Deserts in the Delta: Food Insecurity in Clay and Poinsett Counties

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ABOUT THE EAST ARKANSAS PLANNING & DEVELOPMENT DISTRICT

The East Arkansas Planning & Development District (EAPDD) is a nonprofit agency founded in 1967 that serves 12 counties in northeast Arkansas. The EAPDD, headquartered in Jonesboro, AR, works within this region to promote community planning, community development, business development, and waste management. The EAPDD received a $2.6 million grant from the US Department of Housing and Urban Development to initiate the reNEW East Arkansas program. This program aids local community planning efforts that integrate housing, land use, economic development, transportation, and infrastructure investments as well as targets food security and healthy food choices. More information about the EAPDD can be found at http://www.eapdd.com. More information about the reNEW East Arkansas program can be found at http://www.reneweastarkansas.com.

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Abstract

This paper explores the level of community food insecurity in Clay and Poinsett Counties in the Mississippi Delta region of Northeast Arkansas. A team of graduate students from the University of Arkansas Clinton School of Public Service partnered with the East Arkansas Planning & Development District to research this topic. The study investigated the important contributing factors and significant barriers to healthy food choices. The USDA Community Food Security Assessment Toolkit provided a template for the parameters and research methods of this study. Methods used include secondary data research and analysis, focus groups, household food security surveys, and food store surveys. Results include data for the following assessment categories: community socioeconomic and demographic characteristics; community food resources; household food security; food resource accessibility; food availability and affordability; and community food production resources. Preliminary findings indicate that Clay and Poinsett Counties have multiple high risk factors for high levels of community food insecurity.

Keywords: food insecurity, food availability, food affordability, Arkansas, Mississippi Delta, USDA Community Food Assessment Toolkit

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Arkansas is an agricultural state. Agriculture contributes "$16 billion to the state's economy annually" (Arkansas Farm Bureau, 2013). However, Arkansas is also one of the most food insecure states in America (United States Department of Agriculture, Economic Research Service [USDA ERS], 2013a). According to the USDA ERS, the state of Arkansas has seen an increase of 6.4% in household food insecurity from 1999 to 2011 (USDA ERS, 2013a). This translates to a household food insecurity rate of 19.2% from 2009 to 2011 (USDA ERS, 2013a). In comparison, during the most recent two-year reporting period, the national average of household food insecurity was 14.7% (Coleman-Jensen et al., 2013, p. 19). Food insecurity is a pressing issue for the state of Arkansas.

The East Arkansas Planning & Development District (EAPDD) is among the stakeholders invested in this issue. The EAPDD is a nonprofit agency founded in 1967 that serves 12 counties in northeast Arkansas. This 12 county area can be defined as part of the Mississippi River Delta region, a tri-state area including Arkansas, Louisiana, and Mississippi (Connell et al., 2007, p. 78). The EAPDD works within this region to promote community planning, community development, business development, and waste management (EAPDD, 2013). As part of this work, in 2011 the EAPDD received a $2.6 million grant from the United States Department of Housing and Urban Development to initiate the reNEW East Arkansas plan (reNEW East Arkansas, 2013a). This initiative strives to aid "local community planning efforts that integrate housing, land use, economic development, transportation, and infrastructure investments" (reNEW East Arkansas, 2013b). The initiative also targets food security and healthy food choices.

We contributed to reNEW East Arkansas's research and planning efforts to address the problem of food insecurity. In consultation with the EAPDD, we investigated the following questions: What is the extent of food insecurity in Clay and Poinsett counties? Who does it affect? What are the important factors and significant barriers to healthy food choices? From this larger perspective, we aggregated the pertinent inputs and outputs of food systems in these two counties in northeast Arkansas into preliminary county profiles for the EAPDD. We also delivered recommendations on how to expand these profiles and how to replicate our work in other counties in the region.

Project Description

Out of the 12 county area under the EAPDD's purview, we chose Clay and Poinsett Counties as our target locations for a preliminary community food security assessment. The EAPDD Project Manager, B. Thompson, identified these two counties as similar demographically and in their high level of need (personal communication, October 29, 2013). We used a modified assessment modeled after the USDA's Community Food Security Assessment Toolkit (Cohen et al., 2002).

In order to complete the assessments, we compiled secondary data, conducted focus groups, and conducted food store surveys. Through our adaptation of the USDA Community Food Security Assessment Toolkit, the EAPDD will be able to conduct these assessments in the other counties they serve. These assessments will aid the EAPDD and its partners in identifying the major factors that contribute to the region's food insecurity. The EAPDD can then design appropriate interventions and programs that mitigate these factors and will help lead to future food security in the region. Our research can therefore serve as a starting point for combating food insecurity in the northeast region of Arkansas. Furthermore, by presenting a food security

assessment to the EAPDD, we are contributing to one of the reNEW East Arkansas goals of promoting healthy food choices. Overall, we hope the findings presented below will help bolster the understanding of food insecurity in northeast Arkansas while providing the EAPDD with the means to further this research.

Literature Review

The federal government is the forerunner in collecting data on food security in the United States. The USDA ERS defines food security as "access by all people at all times to enough food for an active, healthy life" (USDA ERS, 2013b). In contrast, food insecurity is an economic and social condition in which people are not able to meet these requirements. Nord, Andrews and Carlson (2002) of the USDA ERS define food insecure households as those that "at sometime during the previous year… were uncertain of having or were unable to acquire [nutritionally] adequate food sufficient to meet basic needs…due to inadequate household resources for food" (p. 29). This definition of food insecurity is a household-level measurement, in contrast to the individual-level, physiological condition of hunger.

Government data on food insecurity for households is only available at the national and statewide level. While the annually administered Current Population Study has included a food insecurity supplement since 1995, the population survey is not large enough to categorize household-level food insecurity indicators for local communities, cities, or counties (USDA ERS, 2013c). This is due to confidentiality constraints and the large quantity of information needed for generalizable data (A. Coleman-Jensen, personal communication, October 28, 2013). Furthermore, the USDA does not measure community food insecurity. Indeed, there is no universal consensus on the definition for this indicator. The USDA only defines community food security as a *preventative* tool with which to combat household food insecurity (USDA ERS,

2013d). In this sense, then, community food security is a set of community-based strategies to improve access, supply, and responses to food resources and needs (USDA ERS, 2013d). Thus, many community food insecurity studies rely on alternative measurements to accurately understand household-level food insecurity on a community-wide level. These studies attempt to assess the feasibility and success of various community-level programs yet they have no baseline consensus for their indicators (Hodgson, 2012; Ver Ploeg, 2009).

