Bringing Food Systems Home:

Preliminary Analysis for a Regional Food Hub in Oregon's Mid-Willamette Valley

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Executive Summary

Beginning in the late 1960s and early 1970s, food and agricultural systems began a rapid expansion in an attempt to match a global population that was growing at a record rate. The local foods movement began in response to what were perceived as the negative impacts of the industrialization and globalization of the food system. Local foods advocates point out that as the food system expanded, producers and consumers became increasingly divided. Consumers lost sight of agriculture, allowing industrial, often unsustainable, practices to creep into the production and processing of the foods we take for granted. Without consumer oversight and input, local foods advocates explain, small farmers were increasingly abandoning their land and time-heralded traditions to the demands of large, profit-hungry agribusiness corporations. These trends caught the attention not only of consumers who no longer felt comfortable with how their food was being grown and processed, but also of the many rural areas dependent on agriculture to sustain the local economy.

This project developed out of a desire to understand and strengthen the regional food system in Oregon's Mid-Willamette Valley. The Mid-Willamette Valley Council of Governments (MWVCOG) had an idea of how to do so and approached the University of Oregon for assistance. That idea was to develop a regional food hub, a relatively new strategy that has proven successful in more than many communities across the United States. Regional food hubs are touted as a way to help small and mid-sized food producers better access local markets and at the same time enable food purchasers to increase the amount of locally-grown food they purchase. The MWVCOG wanted to know if a regional food hub would be a feasible strategy for the very specific needs of the region's food system.

To answer the MWVCOG's primary question, several other questions had to be researched. To begin, the potential feasibility of a regional food hub is highly dependent on the current situation of the area's food system and the trends that influence the future of the food system. Several existing reports touch on aspects of the food system but none pull all of the information together to discuss the overarching strengths and weaknesses of the food system in general. This report pulls together relevant information from existing reports and supplements it with additional secondary data from sources like the U.S. Census Bureau, the Census of Agriculture, Oregon Agricultural Information Network, and the Consumer Expenditure Survey. This regional food system profile presents a picture of a relatively strong existing food system producing a diverse selection of high quality food products. It also exposes a thriving food processing cluster that has defied a general decline in the manufacturing sector nationally. Population trends demonstrate that the region is and will continue to be an attractive place to live, providing a consistent consumer base for local producers and processors.

Another question begging an answer was the precise role that food hubs can and do play in local food systems. Existing research by the U.S. Department of Agriculture provides foundational information about the typical structure and function of regional food hubs. Because food hubs have grown in popularity in the past decade, a significant body of knowledge also exists in the form of feasibility studies done for communities across the country. Food hubs are often considered a solution to problems with a 'missing middle,' which refers to the difficulties that can enter the food system in the stages between production and purchasing. Services typically provided to help with these problems include aggregation of products from small producers, marketing and identification of regional markets,

distribution, and various forms of education and awareness-building. Existing food hubs provide these services in a variety of ways, targeting different markets (including individual consumers, institutions, and wholesalers), and effectively using very different legal structures (such as nonprofits, cooperatives, public-private partnerships, and for-profit corporations).

Findings

Building from the analysis of existing reports and secondary data, this study also strove to answer questions about the actual and perceived strengths and barriers in the existing regional food system. Understanding what the barriers are in a particular region is key to learning whether a food hub will be an appropriate strategy for addressing them. Strengths, on the other hand, are the building blocks that may support the development of a food hub organization. Surveys of regional food producers and purchasers provided insight into these strengths and barriers and supplemented secondary data analysis. Combining all sources of information, the strengths in the existing food system are:

1. The Mid-Willamette Valley is a great place to live.
2. The region has ideal growing conditions.
3. There is already a large amount of food production in the region.
4. Production is complimented by an existing cluster of food processing businesses.
5. The region has a dedicated community of producers.
6. Consumer demand for local food is growing.
7. The region is home to a supportive network of organizations.

The survey was also the primary source of information about potential barriers. Producer respondents were asked to identify their top three most significant barriers to accessing larger markets while purchasers were asked about the barriers to buying more local foods. Several themes emerged from the survey responses, which are summarized below.

The most significant barriers for producers include:

1. Inability to produce the too-large volumes demanded by larger markets
2. The need for a higher price point than wholesale or institutional markets are willing to pay.
3. Difficulties associated with distribution of products to markets.

The barriers for purchasers are similar and include:

1. Difficulty of accessing local products.
2. The need for wholesale pricing on bulk items.
3. The inability to find specific products grown locally year round.

Many producers and purchasers also stated that education is also a major barrier – producers need to know how to access larger markets and purchasers need to know what is produced locally and how to access it.

Building from research on the existing food system, the role regional food hubs can play, and the barriers to increasing the amount of local food products bought and sold, it's possible to determine whether a food hub is a viable strategy for furthering food system development in the Mid-Willamette Valley. There are many qualities of a food system that help set up a regional food hub to succeed. The study region already has many of these qualities, including large supply, growing demand, and existing

infrastructure. The region produces high volumes of a wide variety of food products. This is partly due to the uniquely ideal growing conditions in the region but also due to a large number of dedicated, experienced farmers. In addition to existing supply, regional producers and purchasers indicate that demand for local food is growing. They explain that consumers, institutions, and local governments alike are supportive of the regional food system. Existing support networks serve as a good foundation of social infrastructure that can help a potential food hub find success in the region. Physical infrastructure is also strong. The region is home to a concentration of farms and is located along major ground transit routes, providing easy transportation of food products around the region as well as to external markets.

Research also indicates that the services commonly provided by food hubs are exactly those services that could address many of the most significant barriers identified by regional producers and purchasers. Key barriers and their potential solutions include:

DEMAND for LARGE VOLUMES. A food hub could manage the aggregation of small volumes from small regional farms at a single, central location. Collectively, small farms could meet the demand of wholesale and institutional markets.

DISTRIBUTION and ACCESS. Also through the aggregation function, a food hub would provide a central location for pick-up of food orders, or could manage a distribution service. In this way, farmers would only have to deliver to one location and purchasers could arrange to make large, infrequent pick-ups (or deliveries).

AVAILABILITY. A food hub could serve as an information hub. It could facilitate knowledge sharing between producers and purchasers. Producers may be more inclined to put in the effort to grow specialty crops or extend the growing season if they are aware of demand. Season extenders can be input intensive, requiring upfront cash. For example, purchasing and heating a greenhouse is very expensive. Producers may be more willing to invest in these techniques, or invest the time and effort in growing specialty crops, if they know there is a large demand from a stable market.

KNOWLEDGE. A food hub organization could serve as the collection and distribution point of information about the regional food system. Case studies show that food hubs frequently aim to educate their communities and raise awareness of local foods.

PRICE. Price is more difficult to address in that there likely isn't one specific solution that works for everyone. However, research shows that a food hub may be able to help alleviate some of the concerns. For example, if a food hub takes on the often costly (in both time and money) tasks of marketing and distribution and offers a stable, consistent market for products, producers may be willing to sell at a lower price than they would at direct-to-consumer markets. Farmers could still sell direct at farmers' markets, but wouldn't have to depend entirely on driving to several markets every week in order to sell all of their products. The ability to drop off products at a central location and have the rest taken care of would free up both time and the cost of fuel.

In addition, the food hub could help educate larger buyers about the value of local foods. Survey respondents indicated that they are willing to pay a small premium for local foods versus conventional foods. Also, case studies reveal that food hub models requiring membership fees

may enable the hub to operate without significantly marking-up food products. This allows farmers to take home the full value of products sold. Finally, many food hubs are organized as nonprofits or cooperatives with broad missions including supporting the local economy, supporting local farmers, and raising awareness of the quality food products that are produced locally. In this role, a potential food hub could help both producers and purchasers increase their understanding of how they can benefit from increasing participation in the regional food system.

Summary

The results of this study suggest that a regional food hub is a feasible strategy for the Mid-Willamette Valley given the strong foundation in its existing food system and the compatibility of typical food hub functions with the current weaknesses in the system, as identified by regional food producers and purchasers. This study is not, however, the end of the work that will need to be done to successfully develop and support a regional food hub. Next steps for the region include organizing interested food system players into an open dialogue about existing strengths and weaknesses, maintaining high levels of energy and commitment to the project, possibly through regular meetings of stakeholders, and moving through the key decisions identified in this report with the ongoing guidance of regional stakeholders. Though it will take time and commitment on all parts, together, the dedicated regional producers and purchasers can pool their knowledge and experience to better their food system for everyone involved. A regional food hub is just the strategy needed to bring food back home to the Mid-Willamette Valley.

One: Introduction

The National Food Hub Collaboration defines food hubs as organizations that manage the aggregation, distribution, and marketing of local and/or regional food products with the goal of "strengthening producer capacity and access to wholesale, retail, and institutional markets" (2012). Food hubs, both as physical warehouses and online outlets, have been popping up around the country as a way to aggregate local food production and consumption in a central location, as opposed to the decentralized model of farmers' markets and community supported agriculture (CSAs) (Borst 2010). In this way, many researchers argue that a regional food hub expands market opportunities for small-scale local producers who may not be able to tap into larger markets, such as institutions, on their own. The regional food hub also serves as a showcase of regional food products that can make it easier for consumers to identify and access locally-produced foods. This strategy helps existing local producers stay competitive against the vertically-integrated corporations that currently dominate the global food system (Grey 2000). It also encourages small-scale start-up business as well as a diversification of local agricultural production.

Background & Context

This report provides background information and analysis of data to assess the feasibility of a food hub in Oregon's Mid-Willamette Valley region, which comprises Marion, Polk, and Yamhill Counties. The project developed out of out of a series of studies conducted on behalf of regional economic development agencies as well as meetings and discussions among food-focused agencies and organizations in the region. The Mid-Willamette Valley Council of Governments (MWVCOG), an association of over 40 local government entities, requested assistance from the Economic Development Administration University Center (EDAUC)[1] at the University of Oregon to conduct a feasibility study of a physical food hub facility in the tri-county region. This report aims to provide practical recommendations about potential next steps for further development of the regional food system, based on existing demand, barriers, and opportunities.

Situated in western Oregon, the Mid-Willamette Valley is a three-county region, comprised of Marion, Polk, and Yamhill Counties, that leads the state in agricultural production. The region is also home to an established value-added food manufacturing and production cluster. One of the economic development strategies of the region is to expand on these existing strengths and increase support for small and emerging food-related businesses. The Mid-Willamette Valley Council of Governments, along with regional partners, identified the food hub concept as a potential component in this economic development strategy. The region will be discussed in more detail in Chapter Three: Regional Food System Profile. Given current interest in supporting local foods and more sustainable agricultural models, as well as the success of existing food-related businesses, the timing seems ideal to consider a regional food hub.

[1] The EDAUC is a program of the Community Service Center at the University of Oregon (http://csc.uoregon.edu)

Purpose and Methods

The purpose of this study is to analyze the existing local food system in the Mid-Willamette Valley and examine the possibility that a regional food hub could help further develop and strengthen that system. Within the above framework, this report specifically aims to answer the following questions:

- What is the current state of the region's food system?
- What are the barriers to further development of the regional food system?
- How do regional food hubs fit into local food systems and have they been effective in strengthening local food systems?
- Is a regional food hub a feasible strategy for addressing the needs of the Mid-Willamette regional food system?

To answer these questions, I used the following methodology. Each component is discussed in further detail in Appendix A.

Quantitative Analysis of Secondary Data

To begin to analyze the regional economy and food system, I gathered secondary data from a wide variety of sources. These included government data collection agencies as well as reports previously prepared for the region. Secondary data analysis took the form of a preliminary research phase. It informed the background of the project and began to shed light on the state of the regional economy and food system. I used secondary data to develop a detailed description of the socioeconomic characteristics that may impact food systems development. This methodology also helped identify areas in which more research was needed.

Food System Needs Survey

The study involved collecting primary data through a two-part survey distributed to regional food producers and purchasers. These two groups are the most potentially impacted by a food hub that provides some of the functions that typically connect food growers to end users. The MWVCOG and other regional partners developed a list of target respondents which included about 84 contacts distributed across the following categories: small producers, large producers, farmers' markets, processors, restaurants, retail, and institutions. It was also distributed to participants in the Salem Mayor's Ag Forum, county farm bureaus, and contacts at Oregon State University Extension Service and other regional organizations. From this mass distribution, 62 people started the survey, to various levels of completion, and 39 completed the entire survey. The purpose of the survey was to assess attitudes toward development of the regional food system and discover whether particular barriers exist that could be addressed, at least in part, by the development of a regional food hub.

Case Study Research

The research process included the identification of several regional case studies. These were gathered primarily from existing reports by regional organizations as well as the USDA. The purpose of the case study research was to learn about the food hub as a tool for strengthening the regional food system. Existing food hubs take a variety of forms in terms of the business model used as well as the specific

services offered. The case study research shed light on how different models are used and to what effect. This research will help the study region better understand how a future food hub might be structured based on local needs and desires. I used existing data to the extent that it was sufficient to answer my questions.

Regional Food System Workshop

Finally, although not a research method in the traditional sense of a tool for gathering information, this project involved a regional food system workshop. Interest was initially measured through the needs survey. The workshop was then advertised to the same mailing list as was used for the survey, as well as posted on the websites of several regional organizations. The purpose of the workshop was to bring the various food system groups into the same room to begin a conversation about the food hub strategy. At the workshop, we shared preliminary research results from both secondary sources and the survey, and then broke attendees into smaller focus groups for facilitated discussion.

Organization of this Report

The remainder of this report is broken into five chapters. They are organized as follows:

Two: Background & Context – The following chapter further develops the context within which this study exists. It includes a review of related existing literature from the fields of sustainable agriculture, planning, and the local foods movement.

Three: Regional Food System Profile – Chapter Three contains the secondary data collected for this study. It provides more detail on the existing trends in the regional population, economy, and food and agriculture.

Four: Producer & Purchaser Survey – Chapter Four presents primary data collected through the online survey tool. The chapter walks through the survey results and provides samples of some of the open-ended responses.

Five: Developing a Food Hub – Chapter Five contains a discussion of the key factors and decisions that go into developing a regional food hub. It draws from the primary and secondary data presented in the previous two chapters to tie the discussion to the specific Mid-Willamette Valley setting.

Six: Conclusion & Recommendations – The final chapter presents key findings from the research and draws conclusions. It also provides recommendations for next steps including areas for further analysis.

Two: Local Foods Context

This project is situated within the broad scope of sustainable agriculture. Beginning in the 1960s with the so-called Green Revolution, we saw the opening of agriculture and food systems to a global market, in which dependent components of the system can be divided by oceans and time zones. The Green Revolution pioneered widespread advances in agriculture (primarily in plant breeding) with the goal of increasing yields to levels that could keep up with population growth. The efforts proved successful in breeding cereal crops – including wheat, rice, and corn – that yielded more seed per ton of harvest and that were adapted to mass production in the often harsh conditions of the developing world (Wright 1985, Altieri 1998, Manning 2000). As such, the Green Revolution was the birth of industrial agriculture as we know it today.

In response to this broadening of scale, the past few decades have witnessed a rising opposing interest in strengthening local- and regional-scale food systems. Proponents of local food systems often frame the movement in contrast with what they see as the negative impacts of globalization on food systems. It is often argued that the globalization of agriculture and food systems has significantly widened the gap between food consumers and producers, allowing potentially unsafe or unsustainable practices to become an accepted part of food production (agriculture) and processing (Grey 2000, Hassenein 2003, Hinrichs 2003). Local foods advocates view reduction of scale as a way to bring the focus back to local concerns such as economic development, food access, community resilience, and agricultural security and at the same time improve the sustainability of our agricultural practices and food systems.

Some authors argue, however, that we should be cautious in demonizing the global scale and assigning sweeping assumptions of virtue to all things local. Arguments have been made that the local scale is not inherently freer of vice than the global scale (Born and Purcell 2006). Such arguments echo the words of Don Duvick, retired vice president for research at Pioneer Hi-Bred International, Inc. and Iowa State University professor of plant breeding, who, in a 1995 article, explained a history of environmental degradation attributable to small farms in small towns. This history, he wrote, does not mean that small is bad or that big is good. “It merely says that no group has a monopoly on virtue or vice, on wisdom or folly, on generosity or greed. To assume otherwise, to assign a class uniformity where one does not exist, will put needless roadblocks on the path to the solution of the real problems facing U.S. agriculture. We must look for solutions where we can find them” (Duvick 1995, quoted in Manning 2000).

Indeed, global-scale industrial agriculture was one such solution, just as the local scale is now being proposed as another solution. In pushing aside the efforts of the Green Revolution, however, we must not ignore the progress that was made toward efficiently producing cheap food for people the world around. However often or scathingly we criticize industrial high-input agriculture, it came about at a time when renowned biologist Paul Erlich predicted mass famine in much of the world due to the old Malthusian calculation that agricultural production will not be able to keep up with the rate of our population growth (Manning 2000). Industrial agriculture provided a way to keep up, a way to continue to feed the hungry masses.

The problem we are now faced with is the short-sightedness of such a system. It is a short-sightedness that many environmentalists, agricultural scientists, and politicians alike suggest is beginning to take its toll on our ecological systems. Miguel Altieri explains, "Evidence has accumulated showing that, while the present capital- and technology-intensive farming systems have been extremely productive and able to furnish low-cost food, they also bring a variety of economic, environmental, and social problems" (1998, 61). He goes on to list a handful of examples: cycles of nutrients, energy, water, and wastes are no longer closed, sustainable loops as in a natural ecosystem, but often take place distant from each other; vast fields planted in a single crop encourage specialized pests and deplete organic matter in the soil; heavy pesticide use necessary to grow crops outside of their natural range has resulted in resistance in pests, drinking water contamination, and a need for farmers to constantly upgrade to the newest, best chemicals; genetic engineering of crops threatens genetic diversity, enables monocultures, harms beneficial insects, and can lead to herbicide-resistant super weeds (Altieri 1998).

Can we continue to feed our rapidly expanding population without exhausting the very resources of the earth that make agricultural production possible? This, of course, is a topic discussed at length by recent journalists and scientists alike. It is a topic that caught the spotlight of the media and that lingers behind the curtain in many of the more easily digestible conversations about organic agriculture and local food systems. It is the backdrop before which these conversations, this report included, play out. The local foods movement began as an alternative to the global-scale capital- and technology-intensive agriculture that Altieri references and as such is increasingly demanded by consumers across the United States. The purpose of this report is not to decide whether strengthening local- or regional-scale food systems is the answer to the world's food problems, but to analyze the potential success of such a strategy for a very specific region in northwestern Oregon where supply and demand seem to match.

