The following assessment begins by describing the current status of the physical availability, economic access, and consumption of healthful foods in Kansas. Next, the assessment brings together a number of statistics to tell the story of Kansas food production for global, national, regional, and local markets. To conclude, the assessment highlights key barriers that must be addressed in order to strengthen the capacity of Kansas farms to provide healthful foods direct to Kansas communities.

In all cases, “healthful food” refers to the full spectrum of food types required to achieve a balanced nutritional diet. These are pictured in The Healthful Plate image on page 5.

**PHYSICAL AVAILABILITY OF HEALTHFUL FOOD IN KANSAS**

You are what you eat, and you eat what is available.

Though agricultural production is booming in Kansas, across the state a significant number of community members find that the full spectrum of the “healthful plate” is not readily available to them, due to distance and transportation issues. The USDA Food Access Research Atlas map below demonstrates that residents in more than 92 percent of Kansas counties face limited physical availability of healthful food – requiring travel of 10 miles or more in rural areas, and 1 mile or more in urban areas (light pink) – and in 25 percent of those counties, a significant number of households lack access to transportation (dark pink). When we expand that range, we find that residents in 58 percent of Kansas counties must travel 20 miles or more to a healthful food source, and 43 percent of these more distance-challenged counties find transportation is limited for a significant number of households. Most of Kansas’s highly challenged counties are predominantly rural, including 12 where the entire county is deemed to have limited-access to healthful foods (USDA, 2014). These landscapes are dominated by agricultural production that serves national and global markets.

The issue of physical availability of healthful foods continues to worsen in Kansas. In 2012, only 51 percent of Kansas’s 675 cities had a supermarket (Janke & Johnson, 2012). Between 2007 and 2012, 82 of the 213 supermarkets in communities with populations less than 2,500 closed their doors, according to researchers from Kansas State University’s Rural Grocery Initiative. Distribution trucks full of food drive by
rural communities without stopping, when rural grocers do not have enough volume to meet the mandatory minimum orders the food distributors set. Even if grocers can meet the minimum order, the cost of the food is higher for them and in turn less attainable for low-income populations (RGI, 2014). Higher prices can lead those willing to travel to supercenters many miles away in search of lower prices.

Meanwhile, nutrient-poor and calorie-dense, highly processed foods are amply channeled to Kansans through vending machines, fast food chains, convenience stores and gas stations. In some locations in both rural and urban areas, these are the only nearby food outlets.

**ECONOMIC ACCESS TO HEALTHFUL FOOD IN KANSAS**

**THE ISSUE AND STATUS OF ECONOMIC ACCESS TO HEALTHFUL FOOD IN KANSAS**

Economic access refers to financial resources available to physically access, purchase, and/or utilize healthful foods. There are a number of reasons why individuals and families with limited economic access may find themselves consuming imbalanced diets. These reasons may include:

- **Inability to afford food in general**;
- **Higher price premiums on healthful foods, in certain locations**. This is often the case at convenience stores and in low-income areas, sometimes due to food distributor policies that increase food prices for retail outlets moving smaller volumes (Hakim & McKenzie, 2011). The 2013 Wichita Community Foods Assessment notes that: “Convenience stores offer the most expensive fresh produce options. Bananas, for example, are almost four times more expensive in convenience stores than at grocery stores or super centers” (Hakim, 2013). This issue is significant in a state where 51 percent of cities have no supermarket, and grocery stores are closing at an alarming rate (Janke & Johnson, 2012; RGI, 2014);
- **Belief that healthful foods are always more expensive**. Healthful foods are not always more expensive. For example, when you shop at certain food outlets (see above) or when you calculate food cost based on nutritional value rather than calorie count (to make nutrition-based cost comparisons easier for consumers, groups like NuVal now offer grocers nutrition-based food rank labeling systems). While food prices are on the rise nationally, the price of certain healthful foods are actually rising more slowly than others. Between 2006 and 2011, “average consumer prices for fruits and vegetables in fact increased less than prices of the total food category, but consumption levels fell” (Rabobank, 2013);
- **Limited access to transportation** due to economic situation. This provides an obstacle to physically obtaining healthful foods even if they can be sourced affordably;
- **Limited experience with or training to efficiently prepare low-cost healthful foods at home**. This can be compounded by the need to work excessive hours to get by and/or inability to access quality education on how to prepare healthful foods or cook in a safe environment;
- **Cooking tools or appliances** may be unaffordable to obtain or upkeep, which can increase reliance on pre-processed, convenience or take-away food;
- **Convenience and ease of access to calorie-dense, nutrient-poor foods**.

