From Farm to Table:

A Kansas Guide to Community Food System Assessment

July 2016

LaClair Consulting Services
From Data to Information

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Introduction

Food is a basic human need. Food, of the right types and in the right amounts, provides the energy that sustains physiologic function and activity and the vital nutrients needed to maintain health. These basic facts are indisputable. Access to enough food, and the right kinds of food, is essential to good health and active lifestyles.

In the United States, we are blessed with a plentiful supply of food. Because of this bounty, we are also frequently faced with a daunting array of food choices and decisions. Both healthy and less healthy options are abundant and readily available, and sometimes difficult to distinguish from one another.

There is also abundant evidence that the majority of Americans do not eat healthy, well-balanced diets. In 2014, an estimated 28.9 percent of American adults were obese, and another 35.2 percent were overweight. Kansans were no better off, with 31.3 percent of adults classified as obese, and 34.7 percent overweight [(1)]. While U.S. dietary guidelines recommend that moderately active adults should consume between 1.5 and 2 cups of fruit and 2 to 3 cups of vegetables daily [(2)], fewer than one-quarter (24 percent) of Americans met the fruit consumption recommendation between 2007 and 2010, and even fewer (13 percent) ate the recommended amount of vegetables [(3)].

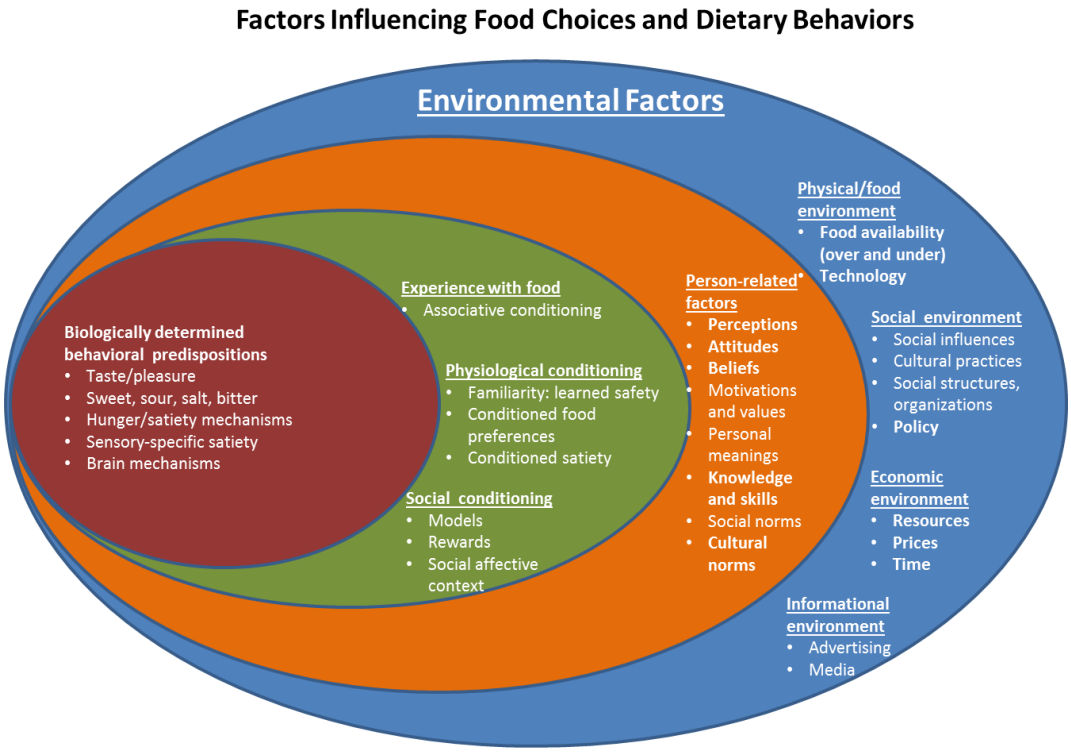
Despite the abundant supply of food in the United States, not all Americans have adequate access to healthy foods. Between 2012 and 2014 more than one in seven (14.3 percent) of American households experienced food insecurity, meaning that there were times when they worried about their ability to obtain enough food for everyone in the home. In one in twenty homes (5.6 percent), someone skipped meals or went without food because there was not enough and no money to buy more. In Kansas, the rates of food insecurity were even higher -- 15.9 percent of households experienced food insecurity, and in 6.4 percent of households someone went without food [(4)]. For many food-insecure families, concerns about affordability and being able to obtain enough food may take precedence over the nutritional quality of the foods that they eat.

Access to healthy foods may also be constrained by a limited availability of retail stores that offer healthy food options. In recent years, researchers have coined the term “food deserts” to describe geographic locations that lack adequate access to healthy food retail options. Although methods for defining and identifying food desert locations vary, the widely-accepted definition promulgated by the U.S. Department of Agriculture is a census tract where a substantial share of residents are low-income

and have low levels of access to a grocery store or healthy, affordable food retail outlet. Low income is defined by a poverty rate of 20 percent or higher, or a median family income that less than or equal to 80 percent of the area's median family income. Low access is defined by at least 500 people or at least one-third of a metropolitan census tract's population living more than one mile form a supermarket or large grocery store, or more than 10 miles in rural tracts [5]. In 2010, more than 236,000 Kansans (8.1 percent of the state's population) lived in areas that met this definition of a food desert [6].

The Complexity of Food Choices

In addition to the affordability and availability of healthy food options, many other individual and environmental factors influence eating choices. Those include personal factors such as taste, familiarity, knowledge and culture; and external or environmental factors such as availability, price, time constraints and marketing (Figure 1) [7]. While personal influences such as taste may be difficult to change, environmental influences such as availability, price, labeling, marketing and contextual influences may be easier to modify and have been shown to exert significant impact on the eating behaviors of individuals [7] [8] [9] [10].



Source: Isobel R. Contento, *Nutrition Education*, 2007

Figure 1. Factors that Influence Eating Behaviors

Concept of a Food System

Over the last couple of decades, awareness and understanding of the ways in which a food environment may influence eating behaviors of persons living within it have increased tremendously. Today, it is widely recognized by public health practitioners that changes in a food environment may be effectively used to support and encourage healthier eating choices, and consequently to improve health [(11)]. Building and maintaining community-level food environments that provide all community residents with ready access to healthy food options has become a primary goal of many local food coalitions and food policy councils.

Viewing the food environment as a system is a useful framework for studying the various components and identifying gaps or opportunities for positive change. At a basic conceptual level, a food system includes all processes and infrastructure involved in feeding a population: growing, harvesting, processing, packaging, transporting, consumption, and disposal of food and food-related items. It also includes the inputs needed and outputs generated at each of these steps. A food system operates within and is influenced by social, political, economic and environmental contexts. It also requires natural resources to support food production, and human resources that provide labor, research and education.

Numerous models illustrating food systems have been developed. Two examples, one basic and a more complex one that includes external support systems are shown below. While the concept of a food system may be applied at any level of geography including national or global, the term “community food system” usually implies focus on a food system with a smaller geographic boundary - often a defined local or regional area.

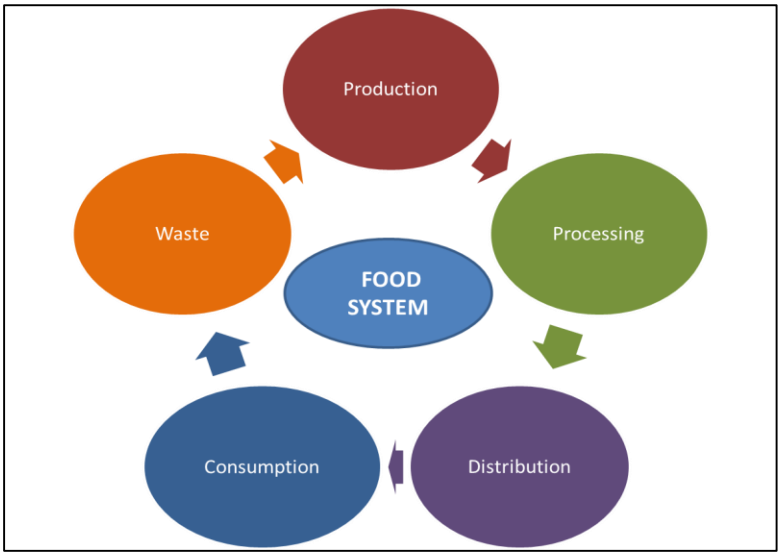


Figure 2. Basic Elements of a Food System

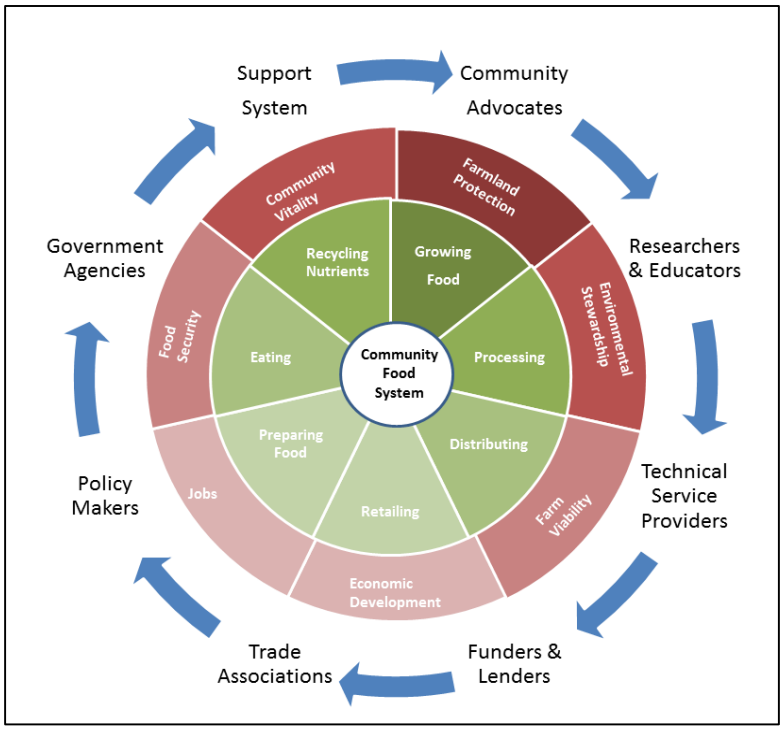


Figure 3. Oregon Food Bank Food System Model

Importance of the Local Food System -Why it matters

In this era of global commerce and trade, one might question why there are renewed and growing interests in local food systems. Without doubt, the global food system does offer advantages - many consumers have become accustomed to the convenience of being able to buy fresh strawberries in January or oranges in July when they could not be produced locally at that time of the year. Foods are routinely shipped around the globe, offering increased variety and erasing the boundaries of growing seasons. With that convenience, however, comes tradeoffs that some have begun to question as they seek to re-build and strengthen robust local food systems. A number of benefits of strong local food systems are often cited:

- **Benefits to local food producers** – Farmers and producers who sell their products through traditional large markets retain only a small percentage of the price that end consumers eventually pay for that food. In 2016, the National Farmers Union estimated that farmers and ranchers received only 17.4 cents of every food dollar spent by American consumers [(12)]. When farmers and producers are able to sell more of their product directly to consumers, they retain a larger share of the food dollar by eliminating the middle-man costs associated with processing, wholesaling, distribution and retailing.
- **Benefits to the local economy** – When farm products are sold primarily to distant markets, little of the money generated from sales is retained and recycled through the local economy. Studies have found that money generated from local sales of farm products is more likely to be retained in the local economy, and recycle through the community more times, generating additional economic activity and benefit to the community [(13)].
- **Reduced energy consumption** – By some estimates, the items on grocery store shelves in the U.S. have traveled an average of 1,500 miles from their point of origin [(14)]. Locally-produced foods, by definition, travel fewer miles from their source of origin to the end consumer, reducing the fuel consumption associated with transporting food long distances. Differences between local and non-local foods in terms of energy use associated with production are less clear and may not always be lower for locally-produced foods.
- **Improved freshness and nutritional content of foods** – By shortening the time between harvest and food consumption, locally-produced foods are often fresher, and may have less loss of nutrient values than foods that have been transported long distances or held in storage for longer periods of time before reaching consumers' tables.
- **Re-establishing a personal connection between consumers and food** – Locally-produced foods offer consumers increased opportunities to learn about the farmers and farms that produced those foods, thus improving consumer awareness and appreciation for that the food that they consume. Community members may form stronger relationships and loyalties to the community through working together to build local food systems [(13)].
- **Positive changes in eating behaviors** – Although research evidence to date is limited, results from some studies suggest that increased levels of direct farm sales are associated with lower levels of mortality and obesity [(15)] [(16)]. Other studies suggest that participation in community gardening or home gardening is associated with increased levels of fruit and vegetable consumption [(17)] [(18)] [(19)].

