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Journal of Food Distribution Research
Volume 45 Issue 3

Local Food Systems and Interactions with Entrepreneurship¹

Editor's Introduction

Dawn Thilmany McFadden^a and Maria I. Marshall^b

^a *Professor, Department of Ag and Resource Economics Colorado State University,
B325 Clark, DARE, Fort Collins, Colorado, 80523-1172 USA. Phone: 970-491-7220
Email: Dawn.Thilmany@colostate.edu*

^b *Professor, Department of Agricultural Economics Purdue University
403 West State Street, West Lafayette, Indiana 47907-2056 USA. Phone: 765-494-4268
Email: mimarsha@purdue.edu*

There is growing public interest in regionally-focused food systems as localization activities are perceived to improve environmental outcomes, provide market access and sustainable financial models for small- and mid-sized farms, enhance public health, and support community-based economic development strategies (Martinez et al. 2010; O'Hara and Pirog 2013). These six case studies illustrate how food entrepreneurs using different business models are catalysts in their local food systems.

The 2012 U.S. Census of Agriculture showed that direct sales by farmers increased by 8% since 2007 (USDA 2014) because of the renewed interest and opportunities in local foods. These entrepreneurial case studies highlight the importance of locally-oriented food producers and retailers who have acted as linchpins within their communities' local food system by scaling up their direct sales to other channel members. They have benefited from the growing interest in localized food systems to grow to a viable scale, diversify their marketing channel portfolios, and leverage new connections within their communities. These case studies are salient examples of how interest in the local foods movement has increased their opportunity to sell locally—even for those who had already successfully established themselves in wholesale markets (Bauman et al. 2014). For example, *Kriemhild Dairy Farms*, located in New York, was able to expand beyond wholesale markets into producing local value-added products and selling them in local food markets.

¹This set of papers was prepared for the National Agricultural & Rural Development Policy Center themed collection on *Local Food Systems and Interactions with Entrepreneurship* and was supported by competitive grant no. 2012-70002-19385 through the U.S. Department of Agriculture, National Institute of Food and Agriculture.

In short, these case studies are examples of values-based supply chains (VBSCs) that involve partnerships between producers, processors, distributors, retailers, and food service entrepreneurs who share environmental, economic, and/or social values. Communicating the benefits of VBSCs' products to customers, as well as to the VBSC partners, is instrumental to the success of those supply chains, but challenging as they attempt to secure scale-appropriate infrastructure and develop economies of scale to broaden demand (Hardesty et al. 2014).

Cooperative structures that encompass more participants as owners may have an advantage in developing more broad-based of community involvement. *Sandhills Farm to Table*, located in North Carolina, is an example of an innovative business structure. Sandhills is a multi-farm, community supported agriculture cooperative. It includes producers/farmers, consumer/customers and employees all as equal owners. It hopes to strengthen the community by directly connecting consumers and producers. The cooperative educates its stakeholder community to increase transparency along the value chain. Its unique structure allows the cooperative to engage with multiple groups within the community and foster a more balanced local food system. Successful VBSCs operate with economies of scale to broaden demand for their products while also generating fair returns to producers and other supply chain partners (Hardesty et al. 2014).

These entrepreneurs are not only catalysts for the local food movement, but also for rural development through increased job creation or growing value chains that allow a greater share of food system governance and economic activity to stay under the control of all food system stakeholders (Lev and Stephenson 2011). Indiana's *Moody Meats* is a vertically integrated business that produces its own meat, processes it and then sells the packaged meat through its own retail stores. Adam Moody is both a serial entrepreneur and a catalyst to new local food businesses, and this case study demonstrates that this firm is an important component to the central Indiana local food system.

In addition, entrepreneurs have also catalyzed linkages to other sectors, such as agritourism. One case shared in this series highlights a marked shift in the Agriculture Census data for 2012—the number of farms securing revenue from agritourism and recreational activities on their farms, and the significant growth in those revenues which increased by 24% since 2007 (U.S. Census of Agriculture 2014). *Two-Rivers Winery*, a winery and tourism destination located in western Colorado, is a linchpin to local economic development. In particular, this case study demonstrates the entrepreneur's use of social capital to build an industry alliance that will improve perceptions about the quality of growing Colorado industry.

Finally, the ability to invest in, leverage and explore social capital investments appears to be facilitated through local food systems. Although returns to social capital are not specifically measured in these case studies, there was fairly compelling evidence in several cases of a growth in informal agreements, cooperative quality enhancements, cost-effective financing models and general shared values. For example, South Carolina's *Limehouse Produce* is nurturing the restaurant community by facilitating the exchange of information and resources between channel members, and acting as a trusted intermediary. Moreover, similar to other cases shared, it has a large number of employees and is fostering economic development through job creation. Limehouse is also a key value chain link given its role in connecting producers to restaurants.

Zia Taqueria, a small-scale restaurant and catering business in southwestern Colorado, is a final example of an entrepreneur actively creating new backward and forward supply chain linkages that strengthen connections between food producers, processors and consumers. Zia's owners intentionally leverage community food system assets to create new business relationships and shorter supply chains between food production and processing entities. They also appear to create significant social capital through their direct and indirect investment in human capital (their own employees and those of associated businesses), capital equipment purchases made on behalf of allied local businesses, and generous donations contributed in support of broader community food system activities in southwestern Colorado.

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Local Food Systems and Interactions with Entrepreneurship

Two Rivers Winery and Event Center: A Key Driver for the Growing Colorado Wine Industry

Dawn Thilmany McFadden

*Professor, Department of Ag and Resource Economics
Colorado State University, B325 Clark, DARE, Fort Collins, Colorado, 80523-1172 USA.
Phone: 970-491-7220 Email: Dawn.Thilmany@colostate.edu*

Abstract

Two Rivers Winery & Chateau, established in 1999, has rapidly emerged as a key asset to the Colorado winery and regional tourism infrastructure on the West Slope of Colorado. The case study presents evidence of how Two Rivers' entrepreneurship has helped an emerging business flourish, a reinvented Colorado wine industry nurture its brand through cooperative quality improvement, and has added a new tourism destination to the portfolio of attractions for a Western Colorado region. The case concludes that a strong commitment to social capital gains can lead to quality improvements throughout the Colorado wine industry. Two Rivers understands the potential long-term gains to its business and region.¹

Keywords: wine industry, quality assurance, tourism, entrepreneurs

¹ This case study builds on a larger, industry wide report commissioned by the Colorado Wine Industry Development Board in 2012-2013 to assess the economic contributions the Colorado wine industry (Thilmany et al. 2013). This paper was prepared for the National Agricultural & Rural Development Policy Center themed collection on *Local Food Systems and Interactions with Entrepreneurship* and was supported by competitive grant no. 2012-70002-19385 through the U.S. Department of Agriculture, National Institute of Food and Agriculture.

Introduction

Two Rivers Winery & Chateau were built in 1999 on 15 acres of vacant land in the Redlands area of Grand Junction. The owners, Bob and Billie Witham are natives to the Western Slope of Colorado. The winery's key activities are wine production, hosting events and serving as a key tourism asset for the Grand Junction region. The Winery first processed grapes in the fall of 1999, and has released nine wines garnering over 60 different awards in international competitions.

The winery also plays a significant role in the growth of the broader wine and tourism sector because of its focus on improving quality with a new Colorado Quality Assurance Program and investing in joint promotions of the industry through participation in the Colorado Wine Industry Development Board.

Another linkage for this business is serving as an essential cog by drawing food and beverage tourists to the area, in partnership with the Grand Junction Visitors and Convention Bureau. The vineyard and winery are nestled between the gateways of the Colorado National Monument in the Redlands—just west of Grand Junction. Chateau deux Fleuves Vineyards (translated House on Two Rivers) encompasses 11 acres of estate-grown Chardonnay, Cabernet Sauvignon and Merlot grapes. This is unique in a state that has relied on importing a significant share of their grapes to meet the growing demand for Colorado wines relative to supply of wine grapes available. The winery's location and setting are one reason it is a key wine tourism asset for the region—an issue discussed in greater detail later.

Two Rivers' state-of-the-art winery is positioned in the center of the vineyards. Great care and thought have been given to equip the crush area, fermentation room and cellar so that a high level of quality is maintained when taking the grape from harvest, through fermentation, aging and bottling. The Withams are meticulous in managing their winemaking activities and barrel aging process. While these practices have been implemented to enhance the complexity of the wine, innovation is still a priority. This flexibility and process are essential in achieving three goals at Two Rivers Winery: premium wines, consistency and predictability, and customer participation.

The Entrepreneurs

The owners, Bob and Billie Witham, are actively involved in vineyard management, winemaking production, and day-to-day operations. Both are graduates of the University of Northern Colorado—Bob with an MBA (1980), and Billie earning a BS degree in accounting (1982). They spent their first careers in the health care industry. Bob eventually became the president and CEO of a publicly held long-term care company, and Billie was the president and owner of a health care consulting company whose mission was to assist healthcare businesses with reimbursement issues. Later, the Withams developed and constructed two assisted living facilities, which were sold once they became operational. They then returned to northwest Colorado, and their roots. Bob grew up in Craig and Billie was from Meeker. They settled in Grand Junction, and began to explore the opportunities associated with a wine business.

Bob and Billie, along with their two children, Brittany and Brandon, and five full-time employees, run the day-to-day operations of managing a winery. Continuous quality and improvement is a focal point of the winery—benchmarks are set and measured against preset goals. The Withams find this aspect of running the business along with their financial success to be the most rewarding. They hope to grow the business by about 15% a year over the next five years.

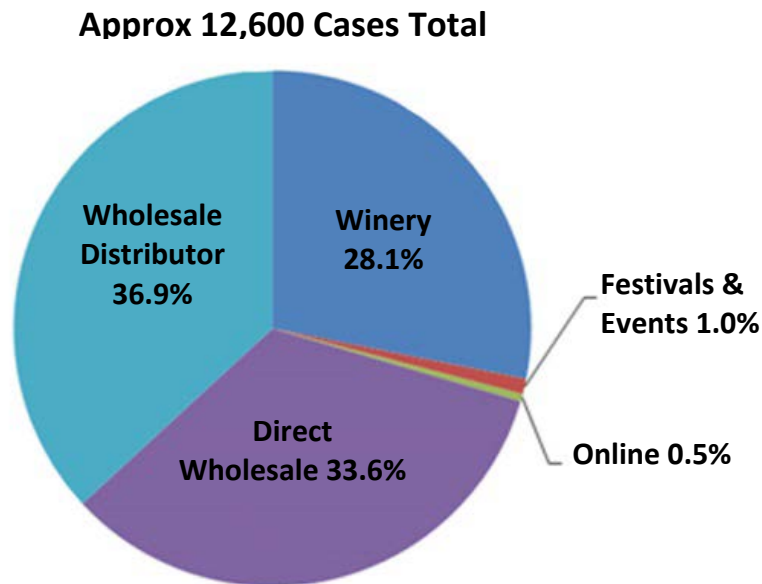


Figure 1. Two Rivers Sales Distribution Channels

A Locally Connected Business Model

The vineyards are capable of producing 44 tons of grapes each year. The Withams recognize that the character of the wine comes from a balanced vineyard and make it a practice to give appropriate and timely attention to the vineyard. In addition to estate grown grapes, local grapes are purchased through contracts with other Colorado growers. In 2013, total production resulted in around 170 tons, and yielded 14,000 cases of wine—up from 1400 cases in 1999, when they started the business. Product volume, combined with a relatively high share of local-input purchases, are the key drivers to increasing the local economic contribution of the winery.

In 2012, Two Rivers winery sold approximately 12,600 cases of wine, the equivalent of about 10% of the Colorado wine industry's total case sales in that year. For its size, the winery sold a surprisingly large share directly (Figure 1) to visitors and consumers.

The high percentage of direct sales may be due to its presence as a tourism destination for the Western Slope of Colorado. Most consumers buy only 10% of their wine directly, whereas this winery sells over 25% in this manner. This is an important contribution to regional vitality as it:

1. Increases the money retained in the region to reinvest in the winery and support its own vineyard and growth in regional grape production.

2. Increases the economic contribution of this business to the surrounding community through payroll and expenditures (Figure 2).
3. Suggests a model of sustainable tourism development, where monies spent on food, beverages, events and lodging can be retained by local businesses and residents.
4. Economic activity in the region is driven by how the winery itself participates in business with other community businesses and households (through payroll). In short, it benefits the region through its expenditures and payments in the community, such as goods sold, people hired and salaries paid.

Figure 2 shows the winery's total shares of expenditures in various categories. One can see that a significant amount is spent on expenditures likely to directly impact the community surrounding Two Rivers (payroll, grapes, and property taxes).

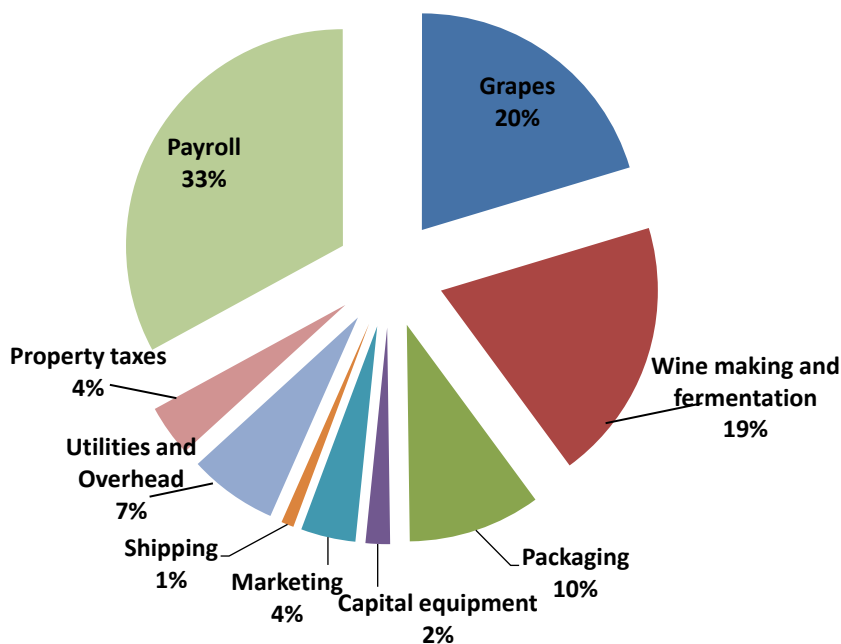


Figure 2. Two Rivers Payroll, Purchases and Expenditures

Building Social Capital among Colorado's Grand Mesa American Viticultural Area

As leaders in the Colorado wine industry and active members in wine-based trade associations, Bob Witham helped grow the capacity and reputation of Colorado's wine industry, which also complements the state's emerging culinary, craft beverage and agritourism sectors. Looking beyond their own winery to the health of the Colorado wine industry, Bob Witham was the founding member of the Colorado Wine Quality Alliance that now includes 12 wineries from throughout Colorado with intentions to add another 12 member wineries in 2014.

The program is intended to provide peer-to-peer, constructive feedback and mentoring to improve the consistency and quality of Colorado wines. Working under the assumption that increasing the perceived quality of the whole set of Colorado wines will improve the marketing power of each individual winery, the success of this industry-led initiative will be demonstrated through improved consumer confidence, market awareness and awards/recognitions that can be measured for those involved in this program. Two Rivers' participation is key because it is a relatively large winery with an event center that has the capacity to introduce many out-of-region visitors to their first Colorado wine experience.

Stam et al (2014) compiled a number of studies on social capital to analyze how it has been used at various times to explain the growth of entrepreneurial firms, through improved performance of diverse actors within a sector, the effectiveness of strategic alliances, and managing transaction costs within supply chain relations. One could argue that Two Rivers has played a key role in building social capital among what others might see as competitors (nearby wineries). Their investments in these alliances and growing firms is because they understand that the growth of their wine alliances may lead the region and sector to have the critical mass and quality reputation needed for all of that "community" to succeed. Although hard to quantify, the continued double digit growth in sales and retail price for Colorado wines is a strong indicator of joint success (Thilmany et al. 2013).

Two Rivers as a Driver of Colorado's Wine and Agritourism Industries

As leaders in the Colorado Wine industry and active members in wine-based trade associations, the Withams have helped grow the capacity and reputation of a state wine industry that complements the emerging culinary, craft beverage and agritourism sectors of the state of Colorado. The size and influence of Two Rivers on wine-related tourism make it particularly interesting to examine as a case study on a growing agritourism and beverage segment.

According to Thilmany et al. (2013), the Colorado wine industry now accounts for almost \$25 million of the state's beverage sector, and \$41 million in economic activity spread throughout the wine regions and population centers of Colorado. This higher number is based on the activity Colorado's wine industry and its expenditures create in business for other sectors as well. On average, for every \$1 in direct wine sales, there is \$1.68 worth of economic activity from grape growers' expenses for maintaining their fields, vineyard workers' payroll, plus wineries' spending on supplies, utilities and business expenses with nearby businesses in their communities.

Two Rivers Winery: A Key Asset in the State's Industry

In 2012, Two Rivers produced almost 10% of the state's total production. The 2013 Economic Contribution Report commissioned by the Colorado Wine Industry Development Board estimated scale-dependent multipliers, so it is possible to estimate the impact of key individual wineries to their surrounding economies and tourism (Thilmany et al. 2013). Beyond these expenditures, indirect effects occur because the input suppliers (sellers of wine bottles and wine grapes for wine production, and sellers of locally produced foods for the event center) with whom Two Rivers does business will increase their own economic activity because of increased

sales of their products to Two Rivers. This is the ripple effect that economic development professionals are looking to amplify with *Buy Local* activities (estimated in the middle column of Table 1). Finally, there is an induced contribution associated with household spending that is a result of households earning money from working in wineries or with those businesses associated with the wine industry (final column contributing to total effects).

Table 1. Scale-dependent Economic Contribution Multipliers

| | Direct Effect | Indirect | Induced | Total Effects |
|---------|----------------------|-----------------|----------------|----------------------|
| Large | 1 | 0.522259 | 0.209069 | 1.731328 |
| Midsize | 1 | 0.454403 | 0.188889 | 1.643293 |
| Small | 1 | 0.365748 | 0.166221 | 1.53197 |

Together, the direct, indirect and induced contributions comprise the total economic contribution of the wine industry, normally expressed as a multiplier of the direct sales. For the Colorado study, the multiplier described above was estimated at 1.68, but in 2012, they also estimated scale-dependent multipliers, shared in Table 1. Two Rivers' sales volume places it into the large category.

Given Two Rivers' reported sales of \$1,129,046 in 2012, and using the multipliers from Table 1, the winery contributed an estimated \$1.95 million to the Colorado economy, with a high share of that likely filtering into surrounding communities. However, this number does not yet reflect the impacts that visitors to the winery may have on the broader tourism sector, and the numbers from a broader Colorado economic report completed in 2012.

The Role of Tourism to Two Rivers and the Economy

For the state of Colorado, considering both wine-based events and visits to Colorado wineries by out-of-state visitors, the industry contributed an additional \$27 million of economic activity related to tourism in 2012—in addition to wine purchases (Thilmany et al. 2013). Given economic activity within the tourism sector, this expands to \$47 million once indirect effects are considered. This is nearly the same amount driven by wine sales but represents spending in nearby communities adjacent to the winery and is in addition to wine sales. The industry also has attracted more in-state residents to their events and wineries since 2005. This has generated almost \$33 million in direct tourism activity, or more than \$56 million when indirect effects are considered.

