

# Growing a Sustainable Portland Metropolitan Foodshed Final Report

Produced for  
Western Sustainable Agriculture Research and Education



**Produced By:**

Cogan Owens Cogan, LLC  
Institute of Portland Metropolitan Studies, Portland State University  
Oregon State University  
City of Damascus

Project SW-143

August 2012

# Acknowledgements

This project involved a partnership between four organizations: Portland State University's Institute of Portland Metropolitan studies; Oregon State University; Cogan Owens Cogan, LLC ; and the City of Damascus. The following people contributed to the study and to the report:

Portland State University

Sheila Martin

Kathryn Doherty-Chapman

Cogan Owens Cogan, LLC

Bob Wise

Steve Faust

Kirsten Greene

Ellie Fiore

Ellen Wyoming

Oregon State University

Clark Seavert

Rebecca Sullivan

Beth Emshoff

City of Damascus

Anita Yap

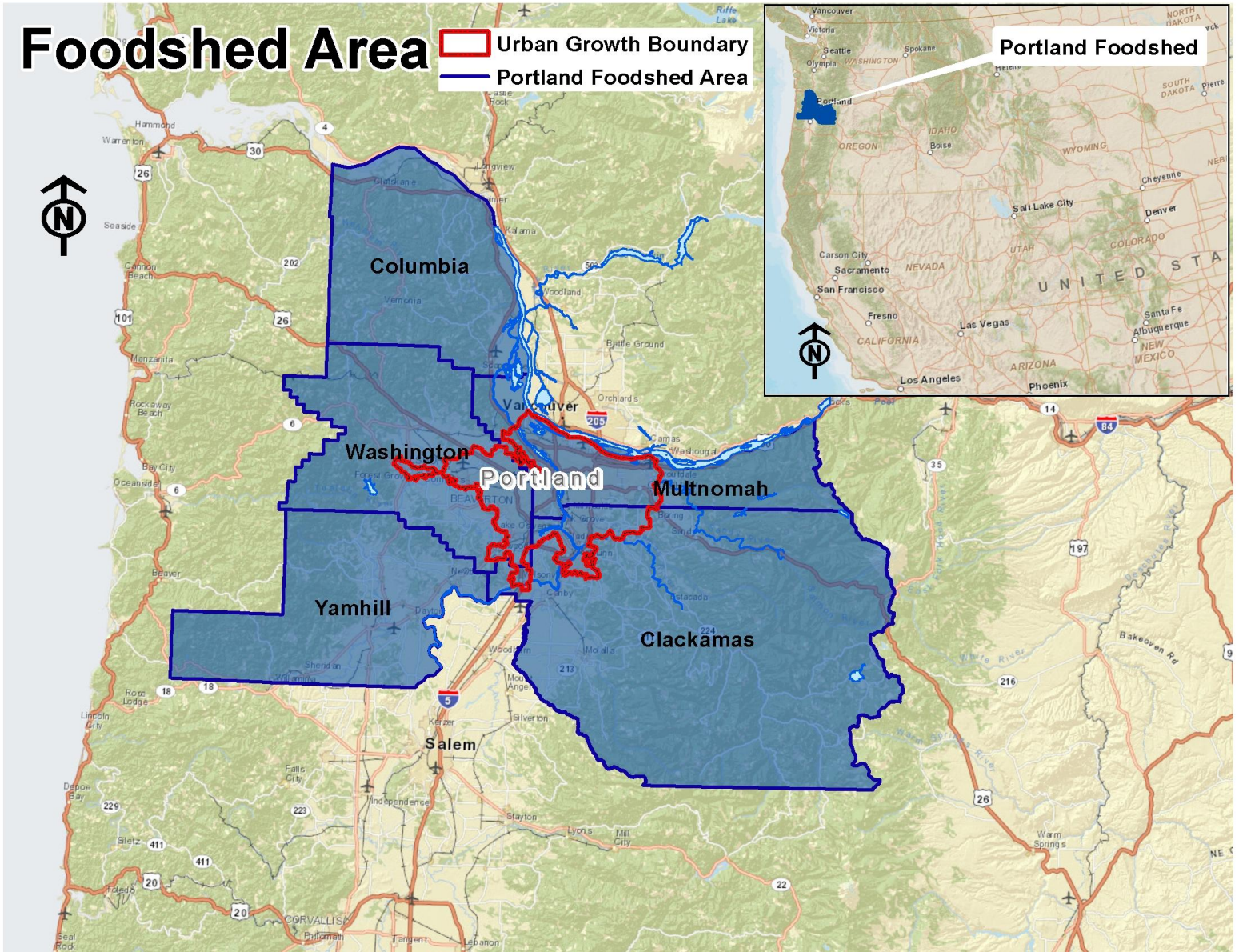
Elise Scolnick

Bob Short

We are also grateful for the contributions of many growers, grower organizations, and policy makers who offered us their invaluable insights and guidance. They are too numerous to list here.

# Foodshed Area

- Urban Growth Boundary
- Portland Foodshed Area





August 2012

# Chapter 1

## Introduction

### Project Background and Objectives

Nationwide, farmers located in or near metropolitan areas face a number of challenges. These challenges have resulted in rapid conversion of land from farming to other uses, particularly in urban-influenced areas. From 1982 to 2003, the cultivated cropland in the U.S. fell from about 420 million acres to about 368 million acres, or a loss of about 14 percent (NRI). Crops in some areas are particularly vulnerable to development. For example, a 2001 study found that 61 percent of vegetable production is located in metropolitan areas (Heimlich and Anderson 2001). Thus, production of vegetables for local consumption may be affected by urban growth.

Despite Oregon's progressive land use laws designed to protect farmland, Oregon and the Portland Metropolitan area are not immune from these forces. In 2006 a Clackamas County Green Ribbon Committee (GRC) made up of local growers, foresters and other sustainability minded professionals and community members conducted five industry forums to assess the needs of their peers in Clackamas County's agriculture, natural resources and sustainability clusters. The GRC process revealed that the long-term viability of Clackamas County farms is under significant economic and regulatory threat from urban development and that there is a need for a comprehensive program that addresses challenges and promotes opportunities for urban-influenced agriculture. While there are many individual programs and initiatives, no regional assessment or strategy for a sustainable food economy exists for the Portland metropolitan region.

### Project objectives

Western Sustainable Agriculture Research and Education (SARE) provided funding for this study to examine key agricultural trends, identify producer needs and define strategies to strengthen the local food production system. The goals of the study are to:

Define the Portland Metropolitan Foodshed; identify related agricultural and economic trends and develop a needs assessment based on input from producers and other stakeholders.

Assemble a regional toolkit of strategies to support evolution of a sustainable Portland Metropolitan Foodshed.

Work with the City of Damascus, Oregon to test the toolkit on a local level.

Develop a research and educational program that supports these goals and supports small and medium farmers in the region.

This project differs from many other studies of the barriers and opportunities faced by farmers because it focuses specifically on farms that are trying to survive within a growing metropolitan region. While these farms face significant challenges related to urban growth, they also have significant opportunities as urban consumers begin to demand food that is grown locally and sustainably and food related experiences that can supplement farm income.

