

# Food Hub Feasibility Study



**Authored by**



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## **Executive Summary**

The main objective of the Regional Food Hub feasibility study is to determine if a regional food hub will benefit small and emerging agri-businesses and help link them to multiple markets. The study seeks to answer questions concerning the potential need, demand, and ultimately, the chances of success for a regional food hub located in our region. The study area includes the Boonslick Region which encompasses the three Missouri counties of Lincoln, Montgomery, and Warren.

The ultimate goal of a potential food hub is to increase market access and add value to the current food distribution system for local producers. The study looks at many factors that could help determine if a food hub would be feasible for the region. Some factors to be considered include environment, economy, and societal impacts.

The study provides an inventory of farmers markets and other potential agri-business suppliers, an evaluation of potential markets, and an evaluation of the current infrastructure of the region. Current producers were surveyed to determine their strengths, weaknesses, opportunities, and challenges. The study closely looks at the needs of the producers and evaluates what aspects of the supply chain present the most significant obstacles. In addition, interviews determined what business tools would be most beneficial to small farmers as they try to grow their enterprise.

Potential buyers are also interviewed to evaluate their current knowledge of local suppliers, their use of local suppliers, and what obstacles may exist in the supply chain with local producers. The study attempts to determine what factors buyers consider when they make buying decisions, and evaluates the likelihood that buyers would consider purchasing from local producers. Factors that could increase the likelihood of potential buyers using local suppliers were also considered.

Based on the results of the interviews with producers, the study evaluates what requirements a food hub should address to provide the most benefit to small and emerging businesses in the region and what aspects of a food hub could be most beneficial to linking producers and buyers. Lastly, the facility requirements were evaluated and strategies were formulated for better business operations, communications, and marketing of the food hubs in the region.

## Survey Methodology

This study is based on face to face interviews with over 75 local growers and buyers (list provided under Appendix A) in the Boonslick region. These interviews were conducted over a period of several months during which a series of baseline questions as provided below were asked of each respondent along with any required follow-up questions. Answers were recorded in generalized notes which, along with information from several debriefing sessions with the interviewer, were used to compile the data used in this report.

<b>Grower/Producer Questions</b>
Do you grow and sell fresh produce?
How long have you been growing fresh produce?
What percentage of your produce do you currently sell for retail versus wholesale?
Who are your customers or target customers?
Do you have storage capacity for all your produce?
How do you distribute your products to local buyers?
What are your barriers to expansion?
In what areas would you like to expand your market?
How familiar are you with food hubs?
Would you expand production if you could get a guaranteed quantity at a set price from a food hub buyer?

<b>Retail Buyer Survey Questions</b>
Are you currently buying local produce? If yes, what are the products?
Are you interested in purchasing?
What types of produce would you be interested?

Interviews of produce buyers were conducted informally by BPRC staff among acquaintances and business associates and used anecdotally within the body of the report. Additional input regarding buyer attitudes and trends was compiled through interviews with growers and information provided through the Elsberry Democrat and St. Louis Post-Dispatch.

## **History of the Region**

The Boonslick Region is situated between two great rivers, the Missouri and the Mississippi. These rivers profoundly influence the geographic, economic, and social development of the area. As major natural avenues of inland migration, the rivers lent accessibility to the region allowing the Trans-Mississippi West to be probed by the Europeans as early as the 1600s. The Boonslick Region's history is especially colorful and significant to Missouri's territorial history.

Prior to the Louisiana Purchase in 1803, the Spanish and French governments held most of the land west of the Mississippi. In 1808, a group of Kentuckians, under the leadership of Colonel Benjamin Cooper, moved into the area. The legendary Daniel Boone moved into Warren County with his family and helped forge the link between St. Louis and St. Charles with the interior of Missouri. By 1859, most of the land in the region had been placed in private ownership. Steady, stable growth encouraged the construction of a railroad through the region stretching from St. Charles to Macon. This growth declined with the onslaught of the Civil War.

Typical of the national pattern of development after the War Between the States, the Boonslick Region attempted to entice more people to settle, to finance construction of additional railroads and to direct existing capital into the exploitation of natural resources. Growth was both steady and gradual.

By the 1950s, the economic base shifted from one supported by agriculture to one broadened by the inclusion of manufacturing. Clothing, nursery products and automobile parts expanded the list of exports from the region. Today, commerce and industry in St. Louis and St. Charles serve as magnets to the region by providing employment opportunities for the work force.

### **Municipalities**

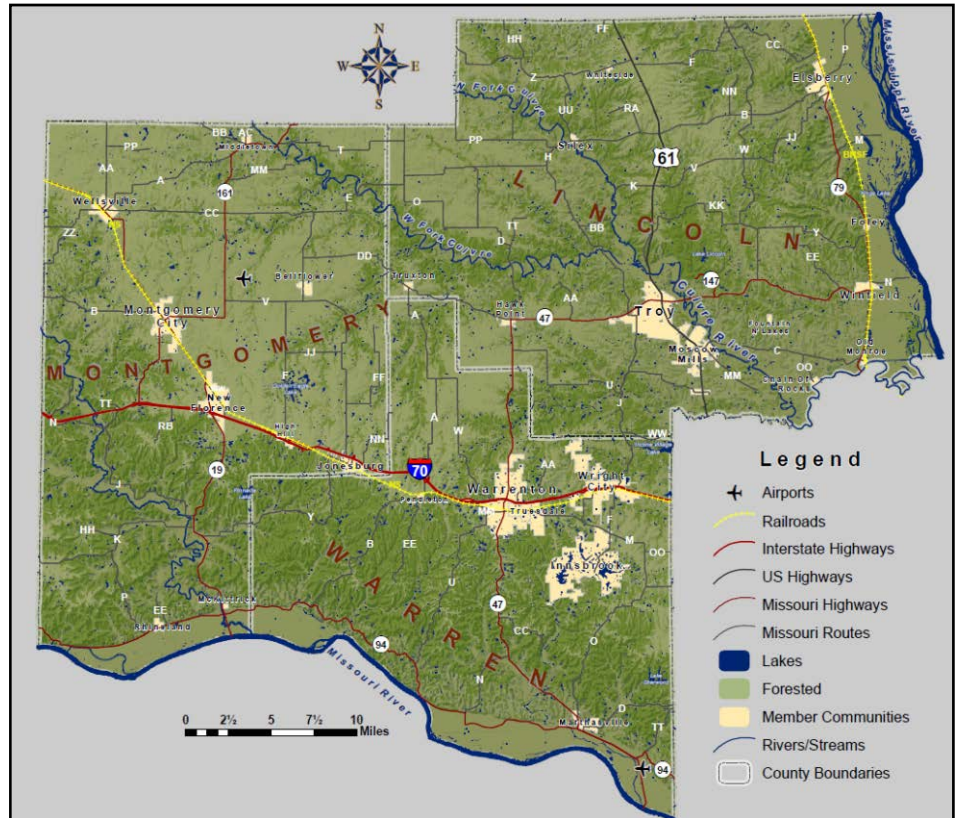
The Boonslick Region has 27 incorporated places within its three counties. Lincoln County is the largest county both in terms of geography and population. It is composed of 631 square miles and includes twelve municipalities; Chain of Rocks, Elsberry, Foley, Fountain N Lakes, Hawk Point, Moscow Mills, Old Monroe, Silex, Troy, Truxton, Whiteside, and Winfield. Troy serves as the county seat for Lincoln County.

