 'this high'...”*

*“...it is just ridiculous what you have to go through.”* However, they perceived publicly funded Congregate Meals, Meals on Wheels Program, and the SHARE program as socially acceptable means to access food.

*“...there is the SHARE program and that is a very good program.”*

A lack of awareness of community food programs (e.g., eligibility requirements, logistics of applying) was common among elderly participants. Many elderly participants stated that they assumed they would not qualify for public assistance. *“...I wouldn't even make an application or try to apply...because a number of things I am not eligible for...automatically figured that I wasn't eligible for that also.”*

*“...she lives in a home and they would say no to her.”*

However, there were several elderly individuals who stated that, even if they did qualify for the Food Stamp Program, they would not participate due to their pride. *“...people may have been turned down for some other programs and so they have been turned down and there pride would come into it again...they don't check it because they feel they aren't eligible for it...”* *“...not everybody is aware of it, or maybe they aren't eligible, or they've got pride and they don't want to take it.”*

Limited food preparation, and resource management knowledge and skills (e.g., basic cooking, saving money, meal planning) were prevalent among parents with young children.

*“...that was supposed to last us two weeks and it didn't last us but a couple of days.”*

*“...everything runs out, so you just got to figure out how to get more.”*

Parents with young children reported it was more difficult to feed their children well during the summer months due to the absence of publicly supported food programs that were available during the school year (i.e., school breakfast and school lunch).

*“...Kids not in school and they are not getting their breakfast and lunch at school...it costs more in the summer.”*

*“...the food pantry needed more help in the summertime...the children were getting a hot lunch at noon...but in the summertime they missed that...”*

Several participants reported that it was expensive to eat fruits and vegetables in Iowa, especially in the wintertime, and they made the trade-off of not eating these food items to purchase foods that were cheaper.

*“...buying the kids fruits that is something is the first thing that goes...they are expensive in the store especially in the wintertime.”*

*“...I can't buy fresh fruit because it is not going to last all month and it is going to spoil.”*

Several parents with young children reported that it did not “pay to work” in their communities. The income they would earn would not provide a big enough gain for the amount they would lose in food stamps and other forms of public assistance (e.g., subsidized housing).

*“...we sat down and crunched the numbers and she is going to make \$60 a month after paying for daycare.”*

**Social support.** Social support was a predominant theme to help ensure food security for both rural and urban participants, as well as the elderly and parents with young children. *“...you really find out who your friends are and who really cares about you at that time because they help provide you with what you need.”*

*“You want to do what you can. I took them (brother's children) a lot...so I know that at least they would get a good meal.”*

Although most of the participants in this study commonly reported receiving instrumental support (i.e., food, transportation) from family and friends, there were some participants who perceived themselves as being isolated and not having family or friends to rely on to access food.

*“...one time they did a deal where if they could get five riders the trolley would go to [next small community] to take people to the Congregate Meal and*

*grocery store...it doesn't go anymore, there really doesn't seem to be enough interest..."*

In the urban community we interviewed elderly participants who commonly spoke of the role of churches and social organizations in helping to provide food to families in need. *"All I have to do is to call my church and someone would come and help me. That church family is the most precious thing you ever met in your life."*

*"...the awareness that there is food in the food pantries in most all churches...if they can't get there by bus, they can always have friends bring them there."*

Elderly participants in both urban and rural communities spoke of friends and neighbors looking after each other and sharing food with one another (i.e., garden produce, meat, providing transportation). *"...she is my sidekick and my best friend..."* *"...I've got a neighbor that live across the driveway...and he kind of looks after me."*

However, in urban communities elderly participants also stated that their neighborhoods were changing and they did not know all their neighbors like they used to know them. Thus, over time, they may not have neighbors they could rely on for social support. *"I don't know my neighbors all that well. I stay to myself. If someone came and asked me for help I could help them I would. As far as me going to someone else, I don't know of anyone that I could go to."*

*"...the other neighbors I don't know, they are all new."*

*"...why don't you ask somebody? ...Well, I didn't know who to ask."*

Parents with young children reported family members (i.e., parents, grandparents) purchasing food for them, or providing them transportation to the grocery store in a larger community to be able to purchase food at lower prices than in the small community. *"... if I needed to go somewhere bad enough my family would take me."*

*"I think most people go there (local grocery store in rural community) if they need something really quick...they basically go out of town..."*

Parents with young children reported that sometimes it was difficult to rely on friends (and sometimes family members) because they were in the same situation as themselves (e.g., low income, no means of transportation). *"...my mom went to the pantry a couple of times..., but there is only so much most of her folks could do for us because they were in the same situation..."*

**Self-efficacy/personal control.** Elderly participants seemed to have a stronger sense of self-efficacy and personal control, and a more positive outlook on their

situations than did the parents with young children. Elderly participants believed that they could make do with the food they had, and they had the ability to feed themselves adequately. *“...people think that they are imposing...they think they are imposing on their family if they ask them to do things for them.” “...I know that it is going to be harder on him,...as the days go on, but he is really losing his sight, but he still fixes for himself...”*

Overall, parents with young children were less sure of their ability to feed their families well and believed they had less control over their lives than did the elderly participants. Parents with young children commonly stated that they “fell through the cracks” and did not seem to have identified long-term solutions to feed their families adequately.

Overall, elderly participants were confident in their ability to prepare food themselves and stretch their limited resources to meet their means. They were able to live within their means.

Both parents with young children and elderly participants wanted to feed themselves and their children well. Elderly participants were very concerned about their health and believed there is a direct relationship between what they eat and their health. Parents commonly reported that they could not afford to eat healthy, the food assistance they received was not enough for the needs of their young children, and there was not as much healthy food at the food pantries as they would like. *“...towards the end of the month it’s like...what are we going to have for dinner? We got this...if we throw it all together it might taste all right.”*

*“...I’ve been giving her watered down milk and she is all right with it...you can stay on this for about a week until I can get back to the WIC office”*

*“...he is going to run out faster and WIC isn’t going to help you out...”*

Some parents with young children reported that, despite the stigma of welfare and the judgmental attitude of some food assistance and pantry workers, they would seek public and private food assistance in order to feed their children the best they can. *“...they want to know what every dime is spent on and why you did ... it is just ridiculous what you have to go through.”*

*“...an opportunity is this SHARE Food Program...this does give them access to fresh*

**Strategies.** Common strategies implemented by elderly participants to help them be food secure were: 1) they do not waste food (they are very resourceful with their food- making different kinds of dishes using minimal resources), and 2) they are willing to eat whatever is in their cupboards. In other words, they are willing to “make do” with what they have. Rural elderly participants, more so

than urban elderly participants, reported growing vegetables for their own source of food, as well as commonly sharing their produce with friends and family members.

*“...he puts out a huge garden ... so I just go over and help myself...he brought me the strawberries...so I reap from his fruits and vegetables and he does give away a lot when he knows people who do not have any...”*

*“ you just never threw anything away...and I do have a small garden...it is a raised bed to I can go out and sit on it and reach from both sides...”*

Congregate Meals and Meals on Wheels were valuable food resources for many of the elderly participants in this study (both rural and urban). Elderly individuals who paid for Congregate Meals perceived the meals as affordable, nutritious, the primary meal of the day, and an important vehicle to socialize with friends. *“My husband is diabetic and so we can come here at noon and I can eat and he can also eat and I don't have to worry about him...we can both do an affordable meal and I feel secure with him going there.”*

*“I think the meal site is very affordable.”*

Elderly participants reported that they eat better when they eat with other people than when they eat by themselves.

*“...[Ruth] and I live together and we eat most of our meals together...I like to go where there is a crowd.”*

*“...I found when you are alone...I wouldn't sit down at the table to eat, I would stand at the counter and eat...sometimes that happens to older people.”*

Virtually all of the participants in this study relied on either friends or family members to help them meet their food needs (e.g., sharing food, transportation to grocery store).

*“...I always had my mom and dad to run to for the extras whereas people don't”*

*“Hitch a ride with someone who is going there.”*

Parents with young children perceived public food assistance as a major source of support to help them meet their families' food needs. WIC and the Food Stamp Program were the two food assistance programs parents with young children relied on most.

*“...I've been giving her watered down milk and she is all right with it...you can stay on this for about a week until I can get back to the WIC office”*

Both parents with young children and elderly participants reported that food comes second when it comes to paying their bills (e.g., they will pay rent, utilities, prescription drugs first).

Parents with young children will trade-off “healthy food choices” that they perceive to be expensive (e.g., fresh fruits and vegetables, meat) for food (e.g., Ramen noodles, bread, canned tuna, peanut butter) that costs less and will “fill their children up”.

*“We can’t afford nutritious”*

*“...it is not a matter of choices when it is good (not spoiled) food”*

Some parents with young children reported that a nutrition education program helped them learn how to eat less expensively and feed their children better. They reported planning meals ahead of time, learning and using basic cooking skills, and making different food choices that have resulted in their ability to feed their families better within their means. *“...we are learning to eat differently...”*

*“...I always try to sit them down with three meals regardless if I give them something in between. Not always, it doesn’t always happen, but I am trying to start that.”*

*“...eating well means eating from the food pyramid, the different food groups.”*

### **Community Food Security Findings**

Household hunger and food insecurity are not only an inadequacy of individual resources but also an inadequacy of community resources. Adequate community food resources are based on the availability and variety of foods for purchase and access to locally produced foods. The social organization of public and private institutions can limit or expand these resources. For example, the federal Food Stamp and WIC programs expand individual capacity to purchase household foods; federal and state programs provide congregate meals for elderly, transportation, and farmers market voucher programs; and local churches and voluntary non-for-profit organizations have food drives to fill local food pantries. No one program or organization can mediate the absence of adequate community resources available and affordable for purchase by vulnerable populations. Rather, it is the social connections people and organizations have with each other that mediate how the food resources of communities are accessed. Both rural and urban communities with high poverty levels experience limitations or an absence in retail food availability and affordability.

This project defined community food security as an adequacy and affordability of food resources from which people can obtain food. These resources include foods for

purchase such as grocery stores and eating establishments, gardens and food production, food programs which offer continuous access to services, and short-term emergency assistance programs. The focus groups conducted in this study also explored how the community food infrastructure affected household food security. Findings are reported based on the following themes: grocery stores, eating establishments, garden and food production, public food assistance programs, emergency food programs, and community social organization.

**Grocery stores.** A number of common themes emerged among the four study sites. Rural and inner city neighborhoods both reported that grocery stores were high priced and of variable quality. Rural respondents frequently traveled 20-25 minutes out-of-town and often out-of-county to purchase groceries. Urban respondents did not always use the closest store because of high prices or poor quality foods. They typically shopped at multiple grocery stores in order to get low-priced foods. One store chain was mentioned at all four sites as the lowest and best place to get staples and canned products. Respondents would travel whatever distance was necessary to stock up on these items. Other grocery stores were shopped for good quality meats, fruits and vegetables at affordable prices. Rural respondents frequently mentioned that transportation to grocery stores was a challenge. If they had a car, gas money was an issue. Both rural and urban respondents depended heavily on friends and family for regular trips to purchase foods.

Rural focus group respondents talked about the price savings available if they went out-of-county for their groceries. One rural older person spoke of driving out-of-county to go to the grocery store: *“We can go to [town], ... a lot of us here go to [store name deleted] ...because their meat is affordable and it is good, but the older ones that don’t drive they are confined. I can buy [brand] milk at [store name] for \$2.25. At our [store in town] it is \$2.94.”* A number of focus group participants talked about using multiple stores to meet their food needs, one said, *“[store name] is the meat and the fresh vegetables. [another store] is all the canned goods and the cupboard stuff...”*

Both rural sites shared the concern that their local grocery was expensive. *“The [store name] here in town is the most expensive...they try to say that the prices are the same, .but they are not and it’s really expensive here in town.”* Another person elaborated, *“You could go to [store name] and walk out with six bags and spend \$200 and you know you could go to [store name] and get two grocery carts for the same amount of money so it’s just all about more for your buck.”* Older persons and parents in both rural sites found meat and vegetables expensive and often did not buy much of either. A young mother who lived in one rural town said, *“Meat is expensive and vegetables are expensive if you want to get fresh.”* Another said, *“...we can’t afford fruits and vegetables and meats...”* Another young mother added, *“I get all my groceries at one shot in the month so I can’t buy fresh fruit because it is not going to last all month and it is going to spoil.”*

One respondent summed what they thought many rural residents do, "...when they [people] get their food stamps or their checks, they basically go out of town." However, traveling out of town was also costly and not an option for everyone.

One rural elderly respondent said, "I think a lot of people can't get out of town." At another focus group in a different rural location, one young Mom said, "If we don't have a car, we just don't go." One rural town had a town bus available for 75 cents that the elderly and others could use. However, this bus did not go out of town to more affordable stores, so those who did not have a car must depend heavily on family and friends. One young Mom said, "I call my Dad." Another mother said you just "hitch a ride with someone going there." Even having a car is not enough; keeping the gas tank filled is also costly. One young parent said, "My Mom will bring us if I don't have the gas." Another agreed, "My gas would go last for me because if I needed to go somewhere bad enough my family would take me."

Although transportation and grocery stores were physically closer to low income urban neighborhoods, focus group respondents in our two urban sites also expressed food affordability and access concerns. One urban respondent said, "I walk a mile each way [to the grocery store]...because I would need two buses to get there." Another respondent used multiple ways to get to the store: "I ride a bike and walk and use the car."