Low income compounds physical availability issues in 51 percent of Kansas counties where residents face healthful food distances greater than 10 miles in rural areas, or one mile in urban areas. That number increases to 57 percent in counties where a significant number of residents must travel 20 miles or more to obtain healthful food.
Many groups and organizations actively work to address the mounting issues of poverty and low-income that obstruct economic access to healthful foods in Kansas. The Kansas Association of Community Action Programs (KACAP) is an example of an organization that works with several member organizations under the common goal of fighting poverty in Kansas. The group holds an annual statewide conference on poverty. Several state and local government agencies also work to address these issues. In 2014, many of these organizations and agencies joined farmers and other partners in issuing the Kansas Health Assessment and Improvement Plan, through the Healthy Kansas 2020 Steering Committee (HK2020, 2014).

The following are examples of programs and policies aimed at increasing economic access to healthful foods among low income Kansas families and individuals:

- **National School Lunch Program** offers free or discounted breakfast and lunch to students from households at or below 185 percent of the federal poverty level. Nearly 1,700 Kansas schools and residential childcare institutions (RCCIs) participate in the National School Lunch Program, to provide healthful foods at least twice per weekday to children of families with economic access challenges, during
times when school is in session. About one in five Kansas children live at or below 100 percent of the federal poverty level.

- **Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)** is a federal nutrition program managed locally by the Kansas Department of Health and Environment. The program provides nutrition and health education, healthful food and other services to Kansas families who qualify. These families may earn up to 185 percent of the federal poverty level.

  A 2009 national WIC policy change led to increased consumption of fruits and vegetables among participating families. The changes include offering financial incentives to families for purchasing fresh, frozen, or canned fruits and vegetables. As a result, WIC recipient “purchases of fresh vegetables increased in volume by nearly 18 percent, and purchases of frozen vegetables increased by nearly 28 percent. The biggest improvements were for fresh fruit, with an increase of almost 29 percent, adding almost a kilogram of fresh fruits per household per month” (Yale, 2014).

Kansas could improve WIC recipients’ access to fruits and vegetables, as other states have, by integrating the program with the existing Electronic Benefits Transfer (EBT) system that enables SNAP food benefit dollars to be used with local farms.

- **Senior Farmers Market Nutrition Program (SFMNP)** is a federal program that channels grant funds to state and tribal governments to provide qualifying seniors, at or above 185 percent of the federal poverty level, with coupons that can be exchanged for eligible foods direct from local farms. Qualifying foods include fruits, vegetables, honey, and fresh-cut herbs. In Kansas, the program is managed by the Kansas Department of Health and Environment (KDHE).

  KDHE’s implementation of SFMNP serves about 5,000 Kansans during their “golden years,” by providing up to $30 in food vouchers per year per eligible person. In 2014, this included about $142,000 in vouchers reimbursable for fruits, vegetables, herbs and honey at Kansas farmers markets. Limited funding is the biggest barrier to reaching more than 10,000 additional eligible low-income seniors with these benefits (Randles, 2014).

- **Supplemental Nutrition Assistance Program (SNAP)** is a federal nutrition program managed locally by the Department for Children and Families. The program provides qualifying low-income households, at or below 130 percent of the federal poverty level, with food benefits and education on food preparation and nutrition. In Kansas, this program is called the Food Assistance Program and food benefit dollars, formerly...
known as “food stamps” are made available through Benefit Cards that function similar to credit cards.

In Kansas, mobile Electronic Benefit Transfer (EBT) equipment helps link customers with Benefit Cards or credit cards to products at farmers market and/or from individual farmer vendors. Markets and vendors may apply to receive and use free EBT equipment.