Montgomery County consists of 584 square miles and has nine cities; Bellflower, High Hill, Jonesburg, Middletown, Montgomery City, McKittrick, New Florence, Rhineland and Wellsville.

Montgomery City serves as the county seat of Montgomery County.

The region's remaining five incorporated communities are part of Warren County. Geographically, Warren County is the smallest county in the Boonslick Region, consisting of just 432 square miles.

These cities include; Innsbrook, Pendleton, Marthasville, Truesdale, Warrenton, and Wright City. Warrenton serves as the county seat.





## **Land Use**

The Boonslick Region incorporates 1,588 square miles or 2.3% of the State. The mean size of the Counties located in the Boonslick Region is 533.6 square miles. The mean population density for the state of Missouri is 87.1 people per square mile (ppsm) whereas Lincoln is 83.9 ppsm, Montgomery 22.8 ppsm, and Warren 75.9 ppsm. The population density in both Lincoln and Warren Counties is increasing. Montgomery County is much less dense than the rest of the region and growing at a much slower rate.

### **Urban Land Use**

According to the Census Bureau, an urban area is defined as a place having a population of at least 2,500 people. Only two cities in the Boonslick Region fit this definition, Troy and Warrenton; however, Montgomery City is within 60 people of becoming designated an urban area. Developed lands in these areas are classified as residential, commercial, industrial, public and parkland. Residential land is devoted primarily to single-family dwellings.

### **Agricultural Land Use**

Although businesses and industries are developing in the Boonslick Region, historically the Region has been agricultural based. Much of the businesses in the surrounding communities are agriculture support services.

## **Natural Resources**

Compared to other areas of the State of Missouri, the Boonslick Region has limited natural resources to exploit for economic development such as lead or iron ores, natural gas, or petroleum. However, the region does have two natural resources that can be exploited; land and water.

In terms of land, the most important natural resource within the Boonslick Region is soil. There is a variety of soil that interlaces the region and fosters a variety of productivity. This is an important resource in terms of adequately allowing development to occur within the region. Limestone is quarried in a few areas of the region and specialized clay used in the production of fire bricks (though a diminishing resource) is still drawn from a few pits in the region.

Water; or rather, waterways are another important natural resource that has not been fully exploited for economic development. The region's proximity to two major rivers, the Missouri and the Mississippi, positions it to capitalize on river transportation up to and including multi-modal transportation hubs located on the Mississippi, above the confluence with the Missouri.

# Regional Demographics

## Population Trends

The State of Missouri, and the Boonslick Region have experienced significant population growth over the past two decades and the growth is projected to continue at a substantial rate through 2020. Out of Missouri's 114 counties, Lincoln County and Warren County ranked second and third respectively in terms of growth rate. Montgomery County ranked 75th in highest population change between the 2000 and 2010 Census. Through 2020, the Boonslick Region is projected to grow at an average rate of 20.7% per decade, which is over 3 times faster than that of the state. The growth of the region is due primarily to its proximity to the St. Louis metro area, low-cost housing, and low transportation costs. It should be noted that many of the people moving into the region are urbanites who desire to embrace nature along with homespun food and crafts such as offered by farmers' markets.

**Land Area and Population Density for Boonslick Region - 2010 Census**

Location	Land Area (square miles)	Population	Population Density (persons per square mile)
State of Missouri	68,885.9	5,988,927	87
Boonslick Region	1,599.3	97,315	61
Lincoln County	630.5	52,566	83
Montgomery County	537.5	12,236	23
Warren County	431.3	32,513	75

Source: 2010 Census Data Missouri (mo.gov)

## Population in Poverty

The poverty level for Montgomery County is higher than that of the state as a whole. The region has a higher percentage of seniors and lower median incomes compared to the state. In sum, the average resident is likely to be older and lower income than the average Missourian and

possibly vulnerable to poor nutrition due to affordability of healthful food. This demographic is likely to be consumers of food hub produce were a food hub available.

<b>Location</b>	<b>Population (2010 Census)</b>	<b>% Poverty All People</b>	<b>% Child Poverty Under 18</b>	<b>% Senior +65 Poverty</b>	<b>Medium Household Income</b>
Lincoln	52,566	13.6%	20.3%	5.1%	\$52,835
Montgomery	12,236	17.5%	23.6%	10.4%	\$40,236
Warren	32,513	13.4%	23.5%	7.7%	\$50,830
Missouri	<b>5,988,927</b>	<b>15.5%</b>	<b>21.6%</b>	<b>8.9%</b>	<b>\$47,380</b>

*Source: 2010 Census Data Missouri (mo.gov)*

## Regional Agricultural Industry

According to the USDA National Agriculture Statistics Service, 2012 Census of Agriculture, 64% of the total land area in the state is dedicated to farmland while farmland accounts for 68% of the total land area in Boonslick region. While livestock sales slightly outpace crop sales in the state, the reverse is sharply true in the Boonslick Region with crop sales accounting for 66% of the total market value of agricultural products there.

