Regional Food Aggregation Feasibility Study

For

High South Foods Partners, Project Coordinators of the Kentuckiana Food Aggregation Project

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Conducted by the

Kentucky Center for Agriculture and Rural Development

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Executive Summary

In late 2016, High South Foods began work with the Kentucky Center for Agriculture and Rural Development to investigate the Kentucky-Southern Indiana regional market for local foods and determine what opportunities might exist to advance the growth of this market. The goal was to examine the conditions necessary for an aggregator and retailer entity with producer interests in mind to succeed in the region while also providing a roadmap for development of such an entity. The project coordinators surveyed producers, buyers, and distributors along with examining models of other aggregators nationwide in the pursuit of that goal. Below are some of the key findings.

I. Findings from Producers: 145 producers answered the survey.

- The survey was dominated by small-scale producers with 36% having sales of less than $5,000. Of the 128 who answered the question about their sales, 89% had sales of less than $100,000, but 5% did have sales of more than $250,000.
- Over 70% of respondents selling at farmers markets have less than $25,000 in sales at those markets, with 59% of respondents selling at farmers markets having less than just $5,000 in sales at those markets. Just one respondent has farmers market sales of more than $100,000.
- Of the producers selling product on their farm, 77% sell less than $5,000 through those sales. Just three respondents have more than $100,000 in on-farm sales.
- No producers out of the 42 selling to restaurants have more than $100,000 in sales through restaurants. Instead, 74% of those 42 producers have less than $5,000 in restaurant sales.
- Just 20 producers indicate using a distributor. Of those, 9 sell less than $5,000, and only 3 sell more than $100,000 to distributors. Of those selling to a distributor, 24% have sold to that distributor for less than a year, 40% have sold to that distributor for between 1 to 5 years, and 36% have sold to that distributor for more than 5 years. Of those selling to a distributor, 79% indicate that they are either highly satisfied (25%) or somewhat satisfied (54%) with that distributor. Just 2 producers indicated not being satisfied and 3 producers were uncertain.
- The vast majority (87%) expressed an interest in increasing production, with most of those indicating a 5-20% increase.
- When asked what producers would find helpful to their operation, the answer that dominated the responses was by far "Information on potential buyers" followed by "More labor resources," and "Information on production issues."

II. Findings from Buyers: Schools, restaurants, and distributors were interviewed.

Schools: Project coordinators interviewed 18 different school district or university representatives. Of those entities 94% (17) indicated that they purchase local food.

- Schools cited Creation Gardens, Sysco, Piazza Produce, GFS, and Custom Food Solutions as their primary distributors. Some did mention particular farmers from whom they have purchased and many identified different products they have purchased.
- When asked how much local food they would want to purchase in the coming five years compared to their current level of purchases, all of the respondents indicated a desire to increase their local food purchases, with almost half (47%) indicating a desire to increase the amount significantly.
- When asked how satisfied they were with their current ability to purchase local food, most are either very satisfied or somewhat satisfied.

Restaurants: Kentuckiana partners interviewed 20 restaurants for the project. Prospective restaurants were selected from a list of ones known for buying local product. Included within this group were known caterers sourcing local, and several restaurants also provide catering in addition to their in-house dining services.

- Of the restaurants interviewed, all but one (95%) purchases local food.
- Restaurants mentioned using Creation Gardens, Piazza Produce, Marksbury Farms, US Foods, and Sysco as their primary distributor for local foods. However, multiple restaurants mentioned purchasing directly from farmers.
- All 15 restaurants responding to the question indicated they want to increase their purchases of local food in the coming five years, with 9 indicating they would like to increase purchases significantly.
- Restaurants are largely satisfied with their ability to purchase local food, with 13 of 17 respondents indicating that they were very satisfied or somewhat satisfied.
- Restaurants are highly interested or somewhat interested in working with a locally based distributor solely focused on selling local food from farmers in the region.

Distributors: The project coordinators spoke with 6 different entities they identified as distributors. Of the entities interviewed, two have charitable interests and one of those indicated that they do not regard themselves as a distributor. Of the 6 distributors, 5 are currently purchasing local food.

- The distributors were primarily local-based food distributors, with 3 indicating that more than 50% of their buying is local food and 1 indicating that it was less than 1%. They sell to schools, restaurants, groceries, hotels, hospitals, and households.
- Of the four distributors who answered the question of how many producers they were buying from, all of them indicated that they source from between 20 to 50 producers.
- All of the distributors indicated they intend to increase their purchasing of local food either significantly (3) or somewhat (1).
- When asked for their interest in working with a locally based business solely focused on selling local food from farmers in the region, 3 were highly interested, 1 was somewhat interested, and 2 were not interested.

III. Implications of the Findings for the Business

1. Small farms dominate. The vast majority of the producers whom the project coordinators reached have smaller sales than would be advantageous to be producer-suppliers of the project. For those where it could be determined, all of the models examined have average sales per producer of greater than $5,000, and for many of them, it is greater than $15,000.

2. The farms that are selling through a distributor appear to be satisfied with that distributor.

3. Those not selling through a distributor often cite price and their lack of volume or scale as the reasons why. While a new business could play a role in aggregating that volume into more viable amounts, the transaction costs will be considerably higher to do so. Given that the new business will be limited in their ability to offer better pricing given their own smaller scale, this will be a challenge to navigate.

4. Producers are interested in selling to a distributor that offers certain features. However, those features will come with a cost. In particular, producers indicated an interest in contracts and convenience.

5. Buyers (schools and restaurants) also indicate a high degree of satisfaction with their ability to purchase local food, but also indicate a high degree of interest in increasing their purchases over the next five years.

IV. Structures Examined for the Business

The project examined four different structures for a business.

Scenario 1: Centralized Food Hub with Aggregation, Storage, Distribution

This scenario represents a nonprofit traditional food aggregating and distribution hub focusing on 5-10 key products. This model was developed to serve as a base scenario.

Strengths: *Entity would serve as marketing arm fulfilling needs of producers for aggregation point, marketing agency, and distribution and logistics coordinator.*

Weaknesses: *High levels of initial investment are necessary for purchase or lease of facility, trucks, and operating expenses. Volume of more than $1 million is likely necessary to achieve level of sustainability.*

Other Considerations: *While a more traditional "food hub" concept fits many expectations of what an aggregator should do, such aggregation entities have faced significant challenges.*

Because of the producer response with regard to their experiences with distributors, only 15 producers are expected to participate in the first year, growing to 35 in the second year, and 50 in the third year. Average sales per producer in the first year are $15,000, rising to $20,000 in the third year, which is in line with the sales/producer reflected in many of the food hub examples examined in this project.

Labor costs are kept low with two positions (manager and driver) in the first year, adding another operations assistant position in the second year, with costs rising 3% per year for each position. This labor seems insufficient in the third year to support $1 million, but it does represent 15% of sales, which tracks with the average for food hub labor to sales percentage, which is 18%.

With this model, the project will have to rely on over $200,000 in grant funding every year of the project. As scale increases in Year 3, labor must increase as well.

Bottom Line: This scenario faces a net loss of $210,870 in year one and is projected to suffer similar losses each year.

Scenario 2: Multi-Stakeholder Cooperative with a Distribution Partner

This scenario assumes the creation of a multi-stakeholder cooperative with one stakeholder providing key infrastructure in a partnership with the cooperative entity.

Strengths: *Low infrastructure and strong key food service partnership*

Weaknesses: *Dependence on that partner for key aspects of the business, maintenance of the supply chain, distribution, and marketing*

Other Considerations: *Partner must see a sufficient value in the relationship with new entity to justify the arrangement.*

The number of producers grows from 25 producers in Year 1 to 60 producers in Year 3, drawn by the partnership with the stakeholder, presumably a distributor or other entity with sufficient cold storage and existing buying relationships to allow a more rapid acquisition of producers than if the entity is burdened by these responsibilities without the stakeholder present. Labor, utility, and the cost of sales decrease due to the reliance on the food service partner.

The greatest threat to the launch of this particular structure would be the lack of an interested food service partner among the larger distributors in the region who would possess the required infrastructure and existing buyer relationships.

Bottom Line: This scenario faces a net loss of $42,970 in year one, but is projected to reach a small positive net income of $21,032 by year three due to the operational support provided by the distributor partner.

Scenario 3: Sub-Regional/Aggregation Points

This scenario responds to the small-scale diversified agricultural production in the region by establishing smaller sub-aggregation points, located primarily in areas of high concentration of interested producers and relying on key farmer leaders that can help coordinate production.

Strengths: *Responsive to disperse, small-scale agriculture in region*

Weaknesses: *Higher infrastructure costs with greater management necessary to handle logistics*

Other Considerations: *This model could be responsive to small producers and buyers, but the higher costs to serve those smaller scale operations will likely need to be borne by external funding sources for the duration.*

While the scenario relies less on a large food hub, some centralized infrastructure would still be necessary for the sub-regional hubs to join their production to reach delivery points in other sub-regions. However, the business may be able to use smaller existing and underutilized regional commercial kitchen spaces. Labor costs are expected to consist of a driver and competent, active manager to handle the flow of product from the different sub-regions and make sure it reaches its destination.

Producers increase from the base model since the decentralized nature of the structure lends itself to more, smaller producers. However, the sales per producer decreases as well and the cost of sales increases. Ultimately, this model suffers from high costs due to the higher infrastructure needs. These costs must initially be borne by external funding resources, but since the sales never reach a sustainable point, the funding would need to be in place for perpetuity for the business to continue to exist.

Bottom Line: This scenario faces a net loss of $218,320 in year one, a loss that worsens each year due to the expenses associated with running multiple small aggregation sites and coordinating the logistics for those sites.

Scenario 4: Service-Based Facilitation

This scenario eliminates the physical aggregation component of the project, moving toward more of a virtual producer acquisition/buyer assistance concept. The proposed business would provide services targeted to "scale-ready" producers – those producers who are smaller than most distributors want, but who are ready to expand and eager to work with a distributor that is "producer-oriented."

Services provided by the entity could include the following: 1) Assistance with meeting regulatory requirements (mentioned by producers in the survey as something that would make them more likely to use a distributor) particularly as it applies to food safety (mentioned by producers in the survey as a need and one growing in relevance now that the Food Safety Modernization Act is being implemented); 2) Information on potential buyers (mentioned by producers in the survey as a need); 3) Assistance with identifying labor resources (mentioned by producers in the survey as a need); and 4) Logistics assistance (indicated as a need by producers).

> ***Strengths:*** *Low infrastructure, focusing on the indicated needs of the smaller scale producers in the region.*
>
> ***Weaknesses:*** *Entity must demonstrate value to both producer and buyer to become a trusted intermediary that can be compensated enough to cover the costs.*
>
> ***Other Considerations:*** *If the entity can gain trust from viable producers and committed buyers through demonstration of their value over time, this model provides a low-cost alternative to a traditional food hub. However, a key question is whether this exists in a no-cost form from various farm-to-table "matchmaking" services and tools.*

The number of producers would be higher than the base scenario since the project would compensate for the lower sales per producer expected with dealing with "scale-ready" rather than producers at commercial scale already. Commissions of 20% are assumed to pay for the operating expenses.

Bottom Line: This scenario faces a net loss of $16,020 in year one, progresses to a small profit in year two, which grows to a positive net income of $91,743 in year three, provided that the business can obtain 60 producers using the service by that time.

Background

In April 2016, three individuals, Rachel Brunner, Lilias Pettit-Scott, and Laura Tornes, in the Louisville, Kentucky area interested in the development of the local food market came together to form High South Foods, a Limited Liability Corporation, to investigate this market and determine what opportunities might exist to advance the growth of this market while also staying true to several key founding principles. These principles included fair treatment of agricultural producers and development of an enterprise that could exist without continued infusion of external fundraising. Ultimately, the partners engaged in High South Foods seek to provide a missing link in the regional food system in the Louisville area by examining the conditions necessary for an aggregator and retailer entity with producer interests in mind to succeed in the region while also providing a roadmap for development of such an entity.

Considerable groundwork has been laid related to this endeavor through studies conducted in 2008, 2012, and 2016. Additionally, the Grasshoppers Distribution study in 2015 yielded multiple lessons learned as a result of the operational changes and ultimate closure of that business entity in Louisville. Unfortunately, that closure left many small-scale producers skeptical of such producer-minded aggregation models, while putting the burden of marketing and the one-sided risk associated with wholesale sales squarely back on their farms. Meanwhile, buyers in Louisville and around the region continue to express a desire for local product while producers express frustration at the nature of the market they are attempting to serve.

The partners of High South Foods succeeded in securing funding to investigate this initiative through the U.S. Department of Agriculture Local Food Promotion Program grant, awarded in September 2016. Following announcement of this award, High South Foods worked with the Kentucky Center for Agriculture and Rural Development (KCARD) to launch the Kentuckiana Food Aggregation Project, which included a literature review, feasibility study and business development project.

The partners of High South Foods have a strong interest in providing a way for producers and consumers to benefit from their market interaction through consideration of different models. The partners formed an Advisory Board of local producers to advise them on this project and began work with Wildflower Consulting, who has primary responsibility for evaluation of the project.

Note: High South Foods partners adopted the name of “Kentuckiana Food Aggregation Project” during the planning stage, so this report references that name or refers to this project throughout. The individuals who formed High South are referred to as the project coordinators.

Methodology

Project coordinators indicated a strong desire to be deeply involved in the study to see firsthand the conditions of the local food market and also to begin establishing relationships both with producers and with buyers early in the process. Working with KCARD staff, project coordinators accomplished most of the primary data gathering for the project.

The survey and interview instruments were drafted by KCARD and are attached in Appendix A, B, C, D, and E. These documents were provided to the project coordinators for review and feedback, and the coordinators provided them to their Advisory Board for additional review.

Data was gathered through surveys with producers, interviews of buyers, and Census data. This data was used to develop the key assumptions used to determine the feasibility of the project and the nature of the distribution business that would best address the needs expressed.

Project coordinators defined the Project Area by choosing likely areas of production supply in the region and the major roadways. This consists of 89 counties straddling the Kentucky and Indiana borders with one county in Ohio included:

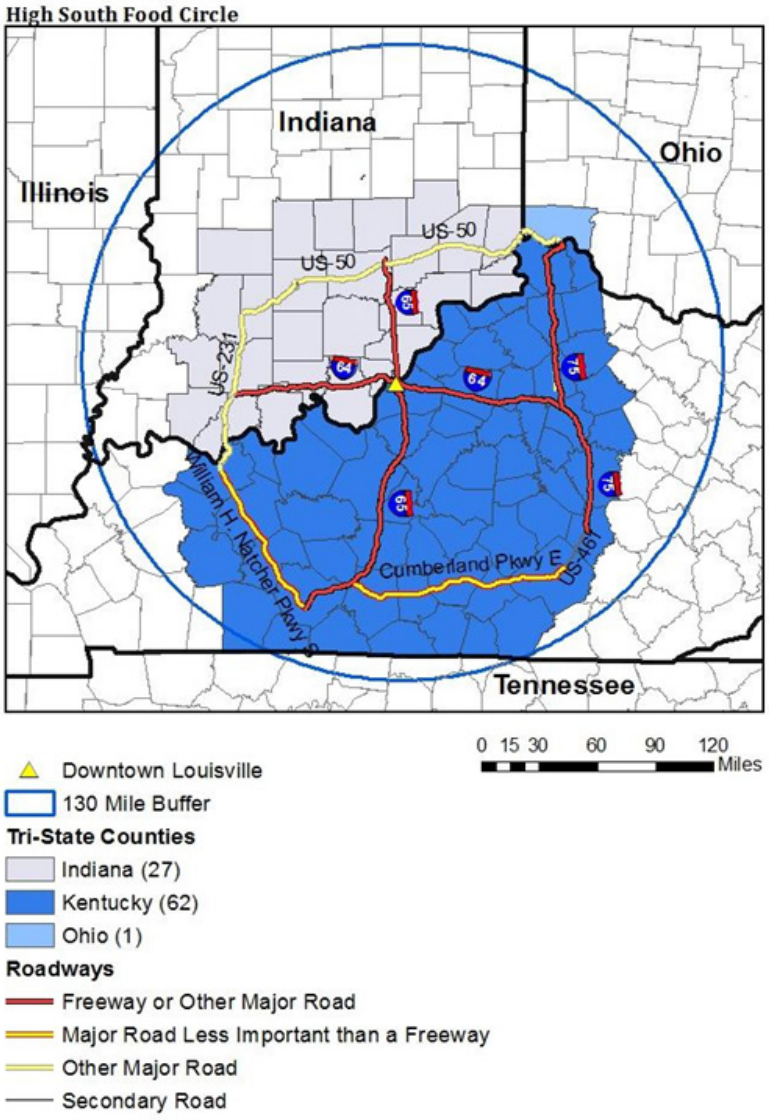
Kentucky Counties:
Adair, Allen, Anderson, Barren, Boone, Bourbon, Boyle, Breckinridge, Bullitt, Butler, Campbell, Carroll, Casey, Clark, Clinton, Cumberland, Daviess, Edmonson, Fayette, Franklin, Gallatin, Garrard, Grant, Grayson, Green, Hancock, Hardin, Harrison, Hart, Henry, Jefferson, Jessamine, Kenton, Larue, Lincoln, Logan, Madison, Marion, McLean, Meade, Mercer, Metcalfe, Monroe, Muhlenberg, Nelson, Ohio, Oldham, Owen, Pendleton, Pulaski, Rockcastle, Russell, Scott, Shelby, Simpson, Spencer, Taylor, Trimble, Warren, Washington, Wayne, and Woodford.