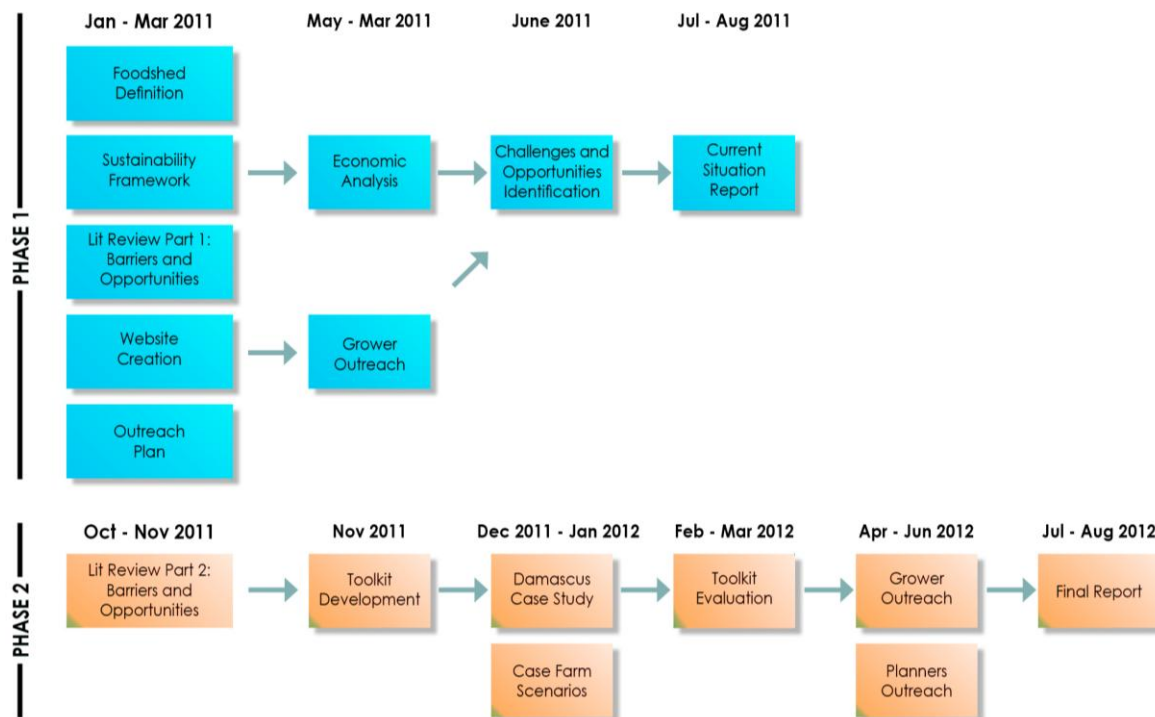
## **Project Methodology**

### ***Timeline***

We completed this project in two phases; Figure 1-1 shows the Foodshed study timeline . In Phase I, we identified the key barriers and opportunities faced by urban-influenced farmers so that we could proceed with designing the toolkit in Phase II. Thus, at the end of Phase I we delivered a current situation report that identified those challenges and opportunities and provided the background required to identify which tools needed to be developed.

In Phase II, we developed tools for growers and for planners and policy makers, conducted outreach to obtain feedback on the tools, then designed outreach materials which currently reside on our web site at <http://smallfarms.oregonstate.edu/pdx-foodshed>

Figure 1-1. Portland Sustainable Foodshed Study Timeline



## **Data sources**

The data sources for this project included the following:

**Literature review.** We conducted an extensive review of the literature covering approaches to food system analysis, case studies of regional food systems, issues facing farmers in urban areas, and studies of the Portland Metropolitan foodshed. Appendix 2 contains this literature review.

**Economic analysis.** We conducted an extensive analysis of available data about the region's food economy. Appendix 3 contains this analysis.

**Interviews and survey data.** To identify the key barriers, challenges, and opportunities, we conducted a survey completed by 81 farmers and aspiring farmers and face-to-face interviews with five farmers. We followed up with a number of them for a second survey that assessed the toolkit. We also used the results of a survey of more than 1,000 Clackamas County agricultural producers as a source of tools recommendations.

**Case Farm scenarios.** We conducted extensive case studies on three farms in the Portland metropolitan region to gain greater insight into the challenges facing their operations and to assess the usefulness of some of the tools in our toolkit. The case farm scenarios are summarized in Chapter 5 and their full text appears in Appendix 8.

**Damascus Case Study.** We conducted a case study to assess the tools impact on Damascus, an urbanizing community in the Portland Metropolitan region. The case study is summarized in Chapter 6 and appears in its entirety in Appendix 9.

## **Outreach materials**

We developed a number of outreach materials to aid in the development of this project. they include:

- A project information sheet that explained the basic objectives and workplan for the project;
- Grower survey to collect information about the barriers and opportunities;
- The Toolkit, containing Policy, producer, and consumer tools;
- The web site that provides access to the tools and related resources at <http://smallfarms.oregonstate.edu/pdx-foodshed>



## Contents of this report

**Chapter 2** clarifies the scope of the project by defining key term used throughout the report, defining the geographic extent of the project, the actors in the foodshed, the products in the foodshed, sustainability and the foodshed economy.

**Chapter 3** summarizes the current situation analysis; additional documentation is found in its entirety in Appendixes 2 and 3. The current situation analysis briefly answers the following questions:

How sustainable is the region's foodshed currently and how is it affected by its urban influence?

What factors are keeping farmers, other producers, and policy makers from moving toward a more sustainable foodshed?

How might we mitigate those factors by developing tools that can be used by those actors?

**Chapter 4** describes the toolkit development and evaluation process and offers short descriptions of the toolkit contents.

**Chapter 5** summarizes the Case farm scenarios included in Appendix 8. The purpose of these scenarios is to illustrate the economic impact of challenges to farming in urban influence areas and to describe how some of the tools developed and illustrated in Chapter 4 can be applied to a variety of farm types. The case farms include:<sup>1</sup>

Blue Bee Farm– A Beginning Farm Operation on Sauvie Island

Muddy Boots Farm – A Small Farm Operation Serving the Portland Metro

Hubbard Farms – A Wholesale Vegetable Farm within the Portland Metro

**Chapter 6** summarizes the Damascus case study which was developed to explore the potential impact of the policy tools on an urbanizing rural community.

**Chapter 7** presents the evidence that the project reached its objectives based on the impact measures proposed in our proposal. It also presents conclusions for the study.

The Appendixes provide supplementary material.

Appendix 1: Foodshed vision

Appendix 2: Literature review covering foodshed approaches, cases studies, and key issues.

Appendix 3: Economic profile of the Portland metropolitan food system

Appendix 4: Farmer survey

Appendix 5: Summary of results from farmer surveys and interviews

---

<sup>1</sup> These are not the real names of these farms.