### Regional Agricultural Data

Area	Land in Farms (Acres)	Land Area (Acres)	Number of Farms	Average Farm Size (Acres)	Total Market Value of Agricultural Products	Average Sales per Farm	Market Value Crop Sales	Market Value Livestock Sales
Missouri	28,266,137	43,994,240	99,171	285	\$9,164,886	\$92,415	\$4,566,953	\$4,597,933
Lincoln	281,155	400,998	1,162	242	\$85,647	\$73,707	\$47,855	\$37,792
Montgomery	279,165	343,200	795	351	\$64,030	\$80,540	\$47,349	\$16,680
Warren	136,128	273,920	621	219	\$31,416	\$50,590	\$24,694	\$6,723

*Source: USDA National Agriculture Statistics Service, 2012 Census of Agriculture*

The chart below illustrates that the Boonslick Region remains largely an area of single family farms. Most of these farms currently produce grain crops for commercial food producers or for stock feed; however, these farms could readily be retooled for produce if demand warrants. It is interesting to note that both Lincoln and Warren Counties already have a presence of agricultural produce such as orchards and vegetables, the crops of which are sold directly to consumers.

## Regional Farms and Crops

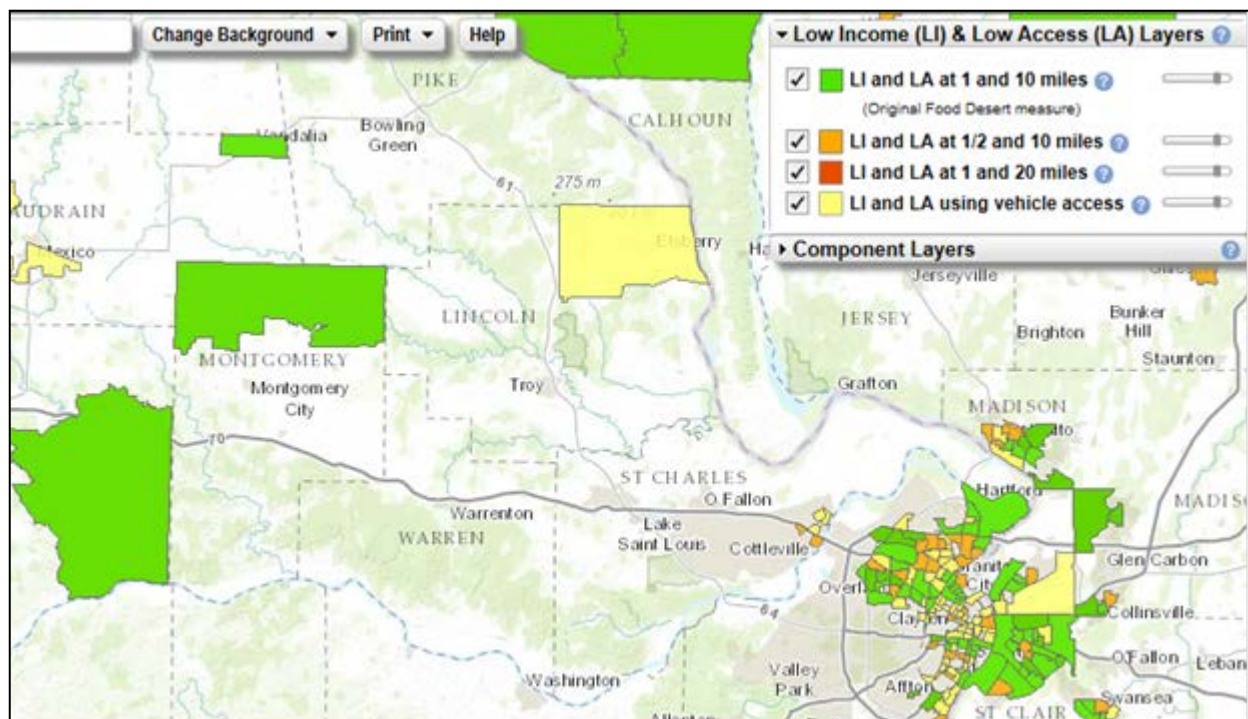
	Lincoln	Montgomery	Warren
The percentage of farms operated by a family or individual	88.66%	89.88%	88.06%
Average age of principal farm operators	56 years	54 years	56 years
Average number of cattle and calves per 100 acres of all land in farms	10.21	8.91	8.2
Milk cows as a percentage of all cattle and calves	3.64%	0.13%	1.19%
Corn for grain	40,049 harvested acres	45,990 harvested acres	17,517 harvested acres
All wheat for grain	10,168 harvested acres	9,422 harvested acres	2,869 harvested acres
Soybeans for beans	66,354 harvested acres	66,412 harvested acres	31,143 harvested acres
Vegetables	2 harvested acres	0	118 harvested acres
Land in orchards	135 acres	0	282 acres

*Source: City Data Website*

## Food Deserts

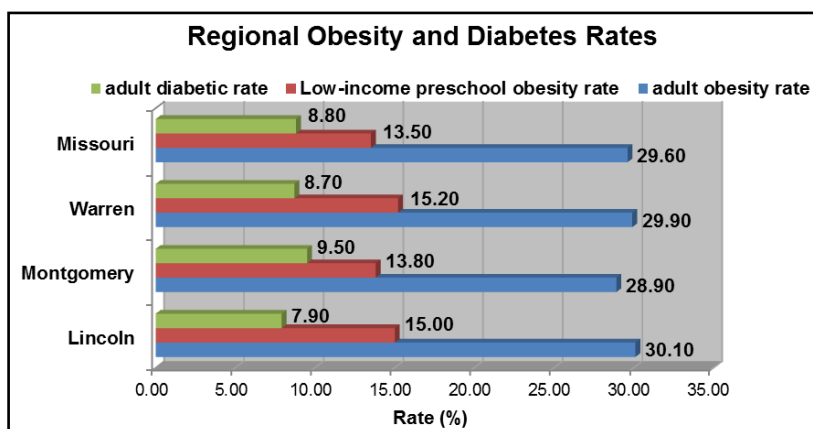
As per USDA, a food desert is defined as a low income census tract where a substantial number or share of residents has low access to a supermarket or large grocery store. Food deserts are accompanied by a high percentage of poor health outcomes, including diabetes, obesity and other issues.