A study on food supply in the Lower Mississippi Delta uses the concept of food supply adequacy to investigate how communities in this region are affected by food insecurity. Connell et al. (2007) define food supply adequacy as "nutritional adequacy based on availability of foods to meet nutritional standards, food safety and quality, and cultural acceptability" (p. 77). This includes both physical access – such as where one finds grocery stores and other food resources – and economic access – such as the affordability of available food items (Connell et al., 2007, p. 77). This study investigated food stores in the Lower Mississippi Delta region, a tri-state area that includes Arkansas, Louisiana, and Mississippi. Using the USDA's Thrifty Food Plan (TFP), a meal plan designed to be characteristic of a low-cost, healthy, and nutritious diet, Connell et al. (2007) investigated 225 food stores in 18 counties (p. 77). Their findings highlight the multiple difficulties of food access in rural areas. They found an average of 4.4 supermarkets per county (with a range of 1-11 per county) in the Lower Mississippi Delta (Connell et al., 2007, p. 80). Low-income residents in particular struggle with this limited access, with "70% of low-income households located 30 miles from a supermarket or large food retailer" (Connell et. al, 2007, p. 81). While most supermarkets fulfilled the TFP's required foods list, smaller markets and convenience stores had substantially lower rankings (Connell et al, 2007, p. 81). Even when these smaller markets have the basic items outlined by the TFP, the quality of these items may

undermine their worth. A separate study of small groceries in Austin, Illinois, found that these markets sometimes carry similar prices and quantity of produce as supermarkets, but of such low quality as to be almost negligible (Menefee, 2011, p. 7). Given the sparse distributions of supermarkets in Lower Mississippi Delta counties, this indicates a significant barrier to adequate food supply. Although food supply and food availability constituted an important part of our assessment, we attempted to undertake a more expansive examination of community food insecurity.

While food supply is one important factor, a broader understanding of a community's food environment is also necessary. The USDA defines a food environment as including the overall "store/restaurant proximity, food prices, food and nutrition assistance programs, and community characteristics" of an area (USDA ERS, 2013c). Food environments take into consideration such factors as poverty, unemployment, low levels of education, and rates of chronic disease related to nutrition (e.g. diabetes) (Stuff et al., 2004, p. 174). Poverty is significantly linked as a predictor of food insecurity (Townsend et al., 2001), and "more than 42% of households with income below the Federal poverty line… were food insecure" in 2005 (Mammen et al., 2009, p. 5). Food environments are useful in comprehensively evaluating the possible indicators of community food insecurity.

Households in the rural Lower Mississippi Delta region score highly on many of the indicators of a difficult food environment (Stuff et al., 2004, p. 174). This aligns with the findings of Monroe et al. (2002) in which households in the rural south were far more likely to undergo high levels of food insecurity when compared with national statistics (Monroe et al., 2002). Indeed, Kaufman (1999) found that in 36 Delta counties across three states, poor rural households had reduced access to food, used smaller grocery stores and had less variety of foods

available at a higher price than urban households (Stuff et al., 2004, p. 173). Fulfilling other basic material needs, such as housing and fuel, is also a struggle for rural households (Stuff et al., 2004, p. 173). These household-level indicators contribute to understanding food environments in the Mississippi River Delta region, which helps fill in the lack of county and region-wide data on food insecurity. A thorough demographic and socioeconomic assessment of Clay and Poinsett Counties provided information to supplement our other indicators of food insecurity.

A study conducted by the Lower Mississippi Delta Nutrition Intervention Research Consortium (Delta NRI) studied household food insecurity in the Lower Mississippi Delta compared with the available national data. The Delta NRI surveyed 1,662 households using the 18 questions of the U.S. Food Security Survey Module, cross-referenced with income levels and participation in food assistance programs (Stuff et al., 2004, p. 175). These results were analyzed and compared with U.S. Census Bureau food insecurity data from 2000. The Delta NRI study found that 21.1% of households in the Lower Mississippi Delta region were food insecure, as compared to national food insecurity rates of 10.5% of U.S. households (Stuff et al., 2004, p. 177). Within the Arkansas counties of the Lower Mississippi Delta region, the study found a high prevalence of food insecurity - 20.5% in 2004 (Stuff et al., 2004, p. 178). While this study provides an important perspective on food insecurity in the Lower Mississippi Delta region, it is too outdated to provide an accurate understanding of regional and county-level food insecurity today. By 2012, the estimated percentage of Americans experiencing food insecurity had risen to 14.5%; it is reasonable to assume a similar trend for the Mississippi River Delta region (USDA ERS, 2013e).

Such high levels of food insecurity spur a significant response from local, state and federal governments, nonprofits, businesses, and community leaders. Some of these programs

are more and less effective than others. A report by Kantor (2011), released by the USDA ERS, details the viability of certain community food security programs. These programs include SNAP outreach, farmers' markets, community gardens, and community-supported agriculture programs, among others. Yet rural communities often pose a different set of problems in combating food insecurity. While supermarkets accounted for 77% of nationally redeemed food stamps, that figure corresponded to only 59% for rural communities (Kantor, 2011, p. 20). Other redemption sites included small grocery stores, convenience stores and gas stations (Kantor, 2011, p. 20). Farmers' markets also contribute to community food security, and are a prominent leader of direct farm marketing. Yet the National Food Stamp Program Survey indicates that few low-income households turn to farmers' markets for their food purchases, at only .02% of food stamp redemptions in 1998 (Kantor, 2011, p. 22). Community-supported agriculture programs are a potential source of improving community food security, but their uneven national distribution limits their effectiveness. Approximately two-thirds of all community-supported agriculture programs currently exist in only 10 states; among all states, "more than one-third … had fewer than six programs" (Kantor, 2011, p. 23). Finally, although community gardens can provide direct access to fresh food, they are found principally in urban settings. The Tufts University Center on Hunger and Poverty reported in 1993 that "travel to community gardens can be difficult, costly, and time-consuming" (Kantor, 2011, p. 25). Thus, community food security opportunities often have special considerations when implemented in rural areas like the Mississippi River Delta.

Still, there is movement in rural areas to combat community food insecurity. In Mississippi, a public-private task force commissioned by the state delivered recommendations on

healthy food. Among the Mississippi Grocery Access Task Force's proposals were the following:

- Grant and loan program that supports retailers selling healthy food in underserved areas
- Expedite transition times for WIC and implement an EBT system for WIC
- Expand the distribution schedule for SNAP more evenly each month
- Reduce regulatory barriers for grocery development in underserved areas
- Develop safe, affordable, convenient transportation to food resource areas (Koprak & Lang, 2011, p. 7)

While these proposals offered viable and potentially transferable solutions for Clay and Poinsett counties, the Mississippi Delta region is diverse. In order to ascertain the best solutions for Clay and Poinsett counties, we sought to understand the extent and the roots of community food insecurity in those specific locations. While the above data on food insecurity is credible and reliable overall, there was a lack of existing data for our specific locations. Thus, our approach emphasized a systematic examination of the current status of community food insecurity. Using the theoretical framework of the studies mentioned above, and in conjunction with the USDA's Community Food Security Assessment Toolkit, we aimed to provide a preliminary assessment and analysis of community food insecurity in Clay and Poinsett counties.