Appendix 6: Toolkits

Appendix 7: Toolkit evaluation reports

Appendix 8: Case farm scenarios

Appendix 9: Damascus case study

Appendix 10: Clackamas County Agriculture and Foodshed Strategic Plan: Implementation Matrix

# Chapter 2

## Definitions and Project Scope

This chapter summarizes the key definitions and scope of the project. Below, we define several key concepts that refine the scope of the project, including

- Portland regional foodshed geography
- Food system actors
- Food system products
- Sustainability; and
- Foodshed economy

### Portland Regional Foodshed

We felt it necessary to develop a definition, or vision, of the Portland Metropolitan foodshed in order to more precisely define the scope of our project.

#### *Geography of the Foodshed*

A foodshed may be defined as the geographic area within which the food for a specific population originates, as well as a mechanism for understanding the systems in place that drive the flow of that food supply (Blum-Evitts 2009). Thus, the scale of our foodshed from smallest to largest might include:

- Local: yard, block, neighborhood, city, county
- Regional: Portland, OR region; Willamette Valley; State of Oregon; Columbia Basin; West Coast
- United States
- Mexico and Canada (The North American Free Trade Agreement guides trade in North America)
- All other countries

While our local and regional foodshed does include flows of supply and demand at all the above scales, this report is focused on the food that is grown within the influence of the

urbanized Portland Metropolitan region. The geographical extent of the foodshed could be justifiably defined in a variety of ways. **This report defines the foodshed as Columbia, Clackamas, Multnomah, Washington and Yamhill Counties and the systems that support the food supply. See Foodshed Area Map at beginning of report.**

### ***Actors in the regional food system***

A number of people and organizations contribute to the regional food system.

**Producers (Growers, Farmers)** are people who grow food. From the smallest to the largest scale, their farms include: yards; community gardens; public planting strips, medians and other small places; nature/the wild; and farms.

**Processors** are the methods and facilities where raw foods and byproducts are processed and packaged for distribution. The extended food industry cluster includes a mix of commodity producers, specialized, niche producers, processors, distributors and packagers. From smallest to largest, these include individual processors, shared facilities/equipment, mobile processors, small-scale processors, large processors, and byproduct processing facilities.

**Distributors** are the various delivery methods by which food reaches consumers, including: food clubs, community supported agriculture operations (CSAs), farm stands, farmers markets, corner groceries, gleaners, restaurants, caterers, regional markets, supermarkets, and commercial wholesale distributors.

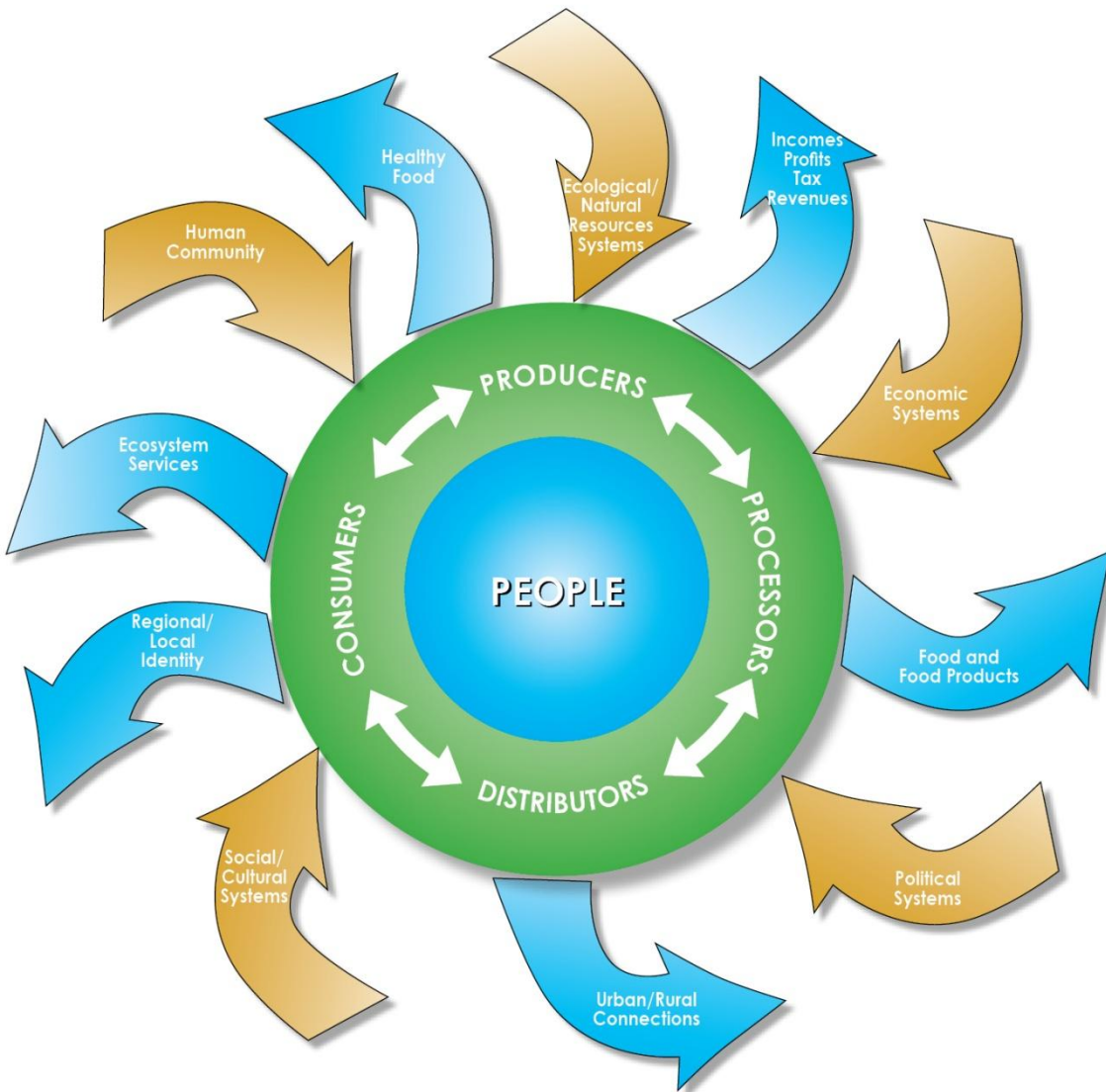
**Consumers** ingest and utilize food and its byproducts made by producers and processors at all scales and delivered by the various distribution methods described above. Consumers include: individuals/households; the landscape; institutions; animals; and fuel-based machines.

The “food system model” in Figure 2 is adapted from the San Francisco Food Alliance’s 2005 *San Francisco Food System Assessment* (San Francisco Food Alliance 2005). It illustrates the high-level flows of inputs and outputs between Portland Metropolitan Foodshed producers, processors, distributors and consumers.

These four components of the food system economy are closely related and interact in a dynamic fashion with growers engaging directly and indirectly with consumers, processors, and distributors. The regional foodshed economy also functions within a broader set of contexts including: human communities (cities and towns), economic systems at different scales, political systems, social and cultural systems, and ecological and natural systems. These systems provide necessary labor, capital, public policies, cultural values (supporting local farmers), as well as clean water, healthy soils and biological diversity that make it possible for regional agriculture to succeed.

