Creating a Regional Food Hub

Assessments and Recommendations for Dona Ana County

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with La Semilla Food Center
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Introduction

“Regional food systems can especially increase employment, income, and output in rural areas, help address ‘food desert’ challenges in cities’ lower-income neighborhoods, foster civic engagement, and enhance urban-rural connections... [Regional] food systems are also an important market outlet for food that is produced in an environmentally sustainable fashion.” -Union of Concerned Scientists

“There is no sincerer love than the love of food.” –George Bernard Shaw

From farmers’ markets to restaurants that specialize in buying and serving local food, the ways in which we procure and consume our food has changed dramatically over the past decade (see fig). This move toward buying local has been fueled both by mainstream activists and writers, and by scientists and international organizations, all expounding on the multiple benefits of buying our food close to home. These benefits are far reaching and cover many different aspects within a community: economy and jobs, agriculture, sustainable development, community food security, and ecological sustainability, to name just a few.

This report will draw on information from a variety of published reports from across the country, with a focus on the relevance in Dona Ana County and the Paso del Norte region (a complete list of the reports can be found in Appendix B). The potential for a thriving and healthy regional food system in this area is great, with its rich history of agriculture and small farms, extended growing season, and a large urban market potential. The reasons for adopting a regional strategy and implementing a “buy local” program are sound and varied.

The first section of the report will cover definitions of local and regional food hubs and their potential effects on local economies and local values. The next section will include information on value chains, including challenges faced and lessons learned from other areas across the nation as these systems were implemented. The focus will then narrow, and specific types of organizations will be considered, along with case studies of each type and the challenges faced. The report will wrap up with information specific to Dona Ana County and the Paso del Norte region, with suggestions and recommendations for going forward with a comprehensive regional food system.

The terms “food hub” and “value chain” are used throughout the report. They are, essentially, the same thing. However, for clarification and ease of reading, “food hub” – as an entity – is used in the first section and “value chain” – as the process – is used in the second section. Resources, reports, and funding opportunities can be found in the appendices at the end of the report. Although the lists are not exhaustive, they are an overview of the support available from across the country for communities wishing to establish local and regional food systems.
SECTION I: Local and Regional Food Systems

The USDA gives this working definition of a regional food hub: “A centrally located facility with a business management structure facilitating the aggregation, storage, processing, distribution, and/or marketing of locally/regionally produced food products” (…). Of course, a food hub is not simply a facility, but a business model that is designed to aid farmers with support and infrastructure. The types of existing food hubs across the country vary greatly, as they should. They key words to consider are “local” and “regional”; there is great diversity across this country in climate, growing seasons, city and town size, and demographic make-up. By considering an area’s particular assets and challenges, a food system can be created that effectively serves members of the community, both the suppliers and the buyers.

The USDA launched the “Know Your Farmer, Know Your Food” (KYF2) initiative in September 2009, which was “designed to spur a ‘national conversation’ on how to develop viable local and regional food systems and stimulate new economic opportunities” (…). The fact that the USDA is on board, in some respects, with localizing food systems is indication that communities nationwide are recognizing and capitalizing on their regional food supplies. Consumers and their attendant buying power are shifting towards a more sustainable and logical way of procuring their food.

Local food systems are springing up across the country, being spearheaded by city, county, and state governments, nonprofit organizations, businesses, and food advocates. A healthy and thriving local food system positively affects the community in various ways, from health to education, and food security to local economies. Buying local foods can benefit everyone involved: farmers, consumers, and distributors. Since each region and locality differs, each food system will also differ, being most effective when local considerations are kept at the forefront of planning and initiation.

“The Archetypal Food Hub” findings from USDA

- Operating for five years with strong producer engagement and participation in both the establishment and operations of the food hub services/activities
- A socially driven business enterprise with a strong emphasis on “good prices” for producers and “good food” for consumers
- Employs 6 full-time or part-time staff and uses volunteers regularly
- Works with 40 regular food suppliers, many of whom are small and mid-sized farmers and ranchers
- Offers a wide range of food products, with fresh produce being its major product category, and sells through multiple market channels, with restaurants being an important entry market
- Actively involved in their community, offering a wide range of services to both producers and consumers
- Even with gross annual sales around $700,000, not completely financially solvent – relies on some external support to cover parts of their food hub services/activities

Local Food Hub benefits identified by the USDA

- Expanded market opportunities for agricultural producers
- Job creation in rural and urban areas
- Increased access of fresh healthy foods for consumers, with strong potentials to reach underserved areas and food deserts
Local Economies

There is substantial evidence that the growth of local food purchasing positively impacts the local economy in a variety of ways. A USDA report, “Local Food Systems: Concepts, Impacts, and Issues” (2010), summarizes the results of a variety of studies looking at the issue of economic impact of local food markets. The overall review found that regional or local food systems have the potential to positively impact the local economy. In particular, the following benefits were found:

- When consumers purchase food from local sources, rather than from food that is imported from outside the area, sales and money stay with businesses and individuals within the area. This can then create additional economic benefits for the community at large.

- More money will stay in the area when various stages of food production and consumption are carried out locally. For example, if processing of certain foods is done locally, this increases economic benefit by retaining more cash in the local community.

- Farmers’ markets were found to have a positive impact on local economies. One study found that each dollar of personal income earned at farmers’ markets generated an additional 47 cents in indirect and induced income, and that each full time job created at a farmers’ market supported almost half of a full time equivalent job in other sectors of the economy.

- Even when displaced economic activity within the local community reduced the positive economic impacts of localization (for example, sales lost at mainstream retail stores), the overall estimated benefits were still positive.

- Improved business skills and opportunities and increased consumer spending at other businesses within a community were also noted as potential positive impacts.

Local food systems will inevitably retain more revenue within a region than conventional purchasing. Whether it is direct-to-consumer sales or sales to local retailers, a greater percentage of each dollar will remain in the region. In this way, a regional food hub and healthy local food system will foster regional economic development. A report from the Union of Concerned Scientists, “Market Forces: Creating jobs through public investment in local and regional food systems”, outlines some of the specific ways in which a regional food system can grow and positively affect the local economy. These examples, along with data from other reports, are as follows:

Direct marketing can foster regional economic development (see Table 1)

- Data taken from three different studies found that farmers’ markets produced, on average, between three and six jobs per farmers’ market.

- Increases in gross output ranged from $2.4 million to $59.4 million overall; increases in personal incomes ranged from $0.7 million to $17.8 million (these numbers from 21 to 152 farmers’ market s surveyed).

Local and regional food systems can result in sector-specific economic growth

- Studies on fruit and vegetable-specific production have shown that positive economic impacts would result if consumption within a region aligned with dietary recommendations. This effect would be two-fold: the economic impact and the health impact within a region. Currently, fruit and vegetable production accounts for 2% of the agricultural acreage in the U.S., compared to 29% for oilseed and grain.

- Swenson (2010) found that increasing the production of seasonal fruits and vegetables (in place of corn and soybean cropland) would net 4,802 jobs, $710 million in output, and $242 million in income if a regional market obtained produce from farms within a 150-mile radius. Fruit and vegetable production would result in a 6.7-fold
increase in labor income and a 3.6-fold increase in jobs for an equivalent acreage of cropland in corn and soybean production.

- Other studies have found a gross increase of 1,889 jobs and $187 million in income in Michigan (Cantrell et al. 2006), and profits of $460 million in California (Jetter et al. 2004) if fruit and vegetable consumption were to meet dietary guidelines.

Farm-to-school economic impacts

- “For every dollar spent locally by ... two school districts, an additional 87 cents was spent in Oregon, generating a multiplier of 1.87 for farm to school spending... Dollars spent in Oregon agriculture reverberated into 401 of 409 of the state’s economic sectors” (Ecotrust)

- If a region in central Minnesota procured all of their needs from the farm products that were locally available, the gross output in the region would increase $323,000 to $427,000. (Tuck et al.)