Project Methodology

This project relied on multiple methods of collecting and interpreting data, including secondary data collection and use of the following resources from Cohen et al.'s (2002) USDA Community Food Security Assessment Toolkit (2002): Focus Group of Food Shopping Patterns (focus group) (p. 120), the Food Store Survey Instrument (food store survey) (p. 157-161), and the Short Survey Household Food Security Instrument (household survey) (p. 110-114). We

received permission from the Institutional Review Board (IRB) of the University of Arkansas at Little Rock to conduct this primary data research on human subjects.

We initiated the project by participating in a key stakeholder meeting hosted by the EAPDD. We conducted key informant interviews to obtain a more detailed understanding of the broader social issues surrounding food insecurity in the Mississippi River Delta region. The interviews provided a localized focus for our adaptation of the USDA Community Food Security Assessment Toolkit.

The USDA Community Food Security Assessment Toolkit suggests using the following parameters: (1) a community's socioeconomic and demographic characteristics, (2) a profile of community food resources, (3) an assessment of household food security, (4) an assessment of food resource accessibility, (5) an assessment of food resource availability and affordability, and (6) an assessment of community food production and resources (Cohen et al., 2002, p. 29). Our initial key informant interviews led us to modify the USDA Community Food Security Assessment Toolkit to address the particular needs of Clay and Poinsett Counties. In conjunction with these modifications, we developed a work plan (see Appendix A) that guided our project. We used a research rubric that prioritized food accessibility, which we examined through focus groups. Availability and affordability of food were also highlighted via the food store survey. Complementing these areas of emphasis, we addressed the four additional toolkit parameters through a variety of secondary data resources.

A significant portion of this project was building a foundation of secondary data. This data provided a detailed demographic and socioeconomic profile of each county in order to gain a deeper understanding of the relationship between issues of food security and income levels. This data was accessed from state and federal government sources, as well as from nonprofits,

policy institutes, academic research institutions, and local sources. Data sets included the total population of each county with the populations broken down by age, race and ethnicity, citizenship, household structure, employment status, income, and poverty status (Cohen et al., 2002, p. 32). In addition, the secondary data provided information on community food resources such as food assistance programs, and emergency food suppliers. Finally, we compiled a preliminary summary of food production resources in the two counties including local food producers, community gardens, community-supported agriculture, fisheries, hatcheries, and processing plants (Cohen et al., 2002, p. 56). A complete overview of the secondary data collected can be found in Appendix B.

Focus groups were our principal mode of primary data collection. The focus groups documented patterns of food resource accessibility, alternative food resources, and access to transportation by investigating household shopping patterns. Each focus group was guided by the 17 questions of the Moderator's Guide for a Focus Group on Food Shopping Patterns as outlined in the USDA's Community Food Security Assessment Toolkit (see Appendix C). Two focus groups were conducted in two different cities in Clay County while three focus groups occurred in three separate cities in Poinsett County. Attendance at the focus groups ranged from two to five people.

In order to supplement our secondary data on household food insecurity, we asked participants of the focus groups to answer a short household food security survey (see Appendix D). We administered this voluntary, anonymous household survey to each of the participants after the focus group discussions. Nine people completed the survey in Poinsett County and four people completed in the surveyed in Clay County. Although not a representative sample of Clay

and Poinsett Counties, this household survey contributed to the otherwise limited secondary data on household insecurity in these counties.

The food store surveys supplemented focus group data on food accessibility by examining the variety and affordability of available food. Using the food store survey (see Appendix E), we assessed food stores to determine if the variety and affordability of available foods met the requirements for the USDA's Thrifty Food Plan (TFP). The TFP is the national standard for eating the most nutritious diet available at the minimum cost. There are three other national standards: the Low-Cost Plan, the Moderate-Cost Plan, and the Liberal Plan. The TFP's purpose is to provide "a standard for assessing the availability and affordability of a standardized TFP market basket across food stores" (Cohen et al., 2002, p. 49). The cost of the TFP's "market basket" is calculated on a monthly basis using current dollars and the Consumer Price Index in order to meet the requirements of the menus and recipes for a single week of food (Cohen et al., 2002, p. 50). It is not meant to represent any individual household's food needs. The TFP identifies six types of food stores: supermarkets, large grocery stores, small grocery stores, specialty stores, convenience stores, and grocery/gas combinations (Cohen et al., 2002, p. 49-50). We adapted the TFP store categories to accommodate the rural profile of our counties, using only the following three categories of food stores: supermarkets/large groceries, small grocery stores, and gas/grocery combinations. We used the TFP as a measure of comparison with available prices in the food stores we surveyed. We surveyed nine food stores in Poinsett County and six food stores in Clay County.

Using the USDA's Community Food Security Assessment Toolkit guidelines for store selection, we targeted a 40% proportional representation of food stores in each county. Through

this food store survey, we were able to analyze the quality and affordability of the various available food stores.

Using the above methods, we compiled a preliminary county profile on food security for Clay and Poinsett Counties. We synthesized these preliminary profiles into a final report to be given to the EAPDD. This final report included visual representations of our data collection efforts and analyses of the compiled data. Finally, the report discusses recommendations for the EAPDD's future work in targeting community food insecurity with the reNEW East Arkansas initiative.

Results

The following data provides a basic overview of food insecurity issues as they pertain to each county. These issues include: socioeconomic and demographic characteristics, community food resources, household food security, food resource accessibility, food availability and affordability, and community food production resources. By examining these possible catalysts for food insecurity, we can begin to see how different factors might play into the overall food security in each county.

Poinsett County Profile

Secondary data. Poinsett County is a rural county of 22,583 people in the Arkansas Delta region. It is demographically more homogeneous than the state of Arkansas overall. The state has an ethnic breakdown of 77% White, 15% African American, and 6% Hispanic in a population of 2,915,918. The ethnic breakdown of Poinsett County is 90% White, followed by 7% African American. However, Poinsett County mirrors Arkansas in household demographic structure. Fifty percent of households are characterized as married-couple families in Arkansas and 49% in Poinsett County. Non-married, female heads of households comprise 13% of

households in Arkansas, and 15% in Poinsett County. The majority of the population in Arkansas is between the ages of 40-64 (32%), while a slightly higher 34% of Poinsett's population fits within this age bracket. See Table B1 and Table B2 (U.S. Census Bureau, 2010a; U.S. Census Bureau, 2010b).

Poinsett County falls below multiple economic indicators when compared to the overall state of Arkansas. In Poinsett, the median 2010 income was $31,743 and 26.8% of families had incomes that were below the poverty level in the previous 12 months. This can be compared to a larger 2010 state median income at $40,531 and a smaller statewide percentage of families with incomes below the poverty level, at 18.7%. Children are at higher risk for living in poverty. In 2012, 41% of all children in Poinsett under the age of 18 were living below the poverty line (County Health Rankings and Roadmaps, 2012). The percentage of people in poverty in Poinsett County is not concentrated in only one area of the county. Interestingly, the zip code areas with the highest populations correlate to higher levels of poverty. See Table B4, Table B5, and Table B12 (U.S. Census Bureau, 2010a; U.S. Census Bureau, 2010b).