Per the United States Department of Agriculture Economic Research Service (USDA ERS) mapping tool, there is one census tract in northern Montgomery County that fits the traditional definition of a food desert, that is, a census tract where a significant proportion of people live more than 10 miles away from a grocery store. There is one census tract in northeastern Lincoln County where a significant proportion of people don't have access to cars or live 20 miles away from the supermarket.



Food hubs can help to reduce the number of food deserts and help improve the health of local residents by improving access to fresh produce. Poor diets can result from insufficient access to high quality produce, often contributing to childhood obesity, diabetes, and other nutrition-related diseases. The adult diabetic rate is higher for Montgomery County than the state average and the adult obesity rate is higher for Lincoln County than the state average. In addition, low-income preschool obesity is higher than the state average in all three counties as represented below.

Source: County Health Rankings & Roadmaps



## Definition of Food Hub

Up to this point, the term Food Hub has been used in a rather generic manner; however, in the Boonslick region, no food hubs exist, so we are narrowing the definition around a concept embraced in our region, farmers markets and small agri-businesses. For the purpose of this study the following definition is employed.

*A food hub is a process that can be comprised of many factors. It helps in increasing market access for buyers and residents, adding value to the current food distribution for local producers, building infrastructure and systems to make local food accessible to consumers and to make larger markets accessible to farmers. In the Boonslick Region, farmers markets are small scale food hubs.*

However, the following definitions have been emerging in terms of marketing to sustainable food systems have been presented in other studies are offered below for consideration.

“Food hubs are businesses or organizations that actively manage the aggregation, distribution and marketing of source-identified food products. Food hubs also operate within their own expressed value sets, and these values guide any additional activities that a food hub may undertake.” (Source: Michigan State University Center for Regional Food Systems & The Wallace Center at Winrock International; Findings of the 2013 National Food Hub Survey)

“Food hubs also defined as Values Based Supply Chains, facilitate the aggregation, storage, processing, distribution, or marketing of differentiated agricultural and food products, particularly from small and midsized farmers and ranchers.” (Source: Indiana Farms, Indiana Foods, Indiana Success: Central Indiana Food Hub Feasibility Study)

“A facility that centralizes the business management structure to facilitate the aggregation, storage, processing, distribution, and/or marketing of locally/regionally produced food products.” (Source: Southern Wisconsin Food Hub Feasibility Study)

“A regional food hub is a business or organization that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional



producers to strengthen their ability to satisfy wholesale, retail, and institutional demand.”  
(Source: *United States Department of Agriculture USDA*)

## Farmers Markets in the Boonslick Region

The trend toward organically raised food (see definition in Appendix A) continues to gain momentum and nowhere is that more evident locally than in the farming methods practiced in the urbanized portions of our three county area. This section is based on the buyer attitudes and trends compiled through interviews with growers and information provided through the Elsberry Democrat and St. Louis Post-Dispatch.

According to the Elsberry Democrat, this east central part of Missouri has been moving in the direction of organic food production for many years with many residents demanding organic foods from their grocers. Today, we are involved in a “revolution” with more and more families producing their own foods for a variety of reasons, including taste, health, and environmental factors. There are many residents in our region who have converted their land to raising their own food needs with the remainder of their produce sold at the local farmers markets.

In an effort to provide their families with healthful foods with no insecticides or unknown chemicals used to grow them, families have introduced the notion of growing their own foods. These families do not always raise all their food needs but raise what they know will grow in the Missouri soil and climate, and partner with others who are like-minded for products that grow better outside of their home region.



Another aspect is that residents today demand to know from where their food products come. It is of paramount importance to many residents who are increasingly concerned about their health and all its contributing factors. Savvy consumers know that the food they put into their mouths will certainly have a large effect on how long they may live and how

healthy they will be. That consideration is a driving factor for producers and accounts for why so much pride is taken in selling products that are free of chemicals. For our producers, it is all about making the world a better place to live.

The needs, demands, and benefits listed above have spawned a number of home delivery services and farmers markets within the Boonslick Region. Each of the three farmers markets operates on various schedules throughout the growing season; some are open twice a week while others are open on just Saturdays.



According to interviews with producers, there are about six of small farm operations that provide home delivery to residents of St. Charles and St. Louis counties each week and each operates on a different delivery cycle. In the Boonslick Region, farmers markets tend to serve the community within a 10 mile radius from the traditional hometown market place. Based on empirical

research, the inventory of potential suppliers and farmers markets in the Boonslick Region is attached in the appendix section.

## Impact on the Current Food Distribution System

The ultimate goal of a potential food hub will be to increase market access and add value to the current food distribution system for local producers. This study looked at three major factors that could help determine if a food hub would be feasible for the region; concern for the environment, affect on the economy, and impact to society. According to those producers interviewed, the following findings surfaced.

- Environmental concerns are not an issue in Boonslick region when considering that many of the farmer / homeowner producers grow their product with only the help of mother nature. Most of the people involved in growing home-grown products do it with the utmost of care in seed and plant selection, culling of livestock brought onsite, and the overall concern they put into their land with recognized soil conversation methods and weed control. The fact that the produce is direct from the garden to the market, without the addition of preservatives required for transportation and storage, and without being subjected to extreme weather conditions during transportation, ensures the best possible taste and nutrition.
- Economic impact effects positively for the communities because it brings customers to the farmers market. Those shoppers that support the markets tend to shop other businesses in the community while in town. In metropolitan areas, many customers plan their shopping trips to revolve around the farmers markets where the day starts earlier because the best produce is bought early and the variety is at its peak. In the Boonslick region, farmers markets tend to set their hours of operation at the end of the day to accommodate commuters.
- Social impact is crucial in the farmers market culture. According to the Elsberry Democrat, friends and neighbors meet, share a cup of coffee, talk over the news of the day and move on about their business. In our three-county region seeing friends and family is part of our Midwestern culture and dates back to the people that settled this area several centuries ago.