Food System Assessments

Food system assessment is an important first step toward understanding the local food system and identifying opportunities for strengthening and enhancing the system. Community food assessments (CFAs) may also serve as a starting point for building relationships and beginning conversations among diverse community members and stakeholder groups about the local food system and how they would like to see it grow or change.

There are many ways to conduct a food system assessment, and it is likely that each community food assessment will be unique and tailored to community needs, interests, goals and available time and resources. Some communities may wish to conduct a comprehensive study which includes all aspects of their food system, while others may choose to focus on only selected components. While the scope and specific content of community food assessments may vary, some general concepts are likely to apply to most assessments:

- The Assessment should focus on a systems-level perspective, considering the movement of food into, through and out of the community.
- The inclusion of multiple data sources and methods of collection will help to provide a more complete and comprehensive understanding of the community's food system assets, gaps, opportunities and challenges. Data may include both existing (secondary) data sources and (primary) collection of new community-specific data, and may include both quantitative (reports, studies, etc.) and qualitative (focus groups, interviews) data and information.
- Involvement of community members and stakeholders in the assessment process is also important. Perspectives of community members may reveal important gaps or opportunities in the local food system, and the inclusion of local voices and stories can help to elevate the attention drawn to what might otherwise be viewed as a data-heavy and dull report.
- Although it may be desirable or necessary to contract portions of the data collection or analysis to external parties with specialized skills or knowledge, community representatives should be involved throughout the assessment process. External contractors or consultants do not have direct knowledge of the community, and may be viewed as an "outsider" by locals. It will likely be easier for community representatives to establish trust and credibility for the food assessment, and to engage community members in assessment data collection efforts (Figure 4).

Community Food Assessments should be tailored to the needs and interests of the local food policy council and community stakeholders, and may take many forms and vary in scope.

Community Team Members	External Consultant
Possible benefits: • *Familiar with the community, and local issues* • *Easier to establish trust, legitimacy to the process* • *Ability to enlist community participation*	***Possible benefits:*** • *Unbiased, more likely to be objective* • *Able to ask the "tough" questions, less likely to assume answers* • *Can bring and share examples and experiences from other communities*
Possible challenges: • *May be less objective* • *May assume rather than ask questions* • *Personal history may influence the process* • *May be too close to the issues*	***Possible challenges:*** • *Not familiar with the community* • *Does not have established relationships* • *Seen as an "outsider" – possible trust issues* • *Distance and detachment*

Figure 4. Trade-offs Between Internal and External Involvement in the Assessment

Data for the food assessment may be drawn from a wide array of resources and methods. Data on many measures of interest may be available from existing data resources (see Secondary Data Resources section). Community-specific data may be more difficult to find, and will in some cases need to be collected by CFA team members. New data and information collected from within the community through methods such as surveys, interviews, focus groups and environmental scans can provide help to fill information gaps, provide a local context, and capture stories and quotes that make the report more complete and compelling.

In summary, the Community Food Assessments should be tailored to the needs and interests of the local food policy council and community stakeholders, and may take many forms and vary in scope. Although the process may seem daunting at first, when the assessment process is broken down into manageable steps it is less overwhelming.

Difference from a Community Health Assessment

One frequently-asked question is how a Community Food Assessment is different from a Community Health Assessment (CHA) or Community Health Needs Assessment (CHNA). In recent years, CHAs and CHNAs have been conducted by many local public health departments and hospitals in response to new voluntary accreditation standards for public health agencies and new government requirements imposed upon non-profit hospitals. CHAs and CHNAs are similar to Community Food Assessments in concept – they all gather and assess data from a variety of sources to look at a selected set of measures within a community. Many CHAs and CHNAs include some measures that relate to access to healthy foods or dietary behaviors, but most also include many other measures of health that are not directly related to the food system. A Community Food Assessment focuses solely

on the availability and flow of food within a community based system, and usually includes a more in-depth assessment of measures related to how food moves through the community. Figure 5. (below) Provides examples of measures that may overlap or be unique to either a Community Health Assessment or a Community Food Assessment.

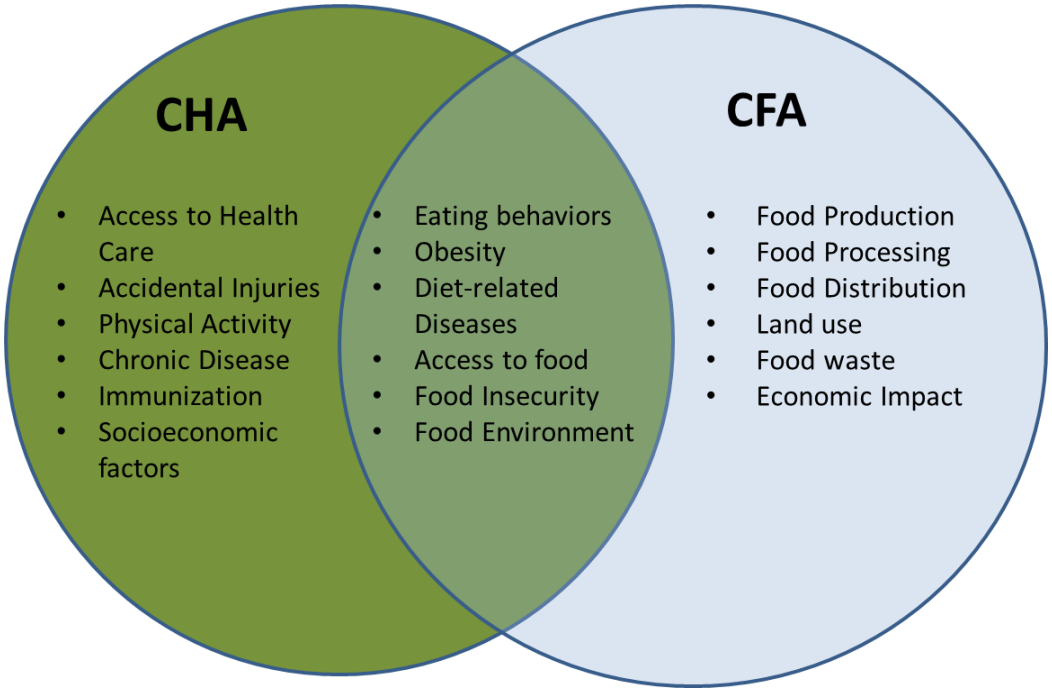


Figure 5. Community Health Assessment vs. Community Food Assessment

First Steps: Planning the Food Assessment

There are some key considerations and questions that should be answered prior to beginning a Food System Assessment. They include:

Define the purpose of the CFA and possible audiences – Before embarking on a Community Food Assessment, it is important to identify the reasons why the assessment is being undertaken, and what the goals are. Consider how you anticipate that the results will be utilized, and by whom. While assessment results may be invaluable to a local Food Policy Council in understanding the community food system and identifying its strengths and gaps, the results may also be of interest to policymakers and the general public, and may be useful in generating policymaker or constituent support for change.

Establish the CFA team and roles – Who will be responsible for coordinating the food system assessment, and who will assist? What roles will each person carry out? Does the team have the

skills, capacity and time to conduct the assessment on its own, or will external help be needed? If so, who might be available and qualified to assist?

Define the "community" of interest - How will "community" be defined for the purposes of the assessment? In some cases, the community of interest may be defined as the area where the group commissioning the assessment has authority or jurisdiction (such as a town or county). If the goal is to take a broad look at all locally-produced foods that supply the community, then it may be appropriate to include nearby or neighboring areas where food is produced. Definitions of "locally-produced" foods vary widely, typically from within 100 miles, to within 400 miles (the USDA definition), to within the boundaries of a state.

Identify the scope of interest, food system sectors to be included – Which aspects of the community food system is the food policy council or community coalition most interested in working on? Which are they most likely to be able to impact? Are there any that are clearly outside of its defined scope of authority or mission?

Identify key stakeholder groups whose input should be solicited – Are there local businesses, food producers, health professionals or other community stakeholder groups who could provide important perspective on the current operations, strengths and weaknesses of the local food system?

Identify appropriate indicators or measures and data sources – What measures or indicators will be used to assess the community food system? Are there existing data sources that can be accessed, or will new data need to be collected?

Determine data collection methods – If new (primary) data is to be collected, what methods will be used? Are existing data collection instruments available, or will a new one need to be developed? Examples of primary data collection might include evaluation of healthy food availability in local food retail establishments, surveys of community member perceptions and attitudes, focus groups with select groups of community members, or structured interviews with key stakeholders in the community.

Estimate timeline and resources needed – Answering the preceding questions should help in estimating a reasonable timeline and costs associated with completion of the Community Food Assessment. If it is anticipated that external help or additional financial support will be needed, how might they be secured?

Plan for dissemination of results – Consider how key findings from the Community Food Assessment will be shared and disseminated beyond the immediate assessment team and the food council. Is there a community event or gathering that would be an appropriate opportunity for public dissemination? Are there local media channels that might be interested in publishing key findings from the Assessment? Will sharing be informational only, or will there be an 'ask' of policymakers, community members or funders? Planning for dissemination from the beginning of the assessment process will help to ensure that relevant information is captured and communicated in ways that are well-suited for the intended audience(s).

Selecting Measures and Indicators

After the scope and topical areas to be included in the Community Food Assessment have been decided, it is time to begin considering the specific measures or indicators that would be relevant to the topics of interest and would help to provide an enhanced understanding of the community's food system's strengths and gaps. The list of possible indicators is almost infinitely long, and the challenge quickly becomes to select a reasonable number of measures that are manageable and will provide a sufficiently complete view of the food system without selecting so many that the assessment process becomes unmanageable or the resulting reports become so data-heavy that few people have the stamina required to read and digest them.

A number of examples of food systems measures are included below. This list is meant to provide examples and stimulate thinking, but not to be an exhaustive or all-inclusive list of possible measures. Additional lists of measures and possible data sources can be found in the *Additional Resources* section of this document.

Examples of Possible Food System Measures

- **Food production capacity**
  - Number of farms, land in farms
  - Land use classifications and policies, zoning restrictions
  - Availability of land with soil quality suitable for agricultural production
  - Water availability
  - Climate conditions, seasonality constraints
  - Availability of skilled labor
- **Local food production**
  - Number of farms
  - Acres in production
  - Volumes of various types of crops and livestock harvested or sold
  - Direct sales of locally-produced food to consumers of local institutions or retail outlets
  - Home and community gardening
- **Food processing and distribution capacity**
  - Existing food processing businesses
  - Existing food distribution or warehouse facilities
  - Availability of commercial kitchens
  - Meat slaughter and processing facilities
- **Retail food environment**
  - Density and locations of grocery stores, specialty stores, restaurants, fast food , convenience stores

- Geographic areas meeting the definition of Food Deserts
- Retail food establishments that accept SNAP or WIC benefits
- Availability of healthy food options in retail settings
- Variability of food prices within the community
- Availability and location of Farmers' Markets

- **Food insecurity and hunger**
  - Overall rates of food insecurity
  - Food insecurity rates among children
  - Participation in food assistance programs
  - Availability and capacity of food pantries and emergency meal programs

- **Food consumption and behaviors**
  - Fruit and vegetable consumption
  - Total food expenditures
  - Expenditures on various types of foods – fruits & vegetables, meats, dairy, soda pop
  - Food eaten away from home vs. food eaten at home

- **Nutrition-related health conditions**
  - Rates of obesity and overweight
  - Rates of diabetes
  - Rates of hypertension or cardiovascular disease

- **Food waste**
  - Plate waste in school lunchrooms
  - Food waste from restaurants
  - Food waste from retail stores

- **Economic impacts of the local food system**
  - Total food expenditures within the community
  - Direct sales of locally-produced foods, compared to total food expenditures
  - SNAP dollars brought into the community, and the overall economic impact
  - Estimates of the economic impacts of agriculture
  - Employment/ jobs in food-sector businesses

- **Community member perspectives on the food system**
  - Access to healthy food options
  - Satisfaction with current situation
  - Barriers to healthy eating
  - Ideas for improvement
  - Community readiness and support for change

Identifying Data Sources and Data Collection Methods

Once the initial wish list of desired indicators and measures has been identified, the next step is to determine whether or not there is an existing and accessible source of data for each measure. For those where a data source is available, it may be helpful to make notes documenting the data resources and where they can be accessed. For those measures where no existing data source is available, consideration should be given to how data could be collected within the community, and whether or not the measure is important enough to justify the time and expense that data collection would entail.