Respondents in urban areas used their newspaper and local ads to make decisions about where to buy food: "twice a month [store name] sends out coupons where you can get a gallon of milk for 99 cents and every week they have sales on particular foods..." The information environment helped them stretch limited household resources. Similar to rural respondents, urban ones used multiple stores for particular food needs. One store was preferred for staples and canned foods. "The price is right at [store name]..." was commonly expressed for a deep discount, no frills grocery store. Large superstores with many household items, clothing and low food prices were also viewed as affordable sources of groceries: "...since [store name] has become a super store I get my stuff at [store name] on 14<sup>th</sup> ..." Local neighborhood stores not only had quality and price concerns but also safety issues. One respondent said, "...the [store name] is up the street from my house, but there are always like people standing around outside and I live in a bad neighborhood...and the people inside [the store] are always rude...and the prices are so much higher." A young mother talked about how unsafe the grocery carts were for infants and toddlers at a neighborhood store, "...don't have straps on most of their carts to keep the kids from falling over, and [20 month old daughter's name] fallen over a couple of times because I couldn't find one with straps...so I go to a store that is 15-20 minutes away."

One urban respondent talked about a local grocery store closing and the local hardware store, which stocked a few groceries: "...we used to have a grocery store in [community name], but it closed and so the [hardware store name] tried to put in some groceries...you can get your milk or whatever..."

**Eating out.** Rural and urban focus group participants ate out at local and out-of-town/county eating establishments. Many focus group participants talked about the enjoyment and entertainment aspect of eating out. The cost of eating out prevented most from doing it as frequently as they would like. Households with young children looked for “cheap” places to eat out. Costs of raising children, such as purchasing diapers, cut into already stressed budgets. Retirees expressed disappointment that they could not afford to eat out as often as they did when they were working. Rural seniors at one study site thought of their senior center as a good place to eat out.

Older focus group respondents talked about the pleasure they got from going out of town to eat. One man said, “...*one of the reasons I like to eat out is because I am able to get to the car and get out of town...*” Another respondent said they go out to eat, “*anytime someone prepares it and cleans up afterwards.*” One young rural parent said, “*We have four children so if we take the kids we have to go somewhere cheap...if we are going out just us two, we usually go where it is going to cost about the same as if we had the four kids.*” Parents did not want to eat out unless they were sure family members will eat the food. One focus group Mom said, “*It also depends on the ages of your kids too. You have to find some place...that all your family can eat at and not have to go to three or four different places just so you can have food that everybody can eat.*” Portion sizes and ability to extend food eaten out to another meal at home was also a consideration. One rural respondent said, “*...you get two large pizzas and it will last you four days...breakfast, lunch and dinner for four days.*”

The affordability of eating out was a concern for one young parent with a 15-month-old baby, “*My husband and I used to get pizza every Friday and we don’t do it anymore because it is like really not affordable to go spend \$20 every week on pizza.*” Another respondent commented if they had an extra \$50, they would “*...probably go out to eat.*” One focus group respondent expressed the sentiments of many of other older participants in the group, “*I think a lot of us in this room eat right here with us at the center next door...it’s affordable and it is good food.*”

Urban focus group participants also talked about the enjoyment of eating out and the limitations of their incomes to do so. “*...I just don’t eat out much anymore. I used to enjoy eating out when I was working, but I just can’t really afford it anymore.*” Another said, “*I used to like to eat out a couple of times a week, but you just can’t you know...eating out is enjoyable, but I can’t afford it.*” One mother with children said, “*We hit [fast food chain] ...I know exactly what it costs for me and the kids to eat there...*”

One urban focus group discussed the health aspects of eating out, “*...you’ve got to watch the restaurants too. The food that they serve is high in cholesterol, high in sugar...*” Another older person commented, “*...older ones think more about nutrition because of low-salt diet and blood pressure problems.*”

**Gardens and local food production.** Rural elderly seemed to have access to in-season local produce. Many elderly mentioned making noodles from scratch and freezing or

canning foods for times when they cannot get out or do not have money for food. Both rural and urban focus group participants talked about Farmer Market vouchers and their use.

One rural focus group of senior citizens talked extensively about their gardens, the food they grew and preserved. *“... I have onions and peppers and radishes and you know, beets, green beans, turnips...”* Another added, *“I have lettuce and radishes and onions and peas...I have snow peas and two other varieties and green beans. I have a lot of green beans. I can green beans and, oh what else, broccoli, cabbage, carrots, beets, mostly I have vegetables...oh cucumber, I have cucumbers and I will plan some squash...I always raise a lot butternut squash and then I freeze that.”* Vegetables were not the only foods grown; some also grew fruit, *“...we have just one apple tree left and I have a pear tree and I can pears.”* A young parent from another rural focus group had access to local meats, *“...my in-laws go and they work on a farm...in lieu of pay we can raise hogs and cattle out there...that is how we get our meat...”*

Locally grown foods were available from street corner stands in one rural town. One focus group participant talked about a friend that sells *“...50 boxes of strawberries a day and he picks them all...”* and sells them on the corner in town. The Amish had hot houses and grew tomatoes and asparagus in this community. One person said, *“...some Amish selling asparagus early this spring down on the corner... and green beans [later in the season].”* An older focus group participant grew vegetables for sale at farmers markets in the region and brokered some locally grown foods for others. He commented he had a *“little garden...right now I’ve got 100 tomato plants out.”* He was frustrated that their small rural town did not have its own farmer market, *“...but to get a program in here too have to have a leader, you have to have five merchants.”* It was not clear how hard he had tried to find five merchants, but he was discouraged that it had not happened. The group also talked about senior farmer market coupons and the need for sellers to have a number so coupons can be used with that vendor.”

Urban focus group participants talked less about gardens and local food production. One older person had a small garden in which green beans and tomatoes were grown. Members in this same group also talked about the senior farmer market vouchers and how they worked. Rumors about high fruit prices at the downtown farmer market kept one person from using them, *“...someone told me that their fruit is so high...especially downtown so I decided that maybe I’ll go myself to another place and I haven’t found one yet.”* Another person said that the Botanical Center had classes on using your garden produce.

**Public food assistance programs.** All focus group participants talked extensively about the federal Food Stamp and WIC programs. Older participants tended to think they were not eligible and really did not want to use the Food Stamp Program. They talked about their pride and embarrassment in needing to use them. Parents spoke highly about the WIC program but lamented that they did not get enough milk for the growing food demands of their children. Senior citizens really liked their congregate meal programs. One focus group was held at a rural senior center and, not surprisingly,

expressed a strong positive bias for the program. The Iowa SHARE program received the highest marks from all focus group participants. They thought it was a good deal and offered high quality fruits, vegetables, and meat. They also liked the flexible payment arrangements—food stamps, cash, or some combination. Participants also noted that timing for food distribution was appreciated. They purchased the food package at the first of the month when food stamps and other income first arrived, but the food package arrived the end of the month when food supplies were short. It overcame some of the pride issue by requiring volunteer community service, of at least \$1 of one's own cash, and has been known to be used also by people who do not have limited incomes but just like the service.

Rural elderly participants had a mixture of accurate and inaccurate information about food stamps. One person thought that the recipient pays for food stamps, “...*older people can, I think buy them, older people can buy food stamps...you buy them at a reduced amount.*” Most did not think they qualified, “...*the trouble with most of us is that we are just a little bit too rich and just too darn poor too...that we don't qualify for a lot of those things...*”

Nevertheless, the bulk of the discussion centered on why older people do not use food stamps. One participant noted, “*There is one gentleman here in town that qualified for a lot of stuff. He would not sign-up. It was pride—that was all it was. He desperately needed it...we have worked all our lives, all of us, never took anything from anybody and then all at once he needed help and it was pride. I don't know how else to say it.*” Another older person shared their experience with food stamps, “...*I had been sick for four years away from home, three of those farming, and there was no cash to buy groceries with. I did apply for two months and that was all—I decided I wouldn't do it again. Even then I would go to [name of town out of county] where I didn't know people to buy groceries rather than come down to [town I live near]. ...we just struggled from then on until we sold something. I suppose, but it was pride I think.*”

Social norms surrounding the use of food stamps were a deterrent for elderly persons in the focus groups, irregardless whether they lived in a rural or urban location. Pride and embarrassment in needing food stamps was shared by older urban focus group participants. One said, “*They are probably too embarrassed...they don't like all the red tape they got to go through to get them. They've got to go through the line, and if anyone sees them or maybe their friends, it is embarrassing.*” Another suggested that some older persons have been turned down and, “*their pride would come into it again and they don't check into that [food stamp program] because they feel they aren't eligible for it.*” One participant denied that senior citizens use food stamps, “*I have never seen a senior citizen have stamps.*” Another boasted, “*I wouldn't even ask for them because you have to have a very low income, like \$300-400 a month check and then they will give you stamps or if you have small children. But for the elderly, I mean, you know, we do without...I've never gone for stamps. I wouldn't think of it.*” One urban site has a commodity program that offers a lot of variety, “*You get noodles, and canned juices and fruits and vegetables, and meat in a can, and cheeses, and really a lot of variety.*”

Parents at both rural and urban study sites expressed the importance and need for WIC. One rural young Mom said, “...*If we didn’t have WIC we wouldn’t have it [milk].*” Another added they wouldn’t have milk either without WIC: “...*my husband works. [but] if we didn’t have WIC we would have crap really.*” An urban mother wished for more formula, “...*only gave me eight cans of formula and she goes through three extra than what they give me...I’ve been giving her watered down milk and she is all right with it...she is a little more hungry after a bottle...[but this works] until I can get back to the WIC office...but like the food stamps, they run out.*”

**Congregate Meals.** For some elderly at the rural study sites, the senior center provides the main meal. “...*A lot of people that is their main meal. We have a lot of 90 year old people that is their main meal.*” Focus group participants who met at the senior center were very proud of their meal program. One person said that some places give you the minimum half cup serving required, but “...*we do get more here.*” The senior center made meals easier for one wife whose husband had health problems: “*My husband is diabetic and so we can come here [senior center] ...and I can eat and he can also eat and I don’t have to worry about him.*” Noon meals at the senior center cost \$2.25 and are “...*big meals, too. A lot of times we cannot eat all that they serve us.*” The group noted that, even though regulations in the seven county regions regarding the senior meal program were the same, they really were not run the same. Some places were better than others. One participant recalled using a senior meal program and not getting all the food promised: “...*they said they forgot to get the corn and green beans and we didn’t get no vegetables.*”

Urban elderly also reported variability among senior feeding sites. The urban senior meals were reported to cost less than the rural senior meals. One participant said, “*At the senior center, they have a dollar a meal and you get soup, a meat and desert and they give them bread to take home.*” Another person took issue with this comment and said they were not allowed to take anything home: “*No, we don’t get bread, you are not allowed to take anything home...never over here at the [name of center]... we are not allowed to...used to go to the [another center] and [grocery store] would have the day-old goodies...*” Meals on Wheels were available to urban seniors on a sliding scale: “...*the people that can’t afford—don’t pay anything. If you could, you pay a certain amount.*” Weekend brown-bag meals are given on Friday by Meals on Wheels to keep people from starving: “...*on Friday they give them double meals so they can have Saturday and Sunday as well.*”

**SHARE Program.** SHARE (Self Help And Resource Exchange) is a community building food network that provides nutritious and affordable food packages to area families in exchange for volunteer service. For \$16 and two hours of volunteer service, participants may purchase a package of top quality food containing frozen meats, staple items and fresh fruits and vegetables worth \$30-35 in retail stores. SHARE is organized through hundreds of churches of all denominations and community organizations such as schools, senior centers and tenant associations.

The Iowa SHARE program was highly regarded and mentioned at all study sites. Focus group participants were knowledgeable about it and thought it worked pretty well. One rural participant noted, *“...for \$16...and you get quite a bit of meat and your vegetables and fruit, that is mainly what you get.”* Another person commented on the flexibility of the program: *“...some they just take the fruit and vegetables...can just take the meat if they want meat.”* Focus group participants seemed to consider food obtained from the SHARE program as food they bought, rather than a handout. *“...it’s a very good program. It takes food stamps except you have to pay one dollar...really good meat, I mean, a lot of different variety of meats that you get and vegetables.”* They appreciated the flexible payment options. One young mother said, *“[I would rather]... give them fourteen dollars in food stamps versus giving them fifteen dollars in cash, when I can use that for something else.”*

Information about the SHARE program is widely available and the timing is good according to focus group participants: *“...it’s always in the paper...sign-up time right at the first of the month...but it comes in toward the last of the month is when it is delivered.”* SHARE members are required to do voluntary public service, but one focus group member defended the time as not burdensome: *“...you volunteer, I mean like you help somebody and take meals to each other or you can just use that as time...you need two hours a month..”* She went on to say that when you volunteer you can bring your kids with you and it’s not really very hard.