Two Rivers Winery & Chateau is a well-known landmark on the West Slope. Architecturally designed as a French country chateau, the theme is carried throughout the interior of the chateau, outer buildings and the winery. The fermentation room is available for intimate catered dinner parties. A fully equipped catering kitchen appeals to discerning chefs and caterers. The outdoor pavilion and grounds are surrounded by the Colorado National Monument to the west, the Bookcliff mountain range to the north, and the Grand Mesa to the east. This unique landscape has attracted an increasing number of large events, from corporate retreats to food media tours—many drawing out of area visitors. An important recognition for the Two Rivers team came when Two Rivers Winery was designated by *USA Today* as a top five destination winery to visit in the United States.

The Chateau is a key driver operating as both as a conference and event center. Often used for weddings and social events, it also accommodates large corporate retreats. In 2012, almost 5,400 visitors attended an event at the center, and approximately 75% were out-of-state. The event center is also unique for a Colorado winery because they provide upscale lodging which captures some of the tourism dollars they help bring to the region. The Chateau's revenues generate a little over \$250,000 annually to support operations and fully employ staff for the operation.

Although it would be impossible to gauge the impact of Two Rivers' presence and participation in industry-wide events (a large share of the tourism impact reported for the industry), it is possible to estimate how winery and event center visitors have contributed to tourism activity in the region.

Two Rivers reported hosting about 16,000 visitors at its winery and event center, and 8,000 more at remote, off-site venues it participates in throughout the year (wine festivals and fundraisers throughout Colorado) in 2012. Of those 24,000 visitors, they estimate that about 48% were from outside of Colorado. As a comparison, the entire Colorado wine industry hosted 265,000 visitors, with approximately 35% being from out-of-state. Two Rivers saw about 10% of the visitors for the total industry (similar to their share of sales), but a greater share of the visitors were from out-of-state. This designation is important for a couple of reasons. First, out-of-state visitors reflect a true "impact" of new dollars flowing into the state; and second, those traveling from farther distances would likely designate their winery activities as a key component of their trip (allowing us to confidently take credit for their expenditures as being the result of the winery's activities and destination appeal).

For the Colorado state-level estimate of wine-based tourism, Thilmany et al. (2013) calculated the daily average expenses of tourists per day including: hotel, regional transportation, food, Colorado produced goods, shopping, entertainment and spending on other goods. Total expenditures were calculated by multiplying the total number of visitors by the number of self-reported travel days and then by the average daily expenses. These expenditures were significantly higher (\$283) for out-of-state visitors than for those visiting from within Colorado (\$153).

Using these estimates, and the number of visitors that Two Rivers reported seeing in 2012, we estimate the total potential tourism impact in Table 2. These estimates draw extensively from the Colorado-wide tourism estimates, and can be fine-tuned based on information shared from the winery. First, it should be noted that visitors to Two Rivers are more likely to be from out-of-state (which may impact spending and new dollars brought into Colorado), because the Two Rivers' event center documents that 5,400 visitors are at the location as a primary focus of their trip, it increases the "credit" that can be given to this enterprise's contribution to total tourism. These changes are reflected in Table 2.

Table 2. Impact of Two Rivers Visitors to Colorado Tourism

| <u>In-State Impact- Two Rivers</u> | | | | | |
|--|-------------------|---------------------|--------------------|---------------------------|--|
| Impact Type | Employment | Labor Income | Value Added | Output | |
| Direct Effect | 12 | \$324,161 | \$491,953 | \$763,776 | |
| Indirect Effect | 1 | \$79,402 | \$134,340 | \$229,557 | |
| Induced Effect | 2 | \$102,140 | \$185,241 | \$312,706 | |
| Total Effect | 16 | \$505,703 | \$811,534 | <u>\$1,306,039</u> | |
| <u>Out-of-State Impact-Two Rivers</u> | | | | | |
| Impact Type | Employment | Labor Income | Value Added | Output | |
| Direct Effect | 19 | \$534,308 | \$852,579 | \$1,304,064 | |
| Indirect Effect | 3 | \$140,499 | \$233,966 | \$392,144 | |
| Induced Effect | 4 | \$170,696 | \$309,592 | \$517,865 | |
| Total Effect | 25 | \$845,504 | \$1,396,136 | <u>\$2,214,073</u> | |

Note: Adjusted by per tourist expenditures and share of primary visitors.

Also, because some of the tourism expenditures are “captured” by the winery’s Chateau, rather than contributing to other potentially corporate-owned hotel chains, this could help to make a case for these dollars contributing an even greater amount to the local economy (since expenditures, payroll and owners’ returns are all dollars that are more likely to remain in the region with this locally-owned model). All of these issues should be considered as one carefully interprets the economic contribution estimates.

Two Rivers Entrepreneur Connecting Local Systems

Two Rivers emerged as an interesting case for a few reasons:

1. It is a longstanding member, supporter and innovator among the Colorado Wine Industry Development Board and regional tourism efforts.
2. Their vision to integrate an events and lodging enterprise within the business cleverly leverages the tourism activity already drawn to the Western Slope of Colorado.
3. The time and energy they invested in developing the Colorado Wine Quality Alliance.

This model implies an understanding that “joint reputation” is an attribute that the state’s industry must improve and promote in order to achieve the same kind of recognition, benefits and growth seen in the state’s microbrewery and local foods movement. Colorado wine leaders must provide consistent, high quality wines.

These factors also highlight the connection between tourism and local regional food systems as joint marketing and promotional strategies across these emerging sub-sectors leverage the word-of-mouth and social connections commonly driving each sector's growth. For example, a visit to the winery may have led some consumers to become more loyal buyers, or request Two Rivers wines at their local restaurant or liquor store. Consequently, Two Rivers may recommend those eating establishments and retailers to their visitors and guests, thus illustrating the reconnecting and cross promotion strategies seen happening across food and beverage systems nationwide. Although the winery has not developed processes to evaluate these linkages, it is an effort they plan to make in the future.

This winery also provided us an opportunity to look at the economic development dimensions of relocalized food and beverage sectors. By sharing sales and visitor information and building upon the Colorado's wine industry study (Thilmany et al. 2013), we were able to estimate how this enterprise contributes to the regional economy of Colorado's Western Slope. The owners of Two Rivers believe that by better understanding the region's or industry's other economic development goals they can guide a discussion on how to use Two Rivers as a key asset in future economic development and tourism planning. Key partners in those efforts include the Grand Junction Visitors and Convention Bureau, Colorado Proud and the Colorado Wine Industry Development Board.

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Local Food Systems and Interactions with Entrepreneurship

Zia Taqueria: Building a Local Supply Chain in Southwestern Colorado¹

Martha Sullins

*Extension Specialist, Agriculture and Business Management Colorado State University, 1525 Blue Spruce Drive,
Fort Collins, Colorado 80524, USA. Phone: 970-498-6006
Email: Martha.Sullins@colostate.edu*

Abstract

Zia Taqueria is a full-service restaurant in Durango, Colorado whose owners have steadily increased the proportion of local vegetables, grains and meats they source and serve to their customers. They created new supply chains that add value to heritage products grown in the Four Corners area, invested in building capacity in local farming operations, and created a restaurant brand known for its commitment to serving high-quality, reasonably priced meals. In addition to operating a profitable and energy-efficient business, they support other local businesses and community events and have become leaders in developing a vibrant local food economy in Southwest Colorado.

Keywords: supply chain development, local sourcing, production planning

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Business Profile

Zia Taqueria is a restaurant and catering business that serves fresh Mexican cuisine in southwestern Colorado (see Figure 1 below). Zia was initially launched in 2005 by Tim Turner, a former bakery owner from Massachusetts, and his wife Becky, who is a silversmith. Tim originally moved to Durango in 2001 to become a partner in Bread, a Durango bakery. Inspired to open his own business after several years, Tim travelled to San Francisco to research recipes and menus for high-quality Mexican fare. He subsequently opened Zia's first location on May 5, 2005 on Main Avenue in Durango. He opened a second location on South Camino del Rio in Durango in April 2013 adjacent to Ska Brewery. The second restaurant initially operated out of an Airstream trailer, but now has its own location. The restaurant name is symbolic of the owners' business philosophy. A taqueria is a restaurant or stand specializing in Mexican dishes, such as tacos and burritos, while the Zia sun symbol originated with the Indians of the Zia Pueblo. The Zia Sun was often referred to as the "Giver of all Good Gifts," and Zia Taqueria's owners are involved in a wide range of community food systems outreach and activities.



Figure 1. Southwestern Colorado region

What makes this business unique is how their value proposition infuses every aspect of their food sourcing and service. They state, "Our commitment to local food stems from our belief in the benefits of eating nutrient-dense food, which is grown locally. Supporting local farmers and ranchers is central to building a healthy and sustainable community. Purchasing local food keeps dollars in our regional economy, reduces our carbon footprint, and offers healthier food options to our patrons." As this study illustrates, Tim Turner's desire to create more direct, localized supply chains from which he sources food for his restaurant and catering businesses, has served as an example to other local businesses to reconsider where they purchase their inputs and the manner in which those inputs are produced.

The restaurant concept is to serve fresh, mostly local food in a way similar to Chipotle restaurants--customers can see the ingredients that will become their meal and choose from a variety of beans, rice, meats, vegetables, cheeses and salsas. Both restaurant locations are open seven days a week for lunch and dinner, year-round. Zia also serves daily specials for those who

don't want to construct their own plate. They have gluten-free offerings, as well as "Smart Meal" options which were developed under the Colorado Smart Meal Restaurant and Eating Establishment Program, where restaurants can be designated as having menu items that meet calorie and nutrition criteria for healthy eating.

Business Location

Both Zia Taqueria restaurants are located in downtown Durango—a growing city with significant tourism, a small undergraduate student population, and a competitive food service environment. Durango is the seat of La Plata County and its most populous municipality. La Plata County lies in the Four Corners area whose states—Colorado, Utah, Arizona and New Mexico—are often linked in regional food systems transactions. The city of Durango holds one-third of the county's total population of 52,506, and was estimated at 17,269 residents in 2012 (State Demographer's Office 2014). Fort Lewis College is located in Durango, with a student population of 1,736 in 2012. In addition, Durango sees considerable tourist traffic as it lies 35 miles from Mesa Verde National Park, and is known for whitewater rafting, fishing, the Durango & Silverton Narrow Gauge Railroad and many other sites. In fact, La Plata County consistently receives more than one-third of all traveler spending in its nine-county region—estimated at \$251.6 million per year for 2012 (Dean Runyan Associates 2013). The median income for La Plata County residents is \$73,400—higher than the state average of \$72,100 for 2013 (BEA 2013). The county's 2012 median income estimate was equivalent to the state median of \$74,100.

Durango and the surrounding area have a substantial base of potential resident and visitor restaurant customers, and it has become a rich location for eating and dining establishments. Labor Market Information data for La Plata County list 77 full service restaurants as of March 2014 (by 6-digit NAICS code) (BLS 2014), with most of these located in Durango (61 total, or 79%). In addition, there are nine restaurants in Bayfield (population, 2,416), and six in Ignacio (population, 705). Overall, there are twice as many restaurants per 10,000 residents in La Plata County than there are in Colorado overall.

Business Situation:Interface with Local Food Systems

Although there is a lot of competition for customers among Durango's many eating and dining establishments, there are opportunities for differentiation among businesses. The region has growing public and private support for its local foods community through an umbrella organization known as Growing Partners of Southwest Colorado. In addition, there are some unique opportunities for building a differentiated business based on sourcing local products and featuring seasonally available and appropriate menu items. Leveraging these assets allows Zia Taqueria to capture a market share of regular lunch and dinner patrons, and generate catering clients who are drawn to the restaurant's menu, philosophy of service, and willingness to work with local organizations.

Of particular interest is the manner in which Zia Taqueria's operations create a supply chain for locally grown and processed foods in Southwestern Colorado—even beyond the restaurant's own market. Not only does Tim Turner purchase fresh produce, grains, beans and meats, but he creates both backward and forward supply chain linkages that are anchored in the Four Corners region. Ultimately his goal is to bring new suppliers and processors into La Plata County,

support existing ones within the county, and center these purchases within a 30-mile radius of the restaurant. Tim's vision is to be a leader in demonstrating that many different types of buyers can support local food production—retail (direct to consumer) and wholesale buyers alike. This creates more consistent demand for his suppliers' products which allows them to engage in more deliberate and economically viable production planning. For example, Tim works with growers before they plant their crops so he can let them know what his needs will be over the season, both in terms of varieties grown and quantities needed. His investments in season extension techniques (he has purchased greenhouses and high tunnels for three growers, and small-scale field equipment for another) means that he lengthens the supply period for local produce and creates new capacity among those growers so they can seek other sales outlets for the produce they grow in using Zia's investments.

Furthermore, by working with local and regional meat, grain and bean processors, he has more influence over the origin of the raw product and the quality of the processed product. For example, he purchases locally raised beef and pork and has it processed at Sunnyside Meats, a USDA certified slaughter and processing facility outside of Durango. He can work directly with the processor on the cuts he needs, and obtain lower processing prices because he can use flexible scheduling (off-peak processing warrants a discount with that facility).

Product Sourcing

Zia is known for its menu offerings based on locally raised beef, pork, beans, tomatoes, tomatillos, peppers, cabbage, salad mix, lettuce, squash, zucchini, potatoes, cilantro, and other products. The Turners have defined local for their business practices as originating with a 30-mile radius of their restaurants, while any regional product they select comes from either La Plata or neighboring Montezuma County. The business also supplements its local sourcing with food products from two mainline distributors: Shamrock Foods (which has distribution centers in Commerce City, Colorado and Albuquerque, New Mexico, among other locations), and Labatt Food Service (a Texas-based company that distributes food and related products from distribution centers in San Antonio, Dallas, Lubbock, and Houston, Texas and Albuquerque, New Mexico).

Zia obtains its fresh produce from a variety of small farms located around Durango and Hesperus that grow summer and winter vegetables. The majority of Tim's purchases are based on long-term relationships and production planning with 6 growers, but he also purchases some produce from vendors in the Durango farmers market. He purchases meats from several area livestock growers. While local beef is relatively easy to source, pork and poultry are more difficult to procure. Pork is in short supply since local demand has been increasing. Tim is usually only able to buy residual quantities of wholesale pork that vendors can't first sell through retail channels. He has also purchased animals through the county 4-H program to support emerging livestock producers.

Zia's mainline distributors play an important role in supplying products that Tim cannot source locally. For example, there is no chicken meat available for retail distribution since there is no poultry processing in the region. In fact, the closest in-state poultry processing facility was in Northern Colorado; however, it too recently closed. Lastly, Tim is able to source a variety of dry beans and spices from Dove Creek in nearby Dolores County, and he buys white and blue corn near Shiprock, New Mexico from Ute Reservation farms.

Product Processing

In addition to purchasing fresh, local foods, Tim tries to have those foods processed to his specifications in the region. In the case of meats, whole animals are processed at Sunnyside Meats, a USDA-inspected and custom livestock processing plant outside of Durango. Tim purchases the Ute Mountain corn by the pallet, and ships it 270 miles to be made into masa and tortillas in Clifton, Colorado, east of Grand Junction. The masa is then returned to Durango and made into gluten-free corn chips at the Chip Peddler, using seasoning obtained from Adobe Milling in Dove Creek. Although this processing arrangement entails larger than ideal transportation and handling costs, it is the only way to process heritage corn varieties and use them in Zia's food service.

Marketing

Zia Taqueria engages in both direct and indirect marketing. The restaurant reaches its current and potential customers through its web site, Facebook page, intermittent articles in local publications (Edible San Juan Mountains, Durango Herald), and a YouTube promotional video. The web site informs visitors of the business's values, menu, and outreach activities in the community. The restaurant's Facebook page helps to connect its community of regular diners and those who participate in broader community activities through frequent posts and photos.

Indirectly, Zia promotes its products and values through its many community sponsorships and events. The restaurant caters many special occasions, such as weddings, business lunches and dinners, conferences, and community events. In addition, Zia has contributed to more than 400 events and organizations in the last 9 years through financial gifts or food donations. In fact, throughout 2013, Zia supported all of Growing Partners' events and programs (see Services Provided by Other Community Organizations and Partners). This is not only a powerful marketing tool for the restaurant business, but it also promotes the food producers from whom Zia sources.

Lastly, Zia Taqueria provides occasional meals for two charter schools in Durango—Mountain High Middle School and Animas High School—by offering several menu items for the children to choose from. This has the benefit of showcasing local products to children, promoting healthy eating choices, and reaching the families of those students.

Entrepreneurial Focus

Local Investment

Zia Taqueria's role in effectively developing and supporting a new supply chain for local foods can be evaluated through two metrics:

1. The increasing quantity of produce, meat and other food products that Zia Taqueria sources directly from a diverse and growing number of suppliers; and
2. Capital investments in suppliers' capacity to increase production and sell their raw agricultural products to Zia Taqueria.

In its initial year (2005), Zia Taqueria sourced 5-6% of its meat and fresh produce locally. By working with growers on production planning to generate output levels that meet Zia's quality standards and desired harvest timing throughout the season, over the last 8 years Tim has been able to increase local sourcing to 18% of all food used in both his catering and restaurant businesses. His goal for 2020 is to increase the proportion of local sourcing to 45% of all food purchases (see Figure 2 below).

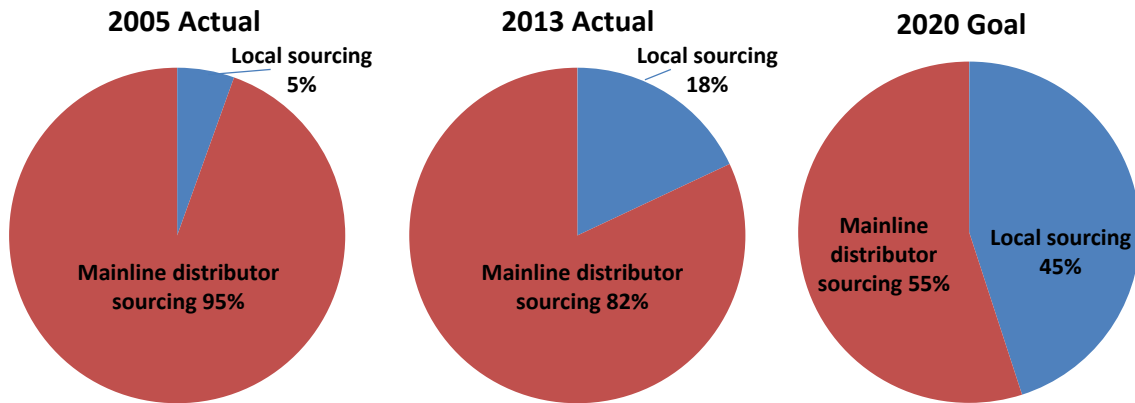


Figure 2. Zia Taqueria's local vs. non-local product sourcing, 2005-2020

Although Tim's goal is to develop long-term procurement relationships with existing businesses, he has found no local facility to cut and freeze or preserve fresh vegetables for year-round use in his kitchens. To mitigate this problem, Tim is planning on constructing a small vegetable processing facility in Montezuma County that will likely be operational in 2015. Although he currently purchases from growers throughout the region, he has considered starting his own farm to provide additional produce for his business. He already has control over some portions of the restaurant and catering business's supply chain by working directly with produce and meat growers, and using tortilla and chip manufacturers that will receive and process his Ute Mountain-sourced corn.