As previously discussed, the demand for locally or regionally produced food has skyrocketed in this country over the last decade. Oregon is no different and the fertile Willamette Valley has the unique advantage of climate and soil that make year-round food production possible in the region. The local food movement has been primarily the focus of disciplines such as rural sociology and alternative agriculture. However, planning scholars point out that there are specific aspects of the conversation in which planners, with their unique focus on broad, interconnected social systems, can provide a valuable contribution (Caton-Campbell 2004, Pothukuchi and Kaufman 2000). This study fits precisely into one of these niches. The purpose of the proposed study is to assess the function of a particular segment of the food system, distribution and marketing, through collection and analysis of both quantitative and qualitative data. Specifically, this study will analyze the concept of the regional food hub as a marketing and distribution tool within local food systems and assess the feasibility of a new food hub in Oregon's Mid-Willamette Valley.

Regional Food Hubs

Building on the growing interest in food systems, as discussed above, in the late 2000s, the U.S. Department of Agriculture (USDA) launched an initiative to strengthen the connection between producers and consumers. The "Know Your Farmer, Know Your Food" Initiative sought to support local and regional food systems by further developing critical relationships and linkages within the food chain. The USDA quickly recognized the challenge of trying to produce high quality food while also managing business-side services such as marketing. Small farms had an especially difficult time trying to meet the

growing demand for larger volumes of locally and regionally grown food products. Out of this recognition grew an interest in centralized points, or hubs, which would provide services such as aggregation, marketing, and distribution to small regional farms, allowing farmers to focus their energy on production.

To get a broader sense of the problem, the USDA established the National Food Hub Collaboration (NFHC) in 2010, in partnership with the Wallace Center at Winrock International, a global nonprofit organization formed in 1985 with the mission of empowering the disadvantaged, increasing economic opportunity, and sustaining natural resources. The NFHC defines a regional food hub as "a business or organization that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand" (Barham et al. 2012, 4).

This definition has several important components. First, it identifies a few of the primary services provided by a regional food hub, which are **aggregation, distribution, and marketing**. As discussed above, the USDA recognizes the difficult y of managing these tasks while also trying to grow high quality produce. In a 2010 report, the USDA Economic Research Service found that one of the biggest barriers to expansion of local food systems is the "lack of distribution systems for moving local foods into mainstream markets" (Martinez et al. 201, iv). Regional food hubs provide a way for producers of local foods to collaborate and share resources as they engage in the mainstream market.

Of course, many crops that are grown in rural regions across the country find their way into the mainstream market with seemingly little trouble at all. Commodity crops like wheat and corn and other crops produced at an industrial scale are the foundation of our current food system. However, that brings up a second important component of the regional food hub concept: it is focused on "**source-identified**" food products. In some ways, the food hub mimics the process of aggregation and distribution that makes the industrial food system so effective. The key difference is that food hubs usually maintain and celebrate the local or regional origin of products even as they are aggregated for ease of distribution.

This leads to a final component of the definition of a regional food hub, which is to improve local and regional producers' ability to meet "**wholesale, retail, and institutional demand**." Small local producers often sell a majority of their products direct to consumers through such routes as farmers' markets and community supported agriculture (CSA) shares. These markets work well for selling small volumes of products to consumers interested in knowing the source of their food. However, direct-to-consumer marketing can be time consuming (traveling to markets in various locations and spending the day working a stand) and unpredictable (changes in weather or other events going on can cause huge fluctuations in sales). Aggregation can help smaller producers gain access to larger volume markets such as commercial and institutional buyers. In addition, reports from the USDA suggest that mid-sized farms often struggle with marketing because they are too large to survive just on direct-to-consumer markets, but too small to compete effectively in the larger wholesale market (Tropp 2011).

Additional research suggests that wholesale and institutional markets play an important role in developing strong food systems, along with direct-to-consumer marketing. In fact, an article in *The Nation* magazine in 2012 called institutions "the next frontier of the local food movement" (Klein 2012). The same article quotes James Barham, an agricultural economist with the USDA, who explains,

"'Farmers' markets are an important part of building local food systems […] but more fundamental change will come from connecting small and mid-sized local farmers with institutional purchasers that are expressing ever more demand for sustainable food"' (Klein 2012). With the growing interest in and prevalence of diet-related disease and ailments, institutions like hospitals, schools, and senior care programs are paying more attention to the food they serve (Brewster 2013). The relative stability of institutional markets could benefit local producers. While restaurants and local markets may come and go, institutions are often anchors in their communities and therefore have the potential to be long-lasting, reliable markets (Brewster 2013, Goodspeed 2011).

In addition to the relative stability of institutions, the Northwest Agriculture Business Center (NABC) in Mount Vernon, Washington, explains that one of the most exciting aspects of institutional interest in healthy food is the potential for local farmers to benefit from the scale of purchasing done by institutions. Though the organization primarily focuses on the Seattle area, the discussion is pertinent to the Mid-Willamette Valley food system. For example, the NABC reports that a "typical Seattle area hospital spends $2-3 million on food every year," and Washington's public universities spend between $3-11 million each annually (Brewster 2013). Similar calculations in Oregon would also show that institutions spend tens of millions of dollars on food every year, especially if we include public K-12 school districts. Directing even a portion of that spending toward local or regional producers would make a huge impact on their income and on local economic development.

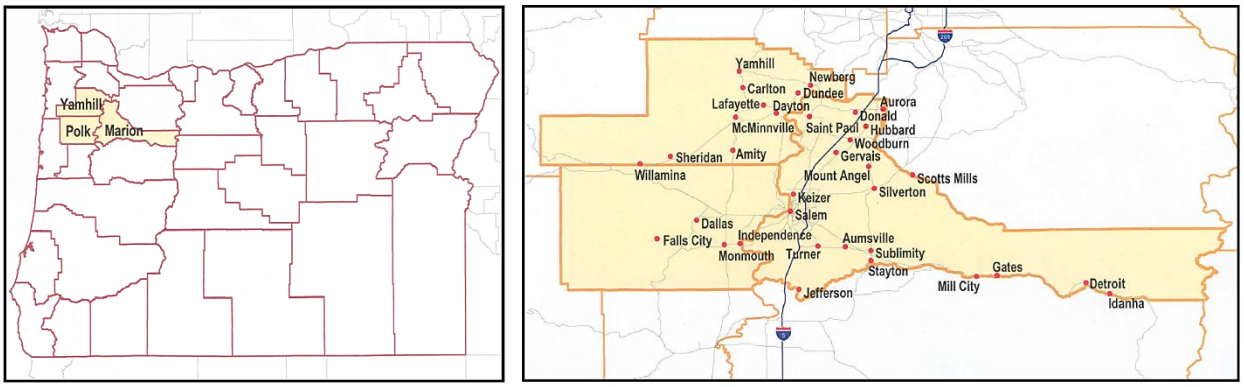
Although direct marketing channels have seen a great deal of development over the past few decades, institutional markets require a different approach and are therefore often a largely untapped market for local foods. There are several significant barriers to accessing institutional markets and local food producers will have to think and act differently than they are accustomed to. The key barriers include distribution and volume of products needed by institutions, pricing that is often lower than the market price producers are used to getting from direct sales, processing and packaging requirements, and food safety certifications, to name a few (Brewster 2013, Goodspeed 2011, Klein 2012). Research suggests that food hubs may have a role to play in addressing some of these barriers.

Through several years of research that involved surveys of existing regional food hubs, the USDA developed a collection of resources about food hubs. These documents include information about potential services and business models as well as priority needs for development of new regional food hubs. A list of such reports can be found in Appendix A: Methods.

Three: Regional Food System Profile

The Mid-Willamette Valley is a three-county region in northwestern Oregon. It is comprised of Marion, Polk, and Yamhill Counties with a total land area of 2,629 square miles. The region is home to the state capitol, which is located in the region's largest city, Salem. In relation to other population centers, the Salem metropolitan area is located about 50 miles south of Portland and 60 miles north of Eugene. Interstate 5, a major north-south transportation corridor in the western United States, cuts through the center of the region.

FIGURE 1: MID-WILLAMETTE VALLEY (COUNTIES AND CITIES)



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This chapter provides some background information on the region's socioeconomic characteristics and trends as well as trends related to food and agriculture production. Much of this information has also been included in other reports on the region. In an effort to be consistent, I rely on existing data where it is available and sufficiently up-to-date. This chapter will only cover aspects that are directly relevant to the topic at hand. Additional demographic information is available in alternate reports, especially the 2012 Mid-Willamette Regional Comprehensive Economic Development Strategy (CEDS) prepared by the MWVCOG.[2]

Population Growth

As of the 2010 Census, the population of the region was 489,931 or about 1/8 of the state's population (U.S. Census Bureau 2013). In terms of population, Marion County is the largest in the region with a population of 315,335, nearly 65% of the region's total, due primarily to the location of the region's largest city, Salem, within the county. Yamhill County is the second-largest with a population of 99,193 (20%) in 2010, followed by Polk County with 75,403 (15%) (U.S. Census Bureau 2013). Since the year 2000, the region grew slightly faster than the state as a whole with Polk and Yamhill Counties showing the most growth. Table 1 shows total growth over the ten-year period for each area, as well as the average annual growth rate.

[2] The regional CEDS was prepared in 2012 and can be accessed through the MWVCOG website at http://www.mwvcog.org:8080/2/mid-willamette-valley-comprehensive-economic-development-strategy-ceds.

TABLE 1: POPULATION CHANGE 2000 TO 2010

			Change 2000-2010		
	2000	2010	#	%	AAGR*
Oregon	**3,421,399**	**3,831,074**	**409,675**	**12.0%**	**1.1%**
Mid-Willamette Region	432,206	489,931	57,725	13.4%	1.3%
Marion County	284,834	315,335	30,501	10.7%	1.0%
Polk County	62,380	75,403	13,023	20.9%	1.9%
Yamhill County	84,992	99,193	14,201	16.7%	1.6%

*Average Annual Growth Rate

Source: US Census Bureau, 2000 and 2010 Census

The relatively remarkable growth in Polk County demanded further analysis, which revealed that the county experienced significantly higher growth than the rest of the region and the state in the populations under 5 years of age and between 20 and 35 (U.S. Census Bureau 2013). This suggests a surge in the popularity of the county among young families.

In addition to population growth in the last decade, the region is predicted to continue to grow steadily through the year 2050 at a rate of approximately 1.3% per year (Oregon Office of Economic Analysis 2013). This rate is again slightly higher than that of Oregon as a whole. According to the Office of Economic Analysis, the highest rate of growth is expected to occur between 2015 and 2030 with growth tapering off slightly after that in both the region and the state. Population growth over the past decade and into the future is promising for economic development efforts as it suggests that there is a growing base of consumers of good and services in the region. It likely also means that the regional workforce is growing.

Data on net migration to the region can tell us a little more about this growth. In the 2000-2010 period, migration accounted for approximately 60% of Oregon's population growth. Migration was not as significant in the three-county region during this period as it was across the state. From 2000-2010, migration represented about half of all growth. However, the impact of migration differed greatly by county. In Marion County, migration represented a smaller portion of total growth than for the state as a whole at only 27%. On the other hand, migration made up about 80% and 65% of the growth in Polk and Yamhill counties respectively. In the state as well as in the region, migration is predicted to be an even larger share of total growth through the next forty years. This suggests that the region is an attractive area to live that will continue drawing people at high rates into the foreseeable future (Oregon Office of Economic Analysis 2013).

Income & Employment

Income and employment in the region are comparable to the state as a whole. The most recent income data is available from the 2011 American Community Survey, which shows the median household income for Oregon at $48,377. This means that half of Oregon households earn less and half earn more than this figure. The region as a whole is slightly above the state median at $50,534. This is due to higher median incomes in Polk and Yamhill Counties, which outweigh lower incomes in Marion County. The 2011 median household income by county is displayed in Table 2 (U.S. Census Bureau 2013b).

TABLE 2: 2011 MEDIAN HOUSEHOLD INCOME ($)

	Median Household Income
Oregon	$48,377
Mid-Willamette Region	$50,534
Marion County	$44,964
Polk County	$53,351
Yamhill County	$53,288

Source: US Census Bureau, 2007-2011 American Community Survey

This data should not be taken to mean that the region is necessarily better off than the state as a whole. Per capita income tells a slightly different story. According to the U.S. Bureau of Economic Analysis, the 2011 per capita income for the three-county region was $33,086, which is about 88% of the Oregon per capita income ($37,527) and only 80% of the national figure ($41,560). Per capita income is calculated by dividing the total of all sources of income in the region by the total population. As such, it tells us about the wealth of a region compared to its total population, but does not tell us about distribution of wealth, like median household income does (U.S. Census Bureau 2013b).

In the region as a whole, government is largest employment sector. As you can see in Table 3, government jobs account for about a quarter of the region's total employment. This is due to the location of the state capitol, Salem, in the region.

TABLE 3: TOP EMPLOYMENT SECTORS – MID-WILLAMETTE VALLEY

2011	Sector Employment	% Total Employment*
Government	44,170	25%
Trade, Transportation, & Utilities	27,347	15%
Education & Health Services	26,440	15%
Manufacturing	17,472	10%
Leisure & Hospitality	14,841	8%
2001	**Sector Employment**	**% Total Employment***
Government	41,329	24%
Trade, Transportation, & Utilities	26,539	16%
Manufacturing	20,593	12%
Education & Health Services	20,470	12%
Leisure & Hospitality	13,626	8%

*Only showing top five sectors, does not add to 100%

Source: Oregon Employment Department, www.qualityinfo.org

The influence of government affects the entire region but is most pronounced in Marion and Polk Counties, where it employs more people than any other sector by a significant margin. Yamhill County, on the other hand, appears to have more of a blue collar workforce. In that county, manufacturing is the

largest employment sector making up about 20% of total employment. The trade, transportation, and utilities sector is a close second with the government sector third in share of total employment in Yamhill County (Oregon Employment Department 2013).

Trends in the manufacturing sector and, within it, the food and beverage manufacturing subsectors, are directly related to the local food system. According to the Oregon Employment Department and the Northwest Food Processors Association, around 23,400 people statewide were employed in food processing in 2011 (Oregon Business Council 2013). A strong food processing industry is a key component of local food systems, especially where local agriculture is already highly productive, because it enables the raw agricultural outputs to be turned into food products that can be sold at a higher price point, thereby increasing the local economic potential. This is often referred to as *value-added agriculture,* which is commonly defined as "changing or transforming a product from its original state to a more valuable state" (Boland 2009). Examples include milling wheat into flour, which is more valuable to customers such as bakeries, and processing fruit into jams. Without a strong local food processing industry, producers must ship raw products and commodities elsewhere to be processed. This deprives the production region of potential added economic value and disrupts the local food system.

In 2011, the output of the statewide food processing industry was $6.1 billion in added value (Oregon Business Council 2013). As previously stated, the Mid-Willamette region has an existing food processing cluster. This burgeoning cluster is obvious when studying employment data. The strength of the food and beverage subsectors over the last decade stands out in comparison to declining employment in manufacturing in general. In the 2000-2010 period, employment in the manufacturing sector decreased by 15% in the region. In comparison, employment within the food manufacturing subsector increased by about 12%. Both saw small increases in the number of units, which suggests that food manufacturing shifted toward slightly more employers employing more people each. During the same period, beverage manufacturing experienced remarkable growth in the region, primarily due to winery development in Yamhill County. Employment within the subsector grew by nearly 130% and the number of business units increased nearly threefold. These trends are summarized in Table 4, below (Oregon Employment Department 2013).

TABLE 4: MANUFACTURING IN THE MID-WILLAMETTE VALLEY

	Employment			Units		
	2001	2011	% Change	2001	2011	% Change
Manufacturing Sector	20,593	17,472	-15%	678	698	3%
Food Manufacturing	4,930	5,512	12%	78	83	6%
Beverage Manufacturing	602	1,379	129%	39	100	156%

Source: Oregon Employment Department, Covered Employment

The development in food and beverage manufacturing and the trend within these subsectors toward smaller establishments is significant in the discussion of the regional food system. This data suggests that regional food is being processed on a smaller scale than in past years. Small establishments are less likely to have the employees or time to handle business services such as marketing. They also likely produce a smaller volume of product, making it more difficult to meet the demand of institutional or

wholesale markets, which are some of the most stable sales outlets. In discussing the data above, it is important to note that employment numbers only include "covered employment," which means employees covered by unemployment insurance and excludes sole proprietors and family businesses.

The trend toward establishments with fewer employees seems to be reflected in agriculture in the region as well, although the factors that influence farm employment certainly may differ from those influencing employment in manufacturing. As with the above data, the following discussion includes only covered employment. In other words it only reflects farms with hired employees and does not include farms run solely by a single person or family. As such, this data probably leaves out the region's smallest farms, which may be family operations. That said, the data may still give us a picture of agriculture in the region.

For the purpose of this study, the term agriculture is used to mean both crop and animal production. Both animal and crop production establishments increased in number during the 2001-2011 period. Crop production grew by just over 10% and animal production by nearly one-third. A barrier to research in this section is the confidentiality of some employment data. For example, total employment is often kept confidential for various industries including animal production. According to the Oregon Employment Department, employment in crop production decreased about 13% in the last decade (2013). As discussed above, this suggests that the more numerous establishments are employing fewer people each, although we do not know the exact distribution of employment. The following section provides a more thorough description of farming and agriculture in the Mid-Willamette region.

Food and Agriculture Trends

In addition to data gathered from the Oregon Employment Department, the USDA's Census of Agriculture can help describe many important qualities of regional agriculture. This survey gathers data from agricultural producers every five years. At the time this report was written, the results of the 2012 Census had not yet been released, which meant that the most current data available was from 2007. The Census of Agriculture provides data on topics such as the regional acreage being farmed, the number of farms and their distribution among various size and income categories, and characteristics about the operators and organization of farms. Relevant data is summarized here with additional tables included in Appendix D.