A “SNAP” Match Pilot Program launched in 2014 to provide Food Assistance Program participants an additional $25,000 in matching dollars over 16 weeks – up to $25 additionally to spend per person per day – for use at three farmers market in Lawrence. This program is made possible through the efforts of the Douglas County Food Policy Council, which helped coordinate a fiscal partnership between with the City of Lawrence, Douglas County, and a local nonprofit called LiveWell Lawrence. This example illustrates one potential role for local, broad-based task forces of community members.

Unfortunately, the rate of participation in Kansas’s Food Assistance Program is among the lowest in the nation – about 31 percent of those who are eligible for the program do not apply (Foodstamps.org, 2013; Shields, 2013). Only 10.6 percent of Kansans received food assistance benefits in 2012. This is despite the fact that 14 percent of Kansans live at or below 100 percent of the federal poverty level, and eligibility for assistance is set at 130 percent of the federal poverty level (Governing.com, 2013).

Stigma, or negative perceptions of low-income/food assistance status, is a significant barrier limiting participation in programs that provide food benefits such as those outlined above, according to participants in the 2013 and 2014 farm-to-fork summits conducted for this project.

**UTILIZATION OF HEALTHFUL FOOD IN KANSAS**

Even for those who have physical availability and economic access to healthful foods, underlying obstacles prevent their consumption of a nutritionally-balanced diet. This is a major issue in Kansas.

The vast majority of Kansans do not eat a healthy diet. Less than 8 percent of surveyed Kansans reported consuming a nutritionally-balanced diet in a Healthy Eating Index survey conducted by the Kansas Health Institute in 2009 (USDA, 2010).

Most Kansans fall behind in consumption of produce, while grains and proteins are often over-consumed (and not necessarily in their ideal or most nutritional form). A Center for Disease Control study demonstrated that less than 25 percent of Kansans consumed the recommended daily amount of fruits and vegetables in 2009 – a number that was trending downward (KDHE, 2010).

Obesity, a condition related to malnutrition, is a growing problem affecting Kansas health. Obesity, like the emaciation that comes from prolonged hunger, is recognized as a condition related to consuming a nutritionally-imbalanced diet. Many health conditions are made worse by the condition of
obesity (Haslam & James, 2005). The Governor’s Council on Fitness – established in 2006 to promote a statewide response to prevent chronic disease and injury among Kansans – has hosted annual statewide Obesity Summits since 2012. In 2013, 30 percent of Kansas adults were obese (CDC, 2013). Over the next 20 years that percentage is projected to double. If food consumption patterns remain as they are, Kansas is on track to reach an adult obesity rate of 62.1 percent by 2030, making it one of the nation’s most obese states (Levi, Segal, St. Laurent, Lang, & Rayburn, 2012).

According to those engaged through this assessment, the top five the most significant factors restricting Kansans from obtaining a nutritionally-balanced diet include:

- **Limited availability, marketing, and affordability of healthful foods;**
- **Widespread availability of well-marketed, highly processed, nutrient-poor and calorie-dense convenience foods;**
- **Social inequities** that limit access to the adequate income, food, and education needed to achieve a balanced diet,
- **The erosion of cultural knowledge** about the health value of different foods, and
- **The erosion of capacity to prepare healthful foods at home and in food establishments.**

The following list describes two key statewide entities and significant programs they offer to improve nutrition education and increase the utilization of healthful foods across Kansas:

- **Kansas State University Research and Extension (KSRE)**
  - KSRE provides free nutrition education to individuals and families who receive food assistance or who are eligible to receive food assistance, through **The Family Nutrition Program (FNP)** (Kansas’s version of the federal Supplemental Nutrition Assistance Program Education (SNAP-Ed)). KSRE County Agents and their assistants administer this program in over 80 counties. Funding for the program is administered by the Kansas Department for Children and Families (DCF).
  - KSRE offers practical lessons in basic nutrition, food preparation, food budget management and food safety to young families and youth through the **Extended Food Nutrition Program**. This demographic is considered most at risk to suffer from hunger, food insecurity, and the inability to connect with available support systems.