## Potential Suppliers and Consumers in the Boonslick Region

Whether it's to provide a space for the community to gather, to bring fresh foods to areas in need, or for strictly commercial reasons, an increased number of Missourians are forming farmers markets. Anecdotal information regarding farmers markets and regional food fads and trends was analyzed from interviews with producers, buyers, and from published articles in the Elsberry Democrat and the St. Louis Post-Dispatch.

It has been identified in the 2015 AgriMissouri Farmers' Market Handbook that "In 2015, Missouri saw the number of farmers' markets in the state grow to more than 300, making Missouri one of the top states for farmers' markets in the nation." The Handbook goes on to state, "Farmers markets provide positive economic activity in themselves as well as hyper-stimulate activity for the traditional businesses that surround them. They create jobs, stimulate the local economy and promote entire communities. Business activities contribute to;

- a. An increase in traffic to local businesses and economic activity by as much as 60 percent on days the market is open.
- b. Creation of twice as many jobs per square foot as traditional retail space.
- c. An 80 percent increase in economic impact compared to traditional sales, which is returned directly to the community.
- d. Incubation of new, high-growth agriculture-based businesses."

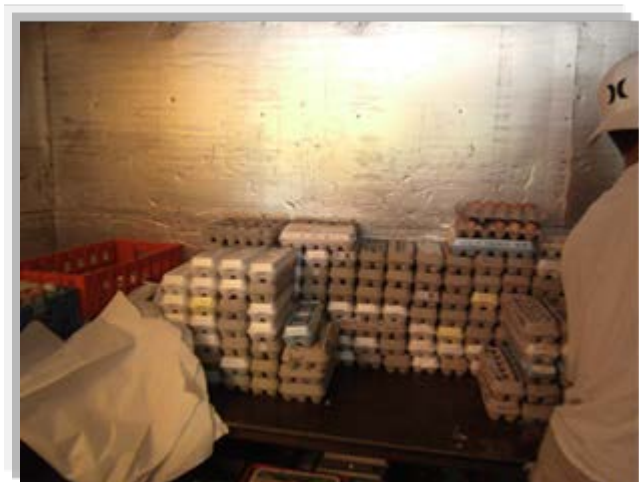
Farmers markets serve as incubators to hundreds of new agriculture businesses each year. According to the data provided by the U.S. 2010 Census and the United States Department of Agriculture, Missouri farmers grow more than \$8 billion worth of food destined for the dinner table each year. That is twice the \$4 billion Missourians spend on food at groceries. However, less than \$500 million (12%) of that \$4 billion is going to Missouri farmers. The gap represents \$3.5 billion leaving the local and state economy in our food production chains. Farmers markets are one of the most direct and fruitful ways to use money Missourians already spend to grow local communities.

Making the consumer aware of the farmers market is the key to the producer's success. The key to understanding farmers markets is recognizing that they are not things, but rather people-centric activities. They are a gathering of individuals, businesses and organizations (vendors)

coming together to promote and sell agriculture products to consumers through a common venue. The farmers market is the business organization managing the gathering and the activities they perform. The vendors and consumers are participating in that activity and each has a role to make it successful. However, vendors and consumers do not become the market by participation, and the market does not become a consumer or vendor. The roles are not interchangeable. To be successful, each party must carry its load. The vendors have responsibilities regarding the business they conduct and the market has responsibilities regarding the gathering and marketing of the farmers market.

According to the AgriMissouri Handbook, there are two keys to successful farmers market planning; include the right people and ask the right questions. For successful markets, the parties know why they are organizing, who is going to sell at the market, and who will be buying. The more stakeholders involved and the more deliberative the planning, the more likely the market will be successful. A deliberate, focused evaluation process is the first step to ensure the market is properly planned and addresses stakeholder expectations.

Most of the farmers markets are open March through November selling their home-grown produce. The majority of farmers markets are producer-only markets; meaning everything must be grown, raised, baked, created, or crafted by the vendor. You can expect to find everything from fresh local produce, including fruits and vegetables, eggs, local honey, meat, and baked goods, to locally produced crafts.



The majority of vendors go out of their way to grow the finest produce possible. Planning this year for next year is critical to the success of the producer. The significant obstacles identified in Boonslick Region are:

- Grocery stores cannot be relied upon to purchase the products from the local farmer unless that producer can supply the supermarket with a supply of product over the summer selling season. When the farmers market has fresh produce available is when fresh produce sales at groceries typically fall off. This drop in demand at grocery stores is due in part to the farmers markets as well as home-grown produce. However, groceries still have a need for a small quantity of local produce to fill the gap between what farmers markets cannot supply.
- Most schools have contracts for food service from outside vendors who provide large quantities of food on a reliable basis. Unfortunately, when farmers markets are at their peak, schools are out of session.
- There is just one hospital in our three-county area and it, along with other nearby hospitals, nursing homes, and senior centers, have food service arrangements as well.
- Individual consumers are uncertain what is available, where, and at what time, making a Marketing and Communications plan essential.

## Existing Resources

There are several resources available for the producers / farmers in the region. The most prominent resource is the AgriMissouri website, (<http://agrimissouri.com/>). AgriMissouri is an outreach program through the Missouri Department of Agriculture that promotes Missouri-grown and Missouri-made items, representing food and non-food products, retailers, farmer's markets, agri-tourism and agricultural experience destinations. AgriMissouri helps members thorough collective marketing and promotions and offers training & educational opportunities to help grow successful businesses.



Another resource is through the University of Missouri Extension Center in each of Boonslick's three counties. The Extension Center offers the "Growing Your Farm" program (<http://extension.missouri.edu/growyourfarm/>) designed for prospective farmers, beginners with some experience, and seasoned farmers who want to make a new beginning with alternative methods. Any of the Extension Centers can put together training sessions depending on the needs of the farmers in each respective county.

Across the state, horticulture specialists offer single training events for the technical part of production. There are field days at the New Franklin horticulture research center (<http://harc.cafnr.org/>) on various topics including orchards, chestnuts, tree fruits, and other horticulture crops.