Farmers’ markets can increase sales at neighboring businesses

- In Oregon, Lev et al. (2003) found that farmers’ markets were the primary reason for patrons visiting small town on the weekends, and also why they visited larger cities during weekdays. This, in turn, could lead to greater patronization at nearby local businesses.

Local and regional food systems can increase business innovation and entrepreneurship

- Several studies (Martinez et al. 2010; Feenstra et al. 2003) have found that local food systems can enhance and foster entrepreneurship and business skills and innovation among farmers.

Case studies

- “Just in the city of Detroit, shifting twenty percent of food spending would increase annual output by nearly half a billion dollars. More than 4,700 jobs would be created, paying $125 million more in earnings. The city would receive nearly $20 million more in business taxes each year” (Shuman)

- “A 20 percent increase in local production, processing, and purchasing would generate $20 to $30 billion of new economic activity annually within the state’s borders. Thousands of new jobs will be created for farmers and farm-related businesses” (Illinois local and organic...)

- “Every $100 spent at a locally owned business contributes an additional $58 to the local economy. By comparison, $100 spent at a representative national chain store in Portland yields just $33 in local economic impact... Shifting just 10% of consumer spending in Cumberland County from national chains to locally owned businesses would result in an additional $127 million in economic activity, supporting 874 new jobs and generating over $35 million in wages” (Maine center for economic policy)
Local Values

“Several studies have explored consumer preferences for locally produced food. Motives for ‘buying local’ include perceived quality and freshness of local food and support for the local economy. Consumers who are willing to pay higher prices for locally produced foods place importance on product quality, nutritional value, methods of raising a product and those methods’ effects on the environment, and support for local farmers.” (Martinez)

In addition to economic concerns, there are other issues that to consider that carry just as much weight and will affect the community and the overall quality of life. Environmental impact, food security, health, and food justice all have wide-ranging and long-term impacts in every community.

Environmental Impact

The way in which food is grown and purchased has a significant impact on the environment. Perhaps the most significant aspect is the distance that food travels to reach consumers. Transportation distance affects the amount of fossil fuel usage, generally resulting in greater greenhouse gas emissions. Local food supply chains can be an important aspect of reducing pollution and carbon dioxide emissions into the atmosphere. This, however, is not a cut-and-dry issue. While some studies have found that local food systems produce significantly less carbon dioxide emissions, because of the shorter distances food must travel, others have stated that distance is not an adequate measure for environmental impact (see Martinez, et al.). Transportation generally accounts for less of a share of energy usage than production and processing. If it is allowed that distance traveled is only a small portion of energy usage, local food systems may still be, overall, a better bet for conservation of energy sources.

Health

Food related health issues abound in our society. Obesity, heart disease, and diabetes are a few of the problems associated with poor nutrition. These issues affect not only the individual, but the community as a whole, affecting everything from health care costs to worker productivity to quality of life. Access to whole foods and education play a large role in individual and community health. Obesity rates correspond with lack of healthy food options (Morland and Everson, 2008), and a positive association has been found between the local food environment and residents meeting dietary recommendations (Morland et al. 2002).

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<thead>
<tr>
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<tbody>
<tr>
<td>State</td>
<td>West Virginia</td>
<td>Oklahoma</td>
<td>Iowa</td>
</tr>
<tr>
<td>Number of Farmers’ Markets in Survey</td>
<td>34</td>
<td>21</td>
<td>152</td>
</tr>
<tr>
<td>Increase in Employment</td>
<td>Gross 119 jobs; net 82 jobs</td>
<td>113 jobs</td>
<td>576 jobs</td>
</tr>
<tr>
<td>Increase in Gross Output</td>
<td>$2.4 million</td>
<td>$5.9 million</td>
<td>$59.4 million</td>
</tr>
<tr>
<td>Increase in Personal Income</td>
<td>$0.7 million</td>
<td>$2.2 million</td>
<td>$17.8 million</td>
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Creating a Regional Food Hub

When looking at New Mexico specifically, health issues and local food become increasingly important, for a variety of reasons. According to Ken Meter:

One-fifth (20 percent) of New Mexico residents have no health insurance — the second highest rate in the United States. Only half of state employers offer health coverage. This lack of insurance carries significant public costs, since both county governments and medical facilities pay for treating customers who are not covered. Costs of this treatment are estimated to be $6 billion per year.

Food has become a leading cause of death in the U.S., rivaling tobacco. A high-calorie diet, combined with a lack of exercise, accounts for one-fifth of the annual deaths in the U.S. Six of the fifteen leading causes of death are related to poor diet and low physical activity. Sixty percent of New Mexico residents are overweight or obese, with one-third (34 percent) overweight and more than one-quarter (26 percent) obese. Nearly four of every five state residents (78 percent) eat fewer fruits and vegetables that nutritionists recommend (five servings per day), and 22 percent report they have no physical activity. Additionally, 7.8 percent of state residents have been diagnosed with diabetes. Source: Centers for Disease Control. (Meter 2009: 1-2)

The U.S.-Mexico Border Diabetes Prevention and Control Project estimates that roughly 72 percent of adults in the Paso del Norte region are obese or overweight and 16 percent of border residents have diabetes; an additional 14 percent have pre-diabetes (First Report of Results n.d.). The profile of childhood obesity in New Mexico is particularly disturbing with 13.2 percent of kindergarten and 22.6 percent of third grade students obese. This compares to an obesity rate of 19.6 percent for 6 to 12 year olds nationwide (NMDoH 2010: Key Findings).

And, in line with state statistics, less than 18 percent of residents in the border region eat the recommended 5 servings or more of fresh fruits and vegetables daily. (“How Healthy Are We?” Center for Border Healthy Research 2005 report).

Conservative estimates indicate that improving New Mexico residents’ diets could save $140 million in healthcare costs per year (NM Food Gap Task Force 2008: i). The food environment (the kinds of foods easily accessible in a community) has a direct impact on health. Individuals without grocery stores in their community eat less fresh fruits and vegetables and have higher rates of obesity, diabetes and heart disease (NM Food Gap Task Force 2008: i).

Farm to School programs are increasingly popular within school systems to combat childhood obesity and poor nutrition by increasing produce consumption and knowledge of agricultural production among students. Research into existing Farm to School programs indicates that students choose significantly more servings of fruits and vegetables when given the choice of high quality, local, fresh produce, especially when this availability is linked to an educational activity. Several studies also indicate that students will eat more fruits and vegetables when they have easy access to a variety of local, fresh options. Using a 24-hour recall methodology, data from a pilot program at three elementary schools in Los Angeles clearly showed that Farm to School programs increased fruit and vegetable consumption by over 40 percent or by one serving per day in children, as well as reduced the overall fat intake of students (Farm to Table & NMDA 2007: 50).

The New Mexico Farm to School Directory 2007 report indicated two main limitations to Farm to School programs in New Mexico. First, New Mexican farmers cannot be in year-round production. This is more a barrier in the North of the state than in Dona Ana County, where there exists the potential to produce year-round. Second, New Mexico’s climate is not suited to grow some of the products (e.g. oranges) that school buyers want (Farm to Table & NMDA 2007: 50).

In Farm to Table’s 2007 survey of food service directors, 17 districts reported that they had purchased from New Mexico farmers within the past year and 83 percent of food service directors that responded indicated that they will purchase locally if price and quality are competitive.