Agriculture is a huge part of life in the Mid-Willamette Valley (Marion, Polk, and Yamhill Counties). Approximately 40% of the region's 1.7 million acres (2,656 square miles) was farmed in 2007. This represents a slight decrease from 2002 but is approximately the same as the concentration of farmland twenty years ago, in 1987. Not only does the concentration of farmland stand out in comparison with the state as a whole, the value of the land is comparatively high. After the large wheat farms just east of the Cascades, the Mid-Willamette Valley is home to some of the state's most valuable farm operations. Per acre of farmland, the average market value of land and buildings in the region is nearly five times the average across the state as a whole. In 2007, the average market value of land and buildings was $7,079 per acre in the tri-county region compared to just $1,890 per acre in Oregon. Comparing the three counties, Yamhill had the most valuable farmland per acre ($8,855) followed by Marion County ($6,908) and finally Polk County ($5,473) (Census of Agriculture 2013).

The region stands out in the state in sales of several products. The following trends showcase the quality of agriculture in the tri-county region compared to other areas of the state:

- Marion County is first in Oregon for **hog and pig sales**, valuing $1.6 million in 2007.
- Marion County is first and Yamhill County is fourth in Oregon for sales of **nursery, greenhouse, floriculture, and sod products**, totaling more than $364 million in 2007.
- Marion County is second and Yamhill County is third in Oregon for **poultry and egg** sales, totaling over $45 million in 2007.
- Marion County is second in Oregon for sales of cut **Christmas trees and woody crops**, valuing about $20.5 million in 2007.
- Marion County is third and Yamhill County is fifth in Oregon for sales of **fruit, tree nuts, and berries**, totaling more than $107 million in 2007.
- Yamhill County is third in Oregon for sales of **horses, ponies, mules, burros, and donkeys**, valuing about $1.5 million in 2007.
- Marion County is third and Yamhill County is sixth in Oregon for sales of **milk and other products from cows**, totaling more than $78 million in 2007.
- Marion County is fourth in Oregon for **vegetable** sales, valuing nearly $43 million in 2007.

(Census of Agriculture 2007)

As these trends reveal, the Mid-Willamette Valley produces a lot of crops that are not limited to food crops. For example, Marion County ranks in the top two counties in the state for production of nursery, greenhouse, floriculture, sod, Christmas trees, and woody crops. This is further emphasized by data gathered through the Oregon Agricultural Information Network (OAIN) at Oregon State University. The following table displays the top five commodities (in sales) in 2012 for each county in the study area.

TABLE 5: TOP 5 COMMODITIES IN 2012 (BY COUNTY)

	Commodity	Sales
Marion County	Nursery Crops	$134,700,000
	Dairy Products	$71,148,000
	Perennial Ryegrass	$44,352,000
	Chicken Eggs	$43,680,000
	Greenhouse Crops	$40,790,000
Polk County	Dairy Products	$28,400,400
	Tall Fescue	$22,609,950
	Christmas Trees	$14,142,240
	Broilers	$13,475,000
	Wheat	$11,070,400
Yamhill County	Nursery Crops	$82,158,000
	Wine Grapes	$28,594,000
	Tall Fescue	$24,117,280
	Dairy Products	$22,540,000
	Perennial Ryegrass	$12,712,000

Source: Oregon Agricultural Information Network

Although this report is about food systems and therefore focuses on food production, the importance of these nonfood crops should not be overlooked given their huge contribution to the regional economy. The significance of nursery crops in the region was felt in the late 2000s when sales declined with the

crash of the housing market. Interestingly then, food crops present an important opportunity for the region in that food production tends to be more stable as people continue to need food no matter the current economic climate.

In terms of farm size, the Census of Agriculture provides data on the average farm size, median farm size, and a distribution of farms into size categories. The average farm size in Oregon in 2007 was 425 acres. In comparison, it was 111 acres in the Mid-Willamette Valley region. Averages can be significantly influenced by a small number of outliers, which is why it is sometimes better to look at the median farm size, which tells us that 50% of farms are smaller and 50% are larger than the median. The region's median farm size is slightly smaller than Oregon as a whole. In both the state and the region, median farm size decreased from 2002 to 2007 (Census of Agriculture 2013).

When we look at the actual distribution of farms, we see that about 70% of farms in the Mid-Willamette Valley had less than 50 acres in 2007 and nearly 90% were less than 180 acres. Statewide, farms are skewed slightly higher on the scale, with nearly 20% larger than 180 acres. This is displayed in Table 5, below. Annual sales can also be an indicator of farm size. In the Mid-Willamette Valley, 45% of farms had less than $2,500 in annual sales in 2007 and 66% had sales of less than $10,000 (Census of Agriculture 2013).

TABLE 6: DISTRIBUTION OF FARMS BY SIZE IN ACRES (2007)

	Farms	1-9	10-49	50-179	180-499	500-999	1000+
Oregon	38,553	25%	37%	19%	9%	4%	7%
Mid-Willamette Valley	6,047	28%	42%	18%	6%	3%	2%

Source: USDA, 2007 Census of Agriculture

Clearly, the region is characterized by a larger presence of small farming operations than elsewhere in Oregon. A final statement about the size of farms in the Mid-Willamette Valley compared to Oregon as a whole is that the region contains 16% of the state's farms but only about 4% of total farmland. The smaller farm size in the region is important to keep in mind in discussions about the regional food system because small farms often have much different needs than larger operations. For example, they are less likely to have the staff and/or time to actively market products, they produce in smaller volumes, and they are less likely to be vertically integrated, often focusing almost entirely on production. All of these create unique challenges for developing the food system, but also can present opportunities for the region. Specific opportunities and barriers are discussed in more detail in the following chapters.

Four: Producer and Purchaser Surveys

The main source of primary data for this study was an online survey. The survey was distributed in mid-April 2013 to a list of producers, purchasers, and other regional food system contacts based on recommendations from the Mid-Willamette Valley Council of Governments, the City of Independence, and the Salem Mayor's Ag Forum. In two weeks, sixty-two individuals had started the survey, to various degrees of completion. Of those, thirty-nine completed the entire survey. Of course, despite the valuable insight provided by these respondents, this data, being from a relatively small number of respondents, is not necessarily representative of the opinions of all participants in the regional food system. The survey data provides a preliminary base of knowledge that can be used to spark further discussion through other means (such as key stakeholder interviews or focus groups) as part of continuing work on this project. The survey targeted producers and purchasers as the two segments of the food system that would be most directly impacted by a regional food hub, given that food hubs generally operate as a sort of middle man – providing services that assist growers post-production and that help purchasers access the products.

The first question in the survey asked respondents to identify as either a food producer or a food purchaser. I understand that this can be a difficult choice for some producers and purchasers who participate in both aspects of the food system. An example of this type of organization might be a restaurant or educational institution that purchases and sells food but also has a small garden in which to grow its own food supply. Another example is the producer who also processes some raw produce into value-added food products. Despite this potential difficulty, we asked participants to choose which segment they identified with *most closely*. This was necessary in order to direct respondents from each segment to a different set of questions that specifically addressed the issues and concerns commonly dealt with by that segment. For example, producers answered questions about production amounts whereas purchasers answered questions about weekly expenditures on food.

Some of the same questions were asked of each group. These included questions about location, experience with and interest in food hubs, barriers to buying and selling, and the existing strengths of the regional food system. Before I present the responses from the producer and purchaser surveys, I want to summarize the responses to the question about strengths. These really showcase the fact that, although there may be weaknesses and areas that need some work, the Mid-Willamette Valley food system already has an incredibly strong foundation.

Beginning with the producers, strengths of the existing food system generally fell into three categories: Community, Quality Inputs, and Demand.

Community: Words like support, community, network, dedicated, invest, and share came up many times throughout the producer responses about food system strength. Taken together, these comments all relate to a strong existing network of support, which is an essential ingredient in a strong food system. One respondent explained, "Growers here tend to be more supportive of each other than competitive with one another." Another echoed that regional farmers "network together and help each other sell their quality products." Yet another respondent said that the community "is willing to share knowledge," an opinion supported by what another calls "brilliant and active discussion" among

"dedicated people and organizations." Like this last respondent, many producers cited support not only from other producers but from "restaurants and wineries who invest dollars and time with local farms," "inter-industry networks," "supportive institutions," and "local governments."

Quality Inputs: Producers were eager to point out the exceptional work being done by their fellow growers in producing a wide variety of top quality food products. This category included words such as farmer, producer, grower, quality, crops, and diversity, all of which indicate a common sense that inputs to the food system are one of its major strengths. Many respondents discussed the "healthy food products," "superior quality of crops grown in the Valley," and the "diversity of crops." Others focused more on the farmers themselves explaining, "Many highly skilled and reputable growers farm here." Another attributed the strength to the "credibility and integrity on behalf of the producers."

Demand: The final key piece of a strong regional food system is demand. It is not enough to have great networks supporting quality products if no one wants them. This is obviously not the case in the Mid-Willamette Valley. Many producers mentioned key words like customer, demand, consumer, and trendy in their responses. While one respondent suggested that "it's trendy to eat local," another explained that the demand for local food is increasing, writing, "Consumer education, awareness, and demand is strong and growing. Desire to purchase remains strong – not a fad." Another producer indicated that significant demand exists "that has yet to be supplied in the market for many products."

Purchasers of local foods echoed these strengths. They emphasized not only the "freshness, quality, and unusual variety" of products, but the "talent and commitment of local farmers to work hard, persevere, and make a variety of food products available locally." Purchasers also noted that demand is strong. As one respondent explained, "Oregonians support purchasing local and may pay a higher price." Others mentioned the "dedicated customer group," "high consumer demand," and the "enthusiasm/support of many (but not most at this point) consumers for local food products." Purchasers also stressed the unique strength of the Mid-Willamette Valley in terms of "ecology," "long growing season," and "good climate and growing conditions," suggesting that, in addition to other strengths, the region has a natural advantage over other areas when it comes to producing local foods.

For the visually inclined, the figures on the following page display the most common words in combined producer and purchaser responses to questions about strengths (Figure 2) and barriers (Figure 3). The size of the word represents the number of times it came up in responses. This visual display of data provides a preliminary overview of the strengths and weaknesses of the existing food system and present opportunities to further develop the system.

FIGURE 2: FOOD SYSTEM STRENGTHS

FIGURE 3: BARRIERS TO PURCHASING OR SELLING MORE LOCAL FOOD

Taken together, these responses indicate that the main components of a strong, healthy, regional food system are thriving in the region. Further analysis of responses to questions about barriers may help us determine what actions can be taken to capitalize on the identified strengths. The following sections summarize responses to the producer and purchaser surveys.

Producer Survey

Of the 53 respondents that answered the first question, 28 (53%) identified themselves as food producers. Of those, 18 continued through the questions to complete the producer survey. Respondents were fairly evenly divided among the counties of the study region. Several producers have land in multiple counties and several identified counties outside the region, including Linn and Multnomah Counties.

Due in part to the unique versatility of the fertile Willamette Valley, a huge variety of food products are grown/produced in the region. The top two categories of food products grown by survey respondents are fruit and vegetables. As one survey respondent explained, when it comes to fresh produce, regional producers grow "just about everything." The wide variety of fresh fruit and vegetable crops are displayed in Figure 4 below. A similarity among most respondents growing fresh produce in the region is that they are highly diversified, growing more crops than are easily counted. In addition, many respondents indicated that they grow several different varieties, including heirlooms, within each type of produce.

FIGURE 4: CROPS PRODUCED IN THE MID-WILLAMETTE VALLEY

Apples, artichokes, arugula, beans (dry),beans (green), beets, blackberries, blueberries, broccoli, burdock, cabbage, carrots, cauliflower, celeriac, chard, cherries, chicory, chives, cucumbers, eggplant, endive, garlic, herbs, kale, kohlrabi, leeks, lettuce, mixed salad greens, mushrooms, musk melon, mustards, olives, onions, parsnips, peaches, pears, peas, peppers, plums, potatoes, pumpkins, radishes, raspberries, rhubarb, rutabagas, spinach, strawberries, summer squash, sweet corn, tomatillos, tomatoes, turnips, watermelon, wine grapes, winter squash, zucchini

In addition to fresh produce, regional producers also grow and sell a variety of meats including beef or veal, pork, lamb, poultry, and rabbit. Producers also sell eggs and both cow and goat dairy products. Other crops include dry beans and lentils, grains, nuts, and wild/native edibles.

Participants were asked about their experience as an agricultural producer. The largest share of responses fell between four and ten years of experience. On either end of the spectrum, one producer had less than one year of experience and six had more than twenty years. The distribution is displayed in Figure 5, on the following page. The fact that 25% of respondents had more than twenty years of experience suggests that these more experienced producers are interested in the project. Catching the interest of experienced producers is an asset to the project because they represent a collective base of knowledge that could be made available to new producers in the region.

FIGURE 5: MID-WILLAMETTE VALLEY PRODUCER EXPERIENCE

The survey also asked producers about the number of acres in production. As discussed in the previous chapter, the USDA found that 28% of regional farms were less than ten acres in 2007. This survey is skewed toward these smaller acreage producers, with nearly 42% (ten responses) of respondents reporting fewer than ten acres. About a third of all respondents (eight responses) indicated that they had 10-49 acres in production (a slightly smaller share than the 42% of regional producers in that size range reported by the USDA). The share of respondents in the 50-179 acre category is similar to the representation documented by the USDA, as is the share of respondents with 180-499 acres. No producers in the 500-999 category responded to this survey and two indicated they had 1,000 acres or more in production. Size distribution is displayed in the following table.

TABLE 7: TOTAL ACREAGE IN PRODUCTION

	#	%
0-9 acres	10	42%
10-49 acres	8	33%
50-179 acres	3	13%
180-499 acres	1	4%
500-999 acres	0	0%
1000 or more	2	8%
Total	**24**	**100%**

The results of this survey suggest that larger acreage goes hand-in-hand with more years of experience in the Mid-Willamette Valley. Of the six respondents with fifty or more acres in production, all had more than 20 years of experience. Most of those with less than fifty acres (84%) had between zero and ten years of experience.

The survey also asked about gross income. Of the twenty-two producers who responded to the survey question about gross farm income, four (18%) earned less than $10,000 in 2012, six (27%) earned

$10,000-$24,999, seven (32%) earned $25,000-$99,999, and five (23%) earned $100,000 or more. The responses ranged from $2,000 to more than $100,000, which was the maximum value on the survey. The survey revealed a major difference in the markets used for selling products. Only 30% of respondents earning less than $25,000 sold to wholesale or institutional markets whereas 82% of those earning more than $25,000 annually used these larger markets.

Speaking of markets, all but one respondent indicated that they sell products direct. This producer is a relatively large fruit operation with more than 450 acres spread across three counties. Of all respondents selling direct, 82% indicated that direct-to-consumer marketing accounted for more than half of their sales in 2012. Respondents were more evenly divided in selling to wholesale and institutional markets: 52% indicated that they currently use the markets. On average, about 39.5% of their sales are wholesale or institutional.

As the USDA explains, food hubs can help small and mid-sized producers access wholesale and institutional markets. I therefore wanted to gauge the interest of producers in increasing their participation in these markets. There was a different response from those currently participating in wholesale or institutional sales compared to those not currently participating. Of the respondents indicating that they currently participate in these larger markets, only 10% indicated that they would definitely increase participation if certain barriers were removed. On the other hand, of those not currently participating, 56% would increase participation. Interestingly, of those already participating, 70% indicated that they were “Not Sure” if they would increase their participation in wholesale and/or institutional markets. This indicates that these producers may not be enthusiastic about their current participation in these markets. The barriers indicated by these producers include volume (50% mentioned something about the volume demanded being too large), cost (40% said costs are higher or the price received is lower), and transportation (30% mentioned cost and distance involved in distribution).

Price and volume are also barriers to increasing participation in wholesale and/or institutional markets for those producers not yet involved in such markets. Nearly 63% cited the lower wholesale pricing as a significant barrier to getting into the market. One respondent explained, “I need premium prices to cover costs.” Another wrote, “Our price point is over what they can generally afford to pay, or are willing to pay.” In regard to volume, several respondents explained that they simply do not have the production capacity to satisfy wholesale or institutional markets.

Knowledge is a significant barrier unique to those not yet involved in wholesale or institutional markets. One respondent stated, “I don’t have the contacts to reach out to possible wholesale markets.” Another echoed that a “lack of knowledge of how to approach wholesalers or markets” was the primary barrier.

The survey also asked producers about their knowledge of and interest in regional food hubs. Participants were presented with the USDA’s working definition a regional food hub and asked whether they had heard the term ‘food hub’ before taking the survey. Of the twenty respondents to that question, sixteen (80%) had heard the term. The four that had not heard the term are located in Marion and Polk Counties. Three sell almost exclusively direct-to-consumer (95-100%) and one sells only to wholesale markets.

Only three respondents indicated that they currently use a food hub. They are using FoodHub and Eugene Local Foods. Both are online marketplaces that serve to connect buyers and sellers via the internet and provide a central pick-up location for orders. Of these three producers, one travels 0-25 miles to access the food hub services while the other two travel between 26-50 miles.

Regardless of whether they currently use a regional food hub, respondents were asked which potential services would be most helpful to their operation. Three main services received equal numbers of votes. These were marketing, aggregation and distribution, and processing (commercial kitchen, shared equipment, etc.). Runner-up services included meat and/or dairy processing and cold storage. Light processing (space for cleaning, chopping, and sorting of fresh produce) did not receive any interest from the producers. It may be interesting to follow up with producers in the region to determine whether they already have ample resources for light processing or if the service was just not as important as the others selected.

The survey questioned producers about the distance they would be willing or able to travel to use a food hub. Of the eighteen respondents who would be willing to travel some distance, 67% indicated that they could travel 26-50 miles to make use of food hub services.

Finally, the survey asked producers to respond to an open-ended question about how a regional food hub in the Mid-Willamette Valley might impact their business. Of the fifteen responses to this question, only two were decidedly negative toward the potential benefits of a regional food hub. One respondent stated that they have not seen a significant benefit from using FoodHub, but did not close the door on a food hub with a different structure.

Eighty percent of responses were positive about the potential impact of a regional food hub. These responses included expressions of interest as well as suggestions about the potential structure or function of the hub. Table 7 displays a sample of these responses.

TABLE 8: SURVEY RESPONSES ON HOW A FOOD HUB MAY IMPACT AGRICULTURAL PRODUCTION

A regional food hub in the Mid-Willamette Valley could …
Be a “vital” solution “for increasing access for consumers and institutions to locally produced food.”
Be a “valuable outlet for some of my products.”
“[H]elp us store or process much of the produce that now goes to waste.”
“[G]reatly impact my ability to produce quality product and reduce overhead cost of trying to diversify.”
“[P]rovide a solid incentive to expand.”
Be “helpful for connecting our farm to wholesale buyers. It would likely greatly reduce the time spent on figuring out how to move bulk product when needed.”