Indiana Counties:
Bartholomew, Brown, Clark, Crawford, Daviess, Dearborn, Decatur, DuBois, Floyd, Greene, Harrison, Jackson, Jefferson, Jennings, Lawrence, Martin, Monroe, Ohio, Orange, Perry, Pike, Ripley, Scott, Spencer, Switzerland, Warrick, and Washington.

Ohio County:
Hamilton

The map below in Figure 1 shows the Project Area along with major highways in the region.

Figure 1: Map of Project Area



Census Data on Production:

KCARD pulled together data for the counties targeted for the project from the USDA Agriculture Census from 2007 and 2012 for several key measures of interest to the project, including the following:

- Number of farms and average and median farm size;
- Number of farms with sales less than $250,000 for 2007 and 2012 (USDA's definition of a small farm);
- Value of Agricultural Products Sold Directly to Individuals for Human Consumption for 2007 and 2012;
- Number of Farms Selling Directly to Individuals for Human Consumption for 2007 and 2012
- Average Net Cash Farm Income for 2007 and 2012;
- Production Levels for Crops and Livestock of Interest to the Project;

- Land Used for vegetables;
- Land Used for orchards;
- Number of farms with orchards;
- Number of farms with beef and dairy;
- Farms with cattle;
- Cattle sales;
- Number of farms marketed products directly to retail outlets;
- Number of farms producing and selling value-added commodities; and,
- Number of farms marketing products through CSAs.

Producer Survey Work:
Beginning in January 2017, the project coordinators began reaching out to agricultural producers in the Project Area to solicit their participation in a survey regarding their production, marketing activities, experience with distributors, and interest in additional marketing channels.

KCARD drafted a survey to go to producers in the region to gauge their current farm sales and marketing status, determine whether they have existing relationships with distributors and the strengths and weaknesses of those relationships, and solicit feedback on what they would like to see in a new producer-friendly distributor business. This survey was reviewed by the project coordinators and the Advisory Board.

The project coordinators distributed the survey through in-person contact at the 2017 Kentucky Fruit and Vegetable Conference, online through intermediaries such as farmers market managers and extension agents, online through direct emails to producers, and mailed surveys to known producers in the region. The project's coordinators aimed to have 100 respondents in each of three major subregions of the projects (Indiana, Kentucky east of I-65, and Kentucky west of I-65).

The High South project coordinators began distributing the survey at the Kentucky Fruit and Vegetable Conference sessions and through e-mail to a producer list they developed consisting of 203 producers. Through this effort, 28 answered surveys were mailed or provided in hard copy form to the project coordinators and 43 surveys were taken through the initial online survey.

KCARD provided a list of 123 email addresses of farmers market managers in Kentucky in the Project Area, taken from the Kentucky Department of Agriculture site. On February 7, project coordinators sent an email to these 123 email addresses, which resulted in 30 online responses.

KCARD provided a sample of randomly chosen Kentucky Proud members (500) producing farm products in the Kentucky counties in the Project Area. The list was generated from the online Kentucky Department of Agriculture database. The project coordinators sent survey links to these contacts. Following this distribution, KCARD developed another sample of additional randomly chosen Kentucky Proud members (450) to improve the number of responses. Coordinators emailed the survey link to these producers, of which 42 responded. The survey was also emailed to Indiana Extension agents in the target region of the state, with 2 responses generated from that effort.

In total, 145 producers answered the survey that was provided. The challenge of securing producer responses is consistent with past experiences by both KCARD and other data-gathering efforts. KCARD has identified a number of reasons for this lack of response:

1. Producers are busy and not sitting at a computer all day, making it difficult for them to take a quick survey.
2. Response rate tends to be lower on local food-related efforts since the short and medium term benefits to producers can often be hard to see (as opposed to a survey on a new grain elevator or meat processing facility, which are very tangible projects).

3. Producer response to surveys is falling over time. A January 2017 University of Illinois publication discusses the falling response rates on USDA/NASS crop surveys in the past 20 years with an acceleration in the decline in the past five years (Johansson, Effland, and Coble). Whether this is due to survey fatigue (too many surveys) or some other cultural phenomenon is unclear.

To address this lack of response, KCARD uses Census data to create more robust production information and contrast it with producer survey data received. KCARD also encourages projects to have direct and frequent contact with producers expected to be their target users for the project, especially since many of these producers are smaller scale, and the Census does not always capture the niche sectors in which these producers often operate. High South project coordinators engage with an Advisory Board of producers, are stepping up their efforts to reach more producers, and expect to continue to do so following the release of this study.

Buyer Research:
KCARD compiled a list of distributors (21 identified), institutional buyers (75 identified), and non-institutional buyers (131 identified) and provided that list to the project coordinators. Additionally, project coordinators provided their own list of such targets.

KCARD drafted a survey for these different groups with slight modifications based on the nature of the buying. These surveys were designed to solicit information about local food purchasing, interest in local food by these buyers, and feedback for how local food purchasing could increase by these buyers. This survey was reviewed by the project coordinators and the Advisory Board.

Project coordinators conducted most of the interviews, and KCARD input them into an online survey collection tool. KCARD staff assisted with completion of some interviews.

Additional Research for the Project:
The project's coordinators, in consultation with KCARD, conducted an initial literature review of the studies of local food relevant to the project, especially those studies concerning the Louisville region. This review informed the development of the surveys for the producers and helped target areas on which the project could focus.

In early May, based on the conversations held with multiple buyers and their stakeholder group, project coordinators identified models of food aggregation that seemed better suited to the feedback they had received both on a supply and demand side. Models were identified by project coordinators as entities that appear to be making a profit, have been around for longer than three years, and are referenced in multiple reports on food hubs. Models rejected are entities that are heavily reliant on grant funding, appear not to be reaching a level of operations where it was supporting the business, and were more consumer-focused. In other words, the entity was coordinating between farmers and consumers more so than aggregating and delivering on a larger scale.

Development of Financial Projections:
KCARD used the research on expected supply and demand to develop revenue and cost estimates and modified those estimates based on the models chosen by the project coordinators for consideration. These estimates were compared with other food hub studies and modified as appropriate.

Supply of Food from Producers in Region

The Project Area is dominated by many small farms in 91 counties of south central Indiana and central region of Kentucky, stretching over into the southwestern section of Ohio. Many farms in this region did raise tobacco, and many still do.

A. USDA Census Data

The U.S. Department of Agriculture conducts a comprehensive Census of Agriculture once every five years, and the last one occurred in 2012. This Census is often the best county-level data available given the number of Census reports filled out by agricultural producers nationwide.

The Project Area contains over 68,000 farms (68,116) based on the last 2012 Census, with an average farm size of 163 acres. However, the median farm size is much lower than the average, with the median averaging just 69 acres in counties in the Project Area, suggesting that a relatively few larger farms are skewing the average. To qualify as a farm for purposes of the Census, the farm just has to sell just $1,000 in farm products on average, so the number of farms includes many operations that are largely hobby in nature.

The vast majority of these farms (64,688 or 95%) have sales of less than $250,000. The average net cash farm income was just $12,984, but this average is skewed as well as the smaller hobby farms pull down the net cash farm income total. Average net cash farm income for the Project Area declined from 2007 to 2012 by 31% in the Project Area though some counties saw increases during this period.

Certain enterprises are prominent on many farms in the Project Area, most notably cattle production. Over 35,000 (35,203) farms in the Project Area had cattle in 2012, over half (52%) of the total farms. The percentage of farms with cattle varies greatly by county, however, with a low of 17% in Pike County, Indiana and a high of 79% in Monroe County.

Direct sales of farms from the region totaled $18.3 million in 2012, a small increase over 2007, when they amounted to $18.1 million. Direct sales are still a tiny portion of the total market value of products sold from these farms, $4.9 billion in 2012, with 68 of the counties reporting less than 1% of the sales coming from direct sales. Some counties in the region have over 3% of sales from direct sales: Monroe (Indiana), Oldham (Kentucky), Kenton and Campbell (Kentucky). Despite direct sales having a larger role in the agricultural economy of these counties than in other areas of the Project Area, these counties still have a relatively small impact on direct sales in the region since their overall level of agricultural sales is much lower than the average. For example, Kenton County in Kentucky has just over $5.2 million in market value of agricultural products sold, compared to the county median of $40 million. Counties reporting more than $500,000 in direct sales in 2012 include Hamilton (Ohio), Daviess and Clark (Indiana), Warren, Shelby, Pulaski, Madison, and Allen (Kentucky). Total agricultural product marketed in all of these counties except Daviess County in Indiana and Hamilton County in Ohio greatly exceed the $40 million county median level for the Project Area.

Direct sales are increasing somewhat, but the number of farms selling directly to consumers has increased very little in the region, growing just 3% from 2007 (3,300 farms) to 2012 (3,395 farms). Some counties again outperformed with many more farms choosing to sell locally, with Ohio, Daviess, and Clark (Indiana) and Wayne, Scott, Oldham, McLean, Hancock, Gallatin, Fayette, and Clark (Kentucky) posting

more than 50% of farms selling direct in 2012 than in 2007. These gains are offset by the many counties who dropped in number of farms selling direct, with the average county growth rate being just 10% in the number of farms selling directly to consumers. Just 356 farms (0.5%) marketed product through Community Supported Agriculture (CSA).

Of the 11 million acres on farms in the study area, just under 8,500 acres (8,496) were planted to vegetables for sale and just under 3,000 acres (2,878) were planted in orchards.

Farms marketing directly to retail outlets are described in the Census as "including restaurants, grocery stores, schools, hospitals, or other businesses that in turn sell directly to consumers". Of the 68,116 farms in the Project Area, just 1.8% (1,228) marketed directly to such retail outlets. Significantly more indicated that they had produced and sold value-added products in 2012, with 3,600 farms (5.3%) having sold value-added product.

These numbers may undercount direct sales. The 2012 Census indicated that 1,341 farms in Kentucky reported marketing directly to retail outlets and 3,438 farms reporting selling agricultural products directly for human consumption for a value of $16.4 million. In 2015, USDA began additional data collection on local food sales and identified 3,227 farms in Kentucky directly marketing product for human consumption with a value of $65.4 million in sales. The number of farms did not change dramatically in the two periods (and mirror the 2007 number of 3,445), but the dramatic increase in sales is hard to explain. Accurate sales estimates for cash-based businesses can be difficult to acquire from survey respondents.

B. Producer Survey Results

Producers who filled out the survey instrument vary greatly as expected from the Census data, given that they were not a randomly chosen sample. Producers who were provided the survey were more likely to be engaged in fruit and vegetable production and more likely to be already selling at a farmers market or through other local sales venues.

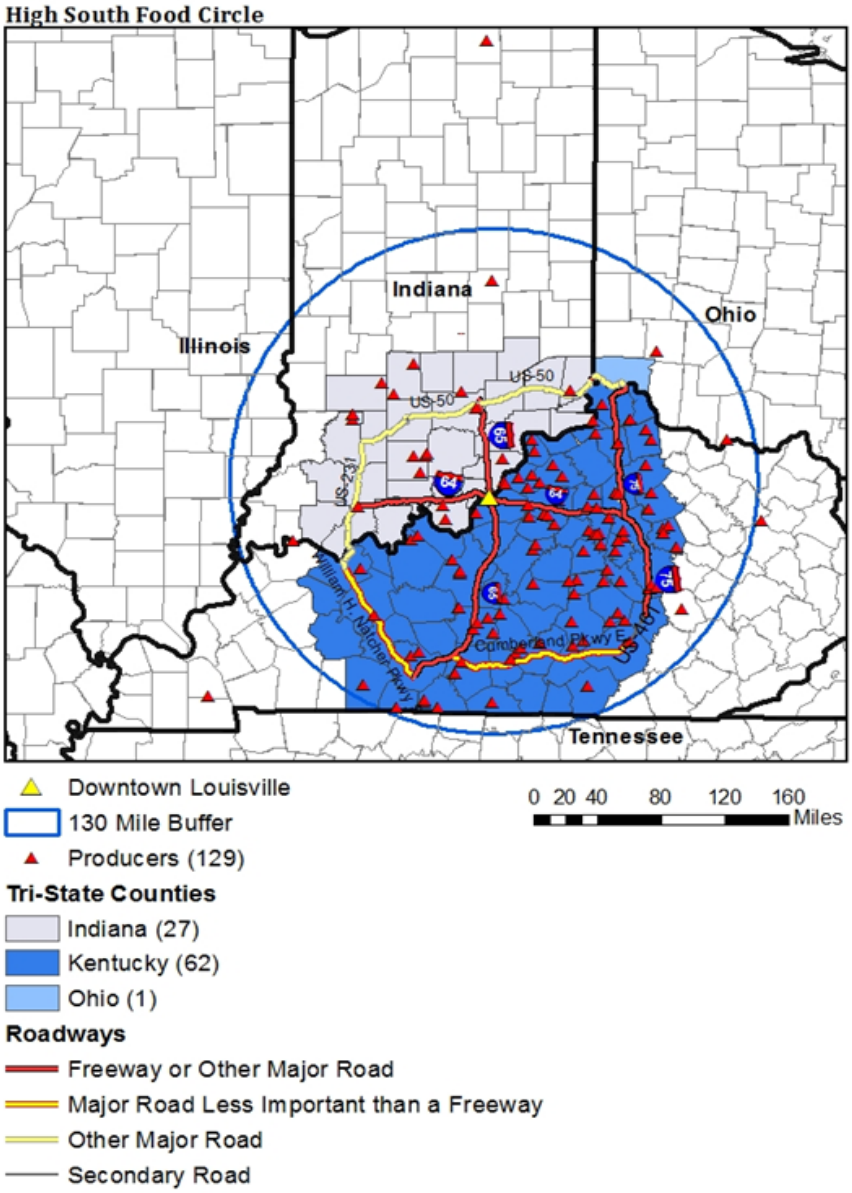
Profile of Producers Answering the Survey

Of the 145 producers who answered the survey, 129 provided their location such that they could be placed on the map below (either address, city or county) as shown in Figure 2. Of these producers, most raised vegetables (77%) and just under half raised fruit (44%). Significantly, almost 32% produced and sold meat (which did not include live animal sales in the question), and 30% produced and sold value-added product. Many (39%) indicated selling other items not identified in the survey, including eggs, maple or sorghum syrup, plants, mushrooms, soaps, and other products.

The survey was dominated by small-scale producers with 36% having sales of less than $5,000. Of the 128 who answered the question about their sales, 89% had sales of less than $100,000, but 5% did have sales of more than $250,000.

Producers answering the survey indicated a relatively low number of years of experience with 31% with less than 5 years of experience, and just under half (48%) with less than 10 years of experience.

Figure 2: Map of Producers Indicating Location

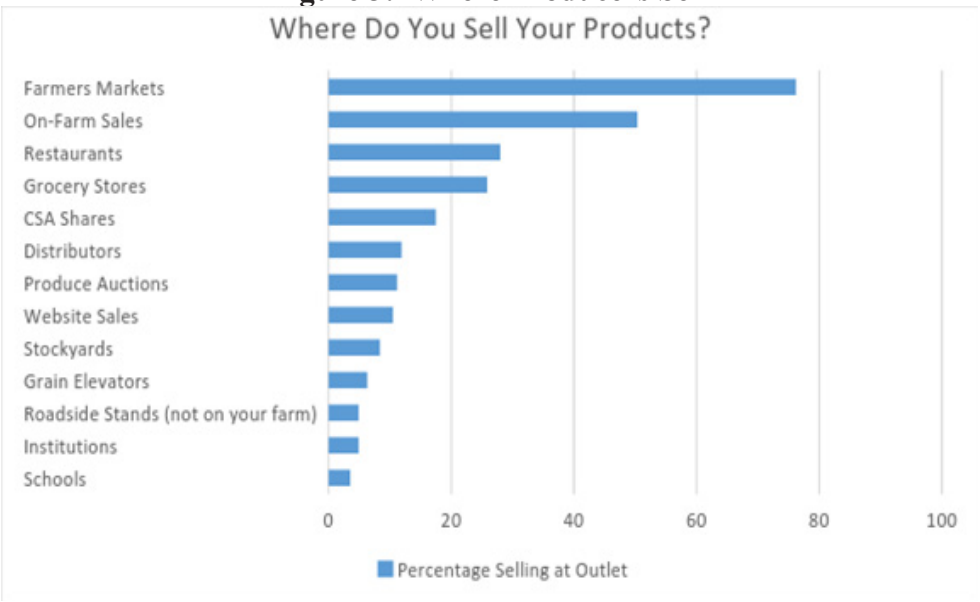


Marketing Channels

Existing marketing channels for producers in the region are much more numerous and diverse than they were 10 years ago. That poses both opportunities and challenges for a new distributor. A new distributor must offer a more beneficial arrangement for producers than they currently have, adequately compensating producers for their product while keeping costs sufficiently low to cover the costs of making the market work for those producers.

When asked where they sell, farmers markets, on-farm, restaurants, and grocery stores dominated as indicated in the table below.

Figure 3: Where Producers Sell



Producers responding to the survey indicate selling at a wide variety of farmers markets across the region. Most respondents (84%) sell at least some product through farmers markets.

Few producers are selling through the schools. The three producers selling to schools indicated selling to Jefferson County (KY), Warren County (KY), and Elizabethtown Independent (KY).