Food Justice and Food Security

‘Food security’ is a broad term that encompasses the many aspects engaged in by humans to feed themselves. From growing food to procuring and preparing food, culture plays an inherent role in food security. Food security is not only
about feeding an individual on a daily basis. If there is to be true food security for an individual, or a community, the food that is eaten must be sustainable. Only then, when the future is factored in as an aspect of securing livelihoods, will true security be achieved. So what exactly is sustainable, and what would a sustainable food system look like? There is no one answer to these questions, but there is more than one good way forward. John M. Gerber, a professor of sustainable agriculture at the University of Massachusetts, points to three main “pillars” of sustainability: economic vitality, environmental quality, and social equity. True social equity must include cultural conservation and local knowledge. Drawing from this, sustainable food systems must consider not only the environmental impact (present or future), but also the effect on culture and traditional knowledge. Conserving culture is also a part of a sustainable food system. By evaluating and understanding the needs and abilities of a community, a local and regional food system can meet the needs of the community. It is important to remember the reasoning behind investing in a local value chain and food hub, rather than continuing to utilize conventional chains. These reasons should be at the forefront of every endeavor to create a healthy local food system. Gary Nabhan points this out:

“I do want to propose that we can better design all future food hubs to specifically meet social, ecological and economic criteria for sustainability. In other words, our food hubs should be explicitly located, designed, built, implemented and managed with tangible objectives in mind that will improve food justice, reduce energy consumption and other ecological impacts, and build livelihoods that provide producers, processors, managers and marketers with livable wages, and investors satisfactory “slow money” returns on their investments.

To achieve such objectives, I have a hunch that food hubs need to be more explicitly designed to capture the potential synergies among their multi-dimensional activities or operations. Unless maximizing such synergies is an explicit goal from the start, I believe it will be marginalized as an objective to the point of becoming a mere afterthought” (2011).
Value Chains

“Few would argue with the goal of healthy food, accessible to all, that promotes better stewardship of the land while improving income for farmers. However, the challenge is in designing a system that makes these sometimes competing elements economically feasible for everyone in the chain. This work is generally referred to as “value chains”, that is, supply chains that begin on the farm and end at the consumer’s table, and which promote values of health, fairness, and sustainability.”
-Flaccavento

The following section is drawn from the report “Healthy Food Systems: A Toolkit for Building Value Chains”. This report is based on the work of the Appalachian Sustainable Development and was created to aid in establishing new local food systems and value chains. The report in its entirety can be found online (see Appendix B).

The working model within any local and regional food system is the “value chain”. A value chain can be defined as “a supply chain that is designed to link supply with markets efficiently, but to do so while promoting certain core values, including: equity and fair pay, ecological sustainability, community capacity, and health and food access for all” (Flaccavento). When creating a value chain within any region, there is a focus on the three main components of the chain: the supply (farmers, etc.), PAD (processing, aggregation, and distribution), and the markets. Conventional supply chains are how we currently distribute and acquire our foods, generally speaking. The difference between the convention and a value chain can be shown thus:
“A value chain differs from a conventional supply chain in terms of the type of farming, the degree of local ownership or influence, and the distance to market. There is also more transparency and ‘feedback’ among the different parts of the chain” (Flaccavento).

The scale at which to operate a value chain is critically important if it to be financially viable for all parties, buyers, producers, and PADs. Local conditions of markets, farmers, and facilities will all play roles in determining at what scale a value chain should operate in a specific area. The following questions will aid in discovering the scale of a local and regional value chain:

1. How large is the unmet demand for local foods? Can it be met by an expansion of direct market options, such as farmers’ markets, CSA’s, etc.?
2. Who and where are the market drivers for local foods (public schools, colleges, retailers)?
3. What is the estimated total demand, and for what products? Is there a minimum demand that must be met?
4. Roughly how many farms/acres are necessary to meet the demand?
5. Is there enough interest among farmers to meet demand? If so, how much assistance and support is needed, in terms of training, financing, and materials?
6. Why are these markets beneficial to farmers? Do they reduce costs, improve prices, provide easier market access, etc.?
7. How many producers will be needed to meet minimum demands? How close are these farmers to one another?
8. What infrastructure is needed to link the desired products to the markets? Does any of it currently exist?
9. What will it cost to build or access the needed infrastructure? What form of funding is available?
10. Is there a local organization or business willing and able to launch the value chain, and to manage it if necessary?

It is essential to research each aspect of the value chain through research and experimentation. This will help focus efforts and plans, and should answer the basics:

- What farmers are now raising, or could be raising, that can be sold in substantial quantities, and produced profitably and sustainably
- Who is likely to buy these products, where they are located, and what are there essential requirements
- What systems and/or infrastructure will be needed to connect area farmers with those buyers, and which parts of this infrastructure need to be developed

Creating an effective value chain is highly important in establishing a viable, long-term local food system. While the breadth and amount of these systems has been increasing at astounding rates nationwide, there are obstacles and challenges to every system. By looking at other systems currently in place, however, we can evaluate, modify, and create a system that works for the local area.

<table>
<thead>
<tr>
<th>Key attributes of value chains</th>
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<tbody>
<tr>
<td>Knowing where your food comes from, through farmer profiles at the point-of-purchase, through farm tours and local meals that create direct contact, and through transparency and traceability throughout the chain</td>
</tr>
<tr>
<td>Reducing food miles, typically by 75-90% compared with conventional food transactions</td>
</tr>
<tr>
<td>Increased availability of organic and sustainably produced food, with less packaging and processing</td>
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*These questions, along with those in the following sections, are addressed in regards to Dona Ana County and the Paso del Norte region in the last chapter, entitled “Bringing It Home”.

**The Players: Markets**

Getting to know buyers is the most important step in creating a value chain, and relationships with buyers must be established. After assessing potential buyers, narrowing the market scope will allow you to focus on those that best fit current needs and capabilities. Buyers can range from local and national retailers, schools, universities, hospitals, and restaurants. It is important to understand whether these buyers place importance on local, sustainable foods. Pricing and product/product quality determination are essential in developing value chains. Creativity can play a role here, as well. Produce seconds can often be used in value-added products, allowing more options for buyers.

Important information to know about buyers and markets:

- Which attributes are they most interested in and why? Quality? Locally raised? Organic?
- Quantities: What would they like to have and what would the minimum be that they need?
- Quality standards, regarding size, ripeness, color, fat content, etc.
- Delivery schedule: Monthly, weekly, twice per week?
- Delivery destination: Will you be delivering to a central dock, or to each individual store or school?
- Seasonality: What do they want and what are they willing to accept?
- Packaging and labeling preferences and requirements
- Do they require GAP (Good Agricultural Practices) for produce, or USDA certification for meats?
- Price: What are they paying now for comparable products and what are they willing to pay for your foods?

**The Players: Suppliers**

Value chains provide important benefits to farmers and suppliers: Large markets for their products, relatively good prices, and time saved on sales and distribution. However, participation in a value chain will not appeal to all farmers, so it is just as important to know suppliers as it is to know buyers. Creating a reliable supply is one of the most difficult aspects of building a value chain, but it is essential. The following are the key components to building and maintain supply:

- Outreach

   The type of outreach employed will depend on the type of farmer you are trying to engage. Community meetings, meeting hosted by neighbors, and using local media are all ways to bring in suppliers. The Appalachian Sustainable Development (ASD) uses a five-prong strategy to recruit growers:

   1. Farm tours – aid in building new skills for farmers and allows farmers to become more comfortable with new crops
2. Community meetings – presentations concerning types of products being sought, market demand, training and support offered, and how to get started

3. “Meet the buyer” gatherings – similar to the community meeting, but a well-known buyer is engaged to interest farmers

4. Use the media – advertise meetings and build a broader interest among potential growers

5. One-on-one outreach and word of mouth – current growers see the benefits of value chains and become recruiters

- Training and Technical assistance

Many farmers will need technical assistance and training, especially if they are embarking on growing new crops for a certain buyer demand. A peer-learning approach was found most effective by ASD. Guidelines for creating effective training and technical assistance are as follows:

1. Gather information, for example: enhancing soil fertility, organic pest management, etc. Land Grant institutions are valuable sources of information. It may also be helpful to conduct field research with partners.

2. Compile the information in a way that provides background information and sources, but focuses on practical application.

3. Hold workshops and farm-based training. It is particularly effective if led or co-taught by local farmers or others with experience in these areas, including extension agents. Different levels of training may be necessary based on farmers’ need, and training may include beginner, intermediate, and advanced levels of training. Farm tours which showcase methods should also be used if possible.