In short, of the producers who responded to the survey, most expressed interest in learning more about regional food hubs and expected that the development of a hub in the Mid-Willamette Valley would

positively impact their business. As discussed earlier in this summary of survey results, respondents represent a wide array of farm sizes (both physically and economically), experience, and agricultural products generated.

Purchaser Survey

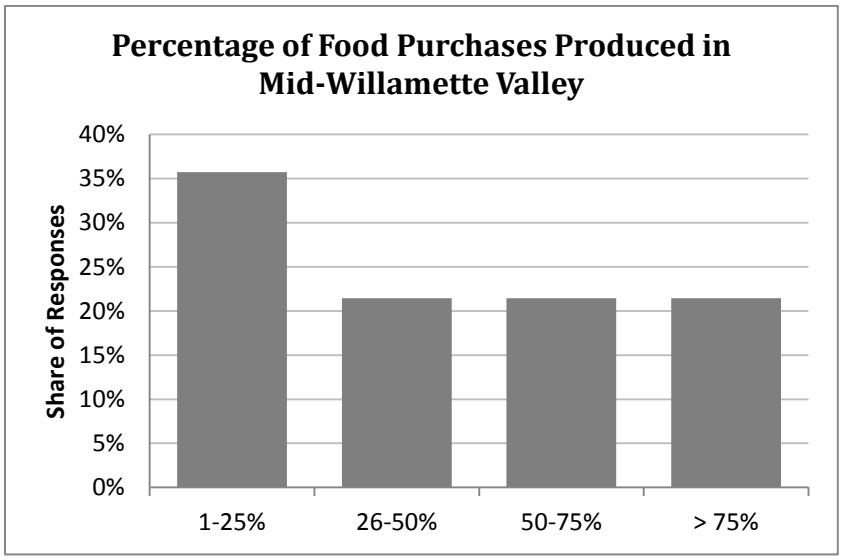
As mentioned above, 53 participants responded to a question asking them to identify as either a food producer or food purchaser. Of those, 26 identified themselves as purchasers and 17 went through to complete the survey. Those 17 respondents represent a variety of several different types of food purchaser, with several falling into more than one category. Seven respondents (41%) identified as retail purchasers and seven as restaurants. Six respondents (35%) identified as food processors, including a bakery and a nonprofit pie maker. Four respondents (24%) selected 'educational institution,' which includes school districts and colleges. Two respondents (12%) identified with other types of food purchaser: agritourism and consumer.

As in the producer survey, food purchasers were distributed across the tri-county region. Polk and Yamhill Counties each had six respondents while Marion County had five. Two respondents identified as being located outside of the study region in Multnomah and Washington Counties. Purchasers responded that their average weekly expenditure on food products ranges from $1,000 to $25,000. Of those that responded to the question about weekly expenditures, the average amount spent is just over $7,000 per week.

When discussing local food systems, it's important to understand that not everyone defines local in the same way. For the purpose of this study, I have defined local based on the parameters of the Mid-Willamette Valley Council of Governments' service area: Marion, Polk, and Yamhill Counties. Many questions in the survey specify that tri-county region as the basis of local. However, I wanted to know how others involved in the food system define the term. Purchasers responded to a question asking them to define the term 'local.' The top choices, each with 35% of the responses, were the three county Mid-Willamette Valley and Oregon. Options with a few responses included Northwestern Oregon, the Pacific Northwest, and one respondent who identifies local as a 250-mile radius around his/her location.

The next question asked survey respondents to think about the approximate percentage of their food purchases that were produced in the Mid-Willamette Valley. Responses ranged from zero to 85% and averaged at around 40%. The fourteen respondents who indicated that they purchase food products grown in the region were fairly evenly distributed in the share of locally grown food they purchase, as is displayed in Figure 6.

FIGURE 6: AMOUNT OF LOCAL FOODS PURCHASED



The fact that the largest response represents the smallest percentage of local foods suggests that there is an opportunity to increase the amount of local products purchased, especially by those on the lower end of the spectrum. If respondents were already all purchasing most of their food locally, there may be less of an opportunity to increase the amount given limitations on what can be grown and produced in the region.

Of course, demand is not based only on the number of people who could still buy more local products. It also requires a desire to do so. The survey asked respondents to indicate whether they would increase the amount of local foods they purchase if certain barriers were removed. Of all respondents, 76% would like to increase the amount of local food products they purchase. No respondents said they would not increase the amount, but 24% indicated that they were not sure. Of those who indicated that only up to 25% of their purchases are produced locally, five respondents (83%) stated that they want to increase that amount while one was not sure.

The next steps in capturing that existing demand are identifying and addressing the barriers that are stopping these purchasers from doing what they want to do, which is to purchase more local products. The survey asked purchasers to list the three most significant barriers to purchasing more local foods. When coding the open-ended responses, it was apparent that four significant barriers play a role in preventing purchasers from increasing the amount of locally-produced food products they buy. In order of significance, these are: Access and/or Distribution, Price, Availability, and Knowledge (both purchaser and consumer).

Access and Distribution: Of the twelve respondents who answered this question, eight (67%) indicated barriers related to access, distribution, or delivery. The responses ranged from the inconvenience of traveling to pick up local products to problems identifying local products from distributors. Most respondents expressed a need for a more efficient delivery system: they want to buy more local products, but don't have time to schedule pick-ups and drive long distances to get the products. One respondent explained, "most small producers don't deliver, which takes a

lot of time out of our week to procure these products, which contributes to the disincentive to use them at all."

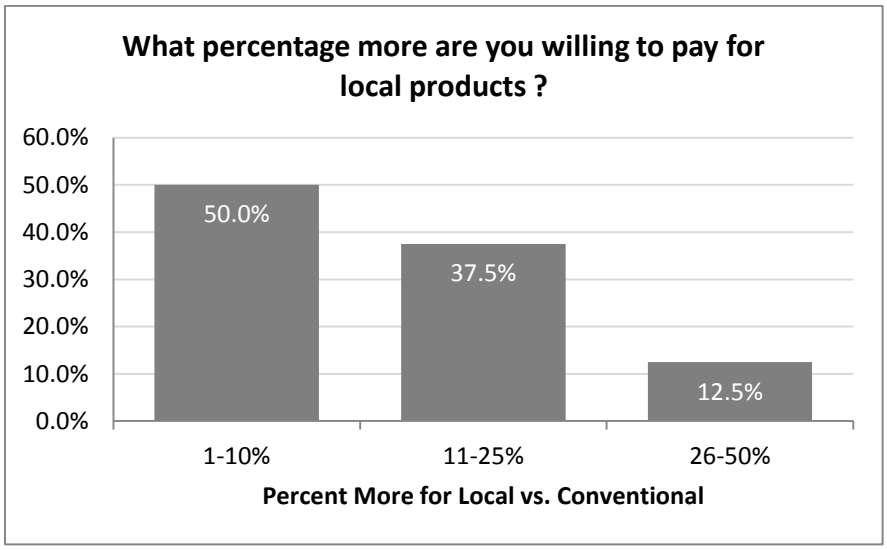
Price: Seven respondents (58%) indicated that price is a problem for them. This barrier needs little explanation, but one purchaser stated that the most significant price barrier is in purchasing "bulk commodity products i.e. baking potatoes, flours, grains, legumes." Another stated, "Most small farmers we know can sell all their products direct to the consumer for retail price and so there's little incentive to give us as a processor a wholesale price."

Availability: Of respondents, six (50%) stated that availability is a significant barrier to purchasing more local products. For most respondents, it seems to be a problem of seasonality – not all the products they need are produced locally year-round. A few respondents mentioned food safety regulations, especially for local meats, which make it difficult to find reasonably priced, locally processed products.

Knowledge: A handful of respondents (33%) listed barriers related to knowledge. While one respondent indicated that consumer ignorance of local products is a barrier, most explained that they themselves do not know what products are available locally and/or how to go about purchasing them. Two indicated that the research necessary to find local products is too time-consuming and one purchaser suggested that a "list of products available and cost of products" would be helpful.

Though the typically higher price of local food products is a significant barrier to purchasers wishing to buy more locally-grown foods, survey respondents indicated that they are still willing to pay a premium for local foods. When asked what percentage more they are willing to pay for locally produced foods than for conventional food products, all respondents said more than 0%. Of the sixteen who answered the question, the majority would pay up to 25% more for local products. Only two would pay between 26-50% more and none would pay more than that. Figure 7 displays the distribution of responses.

FIGURE 7: PREMIUM PURCHASERS ARE WILLING TO PAY FOR LOCAL



As in the producer survey, I wanted to find out if these purchasers have heard about food hubs and whether they currently use a regional food hub. Of those responding to the question, slightly more than 75% had heard the term food hub prior to taking the survey. Of those, only four (31%) are currently using a food hub. Generally, respondents indicated that these are located in and around the Portland metro area and they travel up to 100 miles to access the food hub services. Two purchasers responded positively about the increased awareness of local farmers and products that the hub has provided.

Whether or not they currently use a food hub, the survey asked purchasers to respond to an open-ended question about how a food hub located in the Mid-Willamette Valley might impact their businesses. Of the twelve responses, most were positive and expressed interest in learning more about food hubs and/or helping to get a regional hub off the ground. Four respondents discussed the potential that a regional hub could help with distribution issues. As one purchaser explained, "A better local distribution system would make [winter greens] available to me even if my primary farm sources are out of product." Others stated that a regional food hub would "help with distribution, generally," "make things easier to get," and provide "better access to local ingredients."

Respondents also discussed a variety of ideas linked to local food networks and the local economy. One explained that it "would enable me to interact with farmers more." Another suggested that it would provide jobs and "encourage new businesses to start up in rural towns that might be too cost prohibitive otherwise." Another stated that a regional food hub would help keep "the money within the farming community." On a similar note, one respondent explained that a hub would enable them "to direct more of our resources into the local economy."

Asked about the services of a regional food hub that would be most helpful, 40% of respondents selected "aggregation and distribution," followed by "processing (commercial kitchen, shared equipment, etc.)" at 27%, and "light processing (cleaning, chopping, sorting, etc.) at 20%.

In conclusion, both producers and purchasers of local food expressed interest in a regional food hub for the Mid-Willamette Valley. They described tangible barriers to both selling and buying larger amounts of local food products. These barriers need to be the focus of future efforts to strengthen or further develop the regional food system. The following chapter discusses some of the ways a regional food hub may be able to help with that effort.

Five: Developing a Regional Food Hub

The analysis of both secondary and primary data, presented in the previous two chapters, is just the start of a conversation about the feasibility of developing a regional food hub in the Mid-Willamette Valley. Understanding the current state of the regional food system is fundamental in determining whether enough supply and demand exist in the system (and whether they are balanced) to make a food hub successful. In addition, primary data analysis through the producer and purchaser surveys helps to shed light on potential barriers to further development of the food system as they are perceived by the key players in that system. The surveys also introduced the concept of a regional food hub and sought information about what services of a potential hub would be most useful to the region's producers and purchasers. This information is necessary when making decisions about the function a Mid-Willamette Valley food hub would play in the regional food system.

This final chapter pulls from the data that was presented in the previous two chapters to answer the preliminary questions involved in developing a regional food hub. The chapter begins with an analysis of existing opportunities and barriers in areas such as infrastructure, supply, and demand, which will help to address the question of whether a food hub is feasible in the region. This is followed by a discussion of some of the main decisions that will need to be made in the beginning stages of development.

Opportunities & Barriers

The USDA, through years of research, provides an overview of the primary conditions (of the community, of the location, and of the existing food system) that must exist if a regional food hub has any chance of being successful. The two biggest needs are existing infrastructure and unmet demand for regionally-grown products. The following sections address the opportunities and barriers that exist within the region in relation to these conditions.

Infrastructure

The western portions of Polk and Yamhill Counties are dominated by the Coast Range, the mountains responsible for the rain shadow effect and stable climate in the Willamette Valley. Similarly, the easternmost arm of Marion County traverses the Cascade Mountains. Farming and urban development are concentrated in the fertile, relatively low-lying area between the ranges. As previously noted, the Mid-Willamette Valley is located along Interstate Highway 5, a major north-south transportation route in the western United States. The interstate passes through Salem, the largest city in the region. Within the tri-county region, Highway 99W traces a north-south route just west of I-5. All five of the most populated cities in the region are located along one of these transit corridors suggesting ease of access for transportation of food products around the region.

Other infrastructure required for the development of a successful regional food hub will likely include access to electricity, water, and, depending on the operating model, high speed internet. Water and power are basic to the operation of any sort of facility, but become even more important if the hub will provide refrigerated or frozen storage or any kind of processing or packaging of products. If the hub will involve an online component, internet access in the region will be especially important for linking producers and purchasers. Internet access is important to note because, as will be discussed below,

some successful food hubs began entirely online. Some transitioned into physical marketplaces, completely ditching the online component, while others operate both physical and virtual markets, and others remain entirely online.

In addition to physical infrastructure, developing a successful food hub requires a level of 'social' infrastructure. This includes general awareness of the high quality food products being grown locally, and supportive community organizations, local governments, and policies. In their resource guide for regional food hubs, the USDA points out that in order to reach their full potential, food hubs must "engage and leverage resources with a wide range of community stakeholders" (Barham et al. 2012, 28). As discussed in the previous chapter, producers who responded to the survey indicated a high level of knowledge-sharing and a sense of community among regional growers. They discussed the fact that regional institutions, customers, and purchasers tend to be very supportive of local foods. However, responses from food purchasers showed that many feel they lack the knowledge of local production that would enable them to more fully participate in the local food system.

Just as with physical infrastructure, the key to successful social infrastructure is the connection of different parts of the system. A good question to ask is not just whether there are existing support organizations, but are there partnerships and linkages between these organizations. In other words, are all of the players working together? In the Mid-Willamette Valley, there exist a handful of groups and organizations with interest in the regional food system. They include, but are not limited to: the Mid-Willamette Valley Council of Governments, the Salem Mayor's Ag Forum, Nourish Yamhill Valley, Yamhill County Food Share, Marion-Polk Food Share, as well as various institutions, restaurants, retailers, and local government entities. While researching for this report, I found that a number of the organizations are working on food system projects with limited coordination. Improving the networks between the agencies and organizations working on food related projects could streamline efforts into a more focused approach.

In 2011, a target industry analysis completed for the City of Salem identified the creation of a food policy council as an approach to strengthening the local food system. The purpose of a food policy council is to bring together stakeholders from across the food system to engage in activities that respond to local food-related issues and concerns. An example is the Lane County Food Policy Council, which, according to the organization's website, aims to "foster community food security and local food system development in Lane County" (Lane County Food Policy Council 2013). Food policy councils help develop and advocate for food and farm policies that address the needs of the whole food system. They can be instrumental in establishing and maintaining the partnerships and relationships that help local food initiatives succeed (WhyHunger 2010).

The region has yet to develop a food-focused coalition or food policy council (Courtney Knox Busch, email message to author, April 25, 2013). However, interested parties could take a cue from the nearby Portland-Multnomah Food Policy Council. The Council was formed as an advisory council to the City of Portland and Multnomah County. Membership consists of a chair person and twenty community representatives who work with professionals at the city and county level to address food-related issues and policies. The existing interest from the City of Salem, among other cities, and the Mid-Willamette Valley Council of Governments, as demonstrated by their involvement in recent food system projects,

suggests an opportunity to develop a similar working group in the Mid-Willamette region. Such a group could provide the leadership and expertise necessary to address a broad range of food system issues.

Supply

Due to high quality agricultural soils and a stable climate, the Willamette Valley is home to valuable, highly productive farmland. Across the state, only six counties have higher average value of farm land and buildings per acre than the tri-county region.[3] As discussed in Chapter Two, nearly 40% of the region's land area is farmed. The tri-county region contains 16% of Oregon's farms (6,047), which is surprising since the region makes up only 3% of the state's total land area. In comparison to other areas of the state and country, high productivity and the wide array of products grown mean the region is uniquely situated to feed itself year-round.

Surveys of regional food producers reveal that they are already highly successful selling products to regional markets, especially direct-to-consumer (or farm direct), including farmers' markets, community supported agriculture, farm stands, and on-farm sales. According to the Oregon Farmers' Market Association, the state ranks 15th in the nation for number of farmers' markets, 2nd in farm direct sales per customer, and 5th for total farm direct sales (2013). Producers surveyed as part of this study indicated they are selling a wide variety of agricultural products. Of 24 producers surveyed, 96% indicated that they currently sell direct-to-consumer. Of those surveyed, about one-third would like to increase their participation in larger markets by selling to institutional or wholesale buyers but that several barriers get in the way. Several of these producers suggested they would be willing to scale up production to meet demand, or focus more energy on specific unusual varieties, if barriers were removed.

In addition to concentration of agricultural production, the region is home to an existing food processing industry cluster. As previously discussed, the region has seen growth in this industry over the last decade. A report completed by the University of Oregon Community Planning Workshop in 2011 indicated that Salem has an opportunity to increase small niche food companies. Given the expanding food processing infrastructure, the report refers to the city as "an entrepreneurial food hub" (Becker et al. 2011). Analysis of food processing trends in Polk and Yamhill Counties suggests that this statement could be expanded to refer to the entire region. Not only does a thriving food processing cluster supply the region with locally processed goods, it also provides a market for local producers. In fact, survey respondents identifying with food processing indicated that they currently buy locally-grown products and would increase the amount if a few barriers, such as cost and supply of specific products needed, were removed.

This information suggests that the region is home to a vibrant food production and processing culture with well-established physical infrastructure. The region also seems poised to take the next step in forming the virtual linkages among food-related organizations and stakeholders that will support further strengthening of the regional food system. However, infrastructure and supply are only half of the equation.

[3] Mid-Willamette Valley average value per acre was $7,078 according to the 2007 Census of Agriculture.

Demand

Demand, especially as yet unmet demand, balances out the system, ensuring stable, consistent markets for regionally-grown products. Demand for locally-grown food continues to increase according to national data collection companies. Nationally, the number of farmers' markets grew nearly by nearly ten percent just between 2011 and 2012 (U.S. Dept. of Agriculture 2012). Oregon is home to more than 160 farmers' markets (Oregon Farmers' Market Association 2013).