While the authors are aware of these larger food system elements, this project is focused on producers and their need to be productive and economically viable. Producers interact with other food system actors to accomplish this objective.

**Figure 2-1. Regional Foodshed Economy model**



## **Products of the Foodshed**

The system produces several “products” or outputs including ecosystem services (e.g., clean water and air), incomes profits and tax revenues, regional and community identity and projects (e.g., farmers markets), urban and rural connections, healthy food to prevent disease, and importantly for this project – food and food products.

Using a farmers market as an example, food grown on small farms and collected in the wild goes directly to the farmers market as produce, such as apples, mushrooms and corn. Food from these producers also arrives at the market via small processing facilities, mobile processors or shared commercial kitchens/equipment in processed forms like jams, butchered meats and baked goods. Finally, food sold at farmers markets is bought directly by individual consumers, and restaurants and caterers who then serve the food to individual eaters.

Each point in the food’s journey from producer to consumer creates byproducts that can be repurposed. Food that isn’t sold can be donated to gleaners, such as the Oregon Food Pantry or homeless shelters. Inedible foods may be composted and used packaging may be composted or recycled.

There are many important parts of the foodshed economy that don’t fit easily into the above categories. For example, each part of the foodshed system includes workers (farmworkers and owners) and suppliers (e.g., tools and implements) which are integral parts of the local food-based economy.

This project is focused primarily on food products. However, farms also produce experiences that fall into the category of agricultural tourism--for example, U-Pick operations. These products can contribute to the economic sustainability of a farm and we consider them as strategies for diversifying farm income.

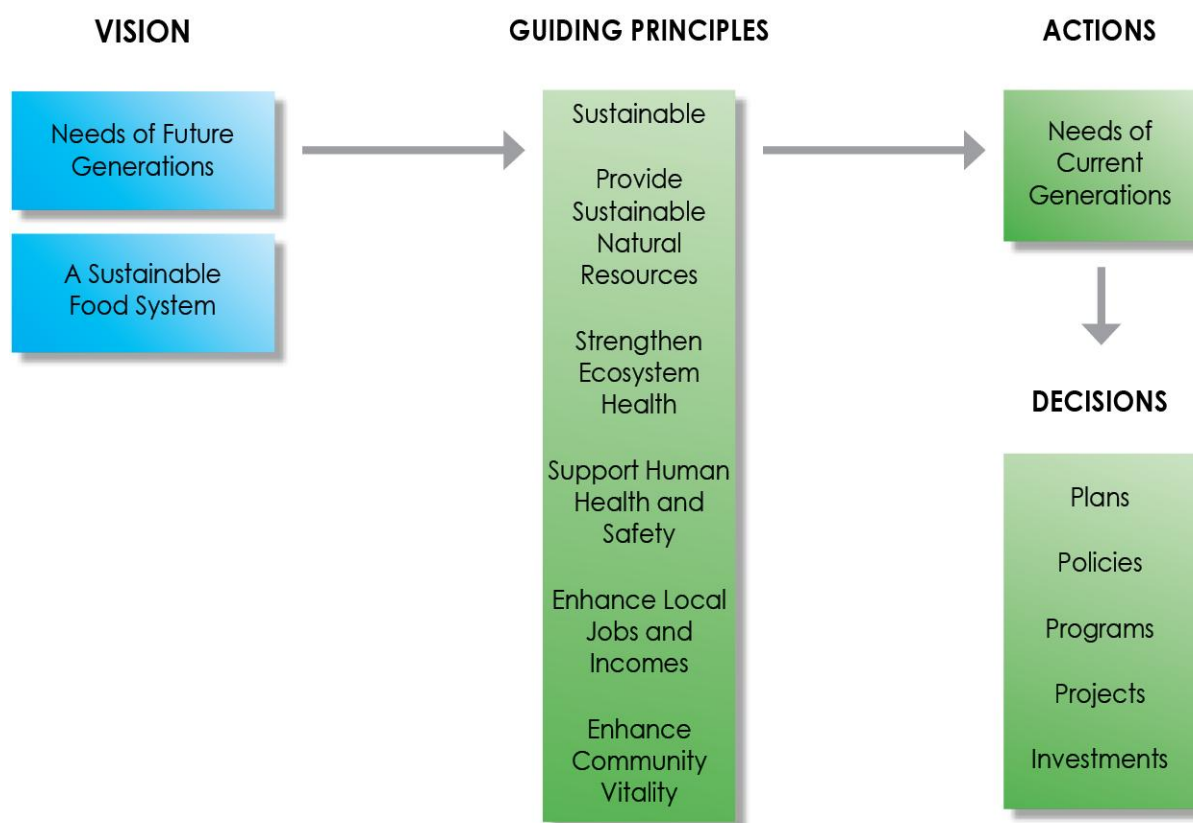
## **Sustainability**

Sustainability has many definitions addressed to different scales of human activity and relationships to economies and the environment. This project considers three definitions of sustainability, examines their common elements, and develops a synthesis. They include the Brundtland Commission definition, the Triple Bottom Line (TBL) and the Natural Step (TNS). These three concepts of sustainability are widely used in the Portland region by public, private, and non-profit organizations. To date we have found limited information that they have been systematically applied to foodshed research and education. The three definitions include several common themes that appear to be useful to foodshed planning and growers as they consider how sustainability impacts their strategies and operations.

These three frameworks can be integrated into a single synthesis that provides general guidance to all major elements of the foodshed economy – production, processing,

distribution and consumption. Our recommended sustainability framework for foodshed sustainability is illustrated in Figure 2-2. The three major elements of the framework include a vision of a sustainable food system that incorporates the needs of future generations (both human and other life forms), a sustainability filter based on guiding principles (derived from the Brundtland Commission, TBL, and TNS) and actions taken today to improve the functioning of the regional food economy focused on the needs of growers and current generations.

**Figure 2-2. Sustainability Framework Applied to Urban Foodsheds**



A few examples of how the sustainability vision and guiding principles apply to agriculture follow:

- Sustainable food systems focus on the needs of both current and future generations (Brundtland Commission). For example, they enhance soil fertility, encourage farmland preservation and protection, improve economic viability of growers, and support family ownership succession.