By looking at statistics regarding food and nutrition programs within Poinsett County, a clearer picture develops regarding the level of food insecurity. In 2012, there were a total of 6,148 SNAP participants in the county, which is approximately 27% of Poinsett County's population. In comparison, only about 14% of the US population is enrolled in SNAP. SNAP participation in Poinsett County had slightly increased by 0.14% from 2007 to 2011(USDA ERS, 2013f). During this same time, participation in the Free and Reduced Lunch programs increased. In 2012, 4,227 children utilized the program, a dramatic increase from the 3,386 children enrolled in 2011. The current rate of Poinsett County school-aged children enrolled in the Free and Reduced Lunch Program is 85%, which is quite larger than the national rate of 68%.

Notably, these increases occurred during a time of overall population loss in the county. Also, according to the Arkansas Department of Health, there are three Emergency Food Assistance Program (TEFAP) providers in Poinsett County (Arkansas Department of Human Services, 2011a). The federal TEFAP program includes certain providers such as food banks, food pantries, and areas that provide mass food giveaways. These providers are in Marked Tree, Trumann, and Weiner (Arkansas Department of Human Services, 2011a). There are no Meals on Wheels programs within Poinsett County. See Table B7 and Table B11.

The data on food resource accessibility for Poinsett County is limited. We looked at the type, availability, access, and frequency of public, private, and paratransit options for county residents. Most people have access to some form of private transportation (NGHIS, 2014). For those without private transportation, however, there are highly limited options. According to the Arkansas Public Transportation Directory (2012), there is only one main source of public transportation, which runs Monday through Friday (p. 24). It is a curb-to-curb service, which can be used for food shopping, signing up for food assistance, or accessing food pantries (p. 24). There are two set prices: $2 per boarding when the starting and final destination is in a town compared to $4 per boarding when each destination is outside town limits (p. 24). There is also only one paratransit service option for disabled residents, although there are four disability service centers (p. 45). However, this transportation option moves solely between disabled individual's homes and one service center; it does not transport individuals to other locations such as grocery stores or DHS offices. The lack of transportation options constitutes a serious problem for some Poinsett County residents without consistent or easy access to private transportation. In 2010, 5% of Poinsett County residents who had incomes of less than or equal to 200% below the federal poverty line lived more than 10 miles from a grocery store (County

Health Rankings and Roadmaps, 2010). For a low-income resident without private transportation living outside town limits, it would cost $8 via available public transportation options to make one trip to one food resource such as a store or food pantry (Arkansas Public Transportation Directory, 2012, p. 24). This lack of public transportation is further compounded by the lack of locations to obtain services such as SNAP and WIC. Because Poinsett is a rural county, there is only one DHS office that is located in Harrisburg where people can enroll in SNAP (Arkansas Department of Human Services, 2011b). Furthermore, mothers looking to enroll in WIC can only obtain the WIC clinic services at the County Health Units located in Harrisburg, Marked Tree, and Trumann (Arkansas Department of Health, 2011). See Table B9, Table B16, Table B18, and Table B20.

A complete picture of food production resources in Poinsett County is quite difficult to obtain due to a lack of uniformity among formal data collection studies. Food production resources can include the following: community gardens, school based gardens, community supported agriculture (CSAs), commercial agricultural resources, fish hatcheries, and food related manufacturing. Poinsett County has 418 farms covering 340,704 acres. Of these farms, 87% produce commercial crops. The abundance of local crop production creates a stark contrast with the lack of local food production resources available to county residents. No information could be found regarding farmers' markets or food cooperatives located within Poinsett County. In Poinsett County, there are no community gardens. There is one school-based garden at Harrisburg Middle School, but its funding expires this year (S. Arjumond, personal communication, January 21, 2014). Poinsett County has one operating CSA, Whitton Farms. However, they do not offer delivery within the county. The only options for pick-up are at the farm itself, in Tyronza, or in the more distant cities of Memphis or Jonesboro (Whitton Farms,

2013). Additionally, a county extension agent was unaware of any commercial family farms or fish hatcheries in Poinsett County. According to the USDA National Census of Agriculture in 2007, there is only one food-manufacturing establishment in Poinsett County and no food wholesaler distributors. Furthermore, there has been a reduction in agritourism, which can add to the income of food production resources. In 2002, there were 18 agritourism farms in Poinsett County, but that number fell to just two by 2007. The absence of infrastructure for food manufacturing and agritourism is worrisome when considering new opportunities for growth. Furthermore, for low-income residents, the lack of local alternative food sources like CSAs and community gardens deprives them of readily accessible sources for fresh, healthy foods. See Table B22, Table B23, and Table B24 (USDA Census of Agriculture, 2007).

Primary data. Our primary data collection efforts focused on three assessment topics: focus groups on food shopping patterns, household surveys on food security, and food store surveys to determine food availability and affordability.

Focus group analysis. Nine people attended focus groups in Poinsett County. The focus groups in Poinsett County asked participants to look over a list of known supermarkets, grocery stores, and gas stations throughout the county. For the most part, participants were familiar with the supermarkets and larger stores in Poinsett County; however, participants tended to be less familiar with smaller stores and gas stations outside of their town or travel radius. A majority of the participants preferred to shop at the supermarkets and larger grocery stores for their main shopping needs while the smaller stores were used to obtain necessary staples as well as find cheaper prices on certain products. Most people seemed to do one large shopping trip every 1-2 weeks, with an additional 2-3 trips a week to the store for basic staples such as bread and milk. Other participants went out to restaurants to eat so their food store trips were less frequent. Gas

stations were used only to buy the occasional candy bar and soft drink. People justified these shopping patterns as the most convenient for their available time. A minority of participants did their shopping outside of Poinsett County. These people tended to shop in Jonesboro because they commute to Jonesboro for work. For this minority, convenience was defined by location. It was also mentioned that larger supermarkets offered fresher meats and produce, making them more attractive to participants. However, smaller stores were attractive for other reasons, such as the ease of maneuvering around the store when compared to larger supermarkets. Many people involved in the focus groups expressed a desire to keep their shopping within Poinsett County to promote economic growth within the county.

After gaining community members' opinions regarding their shopping preferences, the focus groups discussed transportation methods within the county. Answers regarding transportation for grocery shopping included everything from walking to driving to carpooling. Most seemed to drive their personal vehicles; some participants felt the need to carpool with other family members. Also, it was noted that many people walk to the store if they do not have personal vehicles or if they live within close distance of the grocery store.