Urban focus group participants’ understanding and experiences with the SHARE program were consistent with rural participants. One participant said, *“... [it] is around the city, it is around the state. There for sixteen dollars they can get a food package that has frozen meat in it and it has fresh fruit and fresh vegetables...they do encourage community service and it is open to anyone and they do accept food stamps.”* The urban group was very clear that this was not just a low-income program: *“...it is not limited to low income people...”*

### **Emergency Assistance Food Programs**

Rural and urban focus group participants talked about food pantries and emergency food assistance. Rural elderly shared volunteer experiences in local food pantries and being part of an organization that donated foods. One elderly participant reinforced the idea that food pantries are for emergency use, not routine weekly use: *“...anybody that walks in no questions asked, if they are hungry they are supposed to give them something to eat...but they can only come back so often.”* Rural focus group members talked about their churches and the Christmas baskets they prepared for the needy. One older focus group participant said the organization she was part of used to give money for Christmas food boxes. She then said that, *“...we found out that the food pantry needed more help in the summertime than they did throughout the winter because the children were getting a hot lunch at noon, but in the summer time they missed that so we [our organization] stopped giving to the Stocking and started giving to the food pantry in the summer time.”*

A young mom from a rural town also noted the limitations to using the food pantry: *“...you are only allowed to use that three times a year...and you have to qualify.”* Social acceptability of using the food pantry seemed to parallel food stamp usage. One rural participant said, *“...my brothers came down to stay with me and I didn’t have any food and I went there [food pantry] and they couldn’t even go in. They [my brothers] ducked down in the seat so that nobody would see them.”* Another young mother said, *“...food pantries and stuff, it makes you feel like you are begging...there are a lot of people who won’t go because it hurts their pride.”* The (private non-profit agency) in one rural town provides \$25 dollars to go to [local grocery store], *“...but they want the receipt and they want to know what you bought.”*

Urban focus group members found their food pantries helpful. One participant said, *“...when you got heart trouble you can’t go out and work like I want to...so I go over there to the food pantry”* for my food. Another talked about her husband being laid off and the family needing to use the pantry a few times this year. Churches are an important source of food. Focus group members said, *“...there is food in the food pantries in most all churches...”* The Salvation Army, St. Vincent DePaul and other ministries *“...give food out and clothes as well for nothing.”* One focus group participant thought that people might not use food pantries because they did not know about them and were embarrassed: *“...a lot of places that give it out, but not everyone is aware of it, or may be they aren’t eligible, or they’ve got pride and they don’t want to take it.”* Others in the group resonated to this pride. One agreed, *“That’s it, it’s pride.”* However, one member suggested that only older people had pride: *“the young ones, forget it, they loaded themselves up...but the elderly very, very seldom would come because like she said, pride, pride...”*

Information about the urban emergency food pantries was in the newspaper every week according to one participant. One focus group participant did not find many restrictions to using the food pantry: *“It is put on by the churches around there. I’ve used it two weeks in a row and nobody said anything to me so I am assuming it’s okay.”* Another focus group mother was concerned about the freshness and safety of foods at the food pantry: *“...some of the stuff that we did like it was like dated, I mean, like way expired. And I am a date freak so I won’t feed my kids anything [out of date].”*

### **Community Social Organization: Social Connections and Civic Structure**

The way different organizations in rural and urban communities work together to solve food problems affect the kinds and quality of local programs to meet food needs. In addition, the social connections of individuals with limited financial resources often are the difference between food security and insecurity. Rural and urban focus group members found that when local institutions cooperated and worked together food resources were more accessible. Furthermore, their personal relationships were critical in providing access to these resources. These social connections provided transportation to food sources and were also sources, themselves, of food.

Rural focus group participants identified a number of institutions that provided food support. These include senior meal sites, SHARE program, food pantries, voluntary organizations, churches, Salvation Army, and publicly subsidized transportation. Even though one participant who had big city experience noted, *“the needs are very different I think in rural areas than they are in like an urban area....the bigger cities is more extensive and they have way more resources...[than] in a small town like this where the low income is not even noticed.”* There is a sense that rural communities do try to work together. One young mother observed that, *“it’s the stores that donate and then other groups around town that buy food and donate...”* A rural elderly person recalled, *“...a couple of organizations that I’ve belonged to we gave to the Empty Stocking at Christmas.”* The SHARE program attempts to foster a sense of community service by requiring volunteer time: *“They just want you to get involved in the community...I think that everybody should do it, I do it [volunteer] when I get my food stamps.”* In addition, companies donate to help make the SHARE program work: *“companies like Anderson Erickson or what are some meat companies-Hormel-it’s stuff that they have had in their freezers...by the time they get to ship it to the stores it is outdated and the stores can’t take outdated foods, But it has never been thawed...”* However, focus group participants in none of the rural sites reported knowledge of much cooperation or high levels of cooperation among local organizations concerned with food security.

Personal connections among rural residents were an overriding theme of all rural focus group discussions. Focus group participants told many stories of helping others and others helping them. One reported that her friend brought supper: *“Well, she is my sidekick and my best friend..[she brought] two pieces of chicken and spinach and rhubarb cake...and I bring her some too [on other occasions].”* Another said, *“I live by myself and I like to cook and I give people a ton of my leftovers.”* Another said, *“...enjoy it once a while and I have a neighbor across the road in a wheelchair and I take food over to her once in a while.”* Garden produce is freely shared according to focus group participants: *“My husband has a few tomatoes and we share with one little lady in particular...for two tomatoes last year she gave \$5 from a guy on the corner...so every once in a while we bring her tomatoes...”* Another commented, *“I came home the other day and there was a box of strawberries that my neighbor brought to me...”* Produce is not the only food that is shared: *“...we kind of know our neighbors and you know, [my husband] sends produce over or if he goes fishing he will send fish over.”* Another participant talked about receiving fish: *“I had a friend who gave me about that much filleted fish caught out of a pond...”* Neighbor food exchanges seem to be common: *“I bake cinnamon rolls for my lovely neighbor that is retired...he puts out a huge garden and there is no fence between us so I just go over and help myself.”* One rural focus group member summed up the importance of social connections in obtaining food: *“...unless they got good neighbors or something...or someone to help maybe,”* they go without.

Younger rural focus group members depend on family and parents for food and transportation. One young Mom said, *“...my Dad gives food to people if they run out of food...he takes my sister to doctor appointments and [to get] food, you know she doesn’t drive ‘cause they don’t have licenses, and he pretty much just kind of runs*

*everybody wherever they need to go. He'll take his bread or whatever you want if he's got stuff in his freezer"* and give it to you. Another mother with a nine-year-old daughter and twin three-year-old boys said mom and grandma help as well as her "uncle takes her where they need to go."

Urban focus group participants reported cooperation and institutional resources in their communities. In addition to churches and food pantry services, local businesses and community centers work together to provide additional food resources and transportation. "[Store name] on Fleur were very good donating their day-old baked items... They would call table numbers so that not the same people got first choice every time...there are other stores there on the south side that donate it for [name of community center] and a few other places-but not all grocery stores will do this. This is another [store name] out there that would rather throw it away than donate it. The thing is...there has to be a volunteer that goes and picks it up like 5:30 or 6:00 in the morning..." Another participant said, "Downtown on East Court, they have a place all The Door. It is connected with The Door of Faith mission and in there on Wednesday you can get bread which is left over, day-old bread from [store] and vegetables, onions and green peppers and cucumbers..." Some community centers provide transportation for the disabled to get to grocery stores: "...she [my friend in a wheelchair] goes to the East Side Center and they take her up to [grocery store] on the first just for groceries. And so that is free..." However, more cooperation and coordination could decrease food insecurity. One participant noted a lack of volunteers to staff the SHARE program: "...a number of them do not have a way to come and get the food. We don't have any volunteers that can do deliveries."

Personal social connections are important in urban neighborhoods. Long time neighbors, particularly, seemed to help each other. One participant said, "...my next door neighbor, she has no car either but we help each other...we've been neighbors for 35 years and we do what we can for each other and it is really quite helpful to have someone like that." Neighborhood turnover threatens some focus group participants as they lose the social connections with people: "I've been in my house 55 years and it used to be a real nice one-family neighborhood, but now those houses have been divided into three or four and the people come and go so fast that I really don't know them and a lot of them you wouldn't want to know really." One older man said, "I don't know my neighbors all that well. I stay to myself...I don't know of anyone that I could go to." Neighborhoods with associations are considered an asset and resource for households: "...there is a great active one [neighborhood association] a few blocks away from us, but we are not in the boundaries of any of them so we are kind of left out. I have seen the different things that the associations have done or worked together on, and they do sound like a good thing."

Focus group participants who were connected to a church reported a resource that helps them solve food problems: "All I have to do is call my church and someone would come and help me. That church family is the most precious thing you ever met in your life." Another participant talked about her experience, "When my husband was out of work...this lady just dropped off several sacks of groceries on the front porch and I will

*never forget that. And others came to our rescue...I attribute that to the Lord because he will meet our needs. And I have had the opportunity to do that for someone else...".* The senior center also was reported as a source of social connections that offers help.

Friendships and family were mentioned by young and old focus group participants. One young woman said, *"...there is people out there that are worse off than I am though and I have friends and family—people that will help me out..."* Friends and family who help out often are not any better financially: *"...I always had my mom and dad to run to for the extras...now they have fallen on hard times too. They are losing their farm and we have our problems and you know, everything changes."* Another participant recalled her childhood: *"...my mom went to the food pantry a couple of time and she borrowed money off friends so that she could buy food stamps off of other friends...but there is only so much most of her folks could do for us because they were in the same situation..."*

### **Food Security**

National statistics indicate that Iowa has one of the lowest food insecurity rankings compared to many other states. However, the household that is facing an empty cupboard is seldom comforted by being told it is better off than most. We asked our focus group participants if they thought there was a food insecurity issue in their community. Many offered instances when they and others did not have enough food, yet most optimistically felt they had resources available to help them solve their food problems. These resources included access to grocery stores—even though they had to travel distances to purchase affordable quality foods, effective public food programs, and emergency food assistance. One rural participant responded, *"...well, they evidently do [have problems getting food] or they wouldn't go to the food pantry. I volunteered up there for awhile and there is definitely people that run short before they get their check."* Rural elderly on limited incomes reported coping skills that included gardening, food preservation, and social networks that helped them solve their food problems. One rural limited income elderly person remarked, *"I don't really know anyone that really, you know, that doesn't have enough food to eat. Maybe there are people, but I don't really know."* Compared to World War II and Depression experiences, rural and urban elderly thought their current situation was manageable. *"...with us old people on social security you can't go and buy something. You are going to have to wait and see if you have any money left over at the end of the month."* Medicine expenses were commonly mentioned as the greatest strain on their budget. One person said, *"You either buy your medicine or your buy your food, it's just that simple."* Another added, *"We just don't eat the way we want to. We eat the way we have to..."* These statements may suggest there are both consumption of nutritionally inadequate diets as well as a loss of quality of life.

Young families reported much more stress concerning food adequacy. One urban mother talked about the next door neighbor's daughter: *"[She] comes to our house to eat our food and it's like when you are on a budget and her mom is supposed to be taking care of her kids and its like we are feeding her child."* Another commented,

*“Towards the end of the month it’s...what are we going to concoct for dinner tonight...maybe if we just throw it all together it might taste all right.”* One young wife lamented, *“...When my husband is home it is harder because he eats more and he doesn’t realize that he has to cut down so that we have [food] through the week.”* While young families may be eating, they often are not eating healthy meals: *“I think I am doing great if I do eat because I just basically anymore lack time...this morning I had a couple of glasses of chocolate milk and a Pepsi. And I drink a lot of liquids so I never really feel hungry...[my 20 month daughter] has everything she needs...as long as she’s got everything she needs, everything is going okay with me...”*

#### **4.4.b. Secondary Data: State of Iowa and Counties**

##### **Introduction**

The objective of the secondary data collection was to identify indicators of state and county-level economic conditions and assistance program participation that could be used to provide contextual information for assessment of community food security. The data and the sources are provided in Table C1 (see Appendix C). To the extent possible, data with identifiable electronic sources have been used.

There were four categories of data collection: 1) demographic and local economic indicators, 2) food and social assistance programs, 3) food security status, and 4) community food resources. (Some of the information, especially at the county level, was not available publicly at this time). The counties included in Table C1 (Decatur, Monroe, Polk and Scott) reflect the counties that participated in the first year of the Food Security Report Card Project.

The values in the table are based on the most recently accessible data. Some of the variables had data for 2002, whereas for other variables, the most recently accessible data were from 1999. For example, the statewide unemployment rate (3.7%) was from August 2002, and the poverty statistics data at the county level were from 1999.

##### **State Demographic and Economic Indicators**

*Demographics.* The state of Iowa has almost 3 million persons (2,926,324) and over 1 million households (Census 2002). Children account for 25% and the elderly account for 15% of the State’s population. Nearly 65% of the State’s residents are persons older than 25. Of the 527,299 “K-12” students, 28% are in high school. Most Iowa residents are white, representing 94% of the State’s population. Three percent of Iowa’s population is Hispanic, and this population group has been growing rapidly in the last several years. A relatively large percentage (86%) of Iowa’s population older than 25 has a high school diploma.

*Economic indicators.* The State’s average income per capita was \$26,431 in 2000, slightly little higher than the national average per capita income for the same year

(\$22,199). The unemployment rate was 3.7% in August 2002, a level that is lower than the national level of 5.9% for the same period.

Data on poverty in the state are available to a limited extent for 2001, and a larger extent for 1999. Based on the available information from the Census Bureau, in 2001, 7.8% of persons in Iowa were poor (i.e., live in households with income at or below the poverty income level). The percentage of persons reported as poor was greater in 1999 (9.1%). In 1999, 6% of families in Iowa were poor. In 1999, the average household size in the poor households is 5.5 persons. Households in poverty have a disproportionately higher share with single female heads (23.4%), and especially of the single female-headed families with children less than 5 years old, a group that has almost half living in poverty.

### **Food and Social Assistance Program Participation (State)**

The numbers of participants and change in participation in social assistance programs provide information about the relative level of dependence on public assistance. Five major programs available to low income households are: 1) the Family Investment Program (FIP) (Iowa's Temporary Assistance to Needy Families (TANF) program), 2) Medicaid, 3) Food Stamp Program, 4) Free or Reduced-Price Meal programs, and WIC.

