

## HARDESTY RENAISSANCE PLANNING AND FEASIBILITY STUDY 5

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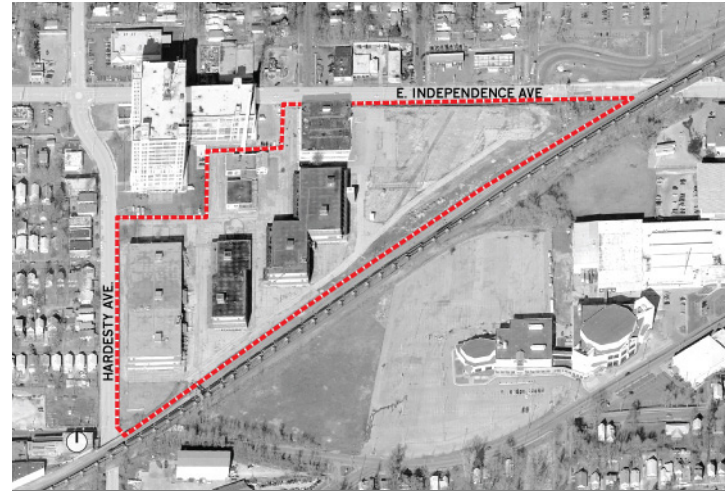
**Prepared By:**

John Burns, Jack & Jake's, Inc.

Jonathon Leit, Alembic Community Development

Development Initiatives, Inc.

## 5.1 CONTEXT



Jack & Jake's, Inc., Alembic Community Development and Development Initiatives Inc. contracted with el dorado, inc in May 2013 to conduct a feasibility study for siting a food hub on the former federal complex located at Hardesty and Independence Avenues in the Historic Northeast area of Kansas City, Missouri. The site is owned by the Hardesty Renaissance Economic Development Corporation (HREDC), which acquired the site in fall 2011 and is currently in predevelopment on the rehabilitation of the first building – Building 11 – to be developed on the property.

Jack & Jake's, Inc. (Jack & Jake's) is a regional food hub operating in New Orleans, Louisiana that aggregates and provides a reliable supply of fresh food products at an affordable price to customers including public schools, large institutions, such as national food service companies operating in New Orleans and Baton Rouge, retail markets, and restaurants in New Orleans and Baton Rouge. It has built a network of more than 200 local farmers and fishers located within an average of 65 miles of New Orleans. Jack & Jake's aggregates fresh food from regional producers and then packs and delivers to its customers. The company has partnered with Alembic to open its initial retail location in Central City, New Orleans.

Alembic Community Development (Alembic) makes long-term commitments to partnerships and investments in underserved neighborhoods through real estate development, organizational capacity building and community-based planning initiatives. Alembic provides a continuum of services, from organizational planning to program conceptualization to real estate finance and construction management. Through its offices in New York and New Orleans, Alembic develops affordable and supportive housing as well as community and commercial space. Alembic has particular experience partnering with mission-driven organizations on community based revitalization projects, including assessing neighborhoods' affordable housing needs and organizations' development capacity, designing projects within mission and capacity, securing financing, and implementing affordable housing, commercial, and community facility developments from inception through construction.



Development Initiatives, Inc. (DI) provides development process, community planning, real estate brokerage, and economic development incentive services to both public and private sector clients. Development Initiatives is a collaboration of Kansas City based professionals whose experience and education in real estate, community planning and economic development provides a holistic approach to the planning and development processes. DI offers a myriad of services ranging from urban planning for municipalities; to real estate brokerage for developers; to economic incentives for the redevelopment of brownfield sites. The firm's principals are accredited with the American Institute of Certified Planners (AICP) and are active members of the American Planning Association, Certified Commercial Investment Member (CCIM) and the Urban Land Institute (ULI). Additionally, the partners are associate members of the US Green Building Council (USGBC), the Missouri Economic Development Financing Association (MEDFA) and numerous local philanthropic, civic and arts minded organizations.

The overall objective for Alembic and John Burns, CEO Jack & Jake's (the Consultants') work was to determine the potential market for, and financial feasibility of, siting a food hub in Building 11 of the Hardesty site that would receive, aggregate, process, and distribute fresh, local produce. Specifically, the Consultants were charged with analyzing the following:

- Determine, quantify, and value the food production sites that can provide sustained supply to a food hub facility.
- Identify potential competitors / providers currently serving the Kansas City market.
- Determine, quantify and value new, underserved or sustainable markets that could be wholesale customers of the food hub.
- Determine feasibility of a retail operation based on defined trade areas and potential customer base.
- Determine operational structure of a food hub as wholesale, retail, or both, as well as business structure (for-profit or non-profit).

The Consultants' work has built on an initial study conducted by the Port Authority of Kansas City for HREDC. This study

investigated the environmental remediation of the Hardesty site and conducted an initial feasibility analysis for a food hub facility.

The Consultants utilized a methodology that focused on assessing existing conditions and identifying gaps in the existing food system in order to determine an appropriate use and role for the Hardesty site. This work included:

- Conducting site visits to Kansas City.
- Conducting semi-structured interviews in-person and via telephone with stakeholders, including the Missouri Department of Agriculture and Northwest Missouri State University.
- Touring area food producers, local auction houses, wholesale distributors, grocery stores, and ethnic food markets.
- Working with Development Initiatives, a Kansas City-based market analysis firm, to understand and analyze market data for trade areas of the development site.

In addition, through the course of this work, the Consultants networked with a parallel feasibility analysis being conducted in Kansas City. This effort is led by the Greater Kansas City Food Policy Coalition, an initiative of KC Healthy Kids, and is analyzing regional producers, area institutions, and existing distribution systems to identify gaps that could be filled through regional food hub infrastructure.







## 5.2 FOOD HUB WHOLESALE & RETAIL EXECUTIVE SUMMARY



The Hardesty Renaissance site off Independence Avenue in Historic Northeast Kansas City, Missouri is an 18-acre, former federal complex comprised of six buildings totaling 572,000 square feet. The property is a brownfield and has been out of commerce since the federal government last occupied the site in the early 1980s. The Hardesty Renaissance Economic Development Corporation (HREDC), the site owner and developer, has selected Building 11, which fronts Hardesty Avenue, as the initial building for redevelopment. Building 11 is a two-story structure, with a basement, totaling 210,000 square feet.

The objective of this study has been to determine the feasibility of siting a produce-focused food hub and food-related retail uses in a rehabilitated Building 11. Towards this goal, the Consultants – John Burns, CEO Jack & Jake’s, Inc. and Jonathan Leit of Alembic Community Development, along with Development Initiatives, Inc. – have conducted analyses of existing conditions and gaps in the infrastructure of the regional food economy as well as existing retail food stores in proximity of the Hardesty site.

Identifying fresh food resources available in the area for aggregation, wholesale, and/or processing is the first step necessary to evaluate the feasibility of the project site as a food hub. Without the infrastructure and existing producers necessary to provide product, the project site is without a local supply line. Identifying the products that are produced in large and small quantities is also critical to ascertaining whether the food hub can get off the ground in the early stages of its operation. The Consultants’ analysis of the potential food hub operation can be summarized as follows:

- There is strong demand for regionally produced food in the Greater Kansas City region, but a limited supply and diversity of fruits and vegetables, with only a few products available at scale: peaches, watermelons, apples.
- The few producers that do exist already are moving product direct or through established distributors. Thus, a new entity would need to work with producers to increase capacity and supply, an effort already undertaken by established distributors.



(Source: Josh Frederick, KU Studio 812)



- Existing distributors have capacity – staff, fleets of trucks and large facilities – and have already undertaken value added products, and so a new facility would face significant competition to taking market share from existing operators.
- Certain large producers are already doing direct wholesale and retail sales, and so a new facility would compete with these entities.
- Currently there is limited capacity within a few existing facilities that provide meat processing for local producers. No IQF operations in the area are currently processing local products for the Kansas City market. Availability of product that is less than ideal for fresh produce distribution is available and existing distributors would have interest in partnerships for these uses.
- A community-led effort to develop aggregation points in rural areas close to production sites is already underway. Although there is potential to develop an aggregation point for Kansas City based producers, these producers currently sell direct, and despite the recent growth of urban agriculture initiatives, production within the city remains at a relatively low volume. The supply of urban agriculture remains low in volume and diversity, and is already accounted for by direct sales and existing wholesale companies.

This analysis has yielded the conclusion that a produce-oriented food hub would not fill a need in the Greater Kansas City food system at this time. Food production in the Kansas City regional system is relatively limited and remains heavily rural-based, and several established wholesale entities already service these producers. In addition, planning is underway to site additional aggregation points near these rural production areas. While urban agriculture is growing in Kansas City, the scale of these enterprises would not currently support a food hub operation at the Hardesty site.

However, major gaps in the regional food system do exist, and primarily involve the processing of meat and fruit products

that are grown at scale. Watermelon, grape, apple and peach are produced in quantity in Missouri and may provide product available to the hub without facilitating contracts with growers to produce additional product for wholesale or processing into value added products. Rice and potatoes are also grown at high volume in Missouri, but because of national and global competition on price point, a local food hub would have difficulty creating a niche with these products. Missouri is a leader in cattle production in the U.S., but does not have the necessary processing facilities to provide local product to in-state customers at volume. One of the few segments of the livestock production that is growing includes goat, sheep, swine and the culture of tilapia (i.e., freshwater perch). Costs for processing smaller animals and fish are reduced when compared to larger animals such as slaughtering cows or swine and poultry at large volume. Swine and poultry are mass produced and vertically integrated in a manner that makes price points extremely difficult for local producers who sell direct.

Specifically, the Consultants have identified the following opportunities to fill gaps in the regional food economy:

- Aggregation and processing of livestock (e.g., goats, sheep, swine, and cattle) for distribution to regional customers. Small livestock (goats, sheep and hogs) are available locally, represent a growing component of overall livestock production in northern Missouri, and are in high demand.
- Individually Quick Frozen (IQF) and Value-Added processing for fruit and, eventually, vegetables to be moved into schools and other institutions during the growing off-season. Most local products are produced in the late spring and summer months when schools are closed. Providing processing facilities for seasonally available local fresh products could increase the amount of local product in local institutions and help provide a more consistent supply during the winter months. Opportunities also exist for partnering with area produce companies who aggregate local products and need outlets for non-conforming or lightly damaged fruit and other products. IQF of fresh produce or the production of value-added products via



bottling and canning of local foods would fill gaps in the existing local food economy infrastructure. Although refrigeration and other processing services exist individually in the area, facilities that can accommodate aggregation, storage, and processing of local fresh food products in the same area are limited. No known entity in the Kansas City metropolitan area is currently processing local fresh food products by IQF methods for the Kansas City market.

- Aquaculture, the production of aquatic animals and plants under controlled conditions for all or parts of their lifecycles, is on the rise because restrictions on the wild harvest of many seafood species may diminish wild harvest seafood supplies. During the last two decades, the value of U.S. aquaculture production rose to nearly \$1 billion. In addition to catfish and trout production in the state, tilapia is becoming an important aquaculture product given the increasing demand for this product in the U.S. Over 503 million lbs of tilapia were imported into the U.S. in 2012 (USDA ERS Data). The Hardesty site condition and the limited restrictions for processing fish make the culture of freshwater fish an attractive opportunity. In addition, caviar has been an important product produced in Missouri.

Meanwhile, the Consultants also assessed gaps in the food retail market area surrounding the Hardesty site. The Historic Northeast area currently has a number of accessible and affordable grocery stores, including the Price Chopper, Mi Mercado, and multiple locally-managed ethnic food stores. These stores offer a very reasonable amount of healthy food options, many of which are priced affordably for the local population. In particular, the small ethnic food stores appear to serve well the diverse local population. Given this competitive environment, the Consultants would not anticipate that a conventional retail operation entering the marketplace at the Hardesty site would successfully take market share from existing operators.

However, the identified market trade areas include opportunities for serving a mix of ethnicities, as both are populated by diverse groups with varying levels of expendable incomes.

Both market areas were identified as having stronger than average connections to both pedestrian and automobile/mass transit users who would access the Hardesty site and the surrounding neighborhoods. Both areas are also currently being studied for the future implementation of the Kansas City Street Car Line, which is anticipated to add an even greater connection to the Kansas City Metropolitan Statistical Area within a ten-year period.

Thus, the Consultants have identified that a community-focused, niche retail food offering providing prepared foods – i.e. food trucks – is likely to be successful in attracting population to the site and building a customer base. Building upon city-wide events such as “First Fridays” and a burgeoning food truck scene, the Hardesty site can play host to neighborhood-appropriate mobile food vendors and artists. Driving residents to the site at regular intervals through these events would achieve multiple community impact objectives, including promoting the multicultural diversity of Kansas City neighborhoods, particularly the Historic Northeast; contributing to the revitalization of Independence Avenue by making the Hardesty site an attraction; and supporting burgeoning small business enterprises such as food truck operators and cultural artists.

In the long-term, these events could build towards creating a permanent Food Truck Port that would support the industry and create additional opportunities for food retail and community building at the Hardesty site. A Food Truck Port would support food truck operators with a dock to obtain supplies, local fresh food products, fuel, refrigerated and freezer storage space, and access to a commercial grade production kitchen. Creation of a retail / restaurant style facility with commercial kitchen space would also support the natural migration of food truck operators to brick and mortar restaurants on-site and within the area. Food truck operation support and restaurant retail operations on-site could provide and improve area businesses and create a unique local and ethnic food retail destination for the surrounding community.





## 5.3 FOOD HUB WHOLESALE ANALYSIS & CONCLUSIONS

### > Analysis Of Regional Food Production

Per the National Good Food Network, 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.”

Identifying fresh food resources available in the area for aggregation, wholesale, and/or processing is the first step necessary to evaluate the feasibility of the project site as a food hub. Without the infrastructure and existing producers necessary to provide product, the project site is without a consistent and diverse local supply line. Identifying which products are produced in large vs. small quantities is also important to ascertain what can get the project off the ground in the early stages of its food hub operation. The Consultants have worked to determine the feasibility of siting a regional food hub at the Hardesty site. They have conducted a high-level assessment of food producers in the Greater Kansas City region. This work included site visits and interviews with operators of a number of urban and rural produce farms, cattle ranches, livestock and produce auctions, processing facilities, university agricultural operations, commercial row crop operations (commodity corn and soy bean), and aquaculture facilities, in September 2013. Any fresh local food operation considered for the project site must first evaluate the availability of product from existing suppliers and identify the capacity of these suppliers to increase production.



### Product Availability

In 2010, Missouri ranked second in the country for number of farms (108,000) and eleventh for total cash receipts (\$8.3 billion) for the sale of crops and livestock (USDA National Agricultural Statistics Service 2011). However, the availability of locally produced fresh foods in Missouri is limited due to the lack of production of fresh market fruit and vegetables and a paucity of facilities able to clean, process, repack, and market fresh foods.

The lack of processing facilities for fresh foods is best exemplified by the livestock industry in Missouri. Missouri is ranked second in the country for beef cow operations (52,000) and cattle operations (59,000), and third for the production of beef cows (1,865,000 head). However, most cattle are shipped out of state to large feed lot operations or meat processing centers. Existing USDA inspected slaughter facilities operating in Missouri that are certified for resale of fresh animal products are either integrated vertically through a single company and unavailable to local ranchers, or service local growers directly and have limited capacity and long waiting times.

Agricultural lands north of Kansas City that were formerly dedicated to cattle production and other agricultural uses are declining in acreage due to conversion to row crops (primarily soybean and corn production). Soybean and corn are produced for sale as feed and for ethanol production and other uses. Elevated land prices have also impacted the economic viability of farms and ranches in Missouri given the limited return on investment relative to the cost of land. However, there are a number of Amish farms and other independent producers that produce limited quantities of fresh produce within the service area of greater Kansas City. A selected list of farm direct operators is available through the Kansas City Food Circle 2013 Directory (<http://www.kcfoodcircle.org/docs/KCFC-Directory.pdf>) and a list of 263 farmer's markets is found on the AgriMissouri website (<http://agrimissouri.com/mo-grown/groresults.php?Tier1=Farmers+Market&Run=view+all+results>). There are also a small number of USDA certified meat processing facilities that service the slaughter and butchering of locally produced livestock.