The focus group also addressed participants' satisfaction with their options when purchasing food. For the most part, participants were satisfied with the stores located within Poinsett County; however, it must be noted that this satisfaction was not at 100%. Complaints ranged from supermarkets not posting correct prices for their items to selling spoiled milk or serving older ground beef mixed with newer ground beef. The satisfaction with the stores seems to come from a sense of complacency. Since selection has improved over the past 30 years, participants seemed to accept the current status as generally positive. However, most participants still wish for more variety and more competition among the stores within Poinsett County.

Participants generally wanted both larger supermarkets and more affordable smaller grocery stores in Poinsett County, to increase competition and lower prices.

The focus group also delved into participants' views on alternative food sources such as home gardens, community gardens, and farmers' markets. Throughout Poinsett County, none of the participants heard of or knew of food co-ops or community supported agriculture (CSAs) programs. There appear to be many small, personal gardens in the area. When a surplus of vegetables is present, especially in the summer, many people share their surplus. Some people even have roadside stands where they sell vegetables during the summer months. However, these small gardens do not provide enough for people to sustain themselves and their families. Many participants felt that residents from Poinsett County hunted and fished for recreational purposes, not to provide a substantial additional food source. It should be noted that people who hunt and fish freeze the meat and share with neighbors. People also can and freeze surplus vegetables in order to eat them during the winter months.

In terms of community gardens, there is only one in Poinsett County at the middle school located in Harrisburg. It appears that this garden has limited use, as only the Harrisburg focus group members knew about the community garden. The produce grown in this garden is distributed to the food pantry as well as sent home in students' backpacks. None of the produce is used in the cooking of school lunches, but it is used in the Cooking Matters class within the middle school. While the garden is generally well known within Harrisburg, it lacks community and school support.

Focus group participants were also asked about farmers' markets in Poinsett County. It appears that the only local farmers' market occurs in downtown Harrisburg between the months of May to September. This market occurred once a month where people sold produce as well as

baked goods, honey, eggs, and crafts. Participants also talked about the farmers' market in Jonesboro and discussed that some residents of Poinsett County shop at the weekly farmers' market when in Jonesboro.

Most participants noted that people do not choose to eat healthy foods. They felt that this problem came from a lack of education. People just do not know how to shop, cook, and eat healthy foods. Also, participants felt that some of these people have no interest in learning more about healthy food choices. Educating people within social programs such as SNAP and WIC needs to occur in order for these people to make healthier decisions. There was some discussion about community gardens and how pooling food resources together to make them easily accessibly could be a solution to accessing healthy, fresh food. Overall, focus group participants thought that people needed to be more educated about healthy foods.

Household food security survey. Nine people completed the household survey regarding food security in Poinsett County. Six participants felt that they always had enough food. Two respondents had enough food, but not the kind of food they wanted. One respondent felt he/she did not have enough to eat in the past 12 months. Also, two people identified that they did not always have enough money for food within that same time frame. A majority of seven people felt that they had not experienced problems with food insecurity. However, two respondents did experience times where they either cut meals or even skipped eating entirely because they could not afford more food. These people noticed that they had to worry about having enough food for themselves some months but not every month within the 12-month period. Three of the nine people who completed the survey had children under 18 years old. Two of these three respondents had to sometimes rely on low cost foods to feed the children because they were worried about having enough money for food. Also, one person sometimes could not

feed his/her children a balanced meal because of a lack of money. However, these three respondents noted that the children within their households never skipped a meal or had to go hungry. Even though this small sample size cannot be used to represent household food security throughout Poinsett County, the results still provide initial insight into problems with household food security. Monetary constraints were a problem that directly inhibited food purchases and consumption for a couple of the respondents.

Food store survey. We surveyed nine stores of the total 21 stores in Poinsett County, which met our target of a 40% representational sample. Of these nine stores, four were categorized as supermarket/large grocery stores, four were gas/groceries, and one was a small grocery store. We used the food store survey to record the lowest price, item weight and item unit of 87 food products recognized by the USDA food plan as meeting people's basic nutritional needs at a minimum cost. We used the suggested data analysis methods in the USDA ERS toolkit to gain an understanding of the affordability and availability of food in Poinsett County.

In analyzing food availability, it was clear that the supermarket/large grocery stores had the fewest number of missing items. On average, the supermarket/large grocery stores were missing only 3.7% of the items compared to the small grocery store that was missing 47% and the gas/groceries missing 86%. This means that the gas/groceries were missing an average of nearly 75 of the total 87 food items listed. Markedly noticeable was the lack of any fresh fruits, vegetables, and meats in the gas/grocery stores. The small grocery also lacked many fresh food items. The store carried only 40% of the suggested fruits, 20% of dairy and 14% of both vegetables and meats. However, it did have higher percentages of frozen fruits and vegetables, canned fruits, and canned vegetables at 80%, 50%, and 100% respectively. The supermarket/large grocery stores only lacked a few items; on average, there were only 3.25 items

missing. They carried 100% of all fresh, frozen, and canned fruits and vegetables. Across all stores, the most common missing items were meat and meat alternatives. Ground pork was missing in eight of the nine stores, followed by frozen fish, canned garbanzo beans, and baked vegetarian beans - all of which were missing in seven stores - and ground turkey, which was missing in six stores.

In analyzing food prices, supermarket/large grocery stores generally had the lowest price for an item, followed by the small grocery store, while the gas/groceries were the most expensive. For example, the price of fresh vegetables was 7% lower in the supermarket/large grocery stores compared to the small grocery. Canned vegetables (in supermarkets/large grocery stores) were 14% lower than in the small grocery, and 57% lower than in the gas/groceries. As a general overall comparison, supermarket/large grocery prices for white, enriched bread were 44% lower than the cost for the same product at the small grocery, and 61% lower than the product at the gas/groceries. By contrast, the small grocery price was 30% lower than gas/groceries prices. The exception to these price breakdowns was in the sugars and sweets category, which were very similar across all stores with less than a 2.5% difference in average item price among all store types.

Using the USDA Thrifty Food Plan (TFP), we also calculated how much a market basket of a week's worth of food for a family of four would cost. The supermarket/large grocery stores bill of $148.22 is slightly higher than the national average reported for January 2014. For a family of four with two parents and two children, the cost was $147.70. This weekly cost would provide the family with 96% of the food items suggested. By comparison, if a family were to shop at the small grocery and purchase all of the items available (constituting only 47% of the TFP's required items list), their bill would be $75.29. If the family were to shop at the

gas/groceries, they would spend a considerable $50.50 to purchase 12 items - the only available TFP products at those locations. Their market basket would not include any fresh fruits, vegetables or meats, as none are available at the gas/groceries. It should be noted that 12 items was the average available at these gas/groceries. However, one of the stores surveyed carried only three of the total 87 TFP suggested items.