Secondary (Existing) Data Resources

There are a number of publicly-available data systems and resources that include data related to food systems. These data resources provide a good starting point for a Community Food Assessment. Brief descriptions of several are included here. More detail on specific measures and data sources can be found in the ***Additional Resources*** section of this document.

Community Commons (http://assessment.communitycommons.org/DataReport/)

This user-friendly data system, hosted by Missouri University CARES (Center for Applied Research and Environmental Systems) and IP2 (Institute for People, Place and Possibility), includes a wide array of measures related to population and community health, including many related to local food environments. Most measures are available at the county level; some extend to census-tract-level. Disparity indexes are included for many measures. A number of pre-defined report formats are available, including a Food Environment report. An interactive mapping feature allows users to generate customized maps which overlay multiple measures. Underlying data, maps and reports generated within the Community Commons system may be saved for future use, printed, or exported.

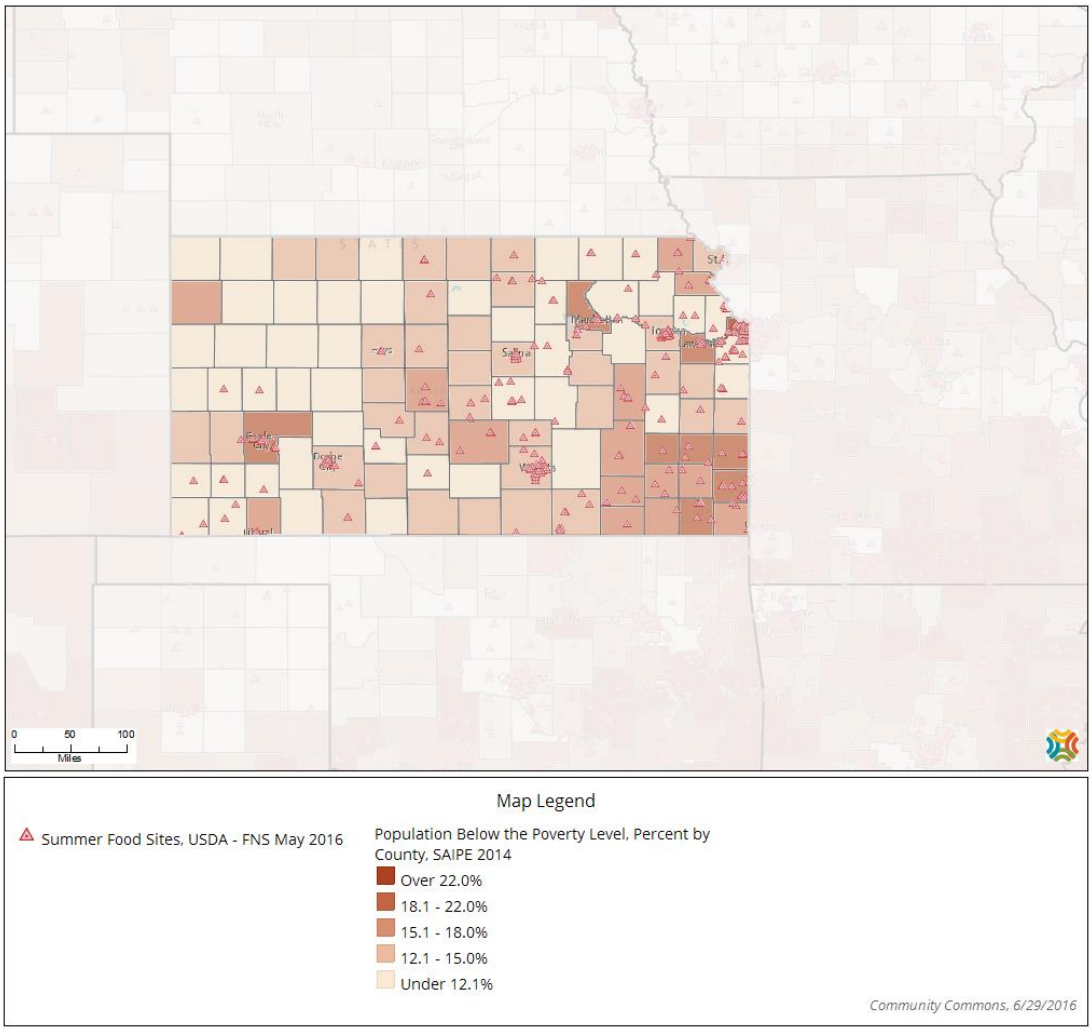


Figure 6 Community Commons - Map of Summer Meal Sites in Kansas vs. Poverty Rates, 2016

Feeding America, Map the Meal Gap *(http://tinyurl.com/mapthemeal)*

This website provides annual estimates of food insecurity by county and congressional district. State-level estimates from the annual Current Population Survey Food Security Supplement are combined with local demographic data in a statistical modeling process to produce local estimates. Estimates of overall food insecurity rates, and rates of food insecurity among children are available. In addition, food insecurity estimates are broken out by household income level to identify the number of food-insecure households which would or would not be eligible for federally-sponsored food assistance programs on the basis of income. Data on average meal costs, and the amount of money that would be needed to meet food needs are also provided.

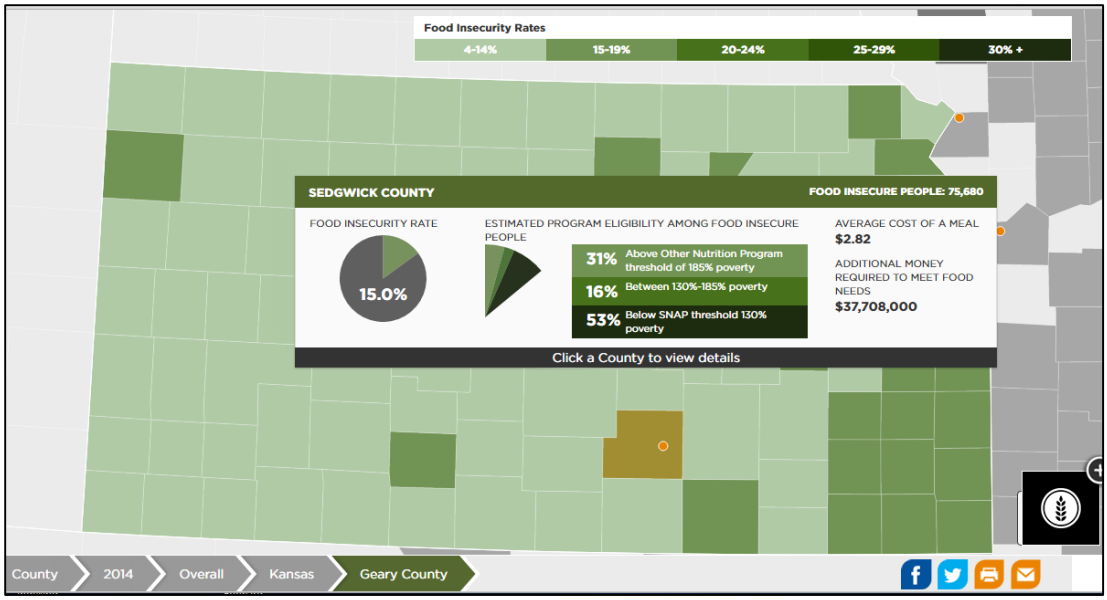


Figure 7. Map the Meal Gap - Food Insecurity estimates for Sedgwick County.

USDA Agricultural Census (http://www.agcensus.usda.gov/)

Every five years, the U.S. Department of Agriculture conducts a census of farming and ranching operations, collecting an extensive array of information about farms and farming practices across the nation. Data are tabulated at the national, state, county and congressional district levels, although county-level information is sometimes suppressed to prevent identification of information about specific farms where numbers are small. Data collected include:

- Numbers and sizes of farms
- Characteristics of farm owners and principle operators
- Types and volumes of crops and livestock produced
- Value of agricultural sales
- Farm expenses and net income
- Farm subsidies and other government payments
- Farms engaging in direct sales, community-supported agriculture programs, agri-tourism

The most recent agricultural census data collection was in 2012.

Figure 8. USDA Census of Agriculture website

USDA Food Environment Atlas (http://tinyurl.com/foodatlas)

This data system includes more than 200 measures related to community food environments, in three broad categories:

- **Community Characteristics -** Indicators of community characteristics that might influence the food environment, such as: demographic composition; income and poverty; population loss; metro-nonmetro status; natural amenities; and recreation and fitness centers.
- **Health and Well-Being -** Indicators of the community's success in maintaining healthy diets, such as: food insecurity; diabetes and obesity rates; and physical activity levels.
- **Food Choices -** Indicators of the community's access to and acquisition of healthy, affordable food, such as: access and proximity to a grocery store; number of food stores and restaurants; expenditures on fast foods; food and nutrition assistance program participation; food prices; food taxes; and availability of local foods.

The year and geographic level of the indicators vary, based upon data availability. Some indicators are at the county level while others are at the State or regional level. The most recent county-level data are used whenever possible.

Maps displaying geographic variation in single indicators can be generated and printed or downloaded. Data can be downloaded and exported in an Excel table format.

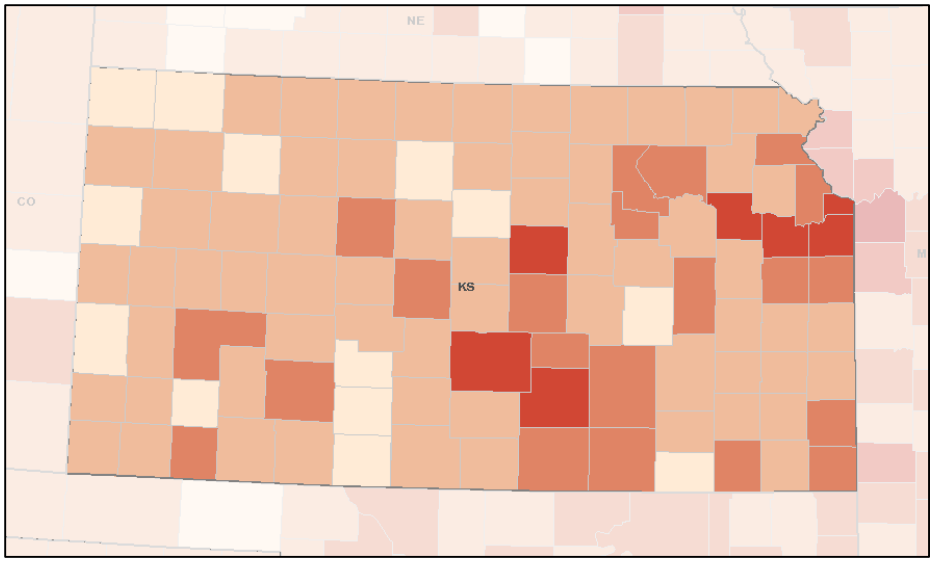


Figure 9. USDA Food Environment Atlas –Map of Fast Food Restaurant Density, 2012

USDA Food Access Research Atlas *(http://tinyurl.com/lwvbxwb)*

This data system, formerly titled the '*USDA Food Desert Locator*,' incudes census-tract-level measures of population income and proximity to grocery stores and supermarkets. The mapping feature can be used to generate downloadable maps of census tracts meeting any of several definitions as 'food deserts'. Census-tract-level data can be downloaded for additional analysis.

