Marshall County, KS

Food System Assessment

2017-2018

Report prepared by
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North Central Regional Planning Commission

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North Central Kansas FOOD COUNCIL

This report was prepared by Kolia Souza, independent consultant, on behalf of the North Central Kansas Food Council under contractual agreement with North Central Regional Planning Commission. Language used throughout this report was borrowed directly from LaClair Consulting Services.

Contents

Executive Summary

Healthy and robust community food systems help to support and sustain healthy communities and strong local economies. The types and amounts of food that are available within a community, and the ways in which that food is presented and made available to members of the community population can exert profound influence on eating behaviors of community members and, in turn, community health outcomes. Food, and the many processes involved in producing it and eventually bringing it to a consumers' table, also generate significant economic activity and jobs within the community.

One of the key steps to understanding a community food systems' current strengths and gaps is to conduct a comprehensive assessment of the food system. This report summarizes the results of an assessment of the Marshall County regional food system. It brings together data and information from numerous secondary data sources to create a description of the current food system in the region. Highlights of assessment findings include:

Demographics. Marshall County is located in the northeastern corner of the North Central Regional Planning Commission (NCRPC) 12-county service area and is bordered by one of the remaining 11 counties in the NCRPC region. The total population for Marshall County is approximately 9,853 and the retiree age subpopulation is significantly higher compared to that of Kansas. Poverty rates, however, are considerably lower than the state average, both overall and among children.

Farming and Food Production. In 2012, there were 796 farms operating in Marshall County, on about 438,438 acres of land. Farming in the region is dominated by the production of grain crops, hay and beef cattle. In 2012, the average age of Marshall County farm operators was 57.1 years. Average farm incomes in the region were above average in 2012 as compared to the state, with one-quarter of Marshall County farms reporting net operating losses in 2012. About 30 percent of principal farm operators in Marshall County reported that their principal occupation was something other than farming, and approximately 38.5 percent worked 200 days or more off the farm. Although farming in the region is predominantly commodity crops and livestock, there are a small number of farms growing fruits and vegetables and selling their farm products directly to local consumers. In 2012, Marshall County reported having five orchards and five farms harvesting fruit. Direct sales to individuals totaled $21,000 in 2012.

Food Processing and Distribution Infrastructure. There is a total of three meat processors in Marshall County. However, there are no manufacturing, distribution, warehouses, or wholesale suppliers.

The Retail Food Environment. Many rural areas of Kansas are struggling to retain their local grocery stores. In Marshall County, there were four grocery stores in operation in 2017. In addition to these stores, grocery items are also sold by a meat market, supercenter, dollar stores, and several convenience stores. There were two farmers' markets in operation. According to 2016 data, the county is also served by 16 eating and drinking establishments, five of which are fast food venues.

Access to Healthy Foods. Across the nation, Americans' dietary intakes are poorly aligned with current dietary guidelines. Kansans are no exception. In 2015 in Marshall County, 46 percent of adults were consuming fewer than one serving of fruit per day and 28.8 percent were consuming fewer than one serving of vegetables once per day. Consumer expenditure data suggest that about 36 percent of all food expenditures by Marshall County residents is spent on food prepared and consumed away from home.

Consumer Eating Behaviors. In Marshall County, there are residents that lack ready access to full-service grocery stores that offer healthy food options. In 2015, there were no census tracts identified within Marshall County that met the definition of a food desert, meaning that a substantial portion of the tract's population was low income and lived more than 1 mile from a grocery store if in an urban area, or more than 10 miles from a store if in a rural area. That does not, however, imply that there are not food access challenges in Marshall County. Approximately 592 people were low-income and had limited access to a grocery store. In addition to access challenges created by distance from a grocery store, there are Marshall County residents that lack access to enough healthy food because they cannot afford to buy it. In 2016, an estimated 11.6 percent of Marshall County residents (1,160 individuals) struggled just to get enough food, a condition referred to as 'food insecurity.' Nearly

one in five children (17.6 percent) lived in households that were food insecure. Additionally, 41.7 percent of Marshall County K-12 students qualify for free or reduced-price school meals, and 662 individuals in Marshall County receive food assistance through the SNAP program each month.

Food Waste. National research suggests that as much as 40 percent of all food grown in the United States is wasted, with a substantial share of that attributed to household/consumer waste. Although local-level measurements of food waste were not available, extending national per capita waste estimates to local population numbers suggest that annual food waste in Marshall County might be in the neighborhood of 2.9 million pounds, with a value of $3.7 million.

Economic Impact. Agriculture and food represent major sectors of the economy, nationally and at the local level. Consumers in Marshall County spend about $27.4 million annually on food purchases. Economic estimates from the Kansas Department of Agriculture indicate that agriculture and food-sector businesses in the county employ about 1,478 people and contribute $364.8 million to the local economy. Farm product sales in the region totaled approximately $127.9 million in 2012. In addition to farm product sales, economic activity is also generated by income received from government farm payments and federal food assistance programs and retail food sales.

Conclusion

The information presented in this report highlights many current strengths and gaps in the current food system for Marshall County. The region has a strong agricultural presence, with access to farmland and adequate water supplies. Although agriculture is predominantly focused on the production of grains, hay and beef, there are a promising, albeit small, number of smaller-scale producers growing and producing foods for direct sale to community residents. The presence of Kansas State University, the state's land grant university, offers food producers and entrepreneurs in the region the opportunity to take advantage of a wealth of available scientific expertise and technical assistance. There is also access to retail grocery and farmers markets within Marshall county.

Despite all those strengths, however, there are still gaps and opportunities to improve and enhance the local food system. Many farmers are nearing retirement age without younger ones stepping in fill the void, and high land prices and low farm profitability present significant challenges to the small numbers of younger people who would like to become farmers. Local production of fruits and vegetables and poultry and eggs fall significantly short of local consumption volumes. The vast majority of community residents do not eat the recommended amounts of vegetables and fruits. Approximately 1,160 Marshall County residents are food-insecure (or struggle to get enough food), because they lack the money to buy it. National research suggests that as much of 40 percent of the food grown in the United States is wasted. If this pattern holds true in the Marshall County area, more than 2.9 million pounds of food is wasted each year.

These are just a few examples of current assets and gaps; readers of this report will likely identify others. While this report does not address or include every possible measure related to the local food system, it has been structured to provide a systems-level description that touches upon each of the major sectors within the food system, using data that are either readily available or could be collected with reasonable effort within the community setting. Because of that breadth of scope, the depth of information on any one subject is necessarily limited to prevent the assessment process and report from becoming totally unmanageable. It is likely that there will be some areas where the information included will generate interest or raise additional questions that are not answered by the brief topical summaries included in the report – those questions may identify areas the North Central Regional Planning Commission or the North Central Kansas Food Council will wish to conduct further exploration in the future.

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Introduction

Food is a basic human need. Healthy diets that provide appropriate levels of calories and nutrients are essential for good health and active lifestyles. In the United States, there is a plentiful supply of food to meet the nutritional requirements of the population. Despite that plentiful supply, however, many Americans do not eat balanced and healthy diets. Obesity rates have steadily increased over the past several decades. At the same time, a significant segment of the population worries about not having access to enough food. The reasons for this disconnect are complex. Individual eating choices and behaviors are influenced by a variety of factors including cultural backgrounds, taste, food availability and prices, food marketing, food preparation requirements and time constraints, nutritional knowledge and more. In recent years, a growing number of research studies have shown that the food context or environment in which an individual lives can exert profound influence upon that person's eating behaviors. This growing awareness of the importance of community-level food environments, coupled with emerging concerns about food production methods and nutritional quality of available foods, has resulted in growth in the numbers of community-level food policy councils established for the purpose of building more robust and self-sustaining local food systems that offer access to healthy food choices to all community members.

For many newly-established food policy councils or food coalitions, completion of a community food assessment (CFA) is an important early step. A CFA is a process that systematically examines a broad range of community food issues and assets, with the focus usually at a systems level. The purpose of a CFA is to provide an objective basis for developing action plans to build and strengthen the community's food system. A community food assessment can be an important tool to gain a deeper understanding of the community's current food environment. The CFA can help in identifying what is currently working well and where there are gaps or opportunities to strengthen the food system and ensure that all members of the community have access to healthy food options.

The scope and content of a community food assessment may vary from one community to the next depending upon the interests, priorities, and resources of the community stakeholders who commission the process. While some assessments may be comprehensive and include all aspects of a food system, others may be more narrowly focused on specific aspects of the overall food system. This report summarizes findings of the first Marshall County food system assessment. Consultant Kolia Souza was contracted by North Central Regional Planning Commission and the North Central Kansas Food Council in October 2017 to conduct the CFA.

The Concept of a Food System

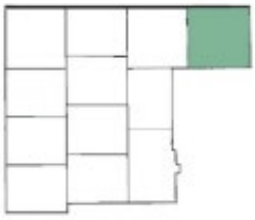
Most, if not all, Community Food Assessments are structured around the concept of food systems, taking a systems-level perspective on the ways that food moves and cycles through a community. In the words of the Oregon Food Bank, a food system is "the sum of all activities required to make food available to people." A food system includes all the processes and infrastructure that are involved in feeding a population: growing or food production, harvesting, processing and packaging, transportation and distribution, marketing and retail sales, consumption, and disposal of food-related wastes. A simplistic model of a food system is shown in the figure here. While not explicitly depicted in this illustration, a food system would also include all the inputs needed and outputs generated in each step of the cycle, such as natural resources, human resources and labor, and economic impacts. Considerations such as access to healthy food options within a community, and food justice and equity issues are also frequently included in a Community Food Assessment. A food system operates within the context of its community, and may be influenced by the social, political, and economic environments.

Food Assessment Methodology

This community food system assessment was conducted using secondary analysis of existing data from a variety of publicly-available sources. Data sources used extensively include the U.S. Census, the U.S. Census of Agriculture, and various business and marketing resources. Data sources are noted in the body of the report, as individual measures are presented.

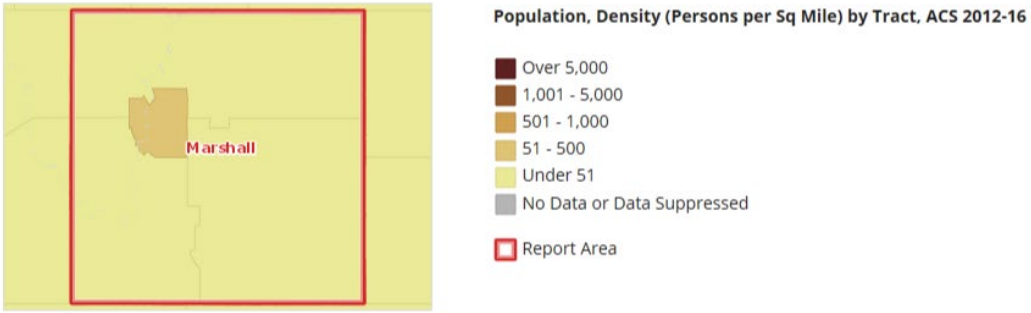
Demographics

Marshall County is located in the northeastern quadrant of the North Central Regional Planning Commission 12-county service area. According to U.S. Census Bureau American Community Survey 2017 estimates, its largest city, Marysville, has a population of approximately 3,288. Marysville accounts for approximately one-third of the county's population. In addition to Marysville, the smaller cities of Frankfort, Oketo, Home, Vermillion, Blue Rapids, Waterville, Axtell, Beattie, and Cottage Hill are within the county as well as numerous townships.



Population

According to U.S. Census Bureau American Community Survey 2013-17 5-year estimates, a total of 9,853 people lives within the 900 square-mile land area of Marshall County. Marshall County residents account for 7.2 percent of the north central region's 12-county area. Population density is 11 people per square mile. Between the 2000 and 2010 decennial census enumerations, Marshall County's population decreased by 848 persons, a decrease of approximately 7.7 percent in overall population.



Geographic Area	Total Population, 2000 Census	Total Population, 2010 Census	Total Population Change, 2000-2010	Percent Population Change, 2000-2010
Marshall County	10,965	10,117	(848)	(-7.73%)
Kansas	2,688, 419	2,853,118	164,699	6.13%
United States	280,405,781	307,745,539	27,339,758	9.75%

Data Source: U.S. Census Bureau, American Community Survey, 2013-2017. Source geography: Tract.

Race/Ethnicity of the Population

The population in Marshall County is culturally homogenous, with 96.9 percent of residents being White or Caucasian. About 2.4 percent also self-identified as Hispanic or Latino ethnicity between 2013 and 2017. Although individuals who identify as Hispanic or Latino may be of any race, the majority in Kansas would be White. Compared to Kansas race/ethnicity population statistics, Marshall County reflects a lower level of overall cultural diversity.

Total Population by Race Alone, Percent

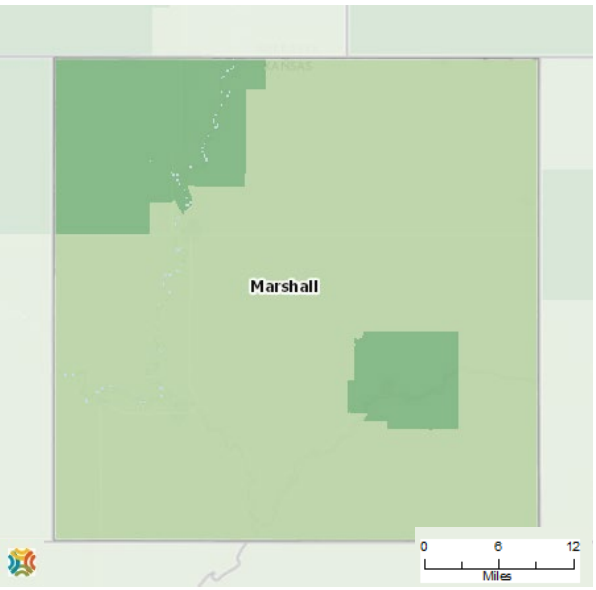
Geographic Area	White or Caucasian	Black or African American	Asian	Native American/ Alaska Native	Native Hawaiian/ Pacific Islander	Some other race	Multiple races
Marshall Co.	9,547	28	31	31	27	39	156
Kansas	2,391,044	167,864	67,762	28,150	2,238	110,127	85,933
United States	234,370,202	40,610,815	17,186,320	2,632,102	570,116	15,533,808	10,081,044

Data Source: U.S. Census Bureau, American Community Survey, 2013-2017. Source geography: Tract.

Total Population by Ethnicity Alone

Geographic Area	Total Population	Hispanic or Latino Population	Percent Population Hispanic or Latino	Non-Hispanic Population	Percent Population Non-Hispanic
Marshall County	9,853	232	2.4%	9,627	97.6%
Kansas	2,853,118	334,860	11.5%	2,568,960	88.5%
United States	321,004,407	56,510,571	17.6%	264,493,836	82.4%

Data Source: U.S. Census Bureau, American Community Survey, 2013-2017. Source geography: Tract.

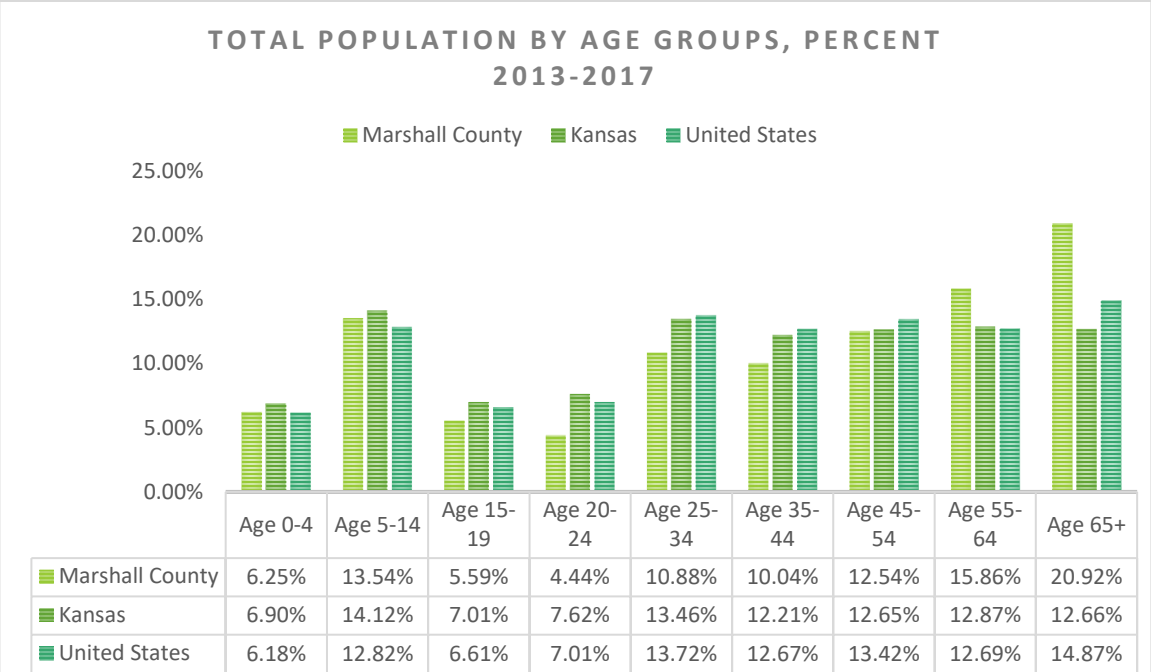


Age of the Population

The retiree age population (age 65+) of Marshall County is significantly higher than that of Kansas or the United States. Conversely, its young adult population (age 20-34) is lower than the state or nationally. Between 2013 and 2017, the median age of Marshall County residents was 44 years, compared to 36.3 years for all Kansans. Approximately 36.8 percent of Marshall County residents were 55 years or older as compared to 25.5 percent of the Kansas population. About 15.3 percent of Marshall County residents were age 20-34 years as compared to 21.1 percent of all Kansans.

Median Age

Geographic Area	Total Population	Median Age
Marshall County, KS	9,853	44



	Age 0-4	Age 5-14	Age 15-19	Age 20-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Marshall County	6.25%	13.54%	5.59%	4.44%	10.88%	10.04%	12.54%	15.86%	20.92%
Kansas	6.90%	14.12%	7.01%	7.62%	13.46%	12.21%	12.65%	12.87%	12.66%
United States	6.18%	12.82%	6.61%	7.01%	13.72%	12.67%	13.42%	12.69%	14.87%

Data Source: US Census Bureau, American Community Survey, 2013-2017. Source geography: Tract

Households with Children

According to 2013-2017 American Community Survey estimates, 21.8 percent of all occupied households in Marshall County were family households with one or more child(ren) under the age of 18. This is significantly lower than the statewide proportion of 31.7 percent.

Geographic Area	Total Households	Total Family Households	Families with Children (under age 18)	Families with children (under age 18), percent of total households
Marshall County	4,890	2,775	1,065	21.78%
Kansas	1,121,943	735,106	355,887	31.70%
United States	135,393,564	78,298,703	37,171,726	27.45%

Data Source: U.S. Census Bureau, American Community Survey, 2013-2017. Source geography: Tract

Geographic Mobility

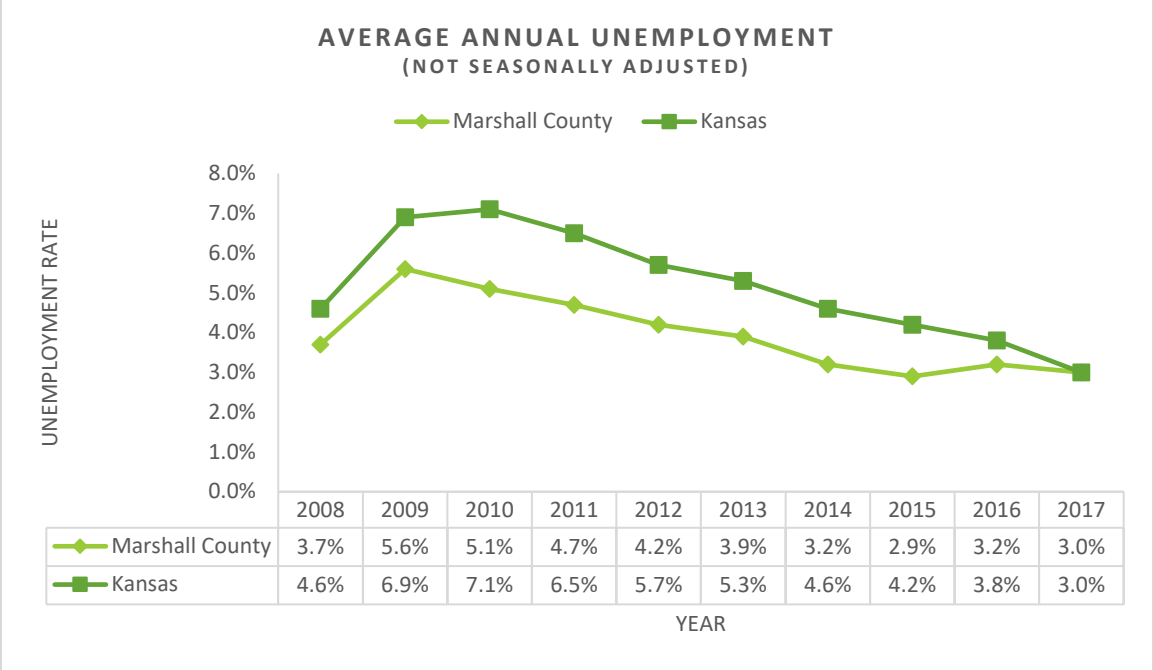
The Marshall County population is slightly more transient than Kansas as a whole, or the national population. According to the American Community Survey estimates, approximately three-quarters of a percent of the Marshall County population relocated outside the area between July 2016 and July 2017, compared to less than half a percent of all Kansans. (Residents who moved to different households within the county are no included in this measure).

Geographic Area	Total Population	Population In-Migration	Percent Population In-Migration
Marshall County	9,853	(73)	-0.74%
Kansas	2,853,118	(-40,572)	-0.28%
United States	321,004,407	7,233,626	0.35%

Data Source: U.S. Census Bureau, American Community Survey, 2013-2017. Source geography: Tract

Unemployment

During 2017, the estimated unemployment in Marshall County and statewide was 3 percent. From 2008 to 2016, Marshall County unemployment rates remained lower than the statewide unemployment rate. Increasing unemployment rates from 2009 to 2011 may be due to residuals from the 2008 recession. Unemployment rates consider only working-age adults who are actively seeking employment; those that are not currently in the workforce or have given up trying to find jobs are not reflected in these statistics.



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Marshall County	3.7%	5.6%	5.1%	4.7%	4.2%	3.9%	3.2%	2.9%	3.2%	3.0%
Kansas	4.6%	6.9%	7.1%	6.5%	5.7%	5.3%	4.6%	4.2%	3.8%	3.0%

Poverty

Poverty is a condition defined by household income levels that are insufficient to support a modest standard of living. In the United States, the Census Bureau sets annual poverty level thresholds, based upon household size and income levels. These poverty thresholds are used to monitor poverty conditions in the U.S. and to define eligibility for numerous social welfare programs. In 2017, Federal Poverty Levels (FPLs) were determined as show in the table at the right.

Household Size	Income
1	$12,060
2	$16,240
3	$20,420
4	$24,600
5	$28,780
6	$32,960
7	$37,140
8	$41,320

Overall rates of poverty in Marshall County were estimated at 8.9 percent of the population during 2017, a rate that is lower than the statewide rate of 12.8 percent. Among children age 0 to 17 years, 11.3 percent of Marshall County children lived in poor households, compared to 16.4 percent statewide. The median household income in Marshall County was $50,420, which is below the state median household income of $55,477.

Percent in Poverty, 2017

Geographic Area	Percent in Poverty, all ages	Percent in Poverty, age 0-17	Median Income
Marshall County	8.9%	11.3%	$50,420
Kansas	12.8%	16.4%	$55,477
United States	14.6%	20.3%	$57,652

Data Source: U.S. Census Bureau, American Community Survey 2013-2017.Source geography: Tract.

Natural Resources

Agriculture and food production are highly dependent upon having access to sufficient land, high-quality soils, and water to support crop or livestock production. This section examines the availability and use of these natural resources as it relates to food production.

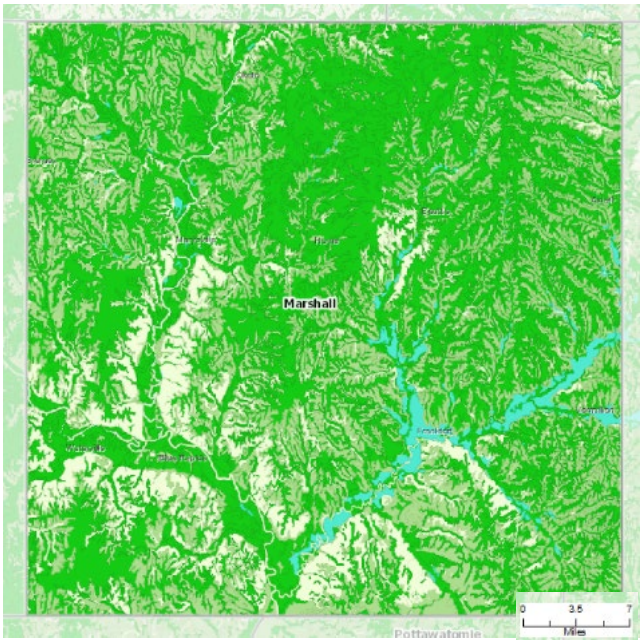
Land Availability and Use

Marshall County boundaries enclose an area approximately equal to 900 square miles, or 576,115 acres. Of that, 438,438 acres (76.1 percent) was in use for farming in 2012. The map at right illustrates the locations of prime farmlands in Marshall County and the region, regardless of their current use.

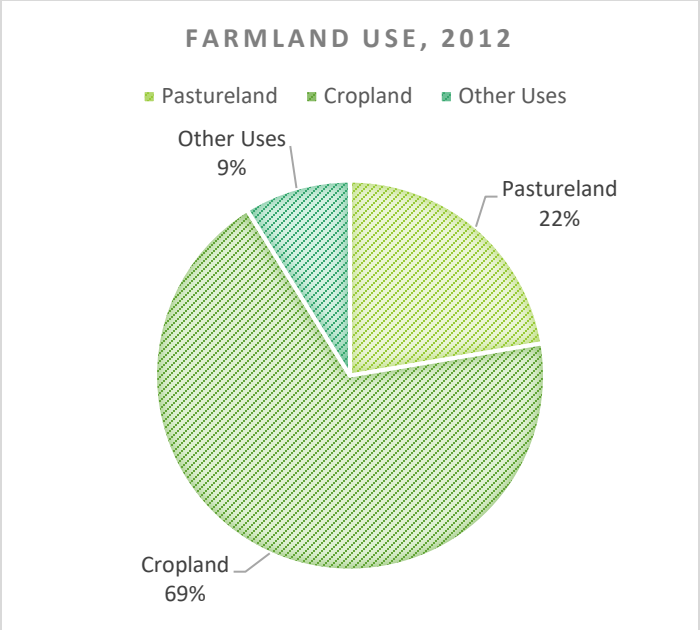
Farmland Class by Map Unit, NRCS 2016

- Prime Farmland
- Prime Farmland if Drained
- Prime Farmland if Irrigated
- Prime Farmland with Limitations
- Farmland of Statewide or Local Importance
- Farmland of Statewide Importance with Limitations
- Farmland of Unique Importance
- Not Prime Farmland
- Not Rated

Map Source: Community Commons



Farmland in Marshall County is used primarily for cropland (68.8 percent) and pastureland (22.4 percent). The chart at the right show how farmland and croplands in Marshall County were being utilized in 2012.