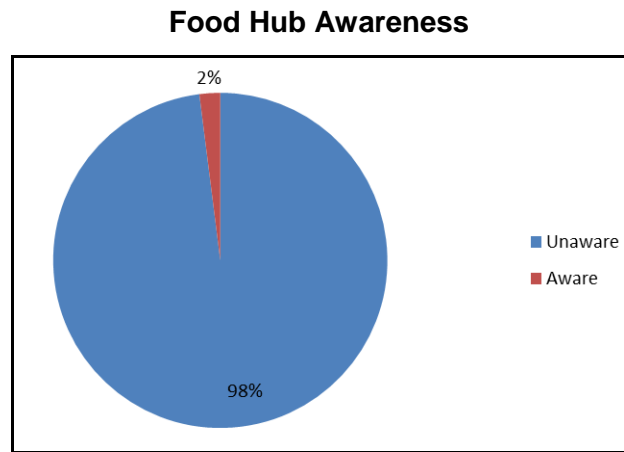
The Lincoln University offers Innovative Small Farmer's Outreach Program (<http://www.lincolnu.edu/web/programs-and-projects/innovative-small-farmers-outreach-program>) and had offered workshops in the past on community gardening, composting, goat farming, vegetable grafting, pastured poultry, and high tunnels.

The subscription to AgriMissouri and collective marketing, promotions & training and educational opportunities incur a reasonable cost and the farmers markets/producers/growers have shown interest to participate in the training sessions if they become available.

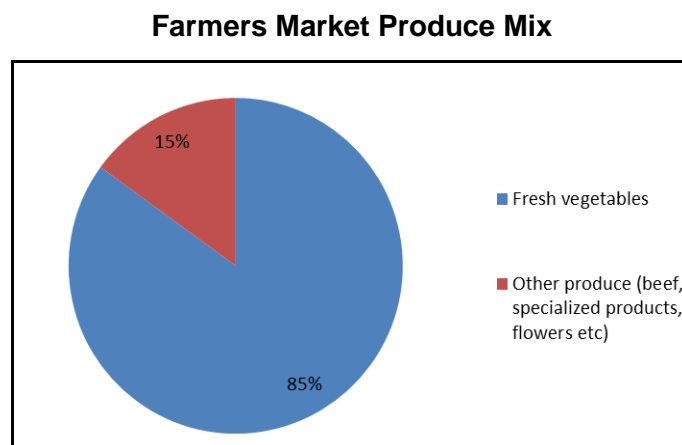


## Survey Findings & SWOC

Boonslick staff reached out to more than 75 growers and producers in the region to obtain input for the survey (See Appendix A). Some of these growers have been in business dating back to the 1800s, while others have just begun. Ninety-eight percent were not aware of what a Food Hub is; however, most said they understood the concept and the opportunities it could provide in communications and sales through combining common resources. Eighty percent said they were interested in becoming part of a food hub.

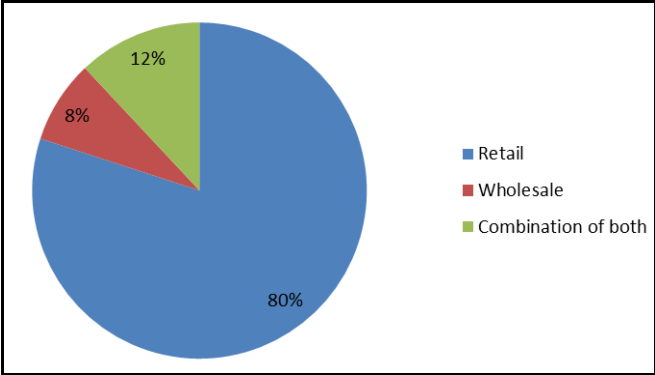


Eighty-five percent of those surveyed indicated they currently produce and sell fresh vegetables while 15% produce and sell other products, from beef to flowers, to crafts. Almost all growers surveyed distribute their produce under permanent pavilions constructed for that purpose, and from under tents along the roadside or in public areas such as parking lots.



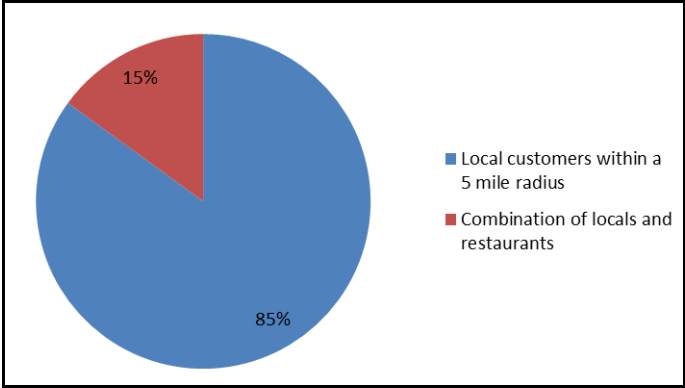
Respondents indicated that 80% of their sales is to retail customers. Eight percent of their sales are wholesale. Twelve percent are a combination of both retail and wholesale.

**Farmers Market Customers**



By far the largest number of customers are located within a 5 mile radius of the farmers markets and are comprised mostly of retail sales. Another 15% of sales are attributed to a combination of retail and restaurant sales.

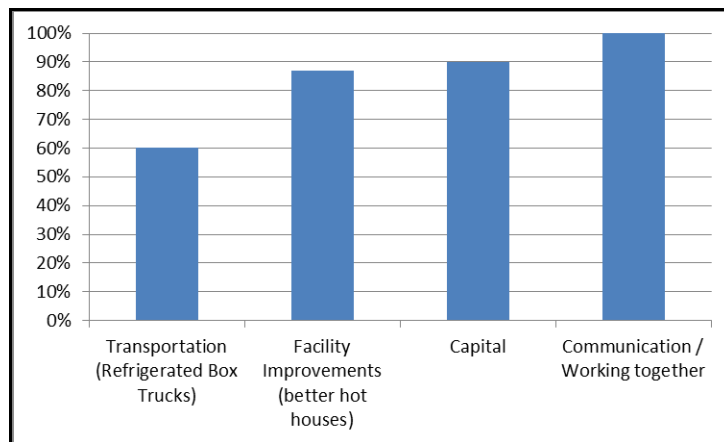
**Farmers Market Customer Mix**



The respondents are split equally between those with short term storage capacity and those that plant, grow, and harvest for just in time delivery to customers.