- **Kansas Schools**
  - **School Nutrition Standards** updates and the launching of the **Fresh Fruit and Vegetable Program** have helped create healthier school environments in Kansas by providing healthier food choices to students of all economic backgrounds (KSDE, 2014).
  - **The Kansas Farm to School Program** works closely with Kansas schools and farms to help create stronger connections between children and local sources of healthful food. Kansas celebrates Farm to School Month and Kansas School Lunch Week by promoting healthful menus using local products in schools. In 2014, eight Kansas schools received Farm to School grants to incorporate local products into their school nutrition programs, through a federal program administered by the Kansas Department of Agriculture.

Existing programs are crucial but, alone, they are not enough. Respondents across Kansas reported that Extension and schools alone cannot realistically reach every Kansan with the tools needed to adequately improve their food choices. A coordinated, collaborative effort across state agencies and communities, building on present successes, would extend the reach of those working to improve the nutrition of Kansans and their families.
An “all hands on deck” type approach is needed to successfully reverse poor-eating trends, and to increase the utilization of healthful foods in Kansas. This approach is already being implemented in Kansas by citizens of South Hutchinson and Allen, Crawford, and Douglas Counties, where individuals from diverse backgrounds have formed publicly-recognized food policy councils. These councils, like hundreds of others across the nation, are actively identifying and pursuing solutions to their communities’ food challenges. Due to the wide range of those challenges and differing needs from one locale to the next, it is a conclusion of this assessment that many additional local, community-based policy councils or task forces are needed to effectively “feed Kansas.”

AGRICULTURAL PRODUCTION AND SUPPLY CHAIN STATUS IN KANSAS

A HISTORICAL PERSPECTIVE

Kansas is one of the nation’s iconic farm states, with 90 percent of its 82,277 square miles in farmland and an agricultural industry that, in 2012, generated nearly $18.5 billion in sales (USDA, 2012). So how is it that we face such significant food access and nutrition challenges?

Kansas farmers once produced a broad range of healthful, nutritious foods for their surrounding communities. In 1920, nearly three-quarters of 165,000 farmers in Kansas grew vegetables for their own tables and most produced vegetables for sale in their communities and region. However, a major shift in agricultural economics – shaped by farm consolidation and the vertical integration of the food industry – has dramatically altered how and where food is grown and made available to us. Decades of agricultural policies and programs have emphasized the production of a handful of agricultural commodities for the national and global marketplace, without providing equal resource and attention to serving local and regional markets, or to producing the countless other food and farm products once found in abundance in this state. The result has been an erosion of Kansas’s once-thriving diversified farming and food system.

Artist Henry Worall painted Drouthy Kansas in 1878, to highlight the agricultural potential of the state and counter drought-inspired claims that Kansas was part of the “Great American Desert.” In the foreground, the painting depicts abundant harvests of grapes, watermelon, potatoes, sweet potatoes, and grains - while the background includes rain, flooding, and a rainbow stretching across the horizon.

Image retrieved from the Kansas Historical Society
In recent decades, the number of Kansas farms and the diversity of Kansas agricultural products has declined dramatically. Most dramatic of all is the decreased production of so-called “consumer” or “specialty crops,” which include fruits and vegetables. In 1920, more than 30,000 farms had land in fruit or nut orchards. By 1950, the number of farms with orchards jumped to 43,000. However, six decades later, diversity of production has plummeted in Kansas. In 2012, only 441 farms in the entire state produced vegetables for sale, and only 489 still had land in orchards (USDA, 2012).