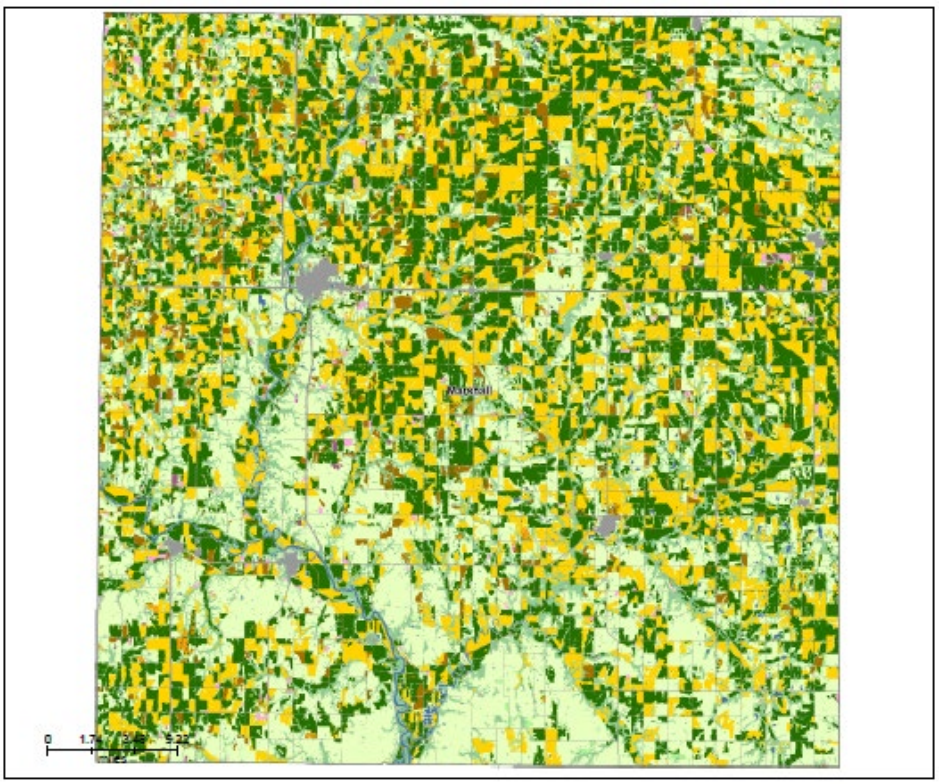


The table on the following page details Marshall County land use. Maps show the locations where various types of crops were under production during 2017.

County Cropland Data, 2012

Geographic Area	Total Cropland Acres	Total Harvested Cropland	# of Farms with Cropland	# of Farms with Harvested Cropland	Idle Cropland or used for cover crops but not harvested or grazed, in acres	Cropland – summer fallow, in acres	Other Pasture and grazing Land that could be used for crops, in acres	Land enrolled in CRP, WRP, or CREP, in acres
Marshall Co.	301,711	276,600	729	632	19,942	986	3,209	16,719

Data Source: U.S. Census of Agriculture, 2012

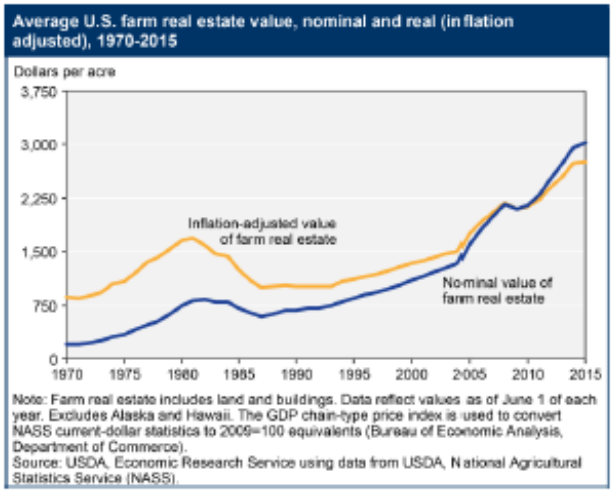


Map Source: USDA, National Agricultural Statistics Services, Cropscape System, https://nassgeodata.gmu.edu/CropScape/

Land Cover Categories
(by decreasing acreage)

AGRICULTURE*
- Grass/Pasture
- Soybeans
- Corn
- Winter Wheat
- Sorghum
- Alfalfa
- Other Hay/Non Alfalfa
- Dbl Crop WinWht/Soybeans
- Oats
- Dbl Crop WinWht/Sorghum
- Dbl Crop WinWht/Corn
- Fallow/Idle Cropland
- Clover/Wildflowers
- Triticale
- Dbl Crop Corn/Soybeans
- Millet

NON-AGRICULTURE**
- Deciduous Forest
- Developed/Open Space
- Open Water
- Developed/Low Intensity
- Woody Wetlands
- Developed/Medium Intensity



Land Values

Access to land is essential for farming operations, and land holdings represent a significant asset on the farm balance sheet. When land values become too high, however, there may be negative impacts on the local food system. When land values are high and farming incomes are low, farm owners may be tempted to sell off land and essentially "cash out", taking the capital gains from the high land prices. High land prices may also be a barrier for new farmers that lack the capital needed to purchase good farmland. Nationally, farmland values have risen steadily since the mid-1980s. Farmland values vary

significantly by location and may be influenced by factors such as the general economy, local farm economies, policies, and development pressures.

Within the state of Kansas, there is significant variation in farmland values by region and by county. Values are generally higher for cropland than pastureland, with irrigated croplands bringing higher prices than non-irrigated lands.

Kansas Farmland Values ($/ acre), 2016*

Geographic Area	Non-irrigated Cropland	Irrigated Cropland	Pasture
Marshall County	$5,130	---	$3,692
Kansas	$2,398	$3,400	$1,726

NOTE: Missing estimates for irrigated values are due to insufficient observations of irrigated land sales in the previous three years.
**Values shown are for bare land, minimum 40 acres in size. Values are estimated by the Kansas Property Valuations Department.*
Data source: Taylor, 2017c

Estimated Cash Rental Rates ($/acre), 2016

Geographic Area	Non-irrigated Cropland	Irrigated Cropland		Pasture
		Tenant-owned	Landowner-owned	
Marshall County	$103.00	---	---	---
Kansas (avg.)	$60.94	$65.33	$89.50	---

Data Source: USDA NASS, Census of Agriculture via Taylor, 2017a, 2017b

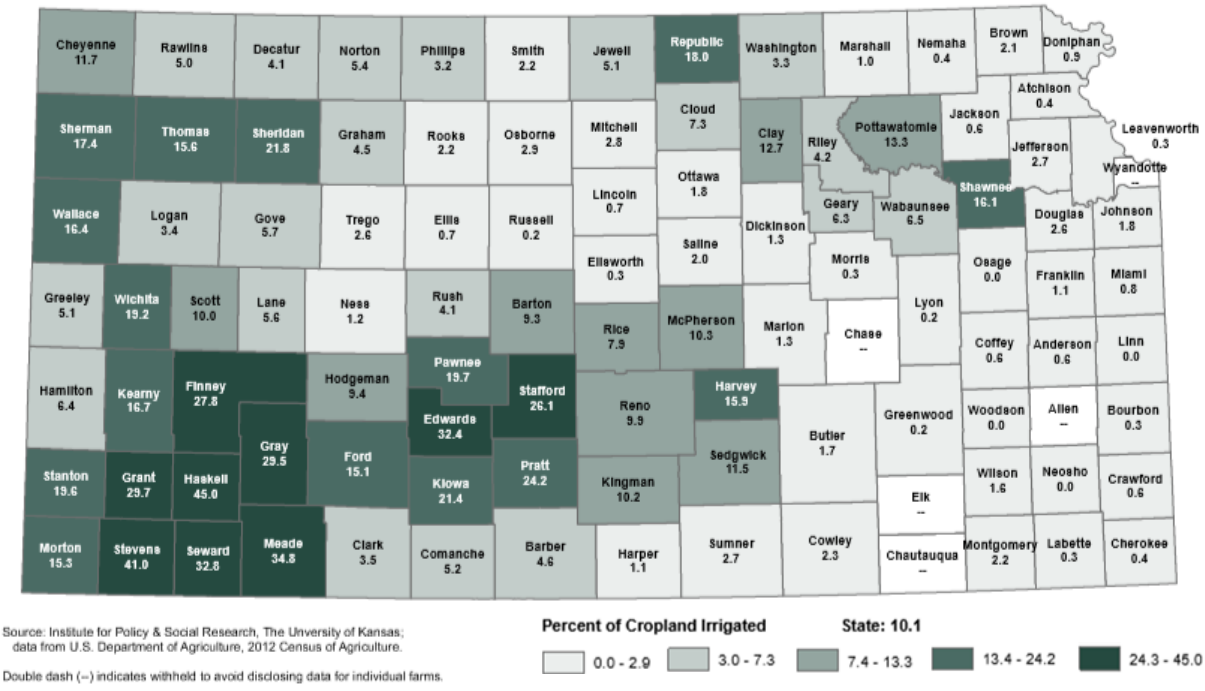
Water

In addition to quality soils, water is another primary resource necessary to support crop and livestock production. In Western Kansas, where rainfall is less abundant and much of the water used in agriculture is obtained from aquifers, declining aquifer levels has become a significant concern. Eastern Kansas counties typically experience higher annual precipitation levels and are less dependent upon irrigation and surface or groundwater reservoirs for agricultural needs.

Irrigated Farmland in the Marshall County Region

A small percentage of farms (approximately 10 percent) utilize irrigation in the state. Marshall County farm irrigation is significantly lower than the state average at one percent. The table below shows the number of farms which used irrigation in 2012 and the amount of acreage that was irrigated.

Percent of Cropland Irrigated in Kansas, by County, 2012



Farms and Irrigation Use, 2012

Geographic Area	Total Farms	Farms Using Irrigation	Land in Irrigated Farms (acres)	Irrigated Land (acres)
Marshall County	796	19	31,0596	2,934
Kansas	61,773	6,205	13,927,077	2,881,292

Data Source: USDA NASS, Census of Agriculture

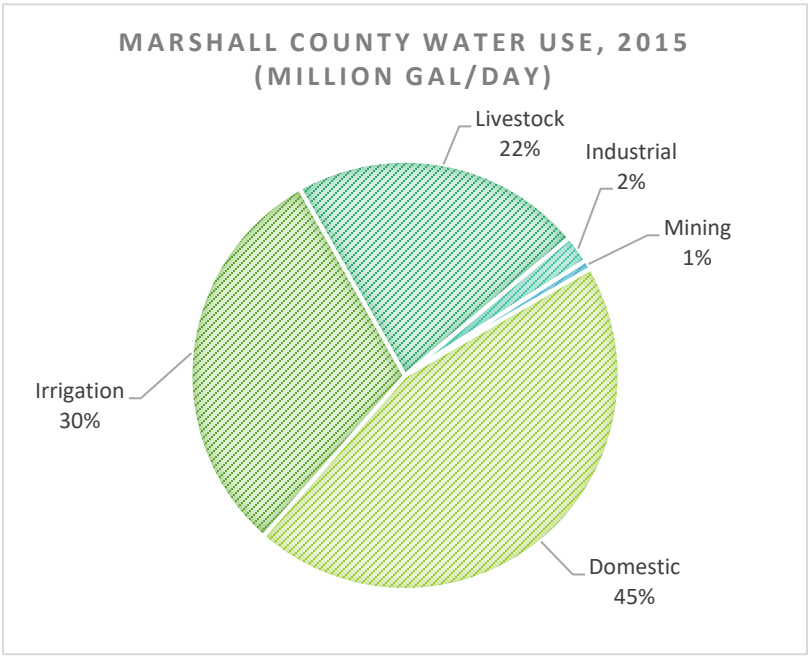
Water Use

Water use statistics for Marshall County reflect low use of crop irrigation. This aligns closely with Southeastern Kansas counties, where the quantities of water used for irrigation far excess domestic use.

Water Use, by type of Use (million gal/day)

Marshall County, 2015	
Domestic Use	0.65
Irrigation	0.44
Livestock	0.32
Industrial	0.03
Mining	0.01

Data Source: U.S. Geological Survey, Water Data



Definitions of water use categories:

- **Municipal/ domestic** – Household use (indoor or outdoor), and municipal water supply use
- **Irrigation** – Water applied by an irrigation system to support crop and pasture growth, or to maintain vegetation on recreational lands such as parks and golf courses
- **Livestock** – Water used for livestock watering, feedlots, dairy operations, and other on-farm needs
- **Industrial** – Water used for fabrication, processing, washing and cooling
- **Mining** – Water used for the extraction of naturally-occurring minerals (such as coal, sand and gravel), liquids (such as crude petroleum) and gases (such as natural gas)

Farming and Food Production

Farms

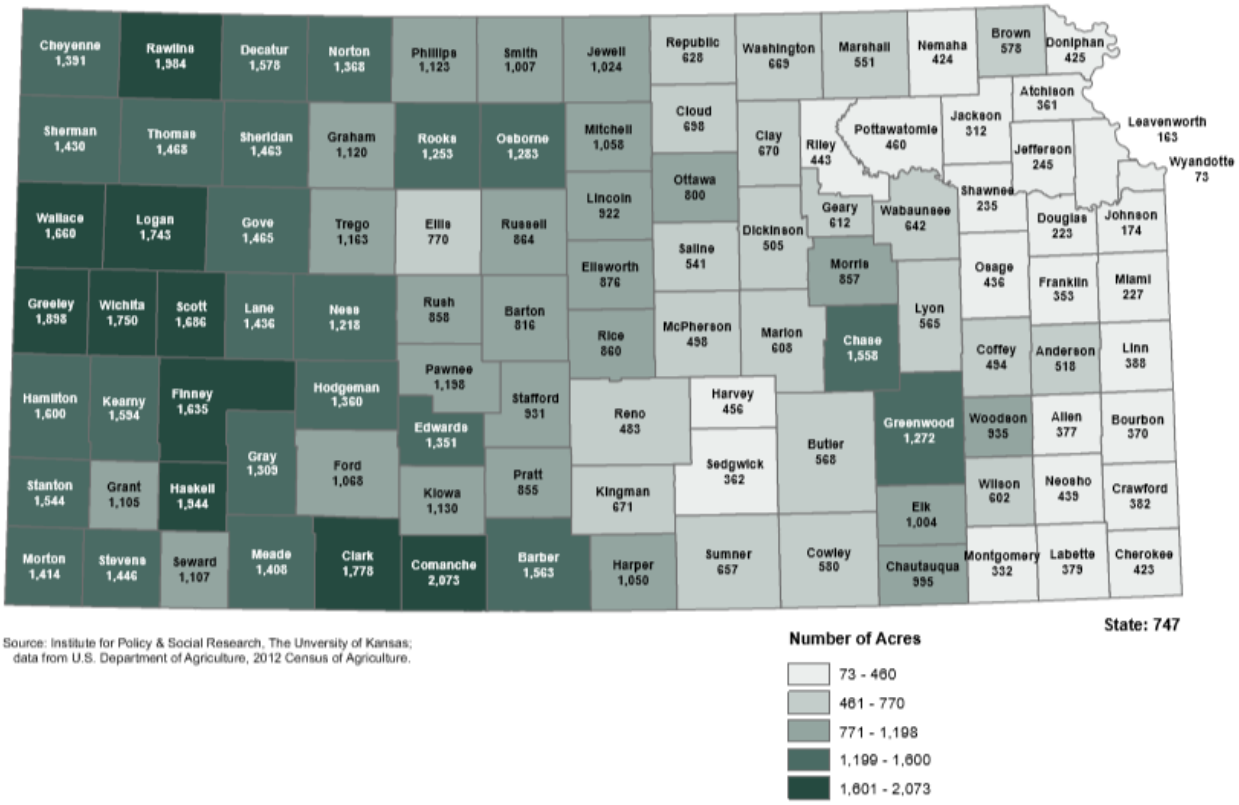
In 2012, there were 796 farms in Marshall County that were enumerated in the U.S. Census of Agriculture, occupying a total of 438,438 acres of land. The average farm size was 551 acres. Although both national and state trends have shown reductions in the numbers of farms and increases in the average farm size in recent years, the number of farms in Marshall County have fluctuated since 1997. The total number of acres in farms have also fluctuated, ultimately reflecting more than a 142,000 acre decrease since its pinnacle in 2002. The charts on the following page illustrate these fluctuations.

Farms and Land in Farms, 2012

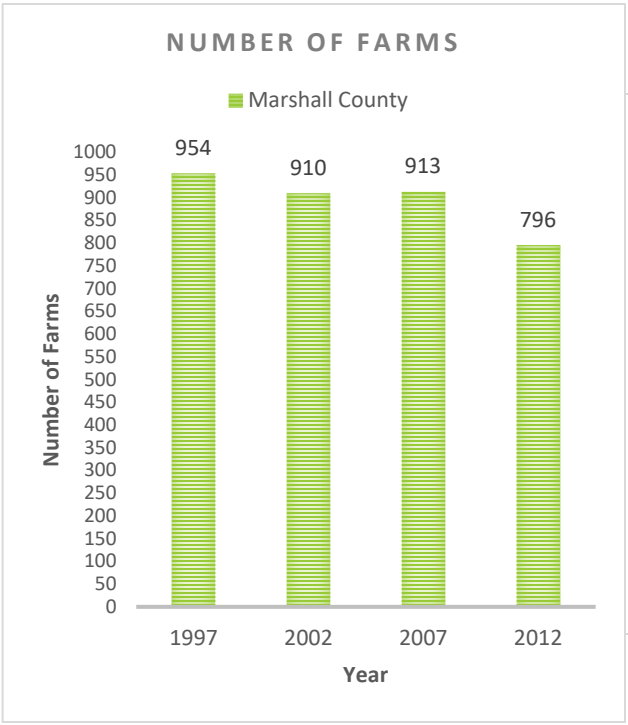
Geographic Area	Farms	Land in Farms (acres)	Avg. Farm Size (acres)	Total Cropland (acres)	Harvested Cropland (acres)
Marshall County	796	438,438	551	301,711	276,600

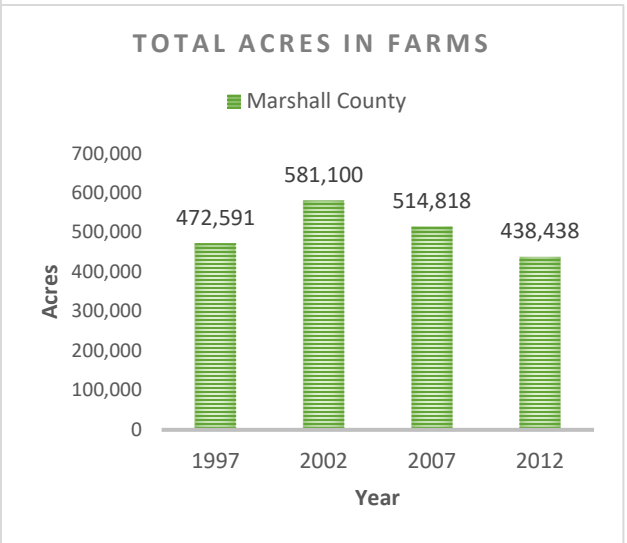
Data Source: USDA NASS, Census of Agriculture

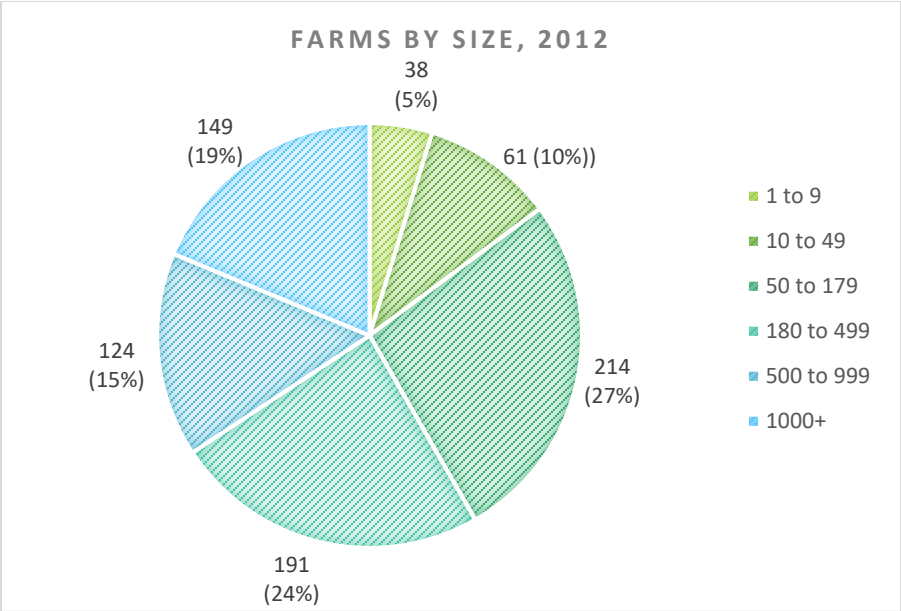
Average Size of Farm in Kansas, by County, 2012



Source: Institute for Policy & Social Research, The University of Kansas; data from U.S. Department of Agriculture, 2012 Census of Agriculture.



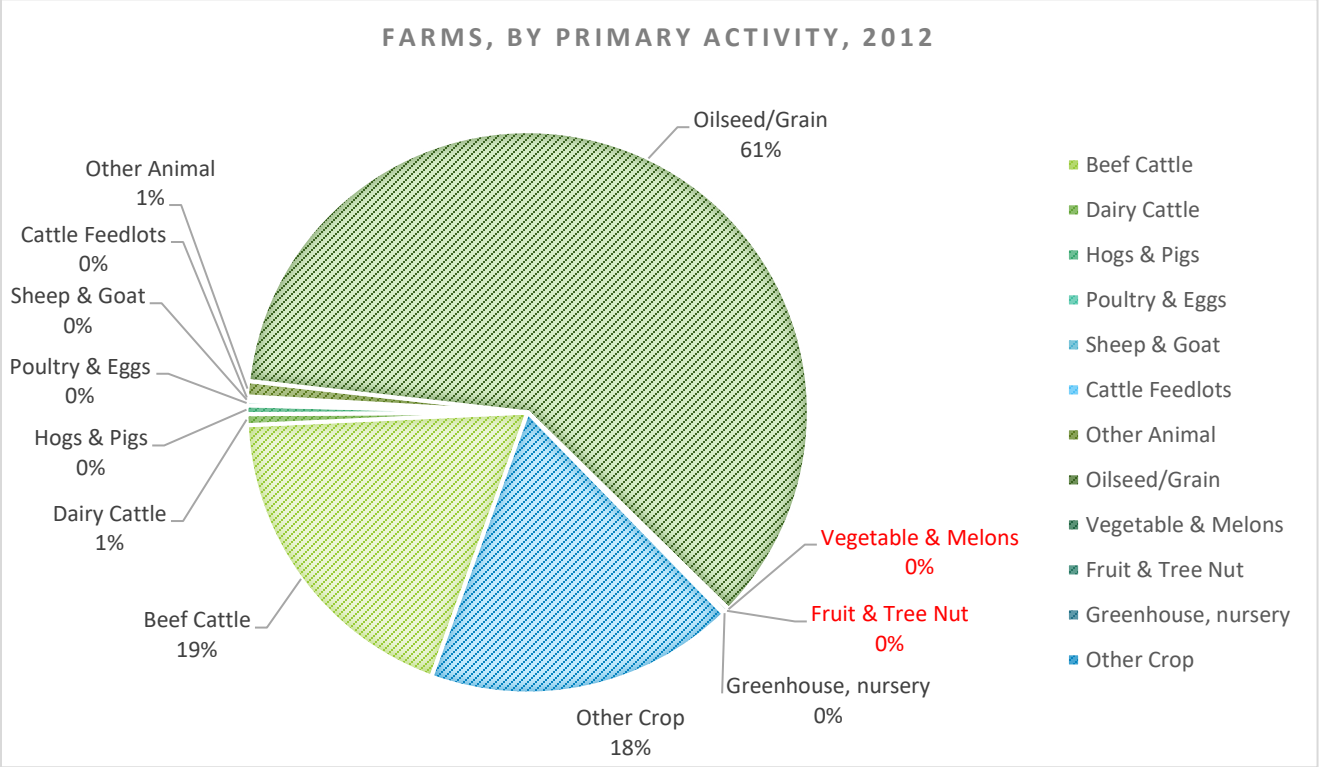




Data Source: USDA NASS, Census of Agriculture

Farm Production

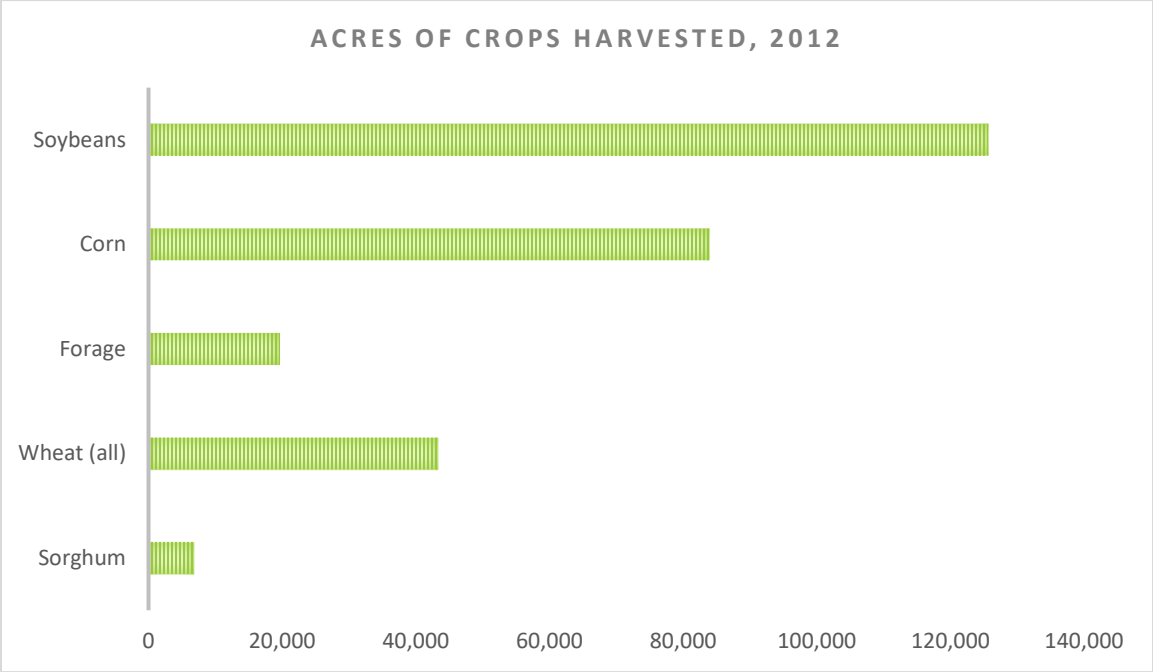
Farming in Marshall County is dominated by grain crops, hay and beef cattle production. There was virtually no fruit and vegetable production reported in Marshall County as a primary activity in 2012.