Growers are interested in expansion opportunities, although many feel there is not enough demand to warrant expansion. Assuming there were enough demand, other barriers would still exist, such as transportation, communications, facility improvements, and availability of capital.

### Barriers for Expansion



Short to Mid-term expansion would likely be to restaurants and grocers directly to the east of the Boonslick region, specifically, St. Charles and St. Louis Counties. Most respondents indicated they have sufficient acreage to support the expansion.

Fifteen restaurants and 5 grocers were also interviewed for this project. Sixty percent of the grocers and 40% of the restaurants responding stated they would be interested in purchasing vegetables such as tomatoes, corn, peppers, cucumbers, and other salad ingredients from a food hub or farmers market provided price, quality and demand could be met.

Boonslick believes these results indicate a significant interest in buying produce through a food hub because there was interest expressed in supply and demand of produce. This is important because a high level of buyer interest and participation is necessary to food hub feasibility.

### Regional Strengths, Weaknesses, Opportunities, and Challenges (SWOC)

Strengths	Weaknesses	Opportunities	Challenges
Geographic location	Communications between producers	Agricultural entrepreneurship	Create public awareness
Transportation Infrastructure	Lack of Organizational Structure	Obtain additional commercial contracts	Develop long term commercial contracts
Successful farmers markets	Lack of commercial demand/contracts	Create additional demand	Serve food deserts
Successful home delivery	Unhealthful eating habits	Instill pride in locally grown products	Work together
Agriculture based economy	Cost of healthful foods	Educate public on healthful eating and cooking	Encourage local restaurants and grocers to prepare and sell locally grown foods
Plentiful water supply	Communications with general public	Facilitate partnerships between producers and consumers	Communication with general public
Numerous family farms	Inventory control	Create and implement communication plan	
Multiple food deserts	No proper planning	Dining Club farm to table	
Savvy consumers	Consistency of procedures	Offer farm and garden tours	
Willingness to work together		Improve variety and quality	
Pride in products		Communicate	
Demand for organic foods		Service Food Deserts (delivery)	
Benefit to local economy		Work together	
Greater variety			

Survey respondents soundly embrace the farmers market concept and expressed a sincere willingness to work together to improve cooperative enterprise, communications and marketing efforts. Successful implementation of the food hub / farmers market concept may indeed kindle enthusiasm for warehousing and wholesaling strategies. Survey respondents are not enthusiastic about warehousing and wholesaling produce on a large scale; however, existing farmers market venues in each county could likely host a start-up food hub warehouse with minimal additional cost.

## Recommendations

According to accepted practice, the first step in the process of establishing a food hub is to create a list of each stakeholder's goals. The goals may include community building, growing businesses, increasing food access and promoting the community. Successful markets have the right pairing between items consumers want and products vendors have to sell. This list may change over time but it is best to start the conversation early, as these decisions will guide the rest of the planning process. Vendors may need to plan a year or more in advance for some crops to be available, so it is best to get this information out early. Items may have different handling and display requirements, which can greatly affect the use of market space.

The following opportunities have been identified from the survey responses.

- Educate consumers about eating healthfully, locally and seasonally.
- Facilitate partnerships between producers and consumers.
- Make educational opportunities available to food producers and local food consumers.
- Offer event space for farm to table suppers and monthly potluck dinners.
- Host cooking classes as well as other healthful lifestyle classes.
- Offer space for a farmers market.
- Establish a demonstration garden.
- Schedule farm tours and mentorships.
- Establish an informational web site to promote the above mentioned events. Include weekly menus for local eating from our local farmers market with recipes.
- Start a dining club with monthly farm to table feasts and entertainment.
- Bring in the farmers from the area to learn benefits to participation in our farmers market.
- Continue sustainability while stressing our farmers market is "economically, socially and environmentally sound.
- Develop a Web site that lists what the producers will be selling each week.
- Develop brochures and pamphlets telling the story of the farmers market and educating the consumers on background and experience the producers may have.
- Submit articles to the local newspaper showing locations and types of vendors.
- Reach out to businesses that will place free ads within their ads to assist farmers markets.

## **Conclusion**

This pre-feasibility study was undertaken to determine if a regional food hub could benefit our region. Following months of study and dozens of first-hand interviews with growers, vendors, and consumers, the study concludes that food hubs certainly could benefit the region by serving the unmet needs for fresh, widely-available home-grown produce, meats, and other related foods demanded by our health conscious residents. Three full-scale farmers markets operate in our region, as do over 75 producers, some of which offer home food delivery services. Each of these agri-businesses are successful on a small scale.

The single most-expressed concern among our respondents was for better communication between growers, vendors, and consumers. A network of growers and vendors must be established so that a sustainable supply chain and revenue stream can be created; and more over, the consortium of growers and vendors must reach out to the general public to promote what they offer. There is opportunity to expand locally grown food in the Boonslick Region. Agri-business needs it, consumers want it, and because nutritious foods are not available in some areas of our region, the health of our residents demands it.

## **Proposed Next Steps**

A natural progression of this feasibility study is our proposed “The Best is Grown Here; Marketing Local Agri-Business Locally” project application currently under consideration by the Agricultural Marketing Service (Farmers’ Market and Local Food Promotion Program). The goal of this project will be to establish a regional culture that supports buying locally produced foods because “The Best is Grown Here”. The study concludes this to be possible due to the willingness of regional agri-businesses to cross-promote themselves. Data collected from this study will form the basis of a future effort to leverage the synergies of all related agriculture supply chain links to promote local foods locally, and to the benefit of all.

The Lincoln County Health Department is also studying the feasibility of a program designed to provide delivery of nutritious foods directly to homes of underserved citizens and significant proportion of people who don’t have access to cars or live 20 miles away from the supermarket.

Additionally, it is possible that allied agri-businesses will develop a self-sustaining, unified marketing and communications plan and related collateral materials. Potential long-term

outcomes from this consortium may include expanded marketing efforts, food hubs (including warehousing and wholesaling efforts), and additional agriculture products.