Fresh marketable produce is typically sold at produce auctions, but most available product is quickly being purchased directly by large produce companies who are capitalizing on local food demand (see Appendix A: Regional Producers & Resources).

C&C Produce and Liberty Fruit are established produce companies in Kansas City that aggregate and distribute locally produced fresh foods. There are also a number of smaller independent distributors who move locally produced fresh foods into market, including fresh foods from urban farms that service primarily supermarkets, independent grocers, and restaurants. C&C Produce operations represent recent efforts to establish local supply chains to meet public demand for local foods. C&C Produce purchased over \$1 million in locally grown produce in 2012 and expects to grow to \$3 million in 2013. Their goal is to eventually purchase \$13 million of local produce annually. The success of local produce companies who are beginning to purchase locally produced fresh foods is directly attributable to investment in and development of direct farm purchasing in Missouri from smaller growers, supply of refrigerated transportation of products from existing farms, repack and processing, and marketing of local foods. C&C Produce will continue to invest in equipment and warehouse space necessary to support the development of local food supply lines and the sale of those products to meet current public demand.



Missouri's rank among states in 2010 for crops, livestock, and livestock products produced at scale includes the following:

<b>Crops</b>	<b>Rank</b>	<b>Total</b>	<b>Unit</b>	<b>% U.S. Total</b>
Rice	5	7,512,000	tons	6.7
Watermelon	9	1,072,000	cwt	2.6
Grape	9	5,100	tons	0.07
Apple (utilized prod.)	17	32,000,000	pounds	0.3
Peach (utilized prod.)	19	4,200	tons	0.4
Potato (all)	19	2,160,000	cwt	0.5
<b>Livestock &amp; Livestock Products</b>				
Beef Cow Operations	2	52,000	number	6.8
Cattle Operations	2	59,000	number	6.1
Beef Cows	3	1,865,000	head	6.0
Calf Crop	4	1,850,000	head	5.2
Turkeys Raised	4	18,000,000	head	7.4
All Cows	4	1,960,000	head	4.9
Cattle and Calves	6	3,950,000	head	4.3
Hogs and Pigs	7	2,900,000	head	4.5
Milk Cow Operations	7	2,600	number	3.7
Ice Cream	7	7,456,000	gallons	3.3
Hog Operations	8	3,000	number	4.0
Sheep Operations	14	2,200	number	2.6
Egg Production	15	1,949	million	2.1
All Chickens	16	10,079,000	head	2.2
Sheep and Lambs	18	81,000	head	1.5
Milk Cows	21	95,000	head	1.0
Cattle and Calves on Feed	22	50,000	head	0.4
Milk Production	24	1,445,000,000	pounds	0.7
Honey Production	28	572,000	pounds	0.3

### Fruit & Vegetables

Missouri is generally considered a minor state for fruit and vegetable production when compared to other vegetable producing states – California, Florida, Arizona, Georgia, and New York. In 2012, California continued to be the leading fresh market state, accounting for 44% of the harvested area, 48% of production and 50% of the value. Missouri accounts for less than 1% of the total fresh market vegetable production in the United States. Large temperature swings in the spring, fall and winter make production of early and late season vegetables difficult, and cool season crops rarely do well past May, due to hot humid summers (J. Quinn, 2000). However, fresh fruit and vegetables are produced throughout the state in limited quantity and are available through CSAs, farmer's markets, road-side stands, and other direct sales.

Fresh Market Vegetable Production for Missouri & United States:

<b>Missouri</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Production (1,000 cwt)	1,072	957	960
Value of Production (\$1,000)	8,576	9,666	9,888
<b>United States</b>			
	<b>2010</b>	<b>2011</b>	<b>2012</b>
Production (1,000 cwt)	441,717	432,297	437,793
Value of Production (\$1,000)	10,906,248	10,724,426	10,068,726
USDA 2012 Summary (January 2013), USDA, National Agricultural Statistics Service			





## CROP PROFILES

Vegetable crops in or occasionally under commercial production in the region include the following: Arugula, Asian Greens, Asparagus, Beet, Broccoli, Cabbage, Carrot, Cauliflower, Collards, Cucumber, Eggplant, Endive, Fennel, Garlic, Herbs (culinary), Horseradish, Kale, Lettuce, Mushroom, Muskmelon / Cantaloupe, Mustard (greens), Onion (bulb and green), Parsley, Pea, Pepper, Potato, Pumpkin, Radish, Rhubarb, Shallot, Snap Bean, Spinach, Squash, Sweet Corn, Sweet Potato, Tomatillo, Tomato, Turnip, and Watermelon.

The following crop profiles provide detailed information on products that are produced in Missouri at commercial scale and are often exported for sale out of state. These products best represent what may be currently available for wholesale and or further processing and in-state marketing.

### Rice

Missouri ranks fifth in the country in rice production with 6.7% of total U. S. production concentrated in a seven-county region in the Bootheel region of Southeast Missouri. In 2010, Missouri produced over 7.5 million tons of rice. Eighty one percent of Missouri's rice acreage is located in two counties, Butler and Stoddard. Butler County has produced half or more of the rice grown in Missouri the past two decades. The county ranks consistently among the top twenty-two of the 110 rice-producing counties and parishes in the U.S. Long and medium grain rice varieties are grown in Missouri and planted between April 15 and June 5. Long grain varieties are planted on approximately 81% of the rice acreage with four varieties: Cypress, Drew, Kaybonnet and Lemont planted on 31%, 21%, 19% and 10% of the rice acres, respectively. New and improved rice varieties have been the single greatest influence on improved yields and economics. The number of rice producers in Missouri is estimated at 250 to 350, with over half of them in Butler County. The actual number of producers is difficult to ascertain, since USDA-registered farm numbers include operations divided among family members. Nonetheless, rice farm operations continue to decrease in number and increase in size. There are four rice production systems used in Missouri: conventional, water-seeded, corrugated tillage and no-till. Currently, approximately 70-80% of the production acreage is conventional, 12-15% is water-seeded (one producer plants about 90% of the water-seeded acreage) and 15-30% is no-till or minimum till (stale seedbed).

(Source: B. Beck and G. S. Smith 2000 <http://www.ipmcenters.org/cropprofiles/docs/morice.pdf>).

### Watermelon

Watermelon is the one of the few fresh market crops produced at scale in Missouri, ranking ninth in the country and producing over 1,070,000 cwt of watermelons. Over 95% of the watermelons in Missouri are produced in the southeast part of the state in two counties, Pemiscot and Dunklin. The remainder is produced throughout the state in small acreages for farmers markets and roadside stands. In 2012, the state had 2,700 acres planted and 2,400 acres harvested. Missouri remains a small producer of watermelons when compared to other leading producers such as Texas, Georgia, and Florida, which each planted over 25,000 acres and harvested over 23,000 acres. Because there is a market advantage to have watermelons by July 4th, early planting is desired. However, in most years this is rarely achieved. Typical planting dates range from April 10 to April 25th. Labor Day is traditionally the last market and therefore with the 85-day varieties most growers are planting, the last day to plant is May 10th. The average watermelon acreage per farmer is 50 to 80 acres. Only a few producers grow over 100 acres of watermelons in Missouri. Due to risk, management and labor factors, most plantings are laid out in 40 acre blocks. This size planting is the minimum to keep an 8-10 man watermelon crew busy and be able to pick 4 loads/day. Over 95% of the watermelons produced in Missouri are hybrids. Seedless types comprise 1-2% of the market, whereas open-pollinated varieties such as Crimson Sweet, Charleston Grey and Black Diamond capture the remaining 3-4% for local markets. Two hybrid varieties, Royal Sweet and Huck Finn comprise over 80% of the market share. These varieties are chosen for yield capabilities and resistance to Fusarium wilt and Anthracnose. Other commonly grown varieties include Emporer, Sangria, Royal Flush, and Fiesta. Over 80% of the transplants are grown locally. The remainder is purchased from greenhouses in Florida.

(Source: L. Kabrick and G. S. Smith 2000. <http://www.ipmcenters.org/cropprofiles/docs/mowatermelons.pdf>).





### Grape

In Missouri, approximately 1,000 acres of grapes are grown primarily for wine production. Acreage is expanding with the largest concentration of production acres in a region bordered by the Missouri River to the north, primarily from Hermann to St. Charles, and the Ozarks plateau in the St. James area and in southwest Missouri near Mountain Grove. The largest vineyards in Missouri contain approximately 100-120 acres of grapes and are located in the central portion of the state. Average vineyard size is 11 acres. Missouri ranked 9th in U.S. production for all grapes at 5,100 tons, representing 0.07% of the total U.S. production. Ninety percent of Missouri grape production is for wine. Average yields for wine grapes range from 3.5 tons/A for Norton (*V. aestivalis*) to 6-8 tons per acre for the French-American hybrids. Ten percent of Missouri production is for juice & table cultivars; primarily Catawba and Concord (*V. labrusca*). The majority of grape varieties grown commercially are derived from the hybrids of native American species crossed with *V. vinifera*, *V. labrusca* and *V. aestivalis*. French-American hybrids grown in Missouri for red wine are Chambourcin, Chancellor, and Rougeon. French-American hybrids for white wine are Cayuga White, Seyval, Vidal blanc, and Vignoles. The principal *V. labrusca* varieties grown in Missouri are Concord, Catawba, Delaware and Niagara. Acreage of Concord and Catawba exceeds that of other American varieties. Norton (*V. aestivalis*), a native American variety that is highly disease resistant, is increasingly grown due to its excellent red wine. Lack of cold-hardiness and little inherent resistance to several pests and diseases are the major reasons that *V. vinifera* acreage is severely limited in Missouri.

(Source: G. S. Smith and S. A. Becker 2000 <http://www.ipmcenters.org/cropprofiles/docs/mograpes.pdf>).



### Apple

Apple production in Missouri is scattered throughout the Ozarks region of Southern Missouri and along the “bluff” hills bordering the Missouri River in central Missouri. The largest producer in the state manages approximately 500 acres of apples, with several growers managing 50 to 150 acres. Other growers have considerably smaller operations, which average from 5 to 10 acres. Missouri ranked 17th in commercial apple production, producing 0.3% of the total U.S. apple crop for a total of 32,000,000 pounds in 2010. Harvest usually begins with a few varieties producing a small crop by late August, but the bulk of the apple harvest runs from mid-September through October. Some of the varieties commonly grown include Golden Delicious, Jonathan, Red Delicious, Gala, Fuji, Red Rome, Ozark Gold, Earli Gold, IdaRed, Cortland, Empire, Winesap, Jonalicious, Rome Beauty, LuraRed, Blushing Golden, Granny Smith, Freedom, and Braeburn. Individual growers reported as many as 23 different apple varieties in their orchards. All apples produced in Missouri are for fresh market or juice. The majority of the crop is marketed through wholesale channels and sold locally. The apple operations located in southwest and central Missouri are coupled with production of other fruit, primarily peach.

(Source: Barrett, B., et al. 2001. <http://www.ipmcenters.org/cropprofiles/docs/Moapple.pdf>).



### Peach

Missouri ranked 19th in the production of peaches in 2010, producing 0.4% of the total U.S. peach crop at 4,200 tons. Peach production in Missouri occurs primarily in three regions: southeast, southwest, and north-central Missouri. The most concentrated acreage of peach production occurs in southeast Missouri in the “Bootheel” region along Crowley’s Ridge. In North Missouri, two areas of production exist, one in the north-central part of the state along the Missouri River from Carrollton then west to Kansas City and north to St. Joseph, and one in the southwest around the Springfield area. One grower in southeast Missouri produces 40% of the total Missouri peach crop. Other growers in southeast Missouri have considerably smaller operations, however, at greater than 50 acres, these are still larger than most of the peach orchards found elsewhere in the state, which average about 15 to 30 acres. The peach operations located in southwest and north-central Missouri are coupled with production of other fruit, primarily apples. The determination of which peach varieties will be grown is based on harvest or ripening date so that growers will have a constant crop of peaches throughout the summer. In the Bootheel, harvest usually begins with a few varieties producing a small crop by June 15th, but the bulk of the peaches start coming on by July 4th with the maturation of Redhavens. The season extends through the middle of September. Some of the varieties commonly grown include Derby, Garnet Beauty, Redhaven, Topaz, Loring, Cresthaven, Jersey Queen and Rio-Oso-Gem. In Northern Missouri, the earliest varieties ripen around July 4th with the maturation of Flaming Fury. The season extends through the middle of September. Some of the varieties commonly grown include Flaming Fury, Raritan Rose, Redhaven, Jim Dandy, Nectar, Envoy, Jayhaven, Contender, Harcrest, Belle of Georgia, and Encore. All the peaches produced in Missouri are for fresh market and the majority of the crop is marketed and sold locally.

(Source: L. Kabrick and G. S. Smith 2000 <http://www.ipmcenters.org/cropprofiles/docs/mopeaches.pdf>).



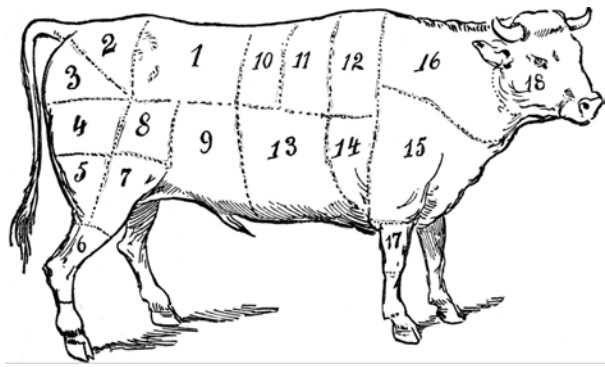
### Pecan

In the U.S., pecans are produced from native or seedling trees or from orchards of clonally propagated cultivars. In Kansas, pecans are primarily produced by native trees (seedling). The commercial production of pecans in the Northern and Central Plains is limited to eastern Kansas and to a few hobby farms in Southeastern Nebraska. A native to the central plains, pecan is often a major component of the urban forest in Kansas and S.E. Nebraska. Commercial pecan production in Kansas is based on the harvesting of nuts from native stands of seedling trees that grow in the flood plains of major rivers. Kansas contributes approximately 1% to the total U.S. pecan production. There are an estimated 8500 acres of pecans in Kansas mostly concentrated in the Southeastern corner of the state. Cherokee is the leading County in pecan production in Kansas, followed by Neosho, Labette, Linn, Montgomery, Miami, Cowley, Chautauqua, Wilson, Crawford, and Coffey Counties. During the period 2002 through 2004, Kansas contributed 2.9, 2.0 and 1.8 million lbs of pecans to the U. S. market. Commercial pecan production in Kansas is limited to soils found within the floodplains of major river systems, including the Neosho, Verdigris, Walnut, Caney, Osage, and Marais des Cygnes rivers.

(Source: Jioa et al. 2001, Updated 2005, <http://www.ipmcenters.org/cropprofiles/docs/kspecan.pdf>).



## LIVESTOCK & LIVESTOCK PRODUCTS



### Beef Cows

Missouri is the third largest producer of beef cattle in the U.S., accounting for over 1.8 million head of cattle and 6% of total U.S. production. Most calves and slaughter cattle are sold to buyers out of state and shipped to feed lots and industrial scale slaughter facilities. Livestock raised in Missouri are primarily sold at a number of state-wide auctions where a few select buyers influence final sale prices. Local beef, pork, lamb, and goat are also available from a number of local growers directly through CSAs, Farmer's Markets, or through select butchers in the state. There are 236 businesses available in Missouri that market local services for meat through the Missouri Department of Agriculture (<http://agrimissouri.com/mo-made/>). Local specialty butcher shops have become destinations for consumers who seek quality pasture raised protein that is free of hormones and antibiotics. Many of these butchers are limited by access to processing facilities that are certified for the slaughter of live animals and resale of meat both in and across state lines. A list of specialty butcher shops in the Kansas City area is included in Appendix A.