There are multiple indications of a significant risk of community food insecurity in Poinsett County. A couple of residents noted they had experienced household food insecurity within the past 12 months. Residents are also paying more for groceries than the U.S. average. The poverty rate is higher than the overall Arkansas average and children are especially vulnerable. However, there are barriers against widespread community food insecurity. SNAP participation and Free and Reduced Lunch participation is growing. While this indicates a growing need (especially among a declining population), it also means that people in need are accessing the services available. Finally, many residents shop within the county. This could be an incentive for more food resources, whether more affordable grocery stores or more CSAs such as the successful Whitton Farms.

Clay County Profile

Like Poinsett, Clay County is also a rural county in the Arkansas Delta region. The population of the county is 16,083 people, with 34% falling within the 40-64 age bracket. By comparison, Clay County is less ethnically diverse than the state of Arkansas as a whole, with a 98% White population (U.S. Census Bureau, 2010a; U.S. Census Bureau, 2010c). Clay County's household demographic structure is similar to the statewide breakdowns. There are 51% married-couple families in Clay County, and 10% non-married female head of households (U.S. Census Bureau, 2010a; U.S. Census Bureau, 2010c). Additionally, Clay County has the same statewide

percentage of families (18.7%) whose incomes were below the poverty level in the past 12 months. Yet the median household income in the county is higher than in the state: the former is $42,203, the latter $40,531 (U.S. Census Bureau, 2010a; U.S. Census Bureau, 2010c). In 2011, there were 2,430 SNAP participants or 15% of the population in Clay County. The 15% of Clay County residents receiving SNAP benefits is in line with the national average of 14%. There was an increase of 0.35% from 2007 to 2011 in SNAP participation in Clay County (Arkansas Department of Human Services, 2011a). Furthermore, there were 2,469 children participating in the Free and Reduced Lunch Program in 2012. This is a large increase from 2011 when there were only 1,654 children enrolled in the program (Annie E. Casey Foundation, KIDS COUNT Data Center, 2014). The current Clay County enrollment in the Free and Reduced Lunch Program translates to approximately 80% of the Clay County school-aged children receiving free and reduced lunches, which is quite larger than the national rate of 68%. Clay County's population has decreased over the same time period rendering these food assistance trends especially notable. In terms of TEFAP resources there are three participating locations in Clay County. They are located in Corning, Pollard, and Rector (Arkansas Department of Human Services, 2011a). Also, there are no local Meals on Wheels programs within Clay County. Using online resources, no information could be found regarding farmers' markets or food cooperatives within Clay County. See Table B1, Table B3, Table B4, Table B5**,** Table B8, and Table B11.

Personal vehicles remain the primary mode of transportation in Clay County. Public and alternative transportation resources are sparse to nonexistent in Clay County. There is one public transportation option in the county, Black River Area Development (BRAD). According to the Arkansas Public Transportation Directory (2012), this service runs on weekdays from 8:30 am-3:00 pm in only one town, Corning, in Clay County (p. 19). It is a curb-to-curb service within the

town limits of Corning, for $2.00 round-trip (p. 19). BRAD also offers countywide services. However, it only operates eight times per month at a round-trip cost of $10.00 (Black River Area Development, 2013). The same paratransit service operates in Clay County as in Poinsett County, similarly restricted to transporting disabled residents to one service center (Arkansas Public Transportation Directory, 2012, p. 45). Again, this lack of transportation and the scarcity of offices to obtain SNAP and WIC services contribute to the problem of food accessibility in Clay County. There is only one DHS office in the county where people can enroll in SNAP, located in Piggott (Arkansas Department of Human Services, 2011b). Furthermore, mothers looking to enroll in WIC can only obtain the WIC clinic services at the County Health Units located in Piggott and Corning (Arkansas Department of Health, 2011). See Table B8, Table B10, Table B11, Table B17, Table B19, and Table B21.

There is a near complete lack of data available for community food production resources in Clay County. There are no community gardens, school based gardens, or CSAs in the county. There are 731 farms across 330,464 acres. Of these, 84% are crop production farms. The significant food production presence starkly contrasts with the lack of such resources that are readily available to county residents. Clay County does have one fish hatchery, the William H. Donham State Fish Hatchery, which has over 40 acres of ponds for fish production. According to the USDA National Census of Agriculture in 2007, there is only one food manufacturing establishment in Clay County and no food wholesaler distributors. Additionally, as in Poinsett, there has been a reduction in agritourism - a subset of the food production industry that can add to the income of food production resources. In 2002, there were eight agritourism farms in Clay County, but that number fell to just two by 2007. See Table B22, Table B23, and Table B25 (USDA Census of Agriculture, 2007).

Primary data.

Focus group analysis. Our focus groups gave local residents the opportunity to share their perspectives on their access to food. Participants distinguished among convenience, variety, and price of food as important factors in their choices about where and how they access food. They also noted the important but limited role that local food sources play in the food economy. They emphasized the distinction between formal transactions of local food – such as farmers' markets or community gardens – and informal trades such as neighborly exchanges of game or vegetables. Overall, participants thought it would be beneficial to have better quality and cheaper food available closer to their homes. However, they felt that viable options to achieve this were very limited.

Focus group participants did not shop locally for the vast majority of their food purchases. They bought most of their food from stores outside of their communities. In fact, the stores at which participants did "major shopping trips" were outside Clay County entirely. Paragould in Greene County along with Poplar Bluff and Kennett in Missouri were popular places to go shopping. Stores that were estimated to be 17 to 27 miles away were considered more convenient for large shopping trips than stores in Clay County. Participants defined convenience by the ability to accomplish multiple tasks at once, not by distance from their home. The larger stores in towns further away allowed participants to carry out multiple errands simultaneously. Participants noted that they often supplemented these big shopping trips with limited weekly purchases in local stores.

Focus group participants were unable to access food that was cheap, of good quality, and of good variety in their local communities. Participants noted a recurring choice between better quality food and higher prices. Fresh produce and fresh meats were the foods that participants

were most concerned about. Even when participants noted that a local store usually had good quality fresh produce and fresh meat, they indicated that the prices of those items were prohibitively high when cheaper food could be found elsewhere – simply farther away. Selection and variety of food constituted a similar problem. Participants lamented the lack of variety in many stores. They did not do major, regular shopping trips even to those stores where variety was noted to be good. As with the convenience of accomplishing multiple tasks, price was a more important factor than variety or quality in determining where participants bought food.

In terms of local food sources, participants did not see them as plausible alternatives or even significant supplements to established groceries. Efforts to establish farmers' markets had failed in both towns in which we conducted focus groups. These markets had failed for a variety of reasons, according to participants. Speculation about causes emphasized the lack of customers for the price of transportation, set-up, and rent. Another contributing factor was thought to be the generally stagnant nature of the local economy. Still, all participants acknowledged the small efforts of local farmers who seasonally sell their fruits and vegetables on the sides of the towns' main street. The number of these local farmers ranged from one family to five stands. However, participants noted that these small farmers sold produce inconsistently, often at inconvenient times, and for expensive prices. Interestingly, participants recognized a substantial amount of trade in fruits, vegetables and hunted goods among friends and neighbors. Hunting could mean either game or fish. They did not appear to consider these exchanges as one of their sources of food. They emphasized that the loss of these gifts and exchanges would not constitute a significant loss for their diets. However, they noted that some people in the county relied quite substantially on personal gardens and hunting to supplement diets.