# Appendix A

## Boonslick Region: List of producers/growers

Name of the producer/contact person	City	List of products/Specialty products
Kalani Sexton	Bellflower	Produce
Sugar creek Piedmontese	Elsberry	Specialized Italian Beef
New Hope Homestead	Elsberry	Produce
Forrest Keeling Nursery	Elsberry	Wholesale nursery
Hidden Valley Homestead	Foley	Produce
Natural Acres	Foley	Produce
Maria Hahn Farms	Foley	Meat, Produce
Pilgrim's Acres, LLC	Foristell	Produce
T.L. Baumann LLC	Foristell	Produce
Prairie Wind Farm	Hawk Point	Produce, Dairy
Davis Family Farms	Hawk Point	Dairy
Jake Moore Farms	Hawk Point	Produce, Meat
Simple Life Farms LLC	Hawk Point	Produce
Seven Cedars Farm	Jonesburg	Produce
Davis Meat Processing LLC	Jonesburg	Beef, Pork, Poultry
Linda Jacquin	Marthasville	Produce
Tim Diermann	Marthasville	Produce
Thierbach Orchards & Berry Farm	Marthasville	Fruits, Berries
Deutsch Country Days aka Luxenhaus Farm German Heritage Foundation	Marthasville	German foods
Three Girls and a Tractor	Marthasville	Beef
Cindy Gladden	Marthasville	Produce
Kluesner Swine Division	Marthasville	Hog
McKittrick Farmers Mercantile	McKittrick	Fruits, Vegetables
Utterback Farms	Middletown	Beef, Pork
Lakeview Farm	Middletown	Meat, Vegetables
Gresyson Organics	Montgomery City	Produce
Karpinski-Hill Farm	Montgomery City	Produce
God's Green Acres	Moscow Mills	Produce
Bluebird Bounty	Moscow Mills	Produce
Brenda Van Booven	Rhineland	Produce
Dry Dock Farm	Silex	Eggs, Poultry, Produce
Stone Creek Farm	Silex	Produce
Golden L Creamery	Silex	Dairy products



<b>Name of the producer/contact person</b>	<b>City</b>	<b>List of products/Specialty products</b>
Rutherford, Lindell & Desiree Farmers	Silex	Meat, Produce
Price Poultry	Silex	Poultry
East Central MO FM	Silex	Meat, Produce
Emily's Produce & Plants	Silex	Produce
Gooding Produce	Silex	Vegetables
Lavy Dairy Farm	Silex	Dairy products
Jack Sullivan	Silex	Honey producer
Steve Twellman	Silex	Eggs
Kent and Peggy Hufty (greenhouse)	Silex	Produce
Bernard Schlote	Silex	Produce
Eric Twellman (pumpkins & gourds)	Silex	Pumpkins & gourds
Pat Fogarty (greenhouse)	Silex	Produce
MKS Homestead Farm	Troy	Produce
Shared Bounty CSA, Troy	Troy	Produce, Meat
Mossy Creek Farm Cut Flowers	Troy	Flowers
Promise Land Farm	Troy	Produce
The Price Family Farm	Troy	Produce, Meat
Back Pasture Farms	Troy	Produce, Meat
River Hills Farmers Markets	Troy	Fruits, Vegetables
Polk's Food	Troy	Produce
Cuivre River Farmer's Market	Troy	Meat, Produce, Fruits, Honey, Crafts
Whispering Spirit Farms	Truxton	Produce
Lee Farms	Truxton	Meat, Produce
Innsbrook Country Market	Village of Innsbrook	Produce, Fruits
Yellow Dog Farms	Warrenton	Meat, Produce
Fleur de Lis Florist	Warrenton	Fruits, Flowers
McCann Forest Farm / Valley View Farm	Warrenton	Beef, Produce
Missouri Grass-Fed Meats	Warrenton	Beef
Farmer Girl Meats	Warrenton	Beef
South Prairie Farms	Warrenton	Beef, Pork
Carl Saunders	Warrenton	Produce
Robinson Farms	Wellsville	Poultry, Produce
Brennan Farm	Wellsville	Produce
Crooked Lane Farm	Wellsville	Produce
No Reins	Winfield	Produce
Integrity Farm CSA, Winfield	Winfield	Meat, Produce
Honey Hive Farms	Winfield	Honey
Ordelheide Farms	Wright City	Beef, Pork
Long Row Lavender Farm	Wright City	Flowers, Vegetables

<b>Name of the producer/contact person</b>	<b>City</b>	<b>List of products/Specialty products</b>
Reckamp Farms	Wright City	Produce
Randy Lewis	Wright City	Produce
Warren County Farmers & Artisans Market	Warrenton & Wright City	Meat, Produce, Vegetables, Honey, Crafts

**Boonslick Region: List of Supermarkets and Restaurants with Potential Interest**

<b>Name</b>	<b>City</b>
Two Dudes BBQ	Warrenton
Breswkies	Warrenton
Holly's Cafe	Warrenton
Hide Out Bar and Grill	Warrenton
Moser Foods	Warrenton
China King Restaurant	Montgomery City
Dry Dock Bar and Grill	Montgomery City
Olivers	Montgomery City
Pit Stop Bar and Grill	Montgomery City
Frumpy Joe's	Jonesburg
Bratcher's Market	Montgomery City
Loutre Market	Hermann
Bernie's Pizza	Elsberry
Cadillac Bill's	Elsberry
Chubby's Restaurant	Moscow Mills
Green Pepper LLC	Troy
Krumbly Burger	Troy
Harry J's Steakhouse	Moscow Mills
Elsberry I.G. A	Elsberry
Moscow Grocery	Moscow Mills

## **Definition of Organically Grown Foods**

Organic food is produced by farmers who emphasize the use of renewable resources and the conservation of soil and water to enhance environmental quality for future generations. Organic meat, poultry, eggs, and dairy products come from animals that are given no antibiotics or growth hormones. Organic food is produced without using most conventional pesticides; fertilizers made with synthetic ingredients or sewage sludge; bioengineering; or ionizing radiation. Before a product can be labeled 'organic,' a Government-approved certifier inspects the farm where the food is grown to make sure the farmer is following all the rules necessary to meet USDA organic standards. Companies that handle or process organic food before it gets to your local supermarket or restaurant must be certified, too." **Source: *Consumer Brochure, USDA National Organic Program*, <http://www.ams.usda.gov/nop/Consumers/brochure.html>**