It is important to note that the federal government has created a mechanism for devolving certain regulatory controls for livestock facilities to the state level. The opportunity for bringing livestock processing back to Missouri, rather than having it remain in neighboring states, would be greatly improved if the State of Missouri would participate in this new federal program that gives states the ability to inspect facilities rather than

USDA. The federal government currently provides incentives for states to conduct this work. Please refer to Appendix B for a description of U.S. regulations regarding livestock processing facilities.



### Dairy

Dairy cows are much less common than beef cows in Missouri, but 95,000 milk cows were reported in 2010 as part of 2,600 Missouri milk cow operations. Milk cows were more abundant in the recent past with over 300,000 head reported in the state in 1975. Milk production in Missouri ranked 24th in the country in 2010, producing over 1,445,000,000 pounds of milk and accounted for 0.7% of total U.S. production. Most dairies sell their products through cooperatives, but many are finding added value by direct marketing of milk and other dairy products.



### Cheese

The potential for artisan cheese varieties appears promising. External factors such as the implementation of the Uruguay Round, which has brought down subsidies for European cheese

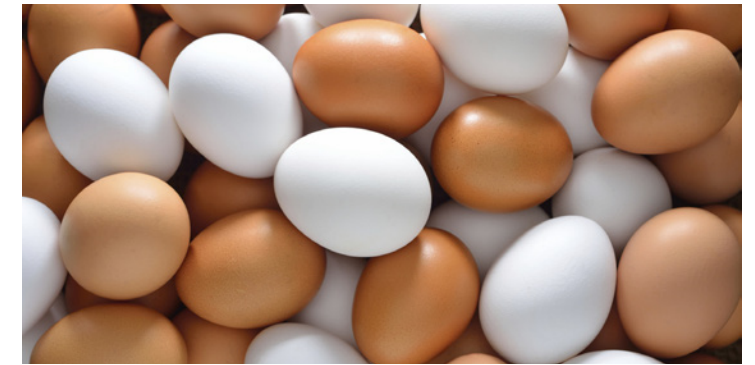
exports, can further open markets both domestically and abroad. Already, U.S. cheese exports have seen tremendous growth. Its market share increased from 4% of global cheese exports in 2000 to 13% in 2010.

Domestic consumption of specialty cheese is also on the uptrend. It grew by 94% between 1993 and 2004 and is projected to increase more given the growing popularity of Hispanic and European cuisines in the American diet as well as the increase in easy-to-consume specialty cheese packages available in retail channels.

Although farmers markets and online retail do not seem to be preferred channels for sourcing artisan cheese, developing institutional support in a more holistic marketing campaign for Missouri artisan cheeses, similar to the strategy adopted by Wisconsin and California, can boost familiarity and patronage for Missouri artisan cheeses.

Interestingly, except for Lorenae Dairy, which produces cheese curds, some of the well-advertised farmstead artisan cheese producers are not located in the Southwest, indicating that cheese-making can develop in other parts of the state as well. Included below are seven farmstead cheese producers who are members of and featured in AgriMissouri, an online resource that promotes Missouri-made products through a variety of marketing efforts and promotional events. These include Baetje Farms, Goatsbeard Farm, Green Dirt Farm, Homestead Creamery, Lavy Dairy Farm / Golden L Creamery, Lorenae Dairy, and Shatto Milk Company.

(Sources: Dr. Joe Parcell ([parcellj@missouri.edu](mailto:parcellj@missouri.edu); 573-882-0870) Jill Moreland ([morelandj@missouri.edu](mailto:morelandj@missouri.edu); 573-884-1756); Missouri Value Added Center University of Missouri; Federal State Marketing Improvement Program United States Department of Agriculture; March 2013; <http://dairy.missouri.edu/business/MissouriArtisanCheeseMarket.pdf>).



### Poultry

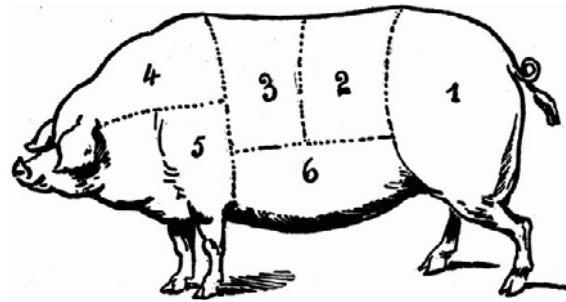
Over 10,000,000 chickens were produced in Missouri in 2010, representing 2.2% of the U.S. production. Breeds of large or medium-sized chickens have been developed for egg or meat production; a few breeds produce both fairly well. The Leghorn chicken produces more eggs. Most eggs are marketed whole as shell eggs. Additional products such as liquid eggs, dehydrated eggs and pre-cooked eggs have been successfully developed. Information about Missouri's egg inspection and licensing can be found under the Division of Weights, Measures and Consumer Protection, commodity inspection program.

The Rock-Cornish commercial broiler has been bred for rapid meat production. Breeds that serve well for dual purposes include the Rhode Island Red and Plymouth Rock. Other varieties selected by smaller producers include New Hampshire, Wyandotte and Orpington. These breeds lay fewer eggs than the Leghorn type but are large enough to provide a good source of meat. Bantam breeds are popular in small hobby farm flocks; crosses between various chicken breeds are also common in these flocks.

Both the poultry and swine industries have undergone dramatic changes over time, but the trend has been for much larger swine and poultry options on many fewer farms. Poultry production in particular has become part of a vertically integrated system where a large company may own the chickens and specify the feeding system while the farmer provides the buildings and labor. However, there are a growing number of individuals raising chicken and turkeys on a small



scale for local sales. Pastured poultry, where the birds are kept in portable cages outside that can be dragged around, instead of raised in a large building, are becoming more popular with a certain segment of consumers.



### Swine

Missouri ranked 8th in the country in the number of hog operations (3,000 operators), producing 2,900,000 hogs and pigs in 2010. Missouri ranked 7th in total hog and pig production and accounted for 4.5% of the total U.S. production. Missouri still has many types of swine operations, including a small number of farmers who pasture their swine instead of using a confinement building. The most common breeds of pigs in the United States are Yorkshire, Landrace, Hampshire, and Duroc. These breeds have been bred for characteristics that make them adaptable to confinement operations. Pasture-raised hogs face different stresses and require different traits, such as hardiness in extreme climates, parasite resistance, foraging ability, and good mothering attributes—characteristics not developed for confinement hog production (Kelsey, 2003). Some traditional and heritage swine breeds still retain these characteristics. These breeds include the Berkshire, Chester White, Spotted, Tamworth, Poland China, Large Black, Hereford, and Gloucester Old Spot Pig.

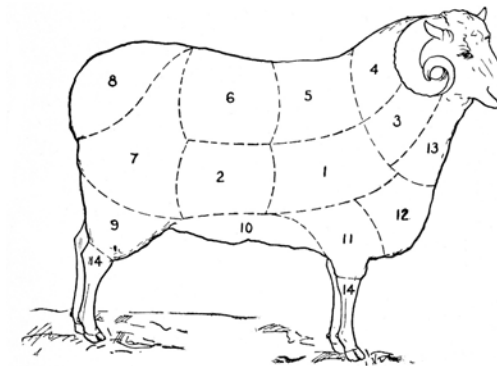
The pork industry has gone through rapid change in the past few years. Since 1979, the breeding herd has declined, while the pig crop has stayed about the same. Fewer breeding animals producing about the same number of pigs is largely due to the remaining producers' increased efficiency. The average number of pigs per breeding herd inventory per year increased from 10.3 in 1979 to 16.2 in 2001, a 57% increase. Operations with more than 5000 head accounted for 75% of the pig crop,

compared to only 27% just seven years earlier. The number of operations with more than 5000 head has increased from less than 1000 in 1993 to more than 2200 in 2001. The 20 or so volume producers, who sell more than 500,000 head per year, account for about 35% of all hogs marketed in the U.S.

Hog production is currently moving in two directions in Missouri:

- 1) Contracting with large-scale vertical integrators (producers/packers/processors linked from farrowing to packing to the retail counter), and
- 2) Sustainable production of a smaller number of hogs sold through alternative markets.

Large-scale vertical integration has put pork production in the same predicament as poultry production. Vertical integrators are direct-contracting more hogs today than in the past. According to a National Pork Board Analysis of USDA price data, 35.8% of all hogs were sold on the open market (negotiated price) in 1999, but that number fell to 11.6% in January 2004 (Anon., 2004a). This shrinking of the open market is a problem for hog farmers. While some small cooperatives and processors, as well as small-scale direct hog marketers, are technically vertical integrators, they lack the concentration of power to affect the market. The mid-size farms are “too big to sell directly to consumers and too small to interest corporate food producers, who often prefer dealing with a few large farms rather than with dozens of smaller farms”(Martin, 2004). The Missouri Rural Crisis Center in Columbia, Missouri, has found that since 1994 more than 70% of Missouri hog farmers (7,400 out of 10,500) have left hog production.



### Sheep & Goats

Sheep and goats are relatively well adapted to Missouri conditions. About 79,000 sheep were on Missouri farms in January 2010, raised for both meat and wool. Goat numbers have been increasing, especially in southwest Missouri, with 96,449 goats reported in Missouri during the 2007 Agriculture Census. Most of these goats are being raised for meat production, but there is a growing dairy goat industry in Missouri, with some goat dairies producing artisan cheese as well. According to USDA, most goats raised in Missouri are sold at local auction to buyers who move that livestock to processing facilities and butchers in the northeast U.S., where strong demand for the meat is concentrated in large ethnic communities.



### Other Livestock

Minor livestock breeds include alpacas, rabbits, buffalo, deer, elk, fish, and various bird species. Rabbit industry sources indicate a consensus that the rabbits slaughtered at USDA inspected plants account for only 20-25% of all rabbits

slaughtered. In fiscal year 2000, USDA inspected slaughter totaled 385,435 rabbits. If this number represents 20-25% of the total number of rabbits slaughtered, total slaughter would be between 1,540,000 and 1,930,000 rabbits. Average retail fryer size is estimated around three pounds (a 4 or 4.5 pound carcass weight) indicating that between 4,625,000 and 5,781,000 pounds of rabbit meat were produced in fiscal year 2001. Pel-Freez, located in Rogers, Arkansas is the oldest and largest rabbit processor in North America. They run transportation routes to and from growers in Missouri and represent the only operator in the U.S. who has a USDA inspected and graded processing facility for rabbits.

(Source: Jennifer Grannis USDA: APHIS: VS 2002 U.S. Rabbit Industry Profile)

Some Missouri farmers also produce honey from beehives as part of their operations. Missouri ranked 28th in honey production in the country, producing 572,000 pounds, accounting for 0.3% of the total U.S. production.



## AQUACULTURE

Aquaculture is the production of aquatic animals and plants under controlled conditions for all or parts of their lifecycles. Interest in aquaculture production is on the rise because restrictions on the wild harvest of many seafood species may diminish wild harvest seafood supplies. During the last two decades, the value of U.S. aquaculture production rose to nearly \$1 billion. Trout, catfish, baitfish, and ornamental fish are the primary species produced by commercial aquaculture. A MAAC found 286 commercial producers in the state of Missouri managing about 1,400 acres of ponds and over 20,000 feet of raceways. The total value of trout, catfish, black bass, sunfish, minnows, crayfish, and ornamental fish sold in 1980 was estimated at \$20,000,000. Success in commercial aquaculture is dependent upon marketing capabilities. Fish are not typically sold at auction or to processing plants in Missouri as are livestock and poultry. However, with the growth of aquaculture, marketing cooperatives and commercial processing plants may develop in the future.

(Source: <http://moaquaculture.org/pubs/pandp.htm>)

In addition to catfish and trout production in the state, the indoor culture of tilapia is in its initial stages of commercial production. White Brook Tilapia Farm, a family owned tilapia hatchery located in Northwest Missouri, is located just a few miles north of Kansas City. This company recently began the build-out of a facility in an abandoned Wal-Mart location in Northwest, MO to begin offering full size fish to a national seafood restaurant chain. They supply live tilapia fry and fingerlings to small and organic growers as well as mid-market commercial growers. Species available include White Brook White Nile Tilapia™ (*Oreochromis Niloticus*), Blue Tilapia (*Oreochromis Aureus*), Hawaiian Gold Tilapia™ (*Oreochromis Mossambicus*), Red Nile Tilapia (*Oreochromis Niloticus*), and Wild Color Mozambique Tilapia (*Oreochromis Mossambicus*).

During recent years, several Latin American countries have taken an interest in commercial tilapia farming. Commercial tilapia production is currently being developed in Mexico, Brazil, Columbia and Costa Rica and other warm tropical areas where pond culture is a quick and inexpensive method for producing

large fish. Over 95 percent of the global tilapia supply is imported to the United States where tilapia is an appreciated food fish. The United States has its own domestic production as well, but it is too small to satisfy consumer demands. Large-scale commercial production of tilapia in the U.S. is currently concentrated in Arizona, California, and Florida.

The following representative companies commercially produce tilapia in the U.S. using recirculating indoor systems:

- Blue Ridge Aquaculture, Inc., Ridgeway, VA ([www.blueridgeaquaculture.com](http://www.blueridgeaquaculture.com)). "Blue Ridge Aquaculture, Inc. is the world's largest producer of tilapia using indoor recirculating aquaculture systems (RAS). Each year, Blue Ridge Aquaculture produces 4 million pounds of tilapia, shipping between 10,000 and 20,000 pounds of live tilapia every day. These fish are raised without the use of antibiotics or hormones, and are free of mercury (undetectable levels from independent studies) and other industrial pollutants. Blue Ridge Aquaculture was founded in 1993, and has been in continuous operation for nearly twenty years. Headquarters and operations are located in Martinsville, Virginia. The company operates out of a 100,000 Sq. Ft. facility, and employs approximately thirty people. The Company sells live fish to distributors in major metropolitan markets in the North East, such as New York, Boston, Toronto and Washington, D.C."
- Sarasota Organic Tilapia Farms, Sarasota, Florida ([www.sarasotaorganictilapiafarms.com](http://www.sarasotaorganictilapiafarms.com)). "Sarasota Organic Tilapia Farms, LLC is a locally owned, organic fish farm located in Sarasota, Florida, USA, with two areas of production: We are a tilapia hatchery which produces tilapia fry (newly hatched) and tilapia fingerlings (young, between 1/2" to over 1") available for fish farms worldwide. We specialize in three types of hatchery tilapia: Blue Aureus, which are the most cold hardy variety; White Nile, selectively bred for color, fast growth and form; and Red which are a fast growing hybrid available in 80-90% all male without undergoing hormone sex reversal. We also have a grow-out section to raise tilapia to market size, available locally in the Sarasota, Florida area."



Caviar has also been an important product produced in Missouri. The Missouri Aquaculture Association lists only three Missouri caviar producers as members – including Osage Catfisheries and Show-Me Caviar. The third, Callaway's Caviar, is based out of Jefferson City. A new program out of Oklahoma is putting businesses like l'Osage Caviar under pressure. Oklahoma Department of Wildlife Conservation made its way into the caviar industry by establishing a new program to manage the paddlefish population, funded by caviar sales. Oklahoma is able to sell the caviar at a low price because they do not front

the production costs that private businessman like Kahrs have. Since recreational anglers in Oklahoma have an incentive to give their fish to the department, it generally does not have to pay for the costs of raising, harvesting or catching the fish. In 2011, all caviar producers in Missouri collectively sold only 400 pounds of paddlefish caviar (In Economy, By Ryan Schuessler, special to the Beacon, 12:07 am on Mon, 10.22.12).