While participants did not appear totally satisfied with their food, neither were they fundamentally unhappy with their current situation. Unfortunately, the current situation is not profitable for Clay County. All of our key informants purchased the majority of their groceries outside of Clay County. Local food purchases are therefore not contributing in any significant way to the Clay County economy. Other counties and more worryingly, other states are instead profiting from Clay County residents' food consumption. Local food stores - even when of good quality and variety - are competing not only with food stores elsewhere, but with the proliferation of other services elsewhere (e.g. doctor's offices, movie theaters). Even a local food store that had donated generously to residents in a time of need was not able to compete with larger supermarkets further away. Until Clay County can provide a multitude of local services to its residents, residents may continue to find accessing food outside the county a more convenient alternative.

Household food security survey. Four people completed the household survey regarding food security. When looking at people's responses on the survey it appears that those that completed the survey were not facing issues of food insecurity. All respondents felt that they never experienced a lack of access to food or that enough food could not be obtained due to financial constraints. Furthermore, no one cited having any experiences with hunger within the past 12 months. Only one respondent had children under 18 years old. This respondent did not identify as having to worry about having enough food to feed her children. However, two respondents did realize that there was a lack of availability of the kinds of food they wanted. Furthermore, one respondent said that being on a diet limited his/her access to food. Also, two respondents felt that time limitations in shopping and cooking limited the amount and kind of food they consumed. Overall, the surveys completed showed that no one felt that they had

experienced food insecurity within the last 12 months. However, by looking at our secondary statistical data, these views do not accurately represent the experiences of other residents of Clay County.

Food store survey. In Clay County, we surveyed six out of twelve food stores in the area. This exceeded our target, which was to survey 40% of all stores in order to have a representative sample of stores in our analysis. Of these six stores, we classified two as supermarkets/large grocery stores; three as small grocery stores; and one as a gas/grocery. We compared the availability and affordability of foods in Clay County grocery stores against this TFP baseline. The different categories of grocery stores (supermarket/large grocery, small grocery, and gas/grocery) revealed large disparities in both availability and affordability.

In analyzing food availability, the distinction between categories of grocery stores was incredibly important. While supermarkets/large grocery stores were missing an average of only 6.3% of the items on the TFP market basket checklist, small groceries lacked an average of 41.4% of items and the gas-grocery did not have a significant 78.2% of items needed. The most frequently missing items in all stores were ground turkey, melon, bagels, and yolk-free noodles. Indeed, fresh foods of all kinds were most likely to make up the missing items. Neither the gas/grocery nor the small groceries had any fresh fruits or fresh vegetables. The gas/grocery was markedly worse in this regard - it also did not have any frozen fruits or vegetables, fresh grains, or fresh meats - while the small groceries had 13.3%, 52.4%, and 38.1% of those items respectively. The supermarket/large groceries were much better in their overall availability of food but still did not achieve 100% of all items necessary for the TFP market basket of goods. They were missing an average of 20% of fresh fruits, and almost 30% of fresh breads and grains.

Thus, supermarkets/large groceries come close but do not provide all items needed for a nutritious diet at minimum cost.

We also analyzed the affordability of the foods present in the surveyed grocery stores. Through the USDA Thrifty Food Plan (TFP) Food List, we calculated how much a week's worth of menus and recipes would be if bought from our surveyed stores. In January 2014, the TFP baseline prices for a market basket of goods were $128.90 and $147.70. These prices were for a family of four with two children under the age of five and over the age of five, respectively. The toolkit instrument we used did not provide a distinction for the weekly prices based on the age of the children. In supermarkets/large grocery stores surveyed, therefore, the price of a market basket of goods that was 93% full was $159.48. In the small groceries, the price was $85.03 for a basket of goods that was 58.6% full. In the gas/grocery store we surveyed, the price was $34.51 for only 21.8% of all TFP goods. The gas/grocery is the most expensive store location for purchasing food. For example, a person shopping at the gas/grocery could buy 13 items for $34.51, while a person shopping at a small grocery could buy an average of 38 more items for only $50 more. At supermarkets/large grocery stores, the ratio of overall price-to-items bought goes down even further. Across the board, supermarkets/large groceries had lower costs for each individual item and lower costs on average for all food groups, from fresh fruits to dairy products to sugars and sweets.

Clay County is at risk for high levels of community food insecurity. A declining population tied to increased use of food assistance programs indicates that household food insecurity may be a problem. In addition, many residents travel to food resource locations outside of Clay County to find food that is affordable, of good quality, and of good variety. Thus,

residents without means of transportation are especially vulnerable, shopping at smaller and more expensive groceries with fewer products.

Conclusion. As our above data indicates, both counties have multiple risk factors for high levels of community food insecurity. Risk factors for food insecurity include any factors that affect household resources and the ability of households to acquire food. Clay and Poinsett Counties belong to a larger congressional district with a food hardship rate of 25.5, a measurement analogous to food insecurity. This rate is higher than the overall food hardship rate for Arkansas, at 23.5 and is the 38th highest rate out of all 436 U.S. congressional districts (Food Research and Action Centers, 2013). Our data helps examine more specifically what contributing factors to this high food hardship rate appear in Clay and Poinsett Counties. In both counties, risk factors for community food insecurity include the following:

- Lack or inaccessibility of food markets
- Poor quantity or quality of food
- Lack or inaccessibility of other food resources (e.g. food assistance, alternative food sources)
- Poverty or lack of non-monetary household resources (e.g. time, information, health)

A summary of these risk factors as applied to each county can be found in the deliverable provided to the EAPDD: *Clay County Profile* and *Poinsett County Profile*.

Our recommendations for repeating and improving this process can be found in the deliverable provided to the EAPDD: *Recommendations for Future Action***.**

Discussion

The underlying premise of this project was based on the USDA's Community Food Security Assessment Toolkit. When completed in its entirety, this resource provides a profile of a

community's level of food security. However, as the authors themselves recognize, the toolkit must be adapted when implemented. Researchers must take the following into consideration: their time and their resources; the type of the community they're assessing; and the most pressing needs of that community. After key informant interviews, discussions with our project faculty advisor and our project supervisor, we decided to prioritize the food availability and affordability portion of the assessment. To this end, our primary data collection efforts focused nearly exclusively on food availability and affordability through focus groups and food store surveys. Our secondary data collection supplemented the other portions of the assessment. Though biased, this does not necessarily indicate a limitation for our data collection, given the toolkit's adaptability. However, when implementing the toolkit in other counties and communities, it is possible to emphasize other portions of the assessment (e.g. household food security or community food production resources). It is important to note that primary data collection efforts for these other portions may have their own limitations. Our discussion below focuses on the limitations we found when implementing our version of the toolkit.