4. One-on-one technical assistance and training help individual farmers identify and solve problems. Farmer mentors can aid in this capacity, based on the experience of each farmer

- Building a Producers Network

Creating a network for farmers to engage each other has two main benefits. The first is it brings farmers together at regular intervals to discuss markets, problems, and successes. Secondly, it aids in peer learning, allowing farmers to share tips and ideas.
The Players: Aggregators, Processors, and Distributors (PAD)

The infrastructure provided by PADs is of upmost importance in establishing a local and regional food system. A lack of infrastructure and support, which PAD supplies, is one of the main obstacles facing many local food systems. The infrastructure is necessary, especially when working with small and limited resource farmers. PAD can be broken down into four different types, based on types of food:

1. Slaughterhouse
2. Dairy and/or Creamery
3. Shared-use or Commercial Kitchen
4. Produce packinghouse

The requirements for each of these facilities vary and, therefore, will require separate entities. There can be overlap, depending on the needs of farmers and buyers. For example, a commercial kitchen could complement a produce packinghouse to create value-added products, giving participating farmers access to larger and more diverse markets. There are certain elements that are needed in every PAD facility, regardless of region:

- A building
Creating a Regional Food Hub

- Equipment for grading, cutting, processing, etc.
- Coolers or freezers
- Trucks; distribution fleets
- Product differentiation capacity, including labels and handling, special packaging, etc.
- The ability to meet food safety and possibly organic standards
- The organizational capacity to manage the PAD and integrate market demand with production

These may be managed by one entity, or by several different organizations and businesses. However, close coordination is key for a successful food hub.

There are a variety of ways to implement PADs. Each area will have unique requirements, and the infrastructure will reflect the local conditions and needs. As an example, the following is Appalachian Harvest’s model for PAD, as well as general information.

Stage 1: Processing (fresh produce, no value-added products)

- Inspection at the dock – suppliers are trained in produce quality standards, which includes GAP protocol, produce size, and post-harvest handling. Dock inspection ensures the produce is of sufficient quality, and if a large portion does not meet the standard, it may be rejected. Here, farmers receive an invoice, noting the type of produce, the number of boxes or bins, and date of delivery

- Forced air or hydro-cooling to remove field heat – this is done for produce with the exception of tomatoes and winter squashes. Field heat is the interior temperature of the produce at the time of picking. Early morning harvest is desirable. Appalachian Harvest uses a forced air cooling system. Cooling extends the self-life of produce.

- Washing, grading, and labeling – grading is essential to meet the demands of most buyers, and it can also help increase the income for farmers by finding the highest value for different shapes and sizes of produce. This is because different buyers have different standards for #1 produce. This allows farmers to get top dollar for a range of different types of produce, in addition to sort out good quality seconds. Washing is important to remove small amounts of dust or dirt, and it also allows the facility to better assess GAP and food safety standards, by adding small amounts of bleach or other disinfectants. This can increase the shelf life while operating within food safety and organic standards, if necessary. Labeling may or may not be required by buyers, but it helps with establishing brand identity. It also allows premium pricing for local and/or organic produce.

Stage 2: Aggregation

- Aggregating produce from multiple farmers enables a group of small farmers to meet buyer demand for large quantities.

- Aggregation can provide both a longer season and reduction of risk for suppliers. Through networking and coordination, multiple producers can meet the demand for a specific item. Interval farming on several farms
ensures a steady supply over time. This can help farmers to avoid large price cuts due to oversupply as well as build buyer and consumer loyalty. Aggregation is also more cost effective, as a full truck costs less per case to transport that a half full truck.

- They type of food identity needs to be established for aggregation points. Some aggregators maintain the identity of a single producer, while others operate under a single brand name for a variety of farmers.

Stage 3: Distribution

- Distribution is often the most expensive component for PAD organizations, especially for highly perishable items that must be shipped frequently. Costs can be covered and net revenue is possible with careful planning of delivery times and routes.

- The most important determinant of net costs is whether or not delivery trucks are full. Plan accordingly.

- Most food shippers charge a per-case delivery fee; the more cases that are on the truck, the more revenue is generated. Local and regional distribution systems have an advantage over national distribution, by being able to charge less and remain competitive.

- Costs of delivery include: rental or lease costs of vehicles, or loan payments and maintenance costs, fuel/oil, road and vehicle taxes and fees, and insurance

- Aside from costs and revenues, other considerations for distributions are: proper refrigeration temperatures, secure wrapping of pallets, proper loading, dock timing for deliveries, driver training, and following Federal Highway Safety Administration rules.
Common Challenges and Lessons

There are many challenges to creating a successful and viable value chain. In 2010, FarmsReach hosted a design workshop in San Francisco, CA, with farms, distributors, aggregators, and others to identify problems and solutions for value chains and successful local food production and procurement. Along with connecting regional producers to buyers, volume sales are an inherently important aspect in creating a self-sustaining and healthy value chain. The following is a brief summary of the findings. Information on accessing the report in its entirety can be found in Appendix B.

Obstacles to the overall value chain:

- **Cost** – resources needed to track prices for local products and conventional competitive pricing. For food service, retail, and distributors with small margins, competitive pricing is essential for difficult for producers to provide.

- **Administrative burden** – for buyers, more stock must be available daily than what may be available locally. Each supplier has different systems of tracking, availability, and delivery schedules. For buyers, reconciling this on a daily basis for hundreds of produce items at a time is an enormous burden.

- **Bureaucratic or food safety restrictions** – many institutional buyers must source from corporate-approved vendors; some institutions, such as schools and hospitals, require suppliers meet even more stringent food safety regulations. Regional farmers are often unaware of the regulations and how to apply, or they are unable to afford the process.

- **Quality and consistency** – buyers, especially larger institutions, has issues with inconsistency of product. In order to stock high volumes, they must source from multiple sources for a particular item, with differences in ripeness, points of growth, etc., with more labor needed to manually sort and prep.

- **Change adversity** – very simply, sourcing from conventional distributors is easier, more consistent, and usually less expensive. Change is difficult even when there is a desire to support regional food systems.

These common problems all call for more comprehensive aggregation and infrastructure at the regional/local level, which can be accomplished through the establishment of food hubs. The following section showcases organizations and businesses that have done just that.
Organizations and Local Food

Once an understanding of the benefits of local and regional food systems has been reached, the next step is to begin envisioning a system that will work for all players within any given region and its particular circumstances. Different types of companies can play integral roles in the food system; each type of company has its particular benefits and challenges. The following charts give information on food hubs from across the country, as surveyed by the USDA Know Your Farmer, Know Your Food program.

The following table lists the challenges that were present across the board for different company types, as well as possible solutions to these problems. Case studies for each organizing entity type can be found in Appendix

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controlling for product quality and consistency</td>
<td>• Product traceability mechanisms and development of food safety plans</td>
</tr>
<tr>
<td></td>
<td>• Centralized grading and packing houses with co-labeling and unified production standards</td>
</tr>
<tr>
<td></td>
<td>• Increased access to capital for development of on-farm, temperature-controlled storage</td>
</tr>
<tr>
<td></td>
<td>• Refrigerated vehicles for collection after harvest</td>
</tr>
<tr>
<td></td>
<td>• Crops and varieties matched to the available infrastructure</td>
</tr>
</tbody>
</table>
### Seasonality
- Products preserved through development of regional processing infrastructure
- Aggregators source locally when possible and from a larger geographic pool during off-season
- Extend growing season with high tunnels, greenhouses, etc.
- Consumer education about seasonal product availability can change eating habits

### Matching supply and demand
- Pre-season planning among grower pools can help match supply to demand
- Buyers, growers, and distributors can collaboratively project product sales, and plant according to these projections
- Aggregators and distributors can provide buyers with product availability updates throughout the growing season
- Growers and entrepreneurs can pool resources to improve capacity for storage, transportation, and logistics
- Development of processing infrastructure to build markets for blemished produce that can serve as ingredients in processed food

### Food origins and product differentiation
- Small-scale growers can conduct outreach to buyer through “high touch” marketing strategies; can be done in partnerships with other dealers to ensure needed volume
- Packaging, online profiles, and POS merchandising with farmer/farm information
- Communication across the chain (processors, retailers, etc.) to consumers of unique stories of farms related to sustainability