Distributors identified as markets by the producers in the survey include the following:

Cabbage Inc. (1)
DFA (1)
Green Bean (1)
Home Grown Direct (1)
New Roots/Fresh Stop (2)
Ohio Valley Food Connection (1)
Piazza Produce (1)
Town and Country (1)

Produce auctions receiving product from these producers include the following:

Lincoln County (4)
Hart County (4)
Bath County (3)

With regard to sales at each outlet, several additional points bear mentioning:

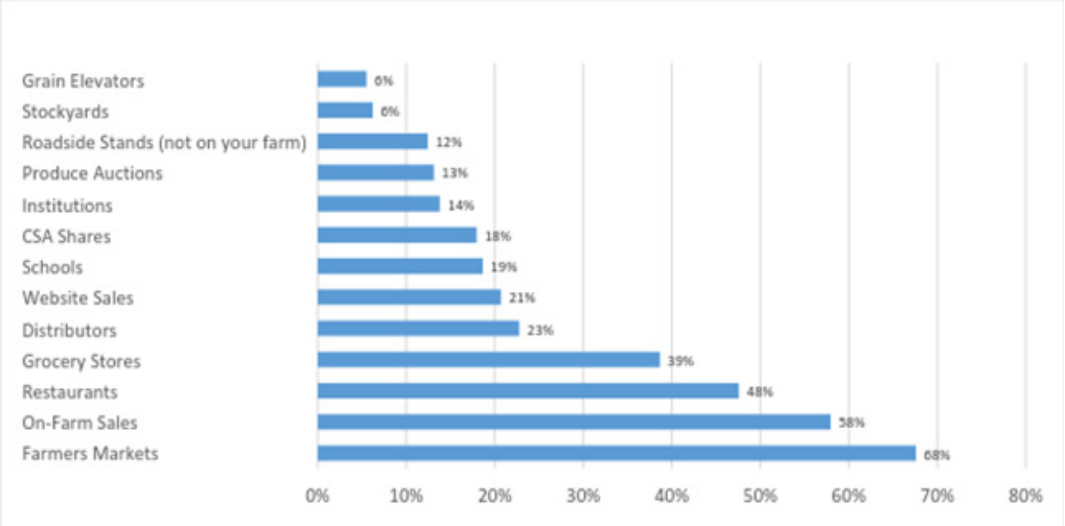
- Over 70% of respondents selling at farmers markets have less than $25,000 in sales at those markets, with 59% of respondents selling at farmers markets having less than just $5,000 in sales at those markets. Just one respondent has farmers market sales of more than $100,000.
- Of the producers selling product on their farm, 77% sell less than $5,000 in those sales. Just three respondents have more than $100,000 in those sales.

- No producers out of the 42 selling to restaurants have more than $100,000 in sales through restaurants. Instead, 74% of those producers have less than $5,000 in restaurant sales.
- Only one producer is selling more than $100,000 to grocery stores. One-quarter of all respondents are selling to grocery stores, but those sales are concentrated in less than $5,000 total (25%).
- Just 20 producers indicate using a distributor. Of those, 9 sell less than $5,000, and only 3 sell more than $100,000 to distributors.

When asked to consider their 2015 sales compared to their 2016 sales, the majority of producers selling at farmers markets increased their sales, as did the on-farm sales.

As shown below, many producers are wanting to increase their sales at a variety of outlets.

Figure 4: Producers Wanting to Increase Sales, by Percentage of Producers



Producers had the opportunity to offer their biggest complaint of their current markets:

"Some greenwashing, not totally transparent to public about reality of farm relationships"
"Transportation, volume, and delivery"
"Time required to coordinate sales, inconvenience of how sales break up the work day"
"I would prefer to sell more directly to grocery stores."
"They are not year-round and some limit what I can bring because other vendors have the same thing."
"Inconsistent sales"
"Farmers markets are not fair."
"People automatically equate local with expensive. The local food market appears trendy. I would like to see it appear as the norm."
"Not consistent, demand does not always meet supply"
"Inconsistency"
"No place for seconds or below standard produce"
"Market is not predictable. We want to start contracting or raising what the buyer wants."
"Unpredictability"
"Fluctuating prices"
"Not having the manpower to keep the farm stand open.
"Sometimes we have more product than we can sell."
"Would like a more consistent wholesale market outlet"
"Not enough time to do the work"

"Inconsistent customers"
"Would like to sell more; I'd rather someone else do the marketing."
"Restaurants barely buy enough to make delivery worth it. We have to deliver to each restaurant, sometimes less than $100 worth of produce"
"Unpredictable, would rather have product sold before it's harvested (i.e. contracts)"
"Unstable prices"

When asked what the best aspect of their current market was, producers offered a lot of input and identified several recurring themes. The most common words used by producers referenced flexibility, consistency, and desired pricing.

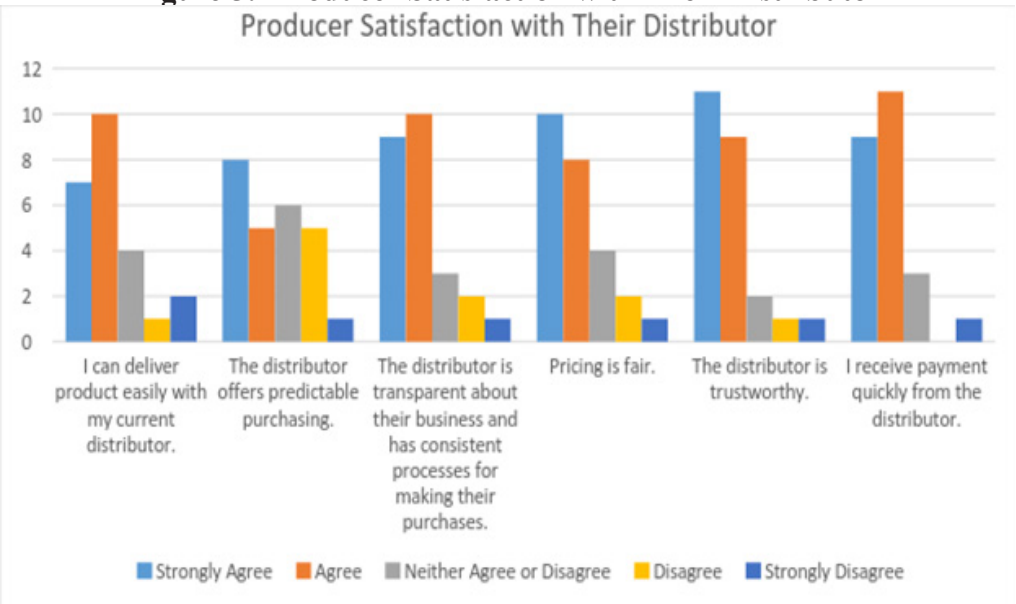
Distributor Relationships, Satisfaction, and Interest from Producers

Of the 145 respondents who answered the survey, just 26 (18%) are selling to a distributor currently. Of those respondents, 24% have sold to that distributor for less than a year, 40% have sold to that distributor for between 1 to 5 years, and 36% have sold to that distributor for more than 5 years.

Of those selling to a distributor, 79% indicate that they are either highly satisfied (25%) or somewhat satisfied (54%) with that distributor. Just 2 producers indicated not being satisfied and 3 producers were uncertain.

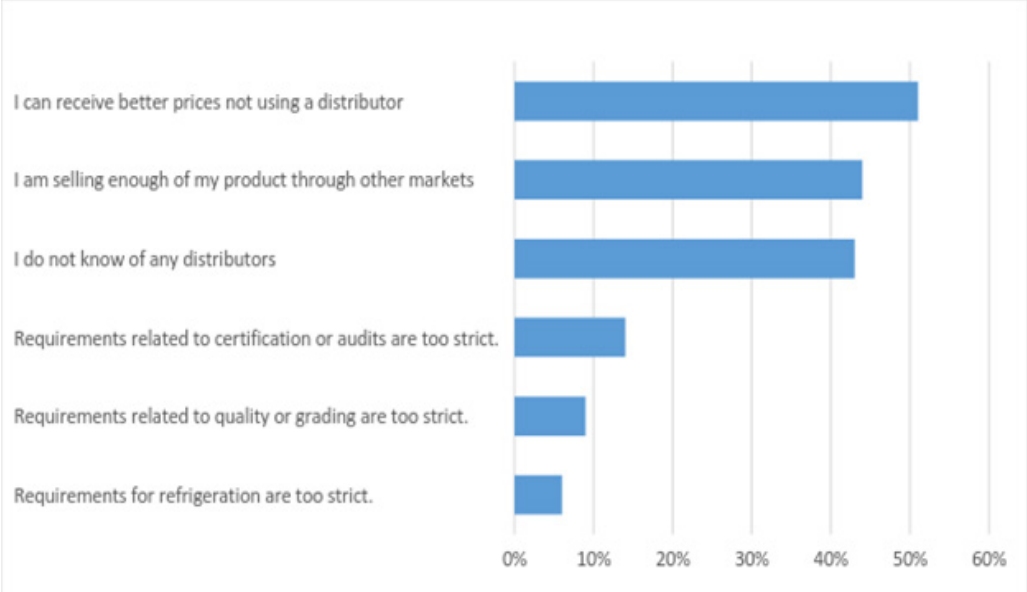
Producers selling through distributors were asked how satisfied they were with different aspects of their distributor relationship. The chart below shows that generally, most producers were satisfied with the aspects discussed.

Figure 5: Producer Satisfaction with Their Distributor



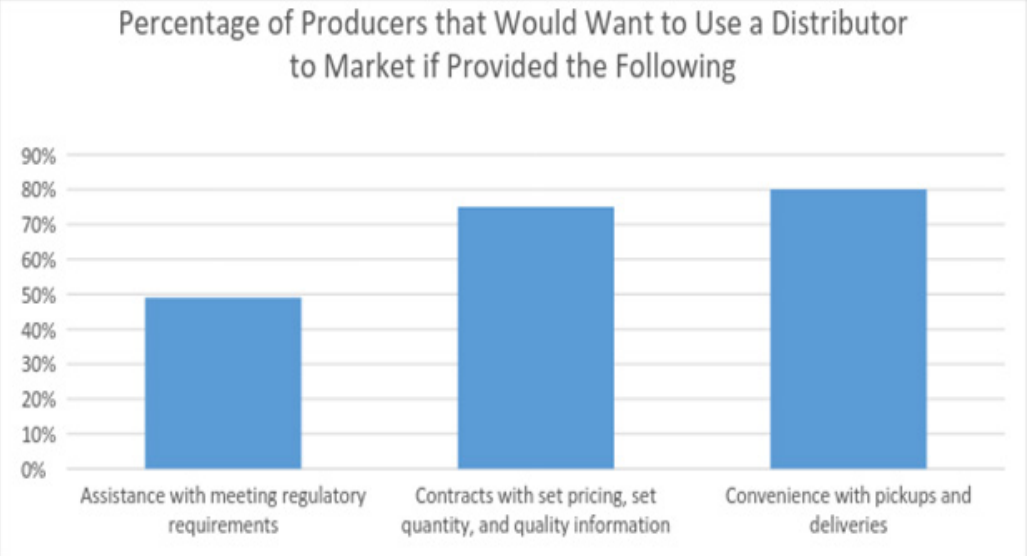
Producers not selling to a distributor were asked why and presented reasons for why that might be the case. As shown below, the majority believe that they can receive a better price without a distributor, and a significant proportion are selling enough of their product through other markets (44%). However, a significant proportion also indicate that they do not sell through distributors because they do not know of any (43%). When asked for other reasons, many producers indicate that "volume", "quantity", and "scale" are the primary reasons not to sell through a distributor.

Figure 6: Reasons for Not Selling Through a Distributor



When presented with some different characteristics and asked if those characteristics would make the producer want to use a distributor, producers indicated that a couple would very much make them want to use a distributor.

Figure 7: Characteristics Needed from Producers Wanting to Use Distributor

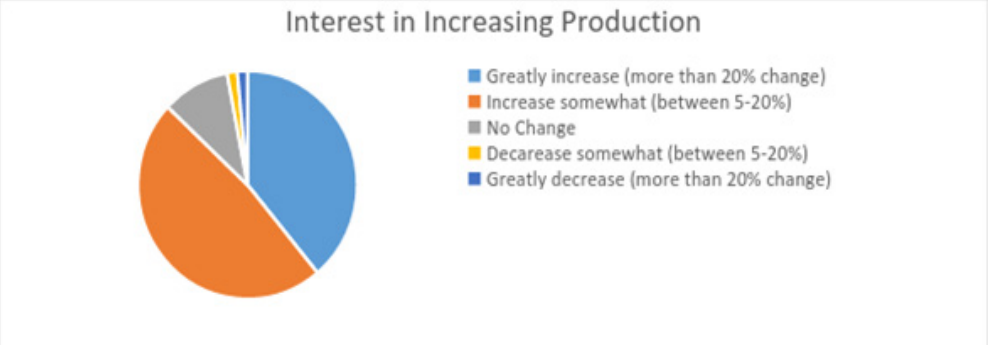


When asked what was important to them in a producer-distributor relationship, producers emphasized trust, price, honesty, and communication.

Interest in Expanding Production and Whether a New Buyer Changes That Interest

Respondents were all asked how much they plan to change production in next five years. The vast majority (87%) expressed an interest in increasing production, with most of those indicating a 5-20% increase.

Figure 8: Producer Interest in Increasing Production



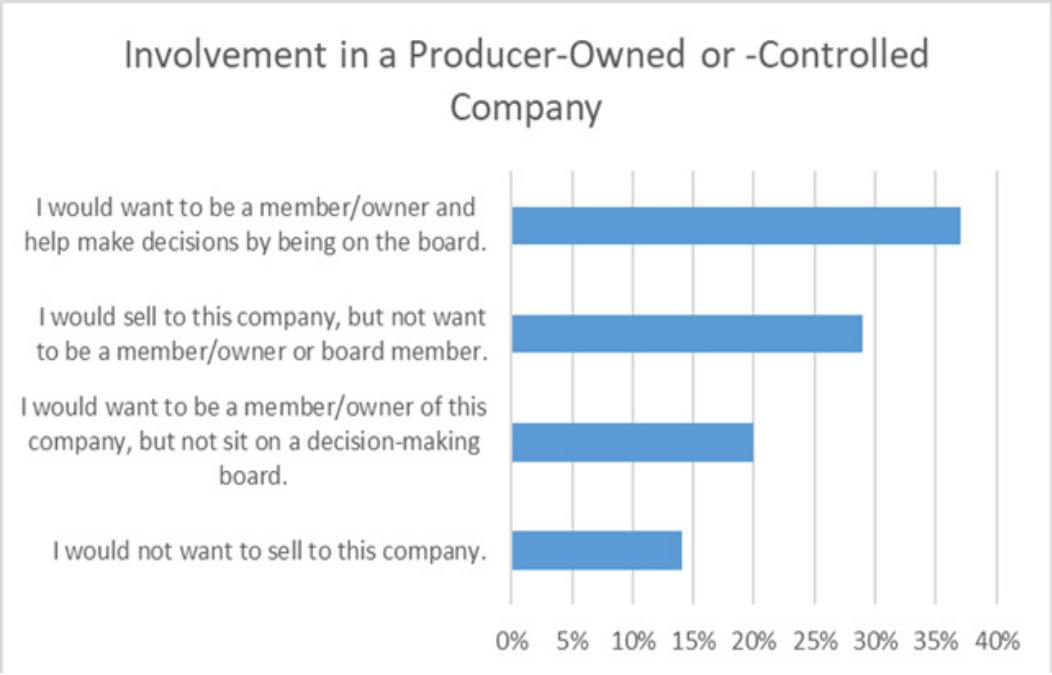
Then producers were asked how much their production would change in the next five years IF they were able to secure a new buyer that would offer a contract with predictable and profitable pricing and quantity. No producers indicated that they would decrease production in this scenario, and the percentage wanting to increase their production by over 20% increased from 39% of the respondents to 55% of the respondents.

Interestingly, of the 17 producers who initially indicated no change or decrease in the first question, 10 changed their mind when presented with the "new buyer providing a contract". Of those producers, 5 have sales of more than $25,000, 2 have sales of $100,000-$250,000 and all of them had over 10 years of experience.

Structure of Business

Producers were asked their level of interest in being a part of a producer-owned or producer-controlled company and presented different options for that involvement. The majority (57%) indicate an interest in being a member/owner, with a minority (14%) that they would not sell product to this company.

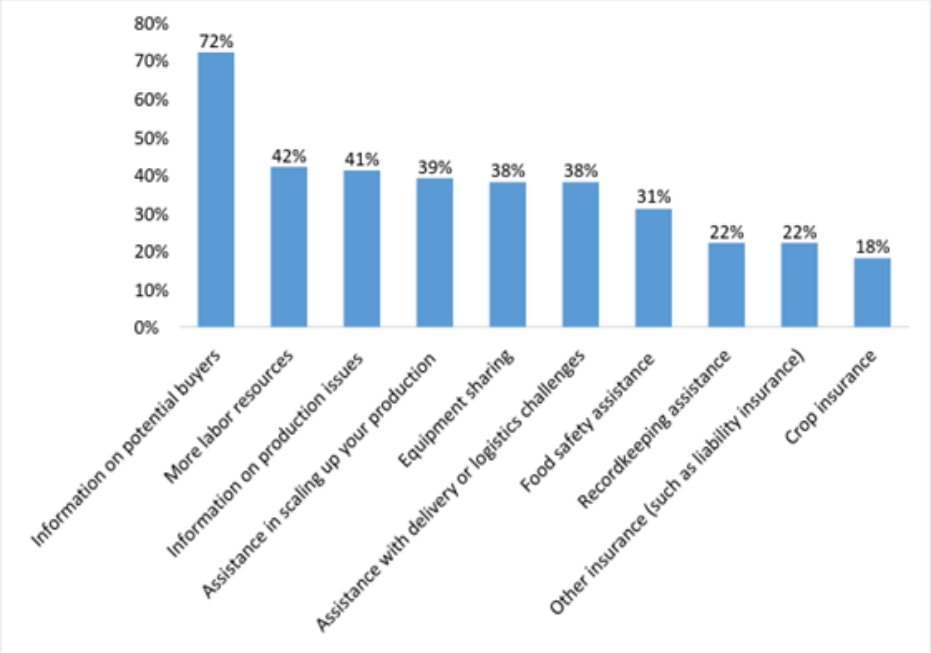
Figure 9: Involvement in a Producer-Owned or -Controlled Company



Services That Would Be Helpful

When asked what producers would find helpful to their operation, the answer that dominated the responses was by far "Information on potential buyers" followed by "More labor resources," and "Information on production issues."