Source: Missouri Aquaculture Directory 2011



## > Conclusions

The primary finding from this analysis is that the creation of a comprehensive food hub focused solely on fresh produce would not fill a needed gap in the Greater Kansas City food system. However, significant gaps in the system do exist, and center on the aggregation and processing of meat, flash freezing of fruits and vegetables, and aquaculture:

- Aggregation and processing of livestock (e.g., goats, sheep, swine, and cattle) for distribution to regional customers. Small livestock (goats, sheep and hogs) are available locally, represent a growing component of overall livestock production in northern Missouri, and are in high demand.
- Individually Quick Frozen (IQF) and Value-Added processing for fruit and, eventually, vegetables to be moved into schools and other institutions during the growing off-season. Most local products are produced in the late spring and summer months when schools are closed. Providing processing facilities for seasonally available local fresh products could increase the amount of local product in local institutions and help provide a more consistent supply during the winter months. Opportunities also exist for partnering with area produce companies who aggregate local products and need outlets for non-conforming or lightly damaged fruit and other products. IQF of fresh produce or the production of value-added products via bottling and canning of local foods would fill gaps in the existing local food economy infrastructure. Although refrigeration and other processing services exist individually in the area, facilities that can accommodate aggregation, storage, and processing of local fresh food products in the same area are limited. No known entity in the Kansas City metropolitan area is currently processing local fresh food products by IQF methods.
- Aquaculture, the production of aquatic animals and plants under controlled conditions for all or parts of their lifecycles, is on the rise because restrictions on the wild harvest of many seafood species may diminish wild harvest

seafood supplies. During the last two decades, the value of U.S. aquaculture production rose to nearly \$1 billion. In addition to catfish and trout production in the state, tilapia is becoming an important aquaculture product, given the increasing demand for this product in the U.S. Over 503 million lbs of tilapia were imported into the U.S. in 2012 (USDA ERS Data). The Hardesty site condition and the limited restrictions for processing fish make the culture of freshwater fish an attractive opportunity. In addition, caviar has been an important product produced in Missouri.

First, meat production, transportation, and product demand all exist; the missing piece is infrastructure to bring these components together. Missouri is a leader in cattle production in the U.S., but does not have the necessary processing facilities to provide local product to in state customers at volume. According to the Missouri Department of Agriculture, meat processing facilities that accept local products and have certification for resale across state lines are limited in number and have long waiting periods for new clients. Meanwhile, the production of goat, sheep, and tilapia in Missouri is increasingly attractive to local producers for local and regional markets. Costs for processing smaller animals and fish is reduced when compared to larger animals such as slaughter cows or pigs and chickens that are produced in mass and vertically integrated in a manner that make price points extremely difficult for local producers who sell direct.

Second, rice, watermelon, grape, apple, peach and potato are produced in quantity in Missouri and may provide product available to the hub without facilitating contracts with growers to produce additional product for wholesale or processing into value added products. In addition, although the scale of urban agriculture is not currently sufficient to support a food hub operation, the recent growth of urban agriculture initiatives suggests that an aggregation and distribution facility for these urban producers can be anticipated to become a need in the future.

At this time, urban agriculture and rural production of marketable fresh fruit and vegetables are not substantial



enough to support a fresh food aggregation and distribution center located in Kansas City. The production of beef and other livestock has potential for increasing in state sales, but is limited by the lack of independent processing facilities that are certified for interstate resale. The gap in the food system is thus to support and increase local production of fresh foods by supplying the infrastructure necessary to process, package, brand, market, and distribute locally grown products. The success of wholesale and retail food sales is dependent

on contracts with growers and/or cooperatives and vertically integrating operations at scale to successfully capitalize on volume sales.

The possibility for the development of a network of food hubs located in rural areas close to productive farms and in urban areas represents significant competition for available products under the aggregator food hub scenario. However, those food hubs could act as aggregation points to help supply





a processing center in Kansas City. Limited availability of local fresh food products increases the competitive landscape for those products. Local wholesale companies also have an existing advantage by buying local product and lending their significant resources to packing, transporting, warehousing, and selling those products to existing customers. In addition, direct retail sales of fresh food product by farms, CSAs, and farmer's markets further reduce the availability of locally produced products for wholesale and represent a competitive scenario with producers who should be aligned with the goals and objectives of the food hub. With the advent of a processing center for fresh foods, local producers will have incentive to produce more food and provide products that can compete in the wholesale and retail marketplace. Marketing local meats will be difficult, but can be successful through direct retail sales and wholesale to supermarkets and other specialty markets, several of which are already operating in the neighborhood. Wholesale opportunities to large volume customers, such as schools, universities, and hospitals, will be difficult due to the higher price points for locally produced livestock products.

In particular, the Consultants' conclusions are based on an assessment of the competitive landscape for food distribution in the Greater Kansas City area. The growing off-season coincides with the middle of the school year, and so an opportunity exists to provide flash frozen fruit and vegetables to schools from the

facility if relationships can be built with food service contract holders. C&C Produce has a particularly strong operation aggregating and distributing fresh produce, as well as bottling and repacking products. However, C&C Produce would be interested in being a supplier / customer for an IQF processing facility. Competition with national providers on frozen produce is fierce; thus, sufficient volume and market share from schools and institutions would be required to achieve profitability.

The Hardesty site is well positioned to fill these identified gaps in the regional food system. The rail line connection and multiple former spurs coming into the site represent significant opportunities for distribution. Although switches for rail spurs are not currently in place, there is no physical limitation to their installation based on conversations with representatives of the Kansas City Terminal Railway. Rail lines operated by BNSF Railway and the Kansas City Terminal Railway could connect livestock aggregation and auction operations in St. Joseph, Missouri to the project site. Live animals on occasion have been transported on the Kansas City Terminal Railway through Kansas City. However, transportation of livestock from in-state auction facilities is better served by trucking options at this time. In addition, the site's existing buildings provide convenient means for co-locating distinct but compatible functions, and the nearby wholesale facility offers a convenient complement to the Hardesty site.



Meanwhile, the culture of freshwater tilapia at the Hardesty site is a possible opportunity given the availability of fingerlings for the production of restaurant marketable fillets, size and condition of available indoor grow-out space, limited requirements associated with fish processing, and a growing demand for tilapia in the U.S. Constraints include limited commercial success stories in the U.S., the cost of feed and heating requirements for the culture of this fish, state concerns regarding the control of this introduced species in the U.S., and competitive price points from foreign tilapia farms that import fresh and frozen products in the U.S.

In addition, the Consultants have considered the issue of structuring the food hub facility as a nonprofit or for-profit entity. The Consultants paid particular attention to a scenario in which HREDC would create a new "food hub" – defined as an aggregation and distribution operation for fresh produce – and determined that this effort would be redundant and competitive with existing service providers that are established and already successful in the Kansas City marketplace. In particular, C&C Produce, Liberty Fruit, Good Natured Family Farms and other local urban farm organizations are long-standing operations that aggregate local produce, and a new distribution operation of this type should expect to face significant challenges in drawing market share.

Given the programmatic recommendations contained herein, which suggest not creating a new food hub entity, the issue of organizational structure has become mostly moot. Rather, the recommended facility uses call for leasing the space to an operator with capacity to manage processing. HREDC can also contemplate a joint venture arrangement with an operator that would bring the necessary expertise to operate a processing facility, but may not have the financial capacity to build-out the facility. HREDC could provide equity or other financing in exchange for ownership to assist with the purchase of equipment, operations and contingency. Leasing the structure to a meat processor and investing in that company to provide cash or other financing for a stake in the company may be an attractive position for both the operator and HREDC.

Generally speaking, nonprofit organizations are advantaged by having access to certain public and philanthropic funding sources from which for-profit entities can be excluded. These funding mechanisms often come in the form of grants or soft loans, and can provide critical subordinate or gap financing that minimizes an entity's debt burden. Meanwhile, for-profit entities are advantaged by maintaining greater control and decision making autonomy, as well as by the potential for cash flow upside that can attract social impact equity investors seeking economic returns balanced with community impact.



## 5.4 RETAIL FOOD ANALYSIS & CONCLUSIONS

### > Trade Market Analysis

The Consultants explored the feasibility of siting a permanent retail grocery operation at the Hardesty site. This general assessment involved visiting area grocery stores and supermarkets to qualitatively determine the availability of fresh produce in the immediate study area. Several grocery and supermarkets are operating in the area along Independence Avenue, including the Price Chopper, Mi Mercado, and locally-managed ethnic food stores. Mi Mercado is a recently renovated Apple Market – repurposed as an ethnic supermarket to compete with the smaller grocery stores. Appendix C includes a listing of grocery stores and supermarkets in the area, and demonstrates that the immediate area is not a food desert but rather is well served by existing operators providing fresh and affordable food options.

Given this competitive environment, the Consultants would not anticipate that a conventional retail operation entering the marketplace at the Hardesty site would successfully take market share from the existing operators. Rather, a community-focused, niche retail food offering that provides prepared foods – i.e. food trucks – is far more likely to be successful in attracting population to the site and building a customer base.

The identified market trade areas include opportunities for serving a mix of ethnicities, as both are populated by diverse groups with varying levels of expendable incomes. Both market areas were identified as having stronger than average connections to both pedestrian and automobile / mass transit users who would access the Hardesty site and the surrounding neighborhoods. Both areas are also currently being studied for the future implementation of the Kansas City Street Car Line, which is anticipated to add an even greater connection to the Kansas City Metropolitan Statistical Area within a ten-year period.



### > Potential Customer Base

By following an approach that is complementary to rather than competitive with existing operators, a processing facility at the Hardesty site would be well-positioned to work with existing wholesalers to fill gaps. Processing of local product and creation of a local brand recognized as a product line produced in the state will be necessary to market directly to a consumer base looking for certified beef, fish, or other livestock products. Direct retail sales of local livestock products will be necessary given higher price points for local products when compared to other national brands or other direct marketed products in the state. IQF and other value added products from canning or bottling operations could be marketed wholesale to large volume buyers for schools, universities, hospitals, and large grocery chains.

IQF of local produce and the production of value added products that are shelf stable would help provide consistency in the availability of local product to institutional food buyers that want to support local producers. Providing processing options for local fresh foods would encourage local producers to expand their operations to supply a market that currently provides limited opportunities. However, moving local product at scale would be required to reach institutional buyers. The supply of most fresh food products is currently restricted by either

supply (primarily fresh fruits and vegetables), processing needs (protein), or by competitive price points and the level of vertical integration already in place (chicken and swine).

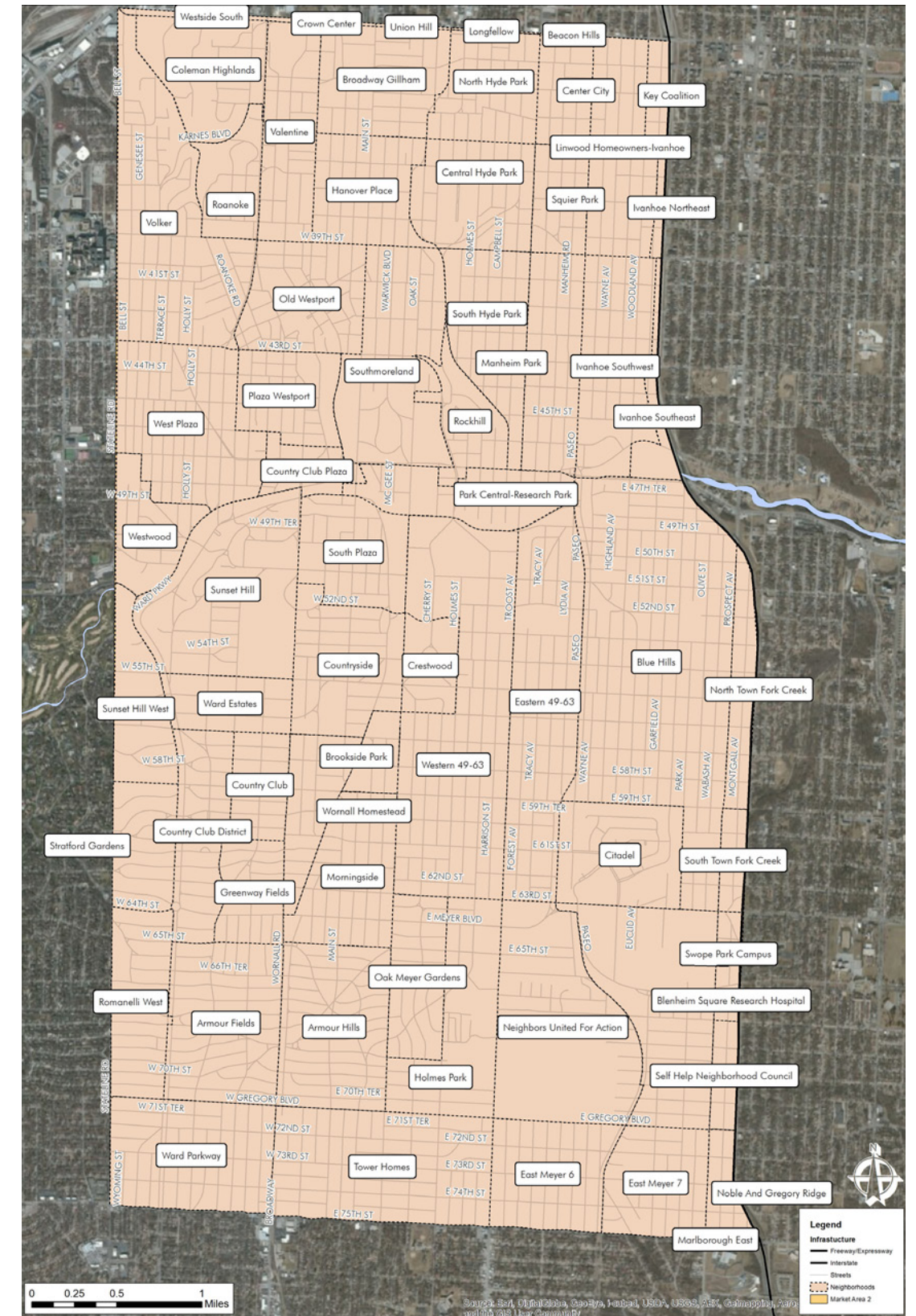
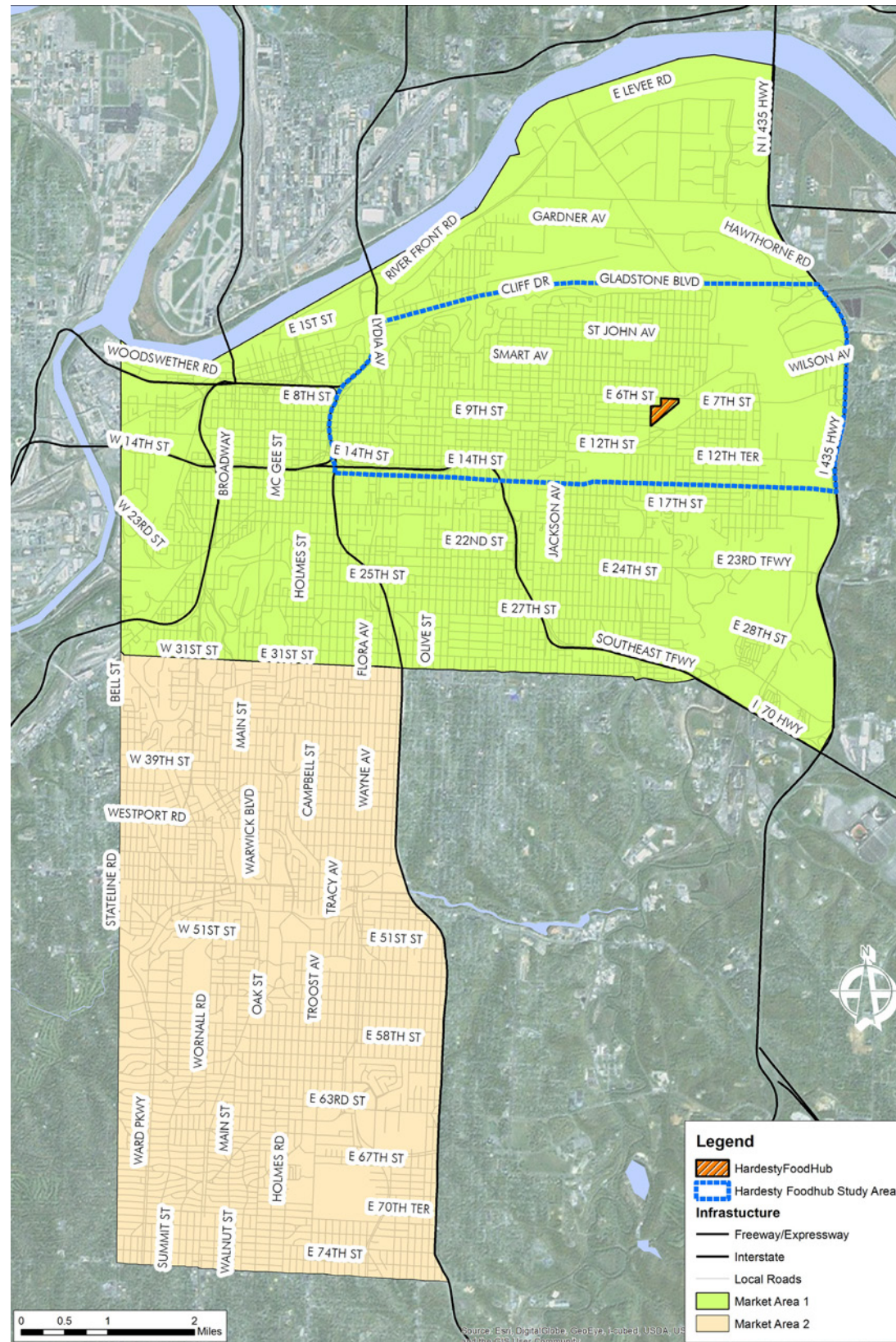
There is a large customer demand in the Kansas City area for local fresh food products, but limitations exist that create barriers to both retail and large wholesale customers. Fresh fruit and vegetable production is limited in the state, but the lack of access to markets and processing facilities for products in large supply during the peak of the growing season keep production low in the state. Missouri is one of the largest producers of cattle in the U.S., but most all livestock are moved out of state to large processing facilities. The development of a local processing facility for small livestock, and the processing of vegetables via IQF, canning, bottling, or other value added processes, could produce products that could be marketed wholesale or through direct sales following the creation and marketing of a local independent brand. Wholesale opportunities are scarce without the advent of additional processing, packaging, and marketing capabilities for marketable fresh produce, protein or livestock derived products, and dairy.