### Supply chain infrastructure
- Third-party logistics enterprises can improve warehousing and distribution efficiencies, allowing producers and PAD to focus on production, marketing, and branding
- Vertical integration can improve supply chain coordination and create access to downstream distribution channels
- Supply chain partnerships with established distributors can achieve similar benefits to vertical integration and reduce investment costs
- Do-it-yourself strategies by entrepreneurs can fill gaps in supply chains through expansion or transformation of services
- Facility upgrades and commercial kitchens can be tailored to accommodate cleaning and prep of fresh product
| Capital                                                                 | • New businesses can access capital through close affiliation with well-established partners  
|                                                                      | • Cultivation of outside investor pools and/or producer cooperatives  
|                                                                      | • Growers and partners can contribute capital or labor  
|                                                                      | • Renovation or upgrading of existing equipment when necessary, rather than developing new infrastructure  
|                                                                      | • Grant funding can aid in start-up until a business becomes self-sustaining  
| Capacity development                                                   | • Grower education (pest management, post-harvest handling, etc.) can improve product quality, consistency, and increase yields  
|                                                                      | • Engaging individuals with diverse professional and personal backgrounds can create enormous advantage  
|                                                                      | • Outsourcing elements or consultants for issues that exceed supply chain staff expertise  
|                                                                      | • Training for institutional chefs and preparation staff to design seasonal and regional menus  
| Information flow and transparency                                      | • Dissemination of accurate, timely information about purchasing preferences, packaging specs, and market trends is imperative  
|                                                                      | • Growers can make informed growing decisions based on cost of production and price points  
|                                                                      | • Sharing knowledge and methods creates higher-quality, competitive products that provide profits throughout the supply chain  
|                                                                      | • Communication about farm to consumer  

SECTION II: Bringing it Home

Dona Ana County is part of the larger Paso del Norte region, which encompasses the area between Las Cruces and El Paso, broadly speaking. This section of the report will focus on Dona Ana County specifically, as the information currently available is from the county. In going forward, attention should be paid to the entire Paso del Norte region in order to access the full potential of markets and producers.

Dona Ana County

Doña Ana County is located in the southwestern portion of New Mexico bordering El Paso County in Texas and the state of Chihuahua, Mexico. The county covers approximately 3,804 square miles with terrain ranging from mountain ranges, valleys, and desert landscape (About the County). Population estimates from 2009 place the county with 206,419 persons, which is an increase of 18.2% from 2000 to 2009 (Census 2010). Historically speaking Doña Ana County has been an agricultural county with much of the land dedicated to farming. Since 1900 the population has increased dramatically and is expected to continue to increase by 4-6% over the next 20 years (About the County). This increase in population has led to an increase in the metropolitan areas thus reducing the amount of land available for farming. In addition, this growth has not occurred evenly over the county, which has left some areas isolated as other areas have grown.

Agriculture is a significant portion of the Dona Ana county economy, and many of the farms are small farms. The 2007 Census of Agriculture County Data (USDA) reported that there were 1,762 farms in the county, covering 589,373 acres. The average size of farms was 334 acres, with a median size of 6 acres. The vast majority of farms, 1,216 of them, have land in orchards, followed by 485 farms with forage, 118 with vegetables, and 81 with cotton.

The following information on markets, suppliers, and PAD is the current information available in Dona Ana County and the Paso del Norte region. These sections are the first steps towards building a food hub based on the Appalachian Harvest toolkit. Each sub-section will outline the information currently available, as well as pertinent missing information.

Markets

La Semilla conducted an online survey of institutions in the Paso del Norte region in March 2011. The survey generated information from five respondents in the area and one respondent from Albuquerque (the information from the
Albuquerque institution is not considered in this report, as it is currently outside the scope of local food hub creation. The five respondents included one nursing home, one hospital, one school district, and two child daycare centers. The following is the analysis of the results from the survey (DeRego et al., La Semilla Food Center):

“There were a total of [five] completed surveys as of May 3, 2011, which will be included in this analysis. The categories for these five respondents vary, including: two childcare centers; a school district; a retirement home; [and] a hospital... As per pre-selection, the areas for the respondents were in the Paso del Norte region (Hatch, Las Cruces, El Paso)...

For the types of food served, five respondents provide snacks at their institutions. With the exception of the recreation program and J C Daycare, the other four respondents provide both breakfast and lunch (four out of six); J C Daycare serves breakfast and no lunch. Apart from the school district and the recreation program, the remaining four also provide dinners. For the hospital-rehabilitation facility, in addition to all categories mentioned above, it provides a cafeteria, patient meals, and catering.

As per the description of local produce and/or meats, three out of the five respondents included food sourced from Doña Ana and/or El Paso counties. Two respondents also included that they sourced from New Mexico and/or West Texas and two respondents included the Southwest United States. One answer stated that local products were sourced from Sam’s Warehouse. Regarding local sourcing, three out of the five currently purchase local foods. It is relevant to note that Hatch Valley Public School has a monthly budget share of between 2 and 4 percent for food; J C Daycare is between 5 and 10 percent, and the Village of Northrise has more than 10 percent of their monthly budget allotted for the same purpose.

The Hatch Valley Public School, the Village of Northrise, and J C Daycare currently purchase locally. The source of local food for Hatch Valley Public School is distributors, while the Village of Northrise uses distributors and Saver’s Market. J C Daycare purchases locally at the Farmers’ Market. The Village of Northrise was the only respondent providing information on their experience purchasing local foods as being very satisfied, saying Saver’s Market “will deliver 6 days a week and if the product is not up to par, they will replace it no questions asked” (Village of Northrise). Other distributor sources mentioned by respondents include Sysco, Samrocks, Zanios, F&R, Jims Supermarket, Sam’s Warehouse, and U.S. Food. The survey answers related to central suppliers as the main point of contact for access to local foods varied in the level of agreement to somewhat agree, neutral, agree, and very much agree.

Also of importance to highlight is that two of the three institutions not currently purchasing local foods are interested in purchasing local foods. These two institutions are the Sweet Pea’s Daycare & LC and Mountain View Medical Regional Center. Additionally, all except for the recreational center are interested in learning more about local purchasing opportunities” (highlights added).

In addition to the institutions that responded to the survey, interest in local food procurement has been expressed by other institutions, including Sodexo, which serves the NMSU campus. Considering the number of individuals served by just these few institutions, it is clear that markets for local food exist in the region.

**Suppliers**

La Semilla Food Center conducted an on-line survey of 20 producers in Dona Ana County. The results of the survey indicate high interest in selling locally and interest in a local PAD facility. The following is information gleaned from the survey.
Where do you normally sell your products?

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmers’ Market</td>
<td>80%</td>
</tr>
<tr>
<td>Retail Stores</td>
<td>60%</td>
</tr>
<tr>
<td>Restaurants</td>
<td>25%</td>
</tr>
<tr>
<td>Community Supported Agriculture (CSA)</td>
<td>10%</td>
</tr>
<tr>
<td>Roadside/Home produce stand</td>
<td>20%</td>
</tr>
<tr>
<td>Brokers</td>
<td>5%</td>
</tr>
<tr>
<td>Processing and/or distribution companies</td>
<td>10%</td>
</tr>
<tr>
<td>Other</td>
<td>20%</td>
</tr>
</tbody>
</table>

Interest in the following:

<table>
<thead>
<tr>
<th>Interest Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A central aggregation facility to combine produce with that of other growers to meet restaurant, store, or institutional demands</td>
<td>84.2%</td>
</tr>
<tr>
<td>A community kitchen in which you could prepare value-added products to sell at a farmers’ market, grocery stores, and other local markets</td>
<td>84.2%</td>
</tr>
<tr>
<td>Accessing resources to expand your production in order to produce year round</td>
<td>55.6%</td>
</tr>
<tr>
<td>Selling directly to schools and local institutions</td>
<td>63.1%</td>
</tr>
<tr>
<td>Peer to Peer learning</td>
<td>73.6%</td>
</tr>
<tr>
<td>Joining a growers’ cooperative to help with marketing, aggregation, and distribution</td>
<td>63.1%</td>
</tr>
<tr>
<td>Interest in networking with food buyers</td>
<td>78.9%</td>
</tr>
<tr>
<td>Food safety, GAP, Organic, or similar trainings and certifications</td>
<td>73.7%</td>
</tr>
</tbody>
</table>