- Focus on sustainable use of renewable natural resources (The Natural Step). For example, use biomass or wind power for energy production, implement rainwater harvesting as a water source, develop farm related carbon and ecosystem service markets.
- Focus on enhancing ecological system functions (The Natural Step). For example, protect and restore stream banks, enhance biodiversity, and plant native plant hedge rows.
- Avoid and be cautious with toxics (The Natural Step)<sup>2</sup>. For example, reduce the use of toxic chemicals and eliminate the use of bio-accumulating toxins.
- Focus on the benefits to individuals and families (The Natural Step). For example, develop diverse and stable farm incomes, provide safe working environments, provide fair pay for farm workers, and provide clean and sanitary housing for farm workers.
- Focus on benefits to communities by supporting farmers markets and community gardens as community gathering places; supporting local farm purchases by institutions and local markets; supporting demonstration and community farms; and improving farm events and agricultural tourism (Triple Bottom Line).
- Achieve benefits to ecology, economy and society at every scale. (Triple Bottom Line)

## Foodshed Economy

The foodshed economy refers to the flow of resources from consumers through intermediate handlers to producers for food ; it also refers to the flow of resources from farmers to other food system actors such as suppliers for the purpose of growing food and creating food products. Food system actors can pursue four key economic goals to strengthen the regional foodshed economy, improve the flow of resources to the region, and support agricultural producers. These goals include the following:

- Strengthen the foodshed civic ecology;
- Increase exports (traded sector);
- Accelerate import substitution; and
- Increase profits derived by producers as they sell for export and locally.

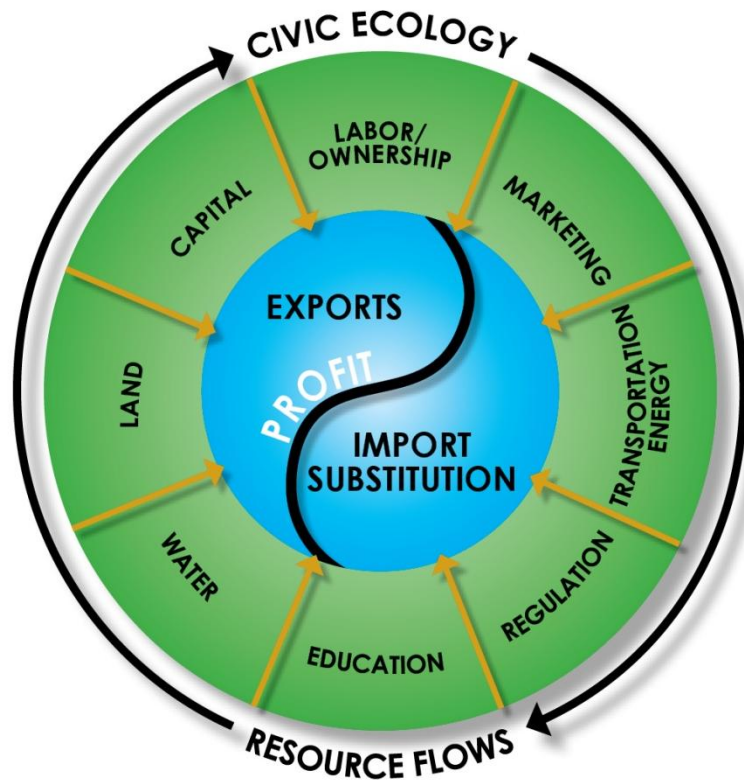
Figure 2-3 illustrates the relationships among these four economic development goals.

---

<sup>2</sup> Traditionally the use of toxics has been seen focused on efficiency (using fewer toxics). William McDonough and Michael Braungart in *Cradle to Cradle*, propose focusing not just avoiding the use of toxics but replacing these substance with materials that are essentially organic fertilizers (e.g., producing the bi o-degradable plastic tub made from corn). This application of “eco-effectiveness” is closely related to the relatively new science of green chemistry and sustainable materials science.



Figure 2-3. Economic Concepts



### Strengthen Civic Ecology

One approach to realizing a more viable regional foodshed economy is the application of Civic Ecology: an integrated web of energy, resources, goods, services, capital, and information flows that animate communities, institutions, cities, and regions. According to Tim Smith, FAICP, AIA, of SERA Architects, “Many communities and institutions have begun to realize that attaining sustainability requires careful attention to planning, constructing, and managing a comprehensive framework of community systems.” (Tim Smith, 2012).

Civic Ecology resources include both the “hardware” (roads, buildings, etc.) and “software” (social capital, civic organizations, etc.) of a community. Civic ecology methods have been applied already in Damascus, Oregon as part of the comprehensive planning process. When applied to the regional food system, the “hardware” may be comprised of resources such as land, water, transportation and energy. Information, services and other “software” systems may include marketing, regulations, capital, labor and education.

## **Expand Exports**

Exports of food and food products are an important, even critical, part of the regional foodshed economy. Currently, at least 90 percent of food crops produced in the Portland region is exported. Advances that expand exports can potentially grow profits for local producers. Expanding exports can improve productivity by increasing the scale of individual farms or the entire agricultural industry. Increased exports might also impact factors such as greenhouse gas impacts, the availability of federal incentives and supports, and the clustering of related companies to support the supply chains for both exports and import substitution.

## **Accelerate Import Substitution**

The import substitution approach to economic development substitutes externally (imported) produced goods and services, especially basic necessities such as energy, food, and water, with locally produced ones (Avik Basu 2005). By doing so, local communities can put their money to work re-circulating within its boundaries. This approach takes the form of “buy local” campaigns, support for smaller local businesses that produce locally and localization of the supply chains of national and international distributors of food. The concept of import substitution in the food system is relatively straightforward.

## **Increase Producer Profits**

A central concept of foodshed economic development is to increase incomes and profit for local growers. Profits might be strengthened by exporting more, selling more in the local and regional foodshed markets, adding value to products (e.g., making jam from fruit), and by reducing costs of the key inputs.

This conceptual framework of the foodshed economy focuses on strengthening the availability and linkages of resource flow needed for local food production (Civic Ecology) to strengthen exports (import capital from outside the region) and substitute locally produced food for imports (to reduce the outflow of capital and circulate more wealth regionally). Civic Ecology, exports, and import substitution work in tandem to increase wealth and the economic viability of growers in the region.

For example, a small grower might initially focus on fresh berry production for farmers markets, then form a CSA, sell to institutions and regional markets through a distributor such as the Organically Grown Company. At some point the grower may decide to make jam, dried fruit, nutraceuticals<sup>3</sup> or other processed products. New growing techniques, such as stormwater harvesting, might be added to grow more products. Processing may allow

---

<sup>3</sup> Any substance that is a food or part of a food and provides medical or health benefits, American Nutraceutical Association.

part of the production to be exported. This approach is discussed further in the Opportunities and Strategies section of the report.

In pursuing these concepts of the regional foodshed economy there may be tradeoffs between producing more food for exports and strategies to substitute regionally-produced food for food that is currently imported. Land, water, labor and other resources for farming may be limited, so growers will need to determine their best strategies for success and use financial analysis tools (see Chapter 5) to determine their relative impact on productivity.

## Summary : Project scope and key definitions

The scope of this project can therefore be defined as follows:

**Geography.** The foodshed includes Columbia, Clackamas, Multnomah, Washington and Yamhill Counties and the systems that support their food supply.

**Actors.** While we are concerned about how all food system actors affect the outcomes or products of the food system, this project focuses on producers and their need to be productive and economically viable while farming sustainably.

**Products:** While we are concerned about all of the outputs, including positive and negative environmental products and societal products, we focus on the ability of producers and processors to grow, process, and distribute food and food products.