There are several ways to look at demand for regionally-produced food. First, there is the demand from individual residents and households in the region. These are people who buy or want to buy foods identified as local when they go to the grocery store, market, or restaurant. This consumer demand puts pressure on stores and restaurants to purchase and sell local foods. Therefore, in addition to the direct consumer demand for local food, there is also demand from businesses and institutions that want to buy local food to market to individual consumers. Some of these organizations buy locally produced food and market it as such because their consumers demand it. Others act in a way more like the consumers themselves, buying local foods to support community farmers, the local economy, and the environment. In this way, we see that consumer demand leads larger buyers to purchase more local food and, at the same time, these buyers increase consumer demand by purchasing and marketing local foods. One does not necessarily come before the other, although resale outlets are more likely to purchase local foods if their consumers demand it.

According to the Consumer Expenditure Survey, which is collected for the Bureau of Labor Statistics by the Census Bureau, American consumers spend only about 10% of our before-tax income on food, including food to eat at home and food eaten away from home (U.S. Bureau of Labor Statistics 2013). Of that total, about 6% is spent purchasing food to eat at home. This includes everything from fresh fruits and vegetables, to meats and dairy, to processed fats, snacks, and non-alcoholic beverages.

Although expenditure data is not available at the local level, we can extrapolate the amount spent by Mid-Willamette Valley consumers by taking a percentage of the regional median household income. Because the Consumer Expenditure Survey uses "consumer unit" as its basis for calculation, which is defined slightly differently from the Census Bureau's use of "household," the use of median household income is not a perfect comparison.[4] Assuming consumers in the region spend the same fraction of their income on food as does the average consumer nationally, this translates to roughly $5,124 average annual household expenditure on food in the Mid-Willamette Valley region, with just over $3,000 of that spent on food to eat and/or prepare at home.[5] Multiplying the average annual household food expenditure by the number of households in the region gives us a total of over $895 million spent on food in the tri-county region annually. The calculation method combined with other research suggests

[4] The Consumer Expenditure Survey defines a consumer unit as either "(1) all members of a particular household who are related by blood, marriage, adoption, or other legal arrangements; (2) a person living alone or sharing a household with others or living as a roomer in a private home or lodging house or in permanent living quarters in a hotel or motel, but who is financially independent; or (3) two or more persons living together who use their income to make joint expenditure decisions." (See http://www.bls.gov/cex/csxgloss.htm). Comparatively, the Census Bureau's definition of a household "consists of all people who occupy a housing unit regardless of relationship. A household may consist of a person living alone or multiple unrelated individuals or families living together." (See http://www.census.gov/hhes/www/income/about/faqs.html).

[5] These numbers are based on regional 2011 Median Household Income as reported by the Census Bureau.

that this is an underestimate.[6] If all households shifted just 10% of their food dollars to regionally-produced items, nearly $90 million would be made available in the local economy every year. That's about $10 per household per week, a small fraction of the money consumers are already spending on food. Making this shift supports regional farmers and food processors and helps grow the regional economy.

In 2012, Nourish Yahmhill Valley, a nonprofit organization focused on improving food security and access to healthy foods in Yamhill County, conducted a survey of nearly 700 consumers in the county. More than 40% of the surveys were collected at food banks and food pantries, so the results are skewed toward a low-income population. Nevertheless, the survey provides valuable insight into local food habits and desires. Of those surveyed, almost 70% indicated that they already buy local foods. For most respondents, the main barrier to purchasing local food was cost – fresh local foods were too expensive to be accessible to all residents (Nourish Yamhill Valley 2013). Being solely focused on Yamhill County, these results do not speak for the entire tri-county region, but give us a picture of the current demand for local foods and suggest some of the barriers to increasing sales.

Surveys collected for this study also provide some insight into regional demand for local foods. As discussed in the previous chapter, regional food purchasers were surveyed about the amount of regionally-grown foods they currently purchase, whether they want to purchase more, and what barriers prevented them from doing so. It was clear from the survey responses that demand exists for regionally-grown foods. It was also clear that there is demand that is not currently being met. Of those surveyed, more than three-quarters of food purchasers indicated that they would buy more local foods if certain barriers were removed. Higher cost is a significant barrier to purchasing more local foods, a concern shared with individual consumers. For food businesses and institutions, barriers also include distribution and finding specific food products during off seasons.

The table on the following page summarizes some of the key findings from this section and prior chapters in relation to the strengths and barriers to further developing the regional food system. Again, it is important to note that the identified barriers represent opportunities for future efforts, such as a food hub, to help fill some of the gaps in the existing food system and start addressing some of the identified problems.

[6] Calculated by multiplying average annual household expenditure by number of households. This is conservative because the Consumer Expenditure Survey expresses expenditures per "consumer units" which do not necessarily equate with households and seem to be smaller on average. Indeed, studies done for other regions in Oregon suggest that this figure is likely an underestimate.

TABLE 9: SUMMARY OF REGIONAL FOOD SYSTEM STRENGTHS AND BARRIERS

Strengths	The Mid-Willamette Valley is a desirable place to live, and will continue to draw migration for the next 40 years.
	The climate, soils, and land use protections make the region ideal for growing food.
	The region is already producing a large amount of food, even relative to the rest of the state.
	The region is home to an existing food processing cluster.
	The region is home to a dedicated community of producers who support rather than compete with each other.
	Demand for locally produced food is on the upswing both nationally and in the region.
	The region has a handful of interested, supportive organizations already working with food-related issues.
Barriers	Local producers have a hard time accessing larger markets like institutions because these markets usually demand larger volumes that individual farms can produce.
	Both producers and purchasers struggle with distribution of local food products.
	Knowledge is an issue on both ends of the food chain with producers unsure how to access larger markets and purchasers uncertain what products are grown locally and how to access them.
	The products demanded by regional businesses and institutions are not always available year-round or are not grown locally at all.
	Retail and institutional markets require a lower price than producers are used to getting through direct-to-consumer channels.
	Existing food-related organizations and agencies are not coordinating their efforts toward a common goal and the region lacks a food systems umbrella group such as a food policy council.

The key to addressing unmet demand, which surveys suggest exists among both consumers and food businesses and institutions, is tackling some of the barriers that are currently holding people and businesses back. The remaining sections of this chapter address some of the decisions that need to be made about a potential food hub, including the services it will provide, which can be tailored to meet the needs of regional consumers and food purchasers as well as producers seeking to access larger markets.

Key Decisions about the Food Hub

The USDA classifies food hubs in two ways. First, regional food hubs can be categorized based on the primary market that they serve. This report relies on the categories described by the USDA, which are (1) Farm-to-Consumer, (2) Farm-to-Business/Institution, and (3) a hybrid of the first two. These are described in further detail in the Target Market section below. Another way to classify regional food hubs is by the legal structure of the organization. The USDA identifies several different legal structures

of existing food hubs. These include: "nonprofit organizations (which often develop out of community-based initiatives), privately held food hubs (a limited liability corporation or other corporate structure), cooperatives (owned either by producers and/or consumers), and publicly held food hubs (often the case where a city-owned public market or farmers market is carrying out food hub activities)" (Barham et al. 2012). Based on a working list of 168 existing food hubs in December 2011, the USDA categorized them in Figure 8, below.

FIGURE 8: TYPES OF REGIONAL FOOD HUBS (AS OF 12/2011)

Food Hub Legal Status	Number	Precentage
Privately held	67	40%
Nonprofit	54	32%
Cooperative	36	21%
Publicly held	8	5%
Informal	3	2%

Market Model	Number	Precentage
Farm to business/institution (F2B)	70	42%
Farm to consumer (F2C)	60	36%
Hybrid (both F2B and F2C)	38	22%

Source: USDA, *Regional Food Hub Resource Guide* (2012), p. 8

Examples as well as more detail about these different types are provided below. For further information about either method of classifying regional food hubs, the reader should consult the USDA's Regional Food Hub Resource Guide.

Target Market

Service Area – The first decision about target market is the size of the service area within which the food hub will buy and sell food products and provide related services. The size of the service area for a regional food hub is dependent on two main factors: (1) the intended capacity of the facility, and (2) the volume of production in the region. In a highly productive

agricultural setting like the Mid-Willamette Valley, a smaller service area may require the same capacity that would serve a larger area in a less-productive region. Because the service area for this project has been identified as the three counties that comprise the Mid-Willamette Valley, it may be more helpful to determine the capacity of existing warehouse facilities or the size of appropriately zoned lots on which a food hub facility could be developed. The targeted service area could then be determined based on the capacity of selected sites.

Another way of deciding the appropriate service area and facility capacity is to look at existing food hubs around the country. There are no generally accepted guidelines for successful service area size because so many variables are in play. However, examples provide a little more insight into what has worked in other areas. As previously discussed, the Mid-Willamette Valley is a tri-county region comprising Marion, Polk, and Yamhill Counties. The region contains over 2,600 square miles, about 40% of which is farmland. For every three acres of unfarmed land in the region, there are two acres of farmland. In addition to developed urban land, a large portion of the unfarmed land in the region is forestland.

The Willamette Valley is unique in the Pacific Northwest for its concentration of farms. The City of Springfield is located just south of the study region in the Willamette Valley. There, Sprout!, a regional food hub, gives preference to food businesses located in a five county region, including Lane, Linn, Benton, Douglas, and Marion (NEDCO 2013). In specific crops, the Willamette Valley is comparable to Washington's Mid-Columbia region in acres of vegetables harvested for sale. There, a food hub located in Richland sources most of its food products from farmers within a 150-mile radius (Northwest Regional Food Hub 2013).

Farm-to-Consumer Model – Similar to existing direct-to-consumer markets, this model focuses on selling products directly to individual consumers. The difference is that the food hub takes on the responsibility of aggregating, marketing, and distributing food products from a number of producers. Examples of this model are food hubs that function as year-round farmers' markets (either physical or online) and multi-farm CSAs in which products from several producers are aggregated and distributed to shareholders.

Farm-to-Business/Institution Model – Another option is to market exclusively to food businesses and institutions. This model focuses on expanding the opportunities for regional producers to aggregate supply in order to jointly provide the volume demanded by these larger outlets, which they may not be able to do individually. Improving the ability of regional producers to access wholesale and institutional markets can complement a strong existing direct-to-consumer market. The Common Market in Philadelphia, PA markets to institutions including school districts, universities, hospitals, food cooperatives, and restaurants. Most of the market's more than 70 producers are located within a 90-mile radius of Philadelphia (Matson et al. 2013).

Hybrid Model – As the title suggests, a this model is a hybrid of the previous two, marketing to both consumers and businesses/institutions. The Central New York Regional Market is

representative of a hybrid approach in that it markets to both wholesale buyers and the public (through an indoor farmers' market). Another example is the Intervale Food Hub in Vermont, which sells wholesale to local restaurants and institutions while also selling directly to consumers through a CSA (Matson et al. 2013).

Legal Structure

Legal structure determines how the food hub operates. It sets up the mechanisms for management and decision-making, allows the organization to seek capital, and delineates how the organization interacts with those outside the hub including the community of customers (Matson et al. 2013). Legal structure is one of the first decisions that must be made when developing a business plan for a new food hub because management plays an important role in the success of the venture. The USDA identified several common business structures of existing food hubs. From a working list of 168 food hubs nationally, 40 percent are privately held businesses. The second most common structure is the nonprofit, which represents 32 percent of existing food hubs and includes producer-owned cooperatives. For-profit cooperatives comprise 21 percent of existing food hubs. Other organizational structures such as publicly held and loosely organized food hubs are much less common, representing only a combined 7 percent of existing organizations (Barham et al. 2012).

Many feasibility studies have been written for new food hubs across the country in which legal structure has been discussed at length. A 2012 report from Illinois provides a quality description of several of the legal structure options. The report discusses the relative advantages and specific considerations of cooperatives, nonprofits, for-profit entities, and public-private partnerships. As the Illinois study points out, there is no single best structure for a developing food hub. Rather, the report explains, the decision should be based on input from local "legal counsel, grower needs, community culture, existing leadership, and financing options" (Lindsey 2012). The options for legal structure of a food hub are discussed below.

Cooperative – There are several models of existing cooperative-type food hubs. Cooperatives are owned and operated by a group of similar members. Membership/Ownership may consist of agricultural producers, retailers, or consumers. The USDA and the Illinois study explain that the cooperative structure has several advantages for a developing food hub. Successful food hubs require the investment and support of the community, especially the producer/grower community. "Cooperative models inherently lead to stronger grower support, given that growers are investors and profit sharers in the business, and have equal voice in decision making" (Lindsey 2012). Considerations include potential legal regulations on cooperatives, the slow democratic decision-making process, and the fact that key decisions will be made by the group and not by specialists.

The Western Montana Growers Cooperative is a coalition of producers that provides wholesale marketing and distribution services for members from several counties in western Montana. As of 2009, the cooperative had 30 producer-members (Western Montana Growers Cooperative 2013). Producers deliver goods to a centrally-located warehouse at which products are aggregated and then delivered to customers several times per week. Another example is the Oklahoma Food Cooperative (OFC), which is both producer- and consumer-owned. The cooperative sources and distributes food

products in a 160-mile radius around Oklahoma City. With more than 125 producer-members, the OFC chose a cooperative structure to "spread equity and create buy-in from its members" (Matson et al. 2013, 16). Throughout its resources, the USDA provides descriptions of many other successful cooperative food hubs.

Nonprofit – Of more than 160 food hubs across the country, the USDA reports that about 32% are structured as nonprofit organizations (Barham et al. 2012, 8). The USDA points out that nonprofit-type food hubs often grow out of community initiatives of community-based organizations. Generally, nonprofit food hubs focus on advancing a social, environmental, or development mission. For example, the mission may be to "promote community involvement and sustainable living," or "to promote healthy community through a vibrant local food economy," or to promote "a more ecologically and socially just food system that supports greater community wellness, public health, and the local economy."[7]

Considerations for nonprofits also include legal regulations involved in applying for nonprofit status. Nonprofits take more time to set up than a for-profit entity in that they must be guided by a board of directors and file articles of incorporation. The Illinois study also points out, "Producers and partners may not feel that a mission-based nonprofit has the business acumen and produce industry knowledge needed to successfully run their business" (Lindsey 2012, 25).

Advantages of the nonprofit structure include "greater access to grant programs and donations than privately held food hubs," tax benefits, and the benefit of reinvesting profits into the organization's mission (Barham et al. 2012, 8). However, nonprofits have a harder time securing business loans.

In their 2012 report about the role of food hubs in marketing, the USDA points out that food hubs that begin as nonprofits may outgrow this legal structure, "especially when it becomes necessary to manage the complexities of contractual arrangements with third-party providers outside the hub's membership" (Matson et al. 2013, 13). This is especially true for hubs that begin as projects out of a community organization. The USDA provides several examples of food hubs that have successfully evolved from nonprofit organizations to privately-held businesses.

For-Profit – The purpose of a for-profit organization is to generate profit for stakeholders. The several options for for-profit organization include sole proprietorship (in which the business is owned and operated by an individual), corporation (shareholders own the business and elect a board to govern), and partnerships (two or more people co-own and are personally liable for the business).

Unlike nonprofits, for-profit businesses usually cannot access grant funding from public and private entities. On the other hand, however, they are much more likely to attract private investors who can help fund start-up costs. Because the organization's purpose

[7] Samples of existing mission statements from the Northwest Regional Food Hub in Richland, WA, Sprout! in Springfield, OR, and Central Oregon Locavore in Bend, OR.

is to generate profit, business owners can pursue strategies that increase profit margins for all of those involved, including producers.

Public-Private Partnership – In many rural areas, agriculture is the foundation of the local economy. There is therefore often interest from public agencies in investing in the agricultural sector to increase production, access to markets, and ultimately sales. Some of the advantages are that public entities can provide funding to help with start-up costs and can facilitate the selection and procurement of a facility and/or site. The public entity obviously must be invested in developing the local food system.

Sprout!, the food hub in Springfield, OR, got off the ground with help from the local government. According to the hub, the city provided "donated space for the market, security, water, power, and restroom facilities and continues to support the market in several ways" (NEDCO 2013b, 3).

In January 2011, the National Food Hub Collaboration (NFHC) conducted a survey of existing food hubs across the country. The purpose of the survey was to gather information on various characteristics of successful food hubs including their location, target market, legal structure, age, and annual sales, among other items. Figure 9, on the following page, is a summary of findings from a series of follow-up interviews conducted by the NFHC with twenty individual food hubs across the country. The information is categorized based on the hub's identified economic viability at the time of the interview.

FIGURE 9: CHARACTERISTICS OF ECONOMICALLY VIABLE FOOD HUBS

	Currenty viable	Not yet viable
Region	• 4 hubs in the Midwest • 2 hubs in the South • 2 hubs in the Northwest • 2 hubs in the West	• 5 hubs in the Northeast • 3 hubs in the Midwest • 1 hub in the Southwest • 1 hub in the West
Legal structure	• 4 hubs are LLCs* • 3 hubs are nonprofit • 2 hubs are cooperatives • 1 hub is a C corporation	• 4 hubs are nonprofit • 3 hubs are LLCs • 2 hubs are cooperatives • 1 hub is S corporation
Age of hub	• Median: 9.5 years • Mean: 13.4 years • Range: 34 • 8 of 10 hubs are at least 5 years old	• Median: 5 years • Mean: 7.1 years • Range: 23 • 6 of 10 hubs are at least 5 years old
Annual gross sales	• Median: $6 million • Mean: $12.6 million • Range: $1 million to $40 million	• Median: $500,000 • Mean: $950,000 • Range: $102,000 to $5.5 million

* Limited liability company

Source: USDA, *Regional Food Hub Resource Guide* (2012), p. 75

Operating Model & Services Provided

Yet another way to differentiate between food hubs is by the services they provide. Typically, food hubs play the role of the 'missing middle' between local producers and local consumers. Hubs actively source local products and seek out new markets for them. The most common services associated with regional food hubs are aggregation (collecting products from a variety of sources in one location for distribution), marketing (the process of actively securing new markets and customers), and distribution. On the subject of aggregation and distribution, the question sometimes arises: How are food hubs different from a traditional wholesale distribution company? According to the USDA, the difference lies in the effort of a regional food hub organization to achieve triple-bottom line (economic, social, and environmental) impacts through accessory services provided to producers, buyers, and to the wider community (Barham 2012). Other services provided by food hubs differ widely but include cold storage of food products (especially true where hubs strive to provide local products year-round), packing, processing (from full shared kitchens, to washing and chopping, to meat butchering), business development, and technical assistance. Hubs may also provide beneficial community services such as donating food to food bank organizations and generally raising awareness of local, healthy food options through coordinated educational activities (Barham 2012).