*Family Investment Program and Medicaid.* Iowa implemented the Family Investment Program (FIP), along with reforms to its social assistance programs, in 1993 under a waiver program. The number of persons participating in the FIP program in August 2002, was 52,045, a number that represents an increase from the average levels of 2000 (46,307). This increase reflects the deteriorating economic situation over the last couple of years. The average monthly per person FIP benefit amount in August 2002 was \$125.60, which was slightly lower than the average monthly per person amount in 2000 (\$127). The average payment per person participating in Medicaid was \$7335 in 2000.

*Food Stamp Program.* Over sixty thousand households received food stamps in July 2002, representing 139,137 persons. This was a large increase over the numbers in 2001 (approximately 52,000 households and 123,000 persons). The average household benefit per person per month was \$76.15 in July 2002, as compared to \$70.69 FY2001. On average, there were 2.3 persons per participating household.

*Free or Reduced-Price Meal Program Participation.* In 2001-2002, approximately 130,000 students in grades 1-12 in Iowa were eligible to receive free or reduced-price school meals. Those eligible represented over one-fourth (26.8%) of all children in these grades. During 2001-2002 preliminary data indicated that the average monthly participation was 378,991 in the School Lunch Program. During 2000-2001, the average monthly participation was 380,864 in the School Lunch Program and 65,743 in the School Breakfast Program.

*WIC.* The USDA provides both the food and administration costs of the Women, Infants and Children food program. Based on administrative data, nearly 61,000

households in Iowa participated in the program in 2001, with an average monthly benefit per qualifying person of \$29.64. The administrative cost was \$0.45 per dollar of food cost. In July 2002, 63,586 individuals participated in WIC.

### **County Demographic and Economic Indicators**

Data for the four surveyed counties are also available in Appendix C. Of the four counties, Decatur and Monroe are rural counties, whereas Polk and Scott are metropolitan counties.

*Demographics.* As is true for most rural counties, Decatur and Monroe had a relatively larger share of children (23% for Decatur and 25% for Monroe) and relatively smaller share of older persons (18% for Decatur and 20% for Monroe) than did the metropolitan counties. The rural counties (Decatur and Monroe) had few (less than 3 percent) non-white residents; Polk and Scott counties had nearly 12% non-white residents. The educational attainment of persons of age 25 years or over also differed between the rural and the metro counties. In the rural counties, 82% of the residents obtained at least a high school diploma, whereas, in the metropolitan counties, 88% in Polk and 86% in Scott obtained a high school diploma.

*Economic statistics.* The income per capita in the two rural counties (Decatur and Monroe) was lower than the state average, while the income per capita in the two metropolitan counties (Polk and Scott) was larger than the state average. Recently, both Decatur and Scott counties have experienced relatively lower rates of unemployment than have Monroe and Polk counties. Poverty rates tend to follow unemployment statistics. More than 10% of the people in Decatur and Scott counties were in poverty while the poverty rates in Monroe and Polk are lower than 10% (Census 2002).

### **Food and Social Assistance Program Participation (County)**

*Family Investment Program.* The number of participants in social assistance programs has declined in all four counties between the 2000 levels to August 2002. The average per person monthly FIP benefits in August 2002 was \$115, \$127, \$129, \$127 for Decatur, Monroe, Polk, and Scott, respectively. These levels (except the level for Decatur) were very similar to the state average level of \$126.

*Food Stamp Program.* In 2000, the average monthly benefits per person in Decatur (\$65.25) and Monroe (\$60.34) were less than the State level (\$68.32). Those in Polk (\$73.71) and Scott (\$74.36) counties were larger than the State average. In July 2002, the average monthly benefits per person in Iowa were \$76.15.

*Free or Reduced-Price Meal Program Participation.* In 2001-2002, Polk County had the largest number of students eligible to receive free or reduced price meals (20,669) compared to the other counties in this study (Scott- 9,134; Decatur-910, Monroe-414). However, the rural counties had substantially higher percentages of students eligible (Monroe-48.35%; Decatur-49.62%; Scott-31.80%; Polk-28.53%).

*WIC*. In July 2002, 7,869 individuals participated in WIC in Polk County, 4,176 in Scott County, 158 in Decatur County, and 138 in Monroe County.

#### **4.4.c. Food Pantry Survey Data**

A pilot survey of food pantry clients was tested as a means to obtain key indicator information that would be sensitive to changes in the status of local food security. We elected to access respondents through food pantries because the pantries provided a cost-effective means of contacting potentially food insecure individuals. The results from these surveys should be viewed with an understanding that they are not representative of any broader population within these communities, these counties, or the state. The survey instrument included six questions developed by the USDA to assess food security. Additional questions were asked to capture broadly the conditions under which these households attempt to meet their nutritional needs.

Respondents were asked questions related to their:

- Personal characteristics,
- Income sources,
- Program participation,
- Food security,
- Employment, and
- Community resources.

The Iowa Food Security Survey instrument is included in Appendix D.

Data related to the number of survey responses that were received are provided in Table 15. Surveys were distributed at food pantries in the four counties of interest during the month of June 2002. Pantry staff members were asked to distribute the surveys to all adults who visited the pantry during June 2002 (also in July 2002, if they were willing to do so). Staff members also were asked to ask individuals if they would like the survey to be read to them. Follow-up phone calls to the pantries indicated that some pantry staff actively distributed the surveys to individuals, while other pantry staff placed the surveys next to the pantry participation form and did not encourage individuals to complete the survey. Some pantry staff stated that they believed the information being asked on the survey was sensitive and they did not want to “push” individuals to complete the survey, but rather have individuals pick up and complete the survey if they wanted to do it on their own. Two pantries continued to distribute the survey during part of the month of July 2002.

Surveys were also distributed to the focus group participants in this study 15 minutes before each focus group began. For two of the focus groups (Leon and Des Moines), the surveys were sent to the participants in a self-addressed, stamped envelope immediately following the focus group sessions because the facilitator had

inadvertently forgotten to bring the surveys to the sessions. In total, 569 completed surveys were received: 529 were from food pantry clients, and 40 were from focus

Table 15. Survey Distribution Totals

County	Focus Groups	Pantries	Total
Decatur	22	23	45
Monroe	11	4	15
Polk	4	311	315
Scott	3	159	162
Unknown	0	32	32
Rural (Decatur & Monroe)	33	27	60
Urban (Polk & Scott)	7	470	477
<b>Total</b>	<b>40</b>	<b>529</b>	<b>569</b>

group participants. Among the survey respondents, 18 were identified as young parents (under age 21) with young children (under age 5). Another 50 respondents were age 65 or over. Table 16 provides a glimpse at the number of individual clients served by the pantries that participated in the project. It also reports the method used to distribute the survey instruments and the period of time in which the survey was available for completion in each pantry.

Table 16. Food Pantry Information<sup>a</sup>

Distribution Site	No. Families	No. Individuals	Distribution Month
<b>Davenport</b>			
St. Mark's Lutheran Church	124	318	June only
Friendly House	112	411	June only
John Lewis (Miriam House)	157	480	June only
Ridgeview Presbyterian Church		N/A	
Community of Joy Methodist Church	60		June only
Sacred Heart Church	85	263	June only
Bettendorf Community Center	50-60	N/A	June only
<b>Des Moines</b>			
Bidwell Riverside Center	440	1,000	June only
Salvation Army East (Citadel)	1 <sup>b</sup>		July
Salvation Army West (Temple)	190	NA	
St. Mary's Family Center	786	2331	June
Woodland Willkie Center	207	N/A	June only
YWCA Community Center	163	185	July
<b>Monroe County</b>			
Helping Hands	44	149	June only
<b>Decatur County</b>			
Lamoni Ministerial Alliance	1 family in June	8 in July	

<sup>a</sup> Distribution month primarily June, with the addition of 5 families in July.

<sup>b</sup> Salvation Army total given as 1.

The majority of survey responses came from pantry clients in the urban counties of Polk (the city of Des Moines) and Scott (the city of Davenport). The majority of responses from focus group participants came from the rural counties of Decatur and Monroe. The ratio between focus group (N=33) and pantry (N=27) responses in the rural counties was nearly even. Nearly all (470 out of 477) of the urban responses came from pantries. The county in which the pantry was located for 32 responses was not discernible. Throughout this report, these 32 unknown responses are included in analyses of composite totals of the respondents, but they are not included in the rural-urban sub sample analyses.

The respondents' characteristics are provided in Table 17. Respondent totals are given to illustrate the difference between urban and rural counties. (See Appendix E for a more detailed analysis.) Respondents had a mean age of about 40 years with rural respondents being on average 10 years older (49 versus 39 years) than urban respondents. The majority of respondents were women. Respondents reported they were in excellent or very good health only 35% of the time (23% for rural, 36% for urban). No rural respondents reported being in excellent health, while less than 10% said they were in poor health. Of these respondents, 60% had at least a high school diploma or GED (57% for rural, 61% for urban), a rate much lower than the state average. Respondent households had, on average, slightly less than 3 persons. This average may be slightly understated as respondents were asked how many people lived in the household by age groupings with response choices being: 0, 1, 2, 3, 4, or 5+. In our computations, a household indicating having "5+" members in a particular age group were coded as having only 5. Over one-fifth of the households had pre-school children (age 0-4), and less than 3% of the households had a member that was elderly (over age 65).

Employment was not common among respondents in this survey. Only 35% of the respondents were working at a paid job at the time of the survey (see Table 18). Working was more prevalent for urban respondents (36%) than for rural respondents (27%). Among those who worked, one-third received minimum wage (\$5.15 per hour) or less; one-fifth received more than \$8.00 per hour. Urban respondents were slightly more likely to work for \$5.15 per hour or less and to work for more than \$8.00 per hour compared to rural respondents. Three-fourths of all respondents who worked were employed more than 20 hours per week. This percentage was about the same for urban and rural workers. Rural workers, however, were much more likely to work fulltime, 40 or more hours per week (58% rural versus 32% urban). Among those respondents currently not working, rural respondents were more likely to have been out of work for more than 6 months (66% versus 54%). Finally, rural households were much more likely to have others in the household who work (40% versus 21%).

Table 17. Respondent Characteristics Based on Rural-Urban Classification

Characteristic	Total (N=569)	Rural (N=60)	Urban (N=477)	Focus Groups (N=40)
Respondent's Age (mean years)	39.68	48.98	38.94	56.62
Respondent's Gender				
Female (%)	72.5	88.1	70.8	86.8
Male (%)	27.5	11.9	29.2	13.2
Respondent reports health as:				
Excellent (%)	9.9	0.0	11.0	0.0
Very Good (%)	25.0	23.3	24.7	27.5
Good (%)	34.6	41.7	33.2	42.5
Fair (%)	22.0	30.0	21.8	30.0
Poor (%)	8.5	5.0	9.3	0.0
Respondent's Education:				
8 <sup>th</sup> grade or less(%)	12.7	6.7	14.1	0.0
9-11 grade (%)	27.3	36.7	25.2	52.5
GED (%)	2.5	1.7	2.8	0.0
HS diploma (%)	20.7	16.7	21.5	5.0
Technical Certificate (%)	16.4	10.0	17.9	0.0
Some College (%)	20.4	28.3	18.6	42.5
Household Composition				
Total number (mean)	2.86	2.52	2.9	2.03
% with other members age:				
0-4	22.9	25.4	23.1	28.2
5-17	33.5	23.7	34.0	12.8
18-65	50.4	40.7	51.7	35.9
Over 65	2.8	6.8	2.2	7.7

Note: Number of surveys returned is provided in the first row. Percentages in each cell are based on the number of valid responses received for that category, not the number of surveys that were returned. Thirty-two (32) surveys came from an unknown location. The responses to these surveys are included in the "total" column, but not in any other columns. The focus group surveys (N=40) are included within the total (N=569).

Table 18. Employment by Rural-Urban Classification

Employment Measure	Total (N=569)	Rural (N=60)	Urban (N=477)
Working (% yes)	35.3	27.1	35.8
Wage per hour:			
Under \$5.15 (%)	8.5	16.7	7.1
\$5.15 (%)	23.4	11.1	25.6
\$5.16 - \$6.00 (%)	14.9	11.1	16.7
\$6.01 - \$7.00 (%)	13.9	16.7	13.1
\$7.01 - \$8.00 (%)	18.4	27.8	15.5
\$8.01 - \$10.00 (%)	15.9	11.1	16.7
Over \$10.00 (%)	5.0	5.6	5.4
Hours work per week:			
1-10 (%)	9.1	5.9	9.6
11-20 (%)	17.7	17.6	17.4
21-39 (%)	41.4	17.6	41.3
40 or more (%)	31.8	58.8	31.7
If not working, last worked when:			
0-2 months ago (%)	19.5	8.6	19.9
3-6 months ago (%)	17.4	20.0	17.3
7-12 months ago (%)	13.7	8.6	14.1
More than 12 months ago (%)	40.5	57.1	39.7
Have not worked (%)	8.8	5.7	9.0
Others in household work (% yes)	23.1	40.0	20.5

Note: Number of surveys returned is provided in the first row. Percentages in each cell are based on the number of valid responses received for that category, not the number of surveys that were returned. Thirty-two (32) surveys came from an unknown location. The responses to these surveys are included in the “total” column, but not in any other columns.