**Sustainability:** This project employs a definition of sustainability that incorporates a vision for the needs of future generations (both human and other life forms), a sustainability filter based on guiding principles (derived from the Brundtland Commission, TBL, and TNS) and actions taken today to improve the functioning of the regional food economy focused on the needs of growers and current generations.

**Foodshed Economy:** The foodshed economy refers to the flow of resources from consumers through intermediate handlers to producers for food and to the flow of resources from farmers to other food system actors such as suppliers. Improving the economic sustainability of the foodshed economy means improving the flow of resources to the region by improving civic ecology, increasing exports, accelerating import substitution and increasing producer profits.



August 2012

# Chapter 3

## Current Situation Analysis

This chapter offers a Current Situation Analysis, drawing from information provided in Appendixes 2 and 3. It focuses on **three key questions** that provide context for the development of a toolkit:

- How sustainable is the Portland Vancouver region's food system?
- How does urbanization affect the sustainability of the system?
- What factors (barriers and opportunities) affect the ability of farmers, other producers, and policy makers to create a more sustainable foodshed?

By answering these questions, we provide the basis for determining what kinds of tools would be most useful to farmers, other producers, and policy makers in creating a more sustainable food system.

### Trends Affecting the Portland Metropolitan Foodshed

This section describes trends that affect food sustainability around the globe and specifically in the Portland Metropolitan region. *Appendix 2: Literature Review I – Foodshed Approaches, Case Studies, and Key issues* contains a more complete review and documentation of these trends.

#### **Global and National Trends**

Food shortages now are a global phenomenon. The World Watch Institute's 2011 *State of the World Report* indicates there are 925 million undernourished people worldwide. This is especially challenging in sub-Saharan Africa. According to the report, several factors are putting pressure on the global food system:

- Global warming. Climate change is resulting in rising temperatures with almost every year in the past century.
- Water shortages. Pressures on water supplies in arid environments are having a dramatic impact on food production (e.g., major drought in Russia).
- Growing populations. There are an estimated 80 million new mouths to feed every year.

- Increasing food prices. The global food price index jumped 32 percent in the second half of 2010 – the highest jump ever recorded.
- Use of grains for sweeteners, motor fuels and livestock feed. More food grains are used to produce motor fuels and to feed animals reducing their caloric availability for human consumption (World Watch Institute 2011).

At the same time, there is another challenge – or is it an opportunity? According to United Nation Food and Agriculture Organization (FAO) approximately 40 percent of all food produced is wasted while stored, transported, processing and packed. This system failure leaves millions of people hungry worldwide (Sustainable Business.com 2011).

These trends have resulted in increased prices for U.S.-produced commodities (wheat, soy, corn etc.) in a global market resulting in increased farm gate receipts for large commodity growers. At the same time the US government continues to provide large subsidies for commodities and fewer incentives for fresh and local foods for regional markets.

During the 2008-2009 period organic agriculture expanded globally to 37.2 million hectares, a 150 percent increase in one year. In the U.S., organic produce is the fastest growing segment of food production. According to the USDA, organic foods now occupy prominent shelf space in the produce and dairy aisles of most mainstream U.S. food retailers, as offerings of organic meats, eggs, breads, grains and beverages have increased. The marketing boom has pushed supermarkets, club stores, big-box stores and other food retailers to carry organic products. Many retailers have introduced lines of organic private-label products and manufacturers continue to introduce large numbers of new organic products (USDA ERS Report 2009).

Local communities are taking note of these trends and developing responses. In North America several metropolitan areas, including New York, Vancouver, B.C., Minneapolis and San Francisco, have undertaken studies or developed strategies to strengthen their metropolitan food economies. It is estimated that every metropolitan area in the U.S. is importing millions, if not billions of dollars a year in food from outside their regions. This scale of imports into each region is getting the attention of local officials as they look to revitalize there regional farm economies and promote more healthy foods.

This movement to support local food systems is documented in a new report of the Union of Concerned Scientists (Union of Concerned Scientists 2011). Major findings include:

- Local food systems are expanding rapidly in the United States.
- The economic, environmental, and health impacts of these food systems depend on how consumers' purchasing decisions are altered. For example, local fruits and vegetable are generally healthier than processed foods.

- Local and regional food systems can have positive impacts on regional economies. Local direct purchases of food and production supplies can create thousands of new jobs.
- Local and regional food systems have scalability challenges. Local institutions, processing infrastructure or regulations may limit the potential of local and regional food sales.

### ***Trends affecting Oregon and the Portland Metropolitan area***

National and global trends affect the Portland metropolitan region. Recent studies and news reports have highlighted two unintended consequences of the current food system in the Portland region—hunger and obesity. Oregon ranks third in the nation in hunger (Daily Beast 2009) while over 25 percent of our people are obese (Trust for America’s Health 2011). Getting local and healthy food to people from local farmers in a sustainable manner can address these challenges simultaneously – probably with large benefits to the region. An important health goal of the foodshed economy is to produce more marketable/profitable fruits, vegetables, legumes, and grains all of which are generally beneficial to human health.

Two major efforts are underway in the region to address these challenges. Multnomah County has developed a comprehensive plan for food addressing local food production, healthy eating, social equity and economic vitality through a widespread community engagement process (see: <http://www.multnomahfood.org/about>). Clackamas County is developing an agricultural investment plan designed to support a vital agricultural economy local focused on local food and other farm products such as Christmas trees and nursery plants), biomass energy production, agricultural tourism, and equine development. Both of these efforts indicate that local governments are interested in seeing the local food economy thrive.

### **Economic Profile of the Portland Metropolitan FoodShed**

We conducted an extensive review of the economy of the Portland Metropolitan foodshed; the full report is contained in Appendix 3. The following points summarize the most significant findings from that review.

#### ***Farms and farmers in Oregon are diverse.***

- Oregon is one of the strongest agricultural states in the nation in terms of length of growing season, quality of agricultural soils, and the diversity and quantity of food crops that are produced.

- Oregon has less industrialized agriculture than other states because of the diversity of farm products, size of farms, with high production of specialty crops, such as fruits, vegetables, tree nuts, dried fruits and nursery crops.
- Small Oregon farming operations or adaptive farms tend to have average gross sales per acre that are about twice as high as the overall farm average.
- Oregon has a strong base of multi-generational family farms and emerging farmers, such as immigrants and a younger generation with a renewed interest in farming. However, farms owned by young farmers are still rare—85% of all farms in Oregon are owned by farmers over the age of 45 and 28 percent are owned by farmers 65 and over.