Figure 10: Services Producers Demand



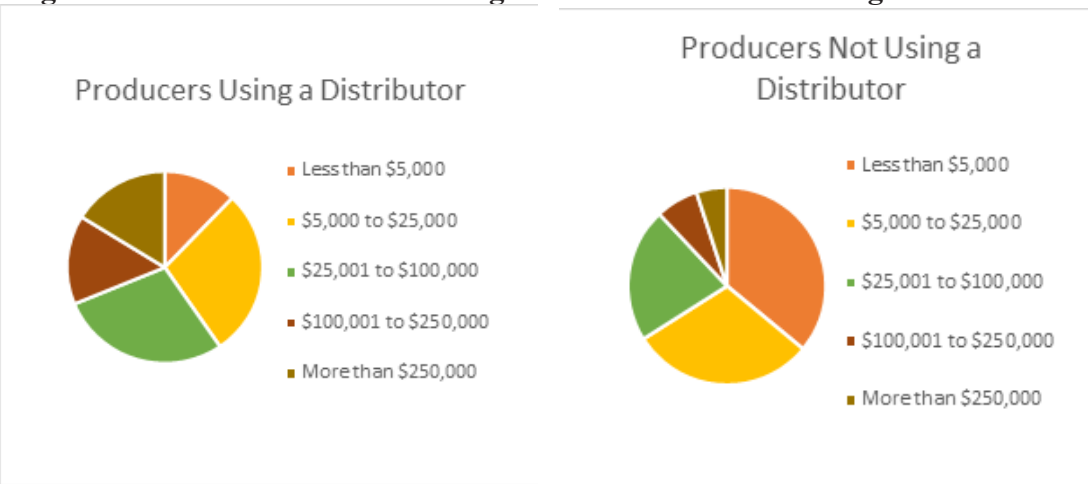
Differences Between Producers Selling Through Distributor and Entire Group

When the responses of producers selling currently through distributors was segregated out, a few key differences can be noted:

- While some producers selling through a distributor do also sell at a farmers market (10 producers), more of those producers (6) have sales of between $5001-$25,000 rather than less than $5000.
- Those producers are selling more to grocery stores, likely through those distributors.
- 80% of those producers want to increase the amount they sell through distributors. However, most of them also want to increase their sales through other outlets.
- 84% of those producers want to increase their production in the next five years
- 48% of those producers have more than 25 years of experience as opposed to just 25% in the larger group.

Sales for this group selling to distributors skewed higher than for the broader group as shown below.

Figure 11: Sales of Producers Using Distributors and Not Using Distributors



C. Additional Local Farm Decision-Making Analysis Relevant to the Study

In July 2016, the Kentucky Center for Agriculture and Rural Development completed a report prepared for the Louisville Metro Government and the Berry Center, entitled "Local Food from Local Farms Making Local Decisions: What Do Area Farmers Think About the Market?" Over 300 producers responded to the survey used for this study, and an additional 21 farmers participated in two focus groups. This report identified several key findings relevant to the work of the Kentuckiana project, which are excerpted below, with the permission of the sponsors of that report.

- Most producers in the study (67%) agree that there exists a high level of unmet demand of local foods in the Louisville region.
- Producers identify concerns with the "sturdiness" of the market.
- Producers in that study also indicated a desire to increase their sales in the region, with a majority of producers (62%)interested in agreements with buyers that could help them have greater certainty on production.
- Similar to the findings in this Kentuckiana study, access to information on buyers was highlighted by producers as a key need.
- Time and labor came up as key on-farm constraints to expanding production.
- Producers that would be natural fits for increasing the local food supply into Louisville have multiple marketing opportunities available to them. As a result, producers most likely to scale up their production to meet the Louisville food demand may find more attractive options closer to home that still provide them a price premium while reducing their travel time and expenses over serving the Louisville market.

Demand Analysis

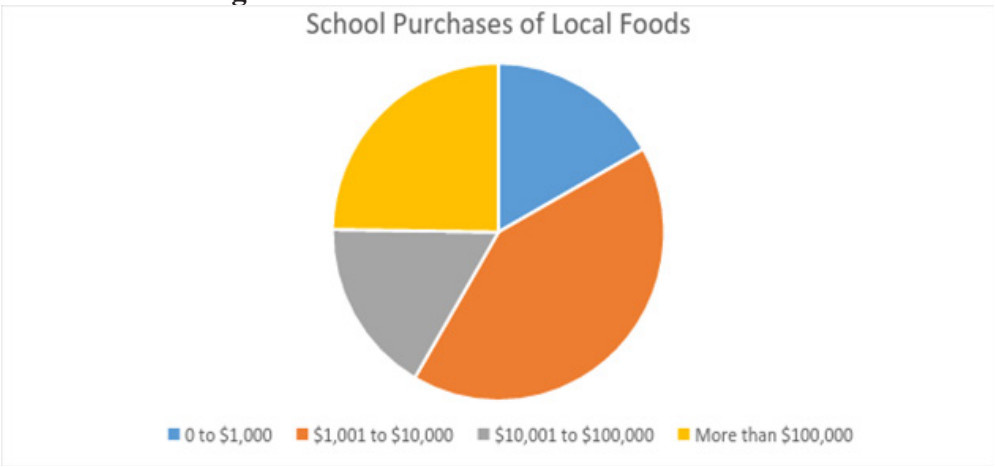
Project coordinators are aiming to fill the gap between producers and buyers, so this project examined a number of questions with regard to what buyers are seeking. For a buyer to change their current buying patterns and purchase from a new supplier, a reason must exist for that change to happen. Buyers examined for this project included schools, restaurants, distributors, and other retail stores. The number of schools and retailers interviewed provided sufficient information to summarize below, and information from the distributors interviewed is summarized in the Competitive Analysis section following. While additional retail or wholesale buyers were contacted, such as two grocery stores, the amount of information provided was insufficient to allow more analysis of that sector.

Schools

Project coordinators interviewed 18 different school district representatives, including 5 university or collegiate institutions. Of those entities 94% (17) indicated that they purchase local food; however, the nature of the question and the responses received suggest that those purchases may be made through distributors helping the schools access local farm product rather than from a farmer directly.

Of the 12 districts answering how much local foods purchasing they did in the last year, 7 districts purchased less than $10,000. Just three respondents reported over $100,000 in purchasing of local foods: Jefferson County (KY) Public Schools, the University of Kentucky, and the University of Louisville. Their percentages are listed below.

Figure 12: School Purchases of Local Food



When asked about whether they have a certain percentage of total purchasing that they try to fill with local food purchases, most indicated that they do not have a percentage or that it varies.

When asked for their Primary Distributor providing them with local foods, schools cited Creation Gardens, Sysco, Piazza Produce, GFS, and Custom Food Solutions. Some did mention particular farmers from whom they have purchased and many identified different products they have purchased:

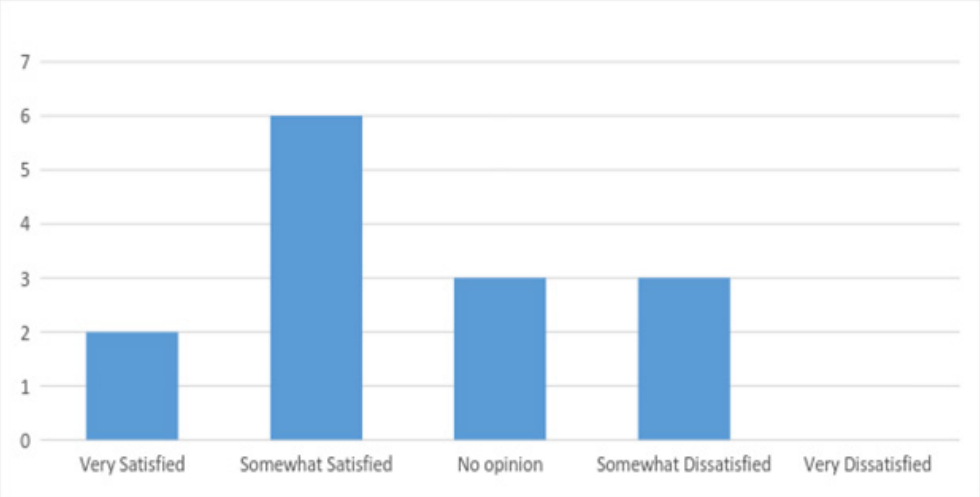
Table 1: Products Purchased by School Buyers

Product Purchased	Number of Buyers Currently Buying Product
Apples	7
Asparagus	1
Beef	1
Berries	2
Blueberries	3
Broccoli	3
Butternut Squash	2
Cantaloupe	1
Chicken	4
Corn	1
Cucumber	2
Garlic	1
Green Beans	1
Herbs	1
Lettuce	5
Milk	2
Peaches	1
Pears	3
Pepper	3
Pork	3
Potatoes	1
Squashes	2
Strawberries	2
Sweet potatoes	1
Tomatoes	4
Watermelon	3

When asked how much local food would they want to purchase in the coming five years compared to their current level of purchases, all of the respondents (15) indicated a desire to increase their local food purchases, with almost half (47%) indicated a desire to increase the amount significantly.

However, when asked how satisfied they were with their current ability to purchase local food, most are either very satisfied or somewhat satisfied.

Figure 13: School Satisfaction with Ability to Purchase



"Creation Gardens can provide everything and I have farmers that will provide me with whatever I want." "Local food is not as consistent."

When asked what products they would like to purchase but have not been able to purchase, districts indicated the following:

- Animal products (2)
- Eggs (1)
- Cheese (1)
- Yogurt (1)
- Strawberries (2)
- Tomatoes (4)
- Cucumbers (2)
- Lettuce (3)
- Zucchini and squash (1)
- Melons (1)
- Corn (2)
- Romaine lettuce (1)
- Blueberries (2)

When asked their interest in working with a locally-based distributor solely focused on selling local food from farmers in the region, half the respondents (8) were highly interested and another 7 respondents were somewhat interested.

- *"It's been eye-opening to see different dining service contracts, and unfortunately, there's so much confidentiality that it's hard to talk to people about the real process of getting into our system without losing my job or getting sued."*
- *"On my end, I'd be highly interested. We would know we were getting a direct farm impact."*
- *"[This project's efforts] probably aren't going to move the needle on Castellini because they would undercut the market."*
- *"Small farmers here don't quite understand how much it takes to supply the schools."*

When asked how they define "local", half of the schools indicated within a 100-mile radius.

Restaurants

Project coordinators interviewed 20 restaurants for the project. Prospective restaurants were selected from a list of ones known for buying local product. Included within this group were known caterers sourcing local, and several restaurants also provide catering in addition to their in-house dining services.

Of the restaurants interviewed, all but one (95%) purchases local food. The amounts varied greatly, as shown in the graph below.

Figure 14: Restaurant Purchases of Local Food

Restaurants mentioned using Creation Gardens, Piazza Produce, Marksbury Farms, US Foods, and Sysco as their primary distributor for local foods. However, multiple restaurants mentioned purchasing directly from farmers.

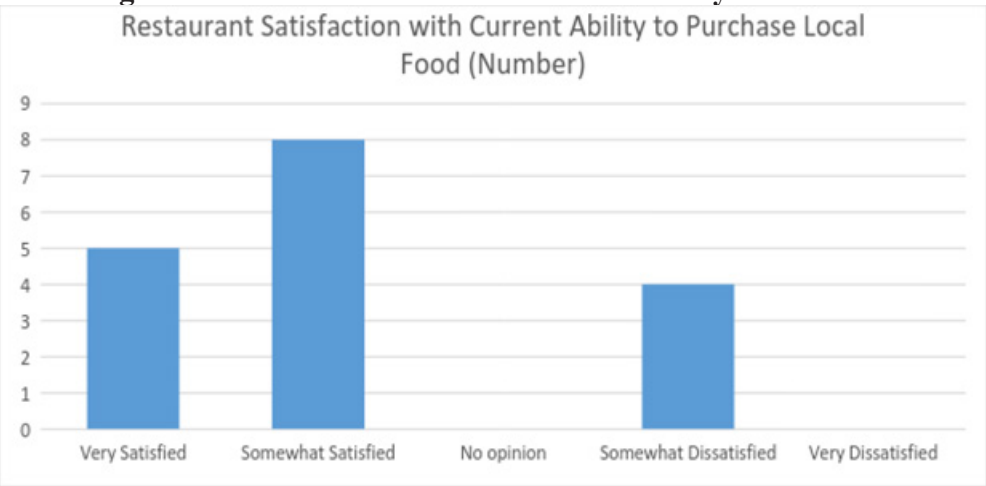
All 15 restaurants responding to the question indicated they want to increase their purchases of local food in the coming five years, with 9 indicating they would like to increase purchases significantly.

"If the [KY Proud] rewards program continues to max out, I imagine I'll be buying a lot less."

"There is nothing that we could buy locally that we are not."

Restaurants are largely satisfied with their ability to purchase local food, with 13 of 17 respondents indicating that they were very satisfied or somewhat satisfied.

Figure 15: Restaurant Satisfaction with Ability to Purchase



Restaurants indicated the following products that they would like to purchase but have been unable to do so:

- Lettuces that hold up well
- Onions
- Potatoes
- Proteins
- Cabbage
- Broccoli
- Tomatoes

"The challenge is the cost."

"It'd be nice to have a buying group. There's a guy who distributes and gets products from multiple different farms."

When asked how much customers value "local food", most of the restaurants (94%) indicated that their customers either highly value or somewhat value local food.

"There's a good amount of people here who want local food and go to farmers markets every single day. But there's also the people who will eat anything."

Restaurants are highly interested (17) or somewhat interested (1) in working with a locally based distributor solely focused on selling local food from farmers in the region. However, multiple restaurants mentioned price.

- *"That'd be great – we'd be able to take Sysco fully out of the equation if we could do that."*
- *"I have so many independent relationships with farmers for so long that it would be hard to shift."*
- *"If it was a company who was doing it right and not screwing over the farmers on price, which happens all the time."*

Most restaurants (53%) describe local as within the state of Kentucky.

Existing Distributors

To become a viable market for farmers and a viable supplier to buyers, a new business/entity would need to offer a unique value proposition. Numerous competitors exist in this space. The project coordinators spoke with 6 different entities they identified as distributors.

Because this project could result in the rise of a new competitor in the marketplace, many distributors did not speak with the coordinators. However, several did, likely seeing that the relationship with a new distributing entity may be one of partnership, rather than competition. Even those who participated did often note in their comments this competitive tension.

Of the entities interviewed, two have charitable interests and one of those indicated that they do not regard themselves as a distributor.

Of the 6 distributors, 5 are currently purchasing local food. Of the five purchasing local food, the amount of annual purchasing is as follows:

- 1 purchases between $10,001-$50,000
- 1 purchases between $50,001-$100,000
- 3 purchases between $100,000-$500,000

"Hit about $400,000 in 18 months, annually probably a little less than $300,000"

The distributors that coordinators spoke with are primarily local-based food distributors, with 3 indicating that more than 50% of their buying is local food and 1 indicating that it was less than 1%. They sell to schools, restaurants, groceries, hotels, hospitals, and households.

Of the four distributors who answered the question of how many producers that they are buying from, all of them indicated that they source from between 20 to 50 producers.

All of the distributors indicated they intend to increase their purchasing of local food either significantly (3) or somewhat (1). With regard to satisfaction with their current ability to purchase local food, only 1 entity indicated any dissatisfaction in that ability.

- *"We are seeing improvements in producer awareness of how to get that product into our distribution system. Growers have become more educated on our system in the last 3-5 years."*

- *"There's a huge difference between entities who SAY they want to purchase local and the ones who actually DO."*

- *"We tell the farmers what we want and they grow it for us."*

Distributors offered several thoughts when asked for recommendations:

- *"There is so much relationship building and negotiation. Don't underestimate the human costs and skills on the human level in order to do it. Need to do such a high volume to cover the labor costs so need to do it on a regional level."*

- *"There has to be demand. To create the demand, it has to be marketed in a manner that the consumer is willing to spend the additional dollars. If you charge a premium, it has to be a premium quality."*

- *"Really cultivate in their customer base the customers who will [pay] extra for the local produce they're providing. It's so much easier to build the supply when you know you have the demand."*

When asked for their interest in working with a locally based business solely focused on selling local food from farmers in the region, 3 were highly interested, 1 was somewhat interested, and 2 were not interested:

- *"Very, very little interest, but it makes the farmers happy then we'd be okay with it existing."*

- *"Already working with Lexington delivery service. We have to work together, we don't need to compete."*

- *"I would rather talk to one person rather than 50."*

- *"I feel a little bit questionable since we're also doing this, but we do see the value in multiple groups doing this."*

Other Competitors

Aside from the distributors interviewed, many other competitors exist in the space that need to be considered. These include Piazza Produce and Creation Gardens, two longstanding and well-known distributors developing local food supplies for large buyers, and Home Grown Direct, Ohio Valley Food Connection, Our Harvest, Farm of the Day, and FoodRoute, four new businesses that are currently cultivating local food supply chains in the region.

These competitors offer a diverse range of challenges for the development of a new entrant. The large distributors have solved the buyer problem since they originated as companies that served those buyers before those buyers began buying "local". Therefore, it is easier for them to add "local" product lines to existing purchases from those buyers. While most of the distributors' purchase of local food would likely be from large-scale producers, many of these distributors are working with medium-scale producers that would be good candidates for working with this new entity as well, especially if the new entity can provide those producers with resources or accommodate their needs better than their current distributor can.