Data Source: U.S. Census of Agriculture, 2012

	Quantity (acres)	State Rank
Top Crop Items		
Soybeans for beans	125,644	1
Corn for grain	83,928	9
Wheat for grain, all	43,359	72
Winter wheat for grain	43,359	72
Forage-land used for all hay and haylage, grass silage, and greenchop	19,673	57
Top Livestock Inventory Items		
Cattle and calves	29,585	76
Hogs and pigs	4,474	33
Layers	910	36
Horses and ponies	215	88
Goats, all	196	62

Data Source: U.S. Census of Agriculture, 2012



**Data for Oats and Vegetables & Melons acres harvested undisclosed*

Data Source: U.S. Census of Agriculture, 2012

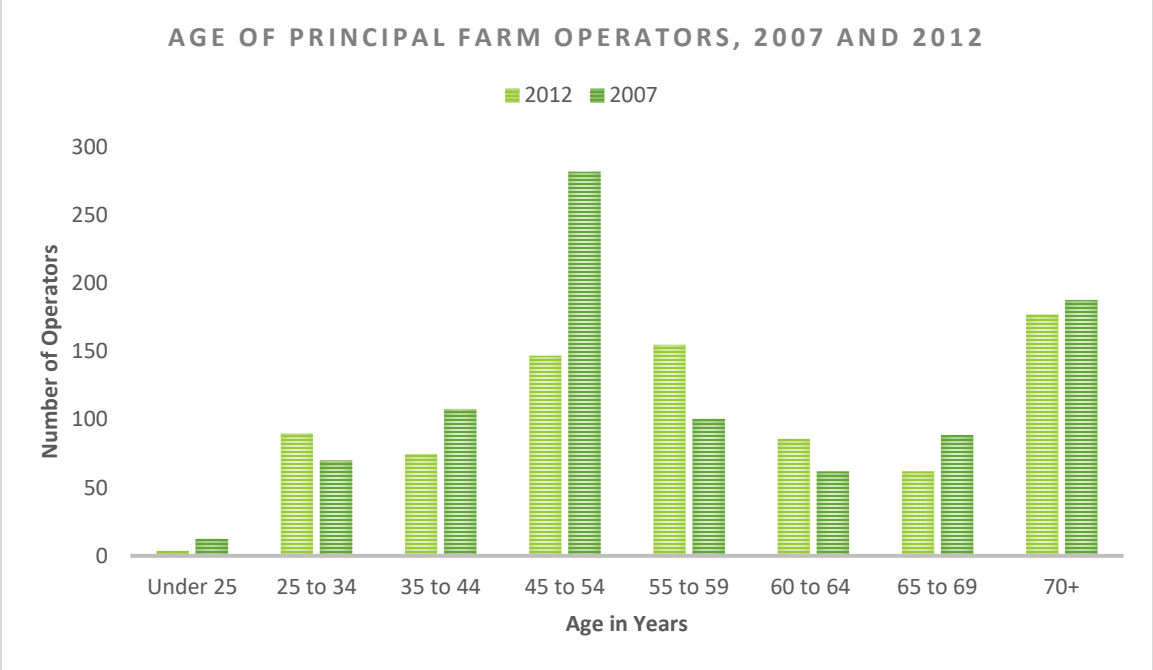
Fruit and Vegetable Production

Commodity crops (corn, soybeans, and wheat) dominate overall crop production in Kansas, and the same is true in Marshall County. During 2012, no Marshall County farms reported harvesting vegetables for sale. Five farms reported having orchards, and fruit production accounted for four of 276,600 total acres of all harvested cropland in 2012.

Farm Operators

Age of Farm Operators

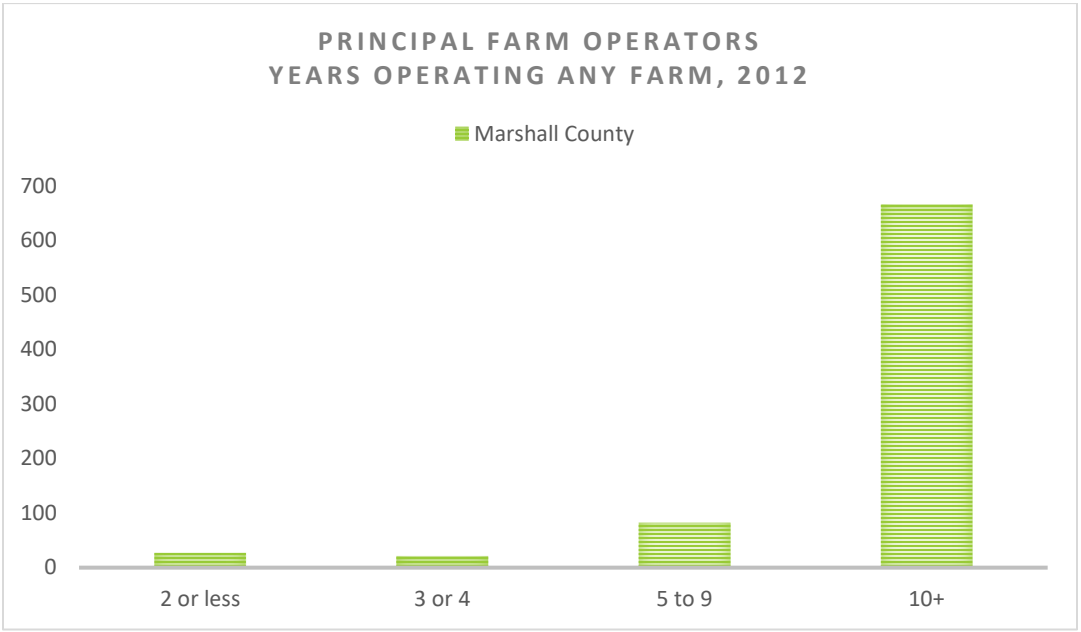
Across Kansas, the average age of farmers has been increasing for many years. The average age of Marshall County Farm Operators in 2012 was 57.1 years, an increase to 55.9 years in 2007. The average age of all Kansas principal farm operators in 2012 was 58.2 years.



Data Source: U.S. Census of Agriculture, 2012

Farm Operator Experience

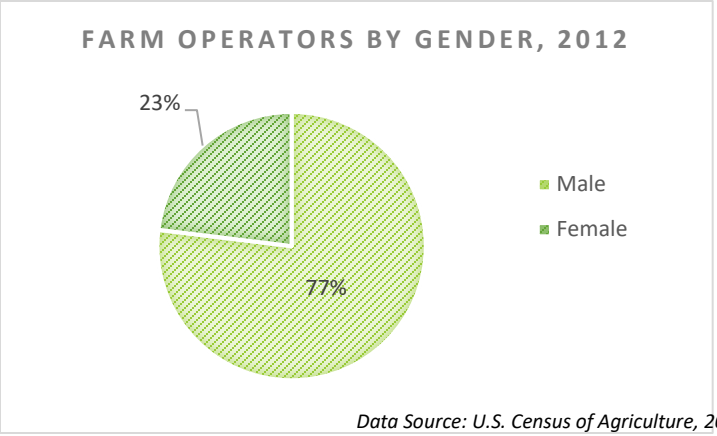
Across Kansas, and in Marshall County, the vast majority of principal farm operators have 10 or more years of experience as farm operators. The numbers of new farmers entering the occupation are small. This data, coupled with the data on aging of farm operators, raises concern over retirement. There may not be sufficient numbers of new farmers coming on board to sustain farming operations. In 2012, Kansas farmers reported an average of 27.1 years of farm operator experience; Marshall County farmers averaged 29 years.



Data Source: U.S. Census of Agriculture, 2012

Gender of Principal Farm Operators

Across Kansas, and in Marshall County, a significant majority of principal farm operators are male. Although 23 percent of all Marshall County farmer operators in 2012 were women, women accounted for only 4.3 percent of principal farm operators.



Data Source: U.S. Census of Agriculture, 2012

Principal Farm Operators, by Race and Ethnicity

Only a small percentage of Kansas farms have principal operators that are non-white, or of Hispanic/Latino ethnicity. The same is true in Marshall County. In 2012, 1,166 principal farm operators in Marshall County self-identified as White and three self-identified as Hispanic or Latino. No operators self-identified as Black, Asian, or American Indian/Alaskan Native.

Race/Ethnicity of Principal Farm Operators, 2012

Geographic Area	White	Black/ African American	Hispanic/Latino	Asian	American Indian/ Alaska Native
Marshall County	1,166	0	3	0	0

Data Source: U.S. Census of Agriculture, 2012

Off-farm Employment

The majority of farm operators find it necessary to supplement income from farming operations with other sources of income. In 2012, 29.6 percent of 1,188 principal farm operators in Marshall County reported that their primary occupation was something other than farming. Approximately 38.5 worked at least some days off the farm. One-quarter of principal farm operators worked off the farm for 200 days or more during 2012.

Principal Farm Operators Off-farm Employment, by percent, 2012

Geographic Area	Primary Occupation Other than Farming	Worked at Least Some days Off-farm	Worked Off-farm 200 Days or More
Marshall County	352	457	298

Data Source: U.S. Census of Agriculture, 2012

Farm Sales

During 2012, Marshall County farms reported total sales of farm products valued at more than $127 million. Crop sales accounted for more than two-thirds of total sales. The average market value of products sold by Marshall County farms in 2012 was $160,699 – a significant increase over previous census-year reports. This increase in value of sales likely represents changes in market values of products as well as changes in production volumes.

Market Value of Products Sold

Year	Farms	Total Sales	Crop Sales	Livestock Sales	Avg. per Farm
1997	954	$65,381,000	$ 40,989,000	$ 24,392,000	$71,487
2002	910	$ 64,350,000	$ 31,710,000	$32,640,000	$67,452
2007	913	$ 111,011,000	$81,815,000	$ 29,196,000	$121,589
2012	796	$ 127,917,000	$ 104,099,000	$23,817,000	$160,699

Data Source: U.S. Census of Agriculture, 2012

Farms, by value of sales

When grouped by the total value of their sales, over half (53.5 percent) of Marshall County farms operate at either a very small or large scale. Approximately 17.1 percent of farms had sales valued at less than $2,500 in 2012 while more than a third (36.6 percent) of farms had sales valued at $100,000 or more.

Data Source: U.S. Census of Agriculture, 2012

Sales through Alternative Market Channels

Although traditional commodity farming dominates the Kansas farm market, a few Marshall County farms are attempting to market their products through alternative marketing channels.

Value of Alternative Market Sales, 2012

Market Approach, 2012	Kansas		Marshall County	
	Farms	$ Value	Farms	$ Value
Direct sales to individuals, for human consumption	2,044	$8,957,000	16	$21,000
Sales directly to retail outlets	406	No data	2	No data
Sales of value-added commodities	1,615	No data	14	No data
Sales through Community-Supported Agriculture program	144	No data	(D)	No data
Agritourism Services	1,000	$8,271,000	23	$49,000

(D) = data suppressed to prevent disclosure of data for individual farms

Data Source: U.S. Census of Agriculture, 2012

Net Farm Income

Net average incomes for Marshall County farms in 2012 were just above average at $59,240. By comparison, 2012 net farm income for all farms in Kansas averaged $50,903. About one quarter of Marshall County farms reported net operating losses in 2012 as compared to about 41 percent for the state average.

Farm Income, 2012	Marshall County
Net cash farm income of operations (total)	$47,155,000
Average per farm	$59,240
Percent of farms that reported net gains	74.1%
Average net gain per farm	$107,730
Percent of farms that reported net losses	25.9%
Average net loss per farm	$35,844

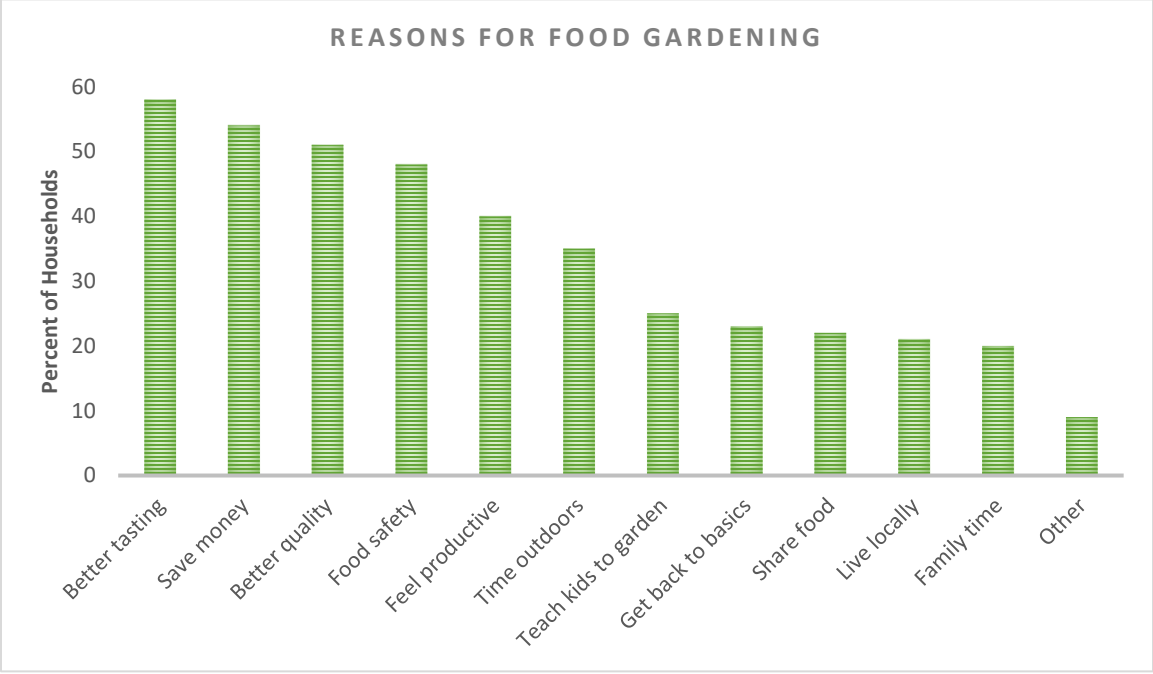
Data Source: U.S. Census of Agriculture, 2012

Other Local Food Production

Home Gardening

Although most communities lack reliable information about the numbers of community residents that grow at least some of their own foods, national studies tell us that interest in home gardening has enjoyed a strong resurgence in recent years. A study published by the National Gardening Association (2014) found that more than one-third (35 percent) of U.S. households had grown food for their own use during 2013. That finding indicates the highest overall participation levels seen in the U.S. in a decade, and an increase of 17 percent over five years. The study found that there had been an increased interest in food gardening among millennials (age 18-34 years old), with a 63 percent increase in participation in food gardening among that group between 2008 and 2013. The report also estimated that more than 2 million U.S. households participated in community gardens in 2013, a 200% increase in five years.

Participants in the same study were asked about the reasons why they participated in food gardening. Their responses may be helpful in understanding what factors are driving the increased interest. Results are shown in the chart below.



Data Source: National Gardening Association. (2014). Garden to Table: A 5-Year Look at Food Gardening in America.

Community Gardens

Community Gardens are also growing in popularity – new gardens are being established in many Kansas Communities. Community Gardens are garden sites that offer growing space to multiple community members. Although rules and policies may vary, garden participants are assigned one or more plots upon which they may grow food plants, herbs or flowers of their choosing. Community Gardens are frequently organized by non-profit organizations or groups of community volunteers. Many gardens offer instruction and educational programming and access to shared tools and equipment. In

addition to the obvious benefits of healthy foods and physical activity, community gardens provide social interaction that helps to build community. Because Community Gardens are often established on abandoned lots or other un-space within the community, they may also help to increase the attractiveness of a neighborhood by eliminating eyesores or hazardous conditions.

There are currently no community gardens identified in Marshall County.

Hunting, Fishing and Food Foraging

In addition to home gardening, households may also supplement their food supply by hunting, fishing or foraging for edible wild plants. Unfortunately, no data are available describing the extent to which these sources are a routine part of the community food supply.

Food System Infrastructure

Most food consumed by humans does not go directly from harvest in the field or livestock operation to a home dinner table. It is far more common to have many intermediate steps in transporting, processing, packaging and distribution before foods reach retail outlet shelves or restaurant kitchens. Once there, most foods undergo additional preparation before being eaten by consumers.

In the conventional food system, most foods are not sold and consumed in the communities where the products originate. Instead, farm products are produced in larger quantities and sold to processors that may be long distances from the farm. Processors, in turn, sell and ship their finished products to distributors and wholesalers, who then sell products to retail stores or restaurants. By the time the food reaches the consumer's plate, it may have traveled thousands of miles and changed hands numerous times.

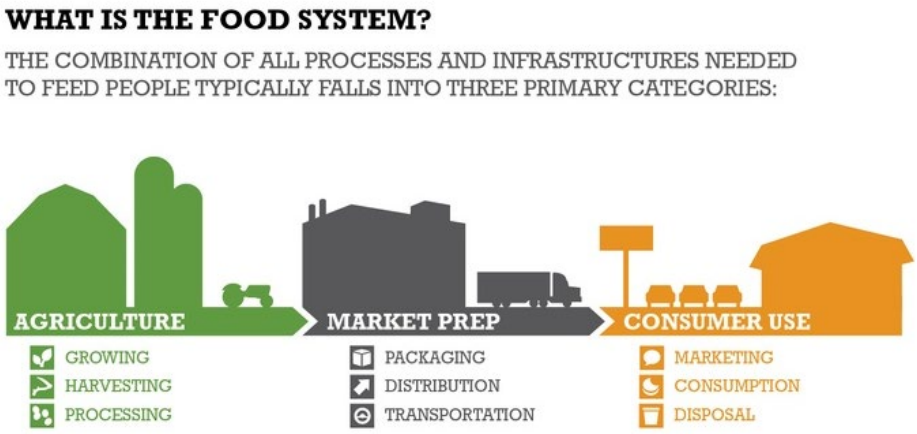


Image Source: http://charlestonorwig.com/

Food Processing

Meats

The limited number of meat processing facilities in Kansas is frequently cited as a barrier to local meat production by smaller scale or family farms. Under federal law, inspection standards in a state facility must be "equal to" those of federally inspected operations. The main difference between state and federal plants is that, by law, state inspected meats can only be sold within the state. In other words, meat products processed at state plants cannot enter commerce across state lines, which includes online sales, mail orders and other sales methods wherein meats are shipped out of state. Meat products processed at federal plants, on the other hand, may be sold across state lines, on the Internet and via mail order.

Geographic Area	Company	City	Activities	Inspector
Marshall County	Beattie Locker	Beattie	---	---
	Welch Brothers Meat Co.	Frankfort	---	---
	Frankfort Meat Processors, Inc.	Frankfort	Slaughter, processing, red meat	KDA

Manufacturing

No manufacturers were identified from searches of the data sources utilized in producing this report.

Distribution, Warehouses, and Wholesale Suppliers

No food distributors, warehouse facilities or wholesale food suppliers were identified from searches of the data sources utilized in producing this report.

Infrastructure to Support Local Food Farmer/Producers

One of the most frequently-cited barriers to increasing sales of locally-grown foods to businesses and institutions within a community is the challenge of aggregating foods produced in small quantities by small-scale producers and adding the processing and packaging that is needed to transform the raw products into forms and quantities that are better-matched to the needs of those potential purchasers. Many smaller-scale farmers lack on-farm capacity for washing and packaging fruits and vegetables, and few have the food safety certifications that may be required by institutional buyers. Institutional purchasers need the convenience of being able to fill all their needs with purchases from a small number of vendors; procuring products from multiple farms is cumbersome and time consuming. Some institutional food purchasers have become heavily reliant upon pre-processed foods like baby carrots or pre-cut apple slices, and no longer have access to the staff and equipment that would be necessary to process and prepare raw foods in-house.

To address this gap between small-scale producers and larger-scale potential purchasers, some form of centralized aggregation, processing, order fulfillment and distribution system may be indicated. Many communities have recognized that the market for locally-produced foods will be limited until this infrastructure gap is adequately addressed. Some communities have undertaken feasibility studies to explore options for creating food hubs to meet the needs. Food hubs fill the gap between small to intermediate-scale local food producers and larger commercial or institutional purchasers by aggregating and packaging farm products and providing a single sales point for purchasers interested in procuring local foods. Many also provide technical assistance to farmers on subjects such as food safety or assessment of market needs, and they may also provide some light processing and packaging.

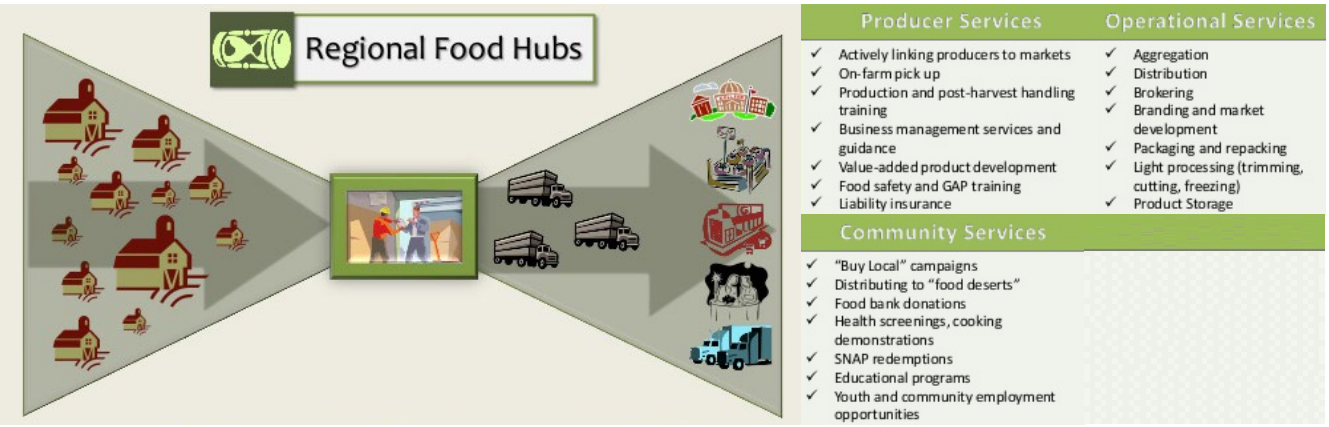


Image Source: Southern SAWG. (2015). Food Hub Lessons: Early Decisions. http://www.slideshare.net

In Kansas, two food hub feasibility studies have been completed in northeastern Kansas. Development of a regional food hub operating under the name Fresh Farm HQ has begun operations. The organization is structured as a member-owned co-op, and currently has ten producer/owners. The food hub serves as an intermediary marketing and distribution broker, coordinating aggregation of foods produced by small-scale farms and providing businesses interested in purchasing locally-

grown foods with a centralized purchasing system. Additional services provided by the food hub organization include assistance with crop/stock planning, food safety planning, bulk packaging supply, and technical assistance and training.

A feasibility study for a regional food hub in north-central Kansas was also conducted in 2017.

Support for Value-Added Food Producers

For individuals or businesses wanting to develop and sell value-added food products, several support resources are available in the region.

Education and Technical Assistance

Kansas State University Value Added Foods programs provide assistance in developing value-added food products, meat products and bakery products. Their services include product and process development, shelf-life evaluation, nutrition labeling, and chemical and microbiological analysis and evaluation.

K-State is the only school in the United States that offers a four-year Bachelor of Science degree in **Bakery Science and Management**. The Bakery Science research laboratories include a modern pilot-scale bakery, and various analytical labs for testing ingredients, dough, and finished products.

The **American Institute of Baking** (now known as AIB International) in Manhattan as founded in 1919 as a technology and information transfer center for bakers and food processors. The original mission was to "put science to work for the baker", a theme that has expanded yet remains central to their programs, products, and services. The Institute's staff includes experts in the fields of baking production, experimental baking, cereal science, nutrition, food safety and hygiene.

Community/Incubator Kitchens

Would-be entrepreneurs who would like to produce and sell value-added food products are often faced with challenges of how to meet food safety regulations and requirements without investing large sums of capital to acquire equipment and an appropriate kitchen workspace. Community or incubator kitchens, which offer certified kitchen space and commercial-grade food preparation equipment on a rental basis provide small-scale startup businesses with an affordable option for producing their food products.

The Kansas Department of Agriculture (KDA) has developed an Incubator Kitchen Resource Guide to provide critical information about incubator resources throughout the state of Kansas. Although the KDA only lists Kitchen 4 Hire, a shared kitchen facility located in Salina, as the only facility of its kind in the 12-county region, there are likely to be a number of other privately-owned commercial-grade kitchen facilities located in churches, schools and community centers in the region. Some of these may be willing to negotiate with individuals seeking kitchen access to allow leased use of kitchen facilities during otherwise idle time periods.

The Retail Food Environment

The food that is available in our environment and the manner in which it is presented to us exert strong influences on our eating choices. No matter how well-intentioned and knowledgeable a person might be, maintaining healthy eating behaviors and supporting a local food system can be difficult if healthy and local food options are not readily available, accessible, convenient or affordable in the community. When we consider the fact that, at times, an abundance of less healthy or non-local food options is more abundant, easier to find and cheaper to buy, we better understand the challenges individual consumers face when choosing what to buy and eat. Even when consumers are deliberately trying to maintain healthy diets, a barrage of subtle and not-so-subtle cues and messages in the food environment may derail their good intentions. Factors as varied as product placement and pricing, the words used to describe a menu offering, plate sizes, and ambient lighting in the dining environment have all been shown through research to influence eating choices and behaviors (Wansink, 2014).

The term 'food environment' describes the array of food options and environmental influences within a neighborhood or community. The U.S. Centers for Disease Control and Prevention (U.S. Centers for Disease Control and Prevention, 2016) defines the food environment as:

- The physical presence of food that affects a person's diet,
- A person's proximity to food store locations,
- The distribution of food stores, food service, and any physical entity by which food may be obtained, or
- A connected system that allows access to food.

Both the private and public sectors shape our food environment. Businesses seek to locate in neighborhoods where they have the best chances of making a profit. Restaurants and grocery stores remain where they find a reliable customer base. For local government and public agencies, zoning regulations influence where different types of commercial businesses can locate, while procurement and purchasing decisions can influence what foods are available in places like schools and city parks.

The factors that shape our food environment range from common to quite subtle factors:

- Cultural influences, and familiarity with various foods
- Knowledge and food preparation skills
- The physical availability to access food
- Access to cooking and food preparation facilities
- Time constraints
- Where various stores and food outlets are located
- The pricing of healthy or local food offerings
- Product placement on store shelves
- Plate size in restaurants
- The words used to describe a menu offering

Each of these factors, and many more, come into play as consumers select the food that they eat.