Zia has invested approximately \$45,000 in greenhouses and high tunnels, which includes the cost of labor to build the structures. In addition, he has purchased \$5,000 in small-scale farm equipment that is being used for cultivation in one producer's vegetable fields. These capital investments serve two purposes. First, they help Tim secure a more reliable and higher quality supply of produce that will be available over a longer period of time—especially in terms of extending the production season into early spring and late fall when cold temperatures preclude open field production. Second, they represent Zia's investment in the growers' capacity to produce other products and expand into new markets, since they have the option of selling their produce to other buyers once they fulfill their commitment to Zia. Tim makes the initial purchases and the growers take possession of the structures and equipment. These growers have periods ranging from 4-7 years to pay for the cost of the capital purchases (interest-free), which they do by selling a proportion of their produce to Zia at a 50% discount. Zia retains ownership of all structures and implements until they are paid off, which allows Zia to depreciate these items until their ownership is transferred to the grower.

Customer Base and Pricing Strategy

In a relatively crowded marketplace for restaurants, Zia Taqueria stands out as the only retail dining establishment in Durango that continues to build its supply chains for local product sourcing, while maintaining price points that are affordable to most Durango residents. In fact, affordability of good, locally sourced food is a priority for Zia Taqueria's owners, who price all dishes under \$10. Two other area restaurants feature local foods on the menu in approximately the same price range, but these establishments have not engaged in the extensive supply chain development that has been Zia's hallmark. The other establishments that source locally and actively promote their product sourcing include: El Moro (small plates from \$7, and large plates from \$14); Mahogany Grille (vegetarian dinner options start at \$18); Cyprus Café (\$10 lunch to \$34 dinner plates); and Ore House (dinners begin at \$22), among others. Therefore, Zia occupies a unique niche in the Durango restaurant scene and maintains a solid following of regular clients. As a result, Tim estimates that 75% of his customers are regular patrons, and approximately 80% are from the local area.

Zia's stable menu pricing is also remarkable given that consumer prices for food away from home have risen by 9.4% since 2010 (Federal Reserve Bank of St. Louis 2014). Zia Taqueria's last price increase was in spring 2010—which likely represents another customer retention strategy. The restaurant's loyal customer base relies on Zia for high quality and affordable offerings. Although Tim indicated that he will likely raise the prices of some items in the face of rising ingredient costs, he will not increase the prices on all menu items in an effort maintain affordable dining for the community.

Limitations to Local Sourcing

Zia does encounter some significant barriers to growing its local sourcing of raw agricultural products and increasing regional processing of corn into value-added products. These barriers are both external to the business (beyond its control or influence) and internal to the business (within its control or influence). External barriers include the small number of vegetable growers who are located within La Plata County (from whom purchases would reduce the distance the food travels) and who can reliably grow the products that Tim needs. The limited number of growers is due to a wide range of factors, including:

- **Location.** The high desert elevation limits the growing season to 90 days in some areas, while other areas have as many as 130 days in their growing season. This means that more expensive investments in season extension and year-round growing technologies are critical to increasing the supply of local foods.
- **Prices for land.** Since Zia opened in 2005, the population of La Plata County has increased by 10% (based on 2012 estimates from the Colorado State Demographer) which has led to the development of agricultural land for residential housing. The scarcity of suitable ag land has, in turn, increased land prices. This not only attracts some farmers to sell their land for development (meaning there are fewer and fewer farmers in agriculture); but it also makes it difficult for new farmers to purchase or lease land for agricultural production.

- **Water scarcity.** A lack of water in some areas has limited crop irrigation, livestock watering and forage production, which has increased costs of production and, in some cases, led farmers to leave farming and ranching.
- **Limited food processing facilities.** Lack of poultry processing means locally-produced chicken cannot be used in the restaurant. There is also no proximate location for processing fruits and vegetables in the region.

Internal barriers to purchasing more local products include the higher costs of sourcing local, many of which are hidden costs. For example, buyers like Tim purchase local foods at wholesale prices, but after first incurring the additional cost of researching and contacting growers, and then repacking and storing any food that is purchased in small lots, and often doing additional cleaning and prepping of field-fresh produce (especially lettuces), above what would be required were the produce purchased from a mainline distributor.

Tim believes a wholesale clearinghouse would reduce some of the costs of local sourcing by locating producers and aggregating product into bigger lots for purchase. At this time, there are two avenues that assist local food buyers. First, there are two electronic guides for those searching for local foods in the region: Mesa Verde Local Foods (<http://ocs.fortlewis.edu/localfood/>) which lists 12 produce and 4 livestock growers in La Plata and Montezuma Counties; and Colorado MarketMaker (www.comarketmaker.com) which lists 7 produce and 4 livestock growers for the same geographic area. However, a regional producer distribution cooperative did form in March 2014—Southwest Farm Fresh. The new cooperative currently has 20 producer-members across 3 counties who will offer meats (tilapia, bison, beef, pork and lamb), and vegetables and fruits (salad and micro greens, broccoli, cucumbers, kale, spinach, carrots, tomatoes, apples, squash, and other produce). The activities of this distribution business may well help Zia increase its local sourcing to nearly 50% well before its target year of 2020.

Lastly, food processing facilities would also help to reduce the costs of local sourcing since raw agricultural products could be purchased in season and then frozen or canned for later use. Zia has not had a very successful experience with processing fresh product in its own small kitchens, and is in the process of developing its own facility in Mancos, which is 28 miles from Durango in Montezuma County.

Overall Business Growth

Zia reports annual sales growth of 15-20% per year since opening its first restaurant in 2005. Initially, the catering business had a smaller contribution to total sales (1-2% in 2005), but over time grew to 18% in 2013, especially as Zia has become known for providing high quality, fresh offerings for a wide variety of events—from community events to corporate lunches to weddings. It is important to note that the restaurant's strong sales growth has continued since it opened, in sharp contrast to general trends illustrated by metrics from the National Restaurant Association (see Figure 3), whose Restaurant Performance Index showed negative sales, customer traffic and expectations from 2007-2010 (NRA 2014). Both Zia restaurant locations have strong sales and serve approximately 300 meals per day, year round.



Figure 3. Restaurant Performance Index, 2004-2014

Comparing Zia Taqueria’s cost structure to typical restaurant metrics, one observes that Zia’s food (cost of goods sold) and labor costs are each approximately 32% of total sales, compared to an industry average of 30% (Colwell 2012). Zia’s overhead is estimated at 20%, equivalent to industry standards, while earnings are estimated at 16%—below the industry benchmark of 20% (see Figure 4). Higher labor and food costs may be related to Zia’s emphasis on labor-intensive local food sourcing and preparation. However, lower than average earnings may be an indication of profit foregone resulting from Zia’s direct and indirect investment in human capital (wages and benefits paid to workers hired or retained by Zia and the businesses with which the restaurant contracts), as well as Zia’s investments in the long-term development of local businesses (capital equipment purchases), and generous donations of food and gift cards to support community events (valued at approximately \$70,000 per year).

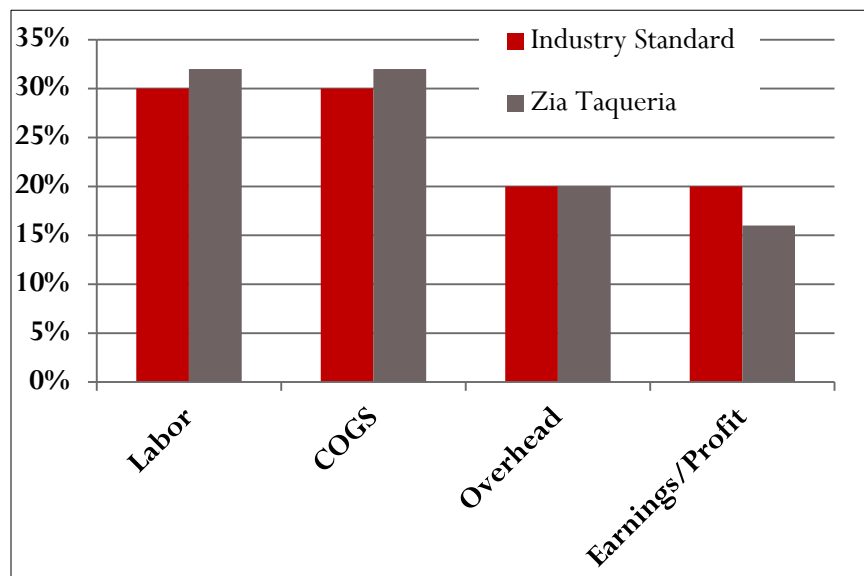


Figure 4. Zia Taqueria’s 2013 cost structure compared to industry benchmarks

Notes. COGS=Cost of Goods Sold. Zia reports its earnings as EBITDA (before interest, taxes, depreciation and amortization).

Positive Outcomes and Benefits to Community

There are several types of impacts that can be associated with Zia Taqueria's role in developing regional supply chain linkages, as well as the way in which it has reduced food waste and energy use in its operations (which likely helps to offset its relatively higher food costs compared to similar food businesses).

First, Zia currently directly sources an increasing amount of food from local farmers and ranchers by regularly buying vegetables from at least 6 local growers and intermittently from multiple vendors in the Durango Farmers Market (which is open from May through October); and meats from at least 3 beef and pork producers, with occasional purchases from 4-H participants who raise hogs. The restaurant processes all meats and beans locally, while purchasing corn within the Four Corners region (in Shiprock, New Mexico) for processing in Colorado.

Employment generation and retention are important indicators of Zia Taqueria's impact in the region. The restaurant itself has two salaried general managers who have been with the business for more than 5 years, and Tim is committed to maintaining a fair and enjoyable work environment that creates employee loyalty and reduces staff turnover. In addition, Zia Taqueria has indirectly contributed to employment in the region. For example, by purchasing corn from the Ute Mountain growers, Tim believes he has either created or retained one position by creating additional demand for Bow and Arrow Brand corn (a non-GMO, traditional variety) which is grown by the Utes on their 7,700 acre irrigated farm. La Milpa in Clifton, Colorado added one position to its workforce to process the raw corn and make masa and tortillas for Zia.

The Chip Peddler in Durango was a small, struggling independent business until Zia began contracting with them to make tortilla chips. Today The Chip Peddler has hired one additional employee and expanded its customer base. Thus Zia Taqueria's direct hiring, as well as its processing contracts with other businesses, have contributed to employment generation and retention in the region's farm, ranch, food processing, and food manufacturing sectors.

Second, Zia has reduced waste and energy consumption, and thus lowered some of its costs, through the following practices:

- Saving all kitchen scraps for the James Ranch who picks them up to feed their chickens. This equates to 50 gallons per week of scraps that are not sent into the waste stream, and that reduce the chicken producer's costs of feed.
- Investing in solar energy by using two 10KW systems for the restaurant which produces about 20% of their electricity. The energy that is required but not produced by the restaurants is purchased through La Plata Energy Association's renewable energy program.
- Using multi-use plates, forks, spoons, knives, and glasses for serving and catering. All paper products are post-consumer products and are pre-cut to reduce consumption.
- Eliminating use of plastic bags, and using buckets and crates for harvesting and storing the locally-sourced food they purchase. Zia sends all cardboard, paper board, paper, glass, tin, and plastic into the Durango recycling stream.

- Incorporating recycled materials in their buildings, and using high-efficiency compact-fluorescent fixtures and bulbs for lighting (which are on timers to reduce energy consumption, and water savers on all water faucets).
- Purchasing bicycles for employees (25 bicycles to-date), for commuting to work and for recreational use.

As a result of its ongoing efforts to reduce waste through conservation, energy production, and local sourcing, in February 2014 Zia Taqueria was recognized for its environmentally-friendly practices by the San Juan Citizen's Alliance Green Business Roundtable and was awarded the 2013 Green Business Leadership Award for leadership in environmentally-based contributions to the community.

Services Provided by Other Community Organizations and Partners

Since its inception in 2005, Zia Taqueria has grown to become a catalyst for new community and business relationships within the region. One anchor regional food systems group is Growing Partners of Southwest Colorado—a partnership of agencies and individuals working together to support a fair, sustainable local food system that reaches all incomes, ages and cultures.

Growing Partners of Southwest Colorado is a coalition of 11 organizations whose goals are to: 1) increase the amount of and access to local, high quality foods; 2) provide beginning farmer support; 3) increase access to growing spaces; 4) facilitate sustainable educational programs and celebrations of local food; and 5) build partnerships and community around food. They produced a community-wide food assessment in 2007, one of the first in the state of Colorado, which called attention to both the opportunities for enhancing the region's food system, as well as the constraints on production and processing.

Growing Partners also supports multiple food-based events each year (Homegrown Food Retreat, Iron Horse Chef competition, Tour de Farms, and Apple Days) in which Zia Taqueria and other businesses and community organizations participate (these include the Southern Ute Community Action Programs, Cooking Matters, The Garden Project of Southwest Colorado, Fort Lewis College Environmental Center, The Old Fort at Hesperus, CSU Extension in La Plata County, Healthy Community Food Systems, Healthy Lifestyle La Plata, La Plata Unity Project, Turtle Lake Refuge, and Twin Buttes Gardens).

These events provide a substantial promotional opportunity for Zia Taqueria, a major sponsor in all of the Growing Partners' events, as well as an opportunity to develop relationships with new growers in the region. For example, in 2013 Zia hosted 3 days where 10% of its restaurant profits were donated to The Garden Project. The Garden Project advertised the fundraising project to its members, partners, and the community at large by posting flyers, sending out newsletters and posting on Facebook. This advertising resulted in increased traffic and sales at Zia Taqueria's locations during the benefit days, which generated the 10% donation, while supporting a cause that is important to Zia's owners.

The La Plata County Building Farmers and Ranchers program and the Old Fort at Hesperus' farm incubator both work with new agricultural producers to teach business planning and

management skills, and enhance market outlets for new entrants to livestock and crop production. Participants in both of these programs graduate with a business plan and more knowledge of how to work with different buyers—from farmers' markets to restaurants to institutional buyers. Zia Taqueria currently buys from 3 producers who are graduates of the Building Farmers and Ranchers program because they have the ability to plan their production to meet Zia's specific requirements for varieties produced, quality and harvest timing. Thus, from food production through to service for consumption, Zia Taqueria's owners consistently leverage the community's food system assets, while also contributing to creating and sustaining its multiple backward and forward supply chain linkages.

Conclusion

Zia Taqueria is a small-scale restaurant and catering business that is creating new linkages in Southwestern Colorado's food economy. These linkages include new supply chains for food procurement and processing, as well as investments in regional businesses that increase their capacity and sustainability. For example, Zia's efforts to use heritage corn varieties in its tortillas and chips has resulted in creating at least 2 jobs, as well as promoting foods that are grown and processed regionally. By investing in season extension techniques such as greenhouses and high tunnels for local produce growers, Zia stabilizes its own supply of fresh produce. However, the restaurant also expands production capacity and potential marketing opportunities for the producers benefiting from those investments. Therefore, even though Zia Taqueria has a small physical footprint, it has a larger impact in terms of bolstering the capacity of Southwest Colorado growers and food processors to meet the regions' burgeoning demand for local foods, and create a more connected food economy, based on investing in sustainable businesses.

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Local Food Systems and Interactions with Entrepreneurship

Sandhills Farm to Table¹

James Matson^a and Jessica Shaw^b

^a *Partner and Principle, Matson Consulting, PO Box 661, Aiken, South Carolina, 29802, USA.
Phone: 803-233-7134 Email: jmatson@matsonconsult.com*

^b *Editor and Writer, Matson Consulting, PO Box 661, Aiken, South Carolina, 29802, USA.*

Abstract

This paper explores the innovative multi-stakeholder cooperative structure of Sandhills Farm to Table Food Hub and how this business utilizes an innovative organizational structure to connect producers, consumers, and workers to each other and the community. Evaluating SF2T's structure demonstrates how a multi-stakeholder cooperative benefits, incentivizes, and equalizes the three stakeholder classes. We also analyze current business activities and comment on barriers to the cooperative's future growth and expansion. Finally, the paper highlights the multiple benefits the cooperative provides to the community and how their structure and activities enable the cooperative to address current objectives and plan for future goals.

Keywords: food hubs, cooperatives, multi-stakeholder, Community Supported Agriculture

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Farm Profile

Sandhills Farm to Table (SF2T) has taken a different, innovative approach to their business model by organizing as a multi-stakeholder cooperative. By including three different stakeholder groups (producer-farmers, consumer-customers, and employees) in the decision making structure of its operations, SF2T has been able to expand the scope of benefits and help address the issues presented in a traditional cooperative structure. It is one of the first local food cooperatives in the country in which the farmers, consumers, and staff are all equal owners.



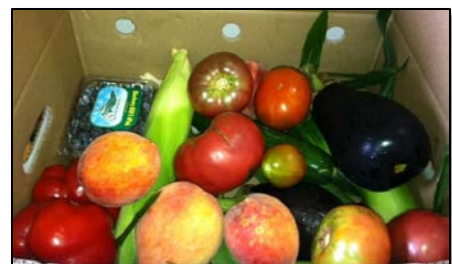
SF2T is a multi-farm, Community Supported Agriculture (CSA) cooperative that was organized in late 2009. Founder Fenton Wilkinson's goal for the cooperative was to create an entity that would serve to meet the food demands of the local community with locally produced food, while also benefitting the producers, consumers, and workers themselves. Wilkinson also wanted to focus on strengthening the community through the cooperative by connecting the people who were buying the food to the people producing it (Matson and Thayer 2012).

Initial start-up attempts lacked the support and additional players it needed to reach potential, but Wilkinson continued to work to bring his vision to fruition. With the help of the Moore County Community Development Planner, Wilkinson finally had the foundation for his plans and SF2T was formed. Wilkinson continued to work to ensure the business' goals were met, but to move to the next stage, SF2T would need to switch focus from the start-up phase and begin looking for growth opportunities. In early 2013, Steve Peters took over Wilkinson's role and helped usher in a new era for the cooperative. SF2T began taking online memberships and subscriptions, a step that was a move toward "stabilizing the cooperative and positioning it for growth" (Natt 2013). Wilkinson is still involved with the cooperative as he continues to pursue other projects to help further its mission.

Products and Services

The cooperative's main source of revenue comes from produce box subscriptions. For 18 weeks in the spring and summer and eight weeks in the fall, SF2T members receive a weekly or bi-weekly, standard- or family-sized box featuring a variety of local, seasonal products. They also sell bulk produce in standard case lots and specialty produce, such as heirloom tomatoes and spring salad mix. The cooperative also markets shelf stable items such as honey, jams, and bread, as well as special handling items, including meats, eggs, and dairy.

Though the weekly boxes tend to be the main source of revenue for the cooperative, other business services are



critical to the success of SF2T. These services include producer and consumer education, product delivery, aggregation, training, and community outreach.

Location

SF2T is located in Whispering Pines, a town in Moore County, in the Sandhills area of N.C. Moore County is typically considered a rural area. In 2011, the N.C. Department of Agriculture and Consumer Services reported that Moore County had 804 farms covering 80,075 acres at an average farm size of 100 acres and 57 employees; however, it is also centrally located within the state near some major metropolitan areas that represent easily accessible buying power within 100 miles of the cooperative (NCDA&CS 2013).