The small, newer distributors have launched in reaction of many smaller-scale producers interested in reaching more urban consumers while still not meeting the scale and certification requirements of the larger distributors.

Organizational Considerations

Models Considered by Project Coordinators
Project coordinators identified seven different business models to examine for comparison for this project. The list and their analysis is attached in Appendix F.

KCARD reviewed the information provided by the partners, gathered additional available information about the businesses mentioned, and evaluated the suitability of the models. This review and analysis is below. Ultimately, KCARD chose three of the models that best fit the indicated objectives while also appearing to fit best with the regional production and demand characteristics present for this project. The following Base Assumptions were used to evaluate the models for this purpose.

Base Assumptions Used to Evaluate the Models:
Assumption 1: Project needs to be sustainable based on operating revenue or private investment, without continued reliance on grants and external funding.

Assumption 2: Project will be focused on serving buyers primarily in the metro areas within their region.

Assumption 3: Project is producer-focused.

Assumption 4: Project is open as to organizational structure, including providing opportunities for producers or other stakeholders to have decision-making roles.

Comparing different food hubs is risky. The way that each food hub presents itself will vary, and certainly the way it presents itself to the public will likely vary a great deal from what is occurring privately. Numerous food hubs have been viewed as successful models for emulation by everyone except those aware of their private financial statements right up until the moment they ceased operations.

How can you use a food hub model, then, as a guide? By looking for track records of sustainability over time, by examining what IS said with regard to hard financials (sales, profits, returns to producers), by viewing what materials are available about the food hub (including Form 990s in the case of those structured as nonprofits), and by taking a hard look at how the conditions in which they operate compare to the conditions seen on the ground for the current project. With those considerations in mind, KCARD examined the models provided by the coordinators.

Model A: Fifth Season Cooperative: the Multistakeholder Cooperative
Fifth Season Cooperative is a multi-stakeholder cooperative located in Viroqua, Wisconsin that launched operations in 2011. Fifth Season comes up often as one of the most prominent multi-stakeholder cooperatives in the nation, particularly in the food hub sector. What makes it a multi-stakeholder cooperative is an ownership model whereby the different stakeholders (producers, consumers, a distributor, and other supporters) can purchase an ownership stake in the company and also participate in decision-making through a democratically elected board.

Fifth Season is also unique in that it works within an existing foodservice distributor rather than competing with them, Reinhart Food Service. Reinhart offers a comparative advantage to Fifth Season since the cooperative is able to use Reinhart's distribution hub and network rather than investing in their own facilities.

Fifth Season sources its products from within 150 miles of Viroqua and provides product under their label to Chicago and other metro hubs in their region. It works with several regional processors as well and recently announced distribution through Sysco. The entity had expected sales of $475,000 in 2015. It has received at least $272,000 in grant funds from the Wallace Center and the US Department of Agriculture.

Viroqua is much smaller than Louisville. However, the population of the area within 150 miles around both cities is similar, with 11 million in the Viroque region and 13 million in the Louisville region. Within that same 150-mile circle, both areas have a similar number of farms, with the Viroque region having over 135,000 farms and the Louisville region having over 150,000.

The Kentuckiana entity to be formed could benefit from working with existing distributor(s) rather than invest in facilities. However, the distributor has to have a reason to work with this new entity, either because the new entity is solving a problem for the distributor (perhaps by more cost-effectively sourcing product the distributor needs) or because the distributor's customers demand such a relationship or product that can only be secured through the new entity. A strong relationship with a diverse group of producers who offer that middle ground of agricultural production (squarely between those with low profitability and high cost to serve and those with high profitability and no need for these services.)

Model B: La Montañita: The Retail Food Cooperative with a Distribution Arm

La Montañita is a retail food cooperative in Albuquerque, New Mexico with a distribution center as well that serves multiple other buyers aside from the food cooperative. This cooperative has undergone a great deal of change in the past few years as it has expanded to 5 retail locations and has over $5.5 million in sales. The entity has been able to operate with minimal grant funding and is governed by an independent governing board of directors.

La Montañita is owned by its consumer-members, but like many food cooperatives, it has strong ties to their local communities and to the producers selling local food to that cooperative. As such, it sources 1,110 products from over 400 producers.

While Louisville's population is significantly smaller than Albuquerque's, the Metropolitan Statistical Area (MSA) of Albuquerque contains 907,301 people, less than the one surrounding the Louisville area (1.27 million). Agriculturally, Kentucky and Indiana offer [growing season] and the ability to source local product.

La Montañita was founded as a food cooperative, however, not as a food distribution entity. The distribution arm grew out of the needs of the food cooperative. It distributes not just local product, however, serving as a distribution arm for many large organic brands to reach stores in the New Mexico region, reaching into Arizona and Colorado.

While the Kentuckiana project is not currently contemplating a retail food cooperative as a piece of their business, La Montañita's development does raise additional opportunities for the project as they consider possible partners with the food cooperatives in the region. La Montañita does operate its Cooperative Distribution Center at a loss, though the losses are declining. The retail stores support the Distribution Center presumably with substantive benefit for those retail stores and their own supply chain.

Model C: This Old Farm: Outgrowth of Farm and Processing Facility with Key Partners
This Old Farm operates a 10,000 square foot meat processing facility and retail store out of Colfax, Indiana, northwest of Indianapolis with the retail store open six days a week with limited hours. They work with a Farmer Alliance with 150 different producers.

This Old Farm has a partnership with Good Earth Natural Foods, a small food cooperative located in Indianapolis to distribute its product. This Old Farm also indicates that it works with two distributors: Piazza Produce and Indianapolis Fruit.

The entity received grant funds from the USDA Local Food Promotion Program to launch their website and their founder appears to be a strong grant writer. In 2016, the business was awarded a $500,000 grant in the Food to Market Challenge related to how to bring more fresh healthy food into Chicago.

The business specializes in natural and/or organic foods, with a heavy emphasis on pasture-raised proteins. The business also offers consulting services.

The company uses experienced, existing distributors to reach customers beyond their immediate area. This Old Farm's work with mainline distributors like Piazza and Indianapolis Fruit suggests the interest of larger distributors in using intermediary suppliers to satisfy their customer's demands for local food. Those partnerships are not threatening the larger distributor's market since it is solving a problem they have by giving them access to more local food at a lower cost. This Old Farm can work with the smaller producers, resolving quantity, quality, and consistency concerns for the entry into the larger distribution chain.

Model D: Local Food Hub:
Local Food Hub is a food hub based in Charlottesville, Virginia structured as a nonprofit 501(c)(3) organization formed eight years ago to address the demand for local food by supplying food distribution infrastructure and training for farmers in central Virginia and reaching markets in Washington DC and the broader region.

Local Food Hub works with over 59 different producers and 15 different value-added producers spread primarily along major highways in the Shenandoah Valley and reaching over to Richmond, Virginia. Local Food Hub spends 12% of their funds on grower service programs and an additional 5% on Education and Outreach.

The organization operates a 3,400 square foot warehouse with refrigerated space and a walk-in freezer. They operate two trucks and a van.

Among its buyers are the larger University of Virginia system, restaurants, several school systems, food cooperatives, and Whole Foods in the area. They are also a vendor for Sysco and US Foods.

Local Food Hub's nonprofit status has enabled it to secure significant grant funding. However, its latest tax filings do indicate a small positive gross margin of $350,000 off sales of $1.6 million. That alone would be insufficient to cover their operating expenses, but certainly contributes to that goal. It appears that their grant funding over the past five years averages around $448,000/year. Again, this is based on publicly available tax filings, which are prepared with some discrepancy in how revenue and expenses are calculated.

Model E: Red Tomato

Red Tomato is a Massachusetts-based nonprofit that has operated since 1997 to purchase produce from over 50 producers that stretch from Vermont down to the Philadelphia area with a number in New York. While the organization began with a fleet of trucks and warehouse space to handle the purchase of produce and delivery to a range of buyers, in 2005, the organization restructured. Now, as Red Tomato indicates, "our distribution plan relies on farmers with storage capacity to aggregate product, and farmers, distributors, or third party logistics companies to move the product to its final destination." They regard this shift as allowing the organization to focus on sales, marketing, and product development.

Red Tomato works with at least 18 different distributors to place their product in Whole Foods, institutions, independent grocers, and other stores primarily in the Boston area, but also reaching across Massachusetts, Connecticut, and Rhode Island.

Red Tomato focuses only on produce.

According to USDA, the organization receives about 60% of its revenue from "development funds", (i.e. fundraising efforts, donations, and foundation support). The remaining 40% are generated by sale profits.

Model F: Common Market Georgia

Common Market Georgia is a nonprofit that works with 30 producers all within 250 miles of their warehouse in Atlanta, Georgia. It is an expansion of the Common Market model that began in Philadelphia, Pennsylvania. The Georgia market is fairly new (launched only in April 2016) and had only $142,000 in revenue in 2015, according to its federal tax filings. However, the Pennsylvania entity indicated that it has distributed over $14 million in local foods since 2008, from 100 farms.

The Common Market based in Philadelphia focuses on institutional buyers, such as hospitals, schools, and universities. Grant and other external support has been critical in getting it to the point it is at currently. Its 2015 tax return suggests a cost of operation that exceeded their sales revenue. However, their grants and contribution portion contributed $2.9 million. Now, it is possible that the categorization of a portion of that revenue is mistaken, so it is hard to draw any conclusions. Their 2014 tax return shows a $40,876 gross margin, but again contributions and grants account for an additional $619,293. The 2013 return is similar.

Common Market is now focused on spreading their model across the nation and began first with Atlanta. Common Market Georgia is focused on selling to institutions in the Atlanta metro area and has a staff of 5.

Common Market's model suggests a high level of external funding, though most documents and reports on the business indicate that it is supposed to be on a downward path of external support to become self-sustaining. Unfortunately, the financial documents do not yet demonstrate that. It received $500,000 in 2015 specifically for replication of the model in Georgia.

Model G: Our Harvest Cooperative

Our Harvest launched in 2012 as a worker-owned cooperative located in the Cincinnati area that provides retail CSA boxes and also serves wholesale accounts. They source all of their food from over 20 producers within 150 miles of Cincinnati. They also operate farms of their own.

Our Harvest focuses on aggregation and distribution and relies on a nonprofit organization called Cultivate! Ohio Valley, which was formed in 2015 for the farmer education and training efforts.

They are also working with efforts to start a new retail food cooperative in Cincinnati where they would provide product. The project is still in development stage, raising funds for launch, in the hopes of opening in 2018.

Our Harvest's use of its own farms help fill supply gaps and issues that it may experience with farms in their supply chain. Additionally, they have used those farms to demonstrate techniques and provide an "incubator" for the development of new farmers.

Possible Partners and Roles

Through the course of this project, the project coordinators and KCARD discussed possible partnerships that could facilitate the development of the project while also serving the coordinators' goals for a more equitable food hub dynamic. In the past three years, many entities have launched to address some of the same issues that this project's coordinators see in the marketplace: smaller producers trying to reach larger buyers and facing challenges as they scale up to meet the rapidly changing marketplace needs. These local partners are listed below along with their potential roles. Note: KCARD works with many businesses in the course of performing its business development function. The information provided here is either public in nature or provided by the entity itself through conversations with project coordinators:

1) Ohio Valley Food Connection: Ohio Valley Food Connection is based out of Cincinnati and works with at least 25 farmers in both Ohio and Kentucky to provide fresh local product to restaurants and households in the region.

2) Farm of the Day: Farm of the Day launched in 2015 to provide delivery services of fresh product in the Lexington area, eventually expanding down the I-64 corridor to Louisville. Farm of the Day works with Ohio Valley Food Connection to expand their reach into Kentucky. Farm of the Day is attempting to rapidly expand in Kentucky, offering its delivery services to a wide variety of value-added food businesses in addition to farm product. Currently, Farm of the Day has routes to and from Cincinnati, Lexington, Louisville, London, Richmond, Georgetown, and Winchester.

3) FoodRoute: FoodRoute is a new company started in Shelbyville that held meetings in Shelby County last fall to determine interest among local producers in selling to FoodRoute for distribution to a "network of wholesale buyers in Louisville and Lexington."

4) Other farmers in the region with an interest in expanding distribution networks and the experience and interest in doing so.

One consideration for the project coordinators is whether any of these entities are strategic partners. In other words, can one of these entities fill a need that the project would have in a more cost-efficient manner and can the project fill a need for one of these entities in a manner that is more cost-efficient for that entity?

A possibility for such a partnership would be for the project to serve one element of the supply chain (either purchasing from producers OR marketing to buyers) rather than being a complete aggregation and distribution entity. By working with a like-minded partner, the entity could still accomplish goals of filling gaps in the supply chain, but also mitigate some of the risk associated with having to fill all of the needs in that supply chain, which a full-service aggregation and distribution hub must do.

Alternatively, project coordinators could partner with some of the mainline distributors in the space, such as Piazza Produce or Creation Gardens. To accomplish this, the project must offer these large distributors a service and fill a need that the distributor does not find itself capable of filling or that the distributor has determined does not need to be filled. The challenge here is that these distributors are already developing local food supply chains to meet their customer needs and their margins require them to squeeze every penny out of the transaction, leaving little for another middleman/woman to receive to cover costs. For this to work, the new entity would need to convince these distributors that the new entity's access to producers and its ability to cultivate those producers would place them in a critical nexus point to benefit the distributors' interest in procuring food more cheaply.

Other partnerships are less financial, but equally important. Project coordinators have communicated with farm-to-table coordinators in both Lexington and Louisville. These individuals first developed these roles as a response to the same supply gap that the project is targeting. However, while they can facilitate sales between producers and buyers, their roles stop well prior to purchasing the product from the producer, a role that a new entity – either alone or with partners mentioned above – could serve to the benefit of their farm-to-table programs as well.

Review of Models, Partners, and Business Structure

For the Fifth Season or La Montañita model to work, a partnership with a food retailer or foodservice partner is necessary.

Given the project's interest in a producer-focused model, consideration was made of a producer cooperative structure, and project coordinators examined the case of Idaho's Bounty, a producer-consumer cooperative. Many farmers in the region experienced the creation and demise of numerous produce cooperatives in the last 15 years amid the transition from tobacco to other crops. Interestingly, producers expressed an interest in the model based on the survey results mentioned above. Such a venture typically requires producer investment in the business, both in the terms of capital, but also in terms of time spent serving on a board of directors and guiding the operations of the entity. Additionally, such operations thrive most when they are filling a need for their farmer-member-owners that is inadequately filled in the marketplace currently. The responses both from producers selling through existing distributors and also from buyers using distributors cast some doubt on whether the cooperative would be able to meet a clearly defined need for a group of owners that also have the capacity to supply the cooperative at such a level as to pay for continuing operating costs.

Project coordinators have indicated an interest in cultivating producer ownership and control as the project evolves. Whether this takes the form of a multistakeholder cooperative such as Fifth Season (with the food service partner, as mentioned) or a nonprofit with board representation of producers is still an open question, but the entity does have an opportunity to distinguish itself from other competitors if producer involvement is institutionalized in some manner into the governing structure of the entity.

Project coordinators exhibited a strong interest in the public good considerations of operating this local food entity, an interest that could take the form of a nonprofit organization or a socially minded limited liability company (LLC). The choice of a nonprofit structure would lend itself to grant-funding as a means to raise capital. The greatest risk to this form is that too often such a structure implies a lack of interest in the bottom line of profitability for the entity. This is a misconception since the nonprofit food hub must consider multiple bottom lines if they intend to stay operational. They must develop a plan for profitability certainly, but they also will be measuring their impact on their community, whether that

community be defined as their farmer-suppliers, food access organizations, or a combination of all of those entities. If the entity does pursue a nonprofit status, they will want to emphasize this multiple bottom line approach as they pursue funding and develop their partnerships.

Newly authorized in Kentucky statute, a public benefit corporation – B Corporation – is available as a structure for the new entity as well. This structure would allow corporate entities via their governing boards to consider public good purposes, aside from their responsibility to maximize shareholder value, in their direction of the operation of the company.

Project coordinators could consider formation of a for-profit entity, such as This Old Farm, structured as an S Corporation. This Old Farm has been successful at securing grant funding despite their for-profit status, so that is not necessarily a barrier to external funding though it often still can be.

Finally, project coordinators could consider the worker cooperative model of Our Harvest. However, this model does not seem to fit with the strong focus on farmer outcomes, which is not to say that the model precludes that focus. However, if they were to form a worker cooperative, they might consider whether such a cooperative should not be multi-stakeholder to take advantage of a stronger relationship with their producer-suppliers.

The project coordinators are keenly aware of existing efforts of producers and other stakeholders in the region to develop collective solutions to the aggregation question and they have reached out to multiple producer groups, organizations, and existing distributors in an effort to determine what gaps remain and how those gaps can be best filled by their joint efforts. Their interest in pulling together these efforts may result in the development of the type of partnerships necessary (either with a retailer or foodservice partner) that could lead to one of the model types discussed earlier and currently placed on hold.

Major Challenges to Business Operations

Based on the research gathered, both primary and secondary, for this project, the business or entity to be created appears to confront many major challenges as it considers its next steps:

1. Small farms dominate. The vast majority of the producers with whom project coordinators connected have smaller sales than would be advantageous for the business's producer-suppliers. For those where it could be determined, all of the models examined have average sales per producer of greater than $5,000, and many of them, it's greater than $15,000.

2. The farms that are selling through a distributor appear to be satisfied with that distributor.

3. Those not selling through a distributor often cite price and their lack of volume or scale as the reasons why. While a new entity could play a role in aggregating that volume into more viable amounts, the transaction costs will be considerably higher to do so. Given that the new entity will be limited in their ability to offer better pricing given their own smaller scale, this will be a challenge to navigate.