Food hubs that grow out of community organizations, especially those with an economic development focus, may be combined with what is often called a food incubator, which provides support for burgeoning food businesses. For example, Sprout! hosts its year-round indoor/outdoor farmers' market in a facility that includes a large certified commercial kitchen. The hub's parent organization, the Neighborhood Economic Development Corporation (NEDCO), also provides incubator services for food businesses. The Northwest Regional Food Hub in Richland, Washington also provides a commercial kitchen, allowing small producers and processors to share the overhead cost of getting a processing facility certified.

Surveys distributed to regional producers and purchasers asked "Which potential function of a food hub would be most helpful to your business?" The producers who responded to that question were evenly split between three potentially helpful services: aggregation and distribution, marketing, and processing. Despite this divide, responses to earlier questions about the barriers to accessing larger markets indicate that aggregation and distribution are probably the most helpful services a new food hub could provide. Several respondents mentioned distribution-related barriers such as "distance of delivery," "distribution costs," and "transportation."

Aggregation-related barriers also came up several times in survey responses. Small producers explained that they simply cannot meet the volume of demand from larger markets on their own. Related responses included: "scale of demand vs. volume of product," "our small production level," "quantities needed," "production quantity," and "our own production ability."

Similarly, purchasers were asked about the barriers to buying more local foods. The number one barrier identified through this survey was related to access and delivery or distribution followed by cost and availability of particular products and volumes. One purchaser stated that there is a need for "more efficient distribution and transportation." Another explained, "Most small producers don't deliver, which takes a lot of time out of our week to procure [local] products [and] contributes to the disincentive to use them at all." Others pointed to needs such as "consistent volume," "reliability," and

knowledge of how and where to purchase local products. These responses point to high demand for improved aggregation and distribution of local foods as well as easily accessible information about what is available within the region. A food hub could not only facilitate the distribution of products from small producers, but could also take the lead on education and/or marketing efforts.

Facility & Location

Research done for a regional food hub in Southern Wisconsin found that "[t]he ideal facility is located close to a core group of committee grower-suppliers and near a major transportation route leading to a large customer base" (Dane County Planning and Development Department 2011, 34). In the Wisconsin study, the county planning department sent a request for information to local governments enquiring about existing available warehouse facilities meeting specific requirements based on intended services and capacity. These facilities can be mapped in relation to the location of interested growers and transportation routes. A similar approach could be taken in the Mid-Willamette Valley, potentially even mapping the production crops and volume of growers.

Through the online survey, producers in the region were asked about the distance they would be willing to travel to access a food hub facility. Of the twenty responses to that question, most (60%) indicated they would travel up to 50 miles to a food hub. Another 30% indicated that they either were unwilling or unable to travel to a food hub or could travel up to 25 miles. The remaining 10% would travel up to 100 miles to use a food hub. These responses suggest that a regional food hub in the Mid-Willamette Valley should locate within 50 miles of the producers it will target for supply of local foods. For reference, it is about 55 miles along roads from Stayton, in southern Marion County, to Yamhill, in north-central Yamhill County.

It is also important to keep competition in mind when selecting a location. As previously discussed, Sprout! is a regional food hub located just over sixty miles south of the study region. Sprout! is a relatively new hub and sources its products from a five-county region including Marion County. In addition, the Central Oregon Locavore food hub is located just over the Cascades in Bend. Depending on the selected location for a Mid-Willamette Valley hub, this could present competition for producers and customers located in eastern Marion County. Eat Oregon First, located just north of the study region in Hillsboro could also be potential competition. This hub focuses on meats, including seafood, and grains and flours, leaving a gap for a hub focused on produce. Ecotrust's FoodHub in Portland is less of a direct competitor since it is a virtual model serving a broad area including several states. However, like the more similar nearby hubs, the fact that these organizations are already operating could present a barrier for the Mid-Willamette Valley. On the other hand, given the level of production and demand in the area, as well as the number of survey respondents not currently using food hub services, there is likely room for an additional hub, located more centrally in the Mid-Willamette region.

Six: Conclusion & Recommendations

The purpose of the previous chapter was to bring together the data collected through existing literature and analysis of both secondary and primary sources, and relate it to the steps and decisions that go into developing a regional food hub. Many research findings were presented in the pages of this report. Given the many topics discussed, it is helpful to summarize key findings before wrapping up this report.

The research presented in this report was intended to answer a number of specific research questions related to the Mid-Willamette Valley regional food system and the feasibility of developing a regional food hub to support the system. The following questions were addressed in depth throughout the early chapters of this report.

- What is the current state of the region's food system?
- What are the barriers to further development of the regional food system?
- How do regional food hubs fit into local food systems and have they been effective in strengthening local food systems?

Chapter Five specifically focused on drawing together the findings from these questions to answer the last question: whether a regional food hub is a feasible strategy for addressing the needs of the Mid-Willamette Valley food system. The following key findings address all four of these research questions.

Chapter Three analyzed the current state of the regional food system through the use of existing data on population and agriculture trends. These trends were discussed in relation to existing infrastructure, supply, and demand at the beginning of this chapter. Some key findings from this portion of the study are presented below:

- Given the natural geology and climate as well as the volume and diversity of crops being produced, MWV is uniquely able to support itself with local foods year round.
- Existing literature, regional trends in agriculture and food processing, population projections, and survey responses from the region indicate that the demand for regionally-produced foods is growing and will continue to grow in years to come.
- According to regional producers and purchasers, the existing food system provides a strong foundation on which to continue building and strengthening networks. Existing strengths include high quality products and dedicated producers, consumer demand for local foods, and a supportive network or community of people, organizations, and institutions interested in the food system.
- Regional food purchasers are willing to pay a premium to purchase local foods, indicating that their customers will also pay more for local foods. However, purchasers buying in bulk often cannot afford to pay the full retail price that individual consumers might pay at a farmers' market, for example.

Barriers to further development of the regional food system were explored through the use of an online survey distributed to food producers and purchasers. Survey respondents pointed to specific barriers

and offered ideas for addressing some of them. These responses were presented in Chapter Four and discussed in more depth in this chapter. Key findings include:

- Most regional purchasers would like to increase the amount of local food products they purchase. Similarly, most producers would like to increase their participation in larger markets such as selling wholesale or marketing to institutions. However, both indicated significant barriers to doing so:
    - For regional producers, the most significant barriers to accessing larger markets are (1) the mismatch of large volume needed by these markets with the small volume produced, (2) the potentially lower price they receive from wholesalers, and (3) transportation or distribution to larger markets that might be far from the farm or dislike small, frequent deliveries.
    - For purchasers, the main barriers to buying more local foods are (1) difficult access to or distribution of source-identified local products, (2) the too-high price of local products from producers accustomed to selling direct-to-consumer at a higher price point, and (3) availability of specific products in large volumes.
    - Both producers and purchasers indicated that knowledge is also a significant barrier. While producers do not know how to access wholesale or institutional buyers, the purchasers often are not aware of the products that are available locally and where or how to buy them.

Existing literature published by the USDA, as well as by consultants on existing food hub projects around the country, provides insight into the role regional food hubs can play in local food systems. Applying this knowledge of food hubs to the above findings about the Mid-Willamette Valley, we begin to understand whether a food hub has a valuable role to play in the tri-county region. Key findings are summarized below:

- Research into the common functions of a regional food hub indicates that the development of a Mid-Willamette Valley hub may be a good strategy for addressing these barriers.
    - Food hubs are often involved in aggregation of products from small and mid-sized producers in order to meet the larger volumes needed by wholesale and institutional buyers.
    - Depending on the legal structure of the new food hub, it may not be necessary to significantly mark-up the prices of products sold, allowing producers to take home the full value of the products they sell. If the hub takes on the marketing and distribution so producers do not have to cover those costs, producers may be willing to sell products at a lower price point.
    - Regional food hubs often facilitate the delivery of food products to larger markets, or provide a central location for pick-ups. This makes it easier for wholesale and institutional buyers who need products in bulk and for whom small, frequent deliveries or pick-ups can be inconvenient.
    - Many food hubs take a leading role in their regional food systems, raising awareness of the quality products produced locally and providing services to help connect supply with

demand and vice versa. This is especially true of nonprofit food hubs that frequently have a broad, social, environmental, or economic development mission.

The above findings are a result of my analysis of the information gathered through all sources and methods used in this study. They suggest that a regional food hub would find a strong base in the Mid-Willamette Valley food system and could be developed to address specific needs identified by regional producers and purchasers. The findings, however, do not represent the end of the work that needs to be done to develop a successful food hub operation in the region. The following next steps are my recommendations for regional partners still interested in moving the project forward.

1. *Food System Workshop*: Next steps begin by bringing all of the players together to start a conversation about the strengths and weaknesses of the existing food system. This represents the first step toward building the social infrastructure that will support a regional food hub organization. Specifically, the workshop should include survey respondents and key stakeholders who have expressed interest in strengthening the food system. As of the writing of this report, a workshop was scheduled to take place in the City of Independence in June 2013. This is only a starting point from which interested parties can continue to build momentum.

2. *Stakeholder Committee*: The workshop may provide a good kickoff from which to facilitate the formation of a committee of interested stakeholders who will guide future efforts related to development of a regional food hub and the food system in general. The survey and workshop drew attention to the food system and a committee should seek to keep energy levels high by scheduling regular meetings to help strengthen networks and steer actions related to the regional food system. In addition to interested agricultural producers and purchasers, the stakeholder committee could help improve coordination among existing food-related organizations. A few of these were discussed in the previous chapter and include the Mid-Willamette Valley Council of Governments, the Salem Mayor's Ag Forum, Nourish Yamhill Valley, Yamhill County Food Share, Marion-Polk Food Share, local farmers' markets, the Oregon Food Bank, and Cascade Pacific Resource Conservation and Development. These organizations work on food-related projects linked to economic development, sustainability, community engagement, and food security.

   Engaging leadership from these and other organizations and improving the networks and information sharing between the agencies and organizations could streamline efforts into a more focused approach to improving the regional food system. As discussed earlier in this report, connecting existing efforts helps to build the social infrastructure and partnerships that will lead and/or support a potential food hub organization. The stakeholder committee may also become a platform for developing a regional food policy council, as discussed earlier in this report. As a committee, a council, or a loose network of related organizations, leaders from the existing food community can collaborate and share ideas for future education and engagement activities for both producers and purchasers, further strengthening the ties among the different segments of the food chain.

3. *Structure & Management*: If a regional food hub is pursued, stakeholders will need to determine the legal structure of the organization and the specific services that will be provided. The findings of this study provide a good starting place for identifying the key services desired by regional producers and purchasers. Stakeholders should also identify strong leadership to manage the business side of the organization.

4. *Market and Feasibility Analysis*: The final stages of analysis will require an economic cost-benefit analysis using the selected legal structure. This should include, among other things, the following considerations: start-up costs such as facility and equipment, employees, membership fees, delivery costs, product mark-up, ongoing operation costs, and potential grants and donations. Stakeholders should keep in mind that USDA studies show that it may take several years for a regional food hub to become economically viable and many continue to rely on grants and donations even a few years into operation.

In conclusion, the research performed for this study points to a number of very specific barriers standing between producers and purchasers wanting to grow the regional food system. Communities across the country have developed regional food hubs as a strategy that has proved effective in addressing some of these barriers. The services typically provided by a regional food hub match the specific needs of the Mid-Willamette Valley. In addition, the regional food system already has many of the qualities necessary for the success of a potential food hub. In sum, the findings presented in this report suggest that not only is the region well-situated to take the next steps in developing its food system, but that a regional food hub is an appropriate strategy for moving forward.

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Appendix A: Methods

The primary objective of this study is to determine the feasibility of developing a physical food hub facility in the Mid-Willamette Valley. As discussed earlier in the report, the project concept developed out of a series of studies conducted on behalf of regional economic development agencies and several meetings and discussions among food-focused agencies and organizations. As such, this study aims to provide practical recommendations about existing demand and potential next steps for the region. Secondary objectives of this study include analysis of the role food hubs play in strengthening local food systems, and identification of a framework that can be used to assess food hub feasibility in other communities. The purpose of this appendix is to describe the steps taken to collect and analyze data in order to answer the proposed research questions. This project employed a mixed-methodology approach, using both quantitative and qualitative analysis.

Quantitative Analysis of Secondary Data

To begin to analyze the regional economy and food system, I gathered secondary data from a wide variety of sources. These included government data collection agencies as well as reports previously prepared for the region. I consulted the following key sources:

- United States Census Bureau – Decennial Census, American Community Survey, Census of Manufactures
- United States Department of Agriculture – Census of Agriculture and related reports including:
    - Direct and Intermediated Marketing of Local Foods in the United States (Economic Research Service, November 2011)
    - Regional Food Hub Resource Guide (Agricultural Marketing Service, April 2012)
    - The Role of Food Hubs in Local Food Marketing (Rural Development, January 2013)
- United States Bureau of Labor and Industry – Consumer Expenditures Survey
- Oregon Employment Department
- Oregon Office of Economic Analysis
- Oregon Business Council
- Regional reports, including:
    - Marion, Polk & Yamhill Counties Regional Economic Profile & Strategic Assessment (E.D. Hovee & Company, LLC, 2007)
    - Yamhill County Agri-Business Economic and Community Development Plan (Barney & Worth, Inc., 2009)
    - Salem Target Industry Analysis (Community Planning Workshop, 2011)
    - Mid-Willamette Valley Comprehensive Economic Development Strategy (MWVCOG, 2012)

Secondary data analysis took the form of a preliminary research phase. It informed the background of the project and began to shed light on the state of the regional economy and food system. I used secondary data to develop a detailed description of the socioeconomic characteristics that may impact food systems development. This methodology also helped identify areas in which more research was needed.

Case Studies of Existing Food Hubs

The research process included the identification of several regional case studies. These were gathered primarily from existing reports by regional organizations as well as the USDA. The purpose of the case study research was to learn about the food hub as a tool for strengthening the regional food system. Existing food hubs take a variety of forms in terms of the business model used as well as the specific services offered. The case study research shed light on how different models are used and to what effect. This research will help the study region better understand how a future food hub might be structured based on local needs and desires. I used existing data to the extent that it was sufficient to answer my questions. However, in some instances I also held informal phone conversations with representative staff working at the case study locations to clarify certain aspects of the research.

Producer and Purchaser Surveys

The primary source of qualitative data was an online survey. I developed and conducted a two-part survey, targeting both regional food producers and food purchasers. I selected these two target populations because they represent the two ends of the food network that stand to be most impacted by development of a food hub facility, which typically serve as a link between producer and purchaser.

The purpose of the survey tool was to collect data on the existing needs, opportunities, and barriers to expanding the regional food system. The survey focused on respondents' experience in and of the regional food system. Each branch of the survey consisted of about 30 questions designed to take participants approximately 15-20 minutes to complete. Question typology included simple multiple choice responses, responses of scale or relative rank, and open-ended short answers. Survey transcripts and response summaries are included in Appendix B.

The survey was built and published online using Qualtrics survey software through the University of Oregon. The MWVCOG and other regional partners developed a list of target respondents which included about 84 contacts distributed across the following categories: small producers, large producers, farmers' markets, processors, restaurants, retail, and institutions. It was also distributed to participants in the Salem Mayor's Ag Forum, county farm bureaus, and contacts at Oregon State University Extension Service and other regional organizations. The survey was distributed via email by Suzanne Dufner, Community Development Director at the MWVCOG. The initial email was sent on April 10, 2013 and a reminder was sent on April 19, 2013. The survey closed on April 26, 2013. Of 62 surveys that were started over the course of two weeks in early April 2013, a total of 39 completed surveys were collected. To help ensure the quality of the data, respondents were asked to confirm that they live and work in the study area and work in the targeted segment of the food system. All participants were asked to agree to participation by reading a brief consent statement prior to clicking through to the survey. Participants were thereby notified that although no identifying information was collected, the aggregated responses would not be confidential.

Public Forum Discussion

The project culminated with a public forum on the local food system. I organized the event with the help of the MWVCOG and regional partners. The purpose was to bring all of the players into one room to begin a conversation about the food system and a potential food hub facility in the region. The event took the form of a large meeting during which I shared preliminary research results from both the

survey and secondary data. Attendees then split up into focus groups based on the segment of the food system with which they identified most strongly. The forum included representatives from the following segments of the food system: production, processing, marketing, distribution, end users. The groups dispersed around the room for more focused discussions on the strengths and weaknesses of the existing food system. At the end of the forum, the groups were brought back together to share what they learned.

While this step was an important part of the project process and fed into the ultimate goals of the project, it was not used in the sense of traditional methodology in that the purpose was not for me to gather data from attendees, but for attendees to share their perspectives with each other. The forum took the form of a kick-off event for regional food system planning and will ideally lead to future efforts.

Appendix B: Survey Script

The online survey tool used to gather primary data for this study is included below.

Hello.

Thank you for your interest in the Mid-Willamette Valley regional food system!

The purpose of this study is to assess the demand for a regional food hub facility located in the Mid-Willamette Valley. Participants in this study are from several segments of the local food system in Marion, Polk, and Yamhill Counties. If you agree to participate in this study, we ask that you spend approximately 15-20 minutes of your time answering survey questions about your participation in and perspectives of the local food system. There are minimal reasonably foreseeable or expected risks associated with this study. Because participation consists of an online survey, no identifying information will be attached to your responses. Your responses may be quoted in final reports, but will be reported anonymously. There are potentially indirect benefits of participation, which include development of the regional food system. Your participation is voluntary and you are free to exit the survey without penalty at any time, for whatever reason.

I consent to the above statement.

- ○ Yes
- ○ No

Which of the following professions do you identify with most?

Selecting "None of the Above" will direct you to the end of the survey. Those that are not a producer or purchaser/end user are not the target audience for this survey, but we appreciate your interest in the project.

- ○ Food Grower or Producer
- ○ Food Purchaser or End User (processing, retail, wholesale, restaurant, institution, etc.)
- ○ None of the Above

Producer Survey

In what county or counties is your farm located?

- ☐ Marion
- ☐ Polk

☐ Yamhill

☐ Other

About how many years of experience do you have as an agricultural producer?

○ Less than 1 year.

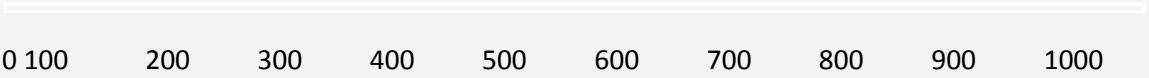
○ 1-3 years.