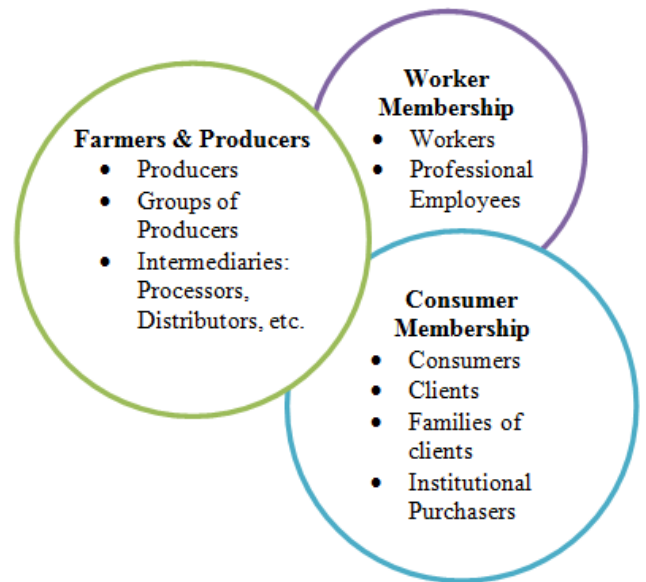
Business Situation: Interface with Local Food Systems

Sandhills Farm to Table was created to address several critical needs in the community. These needs include:

1. The need of small and mid-sized local farms to find a path to economic viability.
2. The need of residents to have consistent access to enough healthy foods.
3. The need to provide households with convenient access to fresh local food at conventional prices, as well as education for healthy eating to address the escalating diet-related health issues of community residents, particularly childhood obesity.

Multi-Stakeholder Business Structure

Because the goals of a traditional cooperative often include benefitting multiple groups within the same structure, many ventures are experiencing increasing difficulty successfully operating a single-stakeholder business. SF2T strove to establish itself as more than just a traditional agricultural cooperative, and found that a multi-stakeholder structure offers a solution to the issues many beginning cooperatives face by balancing the needs of all three stakeholder classes: producers, consumers, and workers. This type of structure creates unique challenges, incentive structures, and information flow and sharing as it embraces the needs of stakeholders.



SF2T’s Board of Directors brings all three stakeholder groups together along with an at-large position that represents the cooperative. SF2T believes, “By including three different stakeholder groups in the decision-making structure of our operations, we are aiming to expand the understanding and respect of each stakeholder group so that each group can benefit the others” (Our Board). The board consists of two members from each class. Anything voted on by the cooperative board requires a majority vote, but must also have a vote from at least one member

from each class. This type of board structure ensures all class's needs are being met and they all have a say in the business' activities.

SF2T is able to bring these different groups together and allows them to strengthen their relationships, benefitting everyone involved. Leitschuh describes the relationship between farmers and consumers as a "dynamic accommodation," meaning the farmers are able to discuss pricing options while also maintaining a relationship with the consumers (Lund 2012). The consumers enjoy the opportunity to interact with producers as they are able to learn more about how and where their food is produced.

Membership Incentives

SF2T's incentive structure aims to benefit all of its member classes and these structures are an important part of maintaining interest and involvement with the cooperative.

The incentives for farmer and producer members to sell through the cooperative are that producer members have been able to receive prices well above what they would otherwise receive in a wholesale market and the ability to reach customers who may otherwise be outside the farmer's market area. Farmers also do not have to worry about the cost of staffing employees to sell their products, which helps lower their overall costs and increase revenue. With these benefits, producers can continue to grow their businesses and promote the area's agriculture.



Consumer members benefit from the cooperative's ability to bring together multiple producers and consistently deliver high quality, fresh local products. Another incentive the cooperative offers to consumers is the knowledge of where and how the products are produced, which is something consumers would not typically get at a traditional grocery store.

The final stakeholder class, cooperative workers, benefits from the cooperative by receiving an income and, at times, employment benefits.

Entrepreneurial Focus of Case Study

The founders of Sandhills Farm to Table have helped redefine the cooperative purpose and structure within their innovative business model. As evidenced in their business slogan, "Neighbors Feeding Neighbors," they focus on how different groups can work together to help create a better community and life for themselves and those around them. The cooperative's success is impacted not only by their unique organizational structure and community outreach, but also by their understanding and use of marketing, the supply chain, and growth challenges.

Marketing

The current marketing strategy SF2T uses is based on their extensive marketing plan. A large part of continued sales for the cooperative is through their produce box subscription model,

which helps producers plan future production so that they are able to meet demand and determine if they will need to sell through additional channels. This model also guarantees a consistent supply of fresh, in season product for consumers. The cooperative receives a monetary commitment, allowing for a more stable market for both producers and consumers. This subscription service enabled the cooperative to distribute over 22,000 boxes of produce in 2013. Initially, the cooperative relied on word of mouth marketing, free community news stories, and newspaper advertising. As the business has grown, they have incorporated more promotion outlets, including social media sites and an interactive website that gives customers the ability to sign up for a product box subscription and place orders for artisanal items.

Customer Base

The customer base for SF2T is steadily growing as they continue to expand their marketing and community outreach. In 2013, the cooperative delivered produce boxes to more than 1,500 members or almost 3.5 percent of the households in Moore County. Many of the cooperative's customers tend to fall in the age range of about 32 years or older; about 52 percent of their customers have households with two people and 30 percent have between three and four people in their household. According to Margaret Lund (2012), the customer base for SF2T "include[s] not only the relatively affluent retiree communities in the area, but also a core group of 25 military families based at nearby Fort Bragg." Part of the cooperative's success is its ability to appeal to the higher-end market, while also servicing those in low-income areas.

Sales

Sales levels for SF2T are steadily increasing as the business grows. In their second year of sales, 2011, sales had already increased by 48 percent bringing overall sales levels to \$425,000. Farmers typically receive about 70 percent of retail price for their products, which is about 20 to 25 percent higher than the prices paid by most wholesalers. From their 2013 sales, about \$320,000 went to farmers and artisans and \$40,000 was contributed directly to community schools, churches, and organizations (2013 Community Impact).

Market Expansion

Some relatively untapped markets for the cooperative that are readily available within Moore County and surrounding area include wholesale markets such as restaurants, assisted living facilities, golf clubs and resorts, educational institutions, hospitals, and military bases.

The impact SF2T has had on farmers and the community has not gone unnoticed and, in fact, local government agencies are finding ways to help the cooperative expand their market and, ultimately, their impact. According to a blog from the N.C. Department of Agriculture & Consumer Services, "Lee County was awarded \$7,500 to work with SF2T Cooperative on a pilot program to assist farmers who would like to market produce to institutions under-served by local foods. The pilot program will serve Lee, Moore, and Richmond counties" (Garrison 2013).

Supply

SF2T built a network of farmers and producers they can rely on for fresh, high quality produce. Since its first season, the cooperative has grown to include over 38 farmer members and 14 invested core growers as of 2012. By having a personal stake in the cooperative, these growers are motivated to continually improve and develop their scale and quality standards. Along with these core growers, they also work with other suppliers on an as needed basis.

Sustainability is a large area of interest for the cooperative, and they believe, “Good nutrition starts with the soil, and most of our farmers universally use organic soil-building techniques like green manures and cover crops. In addition, none of the local produce sold through the co-op is sown with GM (genetically modified) seed” (Supported Practices). Although the cooperative does have quality standards for the product supplied by their farmers and producers, they do not require the produce to be certified organic.

Barriers to Growth

Although SF2T has experienced business growth, they are still facing some barriers. Their past and recent growth demonstrates a strong unmet demand for local food, while also presenting obstacles in growing sales to meet that demand. As stated in a previous study of the business, the cooperative is “a web, and every string is important” (Lund 2012). Two main barriers affecting the cooperative’s ability to increase sales are producer growth and increasing the customer base. The cooperative will need to continue building its network of producers that are able to supply the quality produce consumers demand. This may become problematic. As SF2T adds more producers, they face the issue of competition within the cooperative among this group.

Season extension is another barrier that many food hubs and their producers face. One of the drawbacks to SF2T’s supply is that they are limited to only what is produced locally and are subject to seasonality. One way to overcome seasonality obstacles is by using season-extending technology. Techniques to extend the growing season beyond its normal ranges in central N.C. include greenhouses (fixed location and heated) and high tunnels (semi-fixed and unheated). The area has a moderate supply of underutilized greenhouses, a remnant of the decrease in tobacco production in the region, that could be utilized for growing vegetable crops.

Along with an increase in the cooperative’s network of producers, SF2T will also need to increase its customer base to grow. The cooperative’s strategy for expanding their customer base involves making changes and/or additions that better meet consumer needs. Consumers have made it clear they want more control, more variety, and more choice, so the cooperative is constantly making changes to product packing and delivery to help preserve produce quality.

Positive Outcomes and Benefits to the Community

As part of Sandhills Farm to Table’s business goals, they state, “We are engaged in our community, helping to improve the quality of life for all, making local food accessible to Sandhills families, secure a living for the next generation, you and me!” (We are a community).

SF2T's unique organizational structure allows the cooperative to give back to multiple groups within the community.

As a farmer member, producer John Blue from Highlanders Farms has been able to benefit from the cooperative's multi-stakeholder structure, including condensed demand and an efficient delivery system. Blue also noted how the cooperative has worked to bring the different classes together. He states, "The co-op has been very successful in building a positive relationship between the farmers and community" (Leitschuh 2013). This is especially important to the producer and consumer classes as it can help foster a more balanced local foods system.

YKnot Farm is another example of how SF2T has been able to help upcoming farmers. Owner Kelly Brott partnered with SF2T and with the help she received from cooperative members and a loan through Slow Money NC, she was able to increase her modest flock of chickens to 500 chickens, 50 ducks, and 36 turkeys (Hewitt 2013).

These businesses are examples of how the cooperative multi-stakeholder structure is successfully returning benefits to one of its stakeholder classes. Typically the cooperative works with small to mid-sized farmers who are either looking to break into the local foods market or hoping to expand their customer base. As a multi-stakeholder cooperative, SF2T has also been able to focus on the producer and allow them the benefit of receiving fair and consistent pricing, which, allow the farmers' businesses to grow. They have had a tremendous impact on their 35 producer-members by paying between 70 and 85 percent of food dollars spent. This benefit to producers continues to grow today by increasing the return to producers through increased sales.

The cooperative also provides opportunities for locals to become involved with their community by using volunteer labor for their packing house and gathering sites. In 2013, SF2T had over 38,000 volunteer hours (We're all in this Together).

They continue to innovate and expand their community impact by branching into areas not considered traditional cooperative territory; 2011 marks the first year they began offering community enrichment classes through the cooperative. SF2T uses the winter time when most CSAs experience a lag to educate and connect with the community. They started the SF2T University where farmers "teach what they know," allowing members to share their knowledge and experience with the community. Not only does this program allow for the co-op to build their community connections, but it also helps grow and preserve the area's agriculture and farm culture. In 2010, SF2T was also able to connect an abandoned four acre blueberry patch with a 4-H Club. The Club took on this business because the co-op agreed to buy their entire production. Their multi-stakeholder model is providing inspiration for several other rural cooperatives in N.C., and their unique contributions have been recognized by a recent article in the USDA Rural Development Magazine. They have also encouraged N.C. State and farmers to look for areas of expansion in the local foods industry.

In 2010, SF2T donated more than three tons of produce, which farmers were paid for, to families in need; they are also involved in two local projects to increase the access to and the consumption of fresh local foods by residents of a local low-income community. In 2013, the cooperative donated over \$40,000 to local schools and non-profit organizations in the area and

their dedication to community outreach continues today. The cooperative also works with the West Southern Pines Citizens for Change to begin the “Affordable, Healthy Local Food Access Initiative,” which works to connect areas of low income to healthy food and increase support to farmers.

The cooperative continues its work with schools to help raise money for organizations and engage students. Sandhills Farm Life Elementary receives two dollars for every subscription box that is picked up at their location. The school also receives five percent of online sales from the cooperative’s Artisan Market (Sandhills Farm Life).

Services Provided by Other Community Organizationa and Partners

For the most part, SF2T has been the lead organization for many community projects, but without outside organizations and partnerships, the cooperative may have never existed. SF2T can credit much of its implementation success to outside organizations and partners. Many times, it can be difficult for a multi-stakeholder business to qualify for additional funding and support resources since the different stakeholder classes may cause the business to become ineligible for certain funding programs. Through the Rural Advancement Foundation International (RAFI) grant and the USDA Rural Cooperative Development Grant (RCDG), as well as support from USDA Rural Development staff, N.C. MarketReady, and Matson Consulting, the business was able to get off the ground.

Moore County Community Development Planner Tim Emmert was instrumental during the cooperative’s implementation. He was able to get public agencies, organizations, and citizens involved to help build the foundation for the business. Bruce Pleasant was another key player in moving the cooperative into the next phase of development through his position as a business/cooperative programs specialist with the USDA Rural Development N.C. state office. SF2T also worked with Moore County Partners in Progress, an economic development organization, and a key factor in the county’s plan to create a tri-county food hub. Moore County Partners in Progress commissioned a study and report on the available produce supply and demand in the area, which has been an important resource in determining areas of expansion.

Operationally, partnerships with outside organizations and community members remain vitally important. Through their partnership with local schools, the cooperative is able to offer more convenient pick up locations, or “gathering sites,” to members and can promote their brand by sponsoring PTA fundraisers. SF2T has also partnered with local businesses to help implement a Workplace Wellness Campaign where they can educate business owners on the benefits of integrating employee wellness programs.

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Local Food Systems and Interactions with Entrepreneurship

‘Better Butter’ Opportunities for Local Food and Entrepreneurship¹

Becca B.R. Jablonski

*Postdoctoral Fellow, Department of Agriculture and Resource Economics, Colorado State University
Clark B-338, Fort Collins, Colorado, 80523-1172 USA
Phone: 970-491-6133 Email: Becca.Jablonski@colostate.edu*

Abstract

Kriemhild Dairy Farms, started in New York by Bruce and Nancy Rivington in 2010, has expanded rapidly in response to changing market conditions spurred by growing demand for ‘local’ and ‘pasture-raised’ products. Kriemhild’s entrepreneurial strategy for producing and marketing its pasture-raised butter takes advantage of the company’s ability to leverage alternative (local food system) and conventional resources and infrastructure. The Kriemhild example highlights the importance of: 1) the farm’s scale of operation; 2) the existence of local processing, warehousing, and distribution infrastructure; and 3) the ability to navigate between and capitalize on conventional and ‘alternative’ supply chains.

Keywords: local food; entrepreneurship; pasture-raised dairy; butter; supply chain

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“You can go back to eating butter, if you haven’t already”
Mark Bittman, *NY Times*, March 26, 2014

Mark Bittman’s March 26, 2014 op-ed column in the *NY Times* entitled “Butter is Back”, references what the owners and founders of Kriemhild Dairy Farms, LLC (pronounced cream-hild) are banking on: consumers’ perception that “if you raise fewer animals, you can treat them more humanely and reduce their environmental impact. And [you can] enjoy the better butter, too.”

This case study profiles Kriemhild Dairy Farms, LLC (Kriemhild), owned by Bruce and Nancy Rivington, and the entrepreneurial strategy this operation took in response to the local food system’s changing market conditions. The Kriemhild example highlights the importance of: 1) the farm’s scale of operation; 2) the existence of local processing, warehousing, and distribution infrastructure; and 3) the ability to navigate between and capitalize on conventional and ‘alternative’ supply chain infrastructure.

Farm Profile

Though Bruce and Nancy Rivington both started farming on conventional dairies in Canada, where the majority of the cows’ nutrient requirements were met through grain, they made the decision to start to graze their herd in 1994. Their transition to rotational grazing was not brought on by an environmental rationale, or the potential for a premium from pasture-raised milk sales, but rather a perceived opportunity to make the dairy more profitable by reducing input costs. After a few years of grazing, and attending several workshops, Bruce saw that for the operation to be fully seasonal and profitable enough to support his family, he would need to expand the herd size. Given that the farm was in Canada (30 miles west of Ottawa), and thus subject to Canada’s milk supply management system (Canadian policy restricts the supply of milk by limiting and controlling domestic production through a quota system and instilling high tariffs on imports), the Rivingtons determined that expansion in Canada was not realistic. In 2000, they sold their farm and moved with their four children to rural Hamilton, New York (population 4,197, U.S. Census 2012), where they purchased 519 acres, and found another 280 to lease. They named the farm Red Gate.

At the end of their first year in New York, the Rivington family milked 200 cows. They expanded in 2008, milking 500 cows at their peak with five full time employees; they now own 736 acres and rent another 845. Relative to other dairy farms in New York (NY), Red Gate is a large operation. According to the 2012 Census of Agriculture, over 90% of dairy farms in NY milked less than 200 cows (USDA NASS 2012).

Wary of potential restrictions resulting from membership in a dairy cooperative when they moved to the U.S., Bruce and Nancy decided to sell their raw milk to one of the few independent milk purchasers in the region, Queensboro Farm Products, LLC (Queensboro).² Queensboro was

² The share of all milk delivered to plants and dealers in the U.S. by cooperatives was 86% in 2002 (USDA RD 2005). By virtue of being an independent, either Red Gate or Queensboro can terminate their relationship with 30 days’ notice.

established in 1909. At its peak Queensboro owned and operated 13 milk plants throughout NY and Pennsylvania. Today they have one remaining plant, in Canastota, NY (purchased in 1931), which processes a small percentage of the milk from the 250 farms from which it purchases product. The remainder of the unprocessed milk is shipped throughout the Northeast as Queensboro mainly functions as a supply-balancer and broker. In 2013, Queensboro reported sales of almost \$20 million and had 80 employees (U.S. Business Catalogue 2013).

Company Profile

The Rivington family has always been entrepreneurial. In 2003, they built a small cheese-room adjacent to the milking parlor. One of their sons, Brian, took a cheese-making class at the local University and started making the cheeses that they sold at the Hamilton farmers' markets. However, the small-scale value-added operation ceased in 2006 when Brian decided to return to school.

Through Brian's interactions with customers at the Hamilton farmers' markets, and Red Gate's active participation in a discussion group with 'grass farmers' from across the U.S. (the 'Prograssinators'), Bruce and Nancy recognized that there was growing (and unmet) demand for differentiated, value-added dairy products that could be labeled with certain key attributes like pasture-raised or grass-fed. Additionally, they were frustrated by the constant fluctuations in commodity milk pricing, and saw a value-added product as a way to generate more consistent and higher income.

In 2007, a group of Madison County dairy farmers interested in exploring opportunities for value-added product development started to meet with support from the newly-established Agricultural Economic Development Program in Madison County (under the umbrella of Cornell Cooperative Extension), and with funding from the Northeast Sustainable Agriculture Research and Education (NESARE) program.³ In 2010, four of these dairy farm families formed Kriemhild Dairy Farms, LLC.⁴ Though all four families played an important role in establishing the company, there were irreconcilable differences in determining the standards for 'pasture-raised' (Red Gate was the only operation practicing intensive rotational grazing and that was fully seasonal – i.e., dried off their herd in the winter months when grazing is not an option in Upstate NY). In 2012, Bruce and Nancy bought the ownership shares of the other three families.