Secondary Data

We collected secondary data to compile information for four of the six food security assessment categories outlined in the toolkit. The toolkit provides step-by-step directions for each section on how to collect this data from online resources such as the U.S. Census Bureau, the National Cooperative Business Association, and recognized nonprofit organizations such as the Farm Bureau. It also provides template tables for displaying this information.

A major challenge with these tools is that both the instructions and the tables were developed to be compatible with the 1990 Census. The instructions did not always relate to current websites and the overall information available. We responded to this in multiple ways.

First, we adjusted the template tables to accommodate the format of the more recent 2010 Census data. When adjusting the tables, it became clear that information on socioeconomic characteristics is now much more comprehensive than the toolkit initially requires. For other assessment categories, such as food resource accessibility, the U.S. Census Bureau data was reorganized and re-categorized. Although some data was still available from the U.S. Census Bureau websites, most of the 2010 data was not fully transferable for what the toolkit recommended to collect. Therefore, our second response was to use alternative online resources to gather, to the extent possible, data that would allow us to complete the toolkit table templates. However, this approach resulted in a more haphazard and possibly less comprehensive data collection. Thirdly, for other assessment categories whose instructions were also outdated, such as community food production resources, we turned not only to additional online sites but also information from key informants. However, there were often contradictions between the limited data available online, information from local key informants, and our first-person observation data. While these are significant limitations, they ultimately do not undermine the validity of the data that we compiled.

These limitations may constitute a bias in the comprehensiveness of the county profiles. The difficulties in the data collection process are magnified because we decided to allow the secondary data to serve as the sole method of describing multiple portions of the assessment.

Primary Data

Focus groups. The major limitation for our focus groups was that they essentially became key informant interviews. We did not meet our goal of 6-10 participants in each focus group and participant diversity was lacking. This resulted from a combination of rushed outreach

and advertising, a lack of screeners, a lack of incentives for participation, and a lack of local knowledge.

We began outreach and advertising a month prior to the set dates for our focus groups. While we used multiple methods to conduct outreach, we did not concurrently assess the effectiveness of these methods. Because of the distance between Little Rock and the two counties under our purview, we were not able to conduct intensive in-person outreach. Because in-person outreach was not a feasible option, we had to rely on methods more conducive to offsite recruitment, such as flyers, emails and phone calls. In small and more rural communities, this is a disadvantage. Many of the participants who ultimately came to our focus groups learned about the discussions through word-of-mouth. Additionally, several participants were recruited on the spot on the day of the focus group. More strategic and long-term outreach could have helped us reach our targets for number and diversity of participants.

We recognize that the nature of outreach and advertising is subject to any number of unexpected disruptions such as inclement weather and miscommunication. These kinds of disruptions constituted a significant limitation for our specific project. More time for strategic outreach and more pre-planning could have greatly minimized the effect of these disruptions.

We made a decision early on in our planning process to not include screeners for our focus group participants. We did not want to put the responsibility of conducting the screener on the EAPDD staff, and did not feel that we could adequately conduct the screener in a systematic manner from our location in Little Rock. The screener is a list of questions. A researcher asks these questions to potential participants, helping to identify the targeted population. Through use of the screener, a researcher also records contact information and confirms that the participants

will attend the focus group. The use of a screener could have made our outreach more strategic, as we would have known in advance that we did not have the expected number of participants.

We used free snacks and drinks as our only incentive for participating in the focus groups. Using stronger incentives (e.g. gift cards) could have increased participation. This view is supported by conversations we had with staff members from the Arkansas Hunger Relief Alliance that highlighted their consistent success eliciting participation in their programs using grocery store gift cards (E. Baker, personal communication, March 1, 2014). When considering replicating this assessment for other counties, it is important to note the possibility of monetary incentives. Financing these incentives could come from donations, partnerships with local stores or other organizations, and/or creative use of internal funds.

An additional challenge to the success of our focus groups was a lack of local involvement and knowledge in conjunction with limited time. Although we received helpful suggestions from the EAPDD staff and the local community leaders we talked to when organizing the logistics of the focus groups, we were still at a disadvantage because we did not have the ultimately invaluable knowledge of local community contacts. For example, in one city in Clay County, we held a focus group that overlapped with the community basketball night. To combat our lack of local knowledge, we could have prioritized making local contacts that were interested in working with us. We could have formed a team of local community advocates who were committed to helping with the entire community food security assessment process.

Household food security survey. In the USDA Community Food Security Assessment Toolkit, the household food security survey completes the assessment of household food security in conjunction with focus groups on that subject. However, as mentioned above, we chose to hold focus groups only on food availability and affordability. Therefore, in order to still complete

a partial assessment of household food security, we chose to distribute the household food security survey during our focus groups. The toolkit suggests including people in the household food security focus group and the survey who are either experiencing food insecurity or who are at risk of experiencing food insecurity. We had hoped that our diverse recruitment methods would bring a variety of people to the focus groups and thus provide relevant information for the survey as well. However, given the lack of participant diversity in our focus groups, the survey data does not give us a clear picture of household food security in either county. Nevertheless, the secondary data we collected provides a preliminary picture of household food security.

Food store survey instrument. We were able to follow the Food Store Survey Instrument instructions thoroughly and successfully. The main limitation was the difficulty of assuring that we had a complete and accurate list of all businesses that sell groceries in the two counties. This is significant because an adjustment to the total number of stores affects the proportional representation target for stores to be surveyed. We surveyed stores based on a 40% target. However, during focus groups in Poinsett County, we learned of an additional store that we had not included as well as one that had closed down. Luckily, our target remained at 40%. To reduce the risk of not achieving proportional representation, however, a truly comprehensive and updated list is necessary.

As a result of these findings, we anticipate that the EAPDD will have a deeper understanding of food insecurity in Clay and Poinsett Counties. This localized knowledge may help provide direction for the EAPDD's future policy and program interventions in the area. As they continue with the reNEW East Arkansas initiative, this research as well as future assessments can help support future grant applications and other funding opportunities for growth in the community.

Conclusion

Even though the Mississippi River Delta region of Arkansas contains some of America's most fertile farmland, food insecurity is still a prevalent issue for many Arkansans. By conducting community food security assessments in Clay and Poinsett Counties, we hope to have provided the EAPDD with an understanding of the current contributing factors to community food insecurity in these counties. Furthermore, our piloted use of the USDA Community Food Security Assessment Toolkit will allow the EAPDD the opportunity to expand and replicate these assessments in other counties and communities in the Mississippi River Delta region. Each community food security assessment may be adjusted to align with the pressing needs of the local community, as well as its available resources to carry out such an assessment. We have provided a model of how to systematically develop a localized community food insecurity assessment plan, conduct research in conjunction with this plan, and analyze the results. We hope that this and future assessments will help the EAPDD to gain useful knowledge and practices to further understand and combat community food insecurity in their 12 county region.

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