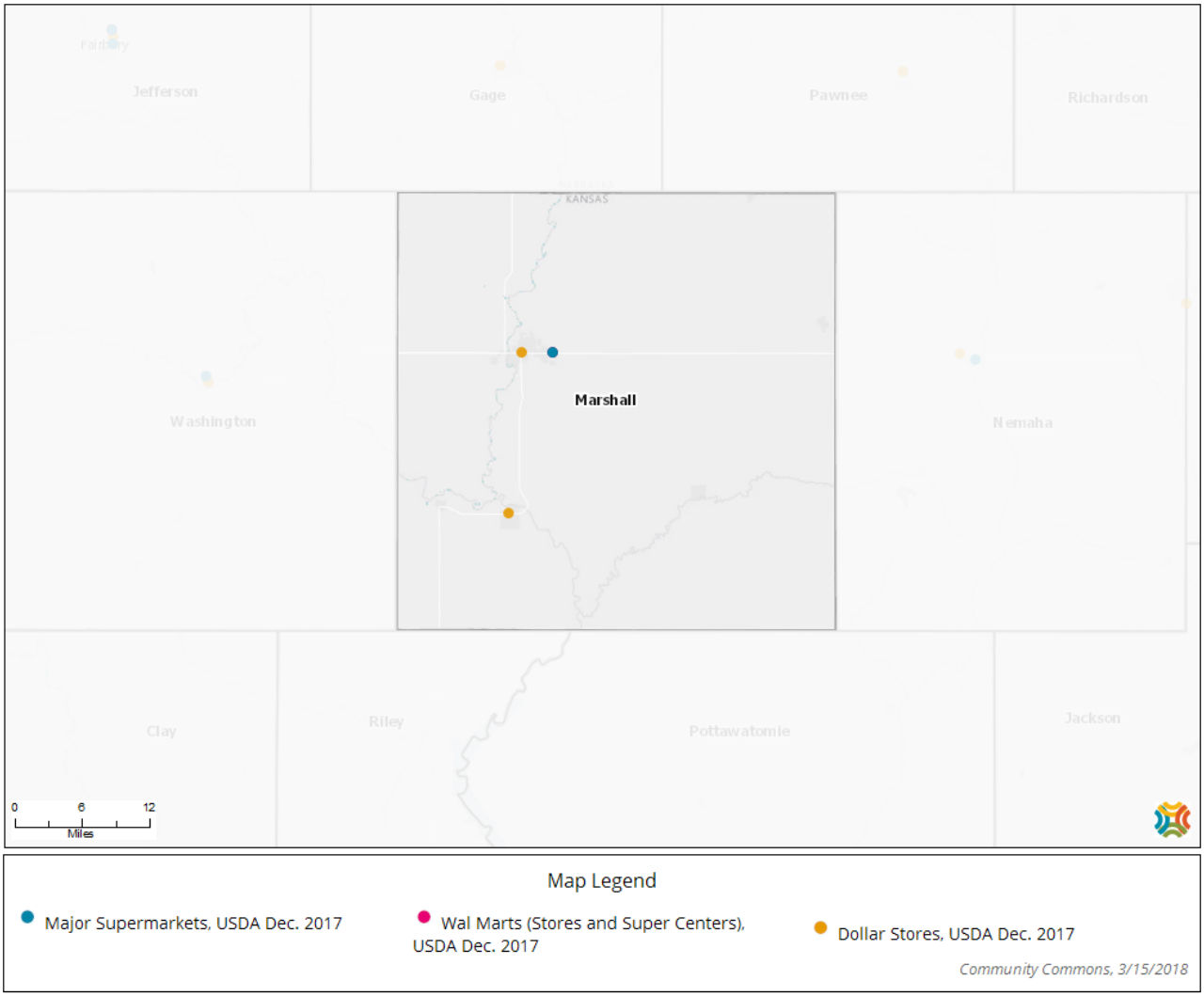
Grocery Stores

Traditionally, most families have purchased the majority of their food for home use at community grocery stores. That tradition is changing, however, as more large-scale 'big-box' stores like Walmart and Target devote significant sections of their store floor space to grocery items, and smaller convenience and discount stores also expand their offerings of food items. Even pharmacies are expanding their selection of grocery items.

Data from the proprietary InfoUSA market analysis database generated the following counts of retail food businesses operating in the region in 2017:

Geographic Area	Store Type					
	Supercenters	Grocery Stores	Meat Markets	Fruit & Veg Markets	Convenience Stores	Dollar Stores
Marshall County	1	4	1	0	5	2

Retail Grocery Outlets, Dec. 2017



**For more discussion of access to grocery stores in Marshall County, please refer to the Food Access section of this report.*

Farmers' Markets

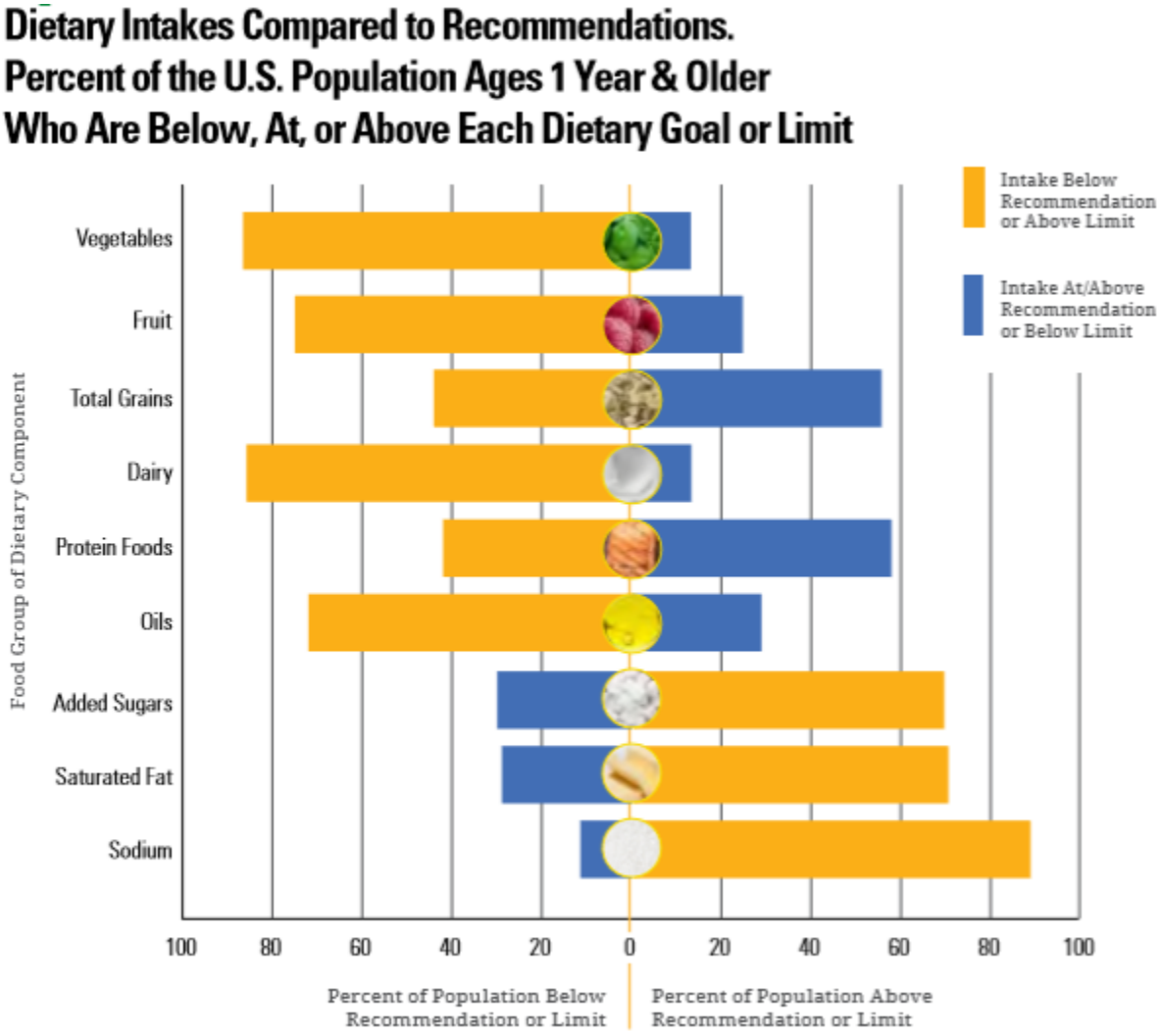
Farmers' markets offer consumers the opportunity to purchase fresh, locally-grown foods directly from the farmers that produced them. This direct marketing approach is beneficial to both farmers and consumers in many ways. Farmers may retain more of the sales value for their products than they would if products were marketed through conventional food distribution systems, and farmers' markets provide an ideal outlet for products that are only available in small quantities. Consumers gain access to products that are freshly-harvested, and the opportunity to build relationships with the farmers that grow their food. Interest in farmers' markets has grown in recent years, both nationally and across Kansas.

In Marshall County, the Marysville Farmers' Market and Frankfort Farmers' Market are in operation.

Consumer Eating Behaviors and Food Purchases

Eating Behaviors

Across the nation, and in Kansas, studies have repeatedly found that consumers' diets are not well-aligned with current dietary recommendations. According to recent information from the Dietary Guidelines for Americans (U.S. Department of Health and Human Services, and U.S. Department of Agriculture), about three-quarters of Americans consume too little fruits, vegetables, dairy products and oils, and more than half eat more than the recommended amounts of grains and protein foods.



Note: The center (0) line is the goal or limit. For most, those represented by the orange sections of the bars, shifting toward the center line will improve their eating program.
Image Source: U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015–2020 Dietary Guidelines for Americans, 8th Edition, 2015. http://health.gov/dietaryguidelines/2015/guidelines/

Fruit and Vegetable Consumption

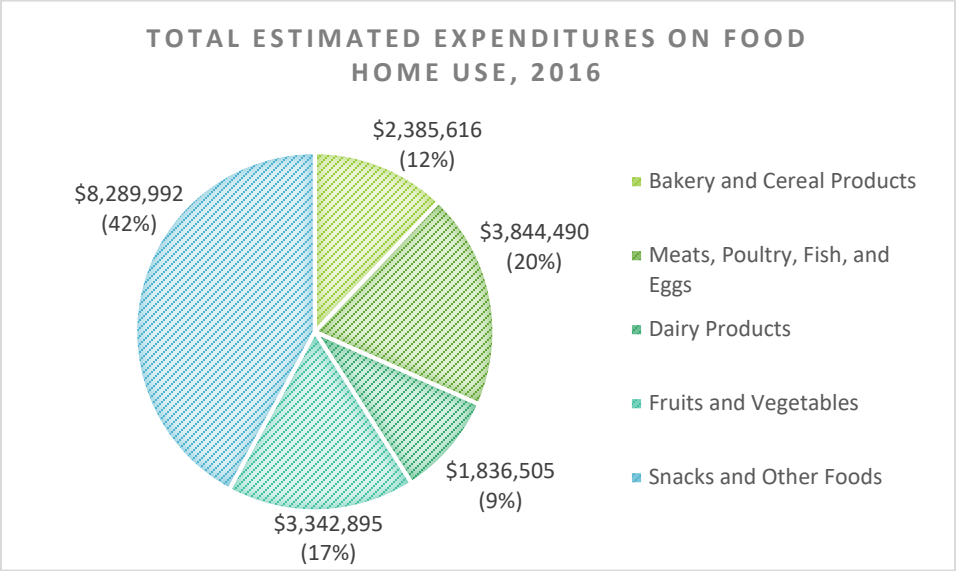
At the state and county levels, information about consumers' fruit and vegetable consumption are monitored as part of the annual Behavioral Risk Factor Surveillance System (BRFSS) survey. State-level results are available for most years; county-level results are available only in years where the survey sample was enlarged sufficiently to produce reliable estimates for most counties in Kansas. The way in which questions about fruit and vegetable intake were asked and reported was changed between 2009 and 2010, which makes comparisons between pre-2010 and later-year results invalid.

BFRSS data for Kansas shows that in 2009, 81.4 percent of adults were consuming fruits and vegetables less than five times per day. Approximately 71.7 percent of Marshall County residents were consuming fewer than 5 servings of fruits and vegetables daily during the same time period. In 2015, 28.8 percent of Marshall County residents were consuming fewer than one serving of vegetables daily, and approximately 46 percent of Marshall County residents were consuming fewer than one serving of fruit.

Food Expenditures

Data from the national Consumer Expenditure Survey provide regional estimates of consumer spending patterns for an array of goods and services. A proprietary company, Synergos Technologies, has combined those regional estimates with local-level demographic data to produce statistical estimates of consumer spending patterns at the county level.

In 2016, Marshall County residents spend an estimated $27,483,431 annually on all food purchases. Of total food purchases, approximately $ 9,912,509 is spent on foods prepared away from home as compared to $17,570,927 spent on foods prepared at home. As illustrated in the chart below, the majority (42 percent) of food purchased for home use is on snacks and other foods and only 17 percent is spent on fruits and vegetables. Given this data, fruit and vegetable purchases are calculated at 93 cents per person, per day.



Data Source: Synergos Technologies, Inc. forecasts Business Decision data system
Estimates derived from the Consumer Expenditure Survey, Bureau of Labor Statistics, 2012

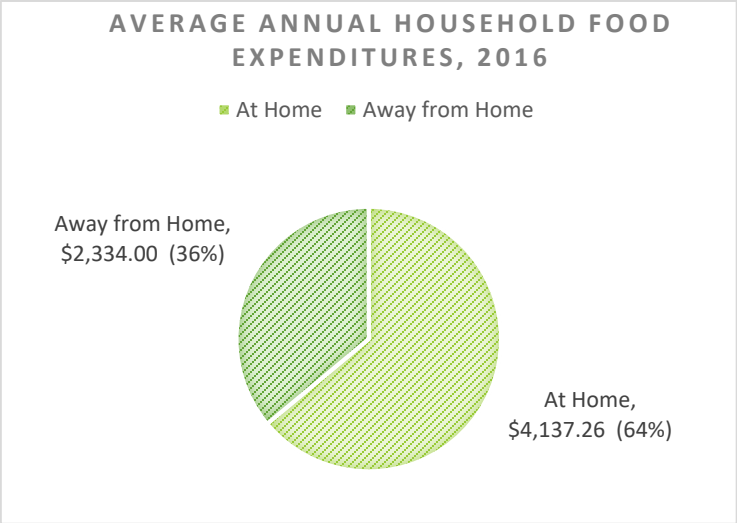
	2016 Consumer Expenditures
Marshall County Population, 2017	**9,853**
Total county food spending	$27,483,431
Total annual food spending per capita	$2,789.35
Total daily food spending per capita	$7.64
Total spending on fruits and vegetables (at home)	$3,342,895
Total annual fruit and vegetable spending per capita	$339.28
Daily per capita spending on fruits and vegetables	$0.93

Data Source: Synergos Technologies, Inc. forecasts Business Decision data system
Estimates derived from the Consumer Expenditure Survey, Bureau of Labor Statistics, 2012

Dining Away from Home

Restaurants comprise another important component in most community food systems. The share of total food dollars that U.S. households spend on food prepared away from home has risen steadily since the 1970s. Several factors have contributed to this trend, including more women employed outside of the home, higher household incomes, and more affordable and convenient fast food outlets (USDA ERS, 2016). While foods prepared away from home are not necessarily less healthy than home-cooked meals, research conducted by USDA has found that meals and snacks based on food prepared away from home contained more calories per eating occasion than those based on at-home food. Away-from-home food was also higher in nutrients that Americans overconsume (such as fat and saturated fat) and lower in nutrients that Americans under-consume (calcium, fiber, and iron). (USDA ERS, 2016)

Residents of Marshall County have limited choices and options when they choose to eat foods prepared away from home, and data suggest that they may spend more time eating at home as a result. U.S. Census county business patterns indicate that there was a total of 16 eating and drinking establishments operating in Marshall County in 2016. Results from the National Consumer Expenditure Survey estimate that Marshall County residents spend approximately 36 percent of their food budgets on food prepared away from home ($2,334/household/year) for a total of $9,921,509 in annual spending (Synergos Technologies, Inc.).



Data Source: Synergos Technologies, Inc. forecasts Business Decision data system
Estimates derived from the Consumer Expenditure Survey, Bureau of Labor Statistics, 2012

Fast Food Restaurants

Just as a lack of access to healthy food options may influence individual's eating behaviors, an over-abundance of less healthy food options may also negatively influence eating choices. Menu offerings at fast food restaurants are frequently filled with unhealthy choices that are high in calories, fats and salt levels. (*Fast food restaurants are defined as limited-service food establishments where patrons generally order or select items and pay before eating*.) Environments in which there are high concentrations of fast food restaurants may tempt consumers toward unhealthy food choices, especially if access to healthier food options is limited or more difficult.

In 2015, there were five fast-food outlets located within the borders of Marshall County. On a per person basis, the density of fast food outlets in Marshall County is considerably lower than the Kansas and U.S. averages.

Fast Food Restaurants, 2015

Geographic Area	Total Population	Number of Establishments	Establishments, rate per 100,000 population
Marshall County	9,853	5	50.75
Kansas	2,853,118	2,036	71.36
United States	312,846,570	233,392	74.6

Data Source: U.S. Census Bureau, County Business Patterns
Additional data analysis by CARES, 2015

Comparison of Agricultural Production to Consumer Spending

For most Kansans, very little of the food that they consume has been produced locally. The vast majority of food consumed by Marshall County residents is produced outside of the county. The quantities of beef produced exceed consumption by community residents. The quantities of fruit and vegetables and poultry and eggs being produced locally are less than the amounts being consumed by residents of the region. Less than one percent of total sales by farms in the region were direct sales to individuals.

Geographic Area	Consumer Expenditures on Food, 2016					
	Households	Poultry/ Eggs	Pork	Beef	Fruits & Vegetables	Milk/Dairy
Marshall County	**4,323**	**$946,737**	**$795,432**	**$1,180,179**	**$3,263,865**	**$1,971,288**
	Farm Products Sold, 2012					
	Total Farm Product Sales	Poultry/ Eggs	Hogs & Pigs	Cattle & Calves	Fruit, Berries & Nuts	Vegetables	Milk/Dairy	Direct Sales to Individuals
	$127,917,000	**$8,000**	**(D)**	**$21,001,000**	**$13,000**	**$0**	**(D)**	**$21,000**

(D) = Data suppressed to avoid disclosure for individual farms
+ = Actual Sales Totals are higher than reflected here, due to suppressed data at county level
Source: Consumer expenditure estimates based upon regional expenditure patterns from Consumer Expenditure Survey and local population figures. Farm sales from 2012 U.S. Census of Agriculture.

Nutrition-related Health Conditions

Overweight and Obesity (Adult)

Maintaining a healthy weight is an important factor in maintaining overall health. Body weight is closely associated with two primary factors --- nutrition and physical activity. Excess body weight, which occurs when caloric intake exceeds the number of calories expended, places individuals at increased risk for many health issues, including heart disease, diabetes, some forms of cancers, and joint problems and physical disability. Obesity has become a widespread problem in the United States, with rates steadily increasing over the last several decades.

Rates of overweight and obesity in the population are routinely measured as part of the national Behavioral Risk Factor Surveillance System coordinated by the U.S. Centers for Disease Control and Prevention (CDC) and state health agencies. In Kansas, the Kansas Department of Health and Environment periodically includes an expanded sample size to make it possible to produce county-level results.

For the measures of overweight and obesity, survey respondents are asked to self-report their height and weight. In 2015, 38.1 percent of Marshall County adults aged 18 and older self-reported that they had a height and weight that would calculate to a Body Mass Index (BMI) between 25.0 and 30.0 (overweight); an additional 30 percent of Marshall County adults reported height and weights that would classify them as obese (BMI > 30).

Rates of Overweight and Obesity, 2015

Geographic Area	% of Adults who are Overweight (BMI between 25.0 and 30.)	% of Adults who are Obese (BMI >30)	% of Adults who are Overweight or Obese
Marshall County	38.1%	30%	68.1%
Kansas	33.8%	34.2%	68%

Data Source: Kansas Department of Health and Environment, Kansas Behavioral Risk Factor Surveillance Survey

Other Diet-related Health Conditions

The Behavioral Risk Factor Surveillance Survey also asks survey participants whether or not they have ever been told by a doctor or other health professional that they have any of several health conditions.

Geographic Area	% of Adults Diagnosed with Diabetes	% of Adults Tested and Diagnosed with High Cholesterol	% of Adults Diagnosed with Hypertension	% of Adults who had Angina or Coronary Heart Disease
Marshall Co.	13.7%	41.7%	37.8%	Data not available
Kansas	9.7%	37.4%	31.6%	3.8%

Data Source: Kansas Department of Health and Environment, Kansas Behavioral Risk Factor Surveillance Survey, 2015

Access to Healthy Foods

Access to healthy food options is essential to healthy eating habits which are, in turn, essential to good health. When we talk about access to healthy food options, there are two considerations. First, a consumer must be able to physically get to places where healthy foods are available for purchase. Second, the consumer must be able to afford to buy the healthier food options or must be able to obtain assistance that enables her/him to do so. These are minimum requirements for food access. In addition, it is desirable that community residents have access to foods that are culturally appropriate and are able to access food through socially acceptable means that respect and preserve individuals' dignity.

Physical Access

Physical access to healthy food options is commonly measured by considering two factors - the distance that the consumer must travel to the nearest retail grocery store and the consumer's access to reliable transportation to travel to that closest store. In urban areas, a distance of one mile or less to the nearest grocery store is commonly considered to be adequate; in rural areas a distance of 10 miles or less is commonly considered adequate. The proportion of low-income household in an area is often used as a proxy indicator of less access to reliable transportation. Geographic areas in which a substantial portion of the population is low income (a poverty rate of 20 percent or higher), and one-third or more of households live further than one mile (in urban areas) or ten miles (in rural areas) from the closest full-service grocery stores are designated as '*food deserts*' to denote challenges with getting to a grocery store that offers a variety of healthy food options.

Population with Limited Food Access

Based upon data from 2015, analysis by the U.S. Department of Agriculture found that no census tracts located within Marshall County met the definition of a food desert (low income and low access at a distance of 1 mile in urban areas or 10 miles in rural area).

Looking at the access question in a slightly different way, the table below shows the number and percent of residents in Marshall County that were both low-income (a family income equal to or less than 200 percent of the Federal Poverty Level) and had low access to a supermarket or large grocery store. Locations of retail grocery stores in 2017 are also shown on the food desert map on the following page.

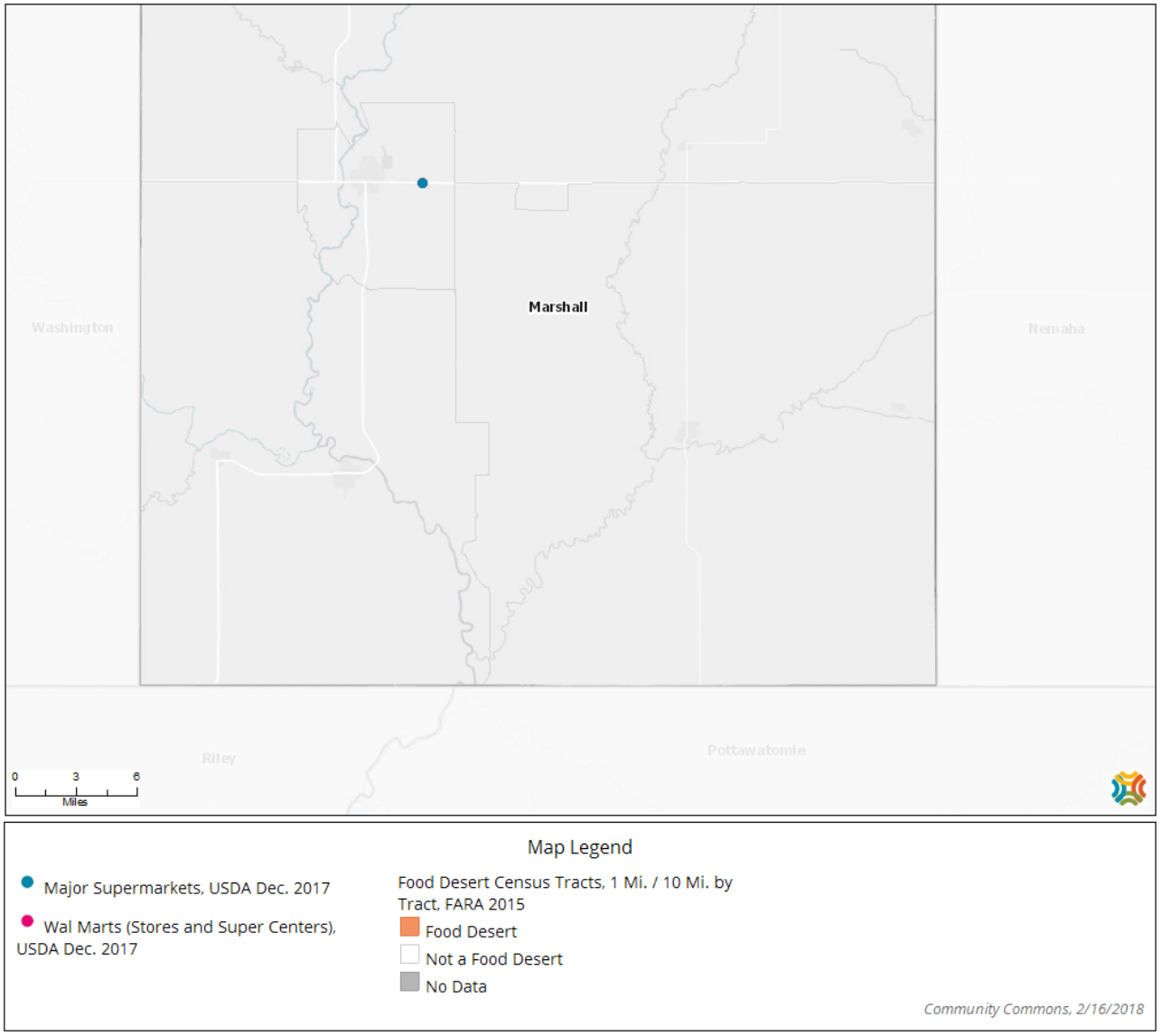
Food Access: Low Income and Low Food Access

Geographic Area	Total Population	Low-Income Population (200%+ FPL)	Low-Income Population with Low Food Access	Percent of Low-Income Population with Low Food Access
Marshall County	9,853	2,997	592	19.75%
Kansas	2,903,820	874,995	253,257	28.94%

Data Source: Community Commons

Original data source: U.S. Department of Agriculture, Economic Research Service, USDA – Food Research Atlas, 2015

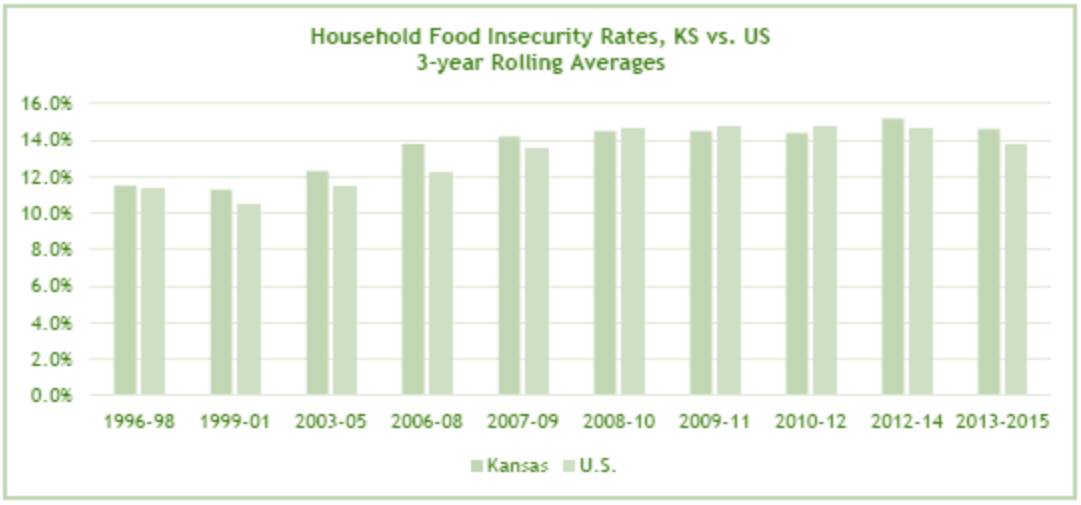
Food Deserts and Grocery Store Locations, Marshall County



Affordability of Healthy Food Options

Affordability is the second component of access to healthy foods. It does little good to have an abundant supply of healthy food options if consumers in the community lack the financial means with which to purchase the food. The term '*food insecurity*' is commonly used in the United States to describe the lack of consistent access to enough food to maintain a healthy lifestyle, because of a lack of resources. Households that express anxiety or uncertainty about their ability to consistently obtain enough food are termed '*food-insecure'*. Rates of household food insecurity are measured annually at the national and state level as a component of the Current Population Survey administered by the U.S. Census Bureau.