Kriemhild's original business plan established the need to maintain low overhead by working with existing processors. Given the complex structure of dairy commodity supply chains, and the highly-perishable nature of raw milk, the most expedient way to develop a new differentiated product was to work with Queensboro directly – Queensboro already picked up the milk from Red Gate Farm, and had a market for the by-products. Additionally, Queensboro had additional capacity at its facility, and previously entered into a space leasing arrangement with another

³ For more information of the NESARE grant (Project Number CNE08-040), please see: <http://mysare.sare.org/MySare/ProjectReport.aspx?do=viewProj&pn=CNE08-040>

⁴ The name Kriemhild emanates from the name of the original Holstein herd of Holstein-Friesian cattle that were born, raised and registered in the United States. This particular herd holds a unique value to Madison County, as the herd resided in Peterboro, NY (located in Madison County) in 1929, raised by Gerrit Smith Miller, grandson of the famous abolitionist, Gerrit Miller.

dairy manufacturer, Leblon Foods, Inc.⁵ Given the relatively-large size of the Rivington's operation (in 2012 the farm was producing approximately 25,000 pounds of milk per day), Kriemhild was unable to utilize all of the farm's milk at the onset and, thus, Red Gate needed to maintain access to the commodity milk market. In 2013, Kriemhild made 53,190 pounds of butter. Manufacturing one pound of butter requires 21.2 pounds of whole milk; Kriemhild used 1,127,638 pounds of milk in 2013, representing approximately 37% of Red Gate's production.

Though Queensboro had reduced its internal processing capabilities, it was well-known locally for the butter it made at its Canastota plant. Kriemhild decided to work with Queensboro to co-pack butter, using milk from Red Gate that Queensboro would keep segregated (in this respect, it was lucky that Red Gate was large enough to fill up an entire milk truck, otherwise this would have added an additional untenable expense). To further differentiate the butter, Kriemhild decided to produce it with a higher fat content (85% versus 80% for conventional butter) as well as with a barrel churn characteristic of a European-style product demanded by many chefs for its unique cooking properties.

Kriemhild's premium butter utilized some of the cream produced by Red Gate's cows, however it required none of the skim milk. Serendipitously, during the 2000s several large-scale Greek yogurt-manufacturing plants opened in Central New York (e.g., Fage, Chobani), which increased the demand for skim milk. Queensboro agreed to act as a balancer for the milk components that Kriemhild would not need. Queensboro and Kriemhild established an arrangement whereby Kriemhild purchases the cream from Queensboro, and pays a Queensboro employee (in conjunction with their own employees) to make and package the butter. From May to November, 2013, Kriemhild manufactured 36 batches of butter with four paid employees and one unpaid employee, each of whom worked approximately seven hours per batch.

In 2012, Kriemhild's first year of full-season production (May-November), the company had gross sales of \$74,000. In 2013, revenue grew by over 300% to \$223,000, and the business turned a profit for the first time.⁶

Business Situation: Opportunities for Entrepreneurship due to Interface with Local Food System

Kriemhild operates at the nexus of alternative (local food) and conventional food systems. To some extent this is a result of Red Gate's scale. For example, the fact that Red Gate's production was of adequate volume to fill an entire milk truck allowed Kriemhild to maintain relatively low transportation costs associated with keeping its milk segregated from farm to processor, and thus to sell butter at a price point that worked for many larger volume/mainstream purchasers. This section provides examples of the ways in which Kriemhild has been able to leverage alternative and conventional resources and infrastructure.

⁵ It is worth noting that Leblon Food Inc's owner relocated his family from New York City to Canastota because of the opportunity to manufacture product at Queensboro—suggesting the uniqueness of a plant of Queensboro's scale willing to enter into this type of arrangement.

⁶ Note that Kriemhild and Red Gate function as entirely separate companies. The values provided only reflect Kriemhild's revenue.

Financing

When Kriemhild first opened, it financed its operations through the traditional banking relationships Red Gate Farms had developed, particularly with Farm Credit East. However, given that Red Gate was already heavily leveraged, Bruce and Nancy needed to explore other options. Through discussions with potential customers, the Rivingtons learned about ‘alternative’ financing initiatives that were just being developed by entrepreneurs interested in increasing the availability of local foods, and who recognized that local food enterprises were not always ‘bankable’ in the traditional sense. One of these opportunities was facilitated by a company called Credibles. According to the *NYTimes*, Credibles is a new investment model, the idea for which arose from the Slow Money movement (focused on finding new sources of capital for small farms and other food enterprises) (Hirsch 2012). The Credibles concept is that ‘good’ food takes time to produce before it gets to the table. Historically it has been the responsibility of farmers to pre-finance food; Credibles shifts the responsibility and provides the working capital to cash flow farm operations – similar to a Community Supported Agriculture (CSA) model.

Kriemhild’s webpage on the Credibles’ website offers customers the opportunity to pre-purchase butter, the commitment from which will enable Kriemhild to make business investments such as purchasing the necessary equipment to expand their product line, install renewable energy systems such as solar thermal, and retrofit a drainage system which will allow them to turn waste water into irrigation water for the pasture. Customers can choose how much they want to pre-pay, different amounts yield various benefits from Kriemhild. For example, the larger the amount pre-paid, the more discounted the per-unit price of butter. Although Kriemhild has raised a very small amount of money to-date through Credibles (\$641.25), the relationship has connected the business with a network of other potential investors in the Slow Food Community, and their affiliated investor group, Foodshed Investors, in NY. Kriemhild is hopeful that this group of angel investors can help them to finance their next phase of expansion. Additionally, Kriemhild intends to launch a crowdfunding campaign in the near-term to better take advantage of their growing network of alternative funders.

Kriemhild has also leveraged government resources to support their operation. In 2011 Madison County was awarded a \$56,000 Rural Business Enterprise Grant from the U.S. Department of Agriculture Rural Development Agency to purchase a butter-filler housed at Queensboro (the butter filler enabled Kriemhild to automatically fill the tubs of butter, rather than hire an employee to do this by hand). The total cost of the filler was \$78,000. According to the terms of the grant, Kriemhild ‘rents’ the equipment from Madison County at approximately one-third of its value for ten years, after which Kriemhild will own the equipment. Kriemhild was also awarded a grant for \$4,500 from the Partnership for Community Development’s Micro-Enterprise grant program (a not-for-profit organization started by members of the Village of Hamilton) to facilitate business expansion.

Warehousing and Distribution

The ability to affordably store product is important to Kriemhild’s success as the company only manufactures butter when the cows can get the majority of their nutrients from pasture (roughly May to November). As most customers (particularly retailers) require product on the shelf year-

round, Kriemhild must manufacture and store enough product to satisfy its customers throughout the winter months. In 2012, Kriemhild stored product at two locations: 1) Queensboro; and 2) Regional Access, LLC., a local foods aggregation and distribution business (food hub) that has a 25,000 square foot warehouse in Trumansburg, NY. Due to Kriemhild's growth in 2013, they had to add on a third storage facility, and chose Americold, a 583,000 square foot cold-storage warehouse located in Syracuse, NY. Note that all of these pieces of key supply chain infrastructure are relatively proximate: from Red Gate to Queensboro is 26 miles one way, Queensboro to Americold is 32 miles, and Queensboro to Regional Access is 87 miles (see Figure 1).



Figure 1. Map of Red Gate Farms, Warehousing, Processing, and Distribution Infrastructure Utilized by Kriemhild Dairy Farms

Source. Google Maps 2014

The advantage to Kriemhild of storing product at Regional Access is that the food hub also functions as a distributor and marketer. In this sense, the food hub is a more vertically integrated system that helps to reduce the transaction costs associated with storing, distributing, and marketing products to smaller-scale stores. Accordingly, the product that Kriemhild has opted to store at Americold is generally intended for larger-scale purchasers that have their own distribution vehicles.

Marketing

When Kriemhild first launched its butter, it did so through local-food oriented markets: the Hamilton farmers' market and a small-scale food hub (CNY Bounty, LLC). They have found continued success in these types of markets, and have capitalized on the number of start-ups catering to consumers eager for the convenience of home delivery, and the sustainability attributes of local. Sales through Quinciple (<http://www.quinciple.com/>), Good Eggs

(<http://www.goodeggs.com>), Wholshare (<http://www.wholshare.com/>), Fresh Direct (<https://www.freshdirect.com>) and others represented 13% of Kriemhild total sales in 2013 (note that many of these sales are made through other distributors or food hubs). Kriemhild anticipates total revenue from these local food markets to increase by 50% in 2014.

There are also several ‘specialty’ distributors, restaurants, and retail shops whose emergence emanates from growing interest in local food. Distributors like ‘Food Matters Again’, restaurants such as ‘The Tailor and the Cook’, and specialty local food butcher shops like ‘Side Hill Farmers’ need companies like Kriemhild (that can provide high-quality products dependably, and at affordable prices) as much as Kriemhild needs them.

Another important and growing local food sales outlet for Kriemhild is other farms’ Community Supported Agriculture (CSA) operations and farm stores. These CSA operations want to provide their ‘shareholders’ with a more diversified product offering than each farm can produce itself. In 2013, sales to other CSAs or other farms’ stores represented over 6% of Kriemhild’s revenue (see Figure 2). Though actual revenue per CSA was small (an average of \$1,000/farm), 14 farms offered the butter to their shareholders, and Kriemhild has already received additional requests for the 2014 season.

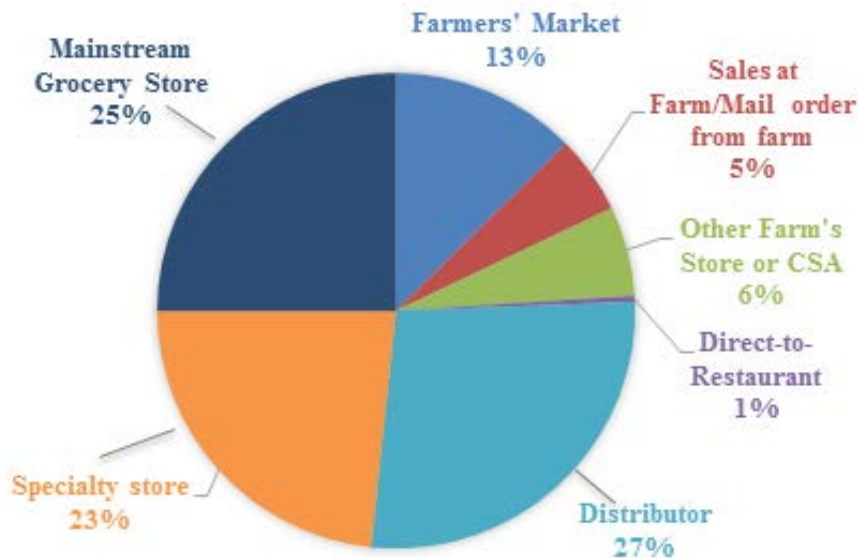


Figure 2. Kriemhild Farms LLC 2013 Sales by Market Channel

Even as Kriemhild grows, it continues to sell at farmers’ markets. Though direct sales from the farmers’ markets are small (particularly when looking at the net impact, subtracting labor costs and vendor fees), Kriemhild appreciates the opportunity these markets provide for direct consumer interaction. Kriemhild Manager, Lindsey Jakubowski, referred to farmers’ markets as a “grassroots mobilization opportunity” citing as evidence that “most of Kriemhild’s customers are downstate [approximately 200 miles from the farm], but almost all of [their] Facebook likes are local” (Figure 3 provides a heat map of customers by location). In 2013, Kriemhild participated in 10 farmers’ markets, the sales from which comprised 13% of revenue (see Figure 2).

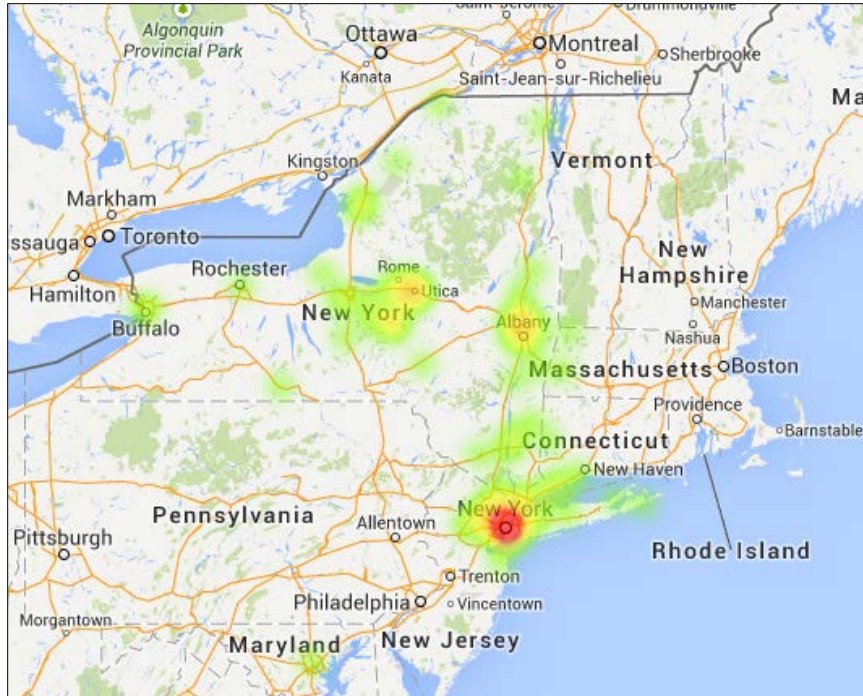


Figure 3. Heat Map, Kriemhild Customers by Location (20 mile radius)

Source. Google Maps 2014

Though these local food outlets have been critical to Kriemhild's 2013 growth, the importance of the company's ability to penetrate mainstream markets and conventional supply chains should not be underestimated. Through its weekly booth at the Hamilton farmers' market, Kriemhild made the acquaintance of an individual with close ties to a nationally recognized mainstream grocery retailer (due to confidentiality the retailer cannot be named). This relationship precipitated the retailer to make an exception to its policy of purchasing products only from purveyors that could supply adequate volume for all of its stores throughout the U.S., and try out a 'regional' product. A full 25% of Kriemhild's revenue in 2013 came from this mainstream grocery retail outlet (see Figure 4). According to Lindsey, sales to this mainstream grocery store require substantially less labor per unit of butter sold (Kriemhild delivers the product for storage at Americold, and the retailer's vehicles do the remainder of the distribution), and thus the net impact of growth in this particular channel has been important.

One of the most interesting aspects for Kriemhild of navigating these alternative and conventional markets is the very different ways in which they do business. To participate in more conventional-type markets, Kriemhild is expected to deal with the just-in-time delivery model where the store calls and needs product the next day. Kriemhild must provide the product right away, or risks losing that customer. Planning for this type of business model is difficult, and requires substantial risk for Kriemhild (they pay to produce and store product without a guaranteed market). Alternative businesses have been much more flexible. For example, Regional Access will store product at its warehouse until a particular customer needs more, allowing a longer lag between an order being placed and fulfilled. Credibles' customers pay up-front for product and pick it up from the farm or farmers' market on an as-needed basis (product

is stored at Red Gate farms, which is possible as long as Credibles remains a relatively small-scale market). The additional flexibility of these alternative markets is important, particularly for a company that can only produce product seasonally, and thus needs more support in its planning and supply chain management.

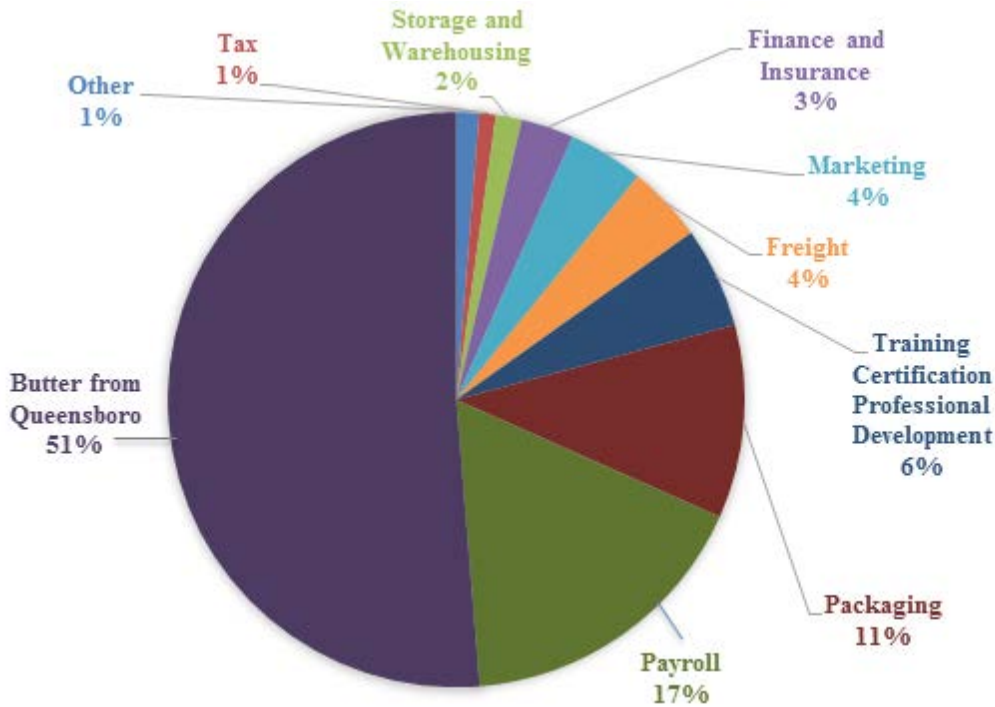


Figure 4. 2013 Expenditures as Percentage of Total, Kriemhild Dairy Farms LLC

Community Impact: Opportunities and Challenges for Future Growth

Kriemhild’s original business plan established the need to maintain low overhead by working with existing processors, distributors, warehouses, and marketing firms—in other words, minimizing its financial capital investment, by investing in developing social capital – i.e., relationships with businesses and individuals throughout the community. As a result, on a small-scale Kriemhild helps to support local businesses, many of which are located in rural areas with limited opportunity for growth (for example, Kriemhild’s printer has consistently higher prices than its online competitors, but it is a long-established third-generation company with a downtown storefront that sponsors local little league teams and community events).

The decision to work with these local businesses is not solely altruistic, but it has potentially important firm-level and community economic impacts. Figure 4 presents Kriemhild’s 2013 expenditures as a percentage of total, and Figure 5 shows total expenditure as percent local (New York). Over 50% of Kriemhild’s total expenditure is with Queensboro to purchase the cream and support the manufacturing of the butter (recall that Red Gate sells its raw milk to Queensboro, and Kriemhild purchases the cream and manufacturing support from Queensboro). The second largest expenditure item is employee compensation (for three full-time equivalents). In total, 90% of Kriemhild’s 2013 expenditure was local, defined here to mean within the State (Figure

5). Compared to similar sectors in NYS, Kriemhild spends a much higher than average proportion of its expenditure locally (77% for dairy cattle and milk production, 72% for fluid milk and butter manufacturing) (IMPLAN Group LLC 2012).