The following were listed as infrastructure challenges to selling products at local markets:

- Refrigerated storage
- No USDA processing facilities
- Transportation

Processors, Aggregators, and Distributors

Mountain View Market Co-op is located in Las Cruces and is dedicated to sustainable practices and local food. The co-op has the potential to serve as both a market for produce and as an aggregation center. Currently, approximately 35% of the produce sold in store is local. There are no contracts with local producers at this time. The store has a cold storage unit measuring 40x10 feet. In addition, the co-op owns a small farm that has a walk-in cooler, measuring 10x10 ft. The cooler is used to store some produce from the farm, but generally the harvest is transported directly to the store. In addition to these facilities, the co-op has a refrigerated van and an area for food preparation. Interest has been expressed from the co-op to act as some form of aggregation and distribution for the local food system. Currently, however, the demand is lacking for expansion, though the ability of the co-op to expand is there.
Given current information from producers, markets, and potential PADs, a centralized entity to pull each of these legs together is missing. Creating such an entity is necessary to recognize the full potential of a local food value chain.

**The Road Ahead and Recommendations**

In moving forward on the path to creating healthy communities and healthy people through the creation of a local food hub, the following recommendations are offered. These recommendations are based on successful case studies from around the country, as well as on current conditions in Dona Ana County. By building a local food hub with all of these recommendations in mind, based on preceding information, the chance of creating a self-sustaining, successful food hub is greatly increased.

The recommendations given are two-fold, which should be carried out concurrently. First (Part 1), more information is needed from both producers and markets in order to determine at what scale the food hub can most successfully operate on. In addition, this will provide information on potential markets that are currently untapped. Workshops, trainings, and networking can be built to better address the needs of local farmers, as well as pull in new and interested farmers.

Secondly (Part 2), action should be carried out to begin establishing the physical basis of a food hub. Based on information that is currently available, interest from farmers and buyers is sufficient to begin establishing aggregation in the form of cold storage at a centralized location, as well as establishing small cold storage facilities at locations convenient to farmers in rural areas. Transportation from the small facilities to the centralized facility should be established, as well. In addition to these actions, policy recommendations are needed at a local level to incentivize entrepreneurs and other organizations to begin developing others facets of PAD infrastructure. One of the key aspects of Part 2 implementation is organizing an entity to facilitate networking and connection between the three legs of the value chain: producers, markets, and PADs.

**Part 1**

*Information on producers*

Information has been gathered from 20 producers by La Semilla in an online survey. The next step is to increase this number to include 20 more producers, totaling information on 40 producers in the area, using the same survey (see appendix D). The survey should be conducted in person, if possible, rather than online. Follow up interviews in person should also be carried out with the original 20 respondents. This will allow personal relationships to be formed and give a better understanding of the needs and concerns of local farmers.

The information gathered from these 40 producers should form the basis of creating the three-pronged approach to building supply in the value chain: outreach, training and technical assistance, and creating a producer network. Once this initial information is gathered, implementation of outreach and creating a producer network is necessary. The steps for outreach and recruitment, taken from Healthy Food Systems: A Toolkit for Building Value Chains (Flaccavento, 2009), were presented in Section 1 and are as follows:

- Farm tours
- Five to ten community meetings
- “Meet the buyer” gatherings
Use the media

One-on-one outreach and word of mouth

Once these steps have been completed, the training and technical assistance phase can being (see Section 1 for more detailed information).

Information on markets

Gathering more information on local and regional markets is necessary, both for understanding the scope of the potential food hub, and for reassurance to potential producers that the markets exist for their products. As with producer information, the survey created by La Semilla for markets should be utilized to extend the information base of potential market. Major institutions in the area should be included in the survey, including hospitals, school districts, daycares, nursing homes, and colleges. The reach should be expanded to include both restaurants and grocery stores. This may include on-site visits, in order to ensure information from a variety of sources.

Once the basic survey information is gathered, those markets that express interest in local food procurement should be the main focus of the next steps. On-site visits will be required to two main ends: documentation of what is already available (i.e. what produce is available, is “local branding” being used, price differences in local vs. non local products, etc.); and documentation of where these potential buyers are headed in terms of local and sustainable foods (i.e. are there procurement goals, are there any statements or pledges from leadership, etc.). The following list is necessary information that should be recorded:

- Which attributes are they most interested in and why? Quality? Locally raised? Organic?
- Quantities: What would they like to have and what would the minimum be that they need?
- Quality standards, regarding size, ripeness, color, fat content, etc.
- Delivery schedule: Monthly (for prepared foods), weekly, twice per week?
- Delivery destination: Will you be delivering to a central dock, or to each individual store or school?
- Seasonality: What do they want and what are they willing to accept?
- Packaging and labeling preferences and requirements
- Do they require GAP for produce, or USDA certification for meats?
- PRICE: What are they now paying for comparable products and what are they willing to pay for your foods?

This documentation will provide necessary information and will also establish necessary relationships.

Part 2

Given current information available on producers and markets, there is indication that creating a food hub on a small scale is desirable at this point. The creation of an aggregation facility will also help alleviate the “chicken or egg” conundrum. The emphasis in moving forward in the creation of the PAD leg of the value chain should focus on produce
aggregation and processing, with options for a commercial kitchen for value-added products, slaughterhouse, and creamery, for example, open for future investigation.

The first priority in this process is the mapping of interested and potential producers and markets in Dona Ana County. The mapping should focus on those entities involved in the producer and market surveys, and eventually extend to include more. In addition, mapping of existing infrastructure should be carried out as well. This includes documentation of buildings that may be of service. Once mapping is complete, the focus should shift to finding an area suitable for a PAD facility. As stated in Section 1, the necessary elements of this facility should include:

- A building
- Equipment for grading, cutting and processing
- Coolers or freezers
- Trucks or distribution fleets
- Product differentiation capacity, including labels and handling, special packaging, etc.
- The ability to meet food safety and possibly organic standards

The creation of a PAD facility will be a large undertaking and will require the input and cooperation of various entities and organizations, including, but not limited to, entrepreneurs, non-profits, food policy councils, and government entities. Meetings with all interested parties should be organized to get a better understanding of the stakeholders and what they can bring to the table. A helpful tool is available from The Ford Foundation’s Wealth Creation in Rural Communities. They have produced a toolkit aimed at helping groups build strong, effective, and sustainable networks (see Resources for information); it is recommended that stakeholders utilize this tool to be as effective as possible.

There are different avenues available to reach a goal of a regional food PAD facility. Joint-use agreements and policies to encourage such an endeavor (such as tax incentives and credits on gross receipts taxes, for example) should be considered when implementing this facility. The elements of a PAD facility may be managed by a single entity or may be dispersed among several businesses and organizations. This is something to keep in mind once meetings with stakeholders have been set up.
Conclusion

Local food systems can provide benefits across the board, creating healthy communities from the ground up. Economies, health, and food security can all thrive when a local value chain is implemented. By keeping the key tenets of a value chain in mind, a self-sustaining food hub can be created while still embracing the basis of what a value chain is: good health, sustainability, and food security at all levels.

Dona Ana County is an area ripe for the creation of such a food hub. Two urban centers, Las Cruces and El Paso, with various, diverse markets exist among rural areas with a long, rich tradition of agriculture. The area’s long growing season opens even more doors for regional sales and consumption. Adequate interest and needs exist among sampled growers and markets to move forward in the first stage of building a regional food hub.