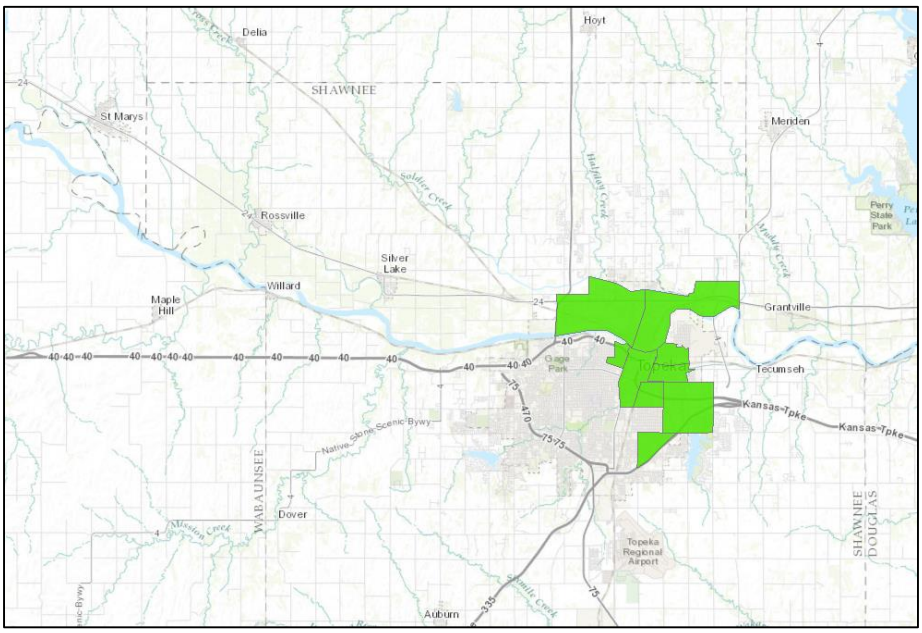


Figure 10. USDA Food Access Research Atlas – Map of Food Deserts (low income, low access) in Shawnee County

Primary Data Collection – Collecting Your Own Community-Specific Data

Although existing data resources offer a wealth of information about a community's food system, it is likely that there will still be questions of interest that cannot be answered adequately with available data. For these questions, community food coalitions may choose to collect additional data about the local food environment or community members' perceptions of the local food system. There are number of possible approaches to collecting community-level data, which could include site visits to food retail outlets, surveys of community members, focus groups or interviews with selected representatives of the community,

Surveys, interviews, focus groups, and community meetings are all ways to collect information about your community members' perceptions of the local food system. Some can be more expensive (i.e. professionally-conducted surveys), but many can be accomplished locally with only the time and effort of local community members or volunteers. By engaging community voices and collecting stories of your community members' experiences in the food system, much can be learned about the challenges people face in accessing healthy food, and their ideas for improving the community food system.

A Few Words of Caution

While assessment team members may be eager to get started with interviews and surveys of community members or other key food systems stakeholders, it is important to understand that primary data collection, analysis and interpretation of the data that are collected can be labor-intensive and costly. Furthermore, the results may be biased and not truly representative of the community if careful attention is not given to the methods employed in data collection. That said, primary data collection offers the opportunity to gain a deeper understanding of the local community context and the perceptions of community residents. With a little careful attention to the data collection methods, the resulting stories and context can be utilized to enrich what might otherwise be a dry and boring assessment report and make it more engaging for community stakeholders.

Common approaches to primary data collection in food system assessment are highlighted in this section, with links to additional information and resources.

Surveys

Surveys are a popular method for soliciting information and opinions from community members. Compared to other methods of data collection such as interviews and focus groups, surveys offer the advantage of being able to gather data from larger numbers of people with relatively little effort and expense. Surveys ask questions in a uniform manner, with each survey participant being asked the same questions in the same way. Survey questions are usually written. Surveys may be distributed and administered through a variety of methods, including paper questionnaires distributed by mail or fax, emails, or website-based survey forms. They may vary in length from one or two questions to several pages, although very lengthy surveys are likely to discourage participation and may result in low response rates. Questions are usually yes/no, multiple choice or rating scale formats; open-ended free text response questions are more time-consuming and difficult for the survey participant, and more time-

consuming to analyze and summarize the results accurately. Surveys are often anonymous to allow the survey respondent to answer honestly without fear of being identified or suffering adverse consequences. Usually, it is desirable to structure the survey sample in a manner such that the survey results may be considered representative of the broader community or the target group of interest (see more on sampling considerations below).

Guidelines for writing survey questions:

- *Begin the survey with a brief introduction explaining who is conducting the survey, why it is important, and how the results will be used.*
- *Place easier questions first; demographic questions and sensitive questions such as household income should be asked at the end of the survey.*
- *Address sensitive issues as discreetly and sensitively as possible.*
- *Avoid words that provoke bias or emotional responses.*
- *Use a logical order and place similar questions together.*
- *Use single questions; avoid combining multiple concepts into a single survey item.*
- *Question formats should be mostly yes/no, multiple choice or rating scales.*
- *Keep the survey brief. Focus on questions of high importance, and reduce or eliminate others that might be "interesting" or "nice to know".*

Before beginning to write or design survey questions, it is important to consider and clearly define the learning objectives of the survey, and the key concepts that are of interest. Once those questions are answered, the work of selecting or creating survey questions can begin. Focus on making sure that critical information related to the learning objectives is captured by the survey questions, and eliminate questions that are not essential or directly related to the primary purpose of the survey. It is always tempting to add questions because the answers might be 'interesting' or 'nice to know,' but the overall length of the survey may soon become problematic. Long surveys frequently deter participation, and may result in lowered response rates or increased numbers of partially-completed surveys.

In many cases, it is not necessary to invent or design new survey questions. Often, it is possible to find existing survey instruments related to the topic of interest, and questions from those surveys may be included in your community survey. Questions from existing surveys offer the advantage of having been tested, and in some cases, formally evaluated for validity and reliability. Additionally, asking the same questions that have been used in other community surveys may allow for comparison of your results to those from other communities.

Once a preliminary list of questions has been identified, consideration should be given to the wording and format of each question. Questions should be clear and concise. Each survey question should ask about only one concept - avoid combining multiple questions into a single item, such as, "how satisfied are you with the variety and prices of food offered at the local farmers' market?" (In this example, it would be more appropriate to separate it to two questions, one asking about variety and the other about price.) Questions should be asked in a neutral way, and not framed so as to lead the respondent to a particular

answer. Wording of questions should be reviewed for clarity, and should avoid abbreviations or jargon that might be unfamiliar to the survey respondent.

Unless the survey is very brief and will be administered to only a small number of respondents, most of the survey questions will probably be formatted in a way that the respondent selects his/her response from an array of predefined choices, such as yes/no, multiple choice or rating scales. Open-ended questions, where the respondent writes or types his/her response in an open text box, offer the advantage of allowing for responses that might not have been anticipated by the survey designers but also place additional burden on the survey respondent and are more time-consuming and challenging to accurately analyze and summarize.

With any survey instrument, it is advisable to test the tool with a small number of individuals prior to full launch of the survey. Preferably, the group of test subjects should include individuals that are similar in terms of education and experience to the intended survey audience. Even if the entire survey instrument has been used previously in other communities, there may be questions where the meaning is unclear or the response choices need to be adjusted for the context of your local community. Testing allows potential problems to be identified and corrected ahead of time, and will help to avoid survey responses that are not usable because of lack of clarity or misunderstanding of the intent of the question.

Sampling Considerations:

Prior to determining the sampling strategy for a survey, it is important to define the target groups or groups about which information is desired. This group, sometimes referred to as the survey "universe", is the group to which one wishes to generalize or make inferences to from the survey results. In community food assessment work, the survey universe of interest may be the entire community, or specific sub-sectors such as small-scale farmers or low-income residents. Once that decision has been made, consideration can be given to best methods for reaching representative group members. Three options for designing the survey sample are generally available – Census, probability sampling, or non-probability samples.

Census – In a census, every member of the target group is contacted and solicited for participation. This approach provides the highest likelihood that results will be representative of the entire group, but may be impractical if the group is large or if there are no available lists or rosters of group members. If the target group is small and members are identifiable, it may be feasible to survey each group member.

Sampling – In larger groups, or situations where group membership rosters are not available, sampling is a more common survey strategy. In simple terms, sampling is a strategy used to determine which individuals from within a target group will be offered the opportunity to participate in the survey. Sampling may be conducted using **statistical (probability)** approaches such as a random sample or stratified sample, or may utilize other **non-probability sampling** approaches (often termed "convenience samples") to reaching community members of interest. Probability samples offer higher likelihood that the survey respondents will be selected uniformly across the population of interest, but require that there be a complete list or roster of eligible community members from which to draw the sample selection. Results from surveys utilizing non-probability samples are less likely to be highly representative of the survey target group as a whole, but may still be useful in eliciting community member perspectives and stories.

Common Survey Sampling Methods

Sampling Method	*Possible Sampling Approaches*	*Description*	*Generalizability* (Highest → Lowest)
Census	*Survey* every *member of the target group*	*A census is a complete listing or enumeration of all members within the target population*	
Probability Samples	*Random*	*A statistical method is used to randomly select a sample of survey participants from within the target population*	
	Stratified	*A specific number of survey participants are randomly selected in each of several defined sub-population groups*	
Non-probability Samples	*Quota*	*Establishing quotas, or minimum number of completed surveys for specific population groups of interest. Quotas that reflect the composition of the population may help to avoid some bias.*	
	Convenience	*Selects survey participants who are easily accessible, such as shoppers at a grocery store or patrons at other public venues, soliciting participation by posting signs or media notices*	
	Snowball	*Asking one participant who is knowledgeable on the topic of interest to provide suggestions for other people who should be included in the survey, then surveying them*	

Sample Size – How Many is Enough?

Most surveys rely upon some method of sampling participants from a larger population of interest. To achieve survey results that are truly representative of the population, one of two conditions must be met. Either there must be an equal chance that every member of the population being surveyed will be selected in the sample, and/or the sample size must be relatively large. In general, the larger the sample size, the more likely that the survey results will be an accurate reflection of the population.

One of the popular internet-based survey systems (Survey Monkey) offers the following chart as a simple guide to determining sample size:

Respondents Needed at Error of ±3%, ±5%, & ±10%			
Population	**±3%**	**±5%**	**±10%**
500	345	220	80
1,000	525	285	90
3,000	810	350	100
5,000	910	370	100
10,000	1,000	385	100
100,000	1,100	400	100
1,000,000	1,100	400	100
10,000,000	1,110	400	100

Source: SurveyMonkey website, https://www.surveymonkey.com/blog/2011/09/15/how-many-people-do-i-need-to-take-my-survey

Alternatively, the *Survey System* from Creative Research Systems provides a relatively simple Sample Size Calculator, available at http://www.surveysystem.com/sscalc.htm .

Note: *It is important to understand that these sample size calculations represent the number of completed responses, and are applicable only when results are summarized for the entire group of survey responses. If there is a desire to break down results by various sub-groups of respondents, such as age or household income, then larger sample sizes will likely be necessary.*

Modes of survey administration:

Surveys may be administered through a variety of methods, including in-person interviews, telephone interviews, paper data collection instruments or online survey systems. Each approach offers advantages and disadvantages, as summarized in the table below. Selecting the most appropriate mode of administration may be based upon a number of considerations, including the anticipated number of completed surveys, the length of the survey, availability of staff time for administering the survey and data entry of responses, availability and skill of staff for analyzing and summarizing the results, and the possible desire to provide anonymity to survey respondents.

Paper-and-pencil surveys offer ease of distribution, and allow respondents to complete the survey when it is convenient for them to do so. If the survey is to be distributed only to pre-selected recipients, targeted mailings of the survey questionnaire may be used to accomplish that goal. If the survey is to be distributed through convenience sampling, survey forms might be left at public locations within the community, such as grocery stores or libraries.

Internet-based surveys are also relatively simple to design and administer, and offer the added convenience of capturing the response data as surveys are completed so that there is not a need for staff to manually enter the data into an electronic form for analysis. Many on-line survey options also provide the capability to generate basic summary reports of the survey responses. If the survey is to be distributed only to a specific group of individuals, most survey systems allow distribution to a list of email addresses. If the survey will not employ a probability sampling method, links to the online survey may be easily distributed through websites and public media venues.

Method	Advantages	Disadvantages
Face-to-face	• Personal interaction with community members • Real-time responses	• Labor-intensive • May inhibit honest responses to sensitive questions • May require data entry of responses
Telephone	Real-time responses	• Labor-intensive • Data entry of responses, or Computer-assisted Telephone Interviewing (CATI) programming required
Paper surveys - mailed	• Convenient for respondents • Ease of designing questionnaire	• Requires a list of mailing addresses • Expense of printing & postage (include stamped return envelope)
Paper surveys – handed out	• Ease of designing questionnaire • Ease of distribution in public venues, meetings	• Data entry of responses • Printing expenses • Inability to select or control who responds
Electronic surveys – email distribution	• Convenient for respondents • Data captured directly, no data entry • Can target specific individuals for participation • Basic analytic features included in survey system	• Requires a list of email addresses • May need subscription to online survey software
Electronic surveys – web-based	• Data captured directly, no data entry • Basic analytic features included in survey system	• Inability to select or control who responds • May need paid subscription to online survey software

A more detailed discussion of considerations in conducting a survey is available from the University of Kansas, Workgroup for Community Health and Development's Community Toolbox, http://ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources/conduct-surveys/main .