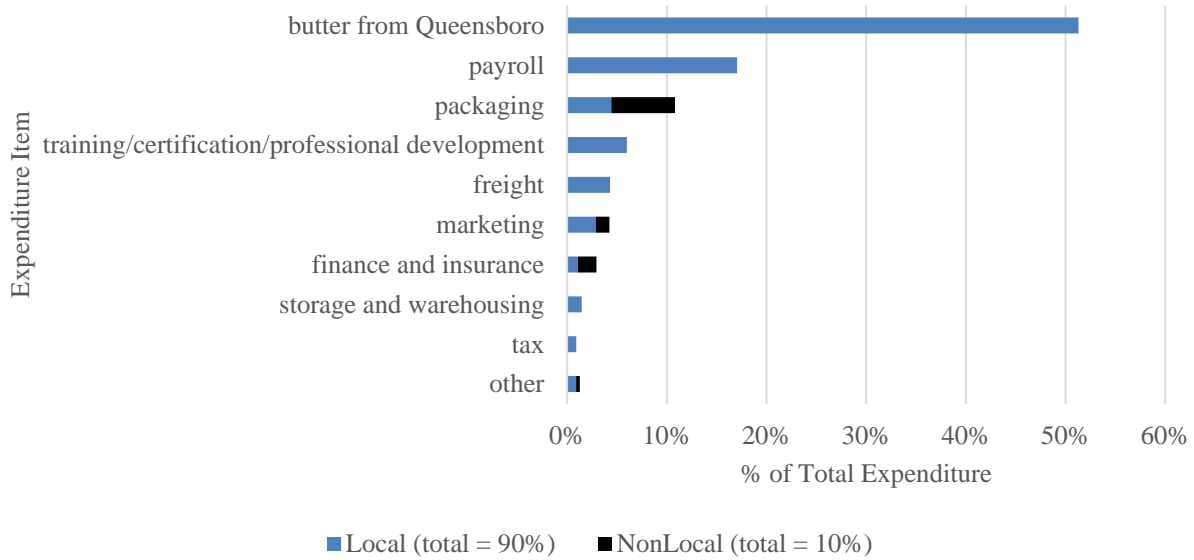


Figure 5. 2013 Local Expenditures, as Percentage of Total (local is defined as New York State)

Kriemhild and its employees also work hard to build excitement around agriculture; they understand that the more interest in and support for locally-grown products, the better their business and local economy will perform. For both the CSA and farmers’ market sales channels, the social networks and relationships developed are perhaps of greater importance than the direct short-term financial gains. Through the farmer-farmer interactions, and farmer-consumer interactions, Kriemhild and the Rivingtons have become mentors and spokespeople for local farms. Bruce works to help new and established farmers, particularly with his involvement on the Cornell Cooperative Extension Agricultural Economic Development Program Committee. Red Gate and Kriemhild also partner with the local U.S. Department of Agriculture, Natural Resources Conservation Service District Office to host grazing events (pasture walks) on the farm, and participate in the annual Open Farm Day celebration sponsored by Cornell Cooperative Extension. Additionally, in 2013 Red Gate and Kriemhild hosted students from John Bowne, a high school in New York City that has an agriculture program, to educate students about farming, processing, and marketing value-added products. The Rivington family also supports students from Morrisville State College (part of the State University of New York) through internships, and facilitates class tours from nearby Colgate University. Cumulatively, these relationships and events have heightened awareness of and excitement for farming, and the region is experiencing growth in farm numbers compared to neighboring counties (Madison County had the largest growth in farm numbers in New York between 2007 and 2012 at 13%, US Census 2012).

Looking Ahead

Kriemhild's main challenges for generating future growth are related to co-packing and include: space constraints; lack of quality control (Queensboro limits Kriemhild's involvement in the processing process); inability to develop other products; and, lack of bargaining power (particularly with regard to pricing for services). As mentioned above, the types of services that Queensboro provides for Kriemhild are unique, putting Queensboro in a more powerful negotiating position; finding another co-packing arrangement would be difficult for Kriemhild, and would necessitate Red Gate finding another purchaser of its raw milk. Further, given that most of Queensboro's revenue comes from its role as a supply-balancer and broker, it lacks a financial incentive to make the requisite changes to support Kriemhild's continued growth.

Of the above-mentioned concerns, the biggest impediment to Kriemhild's growth is the inability to diversify its product offerings. With only one product, it is very difficult for Kriemhild to penetrate key markets. It is also more expensive on a per unit basis to distribute one product than a full suite of products (which can provide economies of scale).

Given these challenges, Kriemhild is working to build its own creamery in Hamilton, NY. The Rivingtons have purchased the land for the creamery, and are currently working to finance the construction of the building and purchase of the equipment. Kriemhild's business plan shows the need for 12 full-time equivalent employees by 2016, with input expenditure requirements of \$2,537,256. Given that Kriemhild purchases a particularly large percentage of its input requirements in the local economy, this could serve to strengthen other local inter-industry linkages.

Additionally, Kriemhild's milk requirements with the new creamery will be greater than what Red Gate will be able to provide. The Rivingtons hope to find other local, like-minded, pasture-based dairies interested in joining the business—thus providing an opportunity for other farms to add value to their raw product and possibly to join in the profit sharing. The Rivingtons also intend to provide a certain percentage of profits to support local land trusts and preserve farmland.

However, investing in a creamery is a much riskier operation than co-packing, requiring a substantial capital investment. NY already has significant milk production and dairy processing capacity. What is Kriemhild's comparative advantage relative to larger companies interested in satisfying the demand for local and pasture-raised dairy products? For example, Organic Valley is now working with Byrne Dairy (outside of Syracuse, NY) to process the raw milk from their cooperative's members. Organic Valley now has a 'Grassmilk' where 100% of participating cows' nutrients come from pasture and dried forages, a 'regional milk' line, and a 'pasture butter'. As Kriemhild grows, will it be able to continue to operate across mainstream and alternative food systems?

Conclusion

Kriemhild Dairy Farms, LLC presents a case study of entrepreneurship jumpstarted by increased interest in local foods. The burgeoning business has substantial opportunity for continued growth given that it still uses a small percentage of Red Gate's raw milk. Further, it appears to have

found a niche in both alternative and conventional supply chains. The desire to pursue its own creamery presents risk, but also opportunity for substantial business and community reward. At least for now, customers seem to be willing to pay for 'better butter'.

Acknowledgements

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Local Food Systems and Interactions with Entrepreneurship

Revitalizing Rural Indiana: Lone Pine Farms Moody Meats Inc.¹

Jodee Ellett^a, Frances Einterz^b, and Michael D. Wilcox Jr.^c

^a *Local Foods Coordinator, Purdue University Cooperative Extension Service, 615 West State Street, West Lafayette, Indiana, 47907-2053, USA. Phone: 765-494-0349 Email: jellettp@purdue.edu*

^b *Local Food Program Assistant, Purdue University Cooperative Extension Service, 615 West State Street, West Lafayette, Indiana, 47907-2053, USA*

^c *Assistant Program Leader for Community Development, Purdue University Cooperative Extension Service and Senior Associate, Purdue Center for Regional Development, 203 S. Martin Jischke Drive, Suite 266, West Lafayette, Indiana, 47907-1971, USA*

Abstract

Lone Pine Farms Moody Meats Inc. (Moody Meats) is a vertically-integrated farm-to-retail business operating in the central Indiana local food system. Adam Moody, a farmer turned serial entrepreneur, is highly responsive to place-based market dynamics. He employs common sense and tested business strategies with social capital to expand operations—a formula which has made him a recognized leader, with a successful model for improving Indiana agriculture and rural revitalization.

Keywords: local food, entrepreneurship, social capital, meat marketing, Indiana rural development

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Introduction

Lone Pine Farms Moody Meats Inc. (Moody Meats) is a vertically integrated business that produces, processes, and sells locally sourced foodstuffs, primarily meat, to retail consumers in Central Indiana. Moody Meats sources sustainably raised animals from their Lone Pine Farms and other 'local' farms, processes the animals in a Moody-owned slaughter facility, and then distributes the meat to Moody's Butcher Shops. The mission of Lone Pine Farms Moody Meats Inc. is "to provide differentiated, value-added meat products in a sustainable cycle of farming, processing, procuring business in an extremely clean, transparent, authentic environment with genuine personal service" (Ellett 2014). In spirit, Moody Meats has a dual purpose: to promote rural development and to connect people with food in an attempt to "redefine agriculture" (Reding & Moody 2011).

Farm Profile

Adam Moody is a fifth generation farmer turned serial entrepreneur that developed Moody Meats Lone Pine Farms Inc (Moody Meats) from his family land of 345 acres in rural Ladoga, Indiana. Unique to their farm was the seven-year rotation, established by his grandfather, of corn, soybeans, oats, rye, hay, wheat and spelt to manage soil fertility and feed their beef cattle and hogs. From 1987 to 1996, Adam farmed on the rotation of his forefathers and sold his products as commodities. Beginning in 1997, Adam made the decision to sell his farm products with added value, triggered by the experience of having the payment for a recently sold load of hogs be less than that required to buy his family an Easter ham (Steiner 2009; McGurk 2009; Ellett 2014). The overwhelming irony from that moment continues to be a driving factor in his business acumen and choice to vertically-integrate his farming, meat processing and retail operations. This choice enables Moody's customers to buy meat knowing how and where it was grown - building trust - a major factor for local food customers (Rushing 2013). It also has influenced the product mix on his farm and resulted in the addition of free-range broilers and free-range layers.

On the farm, and throughout his business, Adam Moody continues to measure success using an agriculturally-oriented triple bottom line, "Margins per acre, employment per acre and fertility retention are what I stand for..." (Einterz 2014). Managing the farm, however, evolved from a farm family affair to a business partnership between Moody and son. Now, because Moody's management skills are focused on growing downstream aspects of Moody Meats and his other venture, Husk LLC, the business relies on a combination of paying a farm manager to run the Moody Meats side and renting out surplus land that cannot be managed by Moody.

At its core, Moody Meats is a farming business sustained from the good soils and smart farming of his grandfather's creation. Moody Meats as a local food business is sustainable because of Adam Moody's tireless commitment to the farm and wide range of practical skills gained from growing up on a mid-sized farm in rural Indiana.

Business Situation

Interface with Local Food Systems

Moody Meats bridges rural entrepreneurship with urban consumer demand. Animals raised on the Lone Pine Farm and other local farms are slaughtered and processed in the Moody-owned facility and sold through four Moody's Butcher Shop retail storefronts in the Indianapolis, Indiana, region (Figure 1). Moody Meats markets to customers interested in sustainably produced local food by differentiating its product in four ways: (1) animals are raised without antibiotics or hormones as verified through farm visits, (2) meat products are sold as a farm to retail product, (3) customer service and loyalty is a priority and (4) customer feedback is integral for business decisions. Adam asserts that "the [food] business that succeeds at this will be treating the public like a person, not a statistic, and like a customer, not a consumer. This done [sic] by innovating the entire system toward the wants of these customers, not toward efficiencies of the industry" (Meter 2012).

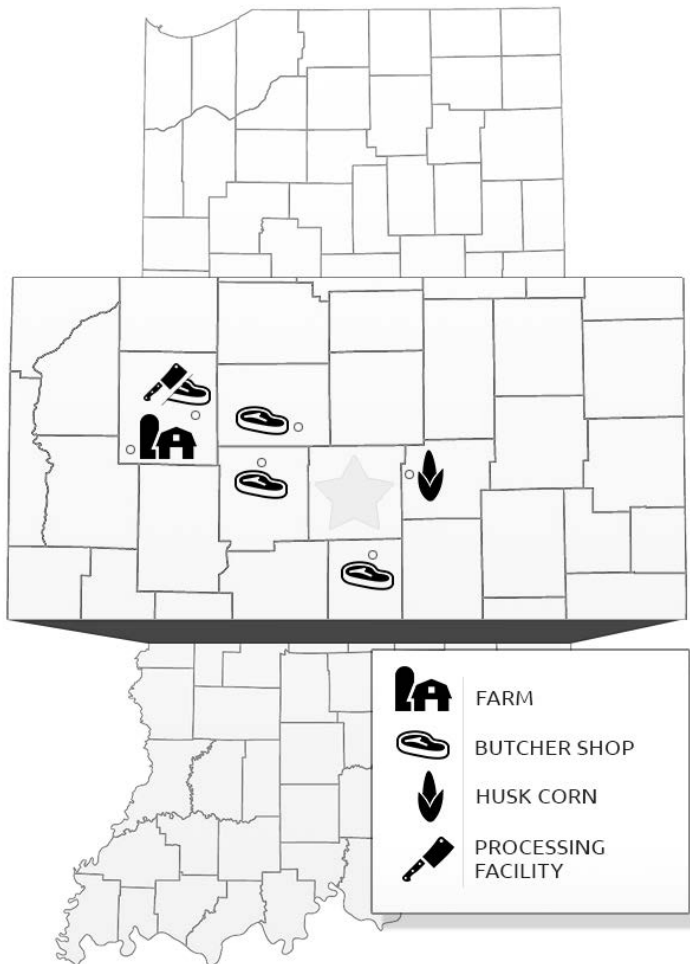


Figure 1. Map of Lone Pine Farms Moody Meats Inc. and Husk LLC.

Moody Meats is highly responsive to place-based market dynamics as his income and success are anchored in the local food system. The evolution of Moody Meats from a family farm in rural Indiana can be illustrated with two examples. When Adam Moody encountered the ultimate irony of raising and selling hogs for the commodity market while simultaneously not being able to afford a ham from the grocery store, he began selling his beef, pork, chicken and eggs directly to the consumer at two farmers markets that were within 50 miles of the Lone Pine Farm (Steiner 2009; McGurk 2009; Moody Meats Lone Pine Farms 2014). This occurred as other mid-sized farms faced similar economic challenges in Indiana and throughout the U.S. From the years 1997 to 2002, the number of farms in the 180-499 acre size range dropped 20 percent, from 11,569 to 9,263 farms, while farms larger than 2000 acres increased by 39 percent (USDA 2004). “Thirty years ago on our country road, there were nine farmers scattered across 1,500 acres, now there are three counting me and my 250 acres. One of the farms is over 5,000 acres and the other is close to 9,000 total acres. My guess is before my life is over, in order to survive, one of those two will buy the other out. By the way, together they employ nine year-round positions on 14,000 acres or one job for every 1,555 acres. Our farm provides a full time position for every 125 acres. For us there was only one way to go if I want to raise my grandchildren the way I was raised-add value” (Reding & Moody 2011).

The second example of response to place-based market dynamics occurred in 2000 when the meat processing facility in Ladoga, Indiana, closed its doors. They had already closed their in-house retail front for freezer meat sales as there was less demand for this style of meat product from consumers. Rather than make the much longer drive to another processing facility, he and his wife, Lucy, decided to purchase the facility with a vision for regional retail store development.

After three years running the meat processing facility and continuing direct customer sales, Moody Meats opened a retail store in 2003 in Avon, Indiana, a location he had been pursuing as a result of customer demand. “It was very successful as our sales increased over 200 percent the first year. When translated into business language, means (sic) new problems, i.e., issues like product flow as now the need for animals exceeded our farm’s capacity. Training employees would become an issue. Facility limitations even came into play. Then of course, we needed cash flow to sustain the growth. These are all good problems, yet they are issues that can and will chew you up” (Reding & Moody 2011). These market challenges would continue. In 2007, Moody Meats was asked to anchor a retail shop inside the Indianapolis City Market, a newly renovated, indoor urban market with daytime retail hours and located in the downtown Indianapolis business district. As the first retailer to open in the space, Adam noted that people would stop to look at his meat case, but his “meat museum” would end up costing him \$250,000 and a year and a half of his time (Ellett 2014). This nearly caused Moody Meats to fold (Adam refers to it as his Pearl Harbor), but he shaped his resolve to maintain laser focus on profits, smart growth and customer service. Two years after this experience, Moody Meats opened a third retail location in Zionsville, Indiana, and turned an overall profit of \$38,000 within one year with no new line of credit. From 2009-2010 revenue increased 62 percent with no new debt. Expenses increased slightly (3.6 percent) with an internal rate of return of 4 percent (Reding & Moody 2011). In 2014, Adam opened a fourth retail store in Center Grove, Indiana, with outside investors, a personal accomplishment that verified his ability to run a profitable local food business (Einterz 2014). To thrive in the local food system in central Indiana, Moody Meats

needed successful business strategies to remain viable and grow in an environment favorable to large agribusinesses. To achieve this, Moody Meats employed novel strategies for the farmer-entrepreneur:

- 1) Sold farm products direct to consumer to establish brand;
- 2) Vertically-integrated supply chain to maintain product quality and manage costs;
- 3) Provided meat processing services to local livestock farmers;
- 4) Offered consistent, high-quality products with transparency to attract customers with food knowledge;
- 5) Employed a relationship marketing strategy to ensure brand loyalty, and;
- 6) Integrated other locally grown and produced foods into retail stores not available at larger supermarkets (Figure 2 and Table 1).

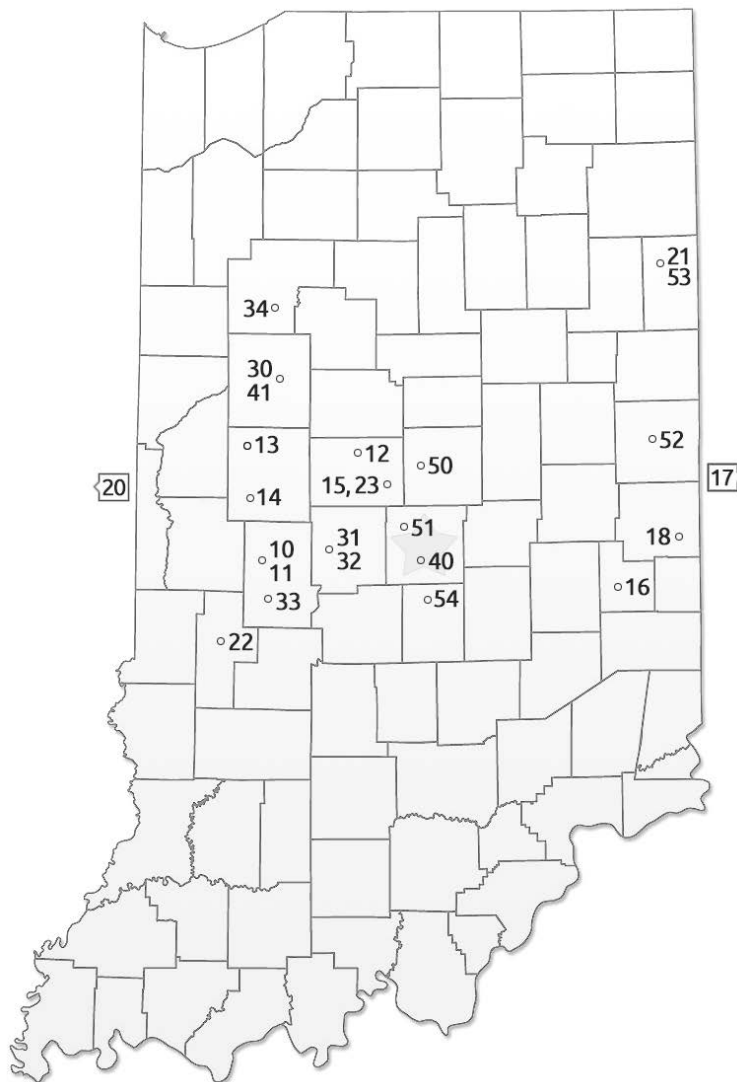


Figure 2. Map of Local Food Product Suppliers for Lone Pine Farms Moody Meats Inc.