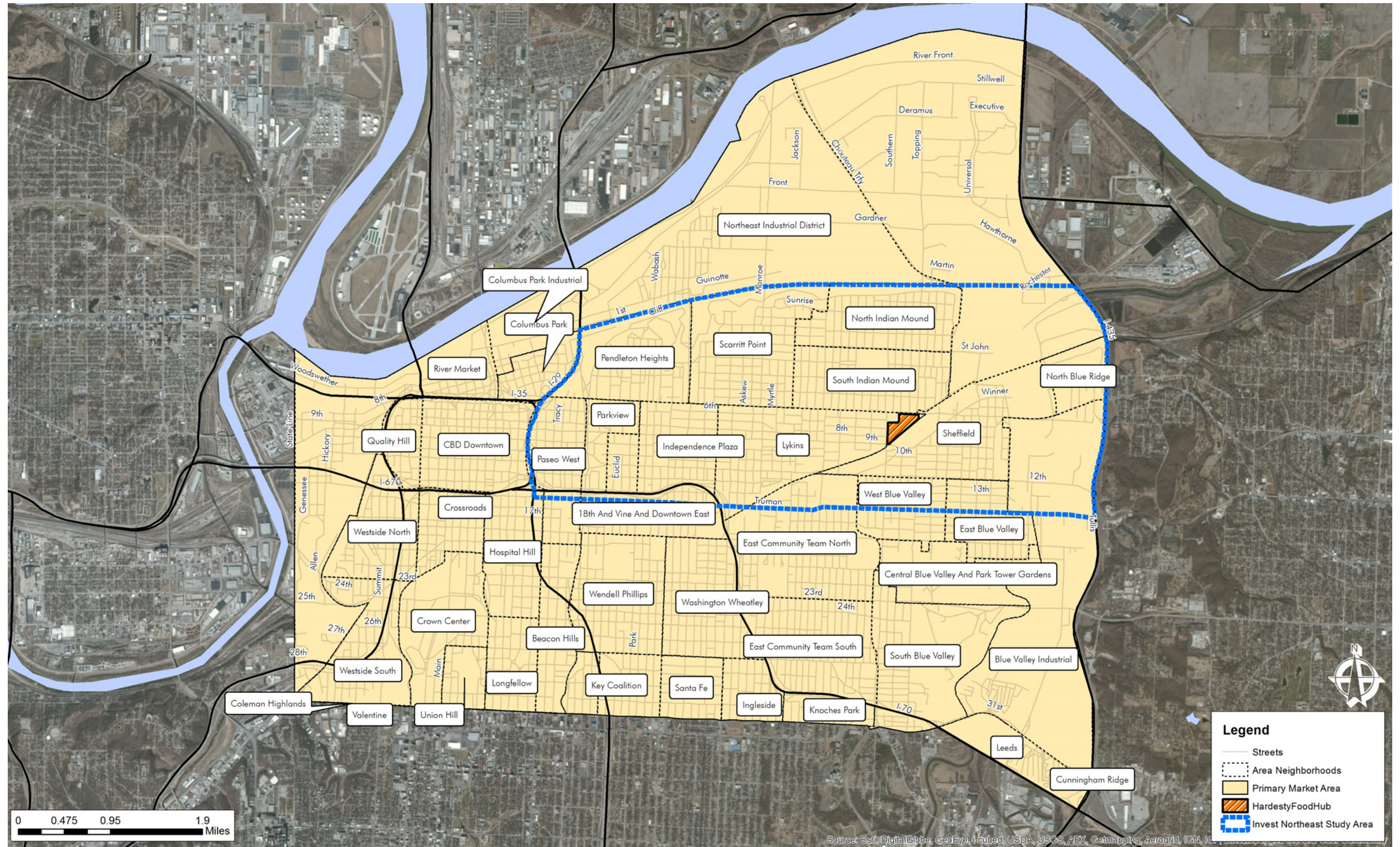
Thus, the Consultants focused on analyzing the neighborhood context and demographics around the Hardesty site to determine the feasibility of hosting event-driven retail food activity, based on primary and secondary market trade areas. This methodology included the following:

- Define the primary trade area based on five-minute drive times from the Hardesty site, with some reconfiguration based on reasonable expectations for drawing population from various neighborhoods.
- Define the secondary trade area based on ten-minute drive times from the Hardesty site, with some reconfiguration based on reasonable expectations for drawing population from various neighborhoods.
- Utilize Census and ESRI demographic data to determine population by racial / ethnic group in each trade area and amount of disposable income spent on 'Food Outside of Home.'
- Apply reasonable assumptions for the percentage of the population that can be captured in each trade area and the percentage of their disposable income that can be captured by food trucks at the Hardesty site.
- Calculate the total amount of annual income that can be reasonably captured by food trucks operating at the Hardesty site.

The identified market trade areas would serve a mix of ethnicities, as both are populated by diverse groups with varying levels of expendable incomes. Both market areas were also identified as having stronger than average connections to both pedestrian and automobile / mass transit users who would access the Hardesty site and the surrounding neighborhoods. Both areas are also currently being studied for the future implementation of the Kansas City Street Car Line. The following maps illustrate the primary and secondary market trade areas.









The following table summarizes the retail market analysis; the complete analysis is included in Appendix D.

<b>PRIMARY MARKET AREA</b>						
	<b>White</b>	<b>Asian</b>	<b>Black</b>	<b>Hispanic</b>	<b>Other</b>	<b>Total</b>
Disposable Income Spent on Food Outside of Home	\$1,343	\$2,086	\$1,495	\$1,766	\$1,673	<b>\$8,363</b>
% Spent at Food Trucks	2%	2%	2%	2%	2%	
Total Population (with income, age >15)	6,291	2,336	20,091	17,438	12,432	<b>58,589</b>
Amt. Pop. Captured (@ 10%)	629	234	2,009	1,744	1,243	<b>5,859</b>
<b>Total Income Captured</b>	<b>\$16,894</b>	<b>\$9,747</b>	<b>\$60,083</b>	<b>\$61,595</b>	<b>\$41,587</b>	<b>\$189,905</b>
<b>SECONDARY MARKET AREA</b>						
	<b>White</b>	<b>Asian</b>	<b>Black</b>	<b>Hispanic</b>	<b>Other</b>	<b>Total</b>
Disposable Income Spent on Food Outside of Home	\$2,013	\$3,127	\$2,241	\$2,647	\$2,507	<b>\$12,535</b>
% Spent at Food Trucks	2%	2%	2%	2%	2%	
Total Population (with income, age >15)	34,787	1,564	19,045	4,056	3,688	<b>63,140</b>
Amt. Pop. Captured (@ 2%)	696	31	381	81	74	<b>1,263</b>
<b>Total Income Captured</b>	<b>\$28,005</b>	<b>\$1,956</b>	<b>\$17,073</b>	<b>\$4,294</b>	<b>\$3,699</b>	<b>\$55,027</b>
<b>Total Income Captured (Primary + Secondary Areas)</b>	<b>\$44,899</b>	<b>\$11,702</b>	<b>\$77,156</b>	<b>\$65,889</b>	<b>\$45,285</b>	<b>\$244,932</b>

This analysis utilizes conservative assumptions to determine the potential market that food truck-related events could anticipate capturing on an annual basis. These potential income figures are considered in the revenue and expense model outlined in the following Conclusions.

## > Conclusions

HREDC has an excellent opportunity to activate the Hardesty site and create linkages to the community through a regular schedule of food and cultural events hosted on the property. Driving residents to the site at regular intervals through these events would achieve multiple community impact objectives, including promoting the multicultural diversity of Kansas City neighborhoods, particularly the Historic Northeast; contributing to the revitalization of Independence Avenue by making the Hardesty site an attraction; and supporting burgeoning small business enterprises such as food truck operators and cultural artists.

This programming can be held outdoors around Building 11 and thus build synergies with the food wholesaling activity occurring inside the property. However, the Consultants emphasize that these activities are not likely to generate profit, and often barely generate sufficient revenue to cover expenses, particularly in the first year of operations. Moving forward, these events can be expected to break even. Thus, HREDC would need to be motivated by non-profit outcomes – community building and promoting regional food, the site and Historic Northeast neighborhood – and see these events as a loss leader in the near term.

According to local sources, approximately 300 mobile food vendors are operating in Kansas City. Many work for catering special events rather than ongoing operations. The relatively nascent Kansas City Food Truck Association has approximately 18 members and focus on events that gather multiple mobile food vendors; the main example of this activity is First Fridays, a monthly event in the Crossroads neighborhood in which art galleries and food trucks participate. The West Bottoms is another location that attracts trucks on a regular basis.

The First Fridays mobile food vendors event, which is in its third year of operations, offers a useful comparable model for HREDC. The event is managed by Copaken-Brooks, a full-service Kansas City real estate company that owns the property at Wyandotte and 21st Streets, a vacant lot of approximately 11,400 square feet. First Fridays occurs monthly from April through October



(and November if weather permits), from 6 pm to 11 pm, and includes 14 to 16 food vendors, a beer garden and DJ playing music. It attracts between 10,000 and 15,000 visitors each month, and it is not uncommon for trucks to sell out of food. Copaken-Brooks uses approximately ten anchor food trucks and rotates in the others from a group of approximately 30 trucks; these vendors are not all members of the Food Truck Association. Vendors prepare food off-site at their regular kitchen spaces. Initially, food trucks paid a symbolic \$25 usage fee for each event, but this year they are charged either \$90 per event or \$240 for committing from April to July or \$240 from July to October. Meanwhile, Copaken-Brooks' expenses include marketing the event, the DJ, renting porta-potties, running electrical power and securing special events permits from the City. These costs total approximately \$7,500 to \$10,000.

As another comparison, the City Market, which operates downtown and has the benefit of a long history and customer base, brings approximately 65 farmers to fill 150 stalls for its weekend farmers markets. The Saturday market attracts an average of 15,000 customers, while the Sunday market attracts 5,000 customers. The customer base includes both suburban residents who travel downtown for shopping, as well as ethnic customers who come from across the city's neighborhoods. City Market also has contracts with two food trucks for vending during the Saturday market. Separately, the City Market's facility includes a commissary kitchen for mobile food vendors and attracts trucks operating downtown; approximately seven vendors utilize this facility through annual leases.

While developing the programming for food events, HREDC can explore a partnership with the growing Kansas City Food Truck Association or a locally recognized chef who would provide branding and direction to the event. The Food Truck Association is a membership organization and currently represents only a fraction of the total number of trucks and trailers operating in the city, but would provide structure, communication channels, and expertise in the mobile food landscape that could benefit HREDC's site activities.

The management and logistical considerations for HREDC include securing an alcohol permit (required in addition to a



CITY MARKET

special events permit), ensuring that its commercial liability insurance on the property sufficiently covers the additional site usage, and ensuring that all food vendors hold current permits from the City and provide proof of insurance for HREDC as an additional insured on their policies. Marketing costs would fluctuate depending on the media utilized: Facebook can be a highly effective and low-cost tool for promoting the event, though to reach certain populations more conventional means may be needed. A weekend daytime schedule would accommodate families and address any potential safety and lighting concerns resulting from a nighttime event; however, this timeframe would compete with City Market's farmers markets.

In addition, following additional relationship building with mobile food vendors, HREDC can explore utilizing a portion of Building 11 for building out a Food Truck Port at which area food truck operators would dock to obtain supplies, local fresh food products, fuel, refrigerated and freezer storage space, and



KANSAS CITY FOOD TRUCK ASSOCIATION

access to a commercial grade production kitchen. Creation of a retail / restaurant style facility with commercial kitchen space would also support the natural migration of food truck operators to brick and mortar restaurants on site and within the area. Food truck operation support and restaurant retail operations on site could provide and improve area businesses and create a unique local and ethnic food related retail destination for the surrounding community.

A food truck support space has been identified as a need for these vendors, and the Hardesty site should offer a good location with its relative proximity to downtown. In order to attract vendors, price differentiation will likely be a critical consideration. According to a local food truck operator, the use of a restaurant's kitchen facilities can cost between \$100 and \$300 per month. Vendors bring in all of their groceries for storage and food preparation. Thus, a reasonable starting point for HREDC would be to charge approximately \$150 to \$200 per

month for use of the kitchen and storage in addition to \$50 per month for use of secured parking.

In summary, HREDC can achieve multiple goals for the Hardesty property through organizing and hosting food and cultural events on the site. HREDC should not consider this programming as a short-term profit-generating activity; rather, HREDC can anticipate that it will not break even in the initial year or two of operations. However, the expense for the events is relatively modest, and the non-economic benefits – namely, community impact and public relations – suggest that this is a worthwhile use for the organization to consider for the site. Furthermore, in the mid- and long-term, the events can develop into a profitable venture through their synergies with compatible programming on the site.



## 5.5 APPENDIX A: REGIONAL PRODUCERS & RESOURCES

### > Wholesale Produce Auctions

- Central Missouri Produce Auction, Inc., 37808 Highway E Fortuna, Mo. 65034 Tel: 660-337-6227
- Clark Produce Auction, LLC, 1966 Highway Y Clark, Mo. 65243 Tel: 660-264-4555
- Four County Produce Auction 1162 NE 1400 Rd., Windsor, Mo. 65360 Tel: 660-684-6844
- North Missouri Produce Auction, LLC, 32633 State Highway F Jamesport, Mo. 64648 Tel: 660-684-6844
- Southern Iowa Produce, LLC, Ice Ave, Bloomfield, Iowa 52537 Tel: 641-722-3623

### > Specialty Butcher Shops In The Kansas City Area

#### McGonigle's Market

1307 W. 79th Street  
Kansas City, MO 64114

For four generations, the McGonigle family has earned a legendary reputation as a purveyor of America's best steaks in a city famous for steaks. They provide only top grade USDA inspected beef, following a precise family tradition of aging for tenderness and flavor. All meat cutting and trimming is done by skilled master meat cutters. Products are also shipped daily to national customers.