Focus Groups

Focus groups are small-group discussions, led by a trained facilitator, for the purpose of exploring participant opinions and perspectives about a specific, focused discussion topic. Focus group participant selection and a scripted list of questions to guide the discussion are carefully planned in advance to create an atmosphere in which participants are comfortable talking openly and expressing their opinions. In contrast to questions that might be asked on a survey, questions posed to focus group participants are generally open-ended and broad, intended to generate discussion and elicit participation by all members of the group.

Focus groups are useful for gaining an understanding of what people are really thinking about an issue, and may help to identify important perspectives or concerns that researchers had not previously considered. They frequently generate a lot of information in a relatively short amount of time, but because the information is all qualitative it may be more difficult to analyze and summarize.

More information about conducting focus groups is available from the University of Kansas, Workgroup for Community Health and Development, Community Toolbox website, http://ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources/conduct-focus-groups/main .

Key Informant Interviews

At times, it may be important to solicit information or opinions from specific stakeholders or experts within the community. In these situations, interviewing may be the most effective approach. Interviews are sometimes described as "a conversation with a purpose." [20] Interviews may be structured (with a list of questions scripted in advance), semi-structured or more casual in nature. In comparison with surveys, interviews offer the advantage of a more flexible and free-flowing conversation, greater depth in the subject exploration, and the opportunity to strategically solicit input from specific community leaders or experts. At the same time, interviews may become time-consuming, and the qualitative information gathered may be more difficult to analyze and summarize accurately.

Additional information and tips on conducting interviews may be found on the University of Kansas Workgroup for Community Health and Development, Community Toolbox website, http://ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources/conduct-interviews/main .

Measuring the Community Food Environment

It goes without saying that community residents will have difficulty maintaining healthy diets if there is not easy access to healthy food within the community. In addition to limited access to healthy foods, an over-abundance of less healthy food options in a community may also contribute to poor dietary habits among community residents. While some secondary data resources attempt to evaluate a community food environment by examining the numbers and locations of various types of food outlets in a community, none include detailed information about the types and quality of foods offered for sale by the outlets. For that information, it is usually necessary to deploy community representatives to physically visit store or restaurant locations and collect the information. A number of tools for objectively measuring the local food environment have been developed and validated, and several are summarized in this section.

Figure 11. Using the NEMS-S Assessment in a Grocery Store

NEMS – Nutrition Environment Measures Survey

The NEMS data collection instruments were first developed in 2004 by researchers at Emory University *(21) (22)* to provide a standardized and quantifiable method for observing and measuring the healthfulness of foods offered for sale in grocery stores and restaurant settings. Since their initial development, the data collection tools have undergone ongoing testing and refinement, and have been used as a data collection method in numerous research studies. Currently, versions of the NEMS tools are available for assessing the food offerings of grocery stores, convenience stores, restaurants and vending operations. More recently, a Farmers' Market audit tool and a new tool to measure community members' perceptions of the local food environment have also been released. The NEMS instruments, data collection protocol, scoring methods, and online training are all available at http://www.med.upenn.edu/nems/index.shtml .

NEAT - Nutrition Environment Assessment Tool

The NEAT instrument is a tool for assessing policies, practices and food offerings in various community setting. The instrument is designed as a comprehensive assessment of the a community food environment, and includes questions about local grocery stores, convenience stores, specialty food stores, farmers' markets, community gardens, educational programs, local media support, schools, worksites and healthcare settings. Currently, participation in the online data collection system is limited to communities in the state of Michigan. A printable version of the assessment tool, and a template for developing a community action plan based upon results from the NEAT assessment process are available at http://mihealthtools.org/neat/.

Slim- by- Design Grocery Store Self-Assessment Scorecard

Researchers at Cornell University's Food and Brand Lab have developed a 10-queston quiz to measure how well a grocery store supports and encourages healthy eating behaviors among its customer base. Results of the assessment may be entered into an online scoring system. The assessment tool is updated annually based upon new research evidence and best practices. The quiz questions are available at http://www.slimbydesign.org/grocery/ .

Food Price Variability - Wichita Wellness Coalition Food Desert Study

In addition to food access concerns related to a lack of grocery stores in some communities, high food prices may also present a barrier to access to healthy foods. In 2013, the Wichita Wellness Coalition conducted a Food Desert Study which looked at both aspects of food access within the city of Wichita – physical availability and price. The study team visited each retail food outlet in the community, and collected price information for each of a list of several specified foods. Results revealed significant variability in prices for comparable food items, with the highest prices often found in under-served or low-income neighborhoods.

The full report from the Wichita food desert study, which includes their data collection instrument, may be downloaded from https://hwcwichita.org/content/upload/files/Wichita%20Food%20Deserts.pdf .

CDC's Healthy Hospital Food and Beverage Environment Scan

To support the creation of healthier hospital environments, the U.S. Centers for Disease Control and Prevention (CDC) has modified the NEMS assessment tools for application in a hospital setting. The instrument assesses foods and beverages offered by hospitals in cafeteria, vending machines and other eating areas.

The tool may be downloaded from http://www.cdc.gov/obesity/hospital-toolkit/pdf/Healthy-Hospital-Food-Beverage-Scan.pdf ; a step-by-step guide for conducting the assessments is available at http://www.cdc.gov/obesity/hospital-toolkit/pdf/healthy-hospital-step-by-step-guide.pdf .

Engaging Community Voices

Involving community members and stakeholders in the food system assessment process offers many benefits, which may include drawing attention to the work of the food council and building community readiness and support for changes to the local food environment. In addition to the previously-discussed focus groups and surveys, two additional examples of community engagement in food assessment work are presented here.

FEAST Events

A concept developed by the Oregon Food Bank, a FEAST event brings together selected groups of community participants to engage in an informed and facilitated discussion about Food, Education and Agriculture in their community, and to begin to work towards Solutions Together that will help to build a healthier, more equitable and resilient local food system [(23).] The FEAST event convenes participants over a meal that celebrates local foods, and engages participants in a facilitated discussion in which they identify existing assets of the local food system and brainstorm to set priorities for their food system. A FEAST event can play an important role in the CFA process by both informing topics included in the CFA and by engaging community members who will ensure that opportunities identified through the CFA process will be acted upon.

More details about the FEAST concept, and how to plan and conduct a FEAST event are available on the Oregon Food Bank website (http://www.oregonfoodbank.org/our-work/building-food-security/community-programs/feast), and from Kansas State University's Rural Grocery Initiative website (http://www.ruralgrocery.org/resources/FEASTtoolkit.html).

Photovoice

A photovoice study is another interesting way to involve community members in the food assessment process, and to see the community food system through their eyes. The concept is simple: volunteers in the photovoice project are provided with cameras (either disposable or inexpensive digital cameras) and training, and are then asked to take photographs within the community setting of scenes that are representative of the study topic. As part of a Community Food Assessment, volunteers might be asked to record pictures of anything related to food in the community. After a specified period of picture-taking, volunteers return the cameras to the project coordinator, and may be interviewed briefly about the meaning or significance of the photos that they took. The images captured through a photovoice project may reveal interesting or surprising perspectives from the point of view of community members who served as photographers and may also be useful in adding local context and relevance to a Food Assessment report.

Figure 12. Hunger Through My Lens Photovoice Project

One example of the photovoice method applied to community food systems is the *Hunger Through My Lens* project that was conducted in the Denver,Colorado area. In that project, a traveling exhibit of photographs representative of hunger

issues was assembled and has been used to stimulate dialogue about hunger issues in the community. Hunger-Free Colorado, the organization that sponsored the *Hunger Through My Lens* project has developed a photovoice toolkit, which is available on their website, at http://hungerthroughmylens.org/resources/photovoice-kit .

Additional information on how to plan and conduct a Photovoice project is available from the University of Kansas' Community Toolbox website (http://ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources/photovoice/main).

Writing the Food Assessment Report

The Community Food Assessment report should summarize the assessment findings in a concise and objective manner that will enable the reader to understand the relevance of the measures that are included, how the data were obtained or collected, and what the results mean. Depending upon the complexity of the Assessment and the anticipated audience(s) for the results, it may be appropriate to develop multiple versions of the report tailored to the different audiences. Members of the local food policy council or CFA team will likely want to review results of the entire assessment. Shorter summary documents that highlight key findings may be more appropriate for policymakers and community audiences.

The report should be organized in a logical manner that is easy for the reader to follow. The use of section headings and a Table of Contents can help to guide the reader through a lengthy document, and will make it easier for all users of the report to refer back to specific findings when needed. The report should be written in plain language, and should avoid the use of jargon. Where terms or abbreviations are used that may not be understood by a reader, definitions or explanations should be provided.

Attention should be given to keeping the report interesting and engaging for the reader. Illustrations such as charts, graphs, maps, info-graphics and photos are all effective ways to lighten up a text-heavy report and can be used to convey the key messages. Bullet points and text boxes are also effective tools for calling attention to key findings or messages. Charts and graphs should be clearly labeled and kept as simple as possible – the reader should not need to have a degree in statistics to understand the graphic.

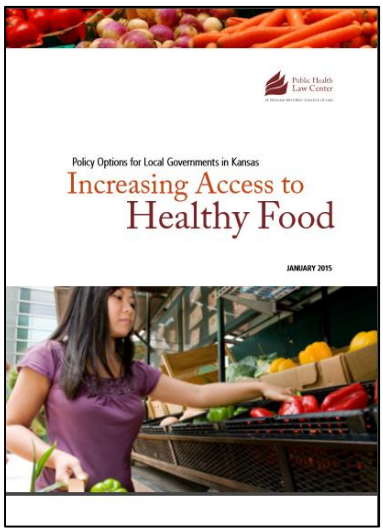
Although the assessment report is likely to be rich with data, the focus of the report should emphasize the uniqueness of the community, and tell the community's story. When possible, the inclusion of quotes, personal stories and photographs from the community will help to personalize the report and make it more relevant to community readers.

Using the Results – From Data to Action

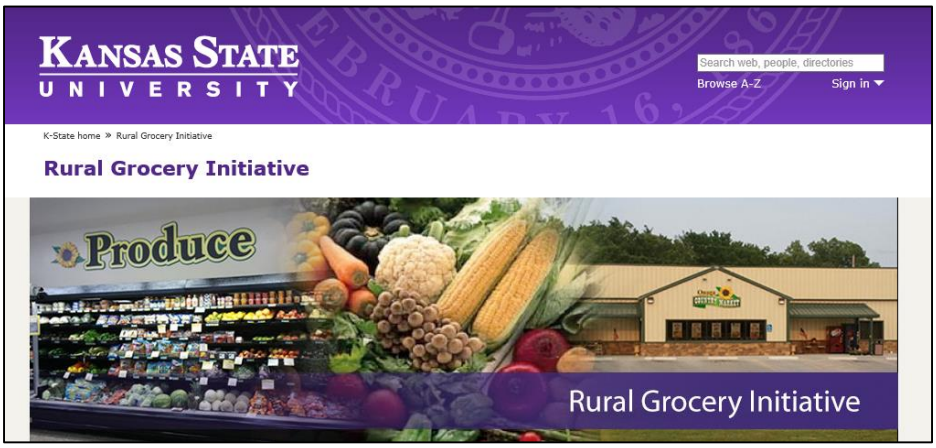
*A*lthough completion of a Community Food Assessment represents a substantial accomplishment and a reason for celebration, the work is not finished when the report is written and disseminated. The report should be viewed as a means to an end, which in this case would be the identification of steps that might be taken to strengthen the community food system and provide all community members with improved opportunities to enjoy healthy diets. The food assessment report should serve as a roadmap that helps to identify community priorities and guide members of the community food council and policymakers toward opportunities for action and solutions. A number of excellent resources are available to provide guidance and examples of how local food councils might translate community food system priorities into action and policies that benefit the community. Two Kansas-specific resources should be of special interest to Food Councils in the state:

1. Under contract with the Kansas Health Foundation, the Public Health Law Center has created a series of Kansas-specific resources related to healthy eating and food policy. One of those resources, *Policy Options for Local Governments in Kansas: Increasing Access to Healthy Food,* discusses an array of possible policy approaches for food councils, ranging from zoning and land banks to food procurement policies and farmers' markets. All are discussed within the context of the Kansas legal and policy-making environment.