Table 1. Local Food Product Suppliers for Lone Pine Farms Moody Meats Inc.

| 1. Meats+Eggs | | | |
|-----------------------------------|---------------------------|-------------------------|--------------------|
| Map Code | Source | Product | Location |
| 10 | Boyd Pickle | Beef | Putnam County, IN |
| 11 | Jim Derringer | Beef | Roachdale, IN |
| 12 | Rhoades Red Angus Farm | Beef | Brownsburg, IN |
| 13 | Phelps Family Farms | Beef and Hogs | Ladoga, IN |
| 14 | Lone Pine Farm | Beef, Chicken, Eggs | Waveland, IN |
| 15 | Duck Du Jour | Duck | Zionsville, IN |
| 16 | Eli Creek Farm | Rabbit | Connerville, IN |
| 17 | Bowman & Landes Farm | Turkey | New Carlisle, OH |
| 18 | Ivan Esh | Eggs | Richmond, IN |
| 2. Dairy | | | |
| Map Code | Source | Product | Location |
| 20 | Ludwig Farmstead Creamery | Cheese | Fithian, IL |
| 21 | Swissland Cheese | Cheese | Berne, IN |
| 22 | The Swiss Connection | Ice Cream | Clay City, IN |
| 23 | Traders Point Creamery | Milk, Yogurt | Zionsville, IN |
| 3. Sauces, Spreads, Syrups | | | |
| Map Code | Source | Product | Location |
| 30 | Bonz Barb b-q | BBQ Sauce, Breeding | West Point, IN |
| 31 | Blue's BBQ | BBQ Sauce, Hot Sauces | Avon, IN |
| 32 | Sweet Maggie's Apiaries | Honey | Avon, IN |
| 33 | Harris Sugar Bush | Maple Syrup Products | Greencastle, IN |
| 34 | Two Cookin' Sisters | Salsa, Jams, Chutney | Brookston, IN |
| 4. Beverages | | | |
| Map Code | Source | Product | Location |
| 40 | Hubbard and Cravens | Coffee | Indianapolis, IN |
| 41 | Triple XXX Root Beer | Root Beer | West Lafayette, IN |
| 5. Food & Snacks | | | |
| Map Code | Source | Product | Location |
| 50 | Great Harvest Bread Co. | Bread | Carmel, IN |
| 51 | Vanilla Bean | Cupcakes, Cake Truffles | Indianapolis, IN |
| 52 | Coe's Noodles | Noodles | Lynn, IN |
| 53 | Amish Country | Popcorn | Berne, IN |
| 54 | Indy Family Produce | Produce | Center Grove, IN |

These approaches have led to a steady increase in sales, profits and total number of employees (Figure 3). In 2013, retail sales were the highest percentage of gross sales (\$2.2 million) for Moody Meats (59 percent), followed by meat processing (27 percent) and wholesale sales (15 percent) (Einterz 2014). These sales were predominantly comprised of raw meat products (76 percent) followed by processed meat products (19 percent). The remainder of Moody Meats sales were comprised of the other locally grown and produced foods listed in Table 1. One of the challenges facing Moody Meats throughout its lifespan has been the inverse relationship between Lone Pine Farms and Moody Meats. By 2013, Lone Pine Farms remained the main source of broilers and eggs, but the ever increasing demand for beef means that Lone Pine Farms' market share of beef in the Moody retail outlets has decreased to less than 10 percent. This has changed

Adam’s focus from the farm to the business as a whole. When reflecting upon growth of Moody Meats, Adam says, “The business [Moody Meats] is a reminder to other agricultural sectors that the highest efficiencies do not necessarily make you profitable and you have to provide food that the consumers will eat. In other words, listen to your market” (Einterz 2014). When prompted for an official explanation of his business strategy, he describes it as one borne out of a lifetime of farming: trial and error. What Adam Moody has learned in his long entrepreneurial journey was that, in order to be a sustainable business, you must be a profitable business.

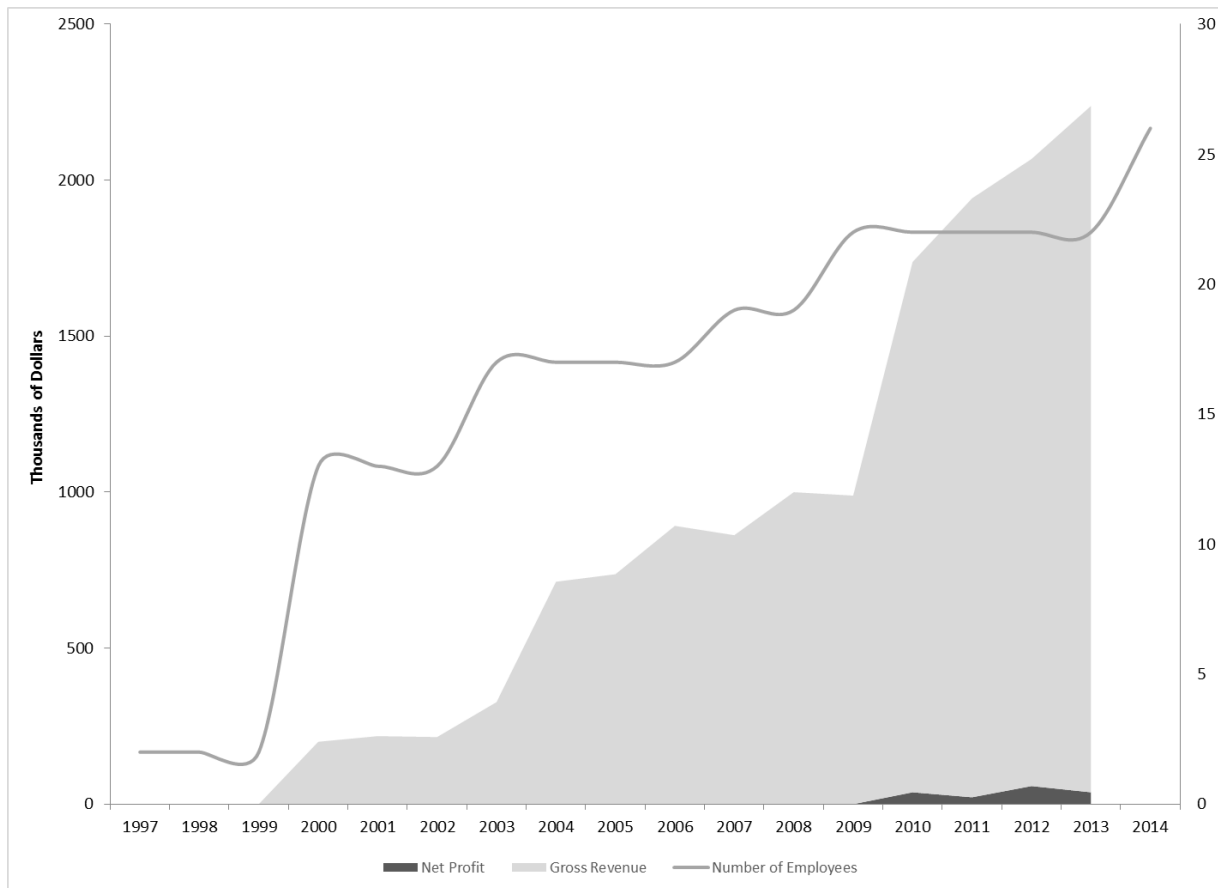


Figure 3. Gross Sales, Profit and Total Number of Employees for Lone Pine Farms Moody Meats Inc. 1997-2014.

Entrepreneurial Profile

In 1997, when Adam Moody began his entrepreneurial journey, Indiana ranked 45th in the U.S. for entrepreneurial activity (Fairlie 2011). He spent a couple of years, while farming, pursuing an associate’s degree from a technical college but had little interest in non-practical education around agriculture and did not want to continue supplementing his farming profession with an off-farm job in manufacturing (Ellett 2014). Adam personifies the farmer turned entrepreneur profile. McNally (2001) suggests that the likelihood of farm diversification is driven by farm size and production portfolio as well as farm household characteristics. Here, the Lone Pine Farm profile (medium-sized and includes the production of poultry) and the household composition (including a spouse and children working on the farm) complements McNally’s findings that

these characteristics increase the probability of farm diversification, including entry into retailing. However, Grande (2011) highlights that, while a farmer's propensity for diversification may be high, farm owners must have "sufficient entrepreneurial skills, market knowledge or the network needed to build an optimal business platform". Furthermore, Grande (2011) suggests that a combination of resources (financial, human, farm location, etc.) and dynamic capabilities (ability to integrate resources, sense opportunities and build appropriate networks) ultimately determine the success of new venture creation in the agricultural sector. For example, location, being situated in close proximity to the Indianapolis metropolitan area, was certainly a resource advantage from the demand side. On the supply side, Lone Pine Farms, and its multigenerational approach to sustainable farming and stewardship of the land, provided product attributes and a product mix that lends itself to retail. However, combining these demand and supply factors into Moody Meats started with Adam working with his grandfather and father on the farm, gaining a wide array of practical knowledge and skills. In addition, an example was set by Adam's mother who has owned and operated a natural foods grocery store in downtown Crawfordsville, Indiana, a town with less than 14,000 residents, since the late 1970s. Combining these experiences and attributes with Adam's innate 'dynamic capabilities' has certainly played a central role in the development of Moody as an entrepreneur and Moody Meats as an enterprise. Perhaps Adam was destined for this entrepreneurial journey that has merged the farming and retail components of his youth.

Building Social Capital

Adam Moody of Moody Meats is committed to rural vitality and the revitalization of family farms for rural communities. He leads by example but also works to share those lessons with other Hoosiers stating: "The underutilized asset in this consideration is in adding value to our agricultural products grown on our farms. These assets not only create jobs, but they create engaging vocations, which provides entrepreneurial opportunity for young people to stay close to the land. They will also create industry infrastructure, community leadership, educational opportunities, food security and contribution to wealth in the form of higher margins per acre for our producers" (Reding & Moody 2011). As a farmer selling crops and livestock in the commodity markets, very little social capital is required to take the market prices for your farm products. But, by entering the direct sales environment at the farmers markets, Adam began to employ bridging social capital with his market customers. As suggested by Grande (2011) social capital, or networks of producers and consumers, play a vital role in the success of the new agricultural venture. In Adam's case, he had to travel to the customer, tell his story and sell them a high-quality product so they would return for further business. When he opened his retail outlets, he needed to ensure his staff could convey the same customer focus, maintaining the networks he built. In 2008, Moody Meats conducted an in-store survey of its customers and found that of the returning customers, 71 percent return for product quality, taste, and staff and 29 percent return because it is a local food business (Reding & Moody 2011). Expansion and evolution of Moody Meats have successfully maintained that social capital. When he bought the meat processing facility, Adam relied on bonding social capital with fellow, like-minded livestock producers. He needed them to not only use his facility as a service but to provide Moody Meats with product. He successfully developed these bonds and continues to process and purchase meat from 29 farmers to slaughter/butcher a diverse range of species in smaller quantities. He provides special services not available from many processors in Indiana, including

the ability to contend with species diversity including: 150 rabbits per week; lamb and chickens; and slaughtering specifications (Halal and Kosher).

Adam continues to network with other groups, including higher education institutions such as Indiana State University, where he has served as the subject of, and consultant for an entrepreneurship curriculum, and Purdue University, where he has presented at the Purdue Extension Small Farms Conference and worked with various faculty. At the state level, Adam has worked on local food policy issues including on-farm poultry processing for farmers market vendors, the Raw Milk Working Group to review legislation, and the Locally Grown Working Group to address barriers for local food markets. As a result of his efforts, Adam received the 2014 AgriVision Award for exemplary leadership to maximize the vision of Indiana Agriculture presented at the Indiana State Fair (Keating 2014). Upon his award, Ted McKinney, director of the Indiana State Department of Agriculture stated, “Adam is an outstanding example of what it takes to be one of the best in Indiana agriculture. He has demonstrated the drive to further promote and advance Indiana agriculture” (McGrady 2014).

Revitalizing Rural Indiana

Alsos, et. al. (2003) describes three types of farm-based entrepreneurs: (1) the pluriactive farmer who engages in new business ventures to increase on-farm profit, (2) the resource-exploiting entrepreneur who takes advantage of the on-hand resources to start new businesses, and (3) the portfolio entrepreneur who begins new activities based on an innovative idea. The evolution of Adam Moody, the entrepreneur, and his business portfolio has followed this typology as a trajectory. He was the pluriactive farmer when he first bought the Ladoga processing facility and transitioned to the resource-exploiting entrepreneur when he opened the butcher shops. Finally, in 2013, Moody entered his portfolio entrepreneur phase when he collaborated to open Husk, LLC. This process was motivated by Moody’s desires to keep Lone Pine Farms operational, solidifying Moody Meats as a local foods mainstay, and to ensure that his business ventures continued to positively impact rural Indiana.

Husk LLC, is the result of a previous collaboration with Nick Carter and successful networking with Chris Baggot (owner of Tyner Pond Farm and former CEO of Compendium Software). In 2011, Moody worked with Nick Carter, a fellow entrepreneur, and the Indiana State Board of Animal Health to create processing regulations for rabbit meat. The collaboration resulted in Carter’s local distribution company called Meat the Rabbit. Carter’s initiation into the local food system and a strong background of successful entrepreneurship (having founded or co-founded seven start-up companies by the time he was 30), set the groundwork for a strong partnership with Moody. From this partnership and an idea that Adam Moody had been nurturing since 2008, a new processing and distribution model was born in 2013. It took 45 days to find a 5,000 square foot warehouse based in Indianapolis, three Indiana sweet corn farmers and processing supplies.

At its inception, Husk LLC, froze locally-grown, non GMO sweet corn for wholesale and consumer sales through Moody Meats and larger grocery retail outlets. Located in a rural warehouse in Hancock County, Husk employs five people year-round and up to 40 during harvest season (Ellett 2014). Unlike the vertical integration of Moody Meats, Husk is distributed

through Piazza Produce, Marsh and Kroger Supermarkets, and Whole Foods, and their products are placed next to the big companies like Bird's Eye - not necessarily in the natural foods section. Nick Carter, CEO of Husk states, "We're proving that the big guys like Marsh will buy a product like this. They were just waiting for a local company to do this" (Dick 2013). Carter states that Husk's core philosophy is rural development and the business is looking to build more small-scale processing plants throughout Indiana (Dick 2013). In 2013, Husk LLC processed nearly 160,000 pounds of Indiana sweet corn. In 2014, their product line expanded to include green beans, garden shelled peas, sugar snap peas and snow peas (Husk LLC 2013).

Both companies, Husk LLC and Moody Meats, will continue to revitalize rural communities and remind Indiana what it means to produce food "in an ecologically and economically sustainable model." The Moody Meats Lone Pine Farms LLC enterprise is a vertically-integrated farm to retail business in the central Indiana local food system. Serial entrepreneurial activities that evolved from commodity farming to direct-to-consumer sales of meat to processing and eventually retail sales of meat and other local food products have resulted in higher gross revenues for Moody Meats, 26 new jobs (half of them rural) and political and economic recognition that this model of agribusiness is successful. Moody Meats remains confident and hopeful that "customers understand that by buying products from our store, that whether I [Adam Moody] raise them, or others, we are truly dedicated to the mission" (Wiles 2011).

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Limehouse Produce: A Unique Wholesaler of Locally Sourced Produce¹

David W. Hughes^a, Harry Crissy^b, and Kathryn Boys^c

^a*Professor and Greever Endowed Chair in Agribusiness Development, 327B Morgan Hall, Department of Agricultural and Resource Economics, University of Tennessee, Knoxville, Tennessee, 37996, USA.
Phone: 865-974-7463 Email: dhughe17@utk.edu*

^b*Community Development Extension Agent, Berkley, Charleston and Dorchester Counties (Charleston, S.C. Region) Clemson University Extension Service, Charleston, South Carolina, 29401, USA. Email: hcrissy@clemson.edu,*

^c*Assistant Professor, Department of Agricultural and Resource Economics, North Carolina State University, Raleigh, North Carolina, 27607, USA. Email: kaboys@ncsu.edu*

Abstract

Despite their growth and desirability, several major barriers preclude the development of Local Food Systems (LFS) including the reluctance of wholesale operators to deal with LFS suppliers. We examine the contribution of Limehouse Produce to the development of the Charleston, S.C. LFS. Survey results indicated that both supplying farmers and buyers (such as restaurants) had a positive view of the firm and felt it was a major contributor to growth of the Charleston LFS. Limehouse Produce also supports local entrepreneurs through a farm incubator and Good Agricultural Practice (GAP) certification efforts and provides support for a variety of philanthropic causes.

Keywords: local food system marketing channels, entrepreneurs, and partners; overcoming local food barriers

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Introduction

Local Food Systems (LFS) are a small but growing element of the U.S. food supply. LFS have many possible benefits including economic growth due to import substitution, development of entrepreneurs and beneficial social capital, improvements in the general quality of life (Boys and Hughes 2013) and obesity reduction (Hardesty 2010).

Despite such possible benefits, however, several major barriers preclude the development of LFS in many locations including the reluctance of wholesale operators to deal with LFS suppliers. While many small scale farmers market directly to consumers, such food sales are dwarfed in volume by those made through intermediated marketing channels such as grocery stores and restaurants. A lack of physical and institutional infrastructure currently precludes much of the output from local food systems from entering conventional food distribution systems and reaching large food buyers (Vogt and Kaiser 2008). Despite interest, institutional food buyers often do not purchase locally produced items because of undeveloped distribution channels. Lack of information about local farmers, variable quality, quantity and primarily seasonal supply, difficulty in negotiating agreements, delivery challenges, and the inability to employ established convenient ordering systems are among the many reasons identified for not buying from small, local farmers (Vogt and Kaiser 2008).

Food wholesalers can help bridge the gap between farmers and business buyers of food. Wholesalers fulfill several marketing functions that facilitate the exchange of products from farms and buyers such as supply aggregation, storage, and distribution. Such firms also may undertake light food processing and enforce food quality and safety standards. Most wholesalers, however, do not support LFS probably because of the additional time, effort, and costs that it requires. To grow a LFS, a local wholesaler must be willing to identify and most importantly establish relationships and ultimately source products from local, usually small, farms. They must be willing to insure that these local suppliers meet quality and timely delivery standards. Buying from numerous small farms in all probability increases the need for greater input supply coordination and infrastructure (such as increasing the size of their refrigerated truck fleet). A LFS wholesaler must also ensure that foods sourced within and outside of the region do not commingle and that buyers receive timely information concerning local suppliers. (The latter allows the buyers to advertise the use of specific local farm products in their marketing efforts.) Those who are willing to do so can serve a vital role in developing their region's LFS. In this case study we examine the role that a unique food wholesaler, Limehouse Produce, has played in developing the Charleston, S.C. LFS

Limehouse Produce-History and Company Profile

Limehouse Produce Company was started in 1940 by H.B. Limehouse. Its distribution area is primarily within the three county Charleston, S.C. Metropolitan Statistical Area (Figure 1), while their input supply chain ranges throughout the southeast United States (Limehouse Produce, 2014). Limehouse Produce buyers consist primarily of institutional buyers such as the U.S. Military and school systems, restaurants, grocery stores, food trucks and other retail outlets.