○ 4-10 years.

○ 11-20 years.

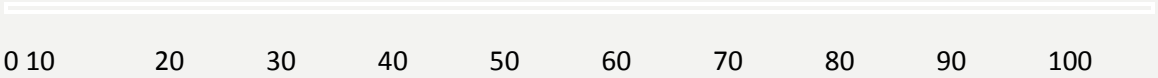
○ More than 20 years.

What is the approximate total acreage you have in production? Select 1000 to indicate 1000 acres or more.



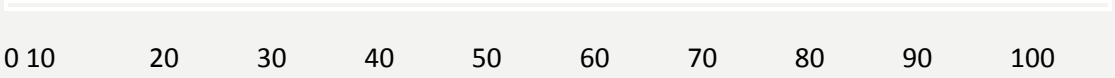
Total Acreage

What was your approximate gross farm income in 2012? Select 100 to mean $100,000 or more.



2012 Gross Income

To the nearest $1,000, what was your approximate gross income for each of the following last year? Select 100 to mean $100,000 or more.



Grains

Beans or lentils

Fruit

Nuts

Vegetables

Dairy (cow)

Dairy (goat)

Beef or veal

Pork

Lamb

Poultry

Eggs

Other

If you produce vegetables and/or fruit, what are the major crops you grow?

Do you sell your products direct?

Yes

No

In 2012, about what percentage of your sales were direct to consumer sales?

0 10 20 30 40 50 60 70 80 90 100

Direct sales

Do you sell your products wholesale or to institutions?

Yes

No

In 2012, about what percentage of your sales were wholesale or institutional?

0 10 20 30 40 50 60 70 80 90 100

Wholesale or institutional sales

Which of the following market(s) do you use to sell products? Select all that apply.

On-farm sales.

Farmers' market.

Community-supported agriculture (CSA) shares.

Direct to restaurant.

Direct to institutions.

Direct to grocer.

Direct to other retailer.

Website/online sales.

Wholesaler.

Road-side stand.

Other. Please explain:

Would you increase your participation in the wholesale and/or institutional market if certain barriers were removed or conditions were met?

Yes.

No.

Not sure.

What are the three most significant barriers to increasing your participation in wholesale and/or institutional markets?

Barrier #1:

Barrier #2:

Barrier #3:

What ideas do you have for addressing some of these barriers?

Despite these barriers, what do you consider the top three strengths of the regional food system?

Strength #1

Strength #2

Strength #3

The United States Department of Agriculture, in partnership with the National Food Hub Collaboration, defines a

regional food hub as "a business or organization that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand."

Some of the services food hubs may provide include aggregation of products from regional farms to meet demand for larger volumes, marketing, various processing options, business services, and distribution.

Have you heard the term "food hub" before?

Yes.

No.

Do you already use a food hub facility?

Yes

No

Where is the food hub you use located?

What services do you currently use at the food hub?

About how far do you travel to use the food hub services?

0-25 miles.

26-50 miles.

51-100 miles.

More than 100 miles.

How has use of the food hub helped or not helped your business?

What thoughts do you have about how a food hub in the Mid-Willamette region could impact your business?

Which potential function of a food hub would be most helpful to your business?

- Light processing (cleaning, chopping, sorting, etc.).
- Processing (commercial kitchen, specialized equipment, etc.).
- Meat and/or dairy processing.
- Cold storage.
- Marketing assistance.
- Aggregation and distribution.
- Other. Please explain:

What is the longest distance you would be willing to travel to deliver products to a food hub?

- 1-25 miles.
- 26-50 miles.
- 51-100 miles.
- More than 100 miles.
- I am not willing and/or able to travel to a food hub.

How frequently would you be able to deliver to a food hub located the following distances from your farm?

	Never	1-2 times per week	3-5 times per week	More than 5 times per week
1-25 miles.				
26-50 miles.				
51-100 miles.				

More than 100 miles.

Do you have any additional comments to share?

Thank you so much for taking the time to share your perspectives on the food system!

Purchaser Survey

In what county or counties is your business/organization located? Select all that apply.

- [ ] Marion
- [ ] Polk
- [ ] Yamhill
- [ ] Other.

What type of business/organization are you? Select all that apply.

- [ ] Food processor.
- [ ] Retail.
- [ ] Restaurant.
- [ ] Educational institution.
- [ ] Other. Please explain:

From which companies do you currently purchase your food products?

To the nearest $1,000, in the last year, what was your average weekly expenditure on food products? Select 25 to mean

$25,000 or more.

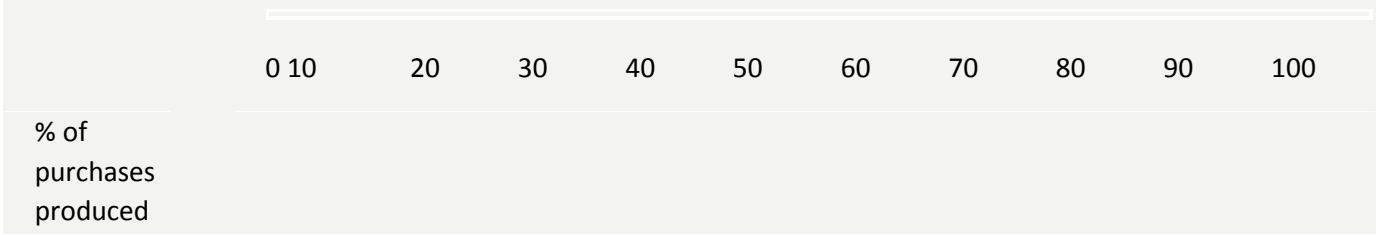
If purchasing raw products, do you have a specific form that products need to be delivered in?

- No preference, products can be delivered as is.
- Need products to be washed.
- Need products to be washed and packaged.
- Need products to be washed, cut, and packaged.
- Does not apply to the products I purchase.

How do you define 'local'?

- Mid-Willamette Valley (Marion, Polk, and Yamhill Counties).
- Northwestern Oregon.
- Oregon.
- Pacific Northwest.
- Other.

About what percentage of the food products you purchased in 2012 was produced in the Mid-Willamette region (Marion, Polk, and Yamhill counties)?



in Mid-
Willamette
region

What type(s) of locally grown food products do you purchase? Select all that apply.

- [ ] Grains.
- [ ] Beans or lentils.
- [ ] Fruit.
- [ ] Nuts.
- [ ] Vegetables.
- [ ] Dairy (cow).
- [ ] Dairy (goat).
- [ ] Poultry.
- [ ] Eggs.
- [ ] Beef or veal.
- [ ] Lamb.
- [ ] Pork.
- [ ] Other. Please explain:

If you purchase fruit or vegetables, what are the major crops you need?

What is your primary source for purchasing local food products?

- ( ) Distributor.
- ( ) Direct from the farmer.

Farmers' market.

Supermarket.

Other. Please explain:

What is the main reason you purchase local food products?

Better taste.

Contributes to local economy.

Food safety issues.

Sustainability.

Customer demand.

Higher quality.

Lower price.

Fresher food.

Other. Please explain:

Do you currently promote any of the food products that you serve or sell to customers as "local"?

Yes.

No.

Would you increase the amount of local food products you purchase if certain barriers were removed or conditions were met?

Yes.

No.

Not Sure.

What are the three most significant barriers to purchasing more local food products?

Barrier #1:

Barrier #2:

Barrier #3:

What ideas do you have for addressing some of these barriers?

How significant to you are the following potential barriers to purchasing more local food products?

	Insignificant	Somewhat Insignificant	Somewhat Significant	Significant
Price.				
Irregular supply.				
Volume.				
Distribution.				
Convenience.				
Food safety.				
Quality.				
Lack of demand.				

In general, about what percentage more are you willing to pay for local products than you pay for conventional products?

	0	10	20	30	40	50	60	70	80	90	100
% Higher Price											

Despite these barriers, what do you consider the top three strengths of the regional food system?

Strength #1

Strength #2

Strength #3

The United States Department of Agriculture, in partnership with the National Food Hub Collaboration, defines a regional food hub as "a business or organization that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand."

Some of the services food hubs may provide include aggregation of products from regional farms to meet demand for larger volumes, marketing, various processing options, business services, and distribution.

Have you heard the term "food hub" before?

Yes.

No.

Do you already use a food hub facility?

Yes.

No.

Where is the food hub you use located?

What services do you currently use at the food hub?

How far do you travel to use the food hub services?

0-25 miles.

26-50 miles.

51-100 miles.

More than 100 miles.

How has the food hub helped or not helped your business?

What thoughts do you have about how a food hub in the Mid-Willamette region could impact your business?

Which potential function of a food hub would be most helpful to your business?

Light processing (cleaning, chopping, sorting, etc.).

Processing (commercial kitchen, specialized equipment, etc.).

Meat processing.

Cold storage.

Marketing assistance.

Aggregation and distribution.

Other. Please explain:

Do you have any additional comments to share?

Thank you so much for taking the time to share your perspectives on the food system!

Appendix C: Survey Responses

This appendix includes the aggregated responses to open-ended survey questions.

Producer Responses

Q. If you producer vegetables and/or fruit, what are the major crops you grow?

Highly diversified. For fruit, mostly blueberries.
Berries, lettuce, tomatoes, peppers, onions, cut herbs, potatoes, beans, cucumbers, chard, broccoli, cauliflower, cabbage, carrots, squash (summer & winter), artichokes, garlic, rhubarb, & more.
sweet corn, green beans, green peas, broccoli, cauliflower, zucchini, yellow squash, strawberries, winter squash
We grow three colors of beets, purple and orange carrots, rutabagas, turnips, parsnips, radishes, kale, chard, spinach, assorted salad lettuces, kohlrabi, cabbage, cucumbers, parsley, sweet corn, chives, onions, potatoes, assorted baby summer squashes and zucchinis, delicata winter squash, eggplants, cut flowers, more. Note that many of these are from the brassica family, as is canola. We grow organically, and we grow lots of heirloom varieties. We are extremely concerned about Oregon DOA's current proposal to drop its longstanding ban on canola. We don't produce vegetable seed, but we buy vegetable seed that is locally produced because it performs better here.
heirloom tomatoes, heirloom winter squash, broccoli, chard, kale, green beans, dry beans, peas, onions, garlic, salad greens, arugula, radishes, radish pots, spinach, mushrooms, beets, carrots, potatoes and various other vegetables and native edibles.
apples / strawberries / raspberries / Brassica's / Solanum's / Squashes / Greens / Beans / Cucumbers / Onions / Garlic / Radishes / Beets / Carrots / Cucumbers / Herbs / Potatoes
Just about everything: carrots, radishes, parsnips, rutabagas, lettuce, salad mix, tomatoes, peppers, tomatillos, corn, beans, cucumbers, winter squash, summer squash, peas, broccoli, cauliflower, kale, cabbage, chard, chicory, endive, watermelon, musk melon, mustards, eggplant, burdock, turnips, celeriac, etc...
Produce CSA: lettuce, onions, beets, carrots, cauliflower, broccoli, leeks, kale, chard, tomatoes, squash(winter and summer), melons
Blueberries; wine grapes
Salad greens, tomatoes, potatoes, beans,
Cherries and Blueberries
diversified vegetable farm + apples, pears, plums
garlic, potatoes, peas, green beans, / Blackberries
Pears, apples, peaches, hazelnuts, pumpkins,
Just starting out...olives

Q. What are the three most significant barriers to increasing your participation in wholesale and/or institutional markets?

Prices needed are too low	Volume is too high without requisite high prices	quantities needed
Price pressure, I need premium prices to cover costs.	Lack of system- I don't have time to make personal calls and market to wholesale or larger markets.	Accessibility- I don't have the contacts to reach out to possible wholesale markets.
there are no barriers. direct sales at full retail price are a lot more profitable. Why would I sell anything at less than the highest price I could get for it?	Logistics- consistency of ordering, have other higher value direct market outlets for products.	We're a young family that has one income (one farmer, one off farm worker), we don't qualify for funding to purchase/lease the amount of property to support even one wholesale or institutional account
storage	packaging	transportation
Lower value.	Large quantities.	Dependability.
We can't compete for price and production quantity	Our own production ability	Our price point is over what they can generally afford to pay. or are willing to pay..
our small production level	low price	licensing egg production for my small farm operation.
Production Costs - including equipment - barrier to entry	Packaging Costs	Distribution Costs
wholesale pricing for my products would not/have not accounted for the increased costs associated with the high labor production model we operate with so we can sell to our direct farm buyers.	not necessarily for our crops, but for other farmers there are fewer processors in the area. limiting the options of who is available to purchase commodities.	we are small by industry standards, we have shifted from packing a majority of our fruit to shipping the majority to larger packers out of state who have more marketing impact.
wholesale orders to restaurants and grocers tend to be small for us, making it less economical	wholesale sales generally generate less income due to wholesale pricing	connecting with folks in charge of ordering for whole and institutional markets
lack of control over product and its use.	scale of demand, volume of product	distance of delivery
lack of knowledge of how to approach wholesalers or markets	Institutions require too much paperwork to make them viable to me at this time	

Q. What ideas do you have for addressing some of these barriers?

Utilize technology. I could make time to login to some sort of listserv and update my availability but form there I need to have customers come to me.
Several farmers have talked about having a common refer truck deliver to Yamhill and Multnomah county for all of us.
Regional Non-profit to organize/collect multiple farmers produce to deliver quantities that meet wholesalers' needs.
Currently in business planning stages for a retail farmer's cooperative that allows outlet for local farmers to sell at higher profit margins. Would also not have the expectation of quantity demand like a box retailer. Provides a more boutique setting for local purchasers. Not a full solution but certainly a desire in this community.
No time to address barrier, just live with it.
Development of favorable loan programs that offer attractive rates/loan forgiveness with job creation.
people need to have a truer idea of the costs associated with 'real' food production. Consumers want to feel good about buying local, naturally produced food....but do not tend to actually be willing to always spend what it costs to do so.
Expanding our production capacity
A Mid-Willamette Valley food hub could help with making the connections.
marketing cooperatives that allow for the aggregation of products from several growers to diminish risk and repetition of effort. lower packaging and transportation costs to the grower
Waive certain requirements for licensing for a small operation.
Government regulation is the major barrier.

Q. Despite these barriers, what do you consider the top three strengths of the regional food system?

Consumer education, awareness and demand is strong and growing	Desire to purchase remains strong- not a fad.	Credibility and integrity on behalf of producers since they are more closely linked to the end consumer.
It's trendy to eat local so it's good for business on both ends.	Top quality and diversity are more accessible since local small growers are often specialists in the unique.	Many of our local governments are very supportive of local food initiatives.
Many highly skilled and reputable growers farm here.	Growers here tend to be more supportive of each other than competitive with one another.	Significant demand that has yet to be supplied in the market for many products.
Resilience	Establishes Community	Increased consumer knowledge.
Keeping it regional - food security.	Minimal footprint.	Helps Local economy
Small farmers who are doing quality work, network together and help each other sell their quality products.	Great support from local restaurants and wineries who invest dollars and time with local farms to access quality product and showcase to their customer bases.	Eaters used to eating seasonal, fresh food in local restaurants etc. are more likely to support local farmers when purchasing food for their homes too.
Healthy food product	Stewardship of land	Diverse producers
Diversity of crops that can grow in the valley.	Superior quality of crops grown in the Valley	Community that is willing to share knowledge.
the strengths....few as they are, are growing in proportion to what was here 20 years ago. / One of our best strengths is the internet.	Hard working dedicated people and organizations dedicated to the success of food production. / OSU, Extension, FoFF, OFB, and eaters everywhere	Creating inter-industry networks is positive for regional businesses. Institutions who rely on local food producers helps local businesses and reduces regional fuel usage.
Committed individuals	Supportive institutions	variety
Local economic impact - keeping money and jobs in the region is important.	A strong history of land preservation and agricultural protections.	brilliant and active discussion creating then enhancing solutions to allow for the expansion of local, available food. /
local support	Location	Local Markets for direct consumer sales
farmers markets		

Q. What thoughts do you have about how a food hub in the Mid-Willamette region could impact your business?

Currently there is a bit of a vacuum in this area as compared to Corvallis/Eugene and Portland metro. Our farm is 10 min from downtown Salem so more purchasing in this would very positively affect our business. We already sell to Lifesource, the new Salem Food co-op, sell at the Salem Saturday Market, have a large CSA in Salem, and sell to the few restaurants that have been able to stay afloat offering a locally sourced menu. These outlets are great, but still small because the mid-Valley doesn't have the same size consumer base as north and south of us that will support locally grown produce. Thus I feel it's more about the consumer base that would support outlets that would be purchasing our products.
I'd be interested in finding out more if one were to start up. I think it could be a valuable outlet for some of my products. It would however, need to be flexible to accommodate small growers by being able to work with small quantities frequently instead of large shipments once in a while.
It is not necessary and will not be competitive with product that is currently available in the current food system
zero.
If it had storage and/or processing facilities it could help us store or process much of the produce that now goes to waste.
It could be good if it was run as an NGO, but probably too expensive if it was a business.
Would allow me as a small farmer to focus on one or two specific products, rather than trying to meet the demands of a full CSA model. Would greatly impact my ability to produce quality product and reduce overhead cost of trying to diversify to greatly.
Favorably
Provide facilities that could help small businesses to lower their capital outlays. Maybe shared production space/ shared offices/ shared equipment? Loan programs with favorable terms for growing businesses?
We have used Food Hub in the past couple of years and have not seen a significant increase to our business at all.
It would provide a solid incentive to expand
Having a more local food hub could be helpful for connecting our farm to wholesale buyers. It would likely greatly reduce the time spent on figuring out how to move bulk product when needed. The key would be for producers and buyers alike to participate regularly.
The problem with this could be loss of control over what is grown and how. What would drive price paid for product. Perhaps 'm not sure I understand the whole picture of a food hub.
I don't really know anything about it.
I think it is vital, and we have been participating in volunteer meetings in West Valley (Sheridan and Willamina to develop ideas for increasing access for consumers and institutions to locally produced food.