Less than one-half of the respondent households (41%) received income from wages. See Table 19. Urban households had a higher percentage (41% versus 34%) with wages. Only wages and Food Stamps were received by more than 20% of the households. The prevalence of the receipt of other sources of income varied by location. A higher percentage of rural households compared to urban households had income from Social Security, Unemployment Insurance, WIC, pensions and housing assistance. Urban households were more likely to have income from Food Stamps, SSI for a child, SSDI, FIP, child support, and Veteran’s benefits. Household incomes were low, with 76% of all reporting households indicating that their annualized household income (monthly income multiplied by 12 months) was below \$18,000 (< \$1500 per

Table 19. Respondent Income Sources by Rural-Urban Classification

Income Source	Total (N=569)	Rural (N=60)	Urban (N=477)
Wages (%)	41.1	33.9	41.3
Food stamps (%)	34.3	25.4	36.1
SSI - Child (%)	5.7	5.1	5.9
Social security (%)	15.3	32.2	14.0
Unemployment insurance (%)	6.2	10.2	5.7
WIC (%)	12.8	13.6	12.9
SSI – Adult (%)	10.0	10.2	10.4
SSDI (%)	7.0	3.4	7.9
FIP (%)	15.1	11.9	15.6
Child support (%)	7.7	5.1	7.9
Veteran’s benefits (%)	2.5	1.7	2.7
Pension (%)	3.4	13.6	2.3
Housing assistance (%)	7.5	8.5	7.0
Other (%)	5.4	0.0	6.4
Household income / month			
< \$500 (%)	32.8	19.0	33.9
\$500 - \$1000 (%)	43.1	46.6	42.9
\$1001 - \$1500 (%)	16.0	20.7	15.6
\$1501 - \$2000 (%)	6.0	10.3	5.6
Over \$2000 (%)	2.1	3.4	2.0

Note: Number of surveys returned is provided in the first row. Percentages in each cell are based on the number of valid responses received for that category, not the number of surveys that were returned. Thirty-two (32) surveys came from an unknown location. The responses to these surveys are included in the “total” column, but not in any other columns.

month). Household incomes were higher in rural counties with 19% of the respondents reporting that their household had a monthly income below \$500 compared to 34% for urban respondents. Similarly, more rural respondents compared to urban respondents reported monthly household incomes over \$1500 (14% versus 8%).

Survey respondents were asked about current and past Food Stamp Program (FSP), and Family Investment Program (FIP) participation (see Table 20). Currently, a higher percentage of respondents received benefits from FSP than FIP (33% versus 16%). Among rural respondents, the comparison was 27% receiving FSP and 11% receiving FIP. Urban households had a greater receipt for both programs compared to rural households (35% FSP and 16% FIP). Among all respondents, 40% formerly received Food Stamp benefits, but not currently. The percentage was slightly higher for urban respondents (40% versus 36%). More urban respondents (28%) formerly received FIP benefits, but not currently, compared to rural (19%) respondents. One-fourth of the respondents reported never participating in the Food Stamp Program (27% total, 37% rural, 25% urban). More respondents reported never participating in FIP (56% total, 70% rural, 55% urban) compared to the Food Stamp program.

Table 20. FIP and Food Stamp Program Participation by Rural-Urban Classification

Program & Participation	Total (N=569)	Rural (N=60)	Urban (N=477)
Food stamp program:			
Participate now (%)	33.4	27.1	34.6
Used to participate (%)	39.7	35.6	40.2
Never participated (%)	26.9	37.3	25.2
FIP:			
Participate now (%)	16.1	11.1	16.4
Used to participate (%)	27.7	18.5	28.2
Never participated (%)	56.2	70.4	55.4

Note: Number of surveys returned is provided in the first row. Percentages in each cell are based on the number of valid responses received for that category, not the number of surveys that were returned. Thirty-two (32) surveys came from an unknown location. The responses to these surveys are included in the “total” column, but not in any other columns.

Indicators of food security are reported in Table 21. Nearly one-half (43%) of all respondents indicated that they had visited a food pantry 4 times or more in the last 12 months. Rural respondents were less likely to visit a food pantry. Only 6% of the rural respondents visited a pantry 4 times or more in the last year, while half (49%) of the urban respondents visited a pantry 4 or more times. A third (31%) of the urban respondents had been to a pantry at least 7 times during this period. Among young parents (under age 21) with young children (under age 5), 19% visited a pantry more than 3 times in the last year. Among the elderly (age 65 or over), it was double that rate (38%).

Analyses of the responses to each of the 6 USDA Food Security questions are also provided in Table 21. A significant number of respondents to the survey indicated that having enough to eat was a problem in their household. Overall, nearly half (41%) of the respondents reported that the quantity of food in their home in the last 12 months was not enough; 32% reported that their food often did not last; 23% reported they often could not afford a balanced meal; and 62% cut or skipped meals. Urban respondents reported greater difficulty obtaining enough to eat compared to rural respondents. Young parents with young children had more difficulties compared to elderly respondents.

Responses to these questions could be used to create a measure of a household's level of food security. By using this procedure, we found that less than one-in-four (23%) of respondent households were food secure (42% rural, 21% urban, 28% young parents, 58% elderly). The remaining households were food insecure. Among all households, 27% were food insecure without hunger (23% rural, 28% urban, 39% young parents, 18% elderly), while one-half (50%) were food insecure with hunger (35% rural, 51% urban, 33% young parents, 24% elderly). Overall, rural households appeared to be more food secure than urban households among those that participated in this study. Among study participants, elderly respondents were more food secure compared to young parents with children.

The survey also asked respondents about community resources (see Table 22). The mean number of minutes to the nearest grocery store among all respondents was 12. Interestingly, rural respondents reported having a store closer to them (mean of 9 minutes away). A store was, on average, 13 minutes away for urban respondents. While the nearest store may be closer for rural respondents, half (49%) of the rural respondents indicated that there were not enough grocery stores in their community. Only 20% of the urban respondents said that this was true. Store safety was not an issue, with respondents with no rural respondents and only 3% of the urban respondents indicating that the store was located where people did not feel safe. Regarding affordability, one-fourth of all respondents (27% total, 24% rural, 29% urban) reported that the supermarkets and grocery stores in their community did not or seldom provided an affordable variety of health food choices. More rural respondents reported that affordable transportation to these stores was not available (29% rural, 18% urban). Elder meals were available about equally across rural and urban counties, with about 84% of the respondents indicating meals were available at some time during the week. Finally, in general, most respondents did not know about community gardens in their area.

Table 21. Food Security by Rural-Urban Classification

Food Security Measure	Total N=569	Rural N=60	Urban N=477	Young Parents with Young Children; N=18	Elderly Respondents N=50
Pantry visits in last 12 months:					
1 (%)	28.9	67.3	24.0	43.8	45.9
2-3 (%)	27.8	26.5	27.3	37.5	16.2
4-6 (%)	16.7	6.1	18.1	12.5	21.6
7-9 (%)	11.3	0.0	13.2	0.0	8.1
10 or more (%)	15.4	0.0	17.4	6.3	8.1
Quantity of food in last 12 months:					
Enough (%)	18.8	35.6	16.1	23.5	47.8
Enough, but not the kinds wanted (%)	40.6	42.4	40.7	64.7	34.8
Sometimes not enough (%)	33.0	20.3	33.6	11.8	15.2
Often not enough (%)	8.4	1.7	9.6	0.0	2.2
Food did not last in last 12 months:					
Often (%)	31.6	17.2	32.6	29.4	13.3
Sometimes (%)	56.8	46.6	58.8	64.7	35.6
Never (%)	11.6	36.2	8.7	5.9	15.1
Could not afford balanced meals in last 12 months:					
Often (%)	23.4	8.8	24.5	25.0	17.8
Sometimes (%)	58.3	56.1	58.8	56.3	37.8
Never (%)	18.3	35.1	16.7	18.8	44.4
Cut or skip meals:					
Yes (%)	61.7	42.4	63.4	62.5	28.9
How often cut or skip meals in last 12 months:					
Almost every month (%)	53.8	59.3	52.9	30.0	56.3
Some months (%)	31.8	22.2	32.1	40.0	31.3
1-2 months (%)	14.5	18.5	14.9	30.0	12.5
Eat less than should:					
Yes (%)	76.7	64.1	77.2	61.5	44.4
Did not eat:					
Yes (%)	61.2	50.0	61.5	38.5	34.8
Food security index values from 0-6:					
0 (%)	13.2	30.0	11.1	5.6	46.0
1 (%)	9.7	11.7	10.1	22.2	12.0
2 (%)	14.9	13.3	15.3	11.1	14.0
3 (%)	4.7	5.0	4.8	16.7	2.0
4 (%)	7.7	5.0	8.2	11.1	2.0
5 (%)	13.2	11.7	13.2	11.1	10.0
6 (%)	36.6	23.3	37.3	22.2	14.0
Food Security:					
Food secure (%)	22.9	41.7	21.2	27.8	58.0
Food insecure without hunger (%)	27.3	23.3	28.3	38.9	18.0
Food insecure with hunger (%)	49.8	35.0	50.5	33.3	24.0

Note: Number of surveys returned is provided in the first row. Percentages in each cell are based on the number of valid responses received for that category, not the number of surveys that were returned. Thirty-two (32) surveys came from an unknown location. The responses to these surveys are included in the “total” column, but not in any other columns. Young parents ≤ 21 years of age; young children ≤ 5 years of age; elderly ≥ 65 years of age.

Table 22. Community Resources by Rural-Urban Classification

Resource Measure	Total (N=569)	Rural (N=60)	Urban (N=477)
Nearest grocery (mean minutes)	12.47	9.26	12.88
Nearest grocery (minimum – maximum number of minutes)	0-150	0-30	1-60
Number of stores:			
Not enough (%)	22.1	49.2	19.6
Enough (%)	50.6	44.1	50.7
More than enough (%)	19.1	5.1	20.8
Don't know (%)	8.2	1.7	8.9
Store safety:			
Not safe (%)	2.7	0.0	3.2
Usually safe (%)	50.7	45.6	52.4
Always safe (%)	36.6	52.6	33.4
Don't know (%)	10.1	1.8	11.1
Store affordability:			
Not affordable (%)	9.9	13.8	9.8
Seldom affordable (%)	17.1	10.3	19.3
Sometimes affordable (%)	51.1	58.6	49.2
Always affordable (%)	13.3	13.8	13.2
Don't know (%)	8.0	3.4	8.6
Community transportation affordability:			
No, it is not affordable (%)	19.2	29.3	18.1
Yes, it is affordable (%)	56.6	48.3	57.7
Don't know (%)	24.2	22.4	24.2
Frequency of elder meals:			
0 days / week (%)	16.0	15.4	15.9
1-4 days / week (%)	18.2	20.5	18.1
Monday – Friday only (%)	44.6	51.3	42.2
7 days / week (%)	21.2	12.8	23.7
Community gardens:			
No gardens (%)	12.2	29.3	10.2
Few gardens (%)	14.5	10.3	15.7
Many gardens (%)	3.3	3.4	3.5
Don't know (%)	70.0	56.9	70.6

Note: Number of surveys returned is provided in the first row. Percentages in each cell are based on the number of valid responses received for that category, not the number of surveys that were returned. Thirty-two (32) surveys came from an unknown location. The responses to these surveys are included in the “total” column, but not in any other columns.

## 4.5 Discussion and Conclusions

This purpose of this project was to develop Iowa indicators of household and community food security. The strategy was to: 1) identify, compile, and analyze secondary data, and 2) identify, 3-4 counties to assess household and community food security. To achieve the objectives of the project, the Iowa State University project team first reviewed food security studies from other states. Next, secondary data sources were identified. A priority of this project was to develop a methodology that could be replicated in local communities. Thus, only those data sources that could be accessed by individuals in local communities (e.g., via the internet using a computer at the local public library; calling a state official) were included in the analyses for this report. Individuals and groups in part of four counties (Decatur, Monroe, Polk, Scott) agreed to participate in aspects of the study. Focus group sessions were held in Albia (Monroe County), Davenport (Scott), Des Moines (Polk), Lamoni (Decatur) and Leon (Decatur). Surveys were distributed in pantries in all four counties. A total of 569 completed surveys were received from focus group participants and food pantry clients.

The project achieved the goal of creating materials and a methodology that local community groups could replicate to assess food security among area residents. In addition, an initial, preliminary assessment of food security in Iowa was obtained. Clearly, the findings from the focus groups and the Iowa Food Security Survey should be interpreted with care. Participation in this study was completely voluntary and was an option for Iowans in only a small number of selected areas. It is quite possible that our findings would be different if we had worked with other communities, identified participants through other means, identified more participants, and/or conducted the focus groups and survey at a different time of the year.

Given the caveats noted previously, and the general limitations of the study, we found that among the participants in this study food insecurity was prevalent. Parents with young children and urban respondents were more food insecure compared to elderly and rural respondents. Nearly 72% of parents with young children were food insecure as compared to elderly respondents (42%), and 79% of the urban respondents were food insecure compared to about 58% of the survey participants who resided in rural counties. A key aspect of future work will be whether or not this extent of food insecurity is observed elsewhere in Iowa, or among other populations. We do know that these findings are consistent with other Iowa food insecurity studies. For example, the Iowa Department of Public Health (2001) found the food insecurity rate among WIC households in 2000 who responded to a survey was higher than the 50.5% rate found in 1997. In a study of 1997 Food Stamp program participants, Jensen, Garasky, Wessman, & Nusser (2002) found that 55% of the responding households were food insecure in 1999. Again, while the findings from this study should be viewed within the context of the limitations discussed previously, nevertheless, the results seem to be consistent with other studies.