#### Bichelmeyer Meats

704 Cheyenne Avenue  
Kansas City, KS 66105-2087

Five generations of Bichelmeyer's have been providing meat to Kansas City, KS and the surrounding area since the 1890s. Bichelmeyer Meats' harvesting facility processes 10-12 locally grown cattle per week and averages 20 locally grown hogs per week. Operations follow the strict guidelines of the Kansas Department of Agriculture's State Inspections with an inspector present whenever an animal is harvested.

#### The Local Pig

2618 Guinotte Avenue  
Kansas City, MO 64120

A Chef-owned butcher shop located in the East Bottoms area of Kansas City selling only hormone, steroid, and antibiotic free meats, all of which are locally sourced. The meat cases are full of fresh pork, beef, lamb, chicken, and a wide range of sausages. Products are sourced directly from area producers and delivered to Blue Springs Missouri for slaughter. Products are further broken down and turned into specialty butcher cuts, sausages, and other value added items.

#### Dodge City Beef

11101 Johnson Drive  
Shawnee, KS 66203

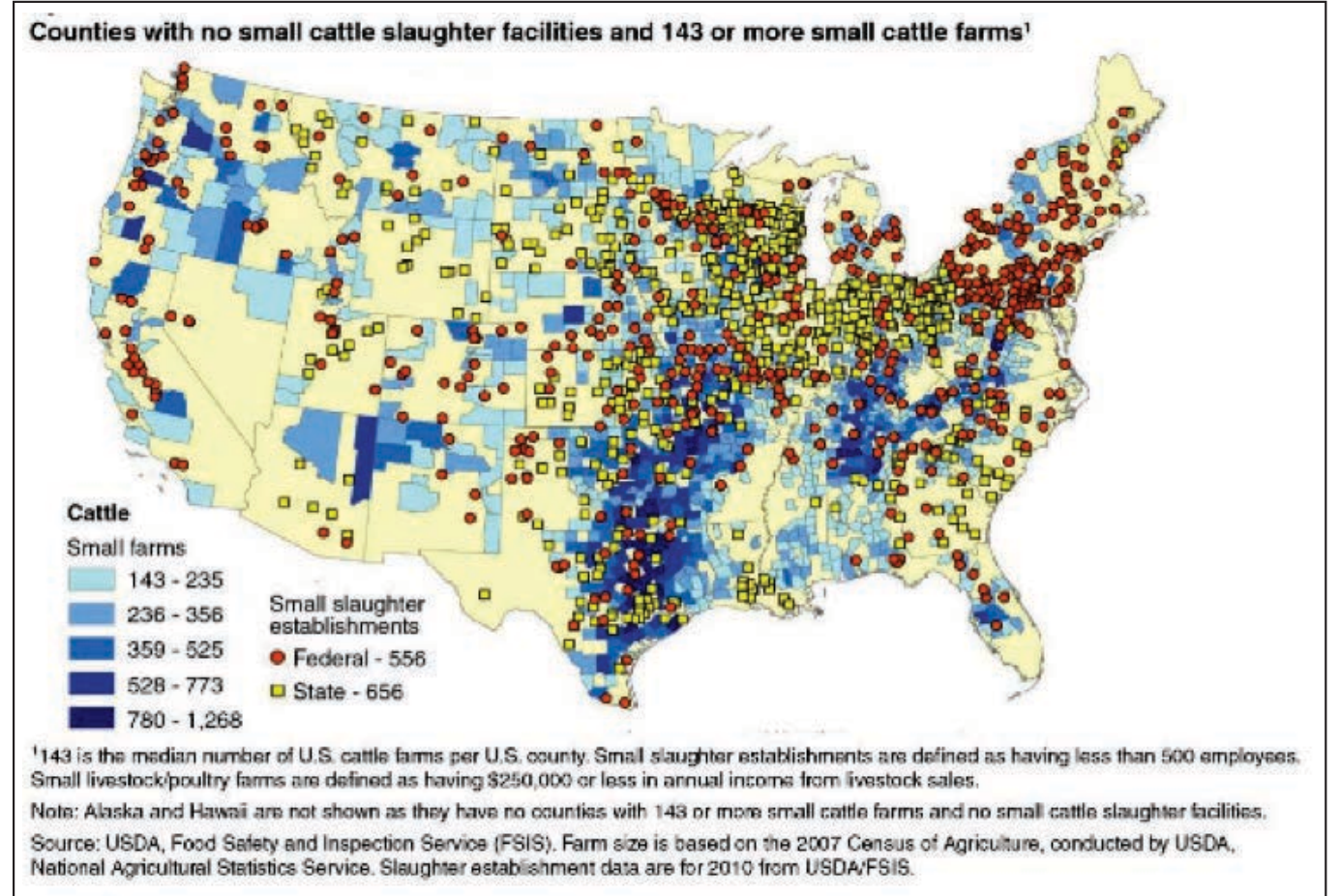
Dodge City Beef sells all natural meat raised on farms in Kansas. All their meat is hand cut and contains no growth hormones or antibiotics. Dodge City Beef carries local beef, buffalo, pork, and lamb and sells direct through their retail store by the pound. Products are individually wrapped, flash frozen, and vacuum packed.

#### Schenker Family Farms

877.632.4470  
[www.schenkerfarms.com](http://www.schenkerfarms.com)

Located in the heart of Southeast Kansas, Schenker Family Farms is a multi-generation working farm that sells beef, lamb, pork, poultry, and more online through internet direct sales and through retail stores in Kansas City, Lawrence, Wichita, and other areas. All animals are allowed to graze freely on several hundred acres of prairie and other specialty grasses. In the winter, the animals are fed hay made from native grasses. They have access to mineral supplements and fresh, clean water year-round to maintain good health. Their Farm is a Certified Naturally Grown farm where no chemical pesticides or herbicides are used. In addition, routine use of antibiotics, steroids and growth hormones is prohibited.

### > Small Slaughter Facilities



#### Broadway Butcher Shop

3828 Broadway Street  
Kansas City, MO 64111

Broadway Butcher Shop is a neighborhood butcher where customers are informed of the origin of their meat, how to prepare it, and what to cook it with. They supply Vintage Natural Beef from Southern California, Duroc Premium Pork from Compart Family Farms in Minnesota, Gerber's Poultry out of Ohio, and fresh fish from the Honolulu Fish Co. in Hawaii. They also make their own Italian sausage, which is a top seller, and they offer deli meats, cheeses, and a house smoked whole boneless turkey breast.



> Locations For Meat Slaughter & Processing In Missouri

Farmland Foods, Inc.  
22123 Highway 5  
Milan, MO 63556

Woods Smoked MEats, Inc.  
1501 Business Highway 54 West  
Bowling Green, MO 63334

Lumley Locker  
109 E. Liberty Street  
La Belle, MO 63447

International Dehydrated Foods  
700 S. Chapel Drive  
Monett, MO 65708

Tyson Foods, Inc.  
19571 Whitfield Road  
Sedalia, MO 65301

Simmons Prepared Foods, Inc.  
10700 south State Hwy 43  
Southwest City, MO 64863

M & M Packing  
1600 Old St. Marys Rd.  
Perryville, MO 63775

Williams Brothers Meat Co.  
302 East 8th St.  
Washington, MO 63090

Golden City Meats, L.L.C.  
400 Vine St.  
Golden City, MO 64748

Ridgeway Freezer, Inc.  
Exit 99 I-35 and A Hwy  
Ridgeway, MO 64481

Cargill Meat Solutions Corpora  
1001 East Smith Street  
California, MO 65018

Swiss Processing Plant Inc.  
2056 Hwy 19 S.  
Hermann, MO 65041

Gibson Packing Co.  
800 Spring Creek Rd.  
Seymour, MO 65746

Butterball, LLC  
411 North Main Street  
Carthage, MO, 64836

Remer Meat Company  
117 W. Rives Road  
Clinton, MO 64735

Tyson Foods, Inc.  
800 County Road  
Monett, MO 65708

Singer Locker Service  
PO Box 412  
Chillcothe, MO 64601

Tyson Foods, Inc.  
1001 Stoddard  
Dexter, MO 63841

College of the Ozarks  
P.O. Box 17  
Point Lookout, MO 65726

Beyond Organic Processing  
1509 East 4th St.  
Mountain View, MO 65548

Tyson Foods, Inc.  
Rt. 1. Highway 59 North  
Noel, MO 64854

Town and Country Butcher Shop  
524 East Water Street  
Palmyra, MO 63461

Dan's Country Meats  
3622 Mill St.  
New Melle, MO 63365

Special D Meats  
30637 Lake Street  
Macon, MO 63552

Campo Lindo Farms  
2390 S. E. 228th St.  
Lathrop, MO 64465

Fruitland American Meat  
3006 State Highway FF  
Jackson, MO 63755

Horrmann Meat Company  
690 Red Top Road  
Fair Grove, MO 65648

Jennings Premium Meats  
125 Broadway  
New Franklin, MO 65274

Brown's Processing  
48 Buckeye Lane  
Elsberry, MO 63343

Paradise Locker Meats  
405 W. Birch  
Trimble, MO 64492

Western's Smokehouse & Meat Mark  
1978 Western Drive  
Greentop, MO 63546

Alewell's Country Meats  
911 North Simpson  
Warrensburg, MO 64093

Wright City Meat Company, Inc.  
363 East North Service Rd.  
Wright City, MO 63390

Zerna Meats, Inc.  
2231 Hwy 100  
Labadie, MO 63055

Triumph Foods  
5302 Stockyards Expressway  
St. Joseph, MO 64504

Star Packing Co., Inc.  
3813 Cote Brillante  
St. Louis, MO 63113

University Of Missouri Abattoi  
Rollins Road  
Columbia, MO 65211

Warner Locker, Inc.  
340 Southeast Offut Rd.  
Maysville, MO 64469

Rutledge Meat Processing  
RR1  
Rutledge, MO 63563

Frickenschmidt Foods LLC  
511 W. 6th Street  
Lockwood, MO 65682

Winter Meat, Incorporated  
110 N. 12th Street  
Blue Springs, MO 64015

Sprague Slaughter House  
26700 Hwy 11  
Brookfield, MO 64628

Hale Meat Locker LLC  
207 Main Street  
Hale, MO 64643

George's Processing, Inc.  
9066 State Hwy W  
Cassville, MO 65625



## > Missouri's Meat Processing Plants Under Inspection

Source: <http://mda.mo.gov/animals/health/inspections/officialplants.php>

Abner Snack Foods 27926 School St Bell City, MO 63735 County: Stoddard (573) 309-2120	Cloud's Meats, Inc. 2013 South Paradise Lane Carthage, MO 64836 County: Jasper (417) 358-5855	Gilbert Meat Locker, LLC 100 N Main St Holden, MO 64040 County: Johnson (816) 732-6431	Hinkebein Hills Farms 434 Whispering Wind Lane Cape Girardeau, MO 63701 County: Cape Girardeau (573) 332-8530	Owen Meat Processing P O Box 305 Urbana, MO 65767 County: Dallas (417) 993-4400	Show Me Farms Gourmet Foods, LLC 7750 East Hwy AB Columbia, MO 65201 County: Boone (573)449-4250
American Halal Meats 4342 Highway E Stony Hill, MO 63068 County: Gasconade (573) 237-4773	Crane's Meat Processing 11657 E Englewood Rd Ashland, MO 65010 County: Boone (573) 657-2501	Golden City Meats 400 Vine St. Golden City, MO 64748 County: Barton (417) 537-8560	Horrmann Meat Company 690 Red Top Rd Fair Grove, MO 65648 County: Dallas (417) 759-2027	Ozark Meats HC 1 Box 45M Grandin, MO 63943 County: Carter (573) 593-4199	Swiss Meat & Sausage Co. 2056 Hwy 19 South Hermann, MO 65041 County: Gasconade (573) 486-2086
Aurora Grand Meats 16686 Hwy 39 Verona, MO 65769 County: Lawrence (417) 678-3902	Davis Meat Processing, LLC 39 Hwy NN Jonesburg, MO 63351 County: Montgomery (636) 488-5227	Hatfield's Smoked Meats 7329 Gateway Dr Neosho, MO 64850 County: Newton (417) 624-3765	J & H Backes Poultry, LLC 229 County Rd 402 Loose Creek, Mo 65054 County: Osage (573) 897-2353	Reis Meat Processing 2470 Hwy C Jackson, MO 63755 County: Cape Girardeau (573) 833-6281	The Butcher Shop, LLC Box 177 Vienna, MO 65582 County: Maries (573) 744-5888
Benne Meat Co. LLC 7497 Logan Rd Hartville, MO 65667 County: Wright (417) 741-1177	Dittmer Meat Packing Company 9145 Ridge Rd Dittmer, MO 63023 County: Jefferson (636) 285-9090	Heintz Processing 2141 Hwy CC Cuba, MO 65453 County: Crawford (573) 732-9938	Josephville Meat Processing 1363 Josephville Rd. Wentzville, MO 63385 County: St. Charles (636) 327-5455	RS & C Processing 3980 E. 320 Rd. P O Box 484 El Dorado Springs, MO 64744 County: Cedar (417) 876-2077	The Deep Freeze 1010 South Westwood Blvd Poplar Bluff, MO 63901 County: Butler (573) 785-2327
Cabool Kountry Meats 90 Industrial Park Dr Cabool, MO 65689 County: Texas (417) 962-2112	Forrest Meat Processing 725 Eagle Norwood, MO 65717 County: Wright (417) 746-4111	Hermann Wurst Haus 234 E 1st Street Hermann, MO 65041 County: Gasconade (573) 486-2266	Miller FFA Cardinal Pride Meats 110 W 6th Street Miller, MO 65707 County: Lawrence (417) 452-3271	Scherf Meat Processing, LLC 1039 Hwy DD Linn, MO 65054 County: Osage (573) 897-9930	
Center Locker Service 108 S. Public PO Box 290 Center, MO 63436 County: Ralls (573) 267-3343	Four Quarters Processing P O Box 375 204 W Main Hwy 154 Perry, MO 63462 County: Ralls (573) 565-2622	Hetherington Meat Processing 803 N Hwy N Clinton, MO 64735 County: Henry (660) 885-4409	Nunan Meat Market 26010 US Hwy 63 Kirksville, MO 63501 County: Adair (660) 956-9428	Shady Maples Farm 17267 Hwy HH Versailles, MO 65084 County: Morgan (573) 378-4387	



## > Missouri Livestock Auctions

### Southwest

- Joplin Feeder Cattle Auction (Mon & Tue)
- Joplin Cow and Bull Auction (Thu)
- Joplin Feeder Cattle Wtd Avg (Tue)
- Joplin Video Auction
- Springfield Cow and Bull Auction (Tue)
- Springfield Dairy Cattle Auction (Monthly)
- Norwood Dairy Cattle Auction (Monthly)
- Springfield Livestock Auction (Wed)
- Springfield Feeder Cattle Wtd Avg (Wed)

### Southeast

- Farmington Livestock Auction (Thu)
- Farmington Feeder Cattle Wtd Avg (Thu)
- Patton Junction Livestock Auction (Tue)
- Patton Junction Feeder Cattle Wtd Avg (Tue)

### Northwest

- Maryville Livestock Auction (Wed)
- Maryville Feeder Cattle Wtd Avg (Wed)
- St. Joseph Feeder Cattle Auction (Wed-Thu)
- St. Joseph Feeder Cattle Wtd Avg (Thu)
- St. Joseph Slaughter Cattle (Mon)
- Show Me Select Heifers (Seasonal)
- Fruitland Replacement Heifer Auction
- Green City Replacement Heifer Auction
- Joplin Replacement Heifer Auction
- Kingsville Replacement Heifer Auction
- Mountain Grove Replacement Heifer Auction
- Palmyra Replacement Heifer Auction