Q. Additional Comments

I'm already working on a cooperative/hub in [location removed to protect identity]. Finishing business planning and running through financials now in preparation for capital funding initiatives. Would love to spend time going over this information with whoever is doing the study in more depth. Lots of studies being done, not a lot of action ever happens out of it.
Great survey. We need more solutions to help growing businesses. Look at City of Salem Fairview Small Business Loan Program and East Pringle Innovation Center as positive examples of public/private partnering to further food processing.
I could deliver as much and as often as was profitable. I cannot deliver a single chicken anywhere and make anything on it, and that has been the issue in the past with the food hub activity.....onesy/twosy stuff will not cut it for us as we are trying to keep our margins so thin to maintain sales.
Only during the harvest season
My desire to travel to use the hub would hinge on things like order size requirements, organic certification and more so hard to answer.
a large factor how far we would be willing to deliver and how frequently would depend upon the volume that was needed. The greater the distance and the smaller the purchase the less likely we would be willing to accommodate.
It would have to be under 5 miles
several deliveries per week is not a reasonable schedule for a meat farmer such as myself. More like how many times per month.. so.. 1-25 miles - 4 times per month / 26-50 miles - 2 times per month / 50-100 miles 2 times per month / more than 100 miles - 1 per month tops.
we are a brand new micro farm producing eggs (chicken and ducks), chickens, turkeys, pork and some fruit. we need assistance with developing consistent buyers of our products. We raise dairy goats too but cannot afford to become a commercial dairy, so are limited to 9 milking goats and farm sales of milk-no offsite sales or cheese-making allowed. any help we can get would be helpful.

Purchaser Responses

Q. From which companies do you currently purchase your food products?

Sysco, Food Service of America, Soda Express, Vistar, Spring Valley / Dairy, Franz Bakery, Charlie's Produce, CoGo Smoothies, Odwalla, McDonald's Wholesale, Riverwood Orchard and Farm, Pepsi, DPI
Independent farms and Willamette Valley Fruit Co
Small local VEG growers (various) i.e. Oakhill Organics, Gaining Ground Farm, Draper Farm, Frog Hollow Farm, Gerhardt Gardens, and many more. Single family meat ranchers - Wood Family Farm, ArtFarm Oregon, Atherton Lamb. Local creameries - Full Circle Creamery, Briar Rose Creamery. Local coffee roaster - Caravan Coffee. Local honey - Christensen Farms. Commercial distributors used for additional products include: FSA, Spring Valley Dairy.
Sysco, franz, valley fruit & Produce Spring Valley
Spokane bakery, Glory bee foods, FSA, Minto Island Growers, Teal Creek Farms, Glenmore Farms, Fresh to You Produce, Cash & Carry, Daum's Farm, Santaim Brewery, Greenwillow Grains, Full Circle Creamery, Willamette Valley Cheese Co.
McK Ranch, Rain Shadow El Rancho, Fairview Farm Dairy, EZ Orchards, Full Circle Creamery, Teal Creek Farms, Minto Island Growers
Unified Grocers and direct vendors for bread, beverages beer & wine etc.
West Salem Safeway / West Salem Roths / Polk Co farm markets
Food Service of America, McDonald Wholesale, Duck Delivery, Spring Valley Dairy
Sunbow farm
Food Service of America and Core-mark
WinCo, Cash and Carry, Willamette Valley Fruit Company, local farmers
Sysco delivers us flours from Pendleton Mills, Yamhill Co. Mushrooms, olive oils from Spain, dairy products from Dairgold Willamette Valley, We also buy from Capefoulweather Coffee Co., Don Froylan creamery in Albany, Fairview Farms in Dallas, Teal Creek Farms in Dallas, Persephone Farms in Sweet Home, Berries and local fruits within the area, lavender and herbs locally, local wines,
Sysco, Duck produce
Teal Creek Farms (Polk County); Fairview Farm Dairy (Polk County); numerous local family farms in Polk County; Heritage Farms NW (Polk County); farmers' market vendors in Polk, Marion, Benton and Linn Counties; Don Froylan Cheese Factory (Albany/Linn County); Azure Standard (via Bridegport Farm and Gardens (Polk County); Sysco Food Service;

Q. If you purchase fruit or vegetables, what are the major crops you need?

Apples, Oranges, Bananas, Lettuce, Spinach, Cucumbers, Tomatoes, Potatoes, Peppers, Grapes, Melons, Berries,
Berries, stone fruits, cherries, pears and apples. Also, less common and heritage fruits like quince, figs, currants, and gooseberries.
Beautiful mix of varied salad greens (especially winter crops), root vegetables - fingerling potatoes, russets, beets, turnips, carrots, sunchokes, onions, garlic, shallot, fennel bulb, celery root, kohlrabi, rutabaga. Asparagus, rhubarb, pea and fava shoots, garlic scapes. Summer veg - beans, squash, eggplant, pepper varieties including hot, heirloom and pasting tomatoes. Leeks, winter squash, winter roots.
Apples, Oranges, Grapes, banana / / Lettuce, tomato, cucumber, peppers, carrots spinach
salad greens, all fruits
onions, potatoes, carrots, celery, garlic, peppers, salad greens
All locally grown produce.
Apple, Pear, Lettuce, Spinach, Carrot baby, peppers,
walnuts, blueberries, cherries, hazelnuts, garlic, spinach, basil, cilantro, parsley, arugula, lettuce, celery, onion, potato
Pineapple / melons / grapes / apples / oranges / banana / carrots / broccoli / cauliflower / beans / cucumbers
strawberries, rhubarb, cherries, blackberries, loganberries, peaches, apples, hazelnuts, tomatoes
apples, plums, berries, salad mixes, WINTER GREENS for salads,
apples lettuce tomato cucumbers carrots celery peppers
salad greens; berries of all kinds (blue/black/marion/rasp...); tomatoes; onions; garlic; fresh herbs (basil, parsley, rosemary, cilantro); apples; pears; plums; cherries

Q. What are the three most significant barriers to purchasing more local food products?

Local Produce is not easily identified by distributor	Our menu currently does not follow seasonal fruits	Do not know how locally without doing a lot of research to find sources
Price	Distribution	Availability
Limited availability especially off-season	Price, especially for bulk commodity products i.e.: baking potatoes, flours, grains, legumes; also unusually high cost of local free range poultry	Access to USDA processing for poultry
Availability	convenience	Price
customer ignorance	customer refusal to pay higher price	lower price
seasonal availability	distribution	high cost
Need for more efficient distribution and transportation	Need for access to list of products available and cost of products	Need for Co-op or other form of facility for better purchasing power
Availability	Reliability	consistent volume
Delivery to our location	Price	accessing the product
knowledge of them	driving distance	pick up schedules
Cost	availability	delivery
availability of specific food products - which is a complicated issue (for example the limited availability of USDA certified meat processing facilities and the costs involved which are inevitably passed on to the consumer making it difficult for processors to support these farmers)	cost of locally grown products. I think this affects processors and some segments of the consumer public. Most small farmers we know can sell all their products direct to the consumer for retail price and so there's little incentive to give us as a processor a wholesale price. Locally produced food products often do cost more than their non-local counterparts making it harder for low-income members of the community to embrace these options.	delivery of products (most small producers don't deliver which takes a lot of time out of our week to procure these products which contributes to the disincentive to use them at all)
cost		

Q. What ideas do you have for addressing some of these barriers?

Have distributors label locally grown and locally produced products.
I do always encourage the farmers who inquire about supplying for me to: 1- plant unusual varieties and specialty crops (I'd love to buy local ginger, for example! I bought a lot of giant kohlrabi this winter.) - I'd choose many heirloom and unusual varieties of beans/tomatoes/squash over standard ones, even at a higher cost. 2- extend their growing season (by picking cold tolerant varieties, using hoops/row covers if pertinent) 3- plant crops with notorious local shortages - asparagus! I'm not sure how to address the cost differential. I do consider sourcing local specialty grains for specialty baking, thinking to market these items at a higher cost, but I do not have a reliable developed market for this in my small rural town. Consumer education campaigns and social trends are important to this.
Conversations with farmers
Not sure.
I would like to see a Local distribution center for mainly Northwest products built and operated near Highway 22 or Highway 99 near Rickreall, Amity area. Set up a Co-op or Member services center so small operators have the same cost advantages as large retailers.
Not sure
more farmers markets and a local food guide and website
It really irks us that commercial agribusiness is heavily subsidized and yet small farmers are seemingly left to fend for themselves. It seems that if we really cared about strengthening the health and security of our regional food system we would develop a broad based plan to support and grow this sector of the local economy. Ideally, farmers and food processors wouldn't need long-term support, but a diverse incentive program to help farmers get their businesses off the ground in the form of affordable loans and tax breaks coupled with some type of incentive to mitigate cost for processors to use local products would go a long way. If these programs exist, then education/awareness might be the need. The sponsoring of or financially supporting of community processing facilities for farmers whose products require a regulated degree of processing before it is ready for the consumer (meat and dairy products come to mind). That way the cost of the facility could be shared by the users or the community at large so that more talented people could use their energy being creative and producing world-class food products instead of spending their energy covering exorbitant overhead costs at the expense of the food products themselves and their ability to commit their lives to farming for the local community. From a processor perspective, food products showing up at our location ready to be used is a big bonus. It's one of the things that makes using large companies like Sysco very attractive. Small food businesses like ours want to make really good food and we do. We're not in business to be really good at navigating a food delivery system. Nevertheless, we have to do what it takes to get to do the "making good food" part. So anything that can lessen the amount of time and energy it takes us to get ingredients to our business would be welcomed.

Q. Despite these barriers, what do you consider the top three strengths of the regional food system?

Good landscape for growing	Water is not in shortage	Oregonians support purchasing local and may pay a higher price.
Commitment	Quality	Sustainability
Freshness, quality, and unusual variety is unsurpassed	Low/no-waste packaging is wonderful - I get reusable plastic bins of veg from a local farm, and may growers bring produce in recycled boxes or without packaging.	Flexible response to my fluctuating volume demands, allows me to purchase only what I need and keep it fresh. I experience very little product waste.
abundant of fresh veggies and fruit	dedicated customer group	Good climate and growing conditions.
High consumer demand.	Hard working farmers.	demand
efficiency	variety of products	availability
Freshness	Ecology	Gives me a good feeling to purchase from growers in the community.
Local economy support	Fun to advertise the local items	long growing season
quality and freshness	local CSA businesses	u-pick and gleaners
better quality	helps Oregon's economy	more sustainable
the talent and commitment of local farmers to work hard, persevere and make a variety of food products available locally	enthusiasm/support of many (but not most at this point) consumers for local food products	commitment of many (but not most at this point) local food processors to support farmers and other local producers
variety		

Q. What thoughts do you have about how a food hub in the Mid-Willamette region could impact your business?

I was extremely challenged by a lack of hearty winter greens, cabbages, salads of any kind for 3 months this winter. A better local distribution system would make these items available to me even if my primary farm sources are out of product. (I had to buy from FSA to cover the shortage, and chose OR/WA grown where possible). I like having a personal relationship with small farms, but a distribution center would give me a better fallback than relying on commercial distributors. I do feel like I need more information to fully understand the food hub proposal.
Not sure if a food hub will help. The establishment of a local food co-op seems to be doing what food hub is intending, rather give to co-op
Help with distribution, generally.
It will provide jobs needed to help grow our small towns and communities. It will encourage new businesses to start up in rural towns that might be too cost prohibitive otherwise.
Do I have time to add one more thing to do?
Better potential for distributing my products to local consumers and restaurants. Better access to local ingredients for my locavore pesto sauce plan. Access to safer, GMO-free local foods for fair prices to preserve.
We are a tiny non-profit, baking to raise funds for Mercy Corps, so I don't think it would have an impact on us.
Marion-Polk Food Share could be the centralizing force and Non-Profit umbrella for a food Hub
I think it would be great! Like a large outdoor grocery store with much better flavors and keeping the money within the farming community.
it would make things easier to get
We would definitely make a regional food hub our first choice for ingredients supplies insofar as items are within our budget and relatively convenient to procure. I think it would lead to greater use on our part of locally produced food and what influence we have with our customers and colleagues in the industry would be directed to garnering their support for the food hub as well. Depending on how the food hub was organized, set up and managed, having farmers compete for our business might take care of the cost issues making it more affordable for us to direct more of our resources into the local economy.

Q. Additional Comments

Working face-to-face with small growers will always be important to me. I would be unlikely to use a food hub to supply most of my needs. However, it may provide excellent resources to local growers who do not have adequate cold storage to cellar winter roots/etc. - I rely on the growers to hold the product (in the ground or cold-stored) until I order volume for about a week at a time in my restaurant use. I would sure like to retain a "specific farm identity" of the products held, but this might be highly impractical. Also not mentioned in this survey is the impact of farming practices (organic or naturally cultivated, etc.) on my likelihood to purchase. I seek product that is chemical-free: natural fertilizers, no pesticides. Even if tagging produce by grower within the hub is impossible, sorting it by growing practices would be imperative and should impact the cost of the product.
Thank you!
DO IT!!!
I participated in Nourish Yamhill Valley, belong to slow food Yamhill county, master gardeners and master food preservers Yamhill County. I want to launch a local pesto sauces business from my home next year.
We support anything that helps Oregon's farmers remain on the land, doing what they do so well.
Many of the things that we as food processors would welcome as improvements in the local food industry may not be in the short term best interests of the farmers themselves. Who wouldn't want to command higher-end, retail pricing for everything that can be produced? Who would want to set up a delivery or distribution system if folks are already willing to come to you to get your product? Having said that, I think a food hub could be just the thing to draw all the players together and launch the region into the next step of local sustainability. If we truly want a robust local food economy, then we need to start thinking in the long term and cultivating and nurturing the more subtle connections that define who we are as a community that is mindful of each other in our individual decisions. Having mutually advantageous financial terms with food processors allows farmers to build relationships that result in consistent purchasing over the long term which also gives them a more reliable cash flow to build and expand their businesses. Food processors making commitments to local farmers to buy, use and promote their ingredients helps mitigate what is essentially a very risky business. And besides, we'll end up getting more delicious and nutritious food into the bellies of members of our own community.

Appendix D: Regional Food System Data Tables

This appendix contains additional data tables related to population and agriculture trends. The data is presented with more analysis in Chapter Three. The data presented in this appendix is pulled from sources such as the U.S. Census Bureau, the Oregon Employment Department, and the U.S. Department of Agriculture.

Population Change 2000 to 2010

			Change 2000-2010		
	2000	2010	#	%	AAGR*
Oregon	3,421,399	3,831,074	409,675	12.0%	1.1%
Mid-Willamette Region	432,206	489,931	57,725	13.4%	1.3%
Marion County	284,834	315,335	30,501	10.7%	1.0%
Polk County	62,380	75,403	13,023	20.9%	1.9%
Yamhill County	84,992	99,193	14,201	16.7%	1.6%

*Average Annual Growth Rate

Source: US Census Bureau, 2000 and 2010 Census

2011 Median Household Income ($)

	Median Household Income
Oregon	$48,377
Mid-Willamette Region	$50,534
Marion County	$44,964
Polk County	$53,351
Yamhill County	$53,288

Source: US Census Bureau, 2007-2011 ACS

Manufacturing in the Mid-Willamette Valley

	Employment			Employment Units		
	2001	2011	% Change	2001	2011	% Change
Manufacturing Sector	20,593	17,472	-15%	678	698	3%
Food Manufacturing	4,930	5,512	12%	78	83	6%
Beverage Manufacturing	602	1,379	129%	39	100	156%

Source: Oregon Employment Department, Covered Employment

Mid-Willamette Valley Top Employment Sectors 2011 vs. 2001

2011	Sector Employment	% Total Employment*
Government	44,170	25%
Trade, Transportation, & Utilities	27,347	15%
Education & Health Services	26,440	15%
Manufacturing	17,472	10%
Leisure & Hospitality	14,841	8%

2001	Sector Employment	% Total Employment*
Government	41,329	24%
Trade, Transportation, & Utilities	26,539	16%
Manufacturing	20,593	12%
Education & Health Services	20,470	12%
Leisure & Hospitality	13,626	8%

*Only showing top five sectors, does not add to 100%

Source: Oregon Employment Department, Covered Employment

Percentage of Total Land Area in Farms (2007)

	Sq. Miles	Acres	Farm Acres	% Farmland
Oregon	98,381	62,963,840	16,399,647	26%
Marion County	1,194	764,160	307,647	40%
Polk County	744	476,160	166,663	35%
Yamhill County	718	459,520	180,846	39%
Mid-Willamette Valley	2,656	1,699,840	655,156	39%

Source: U.S. Dept. of Agriculture, 2007 Census of Agriculture

Principal Operator Characteristics

	Average Years on Farm			Average Age		
	1997	2002	2007	1997	2002	2007
Oregon	16.6	17.6	19.5	54	54.9	57.5
Marion County	17.6	18.4	21	52.9	53.9	56
Polk County	16.8	17.2	20	54.3	55.2	57.9
Yamhill County	16	16.8	18.4	53.2	54.2	57
Mid-Willamette Valley	16.8	17.5	19.8	53.5	54.4	57.0

Source: U.S. Dept. of Agriculture, 1997, 2002, 2007 Census of Agriculture

2002 & 2007 Census of Agriculture Summary

	2002					2007				
	Oregon	Marion	Polk	Yamhill	MWV	Oregon	Marion	Polk	Yamhill	MWV
Number of Farms	40,033	3,203	1,324	2,329	6,856	38,553	2,670	1,252	2,125	6,047
Land in Farms (acres)	17,080,422	341,051	168,881	196,298	706,230	16,399,647	307,647	166,663	180,846	655,156
Average Farm Size (acres)	427	106	128	84	106	425	115	133	86	111
Median Farm Size (acres)	39	22	36	24	NA	29	17	30	20	NA
Avg Mkt Value of Land and Bldgs ($/farm)	$508,882	$510,810	$548,559	$541,936	$533,768	$804,145	$795,988	$728,558	$757,162	$760,569
Avg Mkt Value of Land and Bldgs ($/acre)	$1,202	$5,107	$4,948	$6,885	$5,647	$1,890	$6,908	$5,473	$8,855	$7,079
Total Cropland	5,417,387	251,479	124,596	131,640	507,715	5,010,408	225,094	120,116	114,829	460,039
Harvested Cropland	3,119,384	213,215	101,629	105,097	419,941	3,037,261	199,832	105,829	97,475	403,136
% Cropland Harvested	58%	85%	82%	80%	83%	61%	89%	88%	85%	88%
Gross Farm-Related Income ($1000)	$131,959	$12,816	$6,334	$5,235	$24,385	$175,953	$14,146	$4,689	$7,651	$26,486

Source: U.S. Dept. of Agriculture, 2002 and 2007 Census of Agriculture