4. Producers are interested in selling to a distributor that offers certain features. However, those features will come with a cost to a new entrant. In particular, producers indicated an interest in contracts and convenience.

5. Buyers (schools and restaurants) also indicate a high degree of satisfaction with their ability to purchase local food, but also indicate a high degree of interest in increasing their purchases over the next five years.

6. The business/entity will need to hire personnel experienced with produce handling and logistics.

Developments Occurring around Project

The local food economy in the Louisville region has experienced waves of changes as it continues to evolve, mature, and grow into different shapes as it is pushed and pulled by market forces, policies at the state and local level, and stakeholders and supporters interested in fostering a stronger regional food system. Following presentation of key findings to stakeholders in June, KCARD and project coordinators responded to feedback provided within this report and also noted the following developments that should be noted:

- Louisville Retail Food Cooperative: Discussions continue toward the development of a retail food cooperative in Louisville, a market outlet that could provide a strong buyer of local food from the region as many cooperatives nationwide have done in their respective areas. (The model of La Montañita being one that actually developed a distribution center as a result of the food coop's needs and desire to facilitate the additional sourcing of local food not just for their chain but other similarly minded retailers in the region.)

  The launch of the effort to open the cooperative is partially in response to the closure of six grocery stores within metro Louisville's urban center since April 2016 and the resulting food deserts created by the loss of those stores (Loosemore). The Louisville Food Co-Op organizing committee has submitted a proposal to locate a cooperative at the Heritage West Property on 30th and Market Streets in Louisville. However, the group emphasizes that this is just one possible location, and they continue to hold monthly community meetings to solicit input.

  The University of Louisville will be working with the project on a feasibility study and subsequent business plan.

- Houchens: A stakeholder mentioned Houchens as another buyer that needs to be evaluated as part of the study. KCARD staff visited Houchens Market at 3170 Louisville Road, Bowling Green, Kentucky as well as Price Less IGA at 1901 Russellville Road, Bowling Green, Kentucky. Both grocery stores are operated by Houchens Industries Inc. headquartered in Bowling Green, Kentucky.

  Each store provided a small selection of locally grown produce purchased directly from a farm in Scottsville, Kentucky. Local produce available includes sweet corn, yellow squash, tomatoes, cabbage, green bell peppers, zucchinis, and green beans. The stores will soon add jalapenos and canning pickles to the local produce selection. Most of the remaining produce in each store was sourced from California.

  Each store also had a large display of local canned products from Spring Valley Farm out of Holland, KY. Products included corn relish, pickled beets, maple syrup, honey, apple butter, pickled jalapeno peppers, and an assortment of jams and jellies.

All fresh meat offered in each store was sourced from a major distributor with all their beef coming from Kansas. Brands include Hormel, Sanderson Farms, Honeysuckle, and Price Less IGA. Each store did have KY Proud branded packaged meat products from Fields. Other processed meat product brands offered were Smithfield, Hormel, Land-o-Frost, Hillshire Farms, Eckrich and Clifty Farms. The meat manager would like to have local meat brought in but cannot currently due to price point and supply issues.

- First Link Building: The project coordinators have toured the 47,000 square foot First Link building located at 431 E. Liberty Street, a property purchased in 2016 by the Louisville Metro Housing Authority for $3 million (Shafer). Multiple food-related entities are considering locating in this space, and the project has been tentatively offered refrigeration space, but no details on lease rates have been provided.

Assessment of Feasibility of Alternative Models

As mentioned previously, High South Foods initiated this project by considering where the links in the supply chain were on local food, whether they were broken, and whether they could establish a business entity to fill those gaps that was producer-oriented in nature. Based on the input from the project coordinators, the results of the surveys of producers and buyers, and the research on different food hub models by the coordinators, four different scenarios were developed.

KCARD developed financial projections for multiple scenarios ranging from a centralized food hub to a decentralized service-oriented marketing entity. The following scenarios were examined:

Scenario 1: Centralized Food Hub with Aggregation, Storage, Distribution

Scenario 2: Multistakeholder Cooperative with a Distribution Partner

Scenario 3: Sub-Regional/Aggregation Points

Scenario 4: Service-Based Facilitation

For each scenario, estimates were made for facility space required, labor needs, expected producer interest, sales revenue, and other factors affecting the financial success of the venture. Those estimates were brought into a profit/loss statement for the venture to demonstrate the expected level of net income resulting from its activities along with the expected labor costs. Estimates of startup capital required were not generated for each scenario though discussion is included for context.

Producer numbers and sales per producer were modified based on the ability of the entity identified to serve producers, the attractiveness of the model to producer interests, and the level of producer sales expected for different models.

Scenario 1: Centralized Food Hub with Aggregation, Storage, Distribution
This scenario represents a nonprofit traditional food hub organization with farmers represented on board of directors. KCARD developed this scenario to create a base model to compare with models more targeted on the objectives defined by the project coordinators. Focus on top 5-10 products that buyers indicate they want, that existing distributors indicate are challenging, and that farmers want to sell. Maintain a focus on cultivating a supply chain for these products to sell them to mainline distributors.

Strengths: *Entity would serve as marketing arm fulfilling needs of producers for aggregation point, marketing agency, and distribution and logistics coordinator.*

Weaknesses: *High levels of initial investment are necessary for purchase or lease of facility, trucks, and operating expenses. Volume of more than $1 million is likely to achieve level of sustainability.*

Other Considerations: *While a more traditional "food hub" concept fits many expectations of what an aggregator should do, such aggregation entities have faced significant challenges in this region and that past will affect the perception of the entity's chances of success.*

This reflects a food aggregating and distribution hub with a slight modification in that the food hub would only focus on 5-10 key products, rather than trying to supply local foods more broadly and fragment their focus in the initial stage. This would be recommended to address concerns that the buyers in the study already appear to be satisfied with their current distribution arrangement. However, the buyers also indicated an interest in increasing purchases of local food. The only way they incorporate a new distributor into their business is if that distributor provides something (good or service) that the buyer is not receiving from their current arrangement.

Storage, Refrigeration, and Equipment Needs

A conventional regional food aggregation and distribution center needs substantial square footage of warehouse space for storage and packing. Additionally, the conventional hub must manage the transportation of the perishable product being purchased by farmers both into and out of the facility along with maintaining that cold chain from farm to buyer.

Size

Food hubs in the United States average a facility size of 6,936 square feet with two loading docks, according to the 2014 Benchmarking Study. However, that average disguises the wide range of food hub facilities. On the high end, a food hub included in the 2014 Benchmarking Study had 73,000 square feet. On the low end, a food hub in the study had only 150 square feet. For comparison, the 2013 Benchmarking Study indicates an average of 9000 square feet.

A food hub that assumes ownership of the food procured and stores it for any period of time will need substantial space available to it, certainly well above the 150 square feet. The median food hub size in the Benchmarking study was just 4,000 square feet. To be profitable with that limited amount of square footage, the food hub has to be very efficient with high turnover of product. The longer the hub will be holding product, the more space will be required. If the food hub can achieve a high rate of turnover, then it needs less space.

The storage space and the characteristics of that space should be based on the products handled by the food hub. Each perishable food product has cooling and exposure needs that will have to be addressed by whatever warehouse space is used.

Assuming a traditional food hub that provides services from aggregation to grading to packing to delivery, a warehouse of at least 4,000 square feet will be necessary.

Location and Rates

The natural site for a hub based on the Project Area defined by project coordinators is in metro Louisville. Louisville has access to three major interstate highways: I-65 (north to Indianapolis or south to Nashville); I-71 (northeast to Cincinnati); and I-64 (west to St. Louis or east to Charleston West Virginia). Zoning would likely not be a consideration for the business since the business would likely choose a location based on existing zoning in the area given the ample industrial spaces available near major highways.

Given Louisville's size, finding warehouse space to buy or lease should not be difficult. A Louisville-area rental check indicates 172 available warehouse spaces. Lease rates vary a great deal, but are typically higher for smaller facilities, which this entity would be. Recent rental rate checks in the area ranged from $4-$10 per square foot per year for facilities ranging from 2500-7500 square feet.

Many food hubs are choosing to rent space in their start-up phase to keep their capitalization costs lower. However, additional costs will be incurred at this stage given the need to retrofit or rehabilitate existing structures to meet the needs of the food hub prior to the beginning of operations.

Should the business choose to purchase a facility in which to operate a traditional food hub, they will need to consider purchase costs of $80-$100/square feet based on recent estimates.

Refrigeration:
For a traditional full-service food hub, from 1/3 to ½ of the facility space will likely need to be cooled. Typically, this type of facility will require cooler units, a wet-cold room, a dry-cold room, a dry-warm room, and freezer space.

Equipment:
The equipment needs for a start-up food hub are similar to any small warehouse operation, with some variations. The equipment list provided in Appendix H was largely drawn from the "Running a Food Hub" guide provided by USDA.

Logistic Considerations
Storage of farm product and movement of that product from farm to buyer requires consideration of numerous logistical challenges from maintenance of a cold chain appropriate for the product at each stage to development of efficient transportation routes that reduce the amount of empty space on any given pick-up and delivery. These transaction costs contribute greatly to the cost of running a food hub and are noted by USDA as being one of the largest costs associated with such an operation.

Cold Chain Maintenance:
The Kentuckiana Food Aggregation project will face several challenges particular to the region in that relatively few producers have cold storage facilities and packing sheds on their property, reducing the time that the product will stay fresh prior to delivery to a buyer. The operation can choose among the following options to address this challenge: 1) Careful coordination with producers to arrange pickup of product soon after harvest along with educational efforts to help with on-farm practices; or 2) Required delivery to sub-regional aggregation points that have the necessary cooling infrastructure.

Either option will require greater investment of time and resources to manage product. Loss of product will likely be much greater than other commercial operations, and producers will have to bear some of that loss either directly or through a reduced price offered by the buyer for the product.

With regards to meat products, the problem of cold chain maintenance is somewhat minimized if the new distributor can pick up the meat from the processing facility directly since the processing facility will maintain the temperature of the product up until pick-up.

Transportation of the product: The project research area covers 53,000 square miles that are crossed by several major highways. Running north and south, the I-65 and I-75 interstate highways are heavily trafficked by tractor-trailers and offer opportunities to move product rapidly to and through the major population centers in the region. The Project Area includes the "Triangle" of population centers in Kentucky – Louisville, Lexington, and Cincinnati. Connecting Louisville and Cincinnati, the I-71 highway makes one leg of the triangle with I-64 connecting between Louisville and Lexington, and I-75 connecting Cincinnati and Lexington. The metropolitan areas of these three cities contain almost 4 million people.

Louisville connects with Bowling Green, Kentucky on I-65, and Bowling Green connects up with Somerset and the I-75 corridor via the Cumberland Parkway. Northwest from Bowling Green on the Natcher Parkway is Owensboro.

Producers with good access to those major urban areas can have lower transaction costs to serve those areas, but their cost of land will typically be higher than in counties further away from the metro areas due to development pressures and the creation of "bedside" communities surrounding the cities. As farms have gotten pushed out to the periphery, the counties immediately bordering urban areas are finding opportunities within the markets in those urban areas with minimal transportation costs.

Producers who may be best situated to take advantage of aggregation and distribution opportunities are likely ones located in close proximity not necessarily to the urban areas themselves but to the major thoroughfares that reach those urban areas.

Sorting and grading capacity: Depending on the nature of the aggregation and distribution, Kentuckiana will need to provide some means for producers to pack product either on-farm or within Kentuckiana's facilities.

Quality control: The project will have to prepare farmers for packing their products in ways that meet the new entity's requirements. They may require them to use the new business's packing products (including standard boxes, and farm labels).

Assumptions and Financial Analysis

Unfortunately, as the Profit/Loss statement in Figure 16 shows, the food hub in Scenario 1 will still struggle to achieve a level of sales capable of covering the overhead present in the business.

Because of the producer response with regard to their experiences with distributors, only 15 producers are expected to participate in the first year, growing to 35 in the second year, and 50 in the third year. Average sales per producer in the first year are $15,000, rising to $20,000 in the third year, which is in line with the sales/producer reflected in many of the food hub examples examined in this project.

Labor costs are kept low with two positions (manager and driver) in the first year, adding another operations assistant position in the second year, with costs rising 3% per year for each position. This labor seems insufficient in the third year to support $1 million, but it does represent 15% of sales, which tracks with the average for food hub labor to sales percentage, which is 18%.

With this model, the project will have to rely on over $200,000 in grant funding every year of the project. As scale increases in Year 3, labor must increase as well.

Figure 16: Scenario 1: Central Food Hub Model Assumptions, Profit/Loss Statement, and Labor Costs

		Year1	Year2	Year3
Number of Producers Selling to High South		15	35	50
Average Amount of Sales to High South		$ 15,000	$ 17,000	$ 20,000
Total Amount Purchased from Producers		$ 225,000	$ 595,000	$ 1,000,000
Markup	20%	$ 270,000	$ 714,000	$ 1,200,000

Kentuckiana Food Aggregation Project Scenario 1			
Profit/Loss Statement			
	Year1	Year2	Year3
Sales Revenue	$ 270,000	$ 714,000	$ 1,200,000
Costs of Goods Sold			
Cost of Goods Sold	$ 225,000	$ 595,000	$ 1,000,000
Cost of Sales	$ 37,800	$ 99,960	$ 168,000
Total COGS	$ 262,800	$ 694,960	$ 1,168,000
Gross Margin	$ 7,200	$ 19,040	$ 32,000
Operating Expenses			
Salaries and Wages	$ 115,000	$ 153,450	$ 158,054
Fringe Benefits	$ 17,250	$ 23,018	$ 23,708
Rent	$ 28,750	$ 38,363	$ 39,513
Phone and Office Expenses	$ 22,000	$ 23,100	$ 24,255
Supplies	$ 2,400	$ 2,400	$ 2,400
Travel	$ 3,000	$ 3,000	$ 3,000
Accounting	$ 6,420	$ 3,435	$ 1,838
Legal	$ 2,500	$ 2,500	$ 2,500
Insurance	$ 5,000	$ 2,500	$ 2,500
Marketing	$ 5,500	$ 5,500	$ 5,500
Total Operating Expenses	$ 207,820	$ 257,265	$ 263,267
Net Profit	$ (200,620)	$ (238,225)	$ (231,267)
Depreciation	$ 7,500	$ 7,500	$ 7,500
Interest	$ 2,750	$ 2,550	$ 2,250
Net Profit - Depreciation & Interest	$ (210,870)	$ (248,275)	$ (241,017)

Labor Costs			
Manager	$ 75,000	$ 77,250	$ 79,568
Driver	$ 40,000	$ 41,200	$ 42,436
Operations Asst	$ -	$ 35,000	$ 36,050
Total Labor Costs	$ 115,000	$ 153,450	$ 158,054
Payroll Taxes	$ 17,250	$ 23,018	$ 23,708

Scenario 1 clearly does not meet the demands of the project given that it would have to rely on external sources of funding in the first three years of the business. Many food hubs have used grants in the initial stages with the goal of expanding out of grants by year 5 or earlier. Given the assumptions used here derived from the survey results, growing out of the need for grants in this model is unlikely.

Scenario 2: Multistakeholder Cooperative
This scenario assumes the creation of a multistakeholder cooperative with one stakeholder providing key infrastructure in a partnership with the cooperative entity. This is similar to the structure of Fifth Season Cooperative in Viroqua, Wisconsin.

Strengths: *Low infrastructure and strong key food service partnership*

Weaknesses: *Dependence on that partner for key aspects of the business, maintenance of the supply chain, distribution, and marketing*

Other Considerations: *Partner must see a sufficient value in the relationship with Kentuckiana entity to justify the arrangement.*

Storage, Refrigeration, and Equipment Needs
The virtue of developing a multistakeholder cooperative with a strong food service/distributor partner is that the partner itself provides much of the necessary storage and equipment for the venture using their existing capacity, rather than building or leasing a new facility. The project would be constrained for space only as the food service partner's other non-cooperative-related business competes for space in the facility.

However, the food service partner would need sufficient available space to support the needs of the project. The advantage of this approach is that as the needs increase, the project has a strong, informed partner able to advise them on the needs for additional square footage, coolers, and other infrastructure needs.

Size
While the project may eventually reach the size associated with the food hub considered in Scenario 1, the project would have the aforementioned advantage of being to scale up over time using the available space of the food service partner to reach that 6,900 square foot average area or beyond. To begin operations, at least 2,000 square feet would need to be identified capable of being used for the cooperative's initial operations, with the capability of expanding to 8,000 square feet. Additional space beyond the 2,000 square feet may be needed depending on whether the food service partner is able to pack and grade using existing equipment in place.

Location and Rates
The natural site for a hub based on the Project Area defined by the project coordinators remains in metro Louisville for this scenario given its location. However, Bowling Green does have features advantageous to the project, including the presence of a location of Reinhart Food Service, the same foodservice partner for the multistakeholder cooperative in Wisconsin. Both cities are located on the I-65 corridor, with Louisville having access to I-71 (northeast to Cincinnati); and I-64 (west to St. Louis or east to Charleston West Virginia).

Ultimate location would be determined by the presence of the foodservice partner's existing infrastructure.

Logistic Considerations
Storage of farm product and movement of that product from farm to buyer for this Scenario involving a multistakeholder cooperative with a foodservice partner will involve many of the same logistical challenges as the traditional food hub scenario. However, the foodservice partner should be able to provide both expertise and actual infrastructure in support of this effort in this scenario.

Cold Chain Maintenance
The lack of on-farm cold storage facilities and packing sheds will remain a constraint for the project until more producers are able to secure those resources for their farm. The project will need to coordinate with producers to arrange pickup of product soon after harvest along with educational efforts to help with on-farm practices that will prolong the freshness and quality of the product.