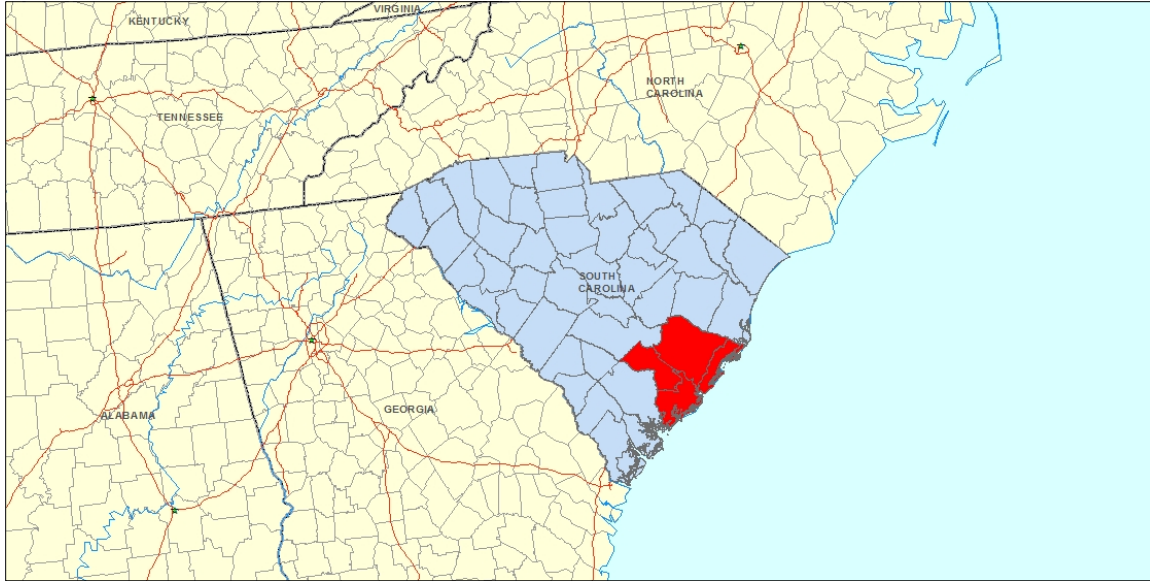


Figure 1. Limehouse Produce Primary Marketing Area, Three County Charleston, S.C. Metropolitan Area.

Limehouse Produce provides several marketing services as summarized in Table 1. By creating a dependable high quality supply of local and regional produce, Limehouse Produce has enabled many businesses to grow and thrive in the flourishing Charleston, South Carolina tourism trade. Through Limehouse Produce, small local growers are better able to supply a growing local market demand. Limehouse Produce has also developed relationships with regional growers in the Southeast U.S. thereby they are able to provide businesses with fresh produce year round.

Table 1. Services offered by Limehouse Produce

| |
|--|
| Transportation: On-farm pick-up within a 25 mile radius. Distribution to: |
| Buyers |
| Aggregation |
| Packaging assistance: Provide boxes |
| Light Processing: Some freezing |
| Farmer Assistance: Food Safety (Good Agricultural Practices), production recommendations |
| Buyer Assistance: Procurement of non-standard items |
| Market Promotion |

Limehouse Produce currently employs almost 70 mostly full-time workers. Their workforce has grown steady in recent years along with current annual revenue that are well in excess of \$20 million. They deliver produce to all customers and provide pick-up for all supplying farms within a 25 mile radius of their warehouse. In season, local suppliers account for roughly one-third of total produce purchases. Most, but not all, of their produce comes from a 150 mile radius so they are an important market for several larger farms in other parts of South Carolina. Limehouse Produce has 36 delivery trucks making daily deliveries over approximately 30 routes Monday through Saturday.

From an economic perspective, it is important to measure key indicators to identify control points that might strengthen the local economy and identify strategies that could be replicated in other locations. It is also important to identify barriers to growing the LFS and how organizations such as Limehouse Produce could help overcome such barriers.

Business Situation: Interface with Charleston LFS

Demand for locally sourced foods stems from a variety of sources. Consumers can obtain these products directly from farmers, in raw or processed form through standard retail settings (primarily grocery stores), or as a prepared meal through a foodservice establishment.

Two survey instruments were developed to assess the effectiveness of Limehouse as an element in the local food system in the Charleston area. Buyers of Limehouse Produce products were asked to fill out a survey as were suppliers (farmers). Among responding buyers, 10 restaurant and two grocery stores provided responses. Survey responses were received from ten suppliers of Limehouse Produce. The following contains a discussion of these survey results.

Perceptions Held by Local Supplying Farmers

Based on our observation that Limehouse has worked with many local farmers in helping them overcome business challenges, it is our contention that they have developed a positive image among most producers. Among the ten responding farmers, most have been in business for a long time (an average of 37.2 years across all respondents). Respondents varied in size with annual sales of \$10,000-\$20,000 for two respondents to \$100,000 or more for four responding farms. Virtually all responding farms indicated strong growth in sales over recent years with the majority indicating annual growth in sales of 25%-50% or greater.

Relationships with Limehouse Produce and their supplying farms are generally long-standing and positive. On average, suppliers have had a business relationship with Limehouse Produce for 22.3 years. Limehouse is a major market for most of the survey respondents. Two respondents indicated that Limehouse Produce purchased 5%-15% of their produce, three respondents indicated Limehouse was responsible for 15%-25% of their produce sales, one respondent stated Limehouse purchased 25%-50% of their produce and three respondents indicated that Limehouse was responsible for 75%-100% of their produce sales. Survey respondents had a mixture response to the related question, "should Limehouse stop operating, where would you sell your produce". Several respondents indicated they had no current alternative market outlet (with the responses "good question" or "I would stop planting"). Others indicate they would increase direct sales to consumers or grocery stores or other market intermediaries.

Survey respondents stated that barriers to growing their business ranged from government regulations, lack of access to labor, capital or land, product distribution, and unfair competition (non-local sellers posing as local). Among nine respondents, four indicated that Limehouse Produce had at least to a large extent assisted them in overcoming the barrier in question and three respondents indicated that Limehouse had assisted to some extent. Despite the diverse and non-market access nature of at least some of the barriers, Limehouse Produce to at least some extent has assisted the typical producer in overcoming barriers.

Responding suppliers tended to be very positive in their evaluation of Limehouse Produce. For example in response to the question regarding the contribution of Limehouse to their business success, four respondents indicated that “our success is due to them” two respondents stated that Limehouse has made a large contribution toward their business success while two respondents indicated that Limehouse Produce has to some extent contributed to their success. Comments by survey respondents highlighted this generally positive relationship. One survey respondent characterized their relationship with Limehouse Produce as one of “teamwork” and another as “very good” and one other as “a close business relationship”. Another respondent indicated that Limehouse “has been a tremendous help in establishing myself in farming” in part by providing advice and even equipment.

The few complaints about Limehouse Produce usually centered on price. One respondent wished that the prices they received from Limehouse Produce would increase given the growth in their own input costs while another suggested higher purchasing prices for very small growers. In terms of changes in how Limehouse Produce operates, one producer wished for a salesman devoted to locally grown produce and another similarly wished for greater involvement in their farm activities.

Producers also tended to feel that Limehouse Produce plays a major role in the Charleston area local food system. With respect to the statement, “Limehouse Produce has played a major role in growing the local food system in the Charleston area”, two producers agreed and six respondents strongly agreed with the statement (Figure 2). This set of survey results provides support for our contention that Limehouse Produce is generally seen as a major player in the local food system in Charleston and an important element in that growth. Comments by suppliers also backed up this assertion. For example, one respondent indicated they would “like to thank Limehouse for all they do for the small local farmers” while another indicated that “Limehouse Produce has been a very good asset to the farmers in the community.”

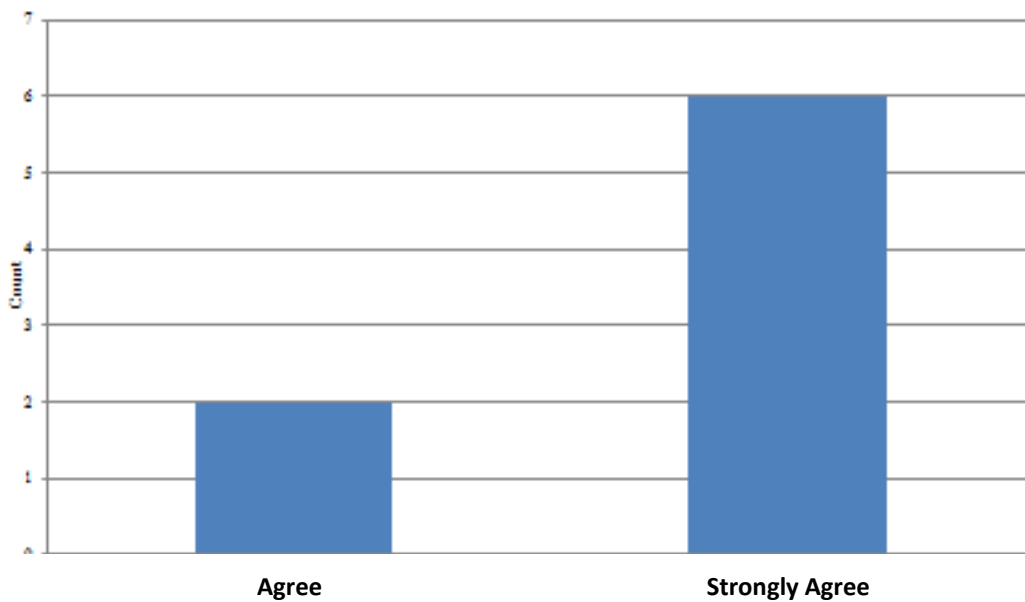


Figure 2. Agreement by Suppliers with Lime House Produce has Played a Major Role in Growing the Charleston Area LFS.

Serving as a supplier to Charleston's Foodservice Operations

In general and consistent with results of Limehouse Produce suppliers, the survey results from buyers indicated the Limehouse fills an important role in Charleston's LFS. The 12 responding buyers have been in business for an average of 10.8 years and on average have done business with Limehouse Produce that same length of time. Buyers indicated a broad range in terms of using Limehouse Produce versus firms or organizations as their source of local produce; several buyers use Limehouse exclusively, while others indicated they use several other businesses or operations to source locally.

Buyers were also asked the percentage of produce that they sourced locally. As a group, respondents indicated that local produce formed a major component of all produce purchases. Among the seven respondents who knew the degree to which they sourced locally, two respondents indicated they sourced 1%-5% of their produce locally, one indicated they sourced 15%-25% of their produce locally, three indicated they sourced 25%-50% of their produce purchases from local sources, and one indicated they sourced 50%-75% of their produce locally.

Limehouse Produce usually played an important role in local sourcing for responding buyers. In responding to the question regarding the degree to which they have used Limehouse Produce for local sourcing, responses ranged from minor (5%) to complete (100%). Six out of the eleven respondents to this question sourced at least half of their local produce through Limehouse and the numeric average across all respondents was 50%. However, in response to the question "what would be your expected percentage decline in local sourcing of produce if Limehouse ceased operations", the results were more mixed. Among the ten respondents to this question, three indicated no decline, four indicated only slight percentage declines (ranging from 0.5% to 3%) and three respondents indicated significant declines (one 30% and two 50%).

Respondents also had mixed opinion regarding the extent to which they felt Limehouse had contributed to the success of their business. Among ten respondents to that question, two respondents indicated to a small extent, five indicated to some extent, and three indicated to a large extent. None of the respondents indicated that "our success is due to them".

Survey respondents also had differing opinions with regard to the role that Limehouse Produce plays in the local food system in Charleston. Specifically, with respect to the statement, "Limehouse Produce has played a major role in growing the local food system in the Charleston area", two disagreed with that statement while one respondent neither agreed nor disagreed. On the other hand, three respondents agreed with the statement, and three respondents strongly agreed with the statement (Figure 3). Accordingly, two-thirds of respondents felt that at least to some extent Limehouse Produce has been a major player in the development of the Charleston area LFS. Hence, while the results are somewhat mixed and not as strong as the support expressed by Limehouse Produce suppliers, this set of survey results provides support for our contention that Limehouse Produce is generally seen as a major player in the local food system in Charleston and an important element in that growth.

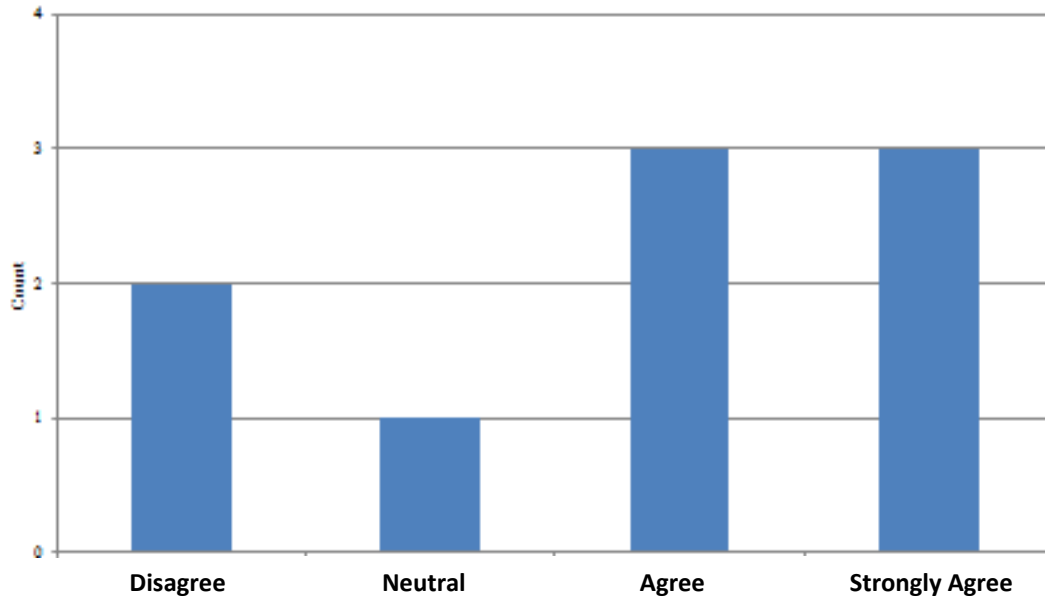


Figure 3. Agreement of Buyers that Limehouse Produce has Played a Major Role in Growing the Charleston Area LFS.

Entrepreneurial Focus of Limehouse Produce (Supporting LFS Development)

Limehouse Produce is facilitating a marketplace that enables more local actors to become creative in their product development and strategies. Many food businesses in the Charleston area have some type of relationship with Limehouse Produce. For example, as one responding supplier indicated, Limehouse Produce had provided direct assistance to their operation in terms of lending equipment and advice. Other suppliers are highlighted on the Limehouse Produce website and on their Facebook Page.

Efforts to support the development of the LFS include the Dirtworks Farm Incubator housed on their farm property, financial and other forms of assistance in helping supplying farms obtain good agricultural practice (GAP) certification working in conjunction with local Clemson University Extension personnel. They have also provided financial support for the construction of a certified GAP Shed on their property that producers can use to pack their produce in a manner that meets GAP standards. (GAP certification, a set of farm practices required to insure safe food, is increasingly being required by buyers.) Among responding suppliers, for example, five respondents indicated that Limehouse Produce had assisted with their GAP certification process to at least some extent. The support of GAP activities by Limehouse is win-win for all in that Limehouse Produce and its suppliers can experience growth in their markets and local buyers have increased access to high quality and safe locally provided produce.

Limehouse Produce has facilitated the development of a local incubator farm in cooperation with LowCountry Local First (a regional LFS organization) and Clemson University Extension. Specifically, Limehouse Produce has leased 10 acres of land to LowCountry Local First for \$1 annual rent, to conduct the Dirtworks Farm Incubator to train a new generation of local food

suppliers. The incubator farm is helping to ensure that local markets will have new growers entering the local supply chain in the future. Limehouse Produce leadership also conducts training courses on produce purchasing procedures for an academic culinary program at the regional technical school (Trident Technical College 2014). Limehouse Produce leadership expects to provide similar training for a (local) Dorchester County sponsored culinary training program later this year.

The training efforts (especially the GAP training) and the GAP shed are examines of Limehouse Produce providing specific technical and infrastructure support to a new generation of entrepreneurs in the Charleston area.

Limehouse Produce: Positive Outcomes and Benefits to the Community (Philanthropy)

Limehouse Produce has also contributed to the development of the Charleston LFS in other ways. Limehouse has provided support for the local food bank (Lowcountry Food Bank) and local faith-based feeding the poor efforts. For example, they provide produce to a regional crisis ministry three times a week and supply the local food bank with produce weekly. They have also introduced the local food bank to possibly sources of local produce.

Support is also provided to other organizations involved in the Charleston Area LFS including board membership for LowCountry Local First, the Trident Technical College Foundation, the Lowcountry Food Bank, and Eat Smart Move More (a nonprofit with the goal of reducing obesity levels especially among children). Limehouse produce also provides sponsorship for several local events including but not limited to Lowcountry Food Bank Chef's Feast, Charleston Food and Wine Festival, and Taste of Charleston. In total, Limehouse Produce Leadership estimates that they provide 100 hours in staff time annually supporting local philanthropic and LFS advocacy efforts.

Services Provided by Other Companies and Partners

Limehouse Produce works with several key partners in providing support for the Charleston LFS. As previously discussed, the relationship with Clemson University Extension has been key in facilitating the development of the GAP certification and GAP shed efforts. Limehouse provided the financial backing for both efforts; currently, 16 local farmers have received GAP certification through the Clemson certification effort, seven of whom are Limehouse Produce suppliers. Limehouse Produce provided the farmer contacts for the certification effort with Clemson; non-suppliers have accessed this program based on word of mouth.

LowCountry Local First is a nonprofit dedicated to supporting small local businesses and the LFS (LowCountry Local First 2014). LowCountry Local First manages the Dirtworks Incubator that is housed on the Limehouse Property. LowCountry Local First has a close working relationship with Limehouse Produce in the day-to-day management of the Incubator.

Trident Technical College is part of the state government supported post-k-12 training system in South Carolina. The community college is responsible for two year technical degree programs in

the Charleston area (Trident Technical College 2014). As discussed, Limehouse Produce has assisted Trident Technical College in its culinary arts program with training in food buying procedures.

Limehouse Produce has also established a relationship with the South Carolina Farm-to-School Effort, which is a S.C. Department of Agriculture effort to supply local schools with fresh produce grown on S.C. farms (Farm to School 2014). The program has become a major market for Limehouse Produce. Besides enhancing the market for Limehouse and its suppliers, the effort hopefully is contributing to a reduction in the state's high childhood obesity rate.

Summary and Conclusions

LFS are a small but rapidly growing component of the U.S. food system. Arguably, LFS provide disproportional benefits to local communities and may even provide part of the solution to national issues such as the obesity epidemic. Wholesale firms, such as Limehouse Produce, that are willing to market locally grown foods sourced from smaller farms can play a vital role in the development of LFS, such as found in the Charleston, S.C. region. In particular, they can serve as a bridge between small farmers and large institutional buyers by filling a gap between supply demand as what local food producers can provide on their own does not meet the needs of potential institution based local food buyers. Limehouse Produce arguably provides additional support to the Charleston area LFS through support of GAP training and a GAP packing shed, and by hosting a farm incubator. In this respect, Limehouse Produce can serve as a model for wholesalers in other regions who may be interested in developing their LFS.

Our analysis of survey results of buyers indicates that Limehouse is an important but usually not sole source of locally provided produce. Surveyed buyers also in general felt that their relationship with Limehouse Produce was important but not essential to their operations. Buyers also indicated that they had a very good relationship with Limehouse Produce, although some issues do exist. Finally, a strong majority of surveyed buyers felt that Limehouse Produce was at least to some degree an important player in the Charleston LFS.

Analysis of local suppliers (farmers) to Limehouse Produce showed an even more positive picture. All responding suppliers saw Limehouse Produce as a major reason for the growth of the Charleston area LFS. Several stated that the existence is due to Limehouse Produce and others indicated that replacing Limehouse Produce as a local buyer could be highly problematic.

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