The findings from this study will be valuable to a variety of groups. We recommend disseminating it to professionals, volunteers, legislators, the Iowa Food Policy Council,

and local groups who work with low-income individuals. Local nutrition education coalitions and Cooperative Extension EFNEP and FNP/FSNEP staff may find the information useful as they attempt to target specific populations for nutrition education interventions and social marketing messages. Cooperative Extension staff and other organizations interested in public policy education may also find this information useful as they continue to help increase public awareness of the issues families in poverty face, and help communities think through program and legislative policies that may or may not best support families. Given the attention that was paid to individuals who received food from food pantries, we expect that food pantry coordinators and volunteers will find the results of this study helpful as they try to better serve families. Finally, we recommend that all or parts of this report be incorporated into training materials as the Department of Public Health, other state agencies, and other organizations seek to find better ways to educate individuals who work directly with families in need.

This study has several implications for outreach and nutrition education. Specifically for the elderly population, it is clear that there is a great deal of pride among elderly individuals which prevents them from seeking public assistance (i.e., food stamps). However, many elderly individuals did not seem to be knowledgeable of the eligibility requirements for many types of assistance programs, assumed they would not qualify for public assistance if they applied, and perceived the benefits derived would not outweigh the paperwork and red tape involved in the application process. Specific, targeted outreach efforts need to be designed to increase elderly individuals' awareness of program eligibility requirements. In addition, targeted messages need to be developed to build upon the pride that elderly have, to help them develop positive attitudes that participating in food assistance programs is an acceptable means to remain healthy and independent. Showcasing elderly individuals who are admired and are participating in food assistance programs as a means to stay healthy and independent may be one strategy. In the study, it was apparent that congregate meals and Meals on Wheels remained a valuable food resource for elderly individuals. They perceived these meals as an acceptable means to nutritious, affordable food. Thus, there may be opportunities to build awareness and acceptance of additional food assistance programs through these meal programs, especially the SHARE program and Farmers Market Senior Food Voucher Program.

It is apparent that reciprocity is important to elderly individuals. They do not want to accept "help" without being able to offer help in return, or pay a portion for services they receive. A critical issue facing elderly individuals is securing enough nutritious food, given the rising costs of prescription drugs. Several elderly individuals stated that the cost of prescription drugs reduced the amount of money they had available for food. In both the urban and rural counties where focus groups with elderly individuals were held, many elderly individuals reported consuming less meat and milk because they did not have enough money. However, primarily in the focus group held in Des Moines (Polk County) and in the focus group held in Lamoni (Decatur County) (in which many participants lived in a nursing home), elderly individuals reported not consuming as many fresh fruits and vegetables as they would like and believe they need for their

health because they did not have enough money. In Leon (Decatur County), many of the elderly focus group participants lived in their own homes and reported that they grew their own fruit (e.g., strawberries) and vegetables (e.g., tomatoes, green peppers), or received fresh produce from family members or friends. Given the elderly individuals' strong interest in their health and remaining independent, sharing information pertaining to the nutritional importance of milk, meat, and fresh fruits and vegetables to their health, as well as practical, low cost ways they can incorporate these items in their diets, could be beneficial. Many elderly individuals expressed great interest in the Farmers Market Senior Food Voucher Program and would like to know how to access the program as well as where it is available. Nutrition education information and recipes would be welcomed by elderly individuals at food pantries, congregate meals, as well as at farmers markets where they can use the senior food vouchers.

Given the vast knowledge and skills many elderly individuals have pertaining to resource management and food preparation, and the general lack of these skills in the younger population, it appears there may be opportunity to partner elderly individuals with young parents to share information and help the young parents develop these skills. Elderly individuals want to remain active and contribute to their communities. Young parents often reported not having learned basic food preparation and resource management skills while they were growing up. Partnering the two populations together in such an effort could result in benefits both to the elderly (e.g., maintain their sense of pride and ability to contribute to society; build opportunities for social interaction; and provide another potential resource of someone to help them as needed, such as for transportation) and young parents (e.g., increase knowledge and develop skills related to preparing food with limited means, grow food by learning gardening techniques; observe role models who have a strong sense of self-efficacy and personal control, and who have experienced difficult times throughout their lives yet have found positive ways to cope).

The findings of this study suggest that there remains a great need to assist parents with young children in understanding basic nutritional needs of children and adults, the nutritional and financial value of breastfeeding, the importance of parents and other adults as role models (e.g., foods they choose to purchase and consume; how foods are prepared), healthy parent/child feeding relationships (e.g., division of parent and child responsibilities in the feeding relationship), and practical strategies for managing limited resources (e.g., developing and using a spending plan; identifying food resources to complement WIC and food stamps; planning meals ahead; using available food resources to prepare nutritious and tasty meals). Continued support of social marketing messages targeted to this group, nutrition education on a one-to-one basis, as well as a group basis is needed. Nutrition educators who work with families in one-to-one settings might consider incorporating the stages of change theory as they design nutrition education interventions. Nearly all of the young parents who were interviewed in this study faced a complexity of issues that will likely influence their ability to make changes related to food and nutrition issues. Stages of change theory allows targeted interventions to be designed associated with the stage of change one is experiencing.

Group settings could provide parents opportunities to network and share ideas and experiences with one another, as well as begin to develop a support system among one another. Parents could define the food and nutrition issues they want to focus on, and professionals and volunteers could serve in an advisory capacity. Through providing means for parents to develop long-term relationships with each other and professionals in a supportive setting, parents may begin to identify practical solutions to their own food and nutrition challenges. An example that could be expanded upon is the Beyond Welfare program in Story County that provides a supportive setting for individuals receiving welfare to identify issues they are facing, and accessing peers, professionals, and volunteers in the community to help them identify practical solutions to their issues. Individuals sense a “circle of support” as they strive to move from reliance on public assistance toward self-sufficiency. Nutrition educators could identify and work with existing groups of low-income parents in communities (e.g., parent support programs, Parents as Teachers group meetings, Storks Nest, parent leadership groups through community action agencies).

Due to time and resource limitations, the ISU project team was not able to include all of the topics listed in the Request for Proposals (RFP), including researching a representative sample of Iowa communities. The project team purposively selected four Iowa counties to research, and only distributed surveys at pantries in the large metropolitan areas in the urban counties identified (i.e., Davenport- Scott County; Des Moines- Polk County). For some of the topics identified in the RFP, the ISU project team was able to gather information at the state level but not the county level (e.g., county funding for food security).

Finally, the ISU project team looks forward to the possibility of continuing this project with the Iowa Department of Public Health for a second year. As noted earlier, an advisory board was established for the first year of this project. Should the project continue, additional individuals will be asked to serve in an advisory capacity. They include: Sue Roberts, a member of the Iowa Food Policy Council and a graduate student specializing in food and agricultural law; Angie Tagtow, a Regional Nutrition Consultant for the Iowa Department of Public Health; Mary Jane Oakland, Associate Professor, Food Science and Human Nutrition, Iowa State University; an ISU Extension Nutrition and Health Field Specialist (to be identified) who works closely with local communities regarding food security issues; and a member of a local nutrition education coalition whose community will be targeted in year 2 of the food security report card project. Advisors will be asked to share their perspectives of how the report card format (if needed) could be modified to strengthen its ease of use and to best meet the needs of local communities.

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## Appendix A. Initial Focus Group Questions

*Icebreaker: Share with us your favorite place to eat out. Why is it your favorite place? What do you like to eat there?*

- 1. Tell us about how you get food for your family.**  
Where do you go?  
Where do you get different food items such as meat, bread, snacks?  
Tell us about food you get from a garden, your neighbors, family, or farmer's markets.  
How far do you have to travel?  
How do you get there?  
Tell us about a time when it was hard to get somewhere to get food for your family.  
How frequently do you shop for food?
- 2. What experiences have you or others you know had with not having enough food?**  
What was it like?  
What did you, your family, or that person do?  
Does this happen frequently for people that you know?  
Is food affordable in your community?
- 3. What is the role of food stamps, reduced priced school meals, and WIC in helping people?**  
How well do these programs work?  
What do you like about these programs?  
What makes it difficult to use these programs?  
How should communities help families get food they can afford?
- 4. What other programs in your community help people get food they need to stay healthy?**  
What kind of soup kitchens, food pantries, and other meal site programs are in your neighborhood or community?  
Tell me about how well these programs have worked for you, or someone you know.  
Share with me what else is needed to help people get the food they need.
- 5. If you had regular, reliable transportation, whether it be a bus, car, or a friend with a car, how would the way you feed yourself and your family be different?**  
How would the stores you visit be different from the ones you normally go to now?
- 6. What does feeding your family well mean to you?**  
How do you make sure your family has the food they need to stay healthy?  
Tell us about how you are able to fix food to stay healthy.  
Share with us how you are able to have balanced meals.  
What do you mean by the term balanced meals?

7. **What makes you feel capable of feeding your family well?**  
What are the strengths that you have that help you feed your family?  
Where did you learn these skills?
8. **If you had \$50 more a month, how would the food you purchase for your family be different?**
9. **Of the issues we have discussed today, which is most important to you?**  
What makes this important to you?

## Appendix B. Coding Scheme for Food Security Focus Groups

( \* Mark refers to a created new code )

*A: Free Node : Fall through the cracks  
Housing Program  
SSI / Title 19  
SS program (General)  
If you have 50\$ More*

*B: Tree Node*

1 Retail Food Purchase

1-1 Geography

1-1.1 Transportation

1-1.1.1 Drive

*\*1-1.1.1.2 Driven by Other(s)*

1-1.1.2 Bus

1-1.1.3 Taxi

1-1.1.4 Walk

1-1.1.5 Public Van

1-1.1.6 Delivery

1-1.2 Distance Time

1-1.2.1 Miles

1-1.2.2 Minutes

1-1.3 Location

• *1 1 3 1 Within town*

• *1 1 3 2 Near town [Will be changed into out-of-town]*

*\*1-1.4 Reasons of Shopping in near town(s) [out-of-town]*

*\* 1 1 4 1 Price*

*\* 1 1 4 2 Variety*

*\* 1 1 4 3 Others: visiting family...*

1-2 Store Type

1-2.1 Convenience

1-2.1.1 Food stamps

1-2.1.2 Quality

1-2.1.3 Price

1-2.1.4 Percent of Healthy food

1-2.1.5 Variety

*1-2.1.6 \* Motivation-Convenience store*

*1-2.1.6.1 \* Location*

*1-2.1.6.2 \* Items*

*1-2.1.7 \* Freq of using*

- 1-2.2 Eating Out Places
  - 1-2.2.1 Food Stamps Acceptance
  - 1-2.2.2 Price
  - 1-2.2.3 Percent of healthy food
  - 1-2.2.4 Variety
  - 1-2.2.5 Quality
  - \*1-2.2.6 Frequency of eating out**
- 1-2.3 Grocery ~ Supermarket [locally owned]
  - 1-2.3.1 Quality *\*/Service*
    - 1-2.3.1.1      \*Service Quality**
    - 1-2.3.1.2      \*Sanitization/Clean**
    - 1-2.3.1.3      \*Freshness (same as 9-1)**
  - 1-2.3.2 Food Stamps Acceptance
  - 1-2.3.3 Price
  - 1-2.3.4 Percent Healthy Food
  - 1-2.3.5 Variety
  - 1-2.3.6 Organic
  - 1-2.3.7 \* Frequency**
- 1-2.4 Food Cooperatives
  - 1-2.4.1 Food Stamp acceptance
  - 1-2.4.2 Price
  - 1-2.4.3 Percent of Healthy Food
  - 1-2.4.4 Variety
  - 1-2.4.5 Quality
- 1-2.5 Farmers Markets & Roadside Stands
  - 1-2.5.1 FS Acceptance **\*(Plus Senior Coupons)**
  - 1-2.5.2 Price
  - 1-2.5.3 Percent of Healthy Food
  - 1-2.5.4 Variety
  - 1-2.5.5 Organic
  - 1-2.5.6 Quality
  - 1-2.5.7 \* Facilitate: Space/Stands/Regulation**
- 1-2.6 Specialty Food Store
  - 1-2.6.1 FS ACC
  - 1-2.6.2 Price
  - 1-2.6.3 % of Healthy
  - 1-2.6.4 Variety
  - 1-2.6.5 Organic
  - (1-2.6.7.)Quality**
    - \* 1 2 6 7 1 Service**
    - \* 1 2 6 7 2 Clean**
    - \* 1 2 6 7 3 Freshness**
- 1-2.7 School Lunches
  - 1-2.7.1 Quality
  - 1-2.7.2 Price
  - 1-2.7.3 Healthy Food available

- 1-2.7.4 Variety
- 1-2.7.5 Federal Assistance
- 1-2.8 CSA
  - 1-2.8.1 **(1 2 8 5)** Organic

2 Food Production

- 2-1 Local Food consumption
  - 2-1.1 Institutional
  - 2-1.2 Individual
    - 2-1.2.1 Low income
- 2-2 Food Production Firms
  - 2-2.1 Food Processing
  - 2-2.2 Gardens
  - 2-2.3 Farms
  - 2-2.4 CSAs

3 Public Nutrition Assistance

3-1 WIC

- **3 1 1 Perceptions**
- **3 1 2 Types of food**

3-2 School Based

- 3-2.1 Lunch
- 3-2.2 After School
- 3-2.3 Summer
- (3-2-9) Breakfast
- \* **3 2 5 Perceptions**

3-3 Congregate Meals-Elderly

- 3-3.1 Attendance
- 3-3.2 Location
- 3-3.3 Participation
- 3-3.4 Frequency
- 3-3.5 Accessibility
- \* **3 3 6 Quality**
- \* **3 3 7 Perceptions/Satisfaction**

3-4 Other hot meal programs

- \* **3 4 1 Quality- Food**
- \* **3 4 2 Quality – Service**

3-5 Commodity programs

- \* **3 5 1 Quality- Food**
- \* **3 5 2 Quality – Service**

3-6 Meal Delivery Programs

- \* **3 6 1 Quality**

3-7 EFNEP (?)