   This resource, and others, are available for download from the Public Health Law Center's website, at http://publichealthlawcenter.org/topics/healthy-eating .



2. For the many Kansas communities that face challenges with food deserts and maintaining access to healthy foods in rural or underserved areas, resources in the *Rural Grocery Toolkit* from Kansas State University's Center for Engagement and Community Development offers a collection of useful information and resources to assist communities in recruiting or maintaining grocery stores in communities. The Rural Grocery Toolkit is available at *http://www.ruralgrocery.org/resources/* .



In addition, the following resources are not specific to Kansas, but offer many useful examples and strategies:

- ***Harvard Food Law and Policy Clinic*** *Good Laws, Good Food: Putting State Food Policy to Work for our Communities. (2012). State Toolkit, downloadable at http://www.chlpi.org/projects-and-publications/food-library*

- ***Harvard Food Law and Policy Clinic****. Good Laws, Good Food: Putting Local Food Policy to Work for Our Communities. (2012). Local Toolkit, downloadable at http://www.chlpi.org/projects-and-publications/food-library*

- ***Healthy Food Portal*** *– Searchable database of resources, policies and local initiatives to improve access to grocery stores. http://www.healthyfoodaccess.org/resources/search-by-region*

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23. ***Oregon Food Bank.*** *Conversations Across the Food System: A Guide to Coordinating Grassroots Community Food Assessments. s.l. : Oregon Food Bank, 2013.*

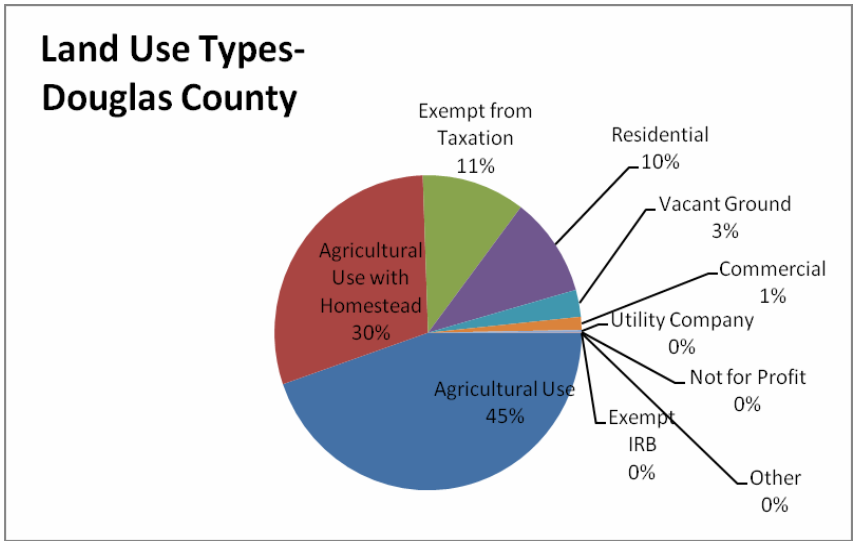
ADDITIONAL RESOURCES

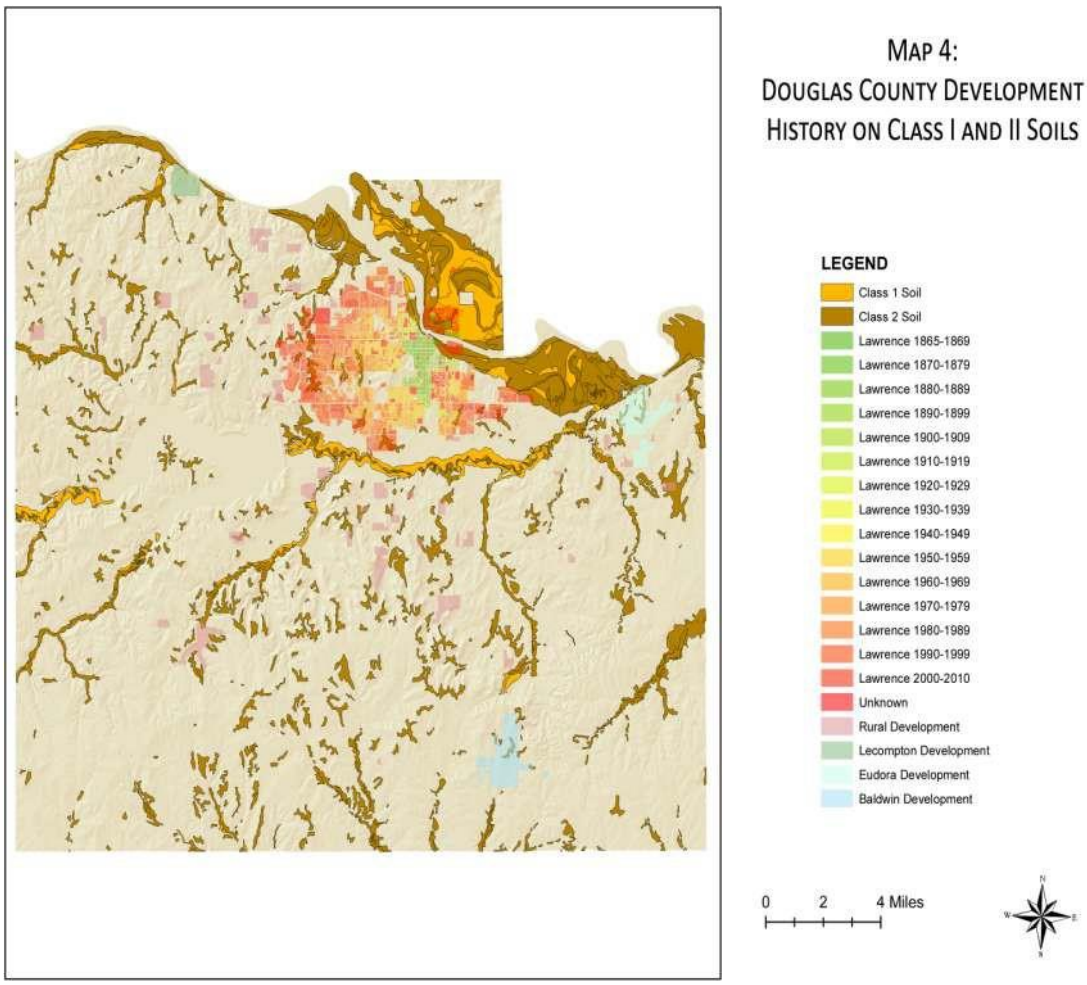
Examples from Local Community Food Assessments

Across the nation, the number of local food policy councils or food coalitions has rapidly grown in recent years, and many of these newly-emerging food councils have completed community food systems assessments and published summary reports of their findings. These reports provide many excellent examples and a fascinating look at the diversity of approaches to food system assessment projects. A few selected examples from food system assessments are highlighted in this report. The purpose of these examples is not to represent the entire reports, but rather, to illustrate the diversity of their content. Many others from across the U.S. may be readily found online by searching the term "food system assessment."

Lawrence-Douglas County Food Policy Council – Initial Food System Assessment

The Lawrence-Douglas County Food Policy Council was the first publicly-appointed, local food council in Kansas. In 2011, they published their first community food assessment report, *Building a Deep-Rooted Local Food System*. The Douglas County assessment looked at all aspects of the local food system, defined as a three-county area in northeastern Kansas. Among the varied food system topics included in the report were land use policies, agricultural production in the region, and an analysis of the gaps between foods that were being grown locally and the amounts and types of foods that would be needed if all community residents ate in accordance with current dietary guidelines.





The full Douglas County report, as well as subsequent studies and reports, is available for download from http://www.douglascountyks.org/fpc/welcome .

Wichita Health and Wellness Coalition - Food Desert Study

In 2013, the Wichita Health and Wellness Coalition conducted on-site surveys of all food retail outlets in the city (grocery stores, convenience stores and other retail food sellers). The study assessed whether or not specific types of healthy foods were offered at each location, and if so, at what price. Geographic mapping analysis was utilized to identify neighborhoods where there was limited access to retail grocery stores, and data from the on-sire store surveys was analyzed to determine variability in the types and prices of foods offered for sale in each type of retail outlet and by zip codes within the community. Results revealed substantial variability within the community in both the availability of healthy food options and the prices at which the foods were being sold.

Price Stability and Variation

Overall, prices varied widely by retail location. For example, while the average price of a dozen eggs is $2.26, the difference between the highest price and the lowest price that eggs are being sold at is $2.85 (high price: $3.85, low price: $1.00). When considering price variation (the highest price an item is being sold for minus the lowest price the same item is being sold for), it is important to interpret the "gap" relative to the average price of the item. For example, while a $0.25 gap for the price of eggs may not seem like much, a $0.25 gap around an item that sells for $1.00 would be considered relatively large. Items that have the most variability include: chicken thighs, green peppers, and whole-wheat pasta.

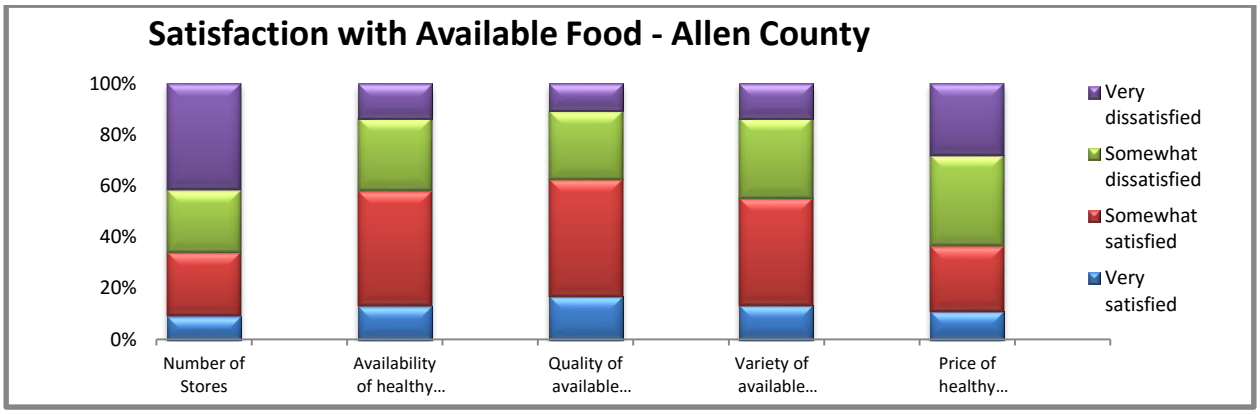
The full report from the Wichita food desert study may be downloaded from https://hwcwichita.org/content/upload/files/Wichita%20Food%20Deserts.pdf .

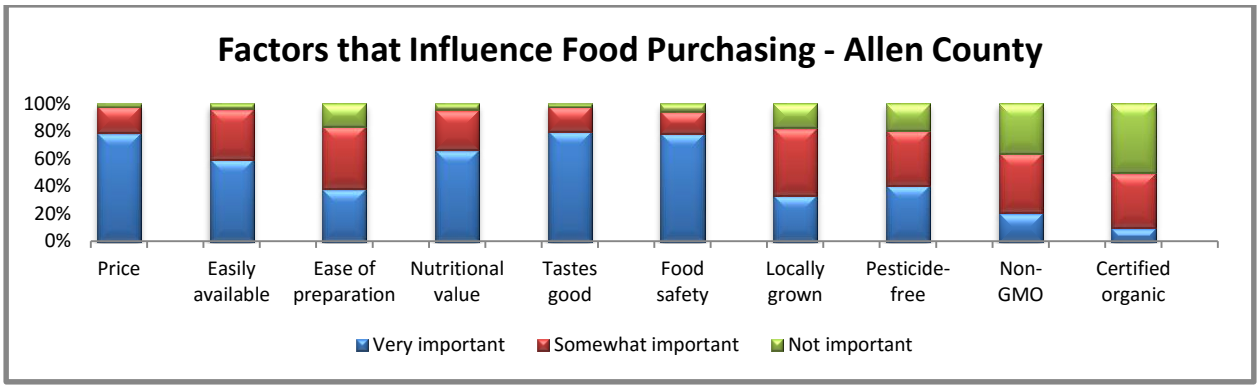
Allen County GROW – Community Food Assessment

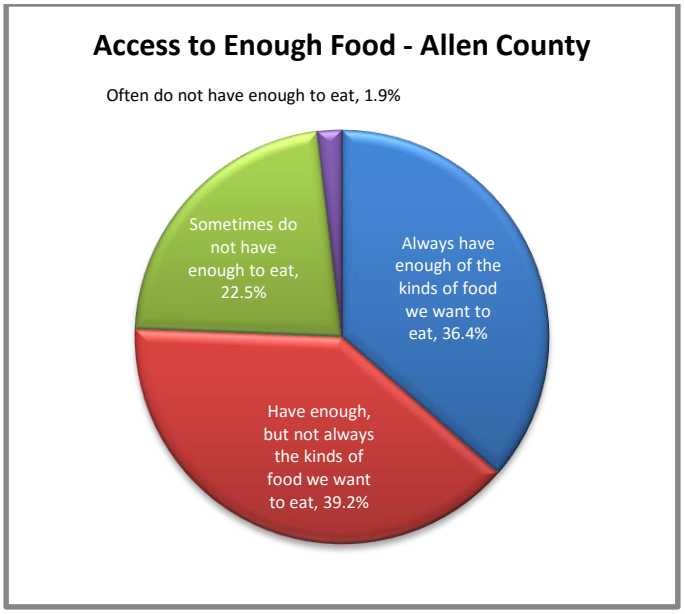
In 2015, the Allen County food policy council, named GROW (Growing Rural Opportunities Works), conducted their first community food assessment. In addition to compiling data from a variety of secondary data resources, the group chose to conduct a survey of community residents to learn more about perceptions related to the current local food and challenges that community members face in obtaining and eating healthy foods.