Communities across the country are recognizing the importance of investing in healthy, local food systems. Grants and funding programs exist to aid in start-up costs, and markets are broad enough to be able to support self-sustaining businesses. There is interest among many different groups and individuals to see these ideas turned into a reality in Dona Ana County. Now is the time to begin creating a more sustainable, healthy community, by investing in our land and our people. Every food producing region is unique, southern New Mexico is no different. The place and stories and culture give our food a taste like no other. And that is something worth investing in.

“Tell me what you eat, and I will tell you what you are.” – Anthelme Brillat-Savarin
Appendix A: Programs and Funding

The following information was taken directly from the USDA’s “Know Your Farmer, Know Your Food” website. It outlines a selection of USDA programs that have supported regional food hubs, though it is by no means a comprehensive list. More information can be found at ....

- **The Rural Business Enterprise Grant (RBEG)**

  - supports the development of physical infrastructure and facilities, including food processing, marketing, and distribution business ventures for locally-grown agricultural products. It is administered by the Rural Business Cooperative Service, and can support everything from planning, plant upgrades, equipment purchases, and technical assistance. Grants range from $10,000 up to $500,000, although smaller projects are given higher priority. Rural public entities, Indian tribes, and rural non-profit organizations are eligible to apply. “Rural” in this case is defined as any area other than a city or town that has a population of greater than 50,000 and the urbanized area contiguous and adjacent to such a city or town according to the latest decennial census. Information and grants are disbursed on the state level. For more information go to: http://www.rurdev.usda.gov/rbs/busp/rbeg.htm

- **The Rural Business Opportunity Grant (RBOG)**

  - supports training and technical assistance for business development (to include support for food processing, marketing and distribution business development of locally-grown agricultural products). It emphasizes strategic technical assistance, training, and planning activities that promote “best practices” in sustainable economic development for rural communities with exceptional needs. For more information go to: http://www.rurdev.usda.gov/rbs/coops/rbog.htm

- **The Value-Added Producer Grant (VAPG)**

  - supports the production of value-added agricultural products from commodities. Up to $100,000 can be awarded for planning, and up to $300,000 for working capital. Eligible entities are independent producers, farmer and rancher cooperatives, agricultural producer groups, and majority-controlled producer-based ventures. For more information go to: http://www.rurdev.usda.gov/rbs/coops/vadg.htm

- **The Business and Industry Guaranteed Loan Program (B&I)**
• The Farmers’ Market Promotion Program (FMPP)
  o is a grant program designed to facilitate and promote farmers’ markets and other direct-to-consumer market channels for agricultural products. Grants are awarded on a competitive basis. The maximum amount awarded for a proposal cannot exceed $100,000. Approximately $10 million is allocated for Fiscal Years 2011 and 2012. Entities eligible to apply include agricultural cooperatives, producer networks, producer associations, local governments, nonprofit corporations, public benefit corporations, economic development corporations, regional farmers’ market authorities, and Tribal governments. “Growing Farmers,” “Professional Development,” and “Expanding Local and Rural Economies” are just a few of the goals of the program. The emphasis of this program is on direct-to-consumer marketing, which includes multi-farm CSAs and online buying clubs. For more information go to: http://www.ams.usda.gov/FMPP

• Community Food Projects Competitive Grant Program (CFP)
  o is designed to increase food security in low-income communities by developing linkages between two or more sectors of the food system, supporting the development of entrepreneurial projects, and encouraging long-term planning for communities. Grants of $10,000 to $300,000 (lasting 1-3 years) are competitively awarded to eligible nonprofit entities that need a one-time infusion of federal assistance to establish and carry out multipurpose community food projects. Approximately 18 percent of submitted proposals have received awards. For more information go to: http://www.csrees.usda.gov/hungerfoodsecurity.cfm

• Sustainable Agriculture Research and Education (SARE)
  o awards competitive grants to advance sustainable innovations that support the whole of American agriculture, with a special emphasis on outreach and dissemination of project results. Four regional offices administer SARE funds, which support research on topics including on-farm renewable energy, pest and weed management, sustainable communities, agro-forestry, marketing, and more. For more information go to: www.sare.org
• **The Community Facilities Program**
  
  o provides loans and grants for the construction, acquisition, or renovation of community facilities or for
  the purchase of equipment for community projects.
  
  http://www.rurdev.usda.gov/HCF_CF.html

• **The Rural Economic Development Loan and Grant Program (REDLG)**
  
  o promotes rural economic development and job creation projects in rural areas.
  http://www.rurdev.usda.gov/ga/tredleg.htm

• **Federal-State Marketing Improvement Program (FSMIP)**
  
  o provides matching funds to states to research and innovate new marketing opportunities for food and

• **The Organic Research and Extension Initiative**
  
  o supports the ability of producers and processors who have already adopted organic standards to grow
  and market high quality organic agricultural products.
  http://www.csrees.usda.gov/funding/rfas/OREI.html

• **Farm Storage Facility Loan Program**
  
  o can finance the construction of on-site storage, cooling, and minimal processing facilities for eligible
  commodities. The 2008 Farm Bill expanded those eligible commodities to include vegetable and fruit

• **Environmental Quality Incentives Program**
  
  o provides financial and technical assistance to help plan and implement conservation practices that
  address natural resource concerns. The 2008 Farm Bill began offering high tunnels, or hoop houses, to
  help extend the growing season for fresh market vegetable producers.
  http://www.nrcs.usda.gov/programs/equip/index.html#intro

• **The Conservation Innovation Grant**
o seeks to stimulate the development and adoption of innovative conservation approaches and technologies, particularly as they relate to agriculture. “Promotion of Sustainable Agriculture,” “Nutrient and Pest Management,” and “Program Outreach and Conservation Technology Transfer to Targeted Groups” are just a few of the goals of this program. http://www.nrcs.usda.gov/technical/cig/index.html

- **Risk Management Education**
  o is a comprehensive educational program to assist producers and agribusinesses to understand their increased risk exposure and responsibility in the current economic environment. http://www.rma.usda.gov/aboutrma/who/aboutrme.html
# Appendix B: Food Hub Business Model Case Studies

## Limited Liability Companies (LLC)

### Provisions International

Provisions International is a specialty food provider, involved in marketing, delivery, in-store tastings, sales, and regional hauling. They offer cheese, meats, oil, baking supplies, and other specialties from Europe and New England. Based in New England, there is an emphasis on products’ stories and origins. The company provides education about product origin and the importance of such. An important aspect of this company is that they will not sacrifice quality for origin, allowing them to build up a faithful customer base.

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Lessons</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Supply shortages</td>
<td>• Imported specialty foods now compete with a growing number of regional artisanal products</td>
</tr>
<tr>
<td>• Sourcing high-quality product</td>
<td>• Limiting scale and growth can help sustain high levels of product quality and customer service</td>
</tr>
<tr>
<td>• Persuading local, artisanal food producers to entrust marketing and distribution to a third party</td>
<td>• Professional resources and responsiveness to the market are critical to success</td>
</tr>
<tr>
<td>• Independent couriers can be unreliable for rural clientele</td>
<td>• Strong relationships between producers, distributors, and wholesale customers result in a mutual investment in product quality and greater product loyalty</td>
</tr>
<tr>
<td></td>
<td>• Product quality and consumer satisfaction must come before product origin</td>
</tr>
</tbody>
</table>

### Cherry Capital Foods

In response to requests for locally sourced products, Cherry Capital Foods was launched and offers marketing, distribution, packaging, training, and guidance on GAP and HACCP protocol. They offer organic produce seasonally and juice, condiments, eggs, meat and cheese year round. They serve schools, restaurants, hotels, grocery stores, colleges, and many more customers.