- 3-8 Food Stamps
  - \* **3 8 1 Perceptions**
    - \* **3 8 1 1 Misused**
  - \* **3 8 2 Practices /Eligibility**
  - \* **3 8 3 Information**
- 3-9 Farmer Market Vouchers
- 3-10 Share Program
  - \* **3 10 1 Affordability-share**
  - \* **3 10 2 Convenience-share**
  - \* **3 10 3 Food items -share**
  
- 4 Emergency Food
  - 4-1 Delivered Meals
  - 4-2 Food Stamps
  - 4-3 Food Bank
    - \* **4 3 1 Perceptions**
    - \* **4 3 2 food items**
    - \* **4 3 3 Difficulties**
  
  - 4-4 Church Assistance
  - (4-8) On site Meals [**Changed node name into Soup Kitchen**]
    - \* **4 8 1 Quality- Food**
    - \* **4 8 2 Perceptions in Service**
    - \* **4 8 3 - Freq**
  
- 5 Health Status
  - 5-1 General Health discussion
  - 5-2 Low income
  - 5-3 Self Assessment
  
- 6 Civic Structure of Community
  - 6-1 Missions not directly food focused
  - 6-2 Key People ~ accomplish change~
  - 6-3 Communication
  - 6-4 Legal Climate
    - \* **6-4.1 Policies**
    - \* **6-4.2 (6-4-5) Rules & Regulation**
  - 6-5 Cultural Norms
  - 6-6 Structural Pluralism
  - 6-7 Health Care Facilities
  - 6-8 Food Related
  - \* **6 9 Infrastructure of Comm Eco-Competition**
  - \* **6 10 Employment Opportunities**

- 7 Households Food Security (Individual HHs)
  - 7-1 Internal
    - 7-1.1 Cultural ~~ Upbringing
      - \* **7 1 1 1 Food culture in Iowa**
    - 7-1.2 Preferences
      - **7 1 2 1 Food Addicts**
      - **7 1 2 2 Eating Habits**
    - 7-1.3 Religion
    - 7-1.4 Knowledge~~Skill
    - 7-1.5 Self-efficacy ~ self-control
      - **7 1 5 1 Pride**
      - **7 1 5 2 Control**
    - 7-1.6 Beliefs (*Values*)
    - 7-1.7 Skills-cooking, other
    - 7-1.8 **Strategies**
      - \* **7 1 8 1 Advanced Purchase**
      - \* **7 1 8 2 Storage**
      - \* **7 1 8 3 Information**
    - 7-1.9 Diet Changes-Internal**
  - (7-8) External
    - (7-8-1) Friends
      - (7-8-1-1-) Educational
      - (7 8 2 1 Advice
      - 7-1.9.1 Interventions
      - 7-1.9.2 Social Pressure
        - \* **7 8 1 5 Instrumental Support from friends**
          - \* **7 8 1 5 1 Vegetables**
          - \* **7 8 1 5 2 Meat/Fish**
    - (7-8-2) Family
      - 7-1.9.3 (7-8-2-1-) Educational
      - 7-1.9.4 Advice
      - 7-1.9.5 Interventions
      - 7-1.9.6 Social Pressure
        - \* **7 8 2 5 Instrumental Support from family**
    - 7-1.10 (7-8-3) Health Care Professionals
      - 7-1.10.1 Educational
      - 7-1.10.2 Advice
      - 7-1.10.3 Interventions
      - 7-1.10.4 (7 8 3 6)Social Pressure
    - 7-1.11 (7 8 4) Media
      - 7-1.11.1 (7 8 4 1) Educational
      - 7-1.11.2 Advice
      - 7-1.11.3 Interventions
      - 7-1.11.4 Social Pressure

## 8 Food Security

### 8-1 Elderly Population

8-1.1 Transportation Issues

8-1.2 Money Issues

- **8 1 2 1 Allocation Priority : Medical cost vs. Food**

**\* 8 1 3 Elderly Food Choice – Preferences/Needs**

**\* 8 1 4 Elderly Social Needs**

8-2 Reduce Food Consumption

8-3 Downturning Economy

8-4 Barriers

8-4.1 Time

8-4.2 Economic Status/Low Income

8-4.3 Financial Pressure

8-4.4 Education

8-4.5 Transportation-barrier

**\* 8 4 6 Equipment-barrier**

**\* 8 4 7 Health Issues**

8 4 8 Downturning Economy

**\* 8 4 9 Affordability – Barrier**

8-5 Children

- **8 5 1 Amount of food**

- **8 5 2 Balanced Nutrition for child**

**8 6 Give Away : Reciprocity**

## 9 [Needs in] Variety, Quality of Food (Fruit + Vegetables)

**9-1 Quality Needs-Freshness**

**9-2 Special Ordering**

**9-3 Needs in Healthy [End]**

## Appendix C. Secondary Data: State of Iowa and Counties

Demographic Profile	State	County			
		Decatur	Monroe	Polk	Scott
Total Population (persons, 2000)a	2,926,324	8,689	8,016	374,601	158,668
Age: 0-17 (persons, 2000)a	733,638	2,002	2,032	96,300	42,015
Age: 65 and over (persons, 2000)a	436,213	1,535	1,566	41,752	18,677
Non-White (% of total, 2000)a	6.07%	3.43%	1.60%	11.66%	11.46%
Hispanic (% of total, 2000)a	2.82%	1.70%	0.50%	4.40%	4.06%
Public and non-public school enrollment (persons, 2000-2001 school year)b	530,347	1,422	1,279	66,320	29,861
9-12 public enrollment (persons, 2000-2001 school year)b	155,073	-	-	-	-
Total households (households, 2000)a	1,149,276	3,337	3,228	149,112	62,334
Family households (households, 2000)a	769,684	2,150	2,210	96,601	41,895
Single person households (households, 2000)a	313,083	1,187	1,018	52,511	20,439
Education: Persons 25 yrs or over with less than high school diploma (% , 2000)a	13.90%	18.29%	17.78%	11.67%	13.68%
<b>Economic Profile</b>					
Personal income per capita (\$, 2000)d	\$26,431	\$17,305	\$24,503	\$32,388	\$27,586
Unemployment (% , seasonally adjusted, August 2002)e	3.70%	-	-	-	-
Unemployment (% , not seasonally adjusted, August 2002)e	-	4.30%	3.60%	3.20%	3.70%
<b>Poverty Profile</b>					
Persons in households with income less than poverty (% of all persons, 2001)f	7.80%	-	-	-	-
Persons in households with income less than poverty (% of all persons, 1999)a	9.10%	15.50%	9.00%	7.90%	10.50%
Persons in households with income less than poverty (persons, 1999)a	258,008	1,226	706	29,051	16,329
Persons in households with income less than 125% of poverty (persons, 1999)a	359,720	-	-	-	-
Persons in households with income less than 150% of poverty (persons, 1999)a	480,410	-	-	-	-
Persons in households with income less than poverty (% of all families, 1999)a	6.00%	10.90%	5.60%	5.30%	7.70%
Families with single female householder with income less than poverty (% of all such families, 1999)a	23.40%	30.40%	19.00%	18.60%	29.80%
Families with children less than age 5 with income less than poverty (% of all such families, 1999)a	12.70%	13.60%	10.00%	11.30%	18.60%
Families with single female householder and children less than age 5 with income less than poverty (% of all such families, 1999)a	46.10%	53.10%	34.80%	40.60%	55.80%
<b>Food and Social Assistance Program Participation</b>					
<b>Family Investment Program</b>					
Total cases (cases, August 2002)g	19,828	143	60	2,852	1,758
Recipients (persons, August 2002)g	52,045	375	157	7,334	4,694
Average monthly benefit per person (\$, August 2002)g	\$125.60	\$114.50	\$127.06	\$128.64	\$126.55
<b>Food Stamp Program</b>					
Average monthly recipients (households, 2000)h	52,600	310	221	6,912	4,345
Recipients (households, July 2002)r	60,411	490	233	7,996	4,813
Average monthly recipients (persons, 2000)h	122,924	619	482	16,264	10,828
Recipients (persons, July 2002)r	139,137	1,077	528	17,899	11,534
Average monthly benefit per person (\$, 2000)h	\$68.32	\$65.25	\$60.34	\$73.71	\$74.36
Average monthly benefit per person (\$, July 2002)r	\$76.15	-	-	-	-
Overall average per household (\$, July 2002)r	\$175.38	-	-	-	-

<b>Free or Reduced Price Meals</b>					
Eligible for free or reduced-price meals: grades PK-12 (persons, 2001-2002 school year)i	129,554	910	414	20,669	9,134
Eligible for free or reduced-price meals: grades PK-12 (% of all grade PK-12 students, 2001-2002 school year)i	26.66%	49.52%	48.35%	28.53%	31.80%
Number of free and reduced-price meals served (2001-2002)t	20,019,706	60,293	51,442	1,270,449	956,502
Percentage of meals served that are free and reduced price (2001-2002)t	31.58%	49.94%	38.34%	28.06%	39.37%
Eligible for free or reduced-price meals: grades PK-12 (persons, 2000-2001 school year)j	131,577	873	417	17,200	7,581
Eligible for free or reduced-price meals: grades PK-12 (% of all grade PK-12 students, 2000-2001 school year)j	26.7%	59.9%	32.8%	27.7%	27.7%
Number of free and reduced-price meals served (2000-2001)t	19,448,928	85,226	97,615	637,985	852,665
Percentage of meals served that are free and reduced priced (2000-2001)t	30.7%	50.02%	72.61%	18.7%	37.47%
Eligible for free or reduced-price meals: grades 1-6 (persons, 2001-2002 school year)k	66,983	-	-	-	-
Eligible for free or reduced-price meals: grades 1-6 (% of all grade 1-6 students, 2001-2002 school year)k	31.5%	-	-	-	-
School Lunch Program (average monthly participation), (2001-2002)u	378,991	-	-	-	-
School Lunch Program (average monthly participation), (2000-2001)u	380,864	-	-	-	-
School Breakfast Program (average monthly participation), (2000-2001)v	65,743	-	-	-	-
<b>Summer Food Service Program</b>					
Average daily attendance (persons, FY 2001)l	5,111	-	-	-	-
Meals served (June 2002)l	157,985	1,664	-	38,685	30,157
<b>Child and Adult Care Food Program</b>					
Average daily attendance (persons, FY 2001)m	28,674	-	-	-	-
Average daily attendance (persons, September 2002)s	Requested	1,014	903	41,229	9,547
Total meals served (FY 2001)m	17,579,572	-	-	-	-
Total centers and homes served (FY 2002)m	29,710	-	-	-	-
Cash payments (\$, FY 2001)m	\$12,648,817	-	-	-	-
Cash payments (\$, FY 2002)s	\$14,545,880	\$3,932	\$8,202	\$724,251	\$86,798
<b>WIC</b>					
Average monthly participation (persons, FY 2001)m	60,664	-	-	-	-
Participation (persons, July 2002)n	63,586	158	138	7,869	4,176
Average food cost per participant (\$, FY 2001)m	\$29.64	-	-	-	-
Average food cost per participant before rebates (\$, FY 2002)n	\$47.92	-	-	-	-
<b>Commodity Supplemental Food Program</b>					
Total participation (persons, FY 2001)m	4,396	-	-	-	-
<b>Nutrition Services Incentive Program (formerly Nutrition Program for the Elderly)</b>					
Participation (meals served, FY 2001)m	3,845,653	-	-	-	-
<b>Food Security Status</b>					
Food insecure without hunger households (% of all households, 1998 – 2000 average)	7.67%				
Food insecure with hunger households (% of all households, 1998 – 2000 average)	2.00%				
<b>Farmers' Markets</b>					
Farmers' markets (number, 2002)p	126	-	-	-	-
Farmers' markets accepting WIC vouchers (number, 2002)q	85 ( in 60 counties)				
WIC Farmers' Market vouchers (individuals receiving, FY 2002)q	50,018	-	-	7,242	3,720

**Sources:**

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- t Iowa Department of Education, Bureau of Food and Nutrition.
- u USDA Food and Nutrition Services: [www.fns.usda.gov/pd/slfypart.htm](http://www.fns.usda.gov/pd/slfypart.htm)
- v USDA Food and Nutrition Services: [www.fns.usda.gov/pd/sbcurren.htm](http://www.fns.usda.gov/pd/sbcurren.htm)

## **Appendix D. Food Security Survey Instrument**

## IOWA FOOD SECURITY SURVEY

Please answer the following questions. Participation is completely voluntary and also completely confidential. Do not write your name or address. Please do not fill out this survey more than once.

Are you:             Male                       Female                      Age: \_\_\_\_\_

### How many people live in your household?

Yourself:                       1

Other adults ages 18-65:    0       1       2       3       4       5+

Other adults ages 65+:     0       1       2       3       4       5+

Children ages 0-4:         0       1       2       3       4       5+

Children ages 5-17:       0       1       2       3       4       5+

### Which income sources does your household currently receive? (Check all that apply)

Wages from a job    Food stamps    SSI for a child       Social Security

Unemployment insurance    WIC benefits    SSI for an adult       SSDI benefits

FIP check    Child support    Veterans Benefits    Pension

Housing assistance (section 8, public housing)    Other: \_\_\_\_\_

### How much income do you expect your household to get this month from all sources, including wages, public assistance, food stamps, and all other cash income?