Today, the vast majority of food consumed within Kansas is imported from out of state, while the lion’s share of Kansas’s agricultural products are exported. Of the $7.2 billion Kansans spent on food in 2012, more than 90 percent went toward food produced outside the state (Meter, 2014). That same year, Kansas ranked 7th in agricultural exports among 50 states – with revenue from those exports totaling about $4.9 billion (USDA-ERS, 2012). Nearly 97 percent of Kansas’s 2012 agricultural sales, almost all of which went out of state, were derived from grains, meat and animal products. This includes the following: cattle and calves (55 percent), wheat (13.4 percent), corn (12.4 percent), soybeans (6 percent), hogs (3.8 percent), sorghum (3.1 percent), and dairy (2.6 percent). In contrast, fruits, vegetables, and tree nuts represented a meager 0.15 percent of total statewide agricultural market value in 2012 (USDA, 2012).

Both Kansans’ diets and Kansas’s agricultural landscape are deficient in fruits and vegetables, compared to other food and farm products. In 2012, 90 percent of Kansas’s harvested crop acres were devoted to growing the following four foods: wheat (9 million), corn (4 million), soybeans (3.8 million), and sorghum (2.1 million). Forage for livestock covered nearly 2.5 million acres. Meanwhile,
only 14,359 acres, 0.03 percent of Kansas farmland, were used to produce vegetables, berries, fruits and nuts.

Increasing production of fruits and vegetables for local markets would help diversify and thereby strengthen Kansas agriculture and the Kansas economy. Kansans currently spend an average $716.5 million on fruits and vegetables annually (Commons, 2014). It would take a mere 0.26 percent of Kansas’s agricultural acres to produce enough fruits and vegetables to meet that level of fruit and vegetable consumption (Janke & Johnson, 2012). At current sales tax rates, production at that level could equate to more than $44 million in state revenue and up to $14.3 million in local and county tax revenue (Tax-Rates.org, 2014). (It should be noted, however, that the fact that Kansas charges sales tax on food was a strong point of debate at this project’s public convenings. Although outside the scope of this project, Kansas’s food sales tax policy warrants careful and long-term examination by Kansans and their policymakers.) Transitioning Kansas crop acres to fruit and vegetable production could also result in increased net income for Kansas farms – as demonstrated by 2007 data from Kansas State University, shown in the table to the right.

Kansas farmers are among the lower-income members of the state. In 2012, Kansas farmers netted a total $2.9 billion less than they netted in 1969 (USDA, 2012). Farmer incomes are not only significantly lower than other industries, they are also not increasing at the rate of other types of employment (DCFPC, 2011). Consequently, the majority of Kansas farmers must work multiple jobs to subsist. In 2012, only 44 percent of Kansas farm operators cited farming as their primary occupation (USDA, 2012). In some areas of Kansas, agricultural workers’ low-income is compounded by the challenge of lack of U.S. citizenship – which prohibits access to many services, including food assistance that could help alleviate food access challenges. Most farmers in Kansas are of course located in rural areas, many of which are designated as “food deserts” or areas with significantly limited healthful food access.

The irony that those tasked with feeding the world are included among those most challenged to acquire and use healthful foods was not lost among participants in the Kansas farm-to-fork summits that helped shape this report.
THE BOTTOM LINE

Two key strategies that Kansas farmers can implement to increase their “bottom line,” or net farm income, could have notable impacts on healthful food access and consumption in Kansas. These include: diversifying types of production and diversifying markets.

In terms of diversified agriculture, Kansas saw a significant increase in the production of fruits and an increase in the production of some types of vegetables between 2007 and 2012.

- Berry production increased most dramatically – with the number of blueberry farms increasing 269 percent, blueberry acres 250 percent, blackberry farms 112 percent, and blackberry acres 260 percent. Other types of berry operations also showed significant expansion.
- The number of Kansas farms producing tree fruit also increased, by 46 percent.
- Though the number of vegetable acres and vegetable farms decreased overall, the following vegetables increased their presence on Kansas farms: eggplants, garlic, lettuce, onions, peppers, potatoes, snap peas, summer squash, and tomatoes (USDA, 2012).

It is possible for Kansas farms to economically produce both fruits and vegetables for year-round consumption in Kansas – indeed, many already are. Better adapted crop varieties and advancements in technology have helped make this easier on a larger scale. For example, plastic-covered growing systems such as high tunnels can provide crops up to 12 months of protection from extreme weather, with the added benefit of increasing both product quality and yields.