***Oregon food markets are also diversifying into new markets that present significant opportunity.***

- Between 2002 and 2007, the number of Oregon farms in organic production increased from 515 to 933 and from 1.3% of total farms to 2.4%.
- Between 2002 and 2007, the market value of Oregon's organic farm sales rose from about \$9.9 million to \$88.4 million or from 0.3% of total farm sales to 1.9%.
- According to the Oregon Farm Bureau, three quarters of what is produced in Oregon is exported to other states and overseas with one quarter sold in Oregon.
- Regional foodshed farmers spend \$740 million per year (1969-2009 average) to raise their crops, \$475 million of which is spent buying inputs sourced outside the region (Bureau of Economic Analysis 2009).
- There is an opportunity to develop Oregon's regional food infrastructure for storage, processing, marketing and distribution that supports the community food system movement, especially for small and mid-sized growers.
- Direct farmer-to-consumer sales is a relatively small part of the regional foodshed economy at \$12 million. This is estimated to be 1.5 percent of farm sales and 0.25 percent of the region's consumer market. A 10 percent substitution of locally produced food and for imports would potentially generate \$430 million in local income.



- Portland metropolitan agriculture is an important industrial cluster in the region's economy comprising nine percent of total regional employment (Brookings Institution 2011).
- Agri-tourism is popular and has potential to provide additional income to improve economic sustainability for farmers.

### ***Oregon Consumers can benefit from a more sustainable food system.***

- The region's consumers spend more than \$4.3 billion buying food sourced outside the Portland region. Thus, total loss to the region is approximately \$4.7 billion of potential wealth each year (see caveats below) (Ken Meter 2011). This loss amounts to nearly five times the value of all farm products now produced in the region. The value of imported food is greater than that of the entire food production of the State of Oregon.
- Oregon currently ranks second among all states for the number of people who are forced to skip or reduce the size of their meals because they cannot afford enough food (termed very low food security).
- Portland metropolitan residents, organizations and governments value agriculture and locally-grown food.

### ***Oregon farm and food Policy needs improvement.***

- While Oregon's land use laws have protected agricultural acreage, they may also have constrained the development of adaptive farms and agricultural tourism.
- There are significant land use, policy, economic and other barriers to the long-term success of local growers.
- Many local governments and institutions are exploring opportunities to buy local food products.

### ***There are significant gaps in the available literature.***

- It's very difficult to find reliable estimates of total regional imports and exports.
- There are few sources of reliable economic multipliers for various parts of the Portland metropolitan foodshed economy.

- We also have no source of detailed needs and issues faced by local growers and strategies to diversify their incomes.
- The types, certifications, and economic costs and benefits of sustainable farming methods used in local agriculture are not clearly identified.
- The economic impact/opportunity of food waste has not been quantified.
- Information on the regional food processing industry is limited.

## Barriers and Challenges Faced by Urban Influenced Farmers

Based on the literature review contained in Appendix 2 and the economic profile contained in Appendix 3 and summarized above, we developed an outreach strategy to test our hypotheses about key barriers, challenges and opportunities for urban influenced farmers serving the Portland Metropolitan region. We reached out to more than 100 operators of small and medium-sized farms as well as aspiring farmers. Our outreach efforts included:

- In-person interviews completed with five core farmers from the Portland regional foodshed.
- On-line survey taken by 50 local farmers and producers.
- On-line survey taken by eight individuals interested in farming.
- Survey conducted at the North Willamette Horticulture Society Meeting taken by 65 growers.

The text of the on-line survey is found in Appendix 4. It included the following sections:

**General Information** included questions about the farm's sales volume, products, and ownership .

**Marketing Information** included questions about customers, markets and potential to expand them

**Operations information** included questions about farm size, labor force, and potential and barriers to expanding capacity.

**Regulatory information**, included questions<sup>3-6</sup> about regulatory barriers and the costs and benefits of certification regimes.

The in-person interviews followed the same general outline; however, because the interview was conducted in person, we were able to record more detailed impressions of the farmers' thoughts about barriers, challenges and opportunities.

This section summarizes the results of this data collection effort.

## **Farmer Profile**

Survey respondents farm more than 4,200 acres, with individual farms ranging from zero to 850 acres, averaging 53 acres and median farm size of six acres. Approximately 79 percent lease portions of their farmed land. The majority of these farms are located in Multnomah, Clackamas and Yamhill counties. The average age of principal farm owners is approximately 47 years with a median age of 46. Annual gross sales from this land ranged from \$0 (mostly farms that began operation in 2010) to \$1.6 million with median gross farm sales of \$22,000. The primary source of gross farm income for respondents is edible crops (55), followed by value added and processing activities, livestock, and non-edible crops.

## **Markets and Customers**

Survey respondents primarily communicate with their customers in person via the Internet or by phone. They market and sell most of their farm products through farmers markets, CSAs, and on-site or to the local community. Other products are sold to restaurants and wholesalers. Nearly all survey respondents target the Portland Metro Area market and plan to continue to do so. Farmers who travel to sell their products traverse an average of 46 and median of 30 miles to their markets. Barriers to effectively market products include time, access to capital, a lack of marketing expertise and regulations. Nearly 60 percent would welcome marketing assistance.

## **Farm Operations**

Farmers who completed the survey have an average of one other family member working on farming operations full-time and 1.4 family members working part-time. An average of seven (median = one) additional non-family employees also work on farming operations. More than 83 percent of respondents indicate that their labor pool is both stable and adequately skilled. More than 88 percent of respondents use local employees and nearly 60 percent use migrant workers.

More than 56 percent of respondents generate all of their sales from organic production. A majority of farms require non-farm supplemental income to stay in business. More than 80 percent of respondents would like to expand the output and revenues of their farms and reduce costs. Approximately 50 percent would like to increase their land base. Nearly sixty percent of respondents would be interested in joining a cooperative or similar organization.

## **Regulatory information**

Respondents face a number of barriers and challenges, with 77% stating they have conflicts in their ability to produce their products in a safe and efficient manner, mainly due to pesticide/herbicide drift from neighboring farms and government regulation. The majority of conflicts arise with local governments (47%) and non-farm neighbors (41%). Regulatory

barriers include certification systems (53%), land use permitting (53%), water rights and supply (45%), labor laws (35%), farmers markets (33%) and the tax structure (20%).

## Gaps, Barriers and Challenges

The following gaps, barriers and challenges were identified through research and verified through outreach to producers. They are influenced by public policy and market forces which affect the availability, quality and timeliness of the resources growers need to be successful. Quotes in text boxes are taken from interviews with regional farmers.

### Capital

Many farmers identify the need for capital sources as a primary need for farm improvement and expansion. Capital is the primary need for survey respondents to increase their capacity to generate new markets, increase revenues and reduce costs. It also is identified as the second biggest barrier to production. Capital is needed for various purposes including but not limited to land to expand farm operations, production or processing equipment, season-extending materials, meeting requirements (e.g. food safety), water/energy/resource/land conservation measures, and to finance start-up operations.

*“I would like to have a new building and rainwater collection for year-round operations, but capital is a barrier. Capital is also a barrier to getting the equipment needed to handling composting operations.”*

### Land

Most farmers both own and lease land. Forty-five percent of survey respondents would like to increase their land base in order to expand their operations and increase revenue. Barriers to land base expansion include a lack of capital, conflicts with neighbors, urban growth and related uncertainties, and conflicting adjacent land uses.