Transportation of the product: The foodservice partner would presumably use their existing truck fleets to assist with the delivery of product to buyers.
Sorting and grading capacity: Depending on the nature of the aggregation and distribution, the cooperative will need to provide some means for producers to pack product either on-farm or within the foodservice partner's facilities.

Quality control: The cooperative will have to prepare farmers for packing their products in ways that meet their requirements. They may require them to use the cooperative's packing products (including standard boxes, and farm labels).

Assumptions and Financial Analysis
The number of producers grows from 25 producers in Year 1 to 60 producers in Year 3, drawn by the partnership with the stakeholder, presumably a distributor or other entity with sufficient cold storage and existing buying relationships to allow a more rapid acquisition of producers than if the entity is burdened by these responsibilities without the stakeholder present.

Labor, utility, and the cost of sales decrease due to the reliance on the food service partner.
The greatest threat to the launch of this particular structure would be the lack of an interested food service partner among the larger distributors in the region who would possess the required infrastructure and existing buyer relationships.

Figure 17: Scenario 2: Multistakeholder Cooperative ModelAssumptions, Profit/Loss Statement, and Labor Costs

		Year1	Year2	Year3
Number of Producers Selling to High South		25	40	60
Average Amount of Sales to High South		$ 15,000	$ 17,000	$ 20,000
Total Amount Purchased from Producers		$ 375,000	$ 680,000	$ 1,200,000
Markup	20%	$ 450,000	$ 816,000	$ 1,440,000

Kentuckiana Food Aggregation Project Scenario 2			
Profit/Loss Statement			
	Year1	Year2	Year3
Sales Revenue	$ 450,000	$ 816,000	$ 1,440,000
Costs of Goods Sold			
Cost of Goods Sold	$ 375,000	$ 680,000	$ 1,200,000
Cost of Sales	$ 31,500	$ 57,120	$ 100,800
Total COGS	$ 406,500	$ 737,120	$ 1,300,800
Gross Margin	$ 43,500	$ 78,880	$ 139,200
Operating Expenses			
Salaries and Wages	$ 35,000	$ 61,050	$ 62,882
Fringe Benefits	$ 5,250	$ 9,158	$ 9,432
Rent	$ 8,750	$ 15,263	$ 15,720
Phone	$ 2,400	$ 2,520	$ 2,646
Supplies	$ 2,400	$ 2,400	$ 2,400
Travel	$ 3,000	$ 3,000	$ 3,000
Accounting	$ 6,420	$ 3,435	$ 1,838
Legal	$ 2,500	$ 2,500	$ 2,500
Insurance	$ 5,000	$ 2,500	$ 2,500
Marketing	$ 5,500	$ 5,500	$ 5,500
Total Operating Expenses	$ 76,220	$ 107,325	$ 108,418
Net Profit	$ (32,720)	$ (28,445)	$ 30,782
Depreciation	$ 7,500	$ 7,500	$ 7,500
Interest	$ 2,750	$ 2,550	$ 2,250
Net Profit - Depreciation & Interest	$ (42,970)	$ (38,495)	$ 21,032

Labor Costs			
Manager	$ 35,000	$ 36,050	$ 37,132
Driver	$ -	$ -	$ -
Operations Asst	$ -	$ 25,000	$ 25,750
Total Labor Costs	$ 35,000	$ 61,050	$ 62,882
Payroll Taxes	$ 5,250	$ 9,158	$ 9,432

Scenario 3: Sub-Regional/Aggregation Points

This scenario responds to the small-scale diversified agricultural production in the region by establishing smaller sub-aggregation points, located primarily in areas of high concentration of interested producers and relying on key farmer leaders that can help coordinate production and address issues in the sub-region.

Strengths: *Responsive to disperse, small-scale agriculture in region*
Weaknesses: *Higher infrastructure costs with greater management necessary to handle logistics*

Other Considerations: *This model could be responsive to small producers and buyers, but the higher costs to serve those smaller scale operations will likely need to be borne by external funding sources for the duration.*

Storage and Equipment Needs
Operating multiple, small, regional aggregation points will require several facilities in the region capable of receiving and storing perishable product.

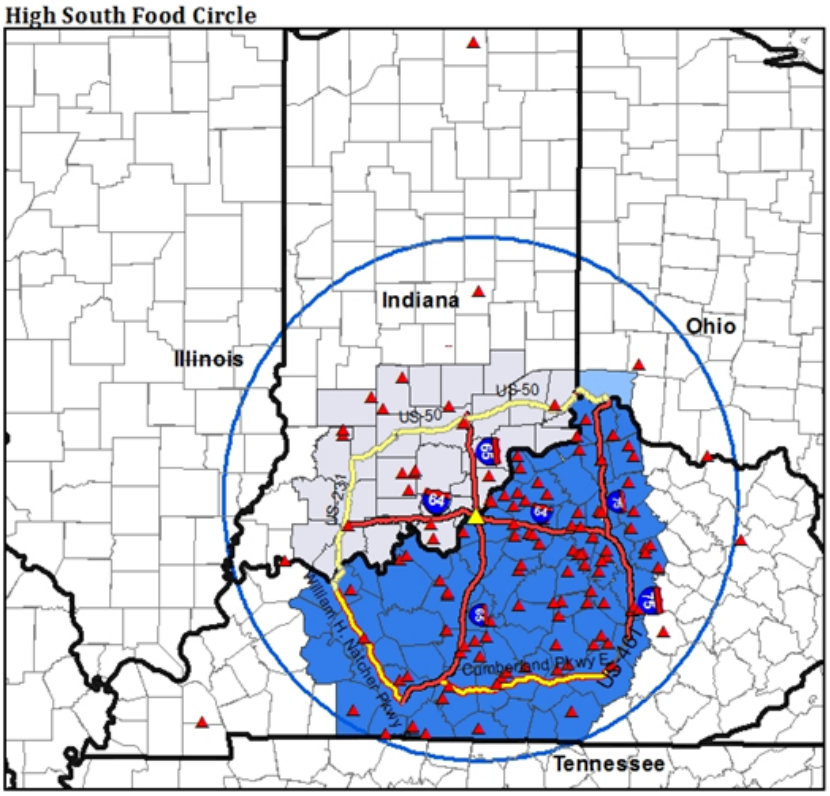
Size
The aggregation points in this scenario are assumed to be just large enough to provide a collection point for product, while also maintaining the cold chain until it is picked up for either delivery or subsequent aggregation. As noted above, the smallest food hubs in the 2014 study averaged 150 square feet. Depending on the production planned, this type of room might be sufficient for some uses, such as temporary storage of tomatoes in 25-pound boxes. However, it would not allow for any pallet movement and temperature control would likely be limited to just one setting.

If the project were to maintain just 3 sub-aggregation points, they would likely need to have each one at least 1,000 square feet, possessing cold storage, and a small loading dock. The more sub-aggregation points required, the greater the transaction costs for the business.

Location
Looking again at the project map (duplicated on the next page), producer interest appears to be concentrated in a few areas as noted in the three white circles:

1. Mercer-Garrard-Jessamine Counties area
2. Hart County
3. Shelby-Oldham Counties area

These three points have the added advantage of being somewhat proximate to major highways.



Logistic Considerations

The logistics of storage and transportation within and among multiple locations suggests a greater level of coordination by the project to ensure quality. Additionally, since transportation is a major expense of any food hub, the transportation will increase given the need to aggregate product from those multiple points. The aggregator will assume some of the transportation costs that the producer was assuming under the scenario where there was just one point of aggregation.

Transportation of the product:

The Project Area will still cover 53,000 square miles, but the emphasis will be on finding producers and buyers located within much shorter distances than envisioned with a centralized hub located in Louisville serving that entire 53,000 footprint. Trucks or a trucking service will still be necessary to pickup from the smaller aggregation points.

Sorting and grading capacity: Depending on the nature of the aggregation and distribution, the project will need to provide some means for producers to pack product either on-farm or within the small aggregation points.

Quality control: The entity will have to prepare farmers for packing their products in ways that meet their requirements. They may require them to use their packing products (including standard boxes, and farm labels).

Assumptions and Financial Analysis:
While the scenario appears to rely less on a large food hub based in the immediate Louisville region, some centralized infrastructure would still be necessary for the sub-regional hubs to join their production to reach delivery points in other sub-regions. Other entities – such as Ohio Valley Food Connection – have rented out facilities such as the Northern Kentucky Incubator Kitchen for aggregation and repacking tasks. This project may be able to use smaller existing and underutilized regional commercial kitchen spaces in that same way.

Labor costs are expected to consist of a driver and competent, active manager to handle the flow of product from the different sub-regions and make sure it reaches its destination.

Producers increase from the base model since the decentralized nature of the structure lends itself to more, smaller producers. However, the sales per producer decreases as well and the cost of sales increases as a result.

Ultimately, this model suffers from high costs due to the higher infrastructure needs. These costs must initially be borne by external funding resources, but since the sales never reach a sustainable point, the funding would need to be in place for perpetuity for the business to continue to exist.

Figure 18: Scenario 3: Sub-aggregation Points Model Assumptions, Profit/Loss Statement, and Labor Costs

		Year1	Year2	Year3
Number of Producers Selling to High South		30	40	60
Average Amount of Sales to High South		$ 5,000	$ 10,000	$ 15,000
Total Amount Purchased from Producers		$ 150,000	$ 400,000	$ 900,000
Markup	25%	$ 187,500	$ 500,000	$ 1,125,000

Kentuckiana Food Aggregation Project Scenario 3			
Profit/Loss Statement			
	Year1	Year2	Year3
Sales Revenue	$ 187,500	$ 500,000	$ 1,125,000
Costs of Goods Sold			
Cost of Goods Sold	$ 150,000	$ 400,000	$ 900,000
Cost of Sales	$ 33,750	$ 90,000	$ 202,500
Total COGS	$ 183,750	$ 490,000	$ 1,102,500
Gross Margin	$ 3,750	$ 10,000	$ 22,500
Operating Expenses			
Salaries and Wages	$ 115,000	$ 153,450	$ 158,054
Fringe Benefits	$ 17,250	$ 23,018	$ 23,708
Rent	$ 28,750	$ 38,363	$ 39,513
Phone and Office Expenses	$ 26,000	$ 27,300	$ 28,665
Supplies	$ 2,400	$ 2,400	$ 2,400
Travel	$ 3,000	$ 3,000	$ 3,000
Accounting	$ 6,420	$ 3,435	$ 1,838
Legal	$ 2,500	$ 2,500	$ 2,500
Insurance	$ 5,000	$ 2,500	$ 2,500
Marketing	$ 5,500	$ 5,500	$ 5,500
Total Operating Expenses	$ 211,820	$ 261,465	$ 267,677
Net Profit	$ (208,070)	$ (251,465)	$ (245,177)
Depreciation	$ 7,500	$ 7,500	$ 7,500
Interest	$ 2,750	$ 2,550	$ 2,250
Net Profit - Depreciation & Interest	$ (218,320)	$ (261,515)	$ (254,927)

Labor Costs			
Manager	$ 75,000	$ 77,250	$ 79,568
Driver	$ 40,000	$ 41,200	$ 42,436
Operations Asst	$ -	$ 35,000	$ 36,050
Total Labor Costs	$ 115,000	$ 153,450	$ 158,054
Payroll Taxes	$ 17,250	$ 23,018	$ 23,708

Scenario 4: Service-Based Facilitation

This scenario eliminates the physical aggregation component of the project, moving away from a physical food hub concept into more of a virtual producer acquisition/buyer assistance concept. The new business entity would provide services targeted to "scale-ready" producers, that is those producers who are smaller than most distributors want, but who are ready to expand and eager to work with a distributor that is "producer-oriented." This option would be a more cooperative/collaborative option in addition to being service-oriented such that the project would aim to bring together producers toward common goals, linking

them up with services, and seeking ways to lower their costs by working together.
Services provided by the entity could include the following:

- Assistance with meeting regulatory requirements (mentioned by producers in the survey as s omething that would make them more likely to use a distributor) particularly as it applies to food safety (mentioned by producers in the survey as a need and one growing in relevance now that the Food Safety Modernization Act is being implemented).
- Information on potential buyers (mentioned by producers in the survey as a need)
- Assistance with identifying labor resources (mentioned by producers in the survey as a need)
- Logistics assistance (described in more detail below and indicated as a need by producers)

Strengths: *Low infrastructure, focusing on the indicated needs of the smaller scale producers in the region.*

Weaknesses: *Entity must demonstrate value to both producer and buyer to become a trusted intermediary that can be compensated enough to cover the costs.*

Other Considerations: *If the entity can gain trust from viable producers and committed buyers through demonstration of their value over time, this model provides a low-cost alternative to a traditional food hub. However, a key question is whether this exists in a no-cost form from various farm-to-table "matchmaking" services and tools.*

Storage and Equipment Needs
Because this scenario envisions a low-infrastructure footprint, no storage or equipment is required.

Logistic Considerations
Logistics and transportation do not evaporate as concerns for this scenario like the storage or equipment, however. Instead, the service-based entity will become the "fixer" for the multiple logistics and cold chain management needs of the producers using their services, helping them figure out how to reach the market with good product in the quality required.

Logistic roles assumed by the entity could include:

1. Coordination of pickup and delivery terms with the producer and buyer;
2. Communication of needs of the buyer to the producer (with regard to packing and grading);
3. Identification of available off-farm cold storage resources for the producer to maintain the cold chain; and
4. Securing of resources to enable on-farm cold storage or packing lines

Assumptions and Financial Analysis:
The number of producers would be higher than the base scenario since the project would compensate for the lower sales per producer expected with dealing with "scale-ready" rather than producers at commercial scale already. Commissions of 20% are assumed to pay for the operating expenses.

Figure 19: Scenario 4: Service-Based Model Assumptions, Profit/Loss Statement, and Labor Costs

		Year1	Year2	Year3
Number of Producers Using Service		40	50	60
Average Amount of Sales Per Producer		$ 10,000	$ 12,500	$ 18,000
Total Amount of Sales		$ 400,000	$ 625,000	$ 1,080,000
Commission of 20%		$ 80,000	$ 125,000	$ 216,000

Kentuckiana Food Aggregation Project -- Scenario 4			
Profit/Loss Statement			
	Year1	Year2	Year3
Revenue -- Commissions	$ 80,000	$ 125,000	$ 216,000
Operating Expenses			
Salaries and Wages	$ 55,000	$ 71,650	$ 73,800
Payroll Taxes	$ 8,250	$ 10,748	$ 11,070
Fringe Benefits	$ 13,750	$ 17,913	$ 18,450
Rent	$ -	$ -	$ -
Phone	$ 2,400	$ 2,400	$ 2,400
Supplies	$ 3,000	$ 3,000	$ 3,000
Travel	$ 6,420	$ 3,435	$ 1,838
Accounting	$ 1,500	$ 2,500	$ 2,500
Legal	$ 1,500	$ 2,500	$ 2,500
Insurance	$ 1,000	$ 5,500	$ 5,500
Marketing	$ 3,200	$ 3,200	$ 3,200
Total Operating Expenses	$ 96,020	$ 122,845	$ 124,257
Net Profit	$ (16,020)	$ 2,155	$ 91,743
Depreciation	$ -	$ -	$ -
Interest	$ -	$ -	$ -
Net Profit - Depreciation & Interest	$ (16,020)	$ 2,155	$ 91,743

Labor Costs			
Manager	$ 55,000	$ 56,650	$ 58,350
Driver	$ -	$ -	$ -
Operations Asst	$ -	$ 15,000	$ 15,450
Total Labor Costs	$ 55,000	$ 71,650	$ 73,800
Payroll Taxes	$ 8,250	$ 10,748	$ 11,070

Summary of Findings

Findings from Producers: 145 producers answered the survey.

- The survey was dominated by small-scale producers with 36% having sales of less than $5,000. Of the 128 who answered the question about their sales, 89% had sales of less than $100,000, but 5% did have sales of more than $250,000.
- Over 70% of respondents selling at farmers markets have less than $25,000 in sales at those markets, with 59% of respondents selling at farmers markets having less than just $5,000 in sales at those markets. Just one respondent has farmers market sales of more than $100,000.
- Of the producers selling product on their farm, 77% sell less than $5,000 through those sales. Just three respondents have more than $100,000 in on-farm sales.
- No producers out of the 42 selling to restaurants have more than $100,000 in sales through restaurants. Instead, 74% of those 42 producers have less than $5,000 in restaurant sales.
- Just 20 producers indicate using a distributor. Of those, 9 sell less than $5,000, and only 3 sell more than $100,000 to distributors. Of those selling to a distributor, 24% have sold to that distributor for less than a year, 40% have sold to that distributor for between 1 to 5 years, and 36% have sold to that distributor for more than 5 years. Of those selling to a distributor, 79% indicate that they are either highly satisfied (25%) or somewhat satisfied (54%) with that distributor. Just 2 producers indicated not being satisfied and 3 producers were uncertain.
- The vast majority (87%) expressed an interest in increasing production, with most of those indicating a 5-20% increase.
- When asked what producers would find helpful to their operation, the answer that dominated the responses was by far "Information on potential buyers" followed by "More labor resources," and "Information on production issues."

Findings from Buyers: Schools, restaurants, and distributors were interviewed.

Schools: Project coordinators interviewed 18 different school district or university representatives. Of those entities 94% (17) indicated that they purchase local food.

- Schools cited Creation Gardens, Sysco, Piazza Produce, GFS, and Custom Food Solutions as their primary distributors. Some did mention particular farmers from whom they have purchased and many identified different products they have purchased.
- When asked how much local food they would want to purchase in the coming five years compared to their current level of purchases, all of the respondents indicated a desire to increase their local food purchases, with almost half (47%) indicating a desire to increase the amount significantly.
- When asked how satisfied they were with their current ability to purchase local food, most are either very satisfied or somewhat satisfied.