### Southern

- Ava Livestock Auction (Fri)
- Ava Feeder Cattle Wtd Avg (Fri)
- West Plains Cow and Bull Auction (Thu)
- West Plains Feeder Cattle Auction (Wed)
- West Plains Feeder Cattle Wtd Avg (Wed)

### Central

- Boonville Livestock Auction (Wed)
- Boonville Feeder Cattle Wtd Avg (Wed)
- Cuba Feeder Cattle Auction (Wed)
- Cuba Feeder Cattle Wtd Avg (Wed)
- Kingdom City Livestock Auction (Tue)
- Kingdom City Slaughter Cattle Auction (Fri)
- Kingdom City Feeder Cattle Wtd Avg (Tue)
- Kingsville Livestock Auction (Wed)
- Kingsville Feeder Cattle Wtd Avg (Wed)
- Butler Livestock Auction (Fri)
- Butler Feeder Cattle Wtd Avg (Fri)
- Sedalia Livestock Auction (Tue)
- Sedalia Feeder Cattle Wtd Avg (Tue)
- Vienna Feeder Cattle Auction (Thu)
- Vienna Feeder Cattle Wtd Avg (Thu)

### Northeast

- Bowling Green Livestock Auction (Mon)
- Bowling Green Feeder Cattle Wtd Avg (Mon)
- Green City Feeder Cattle Auction (Thu)
- Green City Feeder Cattle Wtd Avg (Thu)
- Macon Livestock Auction (Wed)
- Macon Feeder Cattle Wtd Avg Report (Wed)
- New Cambria Livestock Auction (Fri)
- New Cambria Feeder Cattle Wtd Avg (Fri)
- Palmyra Livestock Auction (Tue)
- Palmyra Feeder Cattle Wtd Avg (Tue)
- Palmyra Slaughter Cattle (Tue)
- Unionville Fdr Cattle Wtd Avg (Wed)
- Unionville Livestock Auction (Wed)

## > Market Outlet For Missouri Dairy Farmers

### Arkansas Dairy Cooperative Association

*Damascus, AR*

- Phone: (501) 335-7204
- Fax: (501) 335-7705
- Coverage: SW Missouri
- Grade A milk

### Central Equity Milk Cooperative, Inc.

*Mountain Grove, MO*

- Phone: (417) 766-6376
- Fax: (417) 926-5818
- Coverage: SW Missouri
- Grade A, manufacturing grade, and organic milk

### Dairy Farmers of America, Inc. (DFA)

*Kansas City, MO*

www.dfamilk.com

- Phone: (816) 801-6455 (800) 279-9122
- E-mail: [webmail@dfamilk.com](mailto:webmail@dfamilk.com)
- Coverage: Missouri
- Grade A milk in Missouri; manufacturing grade milk in certain areas

### Dairymen's Marketing Cooperative

*Mountain Grove, MO*

- Phone: (417) 926-7460
- Grade A milk

### Farmers All Natural Creamery

*Wellman, IA*

www.farmersallnaturalcreamery.com

- Phone: (319) 646-2004
- Coverage: N Missouri
- Fax: (319) 646-6836
- Organic milk

### Lone Star Milk Producers

*Windthorst, TX*

www.lonestarmilk.net

- Phone: (888) 828-7827
- Coverage: S Missouri
- Fax: (940) 378-2571
- Grade A milk

### Prairie Farms Dairy, Inc.

*Carlinville, IL*

www.prairiefarmsdairy.com

- Phone: (217) 854-2547
- Coverage: E Missouri
- E-mail: [icebox@prairiefarms.com](mailto:icebox@prairiefarms.com)
- Grade A milk

### Twin County Dairy, Inc.

*Kalona, IA*

www.twincountydairyinc.com

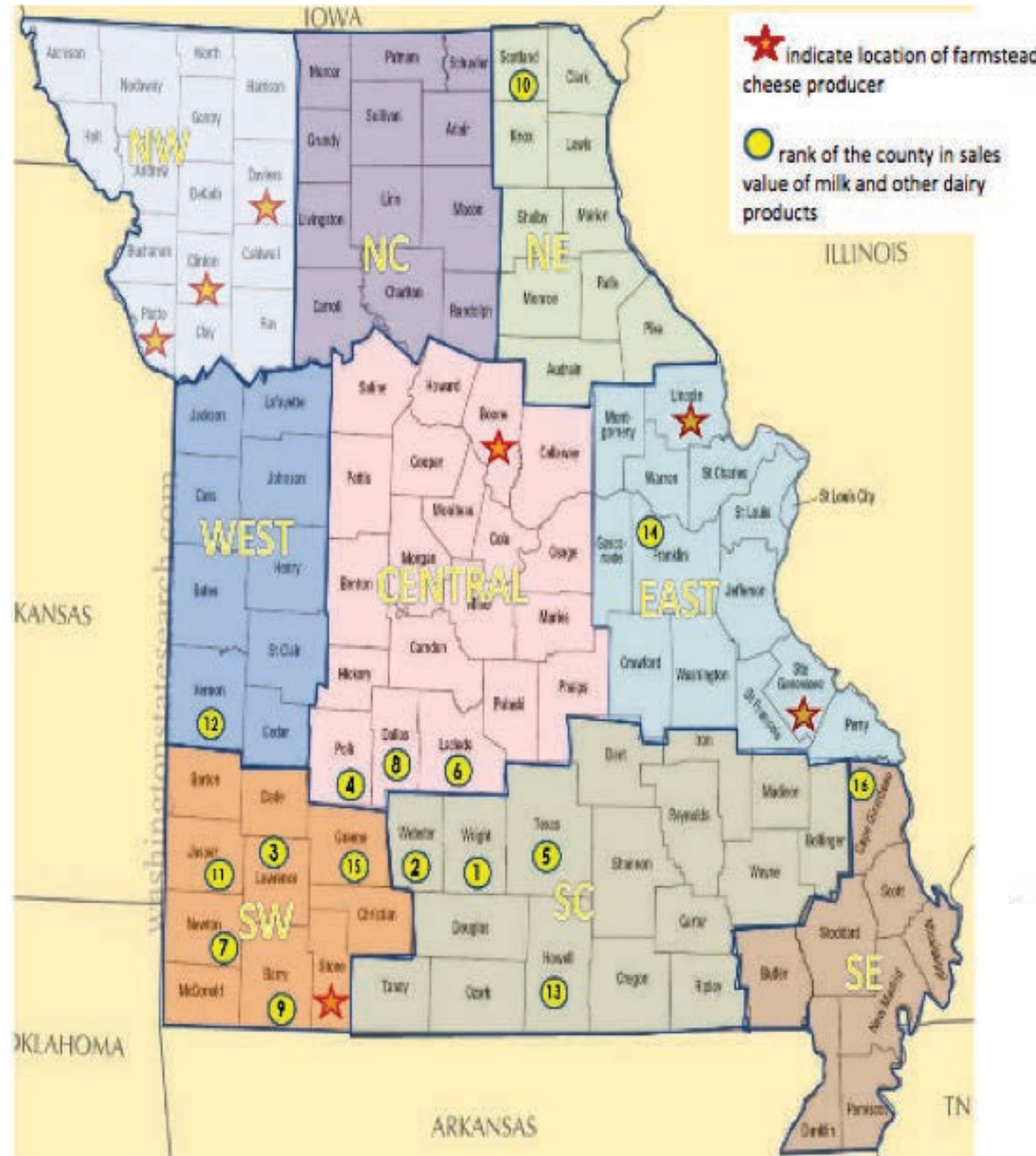
- Phone: (319) 656-2776
- Coverage: N Missouri
- Fax: (319) 656-2761
- Grade A milk

Source: <http://dairy.missouri.edu/buildings/startingadairyguide.pdf>



> Market Artisan Cheese Producers

Name	County	General Background and Description	Cheese products	Retail Channel
Baelje Farms, LLC	Ste. Genevieve	Farmstead artisan goat cheese company	French style award-winning goat cheeses	On premise, grocery chains, farmers market, specialty store
Goatsbeard Farm	Boone	Farmstead artisan goat cheese company	Goat cheeses: fresh rounds, fresh tubs, soft-ripened cheese, feta.	On premise, farmers market
Green Dirt Farm	Platte	Sheep dairy farm and creamery that produces award-winning sheep's milk cheese, yogurt and 100% grass-fed lamb.	Award-winning wash rind, bloomy rind, and fresh cheeses	On premise, grocery chains, farmers market, specialty store, online
Homestead Creamery	Daviess	Wonderful little Amish creamery and cheese shop	Artisan European style cheeses which include sharp cheddar, creamy cheddar, and the tomato and garlic	Own store, on premise
Lavy Dairy Farm/Golden L Creamery	Lincoln	Three generations of dairy farmers involved in dairy farming since 1940	Limited edition Lilette cheese made from unpasteurized raw milk	On premise
Lorenæ Dairy	Stone	Licensed Grade A Raw Dairy in MO	All Jersey full cream cheese curds	On premise, restaurants
Shatto Milk Company	Clinton	A small, family owned and operated, dairy farm who has been farming their land for 100 years. Cheese making started in 2003	Cheese curds	Own store, on premise, grocery chains



AGRICULTURAL DISTRICTS OF MISSOURI



> **Select Honey Suppliers In Missouri**

(Source: National Honey Board)

**Honey Hive Farms**

Winfield MO

**Femme Osage Apiaries**

Foristell, MO

**Hart Apiaries**

Lonedell, MO

**Gibbons Bee Farm**

O'Fallon, MO

**Sundag, Apiaries**

Potosi, MO

> **Fish Processors In Missouri**

**Callaway's Caviar**

Sturgeon and paddlesfish caviar

**Crystal Springs Trout Farm, Inc.**

Fresh rainbow trout

**Show-Me Caviar**

Caviar and fresh river fish

**Show-Me Shrimp Farm, LLC**

Seasonal production of freshwater prawn and tilapia with a prawn harvest festival each fall.

**Troutdale Farm**

Fresh, wholesale or filleted trout to restaurants, grocery stores, and farmers markets. Available year round.

**Warnol Valley lakes Fish Farm, LLC**

Fresh channel catfish

> **Food-Sized Fish or Stockers**

**5 Eaker's Farms**

Grass carp, largemouth bass

**Crystal Lake Fisheries, Inc.**

Rainbow trout

**Crystal Springs Trout Farm, Inc.**

Rainbow trout

**Flowers Fish Farm, LLC**

Channel catfish, grass carp

**Harrison Fishery**

Bighead carp, bluegill, channel catfish, grass carp, largemouth Bass, rainbow trout, tilapia

**Levasy Lake Pond Stocking Service**

Channel catfish

**McMillen-N-Northup Fish**

Channel catfish, grass carp

**Osage Catfisheries, Inc.**

Bighead carp, bluegill, channel catfish, grass carp, largemouth bass

**Raccoon Valley Fisheries**

Bluegill, channel catfish, largemouth bass

**Rainbow Trout and Game Ranch, Inc.**

Rainbow trout

**Troutdale Farm**

Rainbow trout

**Warnol Valley Lakes Fish Farm, LLC**

Bluegill, channel catfish, largemouth bass, rainbow trout

Source: Missouri Beginn Farmers

<http://beginningfarmers.missouri.edu/index.aspx>

All meat and poultry produced for retail in the United States must come from animals that are slaughtered and processed under continuous inspection, meaning that every animal is inspected before and after slaughter. There are three basic categories of inspection:

- Meat from animals slaughtered and processed under Federal Inspection (FI) can be sold interstate.
- Meat from animals slaughtered and processed under State Inspection is limited to intrastate commerce, unless the State and facility participates in the Cooperative Interstate Shipment Program (see box below, "Cooperative Interstate Shipment Program for State-Inspected Meat and Poultry).
- Talmadge-Aiken (TA) plants are slaughter establishments that are inspected by State employees acting as agents for USDA's Food Safety and Inspection Service (FSIS).

In July 2011, USDA's Food Safety and Inspection Service (FSIS) began implementing the Cooperative Interstate Shipment Program, which is intended to expand the market for meat and poultry that is produced in smaller State-inspected slaughter and processing facilities. State-inspected establishments that participate in the program must comply with all Federal standards under the Federal Meat Inspection Act (FMIA) and the Poultry Products Inspection Act (PPIA). Only State-inspected facilities with 25 or fewer employees are eligible for this program. Inspection is carried out by designated State personnel who have been trained in the enforcement of FMIA, PPIA, and Humane Methods of Slaughter Act (HMSA), as well as Hazard Analysis and Critical Control Points (HACCP) inspection procedures. Meat and poultry products inspected under the program bear the official USDA mark of Federal inspection. FSIS provides oversight and enforcement of the program. The law requires that FSIS reimburse the participating States for at least 60% percent of their eligible costs related to inspection. The final rule for the Interstate Shipment of State-Inspected Meat and Poultry Products program can be accessed at: [http://www.fsis.usda.gov/regulations\\_&\\_policies/Interim\\_&\\_Final\\_Rules/index.asp](http://www.fsis.usda.gov/regulations_&_policies/Interim_&_Final_Rules/index.asp).

When it benefits the public interest, FSIS can enter into an agreement with a State agency to have State employees conduct meat, poultry, or egg products inspection or other regulatory activities on behalf of FSIS. The product from a TA plant can move interstate. TA is only active in nine States. Both Federal and State-inspected slaughter facilities follow the same food safety procedures and guidelines, including that plants operate under Hazard Analysis Critical Control Points (HACCP) regulations. State programs must enforce requirements "at least equal to" those imposed under the Federal Meat Inspection Act (FMIA) and the Poultry Products Inspection Act (PPIA), or those established under the Federal system and administered by FSIS (USDA/FSIS, 2008).<sup>4</sup>USDA

The number of slaughter plants has decreased in recent years. In 2010 there were 841 FI slaughter plants in the United States, down from 910 in 2001. According to the NASS annual Livestock Slaughter report, 632 of the FI slaughter plants operating in 2010 slaughtered cattle, 611 slaughtered hogs, and 506 slaughtered sheep or lambs. According to the NASS Poultry Slaughter report, approximately 310 plants slaughtered poultry under Federal inspection in 2010. According to USDA/NASS, a small number of plants account for the majority of cattle, hog, and sheep or lamb slaughter. For cattle, 14 plants account for the majority (greater than 55 percent) of U.S. slaughter. Twelve plants account for the majority of hog slaughter, and 4 plants account for the majority of sheep or lamb slaughter. Additionally, many of these plants are owned by a small number of companies. In many cases, larger processors are vertically integrated and also serve as the retailer or brand-name wholesaler. The majority of slaughter facilities in the United States are small and, all together, account for a minority share of total U.S. livestock slaughter.

In 2009, USDA's Rural Development agency identified areas in the United States where small livestock and poultry operations are concentrated and where there is a lack of small slaughter establishments in their vicinity (both federally and State-inspected). In 2009, USDA's Rural Development agency identified areas in the United States where small livestock and poultry operations are concentrated and where there is a lack of small



## APPENDIX C: GROCERY STORES WITHIN A FIVE MILE RADIUS

slaughter establishments in their vicinity (both federally and State-inspected) (Appendix C). Many producers marketing directly to local outlets typically have smaller operations, raising fewer animals than larger operations that sell into conventional, commodity markets. These small, locally focused producers can perceive a lack of local slaughter capacity as a major impediment to the vitality and profitability of their operations. Lack of nearby slaughter facilities can create logistical impediments to animal slaughter, particularly in being able to transport animals / meat to and from the slaughter plant in a financially practical way.

Most inspected plants are small and process only a small amount of U.S. livestock, but access to inspected processing facilities of the appropriate scale is uneven across the country for small producers – those more likely to sell meat and poultry into local markets. Given the mismatch between

smaller producers and larger plants, many individual producers marketing their meat via niche marketing arrangements must rely on smaller facilities, wherever they are located. Many producers may prefer to use a smaller slaughter and processing facility not only to keep in line with the local foods systems concept but also because a smaller plant is likely to be more flexible in satisfying the producer's individual processing requests. Some potential strategies include the use of mobile slaughter units and the development of local and regional market aggregators.