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Lessons</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Supplier unfamiliarity with the wholesale market</td>
<td>• As the local food industry grows, so does the need for education about wholesale market standards</td>
</tr>
<tr>
<td>• Price and packaging variability</td>
<td>• Professional experience and social capital contribute to the viability and success of a business</td>
</tr>
<tr>
<td>• Building expertise, relationships, and communication across local supply chain</td>
<td>• Environmental constraints such as regional population density, land use, growing conditions, and industrial history significantly impact the scope and growth potential of a business</td>
</tr>
<tr>
<td>• Anticipating and matching supply and demand</td>
<td>• Elastic definition of “local” will be necessary in order to maximize the relational, ecological, and regional economic benefits of local marketing</td>
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<tr>
<td>• Technology</td>
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Cooperatives and Subsidiaries

**Organic Valley Produce Program**

As a producer cooperative, Organic Valley offers production, support, training, marketing, merchandising, and distribution to farmers. Dairy products are the main offering, but high quality produce is also offered. They have around 40 buyers nationwide, and 15 of those are located in the Midwest, where Organic Valley is based. All producers must be certified organic, and while GAP certification isn’t required, Organic Valley offers training for growers.

Challenges:
- Insufficient understanding of production costs
- Difficulty preserving the integrity of the cold chain
- On-farm packing limits use of #2 produce and pack size options
- Balancing small grower profitability with efficient production and distribution

Lessons:
- To succeed in the wholesale market, small growers must reach economies of scale and comply with production, post-harvest handling, and pack size standards
- Building on established enterprises can reduce operating costs and enhance brand recognition

**GROWN Locally**

GROWN locally is a producer-led cooperative that was established to reduce competition between farmers and increase access to wholesale markets. This is accomplished through product aggregation and co-branding of products. The business’ direct-to-consumer sales make up approximately 38% of total sales, with the remaining sales to hospitals, colleges, nursing homes, and restaurants. The products they offer include produce, honey, meat, and flowers, and they provide production, marketing, distribution, storage, and branding to producers.

Challenges:
- Growing and operating within a margin that is sustainable for both the co-op and the growers
- Developing/hiring skilled leadership
- Internet marketing
- Seasonality

Lessons:
- Skilled leadership and coordination are critical to an organization’s sustenance and successful growth
- Adaptability and responsiveness to the evolving market are imperative to an organization’s longevity and financial sustainability
- Technology is only useful if it is functional, updated, and utilized
- Small farmers face unique challenges in meeting and verifying wholesale post-harvest handling standards
- Pre-season production planning helps farmers respond to market demand
Co-op Partners Warehouse

This cooperative emerged to fill a growing need for the representation of small, local producers. It is a drop-ship and traditional aggregation, with local deliveries and billing and marketing services. This aggregation center allows producers to drop off produce at one location, where products are consolidated and delivered to customers, which include food stores and restaurants.

Challenges:
- Matching local supply and demand
- Balancing distribution business interests with respect for farm-direct sales

Lessons:
- Conscientious vertical integration can improve efficiency across the supply chain while preserving relationships and values at every level
- Careful alignment of producer and retailer interests helps create viable distribution models and product lines
- Growing incrementally and using existing resources can reduce start-up costs, enhance product differentiation, and facilitate adaptation to constraints and opportunities
- Skilled, experienced, and networked management is critical to a successful enterprise
- Local food and values-driven markets are dynamic, requiring regular assessment and adaptation

Nonprofit business

Growers Collaborative

Growers Collaborative is a program of Community Alliance with Family Farmers based in California. Services include production and packaging, marketing, distribution, and branding. With over 100 suppliers, Growers Collaborative serves 70 institutions, including public and private schools, colleges, and hospitals. They offer fruit and vegetables seasonally, year round, and provide both retail and processing quality produce.

Challenges:
- Nonprofit management of a distribution enterprise presents unique questions about funding, long-term goals, and economic viability
- Institutional buyers want pre-processed and easily-processed product
- Growers Collaborative has rarely accounted for more than 20 percent of its food service customers’ purchases

Lessons:
- Private-nonprofit distribution partnerships may reduce the cost and infrastructure barriers that prevent new, small, and minority growers from reaching local wholesale markets
- As local food distribution systems are scaled to the wholesale level, greater attention must be paid to the crucial role of product aggregation and marketing
- By sourcing from farms of various sizes, Growers Collaborative is able to meet wholesale volumes while ensuring a place in the market for small and minority farmers
Independent businesses, public and private

**Wescott Agri Products**

Based in Minnesota, Wescott specializes in wholesale tree fruits, available year round by sourcing from both local and regional suppliers, as well as national and international. They provide production assistance, washing, packing, marketing, aggregation, and distribution to 25 regional producers. They serve over 100 customers, including both retail buyers and distributors.

**Challenges:**
- Seasonality
- Regional growing conditions can make it difficult to compete with national and international products
- Mitigating the lower value of seconds
- Cultivating the next generation of growers

**Lessons:**
- Meeting conventional wholesale growing, post-harvest handling, and pack size standards opens regional wholesale market to local growers
- Partnerships with local specialty processors create markets for seconds
- Consumer education and place-appropriate growing standards are necessary for a competitive local market
- Marketing and on-site technical assistance benefit both growers and distributors

**University of Wisconsin-Madison: Division of University Housing: Dining and Culinary Services**

The Dining and Culinary Services at UWM operates as an independent business with no financial support from the university. They have approximately 40 suppliers, including the campus dairy. At the present, locally sourced food only accounts for about 13% of the services food budget, due to seasonal constraints and irregular supply of local staples. They do, however, intend to increase local purchasing.

**Challenges:**
- Upper level management’s decision to improve operational efficiencies by cutting suppliers
- Shortage of locally grown fresh-cut and frozen product
- Liability insurance requirements
- Marketing and merchandising
- Seasonality and inconsistent supply of local product
- Labor, training, and facilities needed for fresh product preparation

**Lessons:**
- Enthusiastic leaders in University Housing helped facilitate a relatively quick, smooth transition to local sourcing
- A la carte food service operations allow for cost transfer and menu experimentations
- Design and capacity development can prove advantageous for local food procurement initiatives
- Anecdotal evidence indicates that the demand for local product exceeds the demand for organic food
Appendix C: Reports and Resources


Day-Farnsworth, Lindsey, Brent McCown, Michelle Miller, and Anne Pfeiffer. 2009. *Scaling Up: Meeting the Demand for Local Food*. UW-Extension Ag Innovation Center. UW-Madison Center for Integrated Agricultural Systems.


Appendix D

Producer Interview and Survey Questions

1. What products do you currently grow or produce for sale?

2. How much land do you currently use to grow or raise food for sale (owned or leased)?

3. Where do you normally sell your products? (specify locations)

4. Are there other specific local markets where you would like to be able to sell your products? (please specify)

5. What financial, policy, or labor challenges do you have selling your products at local markets (i.e. lack of access to land or water, difficulty obtaining small loans, high insurance premiums, barriers selling to school, etc.)?

6. What infrastructure challenges do you have selling your product at local markets (transportation, storage, etc.)?

7. How interested would you be in the following (i.e. Currently participate, very interested, somewhat interested, not interested, unsure):

   a. A central aggregation facility to combine produce with that of other growers to meet restaurant, store, or institutional demand
   
   b. A community kitchen in which you could prepare value-added products to sell at a farmers’ market, grocery stores, and other local markets
   
   c. Accessing resources to expand your production in order to produce year round
   
   d. A microloan program
   
   e. Selling directly to schools and local institutions
   
   f. Peer to peer learning
   
   g. Joining a growers’ cooperative to help with marketing, aggregation, and distribution
   
   h. Offering a community supported agriculture program
   
   i. Participate in a Food Policy Council
   
   j. A farm link program to connect young farmers seeking farmland with retiring farmers and/or individuals willing to rent/lease farmland
   
   k. Partnering with other land owners to expand production
   
   l. A local small farm processing facility to wash, cut, store, and distribute products
   
   m. Mentoring young adults interested in agricultural production as a career
   
   n. Interest in networking with food buyers
   
   o. Interested in having a chef visit your operation
p. Food safety, Good Agricultural Practices, Organic, or similar trainings and certifications

8. What kind of sustainable practices do you use on your farm? (i.e. water usage, biodynamic/permaculture, minimize chemical inputs, non-GMO seeds, certified organic, etc.)

9. Would you like to be included in a database of producers who sell locally?