Results found that survey respondents were particularly concerned about food prices, and that factors such as locally-grown, non-GMO and certified organic were less important in their food purchasing decisions. A significant number of survey respondents indicated difficulty in being able to consistently obtain enough food of the types that they would like to have; nearly one-quarter of survey-takers said that they sometimes did not have enough food.

The full Allen County food assessment report may be downloaded from: http://thriveallencounty.org/allen-county-grow/ .


Satisfaction with Available Food - Allen County
100%
80%
60%
40%
20%
0%
Number of Stores
Availability of healthy...
Quality of available...
Variety of available...
Price of healthy...
Very dissatisfied
Somewhat dissatisfied
Somewhat satisfied
Very satisfied


Factors that Influence Food Purchasing - Allen County
100%
80%
60%
40%
20%
0%
Price
Easily available
Ease of preparation
Nutritional value
Tastes good
Food safety
Locally grown
Pesticide-free
Non-GMO
Certified organic
Very important
Somewhat important
Not important


Access to Enough Food - Allen County
Often do not have enough to eat, 1.9%
Sometimes do not have enough to eat, 22.5%
Always have enough of the kinds of food we want to eat, 36.4%
Have enough, but not always the kinds of food we want to eat, 39.2%

Homegrown South (Dakota County, MN) – Farming Perspectives and the Food System

Homegrown South is a Minnesota network of food producers, hunger relief organizations and community members that seeks to positively impact the local food economy and community health of the region in which they live and work. In 2015, the coalition conducted a community food assessment that focused primarily on gaining a deeper understanding of current conditions and challenges faced by area small-scale farmers. Through online surveys and focus groups, local farmers and producers were asked about the types of products they produced, why they farmed, where they farmed and challenges they faced. Results were summarized, along with a series of recommendations, in the report.

"I would love to expand my farm. The barrier isn't so much the land but that I couldn't afford the physical infrastructure on top of it. [In the US] There are so many laws, restrictions, permits, inspections that make it difficult for small producers like me to gain access to the market and have a successful farm."

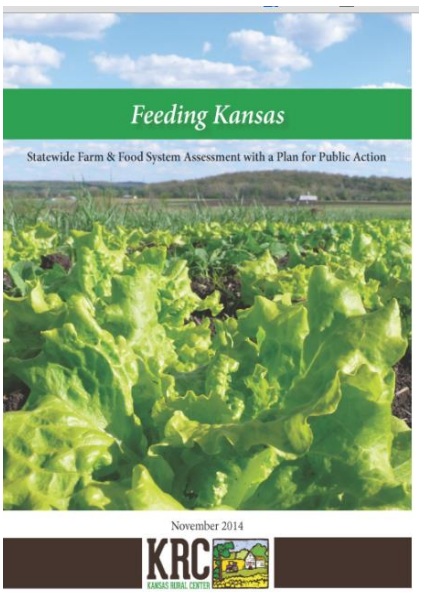
—Javier , chicken farmer

The entire HomeGrown South food assessment report can be downloaded from: http://homegrownsouth.org/wp-content/uploads/2015/07/Farmers-Report-2015-online.pdf .

State-Level Food Assessments for Kansas

Two state-level food assessments for Kansas have been recently completed. Both provide excellent discussion of challenges to local food production in Kansas, as well as a series of recommendations. Both reports provide background and information that will be helpful to local food councils in Kansas.

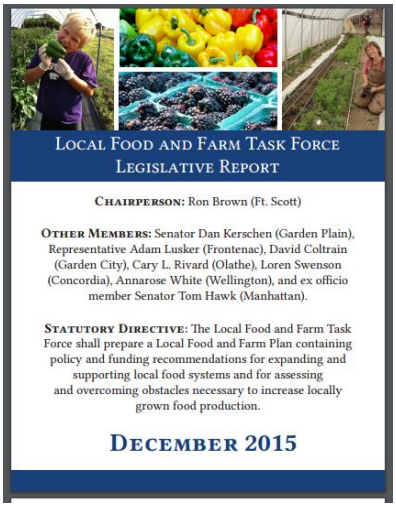
The first report, ***Feeding Kansas***, represents the culmination of a series of listening sessions conducted by the **Kansas Rural Center** during 2013 and 2014, talking with and soliciting input from more than 275 stakeholders across the Kansas food system. Participants represented all regions of Kansas, and all sectors of the farm to fork food system. In addition to the public engagement events, interviews were also conducted with representatives of multiple state agencies to delve more deeply into specific questions that had been raised during the public events. Findings from the study were summarized and presented along with a series of recommendations in the Feeding Kansas report, which was released in November 2014.



The ***Feeding Kansas*** report is available on the Kansas Rural Center's website, at http://kansasruralcenter.org/feeding-kansas/ .

The second report was issued by the **Kansas Local Food and Farm Task Force**, appointed by the Kansas Legislature in 2014 and charged to produce a report addressing four specific aspects of local food production:

1) Identification of financial opportunities, technical support and training necessary for local and specialty crop production;
2) Identification of strategies and funding needs to make fresh and affordable locally grown foods more accessible;
3) Identification of existing local food infrastructure for processing, storing and distribution of food and recommendations for potential expansion; and
4) Strategies for encouragement of farmers' markets, roadside markets and local grocery stores in unserved and underserved areas.



The task force held a series of meetings during 2014 and 2015, and heard presentations and testimony from an array of food growers, producers and food system stakeholders. Their report was finalized and released publicly in December 2015. Since that time, the Kansas Legislature has authorized continuation of the Local Food and Farm Task Force through 2016. The Local Food and Farm Task Force Report is available on the Kansas Department of Agriculture website, at http://agriculture.ks.gov/divisions-programs/agricultural-marketing-advocacy-and-outreach-team/local-food-and-farm-task-force .

Other Guides to Community Food Assessment

USDA Community Food Assessment Toolkit http://tinyurl.com/usdacfa

What's Cooking in Your Food System: A Guide to Community Food Assessment , *authored by Pothukuchi K., Joseph H., Burton H. & Fisher A.Community Food Security Coalition, 2002. Downloadable at* http://www.foodsecurity.org/CFAguide-whatscookin.pdf

Conversations Across the Food System: A Guide to Coordinating Grassroots Community Food Assessments*. Oregon Food Bank, 2013. Downloadable at:* http://www.oregonfoodbank.org/our-work/building-food-security/community-programs/community-food-assesments

Community-Based Food System Assessment and Planning: A Guide to Working with Your Community*. Sustainable Agriculture Research and Education, 2011. Downloadable at :* http://www.sare.org/Learning-Center/SARE-Project-Products/Southern-SARE-Project-Products/Community-Based-Food-System-Assessment-and-Planning

The Economies of Local Food Systems: A Toolkit to Guide Community Discussions, Assessments and Choices*. USFA Agricultural Marketing Service and Colorado State University, 2016. Downloadable from:* http://www.localfoodeconomics.com/ .

Secondary Data Sources

The following databases provide easy access to a wide range of data related to community food systems and food-related health indicators:

- ***Community Commons -*** http://assessment.communitycommons.org/DataReport/
- ***Feeding America, Map the Meal Gap -*** http://tinyurl.com/mapthemeal
- **Kansas Department of Health and Environment, Behavioral Risk Factor Survey -** http://www.kdheks.gov/brfss/
- **Kansas Health Matters -** http://www.kansashealthmatters.org/
- ***U.S. Census Bureau, American Fact Finder -*** www.factfinder.census.gov
- ***USDA Food Environment Atlas -*** http://tinyurl.com/foodatlas
- ***USDA Agricultural Census -*** http://www.agcensus.usda.gov/
- ***USDA Food Access Research Atlas -*** http://tinyurl.com/lwvbxwb

Specific data sources for a list of measures commonly of interest in Community Food assessments are included below. Most are publicly available at no cost. Where data must be purchased from a proprietary vendor, data source entries are denoted with a ($$$).

Measure	Geographic Unit	Data Source
DEMOGRAPHICS		

Measure	Geographic Unit	Data Source
Population, by age groups	State, County, Census Tract	U.S. Census Bureau, American Fact Finder- www.factfinder.census.gov
Population, by race and ethnicity	State, County, Census Tract	U.S. Census Bureau, American Fact Finder- www.factfinder.census.gov
Median Income	State, County, Census Tract	U.S. Census Bureau, American Fact Finder- www.factfinder.census.gov
Poverty rate	State, County, Census Tract	U.S. Census Bureau, American Fact Finder- www.factfinder.census.gov
Poverty rates	State, County, School District	U.S. Census Bureau, Small Area Income and Poverty Estimates - https://www.census.gov/did/www/saipe
FARMS & FOOD PRODUCTION		
Summary of agricultural activity	State, County	U.S. Department of Agriculture, 2012 Census of Agriculture, County Profiles - https://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/Kansas/
# of Farms	State, County	U.S. Department of Agriculture, Census of Agriculture - https://www.agcensus.usda.gov/
Acres in Farms	State, County	U.S. Department of Agriculture, Census of Agriculture - https://www.agcensus.usda.gov/
Number of acres harvested, by type of crop	State, County*	U.S. Department of Agriculture, Census of Agriculture - https://www.agcensus.usda.gov/
Number of head of livestock sold, by animal type	State, County*	U.S. Department of Agriculture, Census of Agriculture - https://www.agcensus.usda.gov/
Acres in use for growing fruits & vegetables, acres harvested	State, County*	U.S. Department of Agriculture, Census of Agriculture - https://www.agcensus.usda.gov/

Measure	*Geographic Unit*	*Data Source*
Market value of agricultural products sold, by product type	*State, County**	*U.S. Department of Agriculture, Census of Agriculture - https://www.agcensus.usda.gov/*
Value of agricultural products sold directly to individuals for human consumption	*State, County**	*U.S. Department of Agriculture, Census of Agriculture - https://www.agcensus.usda.gov/*
Characteristics of farm operators – age, tenure, minority, women	*State, County**	*U.S. Department of Agriculture, Census of Agriculture - https://www.agcensus.usda.gov/*
Farm income and expenses	*State, County**	*U.S. Department of Agriculture, Census of Agriculture - https://www.agcensus.usda.gov/*
Farming practices – irrigation, chemical application	*State, County**	*U.S. Department of Agriculture, Census of Agriculture - https://www.agcensus.usda.gov/*
Government payments to farms	*State, County**	*U.S. Department of Agriculture, Census of Agriculture - https://www.agcensus.usda.gov/*
Hired labor on farms	*State, County**	*U.S. Department of Agriculture, Census of Agriculture - https://www.agcensus.usda.gov/*
Farmers and producers (primarily large-scale)	*Names, contact information*	*FarmMarket ID ($$$), http://www.farmmarketid.com/*
Small-scale growers and food producers	*Names, Contact information*	*Localharvest.org - http://www.localharvest.org* *Farmers' market websites, Local food directories*