At the National level, rates of household food insecurity increased sharply with the onset of the economic recession and have remained elevated since that time. Only since 2012 have the national rates of food insecurity begun to decrease slightly. In Kansas, rates of food insecurity exceeded national rates prior to the onset of the 2008 recession and increased further with the recession's onset. Although national food insecurity rates appear to have decreased slightly in recent years, rates in Kansas have been slower to begin decreasing.



Data Source: USDA ERS analysis of annual CPS Food Security Surveys

Statistical estimates of county-level food insecurity rates have been produced by the national food assistance organization Feeding America. The most recent estimates, from 2016, show that approximately 11.6 percent of Marshall County residents (1,160 individuals) were food-insecure. About one in five children (17.6 percent, or 410 children) in Marshall County lived in households which were food-insecure. With an average meal cost of $3.10, the annual food budget shortfall in Marshall County is estimated at $614,000.

Although risk for food-insecurity is highest among lower-income households, food insecurity is not always limited to the very poor. Many working families with incomes above the poverty level still struggle to meet basic needs such as food, housing, medical care, transportation and childcare on their earnings. The Feeding America estimates suggest that 28 percent of food-insecure households in Marshall County had income levels high enough that they would not be eligible for any of the food assistance programs sponsored by the Federal Government. Similarly, more than one-third (38 percent) of food-insecure children in Marshall County live in families where the household income would be too high for them to be eligible for free or reduced-price school meals or for assistance through the Supplemental Nutrition Program for Women, Infants and Children (WIC) program. For these families, when help is needed, it must come from privately-funded assistance programs like Harvesters, or other food assistance or emergency meal programs in the community.

Overall and Child Food Insecurity Rate, 2016

Geographic Area	Food Insecure Individuals, Total	Overall Food Insecurity Rate	Food Insecure Children, Total	Child Food Insecurity Rate
Marshall County	1,160	11.6%	410	17.6%
Kansas	375,360	12.9%	131,130	18.3%
United States	42,238,000	13.4%	13,118,000	17.9%

Data Source: Feeding America, Map the Meal Gap, 2016

Food Program Assistance Eligibility, 2016

Geographic Area	Food-Insecure Population, Total	Percentage of Food-Insecure Population Ineligible for Assistance	Food-Insecure Children, Total	Percentage of Food-Insecure Children Ineligible for Assistance
Marshall County	1,160	28%	410	38%
Kansas	375,360	36.6%	131,130	34%
United States	42,238,000	26%	13,118,000	20%

Data Source: Feeding America, Map the Meal Gap, 2016

NOTE: Assistance eligibility is determined based on household income of the food insecure household relative to the maximum income-to-pay ratio for assistance programs (SNAP, WIC, school meals, CSFP, and TEFAP).

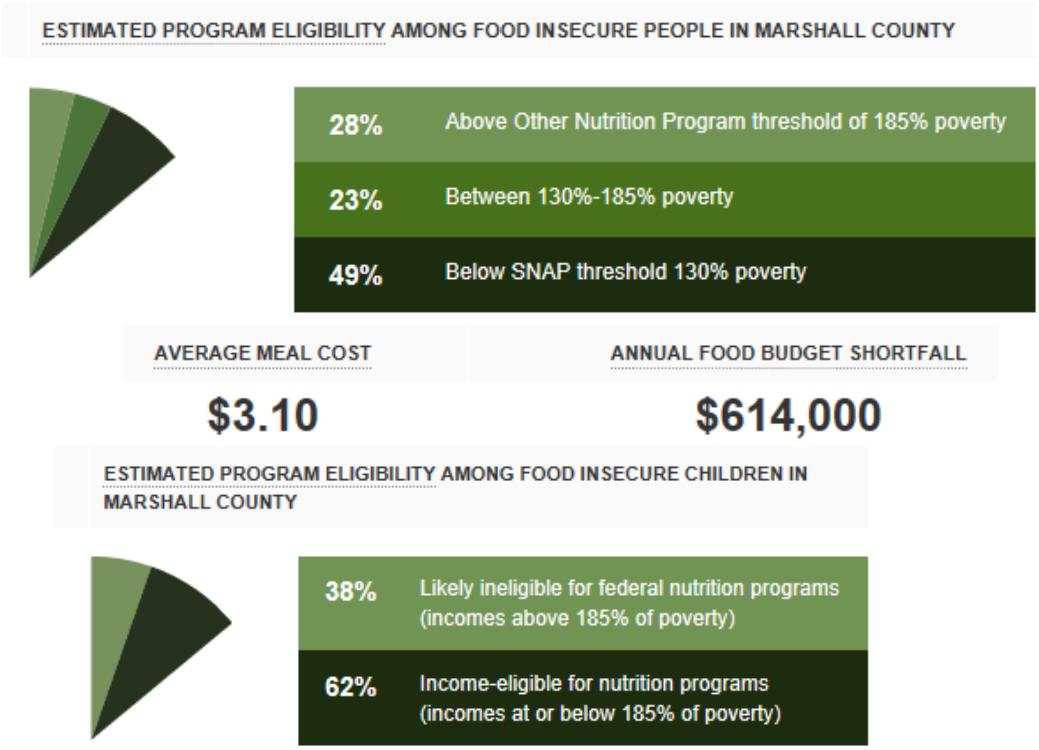


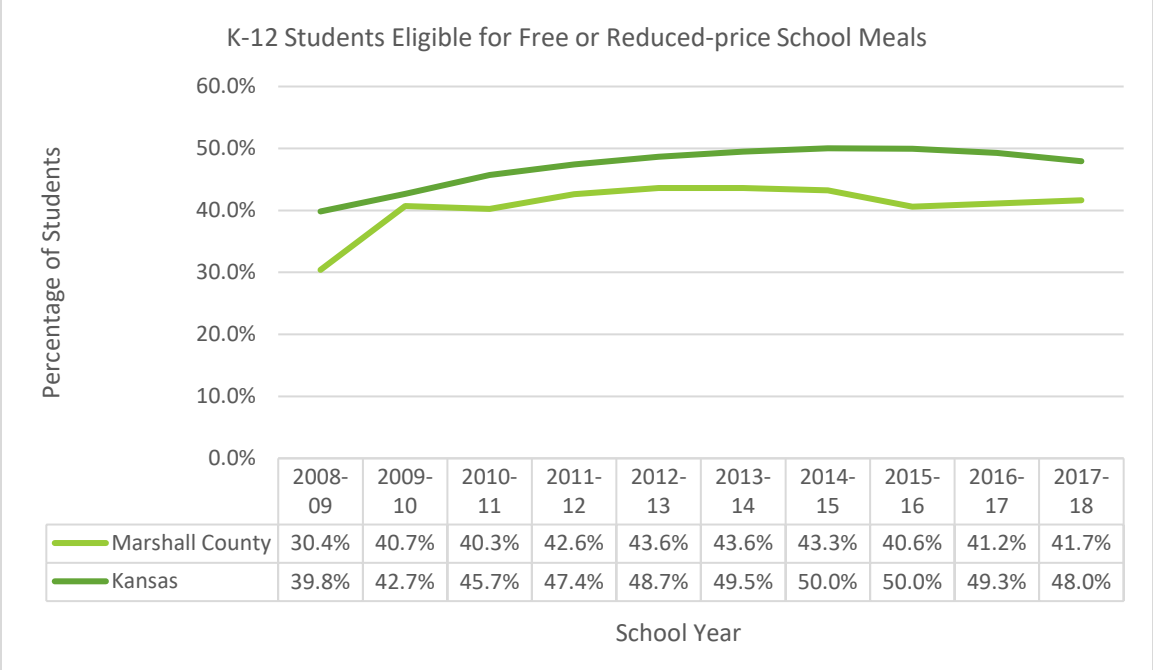
Image Source: Feeding America, Map the Meal Gap, 2016

Food Assistance Programs

In the United States, and in Kansas, a patchwork quilt of public- and private-sector programs and agencies provide food assistance to low-income families in need. Aid is provided through a variety of mechanisms, including prepared meals at schools, distribution of foods for home preparation, and vouchers or electronic benefits that may be used to purchase grocery items. These programs play a vital role in preventing food insecurity from progressing to full-blown hunger and malnutrition.

Children Eligible for Free/Reduced Price School Meals

For many low-income families, school meals provide an important source of food for children. In addition to lunches, many schools also offer breakfasts and some offer after-school snack or supper programs. Children from households where earnings are less than 130 percent of the Federal Poverty Level are eligible to receive free meals; those from households where income is between 130 and 185 percent of the poverty level qualify to purchase meals at reduced prices. In Marshall County public schools, 41.7 percent of K-12 students enrolled for the 2016-2017 school term were eligible for either free or reduced-price school meals. In comparison, 48 percent of all Kansas K-12 students were eligible for free or reduced-price school meals during the same timeframe (Kansas Action for Children, n.d.).



	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Marshall County	30.4%	40.7%	40.3%	42.6%	43.6%	43.6%	43.3%	40.6%	41.2%	41.7%
Kansas	39.8%	42.7%	45.7%	47.4%	48.7%	49.5%	50.0%	50.0%	49.3%	48.0%

Data Source: Kansas Action for Children, K-12 Statistics from Kansas Department of Education

Summer Meals for School-aged Children

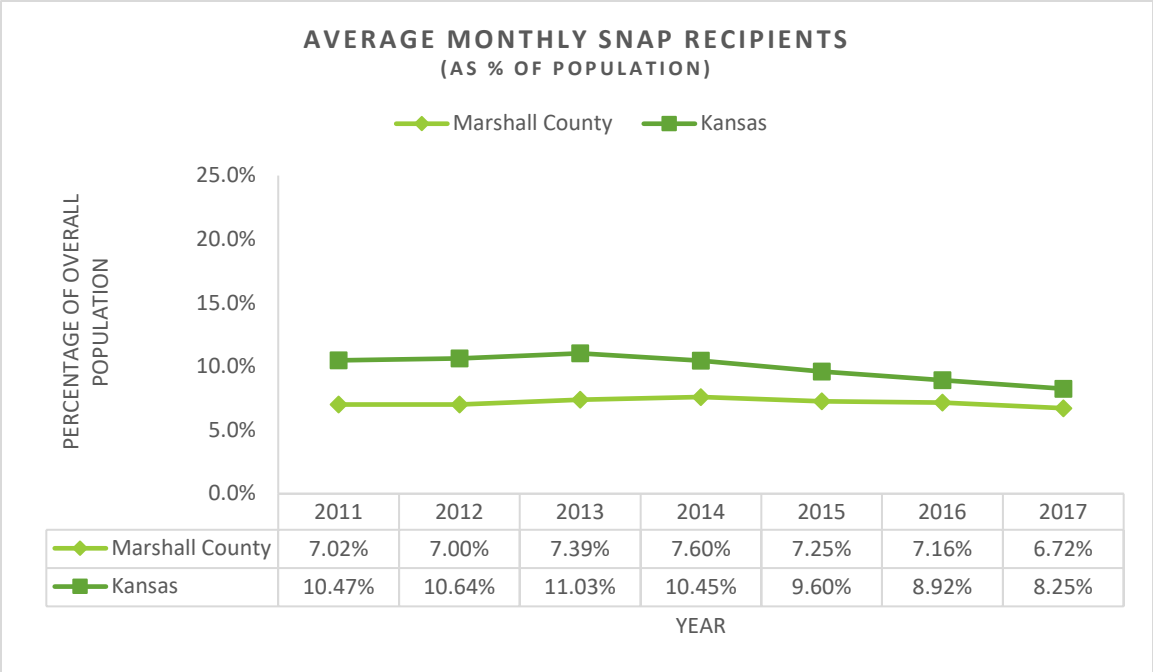
For families that rely upon free or reduced-price school meals to help feed their children, summer recess periods may create additional food hardship. The federally-sponsored Summer Food Service Program is designed to help fill that need. Under this program, all children aged 18 years and younger may receive free meals (usually lunches) at participating community sites located in areas where at least half of children qualify for free or reduced-price meals during the school year. During the summer of 2017, Summer Meal programs operated in three locations in Marshall County: one location each in Frankfort, Marysville, and Waterville.

Supplemental Nutrition Assistance Program (SNAP)

The SNAP program, formerly referred to as 'food stamps', is a federally-funded program that provides qualifying low-income families with monthly benefits in the form of a debit card that can be used to purchase foods for home use. Benefits may also be used to purchase seeds or plants to be used for growing food at home. Households must have incomes below 130 percent of the Federal Poverty level (approximately $31,500 for a family of four) and meet other eligibility guidelines to qualify for benefits.

Most college students are not eligible to receive assistance through the SNAP program, even though their incomes may be low enough to meet the eligibility guidelines. According to the USDA Food and Nutrition Service, able-bodied students age 18 through 49 who are enrolled in college or other institutions of higher learning at least half time must meet the following conditions to qualify for assistance:

- Taking care of a dependent child
- Working at least 20 hours per week, or
- Are participating in any of several specified work training programs (USDA 2015).



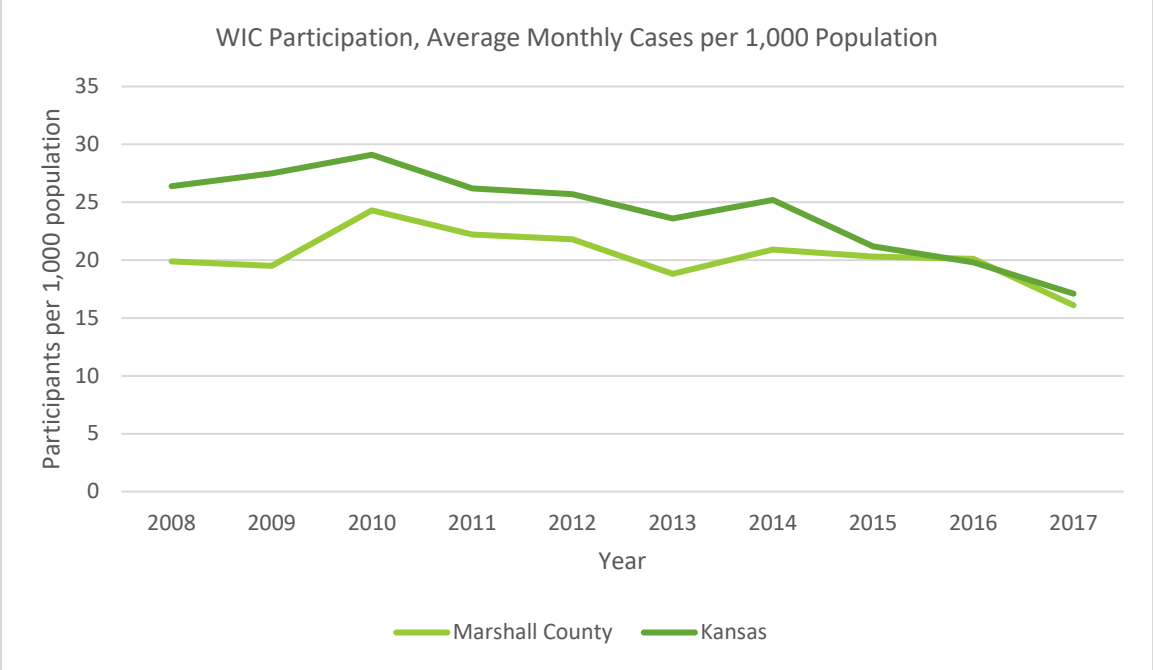
Many households that would be eligible to receive snap benefits do not apply and participate in the program. There are many reasons, including stigma of participation, burdensome paperwork associated with application, and a lack of understanding of eligibility requirements. Participation rates vary considerably between states, ranging from 51 to 100 percent in 2013. Compared to other states, SNAP participation rates (the number of participants divided by the number of eligible) in Kansas have historically been low. The U.S. Department of Agriculture estimated that in 2013, the SNAP participation rate in Kansas was 71 percent, ranking Kansas 40th among the states (Cunnyham, 2016).

During state fiscal year 2017 (July 2016 to June 2017), an average of 662 Marshall County residents received SNAP benefits each month. The number of SNAP participants in Marshall County has declined since reaching a high in Fiscal Year 2013 – these declines are similar to what has happened across Kansas in the same time period. Average monthly benefits were approximately $100.30 per participant during fiscal year 2017; the SNAP program provided a total of $796,768 in food purchasing dollars to low-income families in Marshall County during 2017.

SNAP benefits may only be redeemed at retail locations that have been approved by the USDA as SNAP retail vendors. As of December 2017, there were 10 SNAP retailers operating in Marshall County. In addition to grocery stores, participating SNAP retailers included dollar stores and convenience stores.

The Special Supplemental Nutrition Program for women, Infants and Children (WIC)

The Special Supplemental Nutrition Program for Women, Infants, and Children– better known as the WIC Program– is a federally-funded program that serves to safeguard the health of low-income (household incomes up to 185 percent of the Federal Poverty Level) women, infants, and children up to age 5 who are at nutritional risk by providing nutritious foods to supplement their diets, information on healthy eating, and referrals to health care. Program participants are given monthly coupons or vouchers that may be redeemed at participating retail locations for specified foods. The program serves low-income pregnant, post-partum, and breastfeeding mothers as well as infants and children age 0 through 4 years. Foods that may be purchased with WIC vouchers include milk, juice, cereals, cheese, eggs, fruits and vegetables (fresh, canned or frozen), whole-grain bread, canned fish, beans, peanut butter, baby foods, and baby formula.



Data Source: Kansas Health Matters

Approximately 159 women and children in Marshall County participated in the WIC program each month during 2017 (Kansas Health Matters, 2017). In terms of WIC participants per 1,000 population, participation rates are slightly lower in Marshall County than for the state overall. The average monthly number of participants in the WIC program in Marshall County has decreased in recent years; this trend is similar to those at the state and national levels. According to 2016 data, there are three retail grocery vendors in Marshall County where WIC participants may use their vouchers to obtain food.

The Emergency Food Assistance Program

The Emergency Food Assistance Program (TEFAP) is a Federally-sponsored program that provides free foods to low-income households. TEFAP food is shipped five to six times per year to participating organizations for distribution. Participant organizations determine when and how often food is distributed. The foods may include canned vegetables, fruit, juice, meat, cereal, peanut butter, nonfat dry milk, and pasta. Each shipment provides a minimum of four and a maximum of 10 foods per household.

Persons who work but have low income, as well as those who do not work, are eligible for this program. Individuals seeking assistance from the TEFAP program must apply in their home county, provide proof of their amount of income and household size (if asked), and must sign a form stating that they qualify for the program. Participants may pick up food at only one location in their community.

There is currently one TEFAP distribution location in Marshall County.

TEFAP Distribution Locations in Marshall County

Geographic Area	City	Location
Marshall County	Marysville	Marshall County Agency on Aging

Senior Farmers' Market Nutrition Program

The Senior Farmers' Market Nutrition Program offers low-income seniors in participating locations checks or vouchers that can be used to purchase locally-grown fresh fruits and vegetables, honey, or herbs at participating farmers' markets or farm stands. Seniors are eligible to receive checks if their individual income is less than $1,800/month and their age is 60 years or older. Seniors participating in the Commodity Supplemental Food Program (CSFP) or The Emergency Food Assistance

Program (TEFAP) automatically qualify for the Kansas Senior Farmers Market Nutrition Program. During the 2016 summer season, each participating senior in Kansas received a book of checks that could be redeemed for up to $30 in purchases.

Private-sector Food Assistance

Food-insecure households that are not qualify for Federally-sponsored food assistance programs such as SNAP or free school meals (because their incomes are too high, or they do not meet other eligibility criteria) must rely upon private-sector charitable organizations for help. In addition, many low-income families who do receive government food assistance find that the benefits are not sufficient to meet all their food needs and seek to supplement those benefits with aid from charitable organizations.

Federal and state policy changes in recent years have tightened eligibility requirements and reduced benefits for many government-sponsored food assistance programs, resulting in increased numbers of people seeking charitable help to meet their food needs.

In addition to agencies that provide food assistance or meals on-site, several community organizations partner with Harvesters Community Food Network to host monthly food distributions through mobile food pantry operations.

Food Waste, Recycling and Recovery

Food waste is a significant problem in the United States. USDA estimates that nearly one-third (31 percent) of the available food supply at the retail and consumer levels went to waste in 2010. This equates to 133 billion pounds of wasted food and does not include on-farm losses or losses between the farm and the retailer (Buzby, 2014). The U.S. Environmental Protection Agency (EPA) estimated that food waste accounted for 21 percent of municipal solid waste in 2011, with nearly all (97 percent) of that waste going to landfills or incinerators.

Figure 7. Total MSW Discards (by material), 2011
164 Million Tons (after recycling and composting)

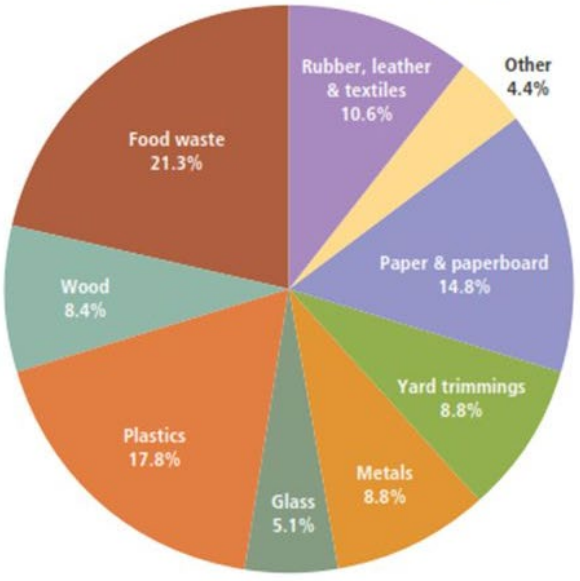


Figure 8. Total MSW Generation (by category), 2011
250 Million Tons (before recycling)

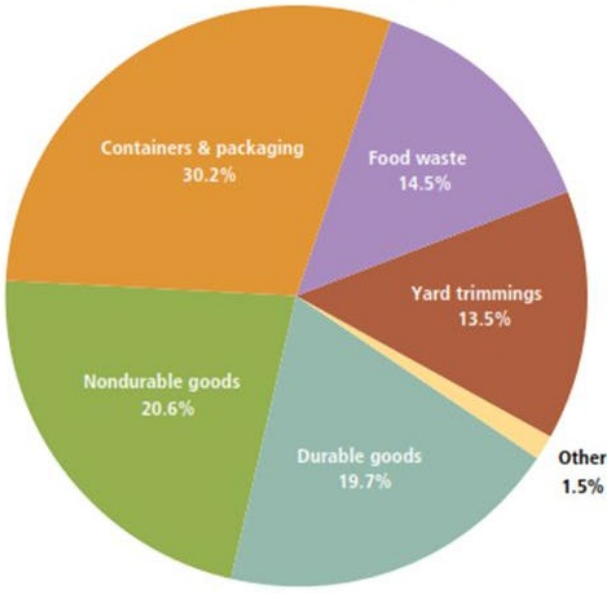


Image Source: adapted from Environmental Protection Agency, 2012

Food waste represents significant loss of money and other resources invested in food production (land, water, labor, energy and agricultural chemicals) to produce food that does not end up feeding people. Food waste occurs at all steps along the food production cycle, from farm to table. Some of the common causes of food waste are listed on the following page.