Restaurants: Kentuckiana partners interviewed 20 restaurants for the project. Prospective restaurants were selected from a list of ones known for buying local product. Included within this group were known caterers sourcing local, and several restaurants also provide catering in addition to their in-house dining services.

- Of the restaurants interviewed, all but one (95%) purchases local food.
- Restaurants mentioned using Creation Gardens, Piazza Produce, Marksbury Farms, US Foods, and Sysco as their primary distributor for local foods. However, multiple restaurants mentioned purchasing directly from farmers.

- All 15 restaurants responding to the question indicated they want to increase their purchases of local food in the coming five years, with 9 indicating they would like to increase purchases significantly.
- Restaurants are largely satisfied with their ability to purchase local food, with 13 of 17 respondents indicating that they were very satisfied or somewhat satisfied.
- Restaurants are highly interested or somewhat interested in working with a locally based distributor solely focused on selling local food from farmers in the region.

Distributors: The project coordinators spoke with 6 different entities they identified as distributors. Of the entities interviewed, two have charitable interests and one of those indicated that they do not regard themselves as a distributor. Of the 6 distributors, 5 are currently purchasing local food.

- The distributors were primarily local-based food distributors, with 3 indicating that more than 50% of their buying is local food and 1 indicating that it was less than 1%. They sell to schools, restaurants, groceries, hotels, hospitals, and households.
- Of the four distributors who answered the question of how many producers they were buying from, all of them indicated that they source from between 20 to 50 producers.
- All of the distributors indicated they intend to increase their purchasing of local food either significantly (3) or somewhat (1).
- When asked for their interest in working with a locally based business solely focused on selling local food from farmers in the region, 3 were highly interested, 1 was somewhat interested, and 2 were not interested.

Implications of the Findings for the Business

1. Small farms dominate. The vast majority of the producers whom the project coordinators reached have smaller sales than would be advantageous to be producer-suppliers of the project. For those where it could be determined, all of the models examined have average sales per producer of greater than $5,000, and for many of them, it is greater than $15,000.

2. The farms that are selling through a distributor appear to be satisfied with that distributor.

3. Those not selling through a distributor often cite price and their lack of volume or scale as the reasons why. While a new business could play a role in aggregating that volume into more viable amounts, the transaction costs will be considerably higher to do so. Given that the new business will be limited in their ability to offer better pricing given their own smaller scale, this will be a challenge to navigate.

4. Producers are interested in selling to a distributor that offers certain features. However, those features will come with a cost. In particular, producers indicated an interest in contracts and convenience.

5. Buyers (schools and restaurants) also indicate a high degree of satisfaction with their ability to purchase local food, but also indicate a high degree of interest in increasing their purchases over the next five years.

Structures Examined for the Business
The project examined four different structures for a business.

Scenario 1: Centralized Food Hub with Aggregation, Storage, Distribution
This scenario represents a nonprofit traditional food aggregating and distribution hub focusing on 5-10 key products. This model was developed to serve as a base scenario.

Bottom Line: This scenario faces a net loss of $210,870 in year one and is projected to suffer similar losses each year.

Scenario 2: Multi-Stakeholder Cooperative with a Distribution Partner
This scenario assumes the creation of a multi-stakeholder cooperative with one stakeholder providing key infrastructure in a partnership with the cooperative entity.

Bottom Line: This scenario faces a net loss of $42,970 in year one, but is projected to reach a small positive net income of $21,032 by year three due to the operational support provided by the distributor partner.

Scenario 3: Sub-Regional/Aggregation Points
This scenario responds to the small-scale diversified agricultural production in the region by establishing smaller sub-aggregation points, located primarily in areas of high concentration of interested producers and relying on key farmer leaders that can help coordinate production.

Bottom Line: This scenario faces a net loss of $218,320 in year one, a loss that worsens each year due to the expenses associated with running multiple small aggregation sites and coordinating the logistics for those sites.

Scenario 4: Service-Based Facilitation
This scenario eliminates the physical aggregation component of the project, moving toward more of a virtual producer acquisition/buyer assistance concept. The proposed business would provide services targeted to "scale-ready" producers – those producers who are smaller than most distributors want, but who are ready to expand and eager to work with a distributor that is "producer-oriented."

Bottom Line: This scenario faces a net loss of $16,020 in year one, progresses to a small profit in year two, which grows to a positive net income of $91,743 in year three, provided that the business can obtain 60 producers using the service by that time.

Conclusion and Next Steps

As the project coordinators evaluated the results of the study, they returned to the core questions that drove their interest in launching the project:

- What can be done to meet the needs of the producers?
- What model is financially sustainable with the least amount of external support?
- What is the gap between producers and current buyers, including those buyers who have recently entered into the regional market, such as Ohio Valley Food Connection?

The challenge of meeting the needs of producers is that producers with higher levels of sales are more likely to have "cracked the code" to work with distributors and are less likely to need the resources provided by another mainline distributor or even a service-oriented entity providing them assistance in making that connection. The survey responses from producers were skewed toward low sales, so even with a dramatic scaling up of production, sales would struggle to support either aggregation activities or consignment charges applied to the sales. The few producers indicating a dissatisfaction with their distributor could be a target audience for this project's efforts, but the entity will need to keep in mind that the dissatisfaction could be due to problems inherent in any producer-distributor relationship, such as pricing expectations that cannot be met due to the need of the distributor or intermediary to make sufficient margin to cover their expenses. Adding to the producer question, producers with already established direct marketing relationships are often harder to convince to take on a distributor relationship. As noted in the study, many of these producers liked the higher retail prices associated with direct marketing along with the direct connection with consumers.

Buyers pose challenges equal to those posed by the producers in the study. Buyers indicate a level of satisfaction with their current local food purchases that suggest that they are not feeling pressure to increase their purchases sufficient to change their buying habits in ways that open the doors to smaller-scale producers. A competitive marketplace without significant complaints creates major obstacles to a new entrant without the significant buying power and relationships with buyers.

Nevertheless, producers do indicate a strong desire for more information on potential buyers, and few in the region would suggest that sufficient supply of local food exists to satisfy what appears to be a continued trend of increased demand. Producers are looking for support in ways that help the producer reduce the transaction costs associated with making the sale to the distributor, thereby creating value for the producer and helping to resolve a need of the distributor.

The financial model with the most potential to create value in this way would be the final scenario considered, a service-based, commission model whereby the entity becomes a "fixer" for the marketing relationships being established between existing and new entrant regional distributors and the producers upon whom they rely.

Below are some final recommendations based on the results of the producer and buyer survey to guide the creation of this entity for the development of a business plan:

Focus on producers who are on the cusp of forming distributional relationships.

Focus on activities related to coordination, payment, marketing and promotion.

Work with existing partners in the region.

Develop value proposition around a reputation for trustworthiness and good communication, as a producer-oriented service business.

Appendix

Appendix A: High South Buyer Survey - Distributors

1) Name of distributor:

2) Individual interviewed and position:

3) Do you purchase local food?
   a. Yes
   b. No (Go to Question 4.)

   c. If so, how much local food did you purchase in the last full year?
      i. $0-$1,000
      ii. $1,001-$10,000
      iii. $10,001-$50,000
      iv. $50,000-$100,000
      v. $100,000-$500,000
      vi. $500,000-$1 million
      vii. Over $1 million

   d. What percentage of your total sales is your sales of local food?
      i. Less than 1%
      ii. Between 2-5%
      iii. Between 6-10%
      iv. Between 11-25%
      v. Between 26-50%
      vi. More than 50%

   e. To whom do you sell local food:
      i. Schools
      ii. Restaurants
      iii. Groceries
      iv. Hotels
      v. Hospitals
      vi. Other customers (identify):

   f. From how many local producers are you currently purchasing?
      i. Less than 5
      ii. 6-10
      iii. 11-20
      iv. 20-50
      v. More than 50

g. How much local food do you want to purchase in the coming five years compared to your current level of purchases?
   i. Increase significantly from the current level
   ii. Increase somewhat from the current level
   iii. No change
   iv. Decrease somewhat from the current level
   v. Decrease significantly from the current level

h. How satisfied are you with your current ability to purchase local food?
   i. Very satisfied
   ii. Somewhat satisfied
   iii. No opinion
   iv. Somewhat dissatisfied
   v. Very dissatisfied

i. What products would you like to purchase locally but have been unable to purchase and why?
   i. List of products:
      a.
      b.
      c.

4) FOR DISTRIBUTORS NOT BUYING LOCALLY

a. What are the greatest constraints to buying local food?
   i. Cost of local food
   ii. Product quality
   iii. Producer challenges (identify)
   iv. Lack of demand
   v. Consistent availability of product
   vi. Certifications required/food safety
   vii. Other?

b. If the above challenges were addressed, would you purchase local food?

5) What is the single most important recommendation you would make to increase local food purchases?

6) What would be your interest in working with a locally based business solely focused on selling local food from farmers in the region?
   a. Highly interested
   b. Somewhat interested
   c. Not interested

7) Which of the following best describes how you would define “local”?
   a. Same city or county
   b. Within state
   c. Within region
   d. Within 50-mile radius
   e. Within 100-mile radius
   f. Within 200-mile radius
   g. Other (please describe)

Appendix B: High South Buyer Survey - Hospitals/Healthcare Facilities

1) Name of hospital/health care facilities:

2) Individual interviewed and position:

3) Does your hospital/healthcare facility purchase local food for sale in your food service outlets?
   a. Yes
   b. No (Go to Question 4.)

   c. If so, how much local food did you purchase in the last full year?
      i. $0-$1,000
      ii. $1,001-$10,000
      iii. $10,001-$50,000
      iv. $50,000-$100,000
      v. Over $100,000

   d. Who is your primary distributor providing you with local foods?

   e. What products have you purchased and how were they purchased (direct from farmer, from a locally based distributor, from their regular food service, other)?
      i. Product: Method:
      ii. Product: Method:
      iii. Product: Method:
      iv. Product: Method:
      v. Product: Method:

   f. How much local food would your facility want to purchase in the coming five years compared to your current level of purchases?
      i. Increase significantly from the current level
      ii. Increase somewhat from the current level
      iii. No change
      iv. Decrease somewhat from the current level
      v. Decrease significantly from the current level

   g. How satisfied are you with your current ability to purchase local food?
      i. Very satisfied
      ii. Somewhat satisfied
      iii. No opinion
      iv. Somewhat dissatisfied
      v. Very dissatisfied

h. What products would you like to purchase locally but have been unable to purchase and why?
    i. List of products:
        a.
        b.
        c.

4) FOR HOSPITAL/HEALTHCARE FACILITIES NOT BUYING LOCALLY

    a. What are the greatest constraints for the hospital/healthcare facility to buy local food?
        i. Cost of local food
        ii. Product quality
        iii. Distributor challenges (identify)
        iv. Lack of demand
        v. Inability to source product all year
        vi. Other?

    b. If the above challenges were addressed, would your hospital purchase local food?

5) What is the single most important recommendation you would make to help your hospital purchase more local food?

6) What would be your interest in working with a locally based distributor solely focused on selling local food from farmers in the region?
    a. Highly interested
    b. Somewhat interested
    c. Not interested

7) Which of the following best describes how you would define “local”?
    a. Same city or county
    b. Within state
    c. Within region
    d. Within 50-mile radius
    e. Within 100-mile radius
    f. Within 200-mile radius
    g. Other (please describe)

Appendix C: High South Buyer Survey - Restaurants

1) Name of restaurants:

2) Individual interviewed and position:

3) Does your restaurant purchase local food?
   a. Yes
   b. No (Go to Question 4.)

   c. If so, how much local food did you purchase in the last full year?
      i. $0-$1,000
      ii. $1,001-$10,000
      iii. $10,001-$50,000
      iv. $50,000-$100,000
      v. Over $100,000

   d. Who is your primary distributor providing you with local foods?

   e. What products have you purchased and how were they purchased (direct from farmer, from a locally based distributor, from their regular food service, other)?
      i. Product: Method:
      ii. Product: Method:
      iii. Product: Method:
      iv. Product: Method:
      v. Product: Method:

   f. How much local food would your restaurant want to purchase in the coming five years compared to your current level of purchases?
      i. Increase significantly from the current level
      ii. Increase somewhat from the current level
      iii. No change
      iv. Decrease somewhat from the current level
      v. Decrease significantly from the current level

   g. How satisfied are you with your current ability to purchase local food?
      i. Very satisfied
      ii. Somewhat satisfied
      iii. No opinion
      iv. Somewhat dissatisfied
      v. Very dissatisfied

h. What products would you like to purchase locally but have been unable to purchase and why?
   i. List of products:
      a.
      b.
      c.

4) FOR RESTAURANTS NOT BUYING LOCALLY

   a. What are the greatest constraints for the restaurant to buy local food?
      i. Cost of local food
      ii. Product quality
      iii. Distributor challenges (identify)
      iv. Lack of demand
      v. Consistent availability of product
      vi. Other?

   b. If the above challenges were addressed, would you purchase local food?

5) What is the single most important recommendation you would make to help your restaurant purchase more local food?

6) How much do your customers value "local food"?
   a. Highly value
   b. Somewhat value
   c. No opinion
   d. They do not value local food.

7) What would be your interest in working with a locally based distributor solely focused on selling local food from farmers in the region?
   a. Highly interested
   b. Somewhat interested
   c. Not interested

8) Which of the following best describes how you would define "local"?
   a. Same city or county
   b. Within state
   c. Within region
   d. Within 50-mile radius
   e. Within 100-mile radius
   f. Within 200-mile radius
   g. Other (please describe)

Appendix D: High South Buyer Survey - Schools

1) School district:

2) Buyer interviewed:

3) Does your school district currently purchase any food products from local farmers?
   a. Yes
   b. No (Go to Question 4.)

   c. If so, how much local foods did you purchase in the last full school year?
      i. $0-$1,000
      ii. $1,001-$10,000
      iii. $10,001-$100,000
      iv. Over $100,000

   d. Who is your primary distributor providing you with local foods?

   e. What products have you purchased and how were they purchased (direct from farmer, from a locally based distributor, from their regular food service, other)?
      i. Product: Method:
      ii. Product: Method:
      iii. Product: Method:
      iv. Product: Method:
      v. Product: Method:

   f. How much local food would your school district want to purchase in the coming five years compared to your current level of purchases? (Increase significantly to Decrease significantly)
      i. Increase significantly from the current level
      ii. Increase somewhat from the current level
      iii. No change
      iv. Decrease somewhat from the current level
      v. Decrease significantly from the current level

   g. How satisfied are you with your current ability to purchase local food?
      i. Very satisfied
      ii. Somewhat satisfied
      iii. No opinion
      iv. Somewhat dissatisfied
      v. Very dissatisfied

h. What products would you like to purchase from a local farm but have been unable to purchase and why?
    i. List of products:
        a.
        b.
        c.

4) FOR SCHOOLS NOT BUYING LOCALLY

a. What are the greatest constraints for the school district to buy local food?
    i. Finding an approved vendor
    ii. Navigating the procurement process
    iii. Dealing with fresh product
    iv. Finding sufficient quantity
    v. Certifications/food safety requirements
    vi. Consistent availability of product
    vii. Other?

b. If the above challenges were addressed, would your school district purchase local food?

ALL:

5) What is the single most important recommendation you would make to help schools purchase more local food?

6) What would be your interest in working with a locally based distributor solely focused on selling local food from farmers in the region?
    a. Highly interested
    b. Somewhat interested
    c. Not interested

7) Which of the following best describes how you would define “local”?
    a. Same city or county
    b. Within state
    c. Within region
    d. Within 50-mile radius
    e. Within 100-mile radius
    f. Within 200-mile radius
    g. Other (please describe)

Appendix E: High South Buyer Survey - Stores

1) Name of store:

2) Buyer interviewed:

3) Do you sell locally produced food in your store?
   a. Yes
   b. No (Go to Question 4.)

   c. If so, how much local food did you purchase in the last full year?
      i. $0-$1,000
      ii. $1,001-$10,000
      iii. $10,001-$50,000
      iv. $50,000-$100,000
      v. Over $100,000

   d. Who is your primary distributor providing you with local foods?

   e. What products have you purchased and how were they purchased (direct from farmer, from a locally based distributor, from their regular food service, other)?
      i. Product: Method:
      ii. Product: Method:
      iii. Product: Method:
      iv. Product: Method:
      v. Product: Method:

   f. How much local food would your store want to purchase in the coming five years compared to your current level of purchases?
      i. Increase significantly from the current level
      ii. Increase somewhat from the current level
      iii. No change
      iv. Decrease somewhat from the current level
      v. Decrease significantly from the current level

   g. How satisfied are you with your current ability to purchase local food?
      i. Very satisfied
      ii. Somewhat satisfied
      iii. No opinion
      iv. Somewhat dissatisfied
      v. Very dissatisfied

h. What products would you like to purchase locally but have been unable to purchase and why?
    i. List of products:
        a.
        b.
        c.

4) FOR GROCERIES NOT BUYING LOCALLY

    a. What are the greatest constraints for the store to buy local food?
        i. Product quality
        ii. Distributor challenges (identify)
        iii. Sufficient producers meeting the requirements of the store
        iv. Consistent availability of product
        v. Other?

    b. If the above challenges were addressed, would your grocery purchase local food?

5) What is the single most important recommendation you would make to help your store purchase more local food?

6) What would be your interest in working with a locally based distributor solely focused on selling local food from farmers in the region?
    a. Highly interested
    b. Somewhat interested
    c. Not interested

7) Which of the following best describes how you would define “local”?
    a. Same city or county
    b. Within state
    c. Within region
    d. Within 50-mile radius
    e. Within 100-mile radius
    f. Within 200-mile radius
    g. Other (please describe)