Measure	Geographic Unit	Data Source
Community-Supported Agriculture (CSA) programs	City	USDA Agricultural Marketing Service , CSA Directory - https://www.ams.usda.gov/local-food-directories/csas
On-farm Market Sellers	Name, Address, City	USDA Agricultural Marketing Service, Local Food Directories - https://www.ams.usda.gov/local-food-directories/onfarm
Community Gardens	Name, Address, City	Kansas State Research and Extension/KHF Kansas Community Gardens project - http://www.kansascommunitygardens.org/ Local community organizations, Extension offices
School Gardens	Street Address	USDA Know Your Farmer, Know Your Food Compass Map, http://www.usda.gov/wps/portal/usda/knowyourfarmer?navid=kyf-compass-map
NATURAL RESOURCES		
Water Use, by Type of Use	County	U.S. Geological Survey, Water Use - http://waterdata.usgs.gov/ks/nwis/water_use/
Cropland	County	USDA National Agricultural Statistics Service, CropScape and Cropland Data Layer- https://www.nass.usda.gov/Research_and_Science/Cropland/SARS1a.php
Agricultural Land values	County	Kansas State University, Department of Agricultural Economics - http://www.agmanager.info/farmmgt/land/county/CountyValues_2016.pdf
FOOD PROCESSING/MANUFACTURING/ PACKAGING		
USDA- Inspected Meat, Poultry and egg product facilities	Street address	USDA Meat, Poultry and Egg Product Inspection Directory http://www.fsis.usda.gov/wps/portal/fsis/topics/inspection/mpi-directory
KDA-Inspected Animal slaughter and processing facilities		Kansas Department of Agriculture , Inspected Slaughter and Processing Plants - http://wapp.kda.ks.gov/m-p/inspected.pdf

Measure	Geographic Unit	Data Source
Meat Processors	Street address	USDA Know Your Farmer, Know Your Food Compass Map, http://www.usda.gov/wps/portal/usda/knowyourfarmer?navid=kyf-compass-map
Food Manufacturers	Street address	Kansas Department of Agriculture, food inspection results database , http://agriculture.ks.gov/divisions-programs/food-safety-lodging/inspection-results
Agriculture- and Food-related businesses, employment and payroll	County-level summary statistics*	U.S. Census Bureau, Economic Census, Geographic Area Series, http://www.census.gov/econ/census/help/sector/gas.html
FOOD WHOLESALERS, DISTRIBUTORS & WAREHOUSES		
Agriculture- and Food-related businesses, employment and payroll	County-level summary statistics*	U.S. Census Bureau, Economic Census, Geographic Area Series, http://www.census.gov/econ/census/help/sector/gas.html
Licensed food establishments, including storage and manufacturing	Street Address	Kansas Department of Agriculture, food inspection results database , http://agriculture.ks.gov/divisions-programs/food-safety-lodging/inspection-results
Food Hubs	City	USDA Agricultural Marketing Service, Food Hub Directory- https://www.ams.usda.gov/local-food-directories/foodhubs
FOOD RETAILERS		
Grocery Stores	Street address	Kansas Department of Agriculture, food inspection results database , http://agriculture.ks.gov/divisions-programs/food-safety-lodging/inspection-results
Specialty food stores	Street address	Kansas Department of Agriculture, food inspection results database , http://agriculture.ks.gov/divisions-programs/food-safety-lodging/inspection-results
Convenience Stores	Street address	Kansas Department of Agriculture, food inspection results database , http://agriculture.ks.gov/divisions-programs/food-safety-lodging/inspection-results

Measure	*Geographic Unit*	*Data Source*
Restaurants (full service or fast food)	***Street address***	***Kansas Department of Agriculture, food inspection results database , http://agriculture.ks.gov/divisions-programs/food-safety-lodging/inspection-results***
Discount stores selling food	***Street address***	***Kansas Department of Agriculture, food inspection results database , http://agriculture.ks.gov/divisions-programs/food-safety-lodging/inspection-results***
SNAP Retailer locations	***Street address***	***USDA SNAP Retailer Locator, http://www.fns.usda.gov/snap/retailerlocator***
WIC Retailer Locations	***Street address***	***Kansas Department of Health and Environment, WIC Retailer Locator, https://maps.kdhe.state.ks.us/kswicvendor***
Farmer's Markets	***Street address***	***Kansas Department of Agriculture, From the Land of Kansas http://fromthelandofkansas.com/*** ***USDA Know Your Farmer, Know Your Food http://www.usda.gov/wps/portal/usda/usdahome?navid=KYF_COMPASS***
On-farm Market Sellers	***City***	***USDA Agricultural Marketing Service, Local Food Directories - https://www.ams.usda.gov/local-food-directories/onfarm***
Modified Retail Food Environment Score	***Census Tract***	***CDC, Modified Retail Food Environmental Index Score: ftp://ftp.cdc.gov/pub/Publications/dnpao/census-tract-level-state-maps-mrfei_TAG508.pdf*** ***Community Commons - http://www.communitycommons.org/***
Agriculture- and Food-related businesses, employment and payroll	***County-level summary statistics****	***U.S. Census Bureau, Economic Census, Geographic Area Series, http://www.census.gov/econ/census/help/sector/gas.html***
Agriculture- and Food-related businesses, employment and payroll	***Store-level detail, including identifiers and addresses***	***($$$) Data may be purchased from InfoUSA, www.infousa.com*** *(Note: access to this information may be available in some locations through a public library subscription, under the database name of ReferenceUSA. Consult your local public library about availability.)*
ACCESS TO HEALTHY FOODS		

Measure	*Geographic Unit*	*Data Source*
Food Insecurity rates	*County, State, Congressional District*	*Feeding America, Map the Meal Gap, http://map.feedingamerica.org/*
Food Deserts	*Census tract*	*USDA Food Access Research Atlas, http://www.ers.usda.gov/data-products/food-access-research-atlas.aspx* *Community Commons, www.communitycommons.org*
FOOD EXPENDITURES AND CONSUMPTION PATTERNS		
Expenditures – total household expenditures on food	*Multi-state regions*	*US Bureau of Labor Statistics, Consumer Expenditure Survey - http://www.bls.gov/cex/*
Expenditures – food eaten at home vs. food away from home	*Multi-state regions*	*US Bureau of Labor Statistics, Consumer Expenditure Survey - http://www.bls.gov/cex/*
Expenditures by type of food (Fruit & Veg, Meats, Cereals, Dairy, other)	*Multi-state regions*	*US Bureau of Labor Statistics, Consumer Expenditure Survey - http://www.bls.gov/cex/*
Consumer Retail expenditure estimates, including food at home, by sub-categories (Fruit & Veg, Meats, Cereals, Dairy, other), and food away from home	*State,County, City/Town, Zip Code, Census Tract, Congressional Districts, Metropolitan Statistical Areas*	*BusinessDecison market analysis system, http://www.businessdecision.info/bd/login/login.php?mel=1&result=success*
Soft Drink Expenditures (in comparative quintile rankings)	*County, Census Tract*	*Community Commons, http://www.communitycommons.org/*

Measure	Geographic Unit	Data Source
Fruit & Vegetable Expenditures (in comparative quintile rankings)	County, Census Tract	Community Commons, http://www.communitycommons.org/
Fruit & Vegetable consumption	State, Region, some counties* in selected years	Kansas Department of Health and Environment, Kansas Behavioral Risk Factor Surveillance Survey- http://www.kdheks.gov/brfss/ Kansas Health Matters - http://www.kansashealthmatters.org/
NUTRITION-RELATED HEALTH MEASURES		
Obesity Rates	State, County*	Kansas Department of Health and Environment, Kansas Behavioral Risk Factor Surveillance Survey- http://www.kdheks.gov/brfss/ County Health Rankings - http://www.countyhealthrankings.org/ Community Commons - http://www.communitycommons.org/ Kansas Health Matters - http://www.kansashealthmatters.org/
Adult diabetes rates	State, County*	Kansas Department of Health and Environment, Kansas Behavioral Risk Factor Surveillance Survey- http://www.kdheks.gov/brfss/ County Health Rankings - http://www.countyhealthrankings.org/ Community Commons - http://www.communitycommons.org/ Kansas Health Matters - http://www.kansashealthmatters.org/
Adult Heart disease rates	State, County*	Kansas Department of Health and Environment, Kansas Behavioral Risk Factor Surveillance Survey- http://www.kdheks.gov/brfss/ Community Commons - http://www.communitycommons.org/ Kansas Health Matters - http://www.kansashealthmatters.org/
Mortality rates-diabetes	State, County*	Kansas Department of Health and Environment, Kansas Behavioral Risk Factor Surveillance Survey- http://www.kdheks.gov/brfss/ Community Commons - http://www.communitycommons.org/ Kansas Health Matters - http://www.kansashealthmatters.org/

Measure	Geographic Unit	Data Source
Mortality rates – heart disease	***State, County****	***Kansas Department of Health and Environment, Kansas Behavioral Risk Factor Surveillance Survey- http://www.kdheks.gov/brfss/*** ***Community Commons - http://www.communitycommons.org/*** ***Kansas Health Matters - http://www.kansashealthmatters.org/***
		FOOD ASSISTANCE
Students eligible for FRP meals	***State, County, School District, School Building***	***Kansas State Department of Education, School Nutrition Program Reports, http://www.kn-eat.org/SNP/SNP_Menus/SNP_Admin_Reports.htm***
SNAP Participation	***State, County***	***Kansas Department of Children and Families, Annual County Packet Reports, or Public Assistance Reports, http://www.dcf.ks.gov/services/ees/Pages/EESreports.aspx***
WIC Participation	***State, County***	***Kansas Health Matters - http://www.kansashealthmatters.org/***
Summer Food Service Meal Sites	***Street address***	***Kansas State Department of Education, Summer Food Service Program, http://uapps.ksde.org/cnw_Reports/mapviewer*** ***USDA Summer Meal Site Finder, http://www.fns.usda.gov/summerfoodrocks***
Prairie Land Food distribution sites	***Town***	***Prairie Land Food, http://prairielandfood.com/***
		ECONOMIC IMPACT
Economic Impact estimates – IMPLAN models	***County***	***Kansas Department of Agriculture, http://agriculture.ks.gov/about-ksda/kansas-agriculture***
Agricultural Impact Infographics	***County***	***Kansas Department of Agriculture, https://www.flickr.com/photos/kansasagriculture/with/15468342964/***
Food-related employment	***County****	***Bureau of Labor Statistics, Occupational Employment Statistics http://www.bls.gov/oes/*** *(includes farm labor, food service sector jobs, etc.)*

**county-level data may be suppressed for rural areas or where numbers are small*

$$$ - proprietary data available for purchase

Nutrition Environment Measurement System (NEMS) *– Validated instruments for assessing foods offered in grocery stores, corner stores, restaurants and vending machines.* *http://www.med.upenn.edu/nems/*

Nutrition Environment Assessment Tool (NEAT) *- Tool for assessing policies practices and food offerings in various community settings, including stores, restaurants, schools, workplace, community programs and local media.* *http://mihealthtools.org/neat/*

Slim by Design Grocery Store Self-Assessment Tool - http://www.slimbydesign.org/grocery/ .

Surveys

Additional Guidance on Designing and Conducting Surveys

Taylor-Powell, Ellen & Hermann, Carol. *Collecting Evaluation Data: Surveys. University of Wisconsin Extension Service, http://learningstore.uwex.edu/assets/pdfs/g3658-10.pdf*

University of Kansas, Workgroup for Community Health and Development's Community Toolbox, *http://ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources/conduct-surveys/main* .

Internet-based survey systems

Survey Monkey - *www.surveymonkey.com*

Survey Gizmo – *www.surveygizmo.com*

Translating Results into Action

Harvard Food Law and Policy Clinic *Good Laws, Good Food: Putting State Food Policy to Work for our Communities. (2012). State Toolkit, downloadable at http://www.chlpi.org/projects-and-publications/food-library*

***Harvard Food Law and Policy Clinic**. Good Laws, Good Food: Putting Local Food Policy to Work for Our Communities. (2012). Local Toolkit, downloadable at http://www.chlpi.org/projects-and-publications/food-library*

***Healthy Food Portal** – Searchable database of resources, policies and local initiatives to improve access to grocery stores. http://www.healthyfoodaccess.org/resources/search-by-region*

***Kansas State University Center for Engagement and Community Development - Rural Grocery Initiative, Rural Grocery Toolkit**, http://www.ruralgrocery.org/resources/*

***Public Health Law Center** Policy Options for Local Governments in Kansas: Increasing Access to Healthy Food. (2015). Downloadable at http://publichealthlawcenter.org/sites/default/files/resources/Policy%20Options_Access%20to%20Healthy%20Food%201%202015.pdf*

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