Less than \$500    \$500-\$1000    \$1001-\$1500

\$1500-\$2000    More than \$2000

### Would you say that your health in general is:

Excellent    Very Good    Good    Fair       Poor

### How much education have you completed? 8th grade or less

High school diploma    Technical certificate    9th-11th grade    GED

Some college

### Have you ever received Food Stamps?

Yes, I do now                       I used to                       No, never

### If I used to, last year on Food Stamps:

2001       2000                       1999       before 1999

### Have you ever received cash benefits from the FIP program?

Yes, I do now                       I used to                       No, never

If I used to, last year on FIP:       2001       2000       1999       before 1999

How many minutes from the nearest grocery store are you? \_\_\_\_\_

How many times have you used food pantries in the *past 12 months* (including today)?  1  
 2-3  4-6  7-9  10+

Do you work at a paid job?  Yes  No

*If yes, how much do you earn per hour including tips?*

- Less than \$5.15  \$5.15  \$5.16-\$6  \$6.01-\$7  
 \$7.01-\$8  \$8.01-\$10  more than \$10

*If yes, how many hours do you work each week?*

- 1-10  11-20  21-39  40  
or more

*If no, how long has it been since your last job?*

- 0-2 months  3-6 months  7-12 months  
 More than 12 months  Haven't worked

Does anyone else in your household work at a paid job?  Yes  No

Which statements best describe the food eaten in your household in the *past 12 months*?

- Enough of the kinds of food (I/we) want to eat  
 Enough, but not always the kinds of food (I/we) want  
 Sometimes not enough to eat  
 Often not enough to eat

Were the following two statements often, sometimes, or never true for (you/your household) in the last 12 months?

"The food that (I/we) bought just didn't last, and (I/we) didn't have money to get more."  
Was that  often,  sometimes,  never true?

"(I/we) couldn't afford to eat balanced meals."  
Was that  often,  sometimes,  never true?

In the last 12 months, did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food?  Yes  
 No

*If yes, how often did this happen?*  Almost every month,  
 Some months but not every month,  In only 1 or 2 months

*If yes, in the last 12 months, did you ever eat less than you felt you should because there wasn't enough money to buy food?*  Yes  No

*If yes, in the last 12 months, were you ever hungry but didn't eat because you couldn't afford enough food?*  Yes  No

**There are enough supermarkets and grocery stores in my community.**

- not enough     enough     more than enough     don't know

**Supermarkets and grocery stores in my community are located where people feel safe.**

- not safe     usually safe     always safe     don't know

**Supermarkets and grocery stores in my community offer an affordable variety of healthy food choices (e.g., fresh produce, skim milk, low fat meats, whole grains, etc.).**

- not affordable     seldom affordable     sometimes affordable  
 always affordable     Don't know

**There is affordable transportation to get to supermarkets and grocery stores in my community.**

- no     yes     don't know

**There are group meals sites and home delivered meals available for elderly persons in my community.**

- not available any days  
 available 1 to 4 days a week  
 available Monday through Friday only  
 available 7 days a week

**Community and school gardens are available for people to get food in my community.**

- no gardens     a few gardens     many gardens     don't know

*Thank you for completing this form!*

## Appendix E. Survey Analyses by County

Table 1E. Respondent Characteristics by County

Characteristic	Total N=569	Decatur N=45	Monroe N=15	Polk N=315	Scott N=162
Respondent's age (mean years)	39.68	57.18	24.93	39.11	38.63
Respondent's gender					
Female (%)	72.5	84.1	100	69.4	73.5
Male (%)	27.5	15.9	0	30.6	26.5
Respondent reports health as:					
Excellent (%)	9.9	0.0	0.0	11.9	9.3
Very Good (%)	25.0	20.0	33.3	26.4	21.6
Good (%)	34.6	40.0	46.7	33.1	33.3
Fair (%)	22.0	33.3	2.0	19.9	25.3
Poor (%)	8.5	6.7	0.0	8.7	10.5
Respondent education:					
8 <sup>th</sup> grade or less (%)	12.7	8.9	0.0	17.7	6.9
9-11 grade (%)	27.3	35.6	40.0	24.8	25.8
GED (%)	2.5	2.2	0.0	1.6	5.0
HS diploma (%)	20.7	15.6	20.0	19.4	25.8
Technical certificate (%)	16.4	11.4	6.7	20.3	13.2
Some College (%)	20.4	26.7	33.3	16.1	23.3
Household composition:					
Total number (mean)	2.86	2.36	3.0	2.7	3.29
% with other members age:					
0-4	22.9	13.6	60.0	19.5	29.6
5-17	33.5	20.5	33.3	20.2	43.2
18-65	50.4	36.4	53.3	47.4	59.9
Over 65	2.8	6.8	6.7	2.1	2.5

Note: Number of surveys returned is provided in the first row. Percentages in each cell are based on the number of valid responses received for that category, not the number of surveys that were returned. Thirty-two (32) surveys came from an unknown location. The responses to these surveys are included in the "total" column, but not in any other columns.

Table 2E. Respondent Income Sources by County

Income Source	Total N=569	Decatur N=45	Monroe N=15	Polk N=315	Scott N=162
Wages (%)	41.1	25.0	60.0	45.2	33.6
Food Stamps (%)	34.3	18.2	46.7	31.6	45.0
SSI- Child (%)	5.7	4.5	6.7	6.5	4.7
Social Security (%)	15.3	40.9	6.7	15.3	11.4
Unemployment Insurance (%)	6.2	11.4	6.7	4.8	7.4
WIC (%)	12.8	4.5	40.0	10.9	16.8
SSI – Adult (%)	10.0	9.1	13.3	8.2	14.8
SSDI (%)	7.0	2.3	6.7	5.4	12.8
FIP (%)	15.1	4.5	33.3	13.3	20.1
Child Support (%)	7.7	4.5	6.7	8.2	7.4
Veteran’s Benefits (%)	2.5	2.3	0.0	3.1	2.0
Pension (%)	3.4	18.2	0.0	3.1	0.7
Housing Assistance (%)	7.5	4.5	20.0	6.1	8.7
Other (%)	5.4	0.0	0.0	8.8	1.4
Household Income / month					
< \$500 (%)	32.8	20.9	13.3	36.9	28.4
\$500 - \$1000 (%)	43.1	51.2	33.3	39.9	48.4
\$1001 - \$1500 (%)	16.0	14.0	40.0	14.3	18.1
\$1501 - \$2000 (%)	6.0	9.3	13.3	7.8	1.3
Over \$2000 (%)	2.1	4.7	0.0	1.0	3.9

Note: Number of surveys returned is provided in the first row. Percentages in each cell are based on the number of valid responses received for that category, not the number of surveys that were returned. Thirty-two (32) surveys came from an unknown location. The responses to these surveys are included in the “total” column, but not in any other columns.

Table 3E. FIP and Food Stamp Program Participation by County

Program & Participation	Total N=569	Decatur N=45	Monroe N=15	Polk N=315	Scott N=162
Food Stamp Program					
Participate now (%)	33.4	18.2	53.3	29.3	44.7
Used to Participate (%)	39.7	40.9	20.0	39.4	41.6
Never Participated (%)	26.9	40.9	26.7	31.3	13.7
FIP					
Participate now (%)	16.1	2.6	33.3	14.0	20.9
Used to Participate (%)	27.7	15.4	26.7	29.4	25.9
Never Participated (%)	56.2	82.1	40.0	56.5	53.2

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Table 4E. Food Security by County

Food Security Measure	Total N=569	Decatur N=45	Monroe N=15	Polk N=315	Scott N=162
Pantry visits in last 12 months:					
1 (%)	28.9	76.3	36.4	19.6	32.3
2-3 (%)	27.8	18.4	54.5	17.9	44.9
4-6 (%)	16.7	5.3	9.1	19.9	14.6
7-9 (%)	11.3	0.0	0.0	17.9	4.4
10 or more (%)	15.4	0.0	0.0	24.7	3.8
Quantity of food in last 12 months:					
Enough (%)	18.0	36.4	33.3	16.7	15.0
Enough, but not the kinds wanted (%)	40.6	43.2	40.0	39.0	43.8
Sometimes not enough (%)	33.0	18.2	26.7	34.1	32.5
Often not enough (%)	8.4	2.3	0	10.1	8.8
Food did not last in last 12 months:					
Often (%)	31.6	14.0	26.7	36.1	26.4
Sometimes (%)	56.8	46.5	46.7	55.0	65.4
Never (%)	11.6	39.5	26.7	8.9	8.2
Could not afford balanced meals in last 12 months:					
Often (%)	23.4	7.0	14.3	27.8	18.7
Sometimes (%)	58.3	55.8	57.1	58.1	60.0
Never (%)	18.3	37.2	28.6	14.1	21.3
Cut or skip meals:					
Yes (%)	61.7	40.9	46.7	62.4	65.2
How often cut or skip meals in last 12 months:					
Almost every month (%)	53.8	57.9	62.5	60.5	38.9
Some months (%)	31.8	21.1	25.0	26.5	42.6
1-2 months (%)	14.5	21.1	12.5	13.0	18.5
Eat less than should:					
Yes (%)	76.1	60.0	77.8	78.8	74.2
Did not eat:					
Yes (%)	61.2	38.5	87.5	63.6	57.5
Food security index values from 0-6:					
0 (%)	13.2	33.3	20.0	13.7	6.2
1 (%)	9.7	8.9	20.0	8.3	13.6
2 (%)	14.9	13.3	13.3	15.2	15.4
3 (%)	4.7	6.7	0.0	4.8	4.9
4 (%)	7.7	6.7	0.0	7.9	8.6
5 (%)	13.2	15.6	0.0	12.7	14.2
6 (%)	36.6	15.6	46.7	37.5	37.0
Food security:					
Food secure (%)	22.9	42.2	40.0	22.0	19.8
Food insecure without hunger (%)	27.3	26.7	13.3	27.9	28.9
Food insecure with hunger (%)	49.8	31.2	46.7	50.2	51.2

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Table 5E. Employment by County

Employment Measure	Total N=569	Decatur N=45	Monroe N=15	Polk N=315	Scott N=162
Working (% yes)	35.3	22.7	40.0	39.2	29.7
Wage per hour:					
Under \$5.15 (%)	8.5	18.2	14.3	7.5	6.3
\$5.15 (%)	23.4	18.2	0.0	32.5	8.3
\$5.16 - \$6.00 (%)	14.9	9.1	14.3	18.3	12.5
\$6.01 - \$7.00 (%)	13.9	18.2	14.3	9.2	22.9
\$7.01 - \$8.00 (%)	18.4	27.3	28.6	13.3	20.8
\$8.01 - \$10.00 (%)	15.9	0.0	28.6	15.0	20.8
Over \$10.00 (%)	5.0	9.1	0.0	4.2	8.3
Hours work per week:					
1-10 (%)	9.1	10.0	0.0	9.2	10.4
11-20 (%)	17.7	20.0	14.3	18.5	14.6
21-39 (%)	41.4	20.0	14.3	41.2	41.7
40 or more (%)	31.8	50.0	71.4	31.1	33.3
If not working, last worked when:					
0-2 months ago (%)	19.5	7.7	11.1	18.4	21.8
3-6 months ago (%)	17.4	19.2	22.2	17.1	17.6
7-12 months ago (%)	13.7	0.0	33.3	18.4	8.4
More than 12 months ago (%)	40.5	65.4	33.3	37.3	42.9
Have not worked (%)	8.8	7.7	0.0	8.9	9.2
Others in household work (% yes)	23.1	30.6	64.3	18.7	23.6

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Table 6E. Community Resources by County

Resource Measure	Total N=569	Decatur N=45	Monroe N=15	Polk N=315	Scott N=162
Nearest grocery (mean minutes)	12.47	9.95	7.14	13.59	11.79
Nearest grocery (minimum – maximum number of minutes)	0-150	0-30	1-20	1-60	1-60
Number of stores:					
Not enough (%)	22.1	56.8	26.7	22.1	15.1
Enough (%)	50.6	38.6	60.0	48.1	55.3
More than enough (%)	19.1	4.5	6.7	20.1	22.0
Don't know (%)	8.2	0.0	6.7	9.7	7.5
Store safety:					
Not safe (%)	2.7	0.0	0.0	3.8	1.9
Usually safe (%)	50.7	53.5	21.4	54.9	47.8
Always safe (%)	36.6	44.2	78.6	30.1	39.5
Don't know (%)	10.1	2.3	0.0	11.2	10.8
Store affordability:					
Not affordable (%)	9.9	11.6	20.0	12.3	5.1
Seldom affordable (%)	17.7	11.6	6.7	23.5	11.5
Sometimes affordable (%)	51.1	53.5	73.3	47.0	53.2
Always affordable (%)	13.3	18.6	0.0	11.2	16.7
Don't know (%)	8.0	4.7	0.0	6.0	13.5
Community transportation affordability:					
No, it is not affordable (%)	19.2	27.9	33.3	17.6	19.0
Yes, it is affordable (%)	56.6	55.8	26.7	50.5	70.9
Don't know (%)	24.2	16.3	40.0	31.8	10.1
Frequency of elder meals:					
0 days / week (%)	16.0	19.4	0.0	14.4	19.7
1-4 days / week (%)	18.2	19.4	25.0	18.0	18.4
Monday – Friday only (%)	44.6	54.8	37.5	48.5	26.3
7 days / week (%)	21.2	6.5	37.5	19.1	35.5
Community gardens:					
No gardens (%)	12.2	30.2	26.7	9.8	10.9
Few gardens (%)	14.5	11.6	6.7	15.2	16.7
Many gardens (%)	3.3	2.3	6.7	3.6	3.2
Don't know (%)	70.0	55.8	60.0	71.4	69.2

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