Common Food Waste Causes

Farm Level

- Damage by insects, rodents, birds, or unfavorable weather conditions
- Edible crops left unharvested due to diminishing returns for additional production
- Overplanting due to difficulty estimating customer demand

Farm-to-Retail Level

- Rejection due to food safety standards or regulation
- Out-grading of blemished or imperfect foods
- Spillage and damage, improper storage
- Byproducts from food processing

Retail Level

- Dented cans, damaged packaging
- Unpurchased seasonal food items
- Spillage, breakage, bruising, inadequate storage, equipment malfunctions
- Culling of blemished or imperfect foods to meet consumer demand
- Overstocking or overpreparing

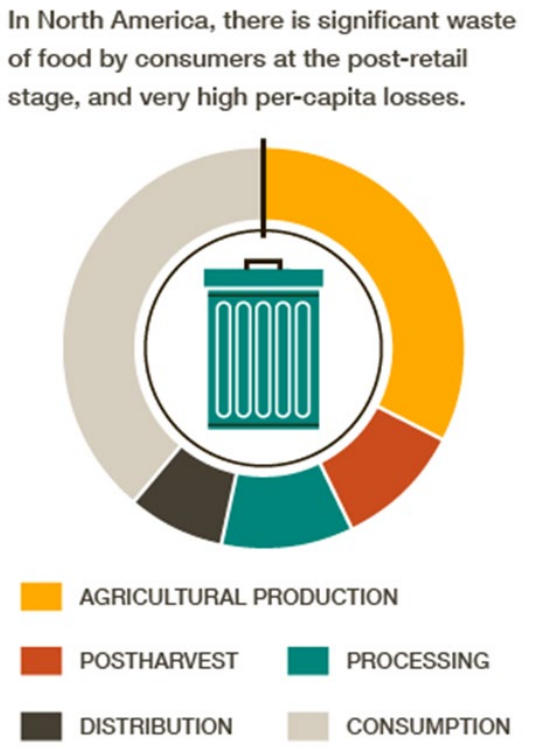
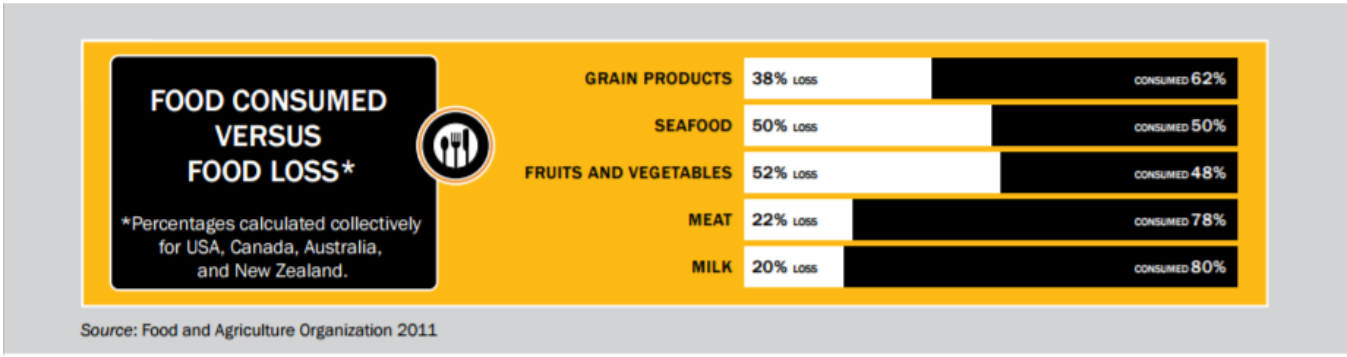


Image Source: https://ccafs.cgiar.org/bigfacts/#region=North-America

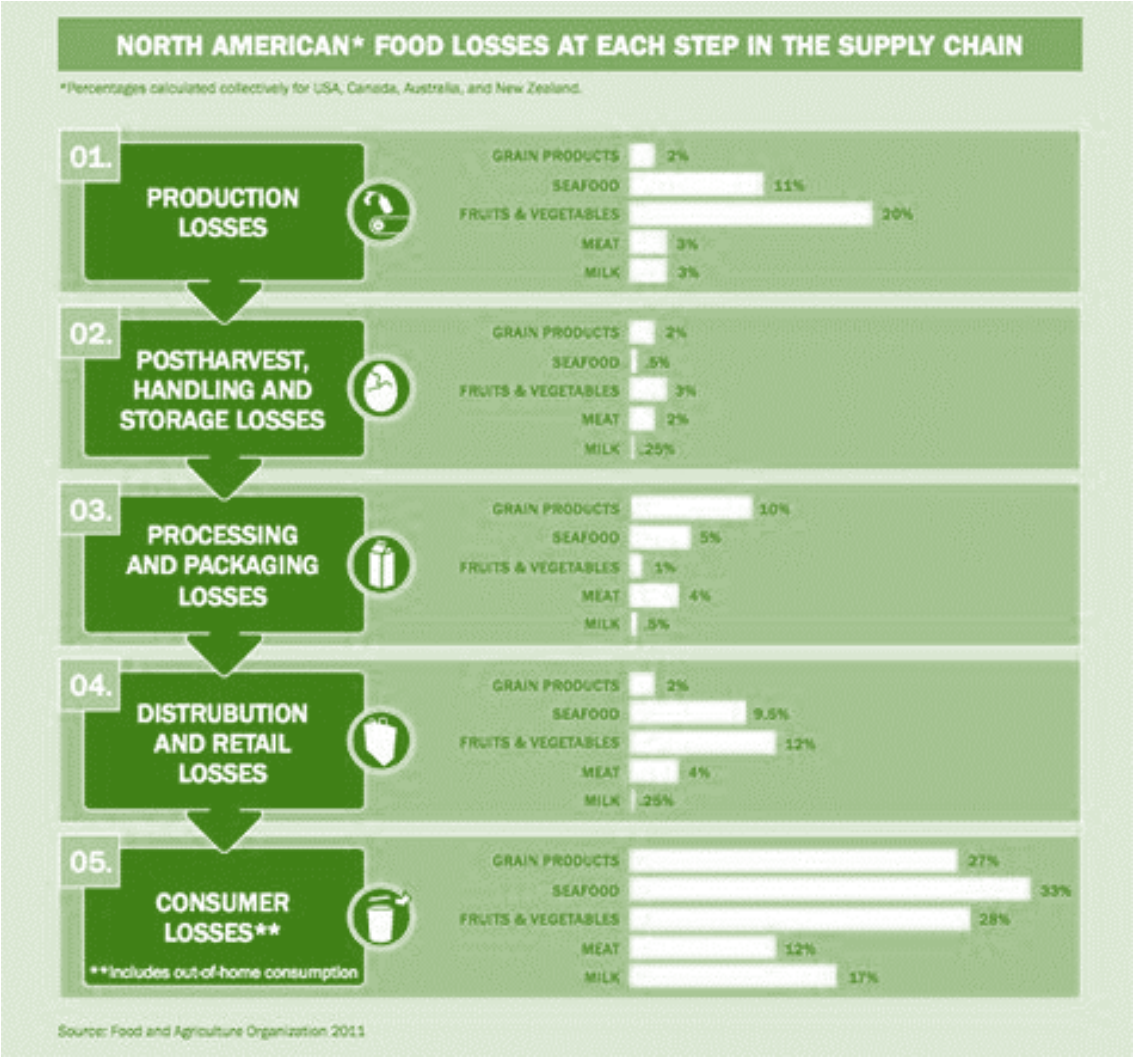
Consumer Level

- Spillage, breakage, inadequate storage
- Confusion about "use-by", and "best before" dates resulting in food being discarded when still safe to eat
- Consumer demand for high cosmetic standards
- Lack of knowledge about preparation, appropriate portion sizes
- Consumer tastes, attitudes and preferences leading to plate waste

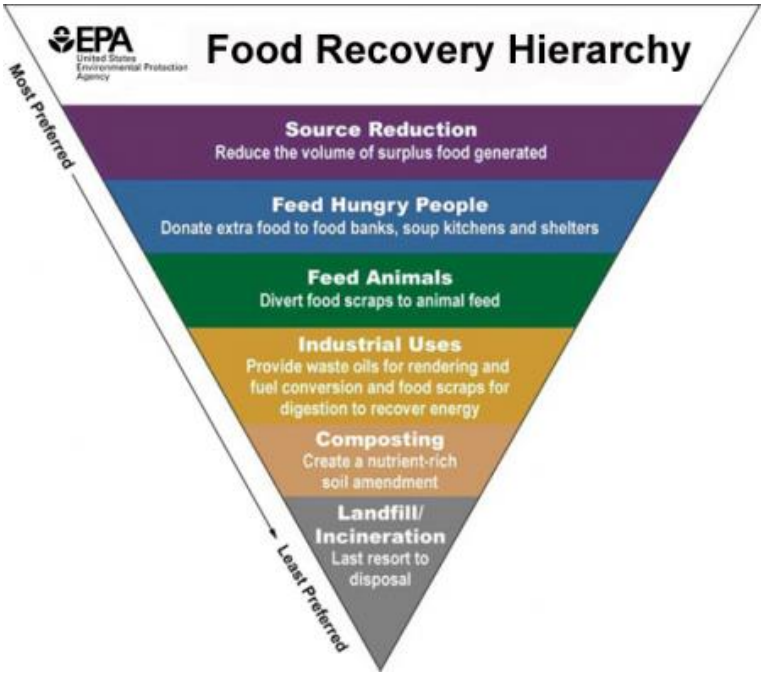
Fruits and vegetables account for a large share of food loss, with more than half of what is grown being lost to waste. Milk and meat products have the lowest loss ratios (Gunders, August 2012).



Although food loss occurs at all steps in the food production chain, consumer waste accounts for the largest share. According to a report issued by the Natural Resources Defense Council, Americans throw away about 25 percent of the food that they buy. The estimated annual cost of food waste for a family of four is between $1,350 and $2,275 (Gunders, August 2012).



Reducing food waste offers many benefits to a community and its residents, including financial savings, preservation of natural resources, reduced demand on waste management systems and landfills, and increased amounts of potentially wasted food diverted to feed individuals at risk for hunger. When foods or food by-products are not safe or appropriate for human consumption, they may still be usable as animal feed. Composting of food scraps and spoiled foods recovers some value from the waste stream by producing a rich soil amendment that can be used in gardens to reduce the need for chemical fertilizers. The EPA has developed a Food Recovery Hierarchy that assigns preferential order to various strategies for reducing food waste (right).



Local Estimates of Food Waste

Community-level data on food waste are not generally available. It is, however, still possible to derive an estimate of local food waste by assuming that the local patterns are similar to those at the national level. Multiplying county population numbers by national per capita food waste estimates suggest that more than 2.8 million pounds of food would be wasted annually in Marshall County, with an estimated value of $3.7 million, as shown in the table below.

Estimated level of consumer-level food waste in the United States and in Marshall County			
	Pounds (annually)	**Pounds (daily)**	**Value (annually)**
Per-person basis (national)*	290	0.8	$371
Marshall County estimate**	2,857,370	7,882.4	$3,655,463

**National figures drawn from USDA, Economic Research Service, 2010 ERS Loss-Adjusted Food Availability*

***County population estimate based upon 2013-2017 American Community Survey (Marshall County population = 9,853)*

Economic Impact of the Food System

Food and food production are big business in Kansas having significant impact on the Kansas economy, both at the state and local levels. According to the Kansas Department of Agriculture, the agricultural, food and food processing business sectors in Marshall County employ more than 2,500 people and contribute an estimated $747 million to the county's economy each year.

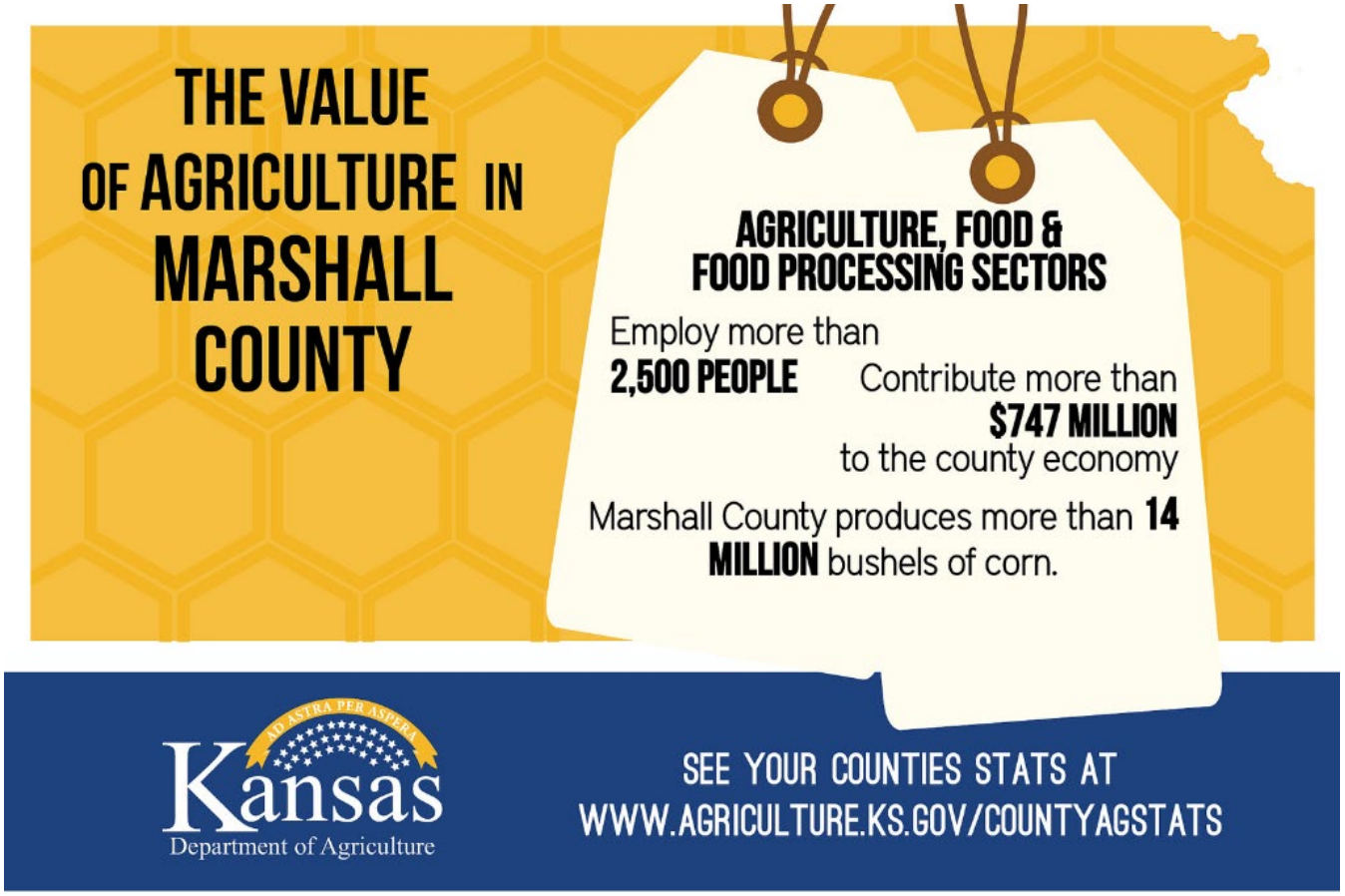


Image Source: https://www.flickr.com/photos/kansasagriculture/16090086842/in/album-72157650132744038/

There are several measures that determine the importance of various economic data. These measures include direct, indirect, and induces effects; value added; gross regional product (GRP); and output.

- **Direct effects** capture the contribution from agricultural and food products.
- **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state.
- **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.
- **Value added** is the summation of labor income, indirect business taxes, and other property income.
- **GRP** is the summation of final demand of households, government expenditures, capital, and exports **minus** imports and institutional sales.
- **Output** is the summation of intermediate inputs and value added.

Based on the most recent IMPLAN data available (2016) adjusted for 2018, there were 18 agriculture, food, and food processing sectors in Marshall County supporting 932 jobs with a total direct output of $290.4 million. Including indirect and induced effects, total jobs supported rises to 1,478, or 21.46 percent of the entire workforce in the county. Altogether, these sectors provide $364.8 million, or approximately 75.92 percent of the economy. Another important metric used to calculate importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 18 sectors was approximately $107.8 million, or 22.43 percent of the total economy (Kansas Department of Agriculture, 2018).

Agriculture, Food, and Food Processing Sector Estimated Contribution in Marshall County (2018)

Impact Type	Employment	% of Employment	Total Value Added	Total Value Added % of Gross Regional Product	Output	Output % of Gross Regional Product
Direct Effect	932.0	13.53%	$71,671,041	14.92%	$290,359,558	60.43%
Indirect Effect	294.2	4.27%	$19,594,455	4.08%	$42,644,791	8.88%
Induced Effect	252.1	3.66%	$16,522,541	3.44%	$31,775,147	6.61%
Total Effect	1,478.3	21.46%	$107,788,038	22.43%	$364,779,496	75.92%

Data Source: Kansas Department of Agriculture, Kansas Agriculture's Economic Impact, 2018

Data illustrating various economic measures related to the Marshall County food system are included in this section.

Farm Sales

During 2012, Marshall County farms reported total sales of farm products valued at nearly $128 million. Crops accounted for 81.4 percent of total sales. The per-farm average market value of farm products sold by Marshall County farms was $160,699 in 2012.

Market Value of Products Sold, 2012

Geographic Area	Farms, 2012	Total Sales	Crop Sales	Livestock Sales	Average per farm
Marshall County	796	$127,917,000	$104,099,000	$23,817,000	$160,699

Data Source: U.S. Census of Agriculture

Government Farm Payments

In addition to income from the sale of farm products, many farms receive payments from various federal government programs. In 2012, 644 Marshall County farms reported receiving federal government payments that totaled $4,946,000.

Consumer Expenditures on Food

Everyone must eat, and most households purchase the majority of their food. Food purchases represent a significant contribution to the local economy. Marshall County residents spend an estimated $27.5 million annually on food.

Annual Consumer Spending on Food, 2012

Geographic Area	Total Spending	Spending on Food at Home	Spending on Food Away from Home
Marshall County	$27,483,431	$17,570,927	$9,912,509

Data Source: Business Decision system, estimates derived from the Consumer Expenditure Survey, Bureau of Labor Statistics, 2012

Government Food Assistance Programs

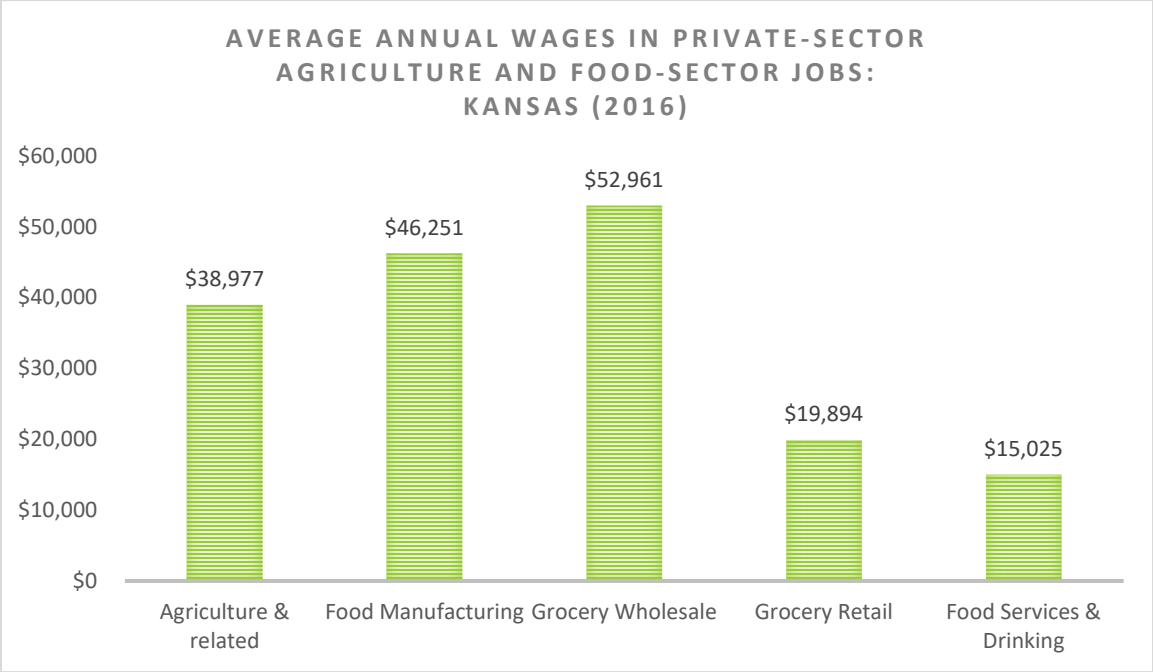
Government-sponsored food assistance programs also provide a significant infusion of dollars into the local economy. Through either direct reimbursement for the cost of meals served (as in school meals) or providing consumers with additional money to spend on food purchases (SNAP and WIC benefits), those dollars support jobs and increase retail sales within the community. As those dollars circulate through the local community, they generate additional economic benefit. USDA economists estimate that each $5 in SNAP benefits infused into a community generates approximately $9 in economic activity.

Geographic Area	SNAP Benefits Disbursed, 2017	SNAP Benefits Disbursed, 2016	SNAP Redemptions, 2012	WIC Redemptions, 2012
Marshall County	$796,768	$852,270	$101,262	No data

Data Source: SNAP benefit disbursement from Kansas Department of Children and Families, Annual County Pocket Reports
SNAP and WIC redemption data derived from USDA FNS data tables

Food-sector Employment

Food production, and food-related businesses also create jobs which employ community members and infuse money into the local economy. Data from the U.S. Bureau of Labor Statistics provide detailed information about the types of businesses operating in a location, the number of individuals employed by those businesses, and their earnings. As illustrated in the graph and tables below, average worker earnings in food-sector jobs vary significantly by the type of work. In Kansas, jobs in food manufacturing and grocery wholesale pay significantly better than jobs in jobs in grocery retail or food service businesses.



Data Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages

Employment and Wages in Agricultural and Food Sectors, 2016

	Ag, Forestry, Fishing & Hunting	Food Manufacturing	Grocery & Related Wholesalers	Retail Grocery Stores	Food Services & Drinking Places
Establishments	8	2	0	5	15
Employees	ND	ND	0	66	167
Total Wages (in thousands)	ND	ND	0	$636,243	$1,785,081
Avg. Annual Pay	ND	ND	0	$9,640	$10,689

Data Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages
ND = Data are suppressed to prevent disclosure of information about individual businesses

Although U.S. Bureau of Labor Statistics data on food sector employment in Marshall County is limited, the Kansas Department of Agriculture estimates that in the top ten agriculture, food, and food processing sectors by employment, the beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector was the top employer in 2016 with 307 employees. The table below also shows the amount of jobs that are created by the agriculture industry in Marshall County (Kansas Department of Agriculture, 2018).

Top 10 Agriculture, Food and Food Processing Sectors by Employment (2018 estimate)

Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	306.9	$30,090,946
Farm machinery and equipment manufacturing	167.4	$82,715,017
Grain farming	162	$49,956,143
All other crop farming	98.7	$6,296,554
Oilseed farming	84.2	$73,302,003
Wholesale trade	55.3	$10,062,572
Real estate	44.7	$3,265,925
Truck transportation	39.2	$6,104,572
Animal, except poultry, slaughtering	32.2	$23,155,804
Monetary authorities and depository credit intermediation	26.1	$5,289,787

Data Source: Kansas Department of Agriculture, Kansas Agriculture's Economic Impact, 2018

The farm machinery and equipment manufacturing sector directly contributes approximately $82.7 million to the Marshall County economy. The table below also shoes the amount of revenue that is generated in other industries by having a strong agriculture industry (Kansas Department of Agriculture, 2018).

Top 10 Agriculture, Food and food Processing Sectors by Output (2018 estimate)

Sector	Total Employment	Total Output
Farm machinery and equipment manufacturing	167.4	$82,715,017
Oilseed farming	84.2	$73,302,003
Grain farming	162	$49,956,143
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	306.9	$30,090,946
Animal, except poultry, slaughtering	32.2	$23,155,804
Other animal food manufacturing	12.9	$17,483,093
Wholesale trade	55.3	$10,062,572
Owner-occupied dwellings	0	$6,435,400
All other crop farming	98.7	$6,296,554
Truck transportation	39.2	$6,104,572

Data Source: Kansas Department of Agriculture, Kansas Agriculture's Economic Impact, 2018

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture, food, and food processing sector and the output they contributed to the Marshall County economy.

All Agriculture, Food and Food Processing Sectors (2018 estimate)

Sector	Total Employment	Total Output
Oilseed farming	84.2	$73,302,003
Grain farming	162	$49,956,143
Fruit farming	1.4	$114,535.01
Greenhouse, nursery, and floriculture production	8.5	$1,094,076.29
All other crop farming	98.7	$6,296,554
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	306.9	$30,090,946
Dairy cattle and milk production	4	$1,491,593.79
Poultry and egg production	0.5	$348,475.23
Animal production, except cattle and poultry and eggs	10.9	$1,155,859.88
Commercial logging	1.3	$60,515.31
Commercial hunting and trapping	2.6	$53,267.48
Other animal food manufacturing	12.9	$17,483,093
Animal, except poultry, slaughtering	32.2	$23,155,804
Bread and bakery product, except frozen, manufacturing	6.2	$694,960.47
Frozen cakes and other pastries manufacturing	0.4	$56,175.52
Farm machinery and equipment manufacturing	167.4	$ 82,715,017
Veterinary services	24.2	$ 1,999,151.92
Landscape and horticultural services	7.5	$ 291,386.25

Data Source: Kansas Department of Agriculture, Kansas Agriculture's Economic Impact, 2018

All 105 counties in Kansas have an IMPLAN model and an agriculture, food, and food processing contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Marshall County, the retail sector was omitted (Kansas Department of Agriculture, 2018).

Equity Issues in the Food System

Health equity issues have received much attention from public health practitioners and philanthropic organizations in recent years. When closely scrutinized, health outcomes measures identify many situations where some segments of the population suffer poorer health outcomes related to issues of social disadvantage or inequity. Similarly, inequities can be identified in the food system, many of which may contribute to disparities in health outcomes. Aspects of the food system where equity issues are frequently identified are outlined briefly in this section. More detail on many of these issues is available in the main body of this report.

Farming and Food Production

- Access to land, capital and financing, especially for young or minority farmers
- Access to water rights
- Farmworker compensation and working conditions, particularly for field hands and immigrant workers

Food System Infrastructure

- Hazardous conditions in meat processing facilities, often employing immigrant or minority workers

Food Retail (processing, manufacturing, distribution)

- Low wages in retail grocery stores

- Low wages in food and beverage operations

Consumer Access to Healthy Food Options

- Underserved locations, food deserts – in urban areas, usually low-income areas. Rural residents may also be underserved and have challenges accessing healthy food options
- Pricing differentials, higher prices often in underserved communities
- Food insecurity (families that cannot afford to buy enough food, high-quality food) – rates of food insecurity are markedly higher for minority households, single parent households, disabled individuals
- Stigma, loss of dignity for individuals who participate in food assistance programs

These equity issues, and others not included in this list, will not apply equally to every community. Community-level issues will likely vary with the types of agriculture and food production in practice in the location, the types of food processing businesses in the area, and socio-demographic characteristics of the population such as racial/ethnic diversity, poverty rates, and educational attainment. In Kansas, the issues of safe working conditions and fair wages for fieldworkers are less salient because the vast majority of crop production is commodity crops that require less hands-on labor. In some parts of Kansas, however, working conditions and safety concerns at meat packing facilities are cause for concern. Many communities in Kansas have locations where residents lack physical access to retail stores that offer healthy foods, and all Kansas counties have community members who cannot afford to buy enough food to feed themselves and their families. The data included in this report describe some of the more widespread food equity issues in Kansas, including lack of access to grocery retail outlets, food insecurity, and low wages in some sectors of the food system.

Community-based Data Collection: Online Surveys and Focus Groups

Online Survey Process and Summary

During the months of June and July 2018, the North Central Kansas Food Council launched a survey within the 12-county region to collect additional data directly from a broad cross-section of local community members. A survey questionnaire was designed by the contracted consultant, working in collaboration with representatives of the Council. When the questions had been finalized, survey questionnaires were developed in both paper and electronic (online) formats.

The survey was open for approximately 10 weeks. Survey promotion took place through face-to-face platforms and online. North Central Regional Planning Commission utilized an intern to distribute paper surveys at county fairs and to local businesses and organizations in collaboration with key community partners such as K-State Research and Extension. North Central Kansas Food Council members also assisted with survey distribution in their respective communities. The link to the online survey was featured on the North Central Regional Planning Commission website where community members could easily access it. North Central Regional Planning Commission staff and a Council member entered data from paper surveys by hand. Data from surveys completed on paper forms were entered into the online survey system prior to analysis.

A total of 4,449 individuals from the 12-county region participated in the North Central Kansas Food Council Community Food Survey. The survey featured 20 questions across a range of topics. Of the total respondents, 184 Marshall County residents participated and fully responded to four of the 25 questions; 21 questions were partially completed.

Because the survey employed a non-random, convenience sampling approach, the results of the survey may not be representative of the county population as a whole. One way to increase likely representativeness of a convenience sample is to obtain a larger group of survey responses; the 184 completed responses to the survey within Marshall County would be expected to produce estimates with a margin of error of ± 5%. Comparison of the demographic characteristics of survey respondents to the Marshall County population suggest that the survey results may be somewhat under-representative of males and adults between 18 and 24 years of age.