Extending the income season in this way is a standard practice for a number of Kansas farmers, and is of growing interest to many more. Between 2013 and 2014, 200 current and beginning farmers participated in the Kansas Rural Center’s “Tunnel to Table” workshop series. In addition, 58 extended-season tunnel farmers responded to the Tunnel to Table initiative’s growers survey. Twenty-five percent reported having farmed in Kansas tunnels for six years or more. The Tunnel to Table program is aimed at supporting Kansas farms to increase their competitiveness in the specialty crop sector through strategic high tunnel and low tunnel use. Funding for the program comes from the Kansas Department of Agriculture’s Specialty Crop Block Grant program and Farm Aid.

Increased farm-to-fork connections through diverse markets is also evident across Kansas.

- With support from entities like the Kansas Rural Center, Kansas Department of Agriculture, and Kansas Department of Health and Environment, Kansas has experienced a quintupling in the number of farmers markets in the past 30 years – from 26 in 1987 to 130 in 2014 (KDA & KDHE, 2014). Many of these markets have expanded membership and days of operation to accommodate increasing demand – and a number of them are now open year-round.
- In northwestern Kansas, several innovative producers and consumers joined together in 2008 to form the High Plains Food Cooperative, which offers an online food hub for connecting consumers to local and regional food products. (See Glossary for a working definition of “food hub.”) The cooperative reports far greater demand than it currently has supply for – particularly in the area of fruits and vegetables. They are actively working to scale-up current producer-member operations and attract more producers to the group.
- Kansas schools have major purchasing power, and are actively seeking sources of local food. Though Kansas farm-to-school efforts are in their fledgling stage, 35 percent of Kansas schools have
already engaged in local food procurement and education activities. According to 2012 Kansas Farm to School Census data, the top five local foods being procured by Kansas schools include: tomatoes, apples, watermelon, beef, and cantaloupe. While Kansas schools have increased purchases of food from Kansas farms, schools report the following two top barriers limit their purchases of local foods: 1) a real or perceived inadequate supply of locally grown products and 2) limited knowledge of and access to local farmers and producers to buy from (KSDE, 2014).

Farm-to-fork connections are still developing across Kansas, including in schools. Enhanced supports for local supply and marketing are needed to continue to advance these efforts.

KEY IDENTIFIED BARRIERS

The following four barriers limit the effectiveness of Kansas farmers working to diversify production and increase sales to local and regional markets, according to those engaged through this assessment:

• **Inadequate local- and state-level coordination, planning, and resource allocation to support and sustain Kansas’s farm-to-fork food system.** These issues restrict innovation in food and farming in Kansas. Because food touches all aspects of society, health, and the environment, there are many different entities work on food issues across the state. However, many of these efforts are insufficiently coordinated with related efforts. Confusion results due to both the sheer number of agencies and departments involved, and the fact that food production, processing and sales are regulated differently by each agency, depending on the type of product, scale of production, level of processing, and market channel used for distribution;

• **Lack of regulatory clarity around state-level policies that impact the farm-to-fork food system.** While several tools do exist to communicate these policies, they are not widely known. Due to lack of information, inconsistent information, or inconsistent regulatory enforcement in the field, confusion persists regarding the various requirements that can impact the production, processing, and sale of products by Kansans for Kansans;

• **Lack of a central location for finding farm-to-fork related policy and program information, across government and nongovernment sectors.** Many reported being bounced around between and within state agencies when seeking answers to key questions for their food and farm businesses. When conflicting information was provided, there was no “higher authority” to serve as the final word, with the effect of frustration, fear, and shutting down attempts at advancing such enterprises;

• **Limited information, resources, and protections for the production, handling, and sale of fruits and vegetables crops.** Only a small number of professionals are available to assist Kansans seeking to address business planning, production, processing, distribution and marketing challenges. What few Kansas-specific written resources are available are often outdated, and funding resources are either limited or challenging to obtain for these diverse operations. Due to inadequate crop insurance options and the threat of drift, Kansas fruit and vegetable growers face unique risks that limit their capacity and diminish their willingness to scale-up.