Source: <http://www.ers.usda.gov/media/820188/ldpm216-01.pdf>

ObjectID	Loc_name	Status	Score	Match_type	Match_addr	Side	X	Y	Disp_Lon	Disp_Lat	Addr_type
1	US_Streets	M	100	A	5206 E 24th St, Kansas City, MO, 64127	R	-94.522174	39.081701	0	0	StreetAddress
2	US_Streets	M	100	A	6300 Independence Ave, Kansas City, MO, 64125	R	-94.508276	39.104857	0	0	StreetAddress
3	US_Streets	M	100	A	721 Paseo Blvd, Kansas City, MO, 64106	R	-94.563385	39.104962	0	0	StreetAddress
4	US_Rooftop	M	100	A	2200 Lexington Ave, Kansas City, MO, 64124	R	-94.555311	39.111078	-94.555301	39.1112	Address
5	US_Rooftop	M	100	A	4422 St John Ave, Kansas City, MO, 64123	R	-94.529261	39.112848	-94.529251	39.11312	Address
6	US_Rooftop	M	100	A	4020 St John Ave, Kansas City, MO, 64123	R	-94.53321	39.112968	-94.533201	39.11324	Address
7	US_Rooftop	M	100	A	1447 Independence Ave, Kansas City, MO, 64106	L	-94.562673	39.106703	-94.562741	39.10611	Address
8	US_Rooftop	M	100	A	2604 E 27th St, Kansas City, MO, 64127	R	-94.552171	39.077108	-94.552161	39.07732	Address
9	US_Rooftop	M	100	A	3400 E 31st St, Kansas City, MO, 64128	R	-94.543312	39.069568	-94.543301	39.06983	Address
10	US_Streets	M	100	A	1112 Troost Ave, Kansas City, MO, 64106	L	-94.569906	39.100499	0	0	StreetAddress
12	US_Rooftop	M	100	A	3719 Independence Ave, Kansas City, MO, 64124	L	-94.538612	39.105844	-94.538021	39.1054	Address
13	US_Rooftop	M	100	A	6421 E Truman Rd, Kansas City, MO, 64126	L	-94.507702	39.093773	-94.507011	39.09346	Address
14	US_Rooftop	M	100	A	3239 Independence Ave, Kansas City, MO, 64124	L	-94.542283	39.105963	-94.542271	39.10573	Address
15	US_Rooftop	M	100	A	303 Grand Blvd, Kansas City, MO, 64106	R	-94.580849	39.110031	-94.580491	39.10997	Address
40					10 E 13th St, Kansas City, MO 64106						
41					114 W 3rd St, Kansas City, MO 64106						
16	US_Streets	M	100	A	424 Locust Ln, Kansas City, MO, 64106	L	-94.578332	39.109935	0	0	StreetAddress
18	US_Rooftop	M	100	A	4808 E 31st St, Kansas City, MO, 64128	R	-94.52801	39.069098	-94.527931	39.06933	Address
19	US_Rooftop	M	100	A	4201 E 9th St, Kansas City, MO, 64124	L	-94.532912	39.101933	-94.532861	39.1017	Address
20	US_Rooftop	M	100	A	2410 Hardesty Ave, Kansas City, MO, 64127	L	-94.520036	39.080842	-94.520551	39.08086	Address
21	US_Rooftop	M	100	A	511 Cherry St, Kansas City, MO, 64106	R	-94.576738	39.10939	-94.576431	39.10934	Address
22	US_Streets	M	100	A	3825 Independence Ave, Kansas City, MO, 64124	L	-94.536962	39.10577	0	0	StreetAddress
23	US_Streets	M	100	A	2203 Lexington Ave, Kansas City, MO, 64124	L	-94.555563	39.111005	0	0	StreetAddress
24	US_Streets	M	78.32	A	3325 E 33rd St, Kansas City, MO, 64128	L	-94.544669	39.06595	0	0	StreetAddress
26	US_Rooftop	M	100	A	5402 St John Ave, Kansas City, MO, 64123	R	-94.518341	39.112469	-94.518341	39.11263	Address
27	US_StreetName	T	88.71	A	E 23rd St, Kansas City, MO, 64108		-94.563658	39.084723	0	0	StreetName
28	US_Streets	M	100	A	3009 Independence Ave, Kansas City, MO, 64124	L	-94.545811	39.106102	0	0	StreetAddress
29	US_Rooftop	M	100	A	2321 Independence Ave, Kansas City, MO, 64124	L	-94.553463	39.106353	-94.553481	39.10603	Address
30	US_Rooftop	M	100	A	5920 Winner Rd, Kansas City, MO, 64125	L	-94.511676	39.102905	-94.511821	39.10313	Address
31	US_Rooftop	M	100	A	2200 E Truman Rd, Kansas City, MO, 64127	R	-94.555881	39.094918	-94.555871	39.0952	Address
32	US_Rooftop	M	100	A	5800 Wilson Rd, Kansas City, MO, 64123	L	-94.514295	39.105427	-94.513741	39.10613	Address
33	US_Rooftop	M	100	A	2839 E 9th St, Kansas City, MO, 64124	L	-94.547332	39.102323	-94.547341	39.10206	Address
34	US_Rooftop	M	100	A	4511 E Truman Rd, Kansas City, MO, 64127	R	-94.529375	39.094074	-94.529431	39.09377	Address
35	US_Streets	M	100	A	4502 E 24th St, Kansas City, MO, 64127	R	-94.530598	39.082234	0	0	StreetAddress
36	US_Rooftop	M	100	A	3821 E Truman Rd, Kansas City, MO, 64127	L	-94.535743	39.094063	-94.536281	39.09383	Address
37	US_Streets	M	100	A	2620 Independence Ave, Kansas City, MO, 64124	R	-94.550559	39.106363	0	0	StreetAddress
38	US_Streets	M	100	A	3615 St John Ave, Kansas City, MO, 64123	L	-94.538484	39.113076	0	0	StreetAddress
39	US_Streets	M	100	A	5402 E Truman Rd, Kansas City, MO, 64127	R	-94.519291	39.094174	0	0	StreetAddress

ZIP_Code	ZIP_Four	Neighborhood	Primary_SIC_Code	Primary_SIC_Description	Primary_SIC_Year_Appeared	Primary_NAICS	Primary_NAICS_Description	Location_Employee_Size_Range	Location_Sales_Volume_Actual	Sales_Per_Sq_Ft	Square_Footage	Square_Footage1	Latitude	Longitude
64127	4707	East Community Team South	541105	Grocers-Retail	2012	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	742000	643.538595	1153	0 - 2,499	39.081645	-94.521937
64125	1543	Sheffield	541105	Grocers-Retail	2008	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	19	2361075	192.9455749	12237	2,500 - 9,999	39.104846	-94.508322
64106	1708	Parkview	541105	Grocers-Retail	2008	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	19	2475000	141.8500688	17448	2,500 - 9,999	39.104988	-94.563413
64124	1608	Pendleton Heights	541105	Grocers-Retail	1997	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	247000	69.69525959	3544	0 - 2,499	39.111186	-94.55541
64123	1738	South India Mound	541105	Grocers-Retail	2003	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	247000	99.63695038	2479	0 - 2,499	39.11311	-94.529322
64123	1716	Scarritt Point	541105	Grocers-Retail	2011	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	742000	303.3524121	2446	0 - 2,499	39.113151	-94.533187
64106	1448	Parkview	541105	Grocers-Retail	2010	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	9	1237000	124.4592011	9939	0 - 2,499	39.106374	-94.562765
64127	3936	Washington Weatley	541105	Grocers-Retail	2007	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	742000	153.2741169	4841	0 - 2,499	39.077322	-94.552164
64128	1634	Ingleside	541105	Grocers-Retail	2012	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	742000	171.7990276	4319	0 - 2,499	39.069694	-94.543339
64106	0		541105	Grocers-Retail	2007	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	9	1237000	201.7944535	6130	0 - 2,499	39.104251	-94.574607
64124	2701	Lykins	541105	Grocers-Retail	2005	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	99	14851000	433.871863	34229	2,500 - 9,999	39.105688	-94.537923
64126	2635	East Blue Valley	541105	Grocers-Retail	2005	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	742000	82.4627695	8998	0 - 2,499	39.093462	-94.507014
64124	2636	Lykins	541105	Grocers-Retail	1998	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	247000	36.93734111	6687	0 - 2,499	39.10573	-94.542272
64106	1106	River Market	541105	Grocers-Retail	1984	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	495000	28.14899062	17585	0 - 2,499	39.109994	-94.580645
64106	1106	Downtown	541105	Grocers-Retail	2009	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	85	1800000	1838.798652	9789	2,500-9,999		
64106	1106	River Market	541105	Grocers-Retail	1995	455110	Supermarkets/Other Grocery (Exc Convenience) Strs	5	980000	293.4131737	3340	2,500-9,999		
64106	1110	River Market	541105	Grocers-Retail	1999	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	9	1237000	50.35824784	24564	0 - 2,499	39.109594	-94.57821
64128	1734	Knoches Park	541105	Grocers-Retail	2011	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	684000	328.2149712	2084	0 - 2,499	39.069179	-94.527935
64124	2821	Lykins	541105	Grocers-Retail	2011	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	584002	388.816245	1502	0 - 2,499	39.101808	-94.532757
64127	4833	South Blue Valley	541105	Grocers-Retail	2009	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	742000	116.813602	6352	0 - 2,499	39.080864	-94.520557
64106	1217	Columbus Park	541105	Grocers-Retail	2002	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	19	2722000	230.6779661	11800	2,500 - 9,999	39.109345	-94.576437
64124	2703	Lykins	541105	Grocers-Retail	2010	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	742000	310.5902051	2389	0 - 2,499	39.105761	-94.536144
64124	1607	Pendleton Heights	541105	Grocers-Retail	2012	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	742000	216.3265306	3430	0 - 2,499	39.110855	-94.555445
64134	0		541105	Grocers-Retail	2012	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	742000	579.2349727	1281	0 - 2,499	38.928248	-94.499214
64123	0		541105	Grocers-Retail	2012	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	742000	53.0758226	13980	0 - 2,499	39.113601	-94.525606
64127	0		541105	Grocers-Retail	2011	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	742000	40.16020784	18476	0 - 2,499	39.087248	-94.545097
64124	2537	Independence Plaza	541105	Grocers-Retail	2008	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	742000	513.1396957	1446	0 - 2,499	39.105811	-94.544977
64124	2314	Independence Plaza	541105	Grocers-Retail	2011	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	742000	121.9792865	6083	0 - 2,499	39.106032	-94.533484
64125	1626	Sheffield	541105	Grocers-Retail	2011	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	9	1237000	87.11881118	14199	0 - 2,499	39.103251	-94.511694
64127	2035	18th And Vine And Downtown East	541105	Grocers-Retail	1992	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	9	1485000	317.239906	4681	0 - 2,499	39.095155	-94.555979
64123	2000	South India Mound	541105	Grocers-Retail	1986	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	249	49506000	923.343778	53616	40,000+	39.106136	-94.513743
64124	2512	Independence Plaza	541105	Grocers-Retail	2012	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	742000	514.5631068	1442	0 - 2,499	39.102066	-94.547348
64127	0		541105	Grocers-Retail	2007	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	9	1485000	598.0668546	2483	0 - 2,499	39.087248	-94.545097
64127	4510	East Community Team South	541105	Grocers-Retail	1984	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	495000	79.56920109	6221	0 - 2,499	39.082268	-94.530507
64127	2231	East Community Team North	541105	Grocers-Retail	2008	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	19	4208000	241.1046811	17453	2,500 - 9,999	39.093958	-94.536283
64124	2434	Pendleton Heights	541105	Grocers-Retail	1984	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	19	4455000	362.6668838	12284	2,500 - 9,999	39.106748	-94.549694
64123	1130	Scarritt Point	541105	Grocers-Retail	2012	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	4	742000	1060	0 - 2,499	700	39.113057	-94.537804
64127	2434	West Blue Valley	541105	Grocers-Retail	1984	445110	Supermarkets/Other Grocery (Exc Convenience) Strs	49	5445000	265.0925024	20540	2,500 - 9,999	39.094164	-94.519359



## APPENDIX D: MARKET AREAS DEMAND ANALYSIS

Primary Market Area	Race				
	White	Asian	Black	Hispanic	Other
Disposable Income Spent on Food Outside of Home	\$1,343	\$2,086	\$1,495	\$1,766	\$1,673
% Spent at Food Trucks	2%	2%	2%	2%	2%
Total Pop (with income, age >15)	6,291	2,336	20,091	17,438	12,432
Amt. Pop. Captured	629	234	2,009	1,744	1,243
<b>Total Income Captured</b>	<b>\$16,894</b>	<b>\$9,747</b>	<b>\$60,083</b>	<b>\$61,595</b>	<b>\$41,587</b>

Study Area 2	Race				
	White	Asian	Black	Hispanic	Other
Income					
Amt. Spent on Food Outside of Home	\$2,013	\$3,127	\$2,241	\$2,647	\$2,507
Pct. Spent at Food Trucks	2%	2%	2%	2%	2%
Population	40,734	1,831	22,301	4,749	4,319
(- Pop > 15)	5,947	267	3,256	693	631
Total Pop (with Income)	34,787	1,564	19,045	4,056	3,688
Amt. Pop. Captured	696	31	381	81	74
<b>Total Income Captured</b>	<b>\$28,005</b>	<b>\$1,956</b>	<b>\$17,073</b>	<b>\$4,294</b>	<b>\$3,699</b>

<b>Total Amt. of Captured Income (EST.)</b>	<b>\$44,899</b>	<b>\$11,702</b>	<b>\$77,156</b>	<b>\$65,889</b>	<b>\$45,285</b>	<b>\$</b>	<b>244,932</b>
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Avg. Amount of Disposable Income for Area (SA1)
<b>\$32,096</b>

Avg. Amount of Disposable Income for Area (SA2)
<b>\$48,108</b>

2%
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SA1 Capture Rate
10%

SA 2 Capture Rate
2%

Expected Rate of Expenditure (Food)	
White	4.18%
Asian	6.50%
Black	4.66%
Hispanic	5.50%
Other	5.21%

\*Based on National Trends and 2009-2010 Census Data. (Sheet 6)



## APPENDIX E: STAKEHOLDER INTERVIEW LIST

- Aquaculture Facility (tilapia), Chillicothe, MO
- Scott Baker, Missouri Food Bank Association
- Diane Binckley and Patty Noll, City Planning and Development
- Ben Blackford, Northwest Missouri State University, Maryville, MO
- Debra Churchill, The City Market
- Diana Endicott, Good Natured Family Farms
- Lorin Fahrmeier, Fahrmeier Farms, Univ. of Missouri Extension
- Harvesters Community Food Network
- Craig Heller, FarmWorks Project
- Charlie Hopper, State of Missouri Department of Agriculture
- Dell Housworth, Ball Food Stores
- Katherine Kelly, Cultivate Kansas City
- Donnie Kirkham, Marysville Livestock Auction
- Sharon Ko, Copaken Brooks
- Micah Kubic, Greater Kansas City LISC
- David Lawrence, Kansas City Food Circle
- Bob Long, Kansas City Economic Development Corporation
- Beth Lowe, Greater KC Food Policy Coalition
- Bill McKelvey, University of Missouri Extension
- Emily Miller, Greater KC Food Policy Coalition / KC Healthy Kids
- Katie Nixon, Small Farm Specialist at Lincoln University Cooperative Extension
- North Missouri Produce Auction, Jamesport, MO
- Bill Pischouta, Local Distributor
- Elizabeth Rosin, Rosin Preservation
- Mark Servaes, St. Joseph Stockyards
- Chris Shea, C&C Produce
- Brandon Simpson, KC Food Truck Association
- Scott Wagner, 1st District Councilman At-Large, City of Kansas City
- Corbitt Wall, USDA, St. Joseph, MO