Nevertheless, the results represent an important cross-section of community member perspectives and voices and contribute to an overall understanding of the food environment and community member needs in Marshall County. Survey

participants have provided many comments which provide valuable insights regarding their satisfaction with the current Marshall County food environment and where they would like to see changes.

The following are highlights from the online survey. Note, however, that this does not include all question responses.

Demographics

- Of 4,499 respondents in the 12-county North Central Kansas area, Marshall County accounted for 184 (4.1%) of all responses.
    - Survey respondents account for 2.2% of the Marshall County population 18 years or older.
- Respondent age: <25 years (1.1%); 25-44 years (30.2%); 45-64 years (34.6%); 65+ years (34.1%)
- Respondent sex: female (79.2%); male (20.8%)
- Respondent household sizes: 1-2 (57.9%); 3-4 (29.5%); 5 or more (12.6%)
- Approximately 66.5% of respondents live in a town as opposed to outside of city limits.
- Approximately 40.8% of respondents grew up somewhere other than Marshall County.

Food Access

- Approximately 38.6% of respondents live less than 2 miles from a grocery store; approximately 63.1% live less than 5 miles away from a grocery store.
- Where multiple responses were allowed, the top three barriers to food access cited were:
    - **lack of fresh food selection** (48.6%);
    - **lack of retail food outlets** (48.6%); and
    - **affordability** (35.9%).
- Approximately 85.4% of respondents cited they do not use public benefits or other strategies to acquire food.
    - Approximately 6.7% of respondents indicated SNAP or WIC utilization.
- When asked what preferred food access channels would be, the top three responses were:
    - **one large supermarket** (54.1%);
    - **several small corner stores with quality fresh fruits, vegetables, and proteins** (45.9%); and
    - **community gardens that sell fruits and vegetables** (35.5%).
- Approximately 47.5% of respondents would be interested in subscribing to a delivery service for food grown or produced regionally.

Dietary Habits

- Only 1.1% and 1.7% of survey respondents eat the recommended 5 servings of fruits and vegetables, respectively, per day.
    - Approximately 53.3% or respondents eat 1 or fewer servings of fruit daily.
    - Approximately 37.9% of respondents eat 1 or fewer servings of vegetables daily.

Shopping Behaviors & Preferences

- Approximately 51.1% of survey respondents spend less than $300 on groceries per month.
- When asked where groceries are purchased, the top three responses were: **supercenters** (86.9%); **Dollar store** (44.8%); and **independent, locally-owned grocery store** (37.2%).
- Approximately 96.6% of respondents spend the majority of their grocery dollars at either a **supercenter** (72.5%); **independent, locally-owned grocery store** (14.6%), or **supermarket** (9.6%).
- When asked about the most important considerations for purchasing food, the top four were:
    - **freshness** (87.5%);
    - **affordability** (77.29%);
    - **variety** (51.6%); and
    - **healthy selection** (39.1%).

Local Foods Economy

- Approximately 78.7% of survey respondents do not grow, raise, or produce food or food-based products for public sale.
    - Approximately 16.9% of respondents produce vegetables.
- Survey respondents agree or strongly agree that they would be more likely to purchase regionally grown or produced foods if…
    - They knew it was healthy for them (91.2%)
    - They knew it would benefit the local economy (96.7%)
    - They knew it was better for the environment (89.4%)
    - There was a wider variety of to choose from (92.3%)
    - They knew who grew it (79.8%)
    - If they knew where they could purchase it (92.8%)

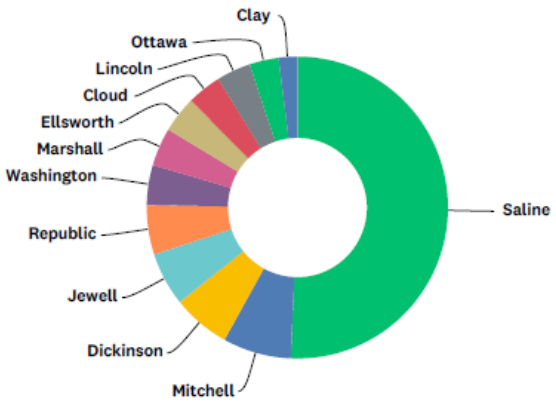
Communications

- When asked what the preferred communications channels for learning about local foods are, the top four responses were:
    - **word of mouth** (66.5 %);
    - **newspaper** (51.1%); and
    - **Facebook** (48.9%).

Responses to Survey Questions

Q1 Which county do you currently live in?

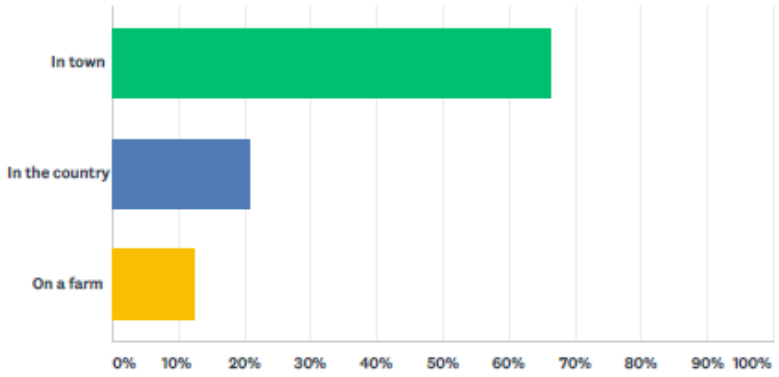
Answered: 4,499 Skipped: 13



Answer Choices	Responses	Count
Saline	50.72%	2,282
Mitchell	7.33%	330
Dickinson	6.20%	279
Jewell	5.73%	258
Republic	5.29%	238
Washington	4.27%	192
Marshall	4.09%	184
Ellsworth	3.91%	176
Cloud	3.67%	165
Lincoln	3.65%	164
Ottawa	3.13%	141
Clay	2.00%	90
TOTAL		**4,499**

Q2 Which of the following best describes where you live in your county?

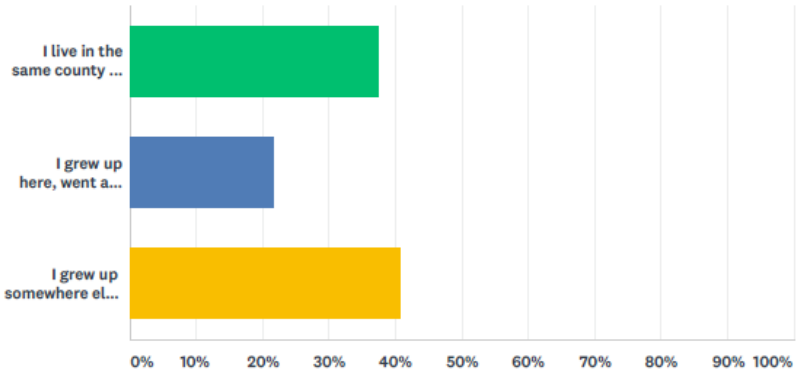
Answered: 182 Skipped: 2



ANSWER CHOICES	RESPONSES	
In town	66.48%	121
In the country	20.88%	38
On a farm	12.64%	23
TOTAL		182

Q3 Which of the following best describes your relationship to the county you live in?

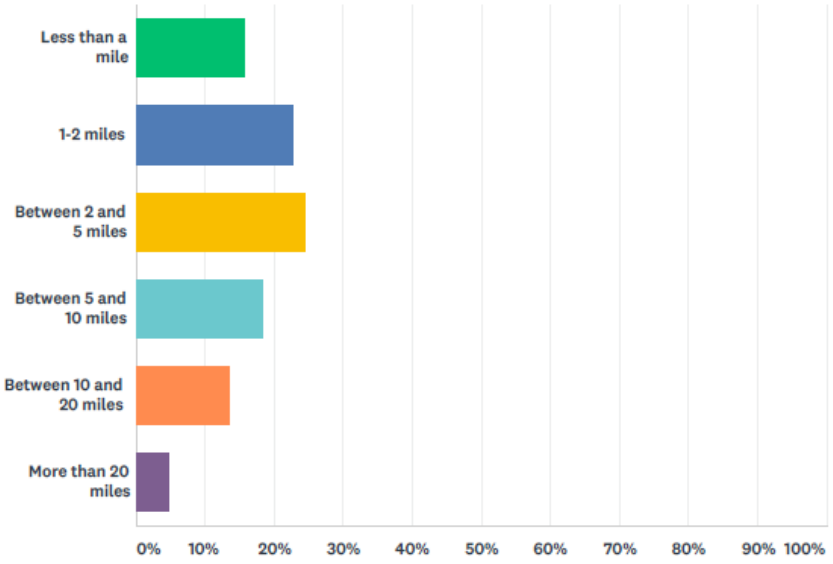
Answered: 184 Skipped: 0



ANSWER CHOICES	RESPONSES	
I live in the same county I grew up in	37.50%	69
I grew up here, went away and came back	21.74%	40
I grew up somewhere else and moved here	40.76%	75
TOTAL		184

Q4 How far away are you from the closest location where you purchase fresh foods?

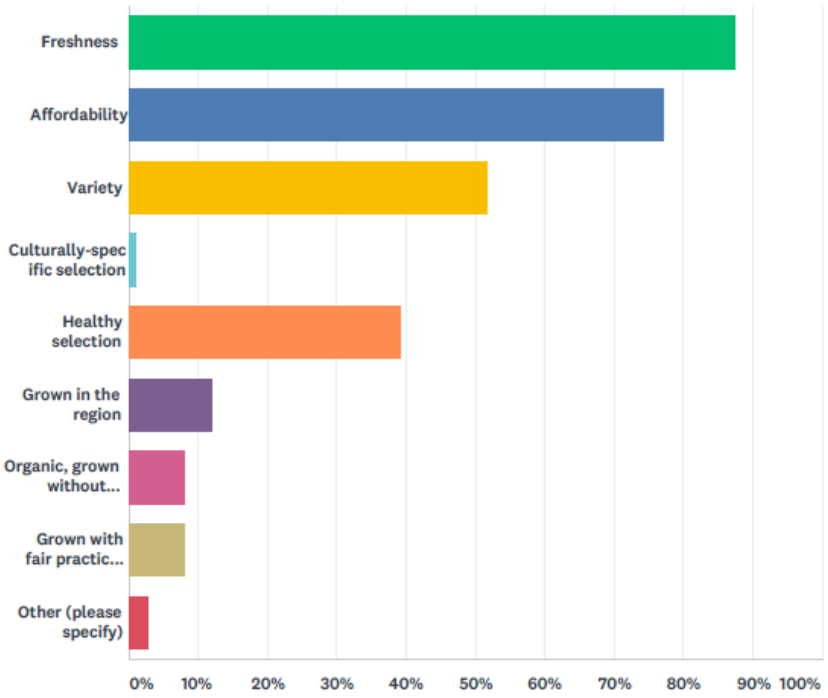
Answered: 184 Skipped: 0



ANSWER CHOICES	RESPONSES	
Less than a mile	15.76%	29
1-2 miles	22.83%	42
Between 2 and 5 miles	24.46%	45
Between 5 and 10 miles	18.48%	34
Between 10 and 20 miles	13.59%	25
More than 20 miles	4.89%	9
TOTAL		184

Q5 What is most important to you when purchasing food? Please choose three.

Answered: 184 Skipped: 0

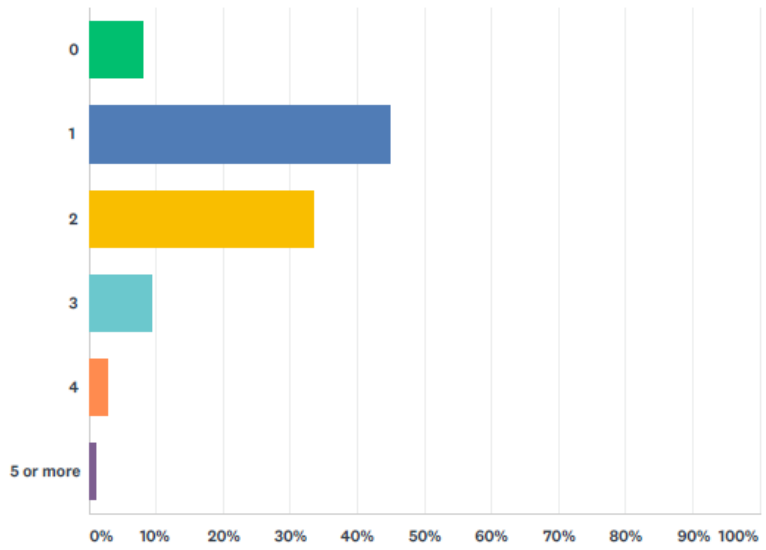


ANSWER CHOICES	RESPONSES	
Freshness	87.50%	161
Affordability	77.17%	142
Variety	51.63%	95
Culturally-specific selection	1.09%	2
Healthy selection	39.13%	72
Grown in the region	11.96%	22
Organic, grown without man-made fertilizer or pesticides or GMO-free	8.15%	15
Grown with fair practices (i.e., farmer workers paid fairly)	8.15%	15
Other (please specify)	2.72%	5
Total Respondents: 184		

#	OTHER (PLEASE SPECIFY)
1	Shelf life longevity
2	Allergen Friendly
3	Community farms for each other.
4	availability
5	Sold by a local owned business.

Q6 One serving of fruit is about equal to one cup fresh or ½ cup dried. On average, how many servings of fruit do you eat per day?

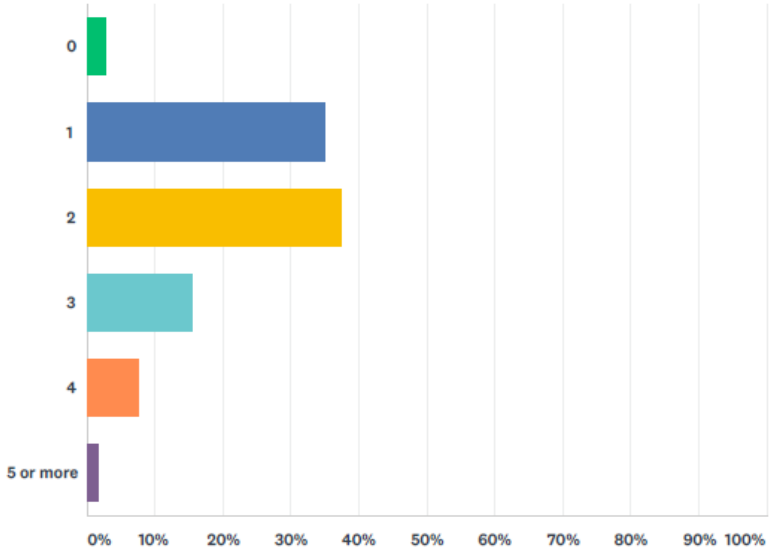
Answered: 182 Skipped: 2



ANSWER CHOICES	RESPONSES	
0	8.24%	15
1	45.05%	82
2	33.52%	61
3	9.34%	17
4	2.75%	5
5 or more	1.10%	2
TOTAL		182

Q7 One serving of vegetables is about equal to ½ cup dried or cooked, or one cup of leafy greens. On average, how many servings of vegetables do you eat per day?

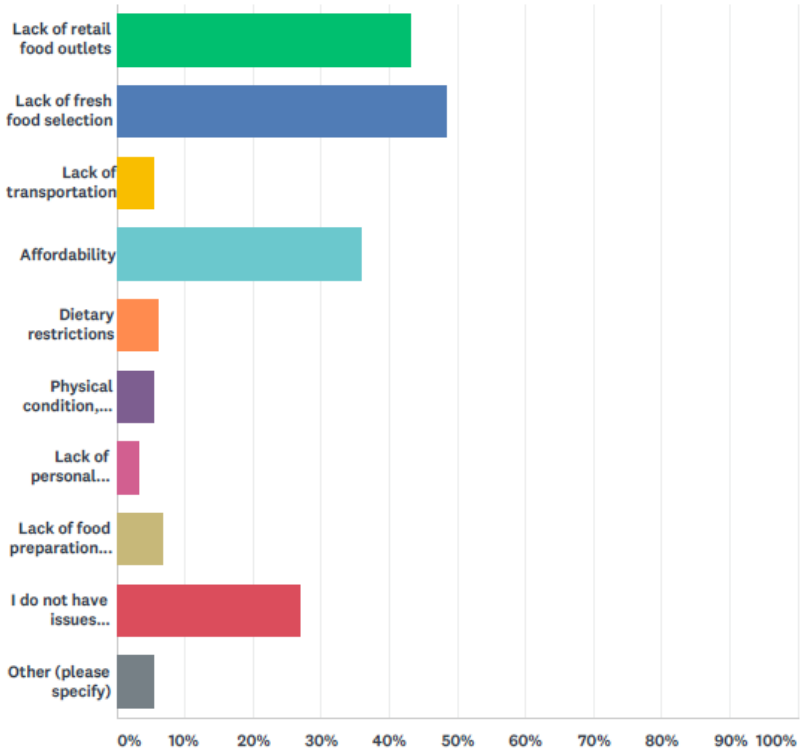
Answered: 182 Skipped: 2



ANSWER CHOICES	RESPONSES	
0	2.75%	5
1	35.16%	64
2	37.36%	68
3	15.38%	28
4	7.69%	14
5 or more	1.65%	3
TOTAL		182

Q8 What barriers make it harder for you to access food? Please check all that apply.

Answered: 181 Skipped: 3

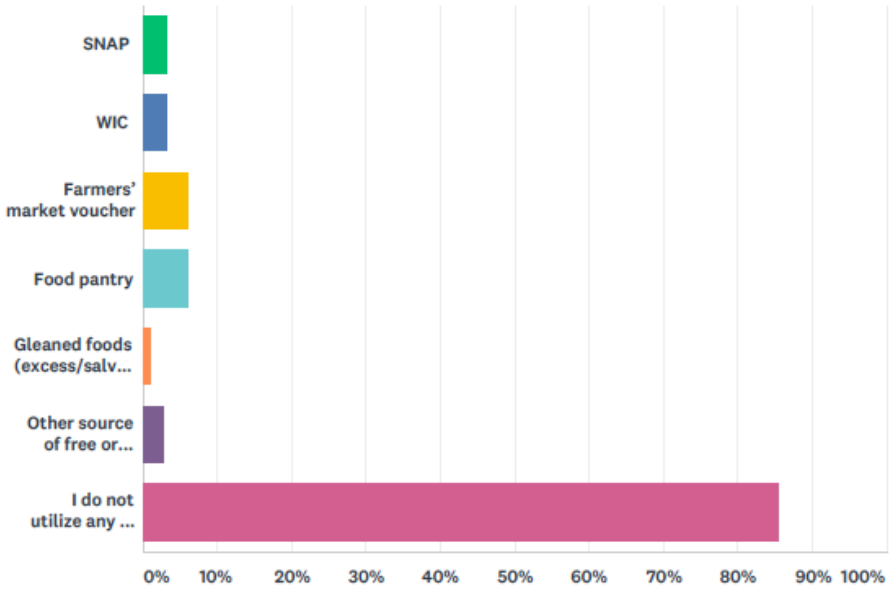


ANSWER CHOICES	RESPONSES	
Lack of retail food outlets	43.09%	78
Lack of fresh food selection	48.62%	88
Lack of transportation	5.52%	10
Affordability	35.91%	65
Dietary restrictions	6.08%	11
Physical condition, including age	5.52%	10
Lack of personal storage or equipment	3.31%	6
Lack of food preparation knowledge	6.63%	12
I do not have issues accessing food.	27.07%	49
Other (please specify)	5.52%	10
Total Respondents: 181		

#	OTHER (PLEASE SPECIFY)
1	I live alone so I always have leftovers or most of my groceries expire before I use them
2	poor quality
3	choices
4	poor quality
5	Not much local selection from the bread basket of the nation.
6	W
7	No stores available here but Walmart.
8	little gluten free choice; at Walmart, things suddenly disappear and are no longer available
9	I don't want to support Wal-Mart
10	Lack of time

Q9 Do you or anyone in your household currently use the following? Please check all that apply.

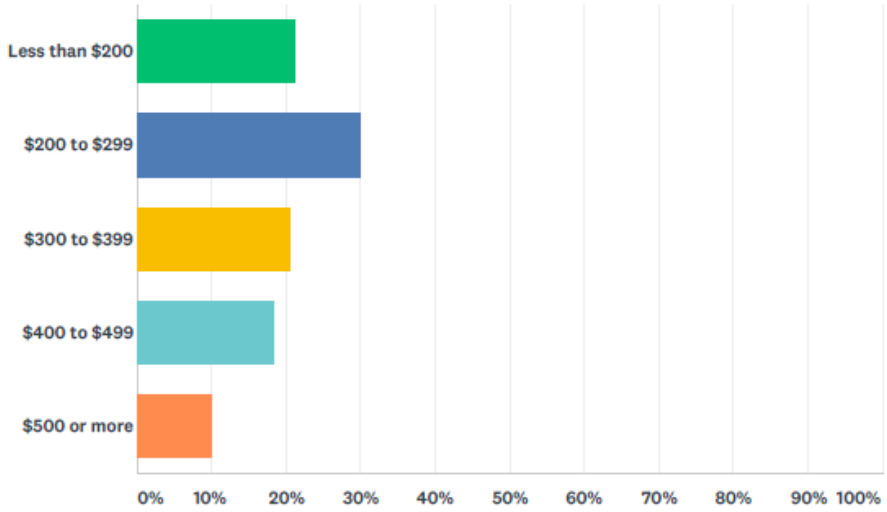
Answered: 179 Skipped: 5



ANSWER CHOICES	RESPONSES	
SNAP	3.35%	6
WIC	3.35%	6
Farmers' market voucher	6.15%	11
Food pantry	6.15%	11
Gleaned foods (excess/salvaged food items collected from farms, gardens, grocery stores, etc.)	1.12%	2
Other source of free or discounted food (i.e., church, community meals, etc.)	2.79%	5
I do not utilize any of these options.	85.47%	153
Total Respondents: 179		

Q10 About how much does your household spend on groceries per month?

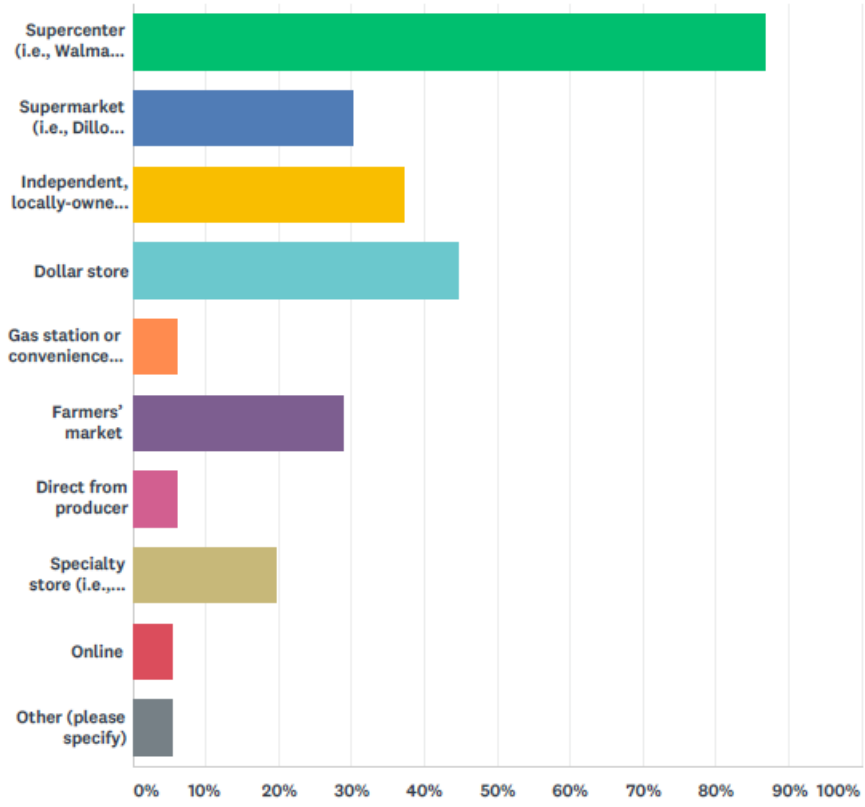
Answered: 180 Skipped: 4



ANSWER CHOICES	RESPONSES	
Less than $200	21.11%	38
$200 to $299	30.00%	54
$300 to $399	20.56%	37
$400 to $499	18.33%	33
$500 or more	10.00%	18
TOTAL		180

Q11 Where do you purchase groceries? Please check all that apply.

Answered: 183 Skipped: 1



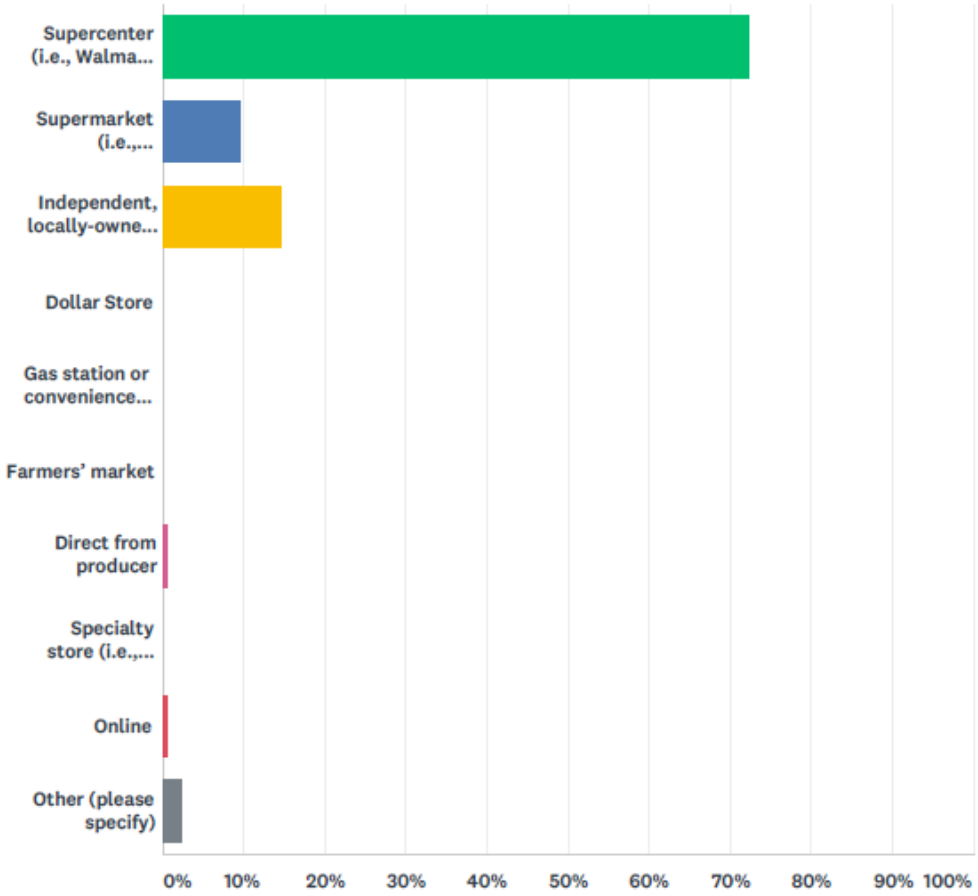
ANSWER CHOICES	RESPONSES	
Supercenter (i.e., Walmart, Sam's Club)	86.89%	159
Supermarket (i.e., Dillons, IGA stores)	30.05%	55
Independent, locally-owned grocery store (i.e. Ray's Apple Markets)	37.16%	68
Dollar store	44.81%	82
Gas station or convenience store	6.01%	11
Farmers' market	28.96%	53
Direct from producer	6.01%	11
Specialty store (i.e., bakery, butcher, ethnic)	19.67%	36
Online	5.46%	10
Other (please specify)	5.46%	10
Total Respondents: 183		

#	OTHER (PLEASE SPECIFY)
1	Meat market
2	produce at the Marysville Walmart is terrible
3	Aldi
4	Gome grown
5	Would love to purchase from a local farm or buyers center.

6	I drive 60 miles to have access to most fresh produce, since our walmart lacks good fresh veggies.
7	Gators Blue Rapids
8	Have a garden and fruit trees and meat
9	Gators Hometown Foods
10	Dollar General

Q12 Where do you spend the majority of your grocery dollars?

Answered: 178 Skipped: 6

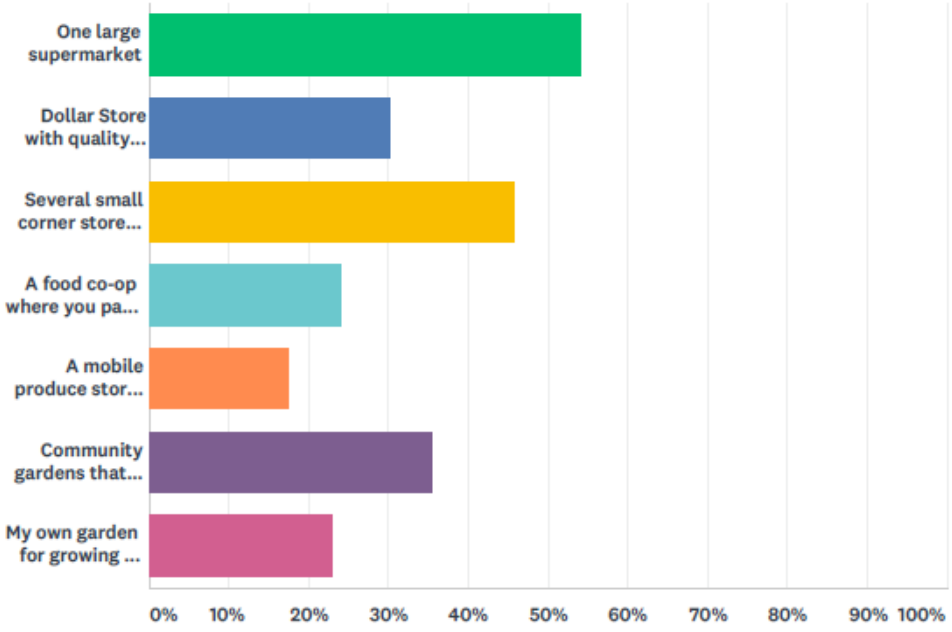


ANSWER CHOICES	RESPONSES	
Supercenter (i.e., Walmart, Sam's Club)	72.47%	129
Supermarket (i.e., Dillon's, IGA stores)	9.55%	17
Independent, locally-owned grocery store (i.e. Ray's Apple Markets)	14.61%	26
Dollar Store	0.00%	0
Gas station or convenience store	0.00%	0
Farmers' market	0.00%	0
Direct from producer	0.56%	1
Specialty store (i.e., bakery, butcher, ethnic)	0.00%	0
Online	0.56%	1
Other (please specify)	2.25%	4
TOTAL		178

#	OTHER (PLEASE SPECIFY)
1	Aldi
2	Gators Blue Rapids
3	Meat
4	Left blank

Q13 What kind of food access would you prefer in your community? Please choose three.

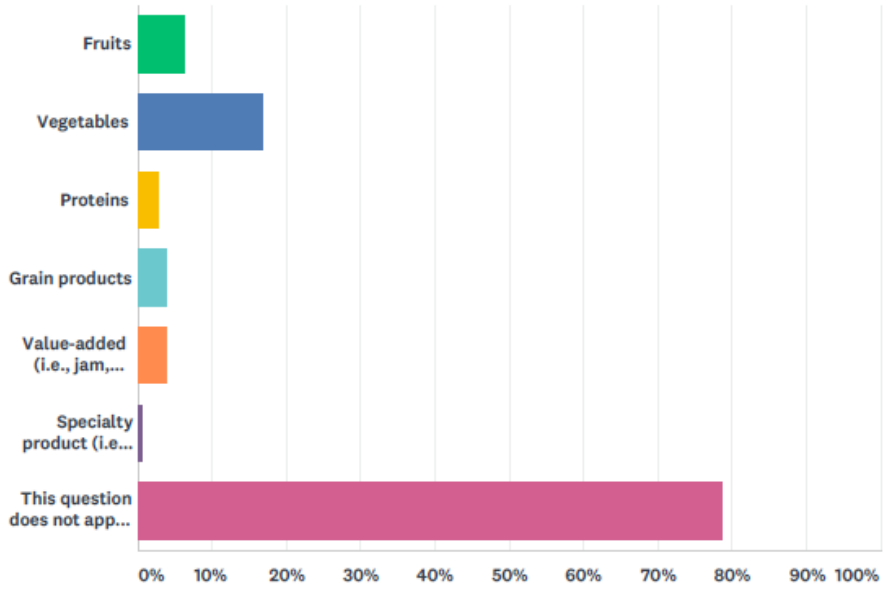
Answered: 183 Skipped: 1



ANSWER CHOICES	RESPONSES	
One large supermarket	54.10%	99
Dollar Store with quality fresh fruits, vegetables, and proteins	30.05%	55
Several small corner stores with quality fresh fruits, vegetables, and proteins	45.90%	84
A food co-op where you pay in advance to have food delivered from farms to a specific pick-up location year round	24.04%	44
A mobile produce store that comes to your neighborhood	17.49%	32
Community gardens that sell vegetables and fruit	35.52%	65
My own garden for growing my own food	22.95%	42
Total Respondents: 183		

Q14 Do you grow, raise, or produce any of the following food or food-based products to sell to the public? Please check all that apply.

Answered: 178 Skipped: 6

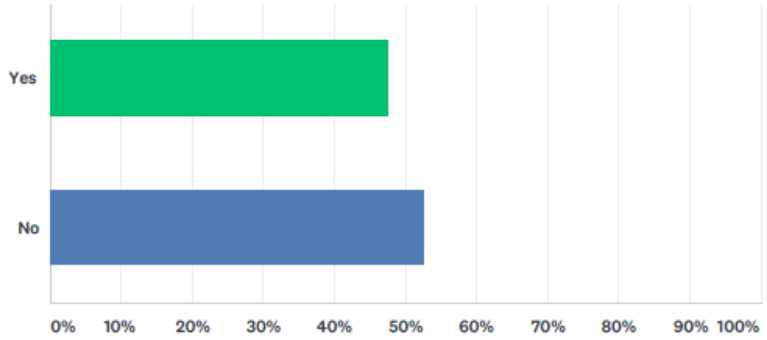


ANSWER CHOICES	RESPONSES	
Fruits	6.18%	11
Vegetables	16.85%	30
Proteins	2.81%	5
Grain products	3.93%	7
Value-added (i.e., jam, bread, salsa, etc.—please specify below)	3.93%	7
Specialty product (i.e. candles—please specify below)	0.56%	1
This question does not apply to me.	78.65%	140
Total Respondents: 178		

#	IF YOU SELECTED VALUE-ADDED OR SPECIALTY PRODUCT ABOVE, PLEASE SPECIFY.
1	Hay
2	Salsa
3	eggs
4	Donate extra raised
5	Other
6	We are dairy farmers and produce milk & meat that is eventually sold to the public.
7	have my own garden for myself and family but not to sell

Q15 Would you be interested in subscribing to a delivery service for food grown or produced regionally?

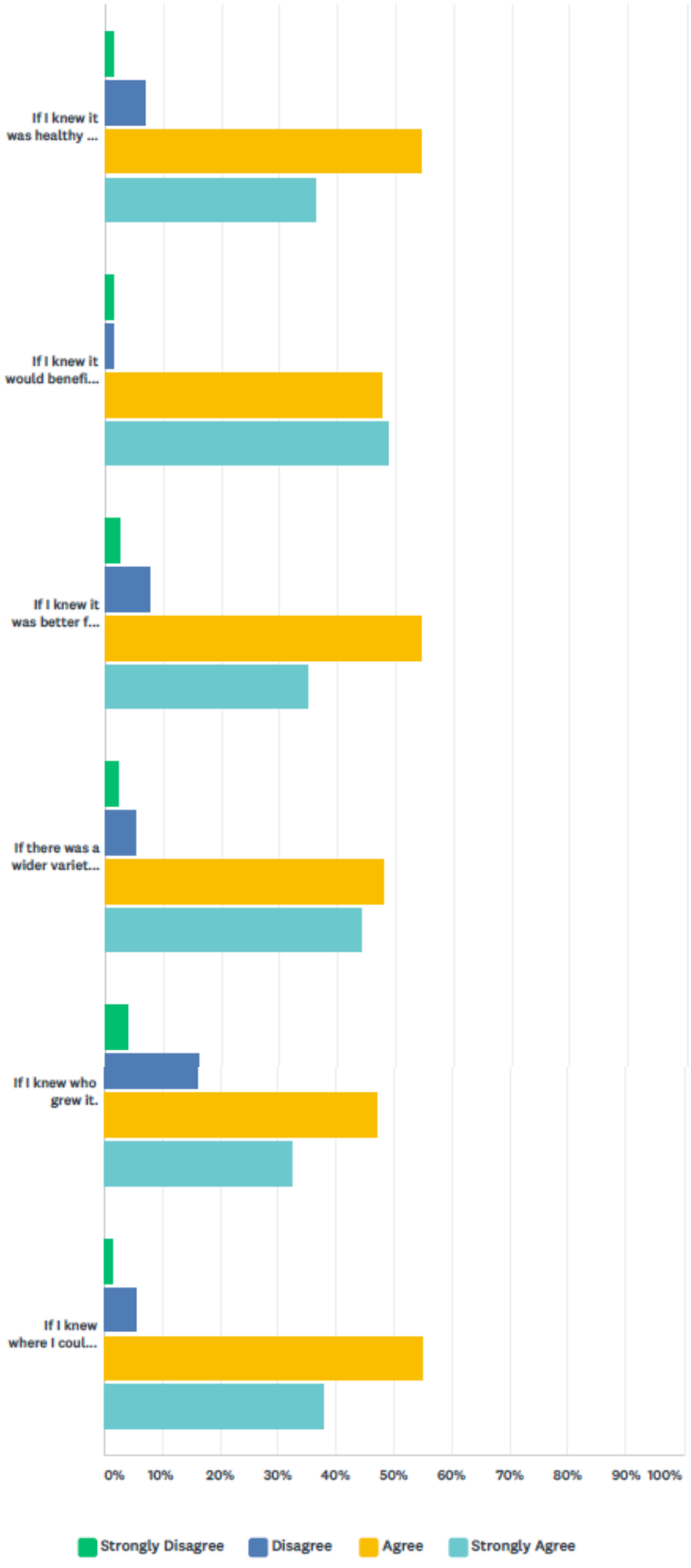
Answered: 177 Skipped: 7



ANSWER CHOICES	RESPONSES	
Yes	47.46%	84
No	52.54%	93
TOTAL		177

Q16 Please indicate whether you agree or disagree with the following statements:I would be more likely to purchase regionally grown or produced foods...

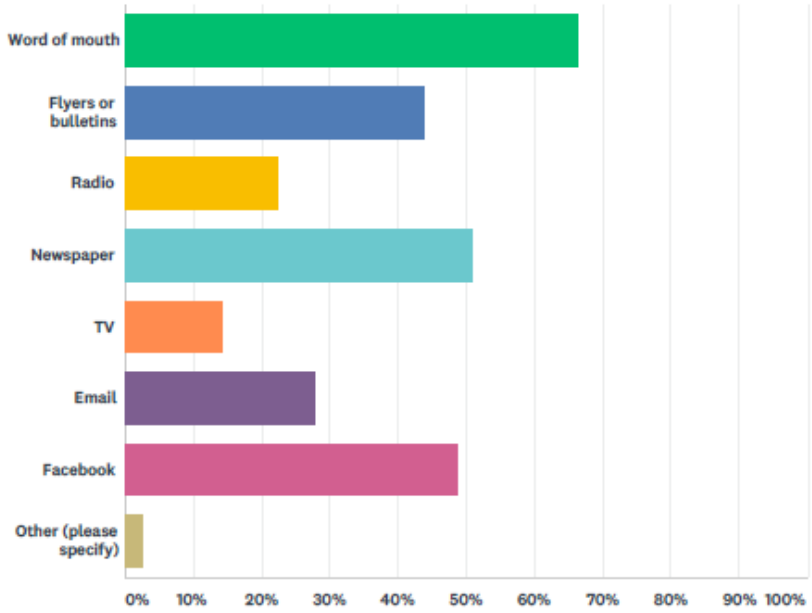
Answered: 183 Skipped: 1



	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	TOTAL
If I knew it was healthy for me.	1.66% 3	7.18% 13	54.70% 99	36.46% 66	181
If I knew it would benefit my community's economy.	1.67% 3	1.67% 3	47.78% 86	48.89% 88	180
If I knew it was better for the environment.	2.78% 5	7.78% 14	54.44% 98	35.00% 63	180
If there was a wider variety to choose from.	2.21% 4	5.52% 10	48.07% 87	44.20% 80	181
If I knew who grew it.	3.93% 7	16.29% 29	47.19% 84	32.58% 58	178
If I knew where I could buy it.	1.67% 3	5.56% 10	55.00% 99	37.78% 68	180

Q17 How do you prefer to learn about local foods? Please check all that apply.

Answered: 182 Skipped: 2

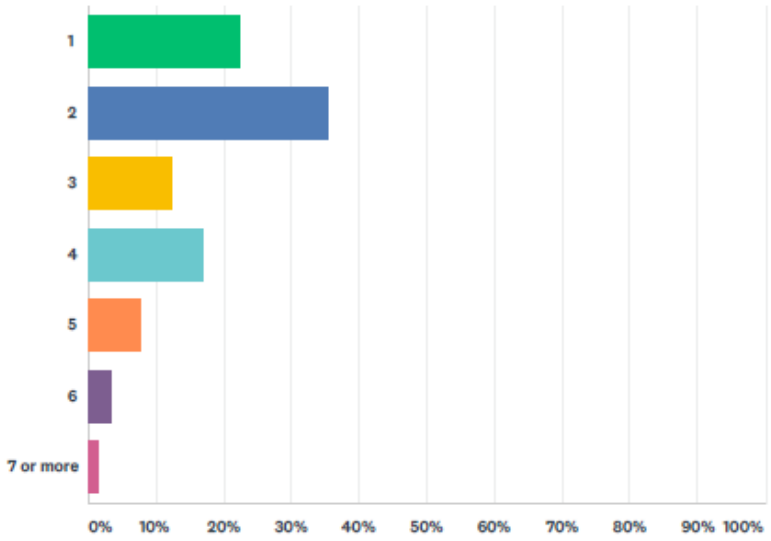


ANSWER CHOICES	RESPONSES	
Word of mouth	66.48%	121
Flyers or bulletins	43.96%	80
Radio	22.53%	41
Newspaper	51.10%	93
TV	14.29%	26
Email	28.02%	51
Facebook	48.90%	89
		5

#	OTHER (PLEASE SPECIFY)
1	Just go to the Store
2	Anything.
3	Phone
4	Left blank
5	Classes on how to can cook and store and how to beat garden

Q18 How many people live in your household?

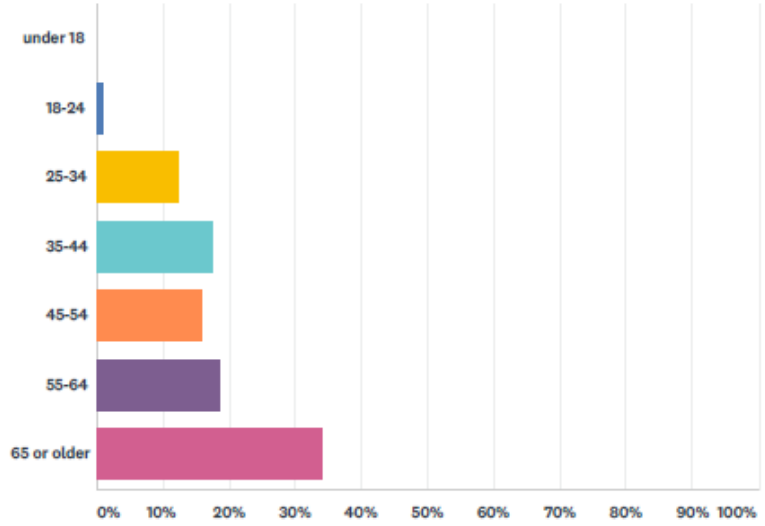
Answered: 183 Skipped: 1



Answer Choices	Responses	Count
1	22.40%	41
2	35.52%	65
3	12.57%	23
4	16.94%	31
5	7.65%	14
6	3.28%	6
7 or more	1.64%	5
TOTAL		**183**

Q19 What is your age?

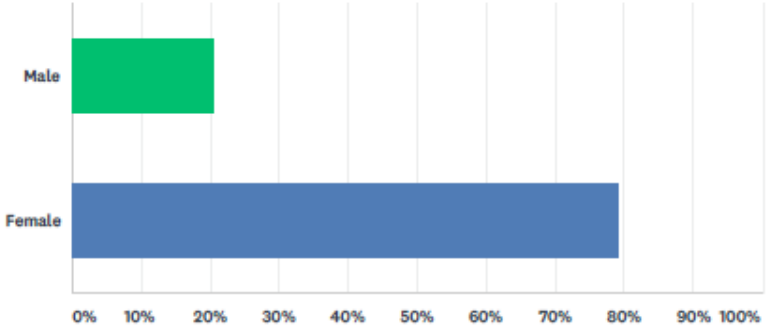
Answered: 182 Skipped: 2



Answer Choices	Responses	Count
Under 18	0.00%	0
18-24	1.10%	2
25-34	12.64%	23
35-44	17.58%	32
45-54	15.93%	29
55-64	18.68%	34
65 or older	34.07%	62
TOTAL		**182**

Q20 What is your gender?

Answered: 183 Skipped: 1



Answer Choices	Responses	Count
Male	20.77%	38
Female	79.23%	145
TOTAL		**183**

Focus Group Process

To complement information gleaned from secondary data sources and the community survey, key community stakeholders within each of the 12 counties comprising the North Central Kansas Food Council were sought to participate in a focus group. Focus groups were organized by North Central Regional Planning Commission in collaboration with North Central Kansas Food Council members, and personal invitations were made. In at least one case, the focus group was advertised in the local newspaper. Participants were provided with a packet of information for review at least one week prior to the focus group. The packet included a copy of the full community survey results for their county; a summary of secondary data collected; and a one-page, double-sided information sheet of secondary data and community survey highlights.

Focus groups were facilitated by two consultants and lasted two hours. Participants were provided with the one-page information sheet of county data highlights, an agenda that included two additional questions for which to provide a written response, and name tents on which to not only indicate their name and food sector represented but also provide written responses to questions that would be asked during the focus group. In many cases, food and refreshments were provided as well. The objectives of the focus groups were to:

- ground-truth the survey data;
- create linkage between the local food system and the survey;
- enrich and deepen the assessment process and corresponding data collected; and
- engage community members.

Focus groups took place from August to November 2018, the Marshall and Washington County focus groups occurring on September 12, 2018 at the Senior Center in Marysville. Marshall County had 12 community members in attendance representing a diversity of food system sectors. Washington County had one community member in attendance. Each focus group began with an overview of the food assessment process by North Central Planning Commission staff and ground rules discussion followed by a "warm-up" exercise where participants were asked what came to mind when thinking about their "local or regional food system." The two counties were combined for the entirety of the focus group.

The focus group was conducted in three parts that focused on reactions to the community survey; the local food economy; and conclusions drawn. The following includes responses recorded by facilitators during the Marshall and Washington county focus group as well as written responses from participants. Washington County responses are highlighted in green.

Focus Group Responses

Part 1: Survey Reactions

What surprised you?

- Is affordability low??
- Shocked by rating on nutrition for fruit and vegetable consumption
- $22 million in food expenditures
- < $300/month grocery spending (must be 1- or 2-person households)
- Production of commodities vs. food deserts
- % of food waste

What resonated with you?

- There is local grocery store
- Good meat supply locally
- More interest in healthy food options; grocery supplying it

"Defining the local, regional food system."
Marshall and Washington County focus group participant responses.

What is out of alignment or leaves you with additional questions? (ground-truthing)

- Willingness to shop at local store???
- Affordability at local store???
- $300/mo. In food expenditures could be representative
- Just eating a single serving of veggies could be accurate
- Desire to grow your own food vs. willingness to buy fresh local vs. eating 1 serving/day do not add up
- Not connecting nutritional value vs. cost
- Concession stands food availability (lack of alignment, mixed messaging)

Part 2: Economic Data

Local Food Economy (survey question #16)

Is this data representative?

- Close match (1)
- Neutral (2) – (1) Washington
- Not match at all (9)

Additional comments:

- Reflects attitudes, not behaviors
  - Consider indicators (freshness, affordability) as priority
- How are respondents perceiving the questions?
- How to make consumer desires economically accessible?
- Consider production costs

Consumer Choices: Competing Values

Preparing fresh vs. Convenience

- Families in "survival mode"
  - Fluctuations day-to-day
  - Challenge to meet
- Prepared meal might be welcomed

Quality vs. Affordability

- "Not a choice" – fixed income
- Difference in taste
- Lack of education ha impact
  - USD nixed home economics
- Priorities misplaced – poverty mindset, cycle
- Instant gratification (want vs. need)

Production Expectations vs. Feasibility

- Not willing to pay the price
- Educate on growing seasons
- Disparity in access (high population vs. low population centers)
  - Buying power
- Availability – hours of operation vs. free time

What do you think is the level of awareness of the food supply chain?
(12 Marshall County participants)
(1 Washington County participant)*

Level of Awareness		Your own awareness	Community awareness
	Production	# of participant votes	
	High	8/1*	0
	Medium	3	5/1*
	Low	0	7
	Processing	# of participant votes	
	High	4/1*	0
	Medium	4	1*
	Low	4	12
	Distribution	# of participant votes	
	High	6	0
	Medium	6	0
	Low	1*	12/1*
	Marketing	# of participant votes	
	High	6	0
	Medium	4	2
	Low	2/1*	10/1*

Part 3: Conclusions

Local Food System: What should be priorities?

- Education on everything
  - Nutritional value
  - Financial investment in health
  - Social/environment impacts
- Affordability including transportation costs
- Break down barriers like policies and regulations
- Leadership is the key
- Leverage existing resources
- Need concrete plan with strategies
- Work with small grocers and keep it local

Local Food System: Community Assets

- Folks who care
- Have producers/buyers
- Empty buildings
- Transportation/trucks
- Deer, fish, wild game
- Extension and leadership in Marshall county
- This group here!! (Meaning the focus group participants in the room)
- Economic groups

Local Food System: What would you change?

- Make buying from each other a requirement → institutional purchasing
- Infrastructure for delivery for institutional purchasing
- Create central location like a hub or coop
- Create an educational center for nutrition and a community kitchen (connect with hub/coop)
- Central place for incubator (include with community kitchen); find different entry point
- Affordability and accessibility
- Online delivery (initiated by local grocery stores)
- Donation system for expiring dated food; create food waste policy

Overall Takeaways

- There is hope!!
- Start now!!
- Multi-model education
- Code's own food program online
- Perspective and passion is here

Parking Lot (miscellaneous)

- Why are we not getting enough food?
- Use co-op/CSA to replace supercenter
- How sustainable are restaurants without a constant supply?
- Educate youth on nutrition
- Network farmers with consumers
- Create more reasonable profit margins at retail (matter of ethics)
- Get community more involved; take ownership
- How many people subscribe to a prepared meal service?
- What would be the interest in a local version?
- What are the perceived barriers?

Written Responses

How often do you dine away from home? On average, Marshall County focus group participants dined away from home 2.3 times per week.

Finish this sentence: **I would be most proud of my city/county/community food system if in five years…**

- The community was buying from each other and not out of county or state.
- [There was a] community garden, community grocery store with volunteers, and school garden to eat what they grow.
- We had two more grocery stores. Affordable, nutritious food accessible to all.
- [We were] bridging the gap between farmers and consumers, creating a community food coop.
- It had a larger more diverse supply of health, fresh food.
- Survey results match reality (i.e. if 90% of people actually bought locally).
- We have more smaller grocers offering affordable and fresh foods.
- [We had] more local food. Keep the local money in the local community to increase local wealth circulation.
- A local food market is in place.
- I am not a member of any group which is represented here. I simply came because I heard there was a meeting about food. Having owned a grocery store for 38 years, I am so concerned about food availability for everyone.
- We have a local grocer that provides quality with affordability
- Every citizen of Marshall county had access to affordable and nutritious food in their area/town weekly.
- We had a hub in town for produce and meats that had a certified kitchen, [and if] there was more education about the food system as a whole.

Conclusions

The information presented in this report highlights many current strengths and gaps in the current food system for Marshall County. The region has a strong agricultural presence, with access to farmland and adequate water supplies. Although agriculture is predominantly focused on the production of grains, hay and beef, there are a promising, albeit small, number of smaller-scale producers growing and producing foods for direct sale to community residents. The presence of Kansas State University, the state's land grant university, offers food producers and entrepreneurs in the region the opportunity to take advantage of a wealth of available scientific expertise and technical assistance. There is also access to retail grocery and farmers markets within Marshall county.

Despite all those strengths, however, there are still gaps and opportunities to improve and enhance the local food system. Many farmers are nearing retirement age without younger ones stepping in fill the void, and high land prices and low farm profitability present significant challenges to the small numbers of younger people who would like to become farmers. Local production of fruits and vegetables and poultry and eggs fall significantly short of local consumption volumes. The vast majority of community residents do not eat the recommended amounts of vegetables and fruits. Approximately 1,160 Marshall County residents are food-insecure (or struggle to get enough food), because they lack the money to buy it. National research suggests that as much of 40 percent of the food grown in the United States is wasted. If this pattern holds true in the Marshall County area, more than 2.9 million pounds of food is wasted each year.

These are just a few examples of current assets and gaps; readers of this report will likely identify others. While this report does not address or include every possible measure related to the local food system, it has been structured to provide a systems-level description that touches upon each of the major sectors within the food system, using data that are either readily available or could be collected with reasonable effort within the community setting. Because of that breadth of scope, the depth of information on any one subject is necessarily limited to prevent the assessment process and report from becoming totally unmanageable. It is likely that there will be some areas where the information included will generate interest or raise additional questions that are not answered by the brief topical summaries included in the report – those questions may identify areas the North Central Regional Planning Commission.

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