*“The location of my property is problematic. Creeping development and farming on both sides of Highway 212 causes too many problems. I get complaints from property owners about existing operations. ODOT won’t let me cross the highway with farm equipment. Also, the land is very rocky, causing lots of damage to equipment.”*

## Water

Water access and related costs are an issue for many farmers. Water is a critical factor in production and farmers often do not control sufficient water sources to meet their needs. More than 40% of survey respondents identify water rights and supply as a regulatory barrier they face. Water rights are often reserved for residential, commercial and industrial uses with farmers being the last in line. Municipal water is expensive to use for irrigation due to pricing structures (price increases as water use increases). Rainwater harvesting systems and equipment are not standardized and are expensive. Drip irrigation and other efficiency systems are also expensive. Black and grey water systems are not widely permitted or used.

*“Water rights and access prevent me from doing more on my property. Paying for city water to irrigate the farm is very expensive. I would rather have an irrigation well, but am located in an area with limited groundwater that is reserved for domestic use. City water rates are structured so that the more you use, the more they charge you.”*

## Labor

A majority of survey respondents indicate the labor force is stable (77%) and adequately skilled (82%). Farmers use both local and migrant laborers. Volunteers also help comprise the labor pool although they must come through a certified educational program. Labor challenges include inspections, hygiene and safety, workman’s compensation and unemployment claims, access to/provision of affordable housing, documentation and the future of guest worker programs.

*“We have 20 full-time employees; 80-100 at harvest time. Most full-time employees are from Mexico. The wages paid allow them to send money home to family to build a home and live comfortably. Most of them have worked for us for at least 10 and up to 40 years... We do not have a problem finding workers with a 60-70% return rate.”*

*“I could have a more robust education program if I could have actual interns. I have to comply with wage laws but a lot of people want to volunteer and learn, but it’s illegal for to do that unless through a formal educational program.”*

## ***Ownership and Succession Management***

While the average age of principal farmer owners responding to the survey is 48, the average for all farmers in Oregon is 57. This indicates that there will be a major transfer of farm ownership in the next twenty years. Many farmers plan to transfer land/farm ownership to a family member (53%), family trust (27%), co-worker or employee (13%) or land trust (7%). Sixty-eight percent of survey respondents do not have land/farm transference plans formalized in a legal document, and 82 percent indicate they need assistance with legal and tax issues.

*“I would like to leave a portion of the farm as a testament to parents and family in Damascus. This would allow my son to continue farming if he desires and continue our small-scale sustainable farming heritage. I have enough financial support to retire, by selling some land, if need be.”*

## ***Education and Management Expertise***

Many farmers get into farming because of their love of the process and have little business experience. There also is a group of new farmers who have little experience with the industry. Many farmers would like to receive education on farm business related topics such as business planning, management, marketing and finance to help them become more profitable. In a survey of eight of these new farmers, half of them indicate a need for education to help overcome challenges of operating a farm as a business. Farmers face a variety of challenges in accessing educational services. Their work schedules often include 80+ hour weeks with little time for other pursuits. Oregon State University (OSU) offers many excellent courses but they may not be presented in a way that works best for a diverse set of urban, market-oriented farmers and may be focused more on the techniques of farming rather than the business of farming. Community colleges are not currently focused on the regional food economy and have limited offerings in horticulture and biology.

*“Education and package of crop marketing resources are opportunities to grow the regional food market. We need education on crop-income diversification strategies; systematic connecting to customers; and expanding sales of local food in big markets.”*

*“I could use some help with using financial and planning tools. Would love to sit down with someone who could show me how to use excel and other planning tools more effectively. Would like to have an integrated system for planning and recordkeeping that integrates orders, invoices and to be picked list and harvest record.”*

## **Regulations and Requirements**

Nearly 70% of survey respondents require supplemental income to remain economically viable. Regulation is identified as one of the biggest barriers to generating new markets, increasing revenues and reducing costs. Restrictions against on-farm accessory uses such as agricultural tourism facilities, farm stands, parking lots, bed and breakfast facilities, integrated production facilities (e.g., organic fertilizers), urban farm residential developments (housing), and processing and sales facilities limit farmers’ ability to make a living solely from their farm operations.

*“I would like to conduct sustainable agriculture tours and have a farm restaurant, community kitchen, concert area and community garden on my property. Regulatory barriers are the issue.”*

## **Transportation/Energy**

Farmers who travel to reach their markets trek an average of 32.5 miles. This especially affects small growers who regularly attend multiple farmers markets. Several farmers indicate that they travel to up to five farmers markets per week. There is no coordinated farm to market transportation system for small growers with diverse markets. This also is a key issue for growers in the climate change debate. Several analyses indicate that complex and multiple trips to market increase the greenhouses gases (GHG) produced by farm vehicles. Some studies indicate that small farmers with diverse crops have higher greenhouse gas production than mass production farmers who ship to the region from overseas. ( Benjamin Champion 2007). Others such as a 2008 King County, WA study

showed that locally produced food crops are responsible for less greenhouse gas production than imported crops (Food Policy Council 2008).

*“It is difficult for me to travel to five to ten farmers markets every week. There has got to be a better way.”*

## **Marketing**

Farmers sell to a variety of markets, including CSAs, farmers markets, direct on-farm sales, restaurants, and wholesalers. They connect with their customers mostly through in-person marketing or via the Internet through farm websites, shared websites (Food Hub, Local Harvest) and Facebook. Nearly all survey respondents indicate their target market is the Portland Metro Area. Thirty-nine percent of survey respondents say they need assistance with marketing and connecting with customers. Desired services include websites, marketing, advertising and farm membership systems.

*“We need assistance with newspaper write-ups, advertising, and other ideas generated to connect with the consumer to let them know we exist and tell them about our value-added product and what makes it special.”*

## **OPPORTUNITIES AND STRATEGIES**

Based on data collected from farmers, the literature review and stakeholder interviews, we developed a preliminary list of opportunities for overcoming the gaps, barriers and challenges identified in the previous section, as well as potential tools and strategies to strengthen the Portland metropolitan food economy.

These strategies have significant potential to increase the stability and economic return of farming in the urban influenced area of the Portland metropolitan region.



## Export Expansion

Exports of food and food products will continue to be a major feature of the Oregon and regional food economy. State agricultural exports were estimated to be \$1.5 billion in 2008 with the largest exports being wheat at \$285 million, planting seeds at \$280 million, fruits and preparations at \$209 million, and vegetables and preparations at \$133 million (USDA 2009).

**Opportunity:** Increase exports from small and medium-sized farms through distributors such as Organically Grown Company, Aramark and other distributors.

**Potential benefits:** Increased income to the region and individual growers.

**Potential Tools and Strategies:** Regional producers and distributors need to know which crops or processed products have most potential for export. An on-line target market database is needed to detail the food products for export and the best ways to integrate them into distribution channels. New export distribution channels may be necessary.

## Import Substitution

Import substitution is an economic development strategy with major potential for the regional foodshed economy. The region currently consumes an estimated 1.5 percent regional farm sales.

**Opportunity:** If this amount was to increase to 20 percent of food regional food purchases this would put approximately \$940 million per year into the regional food economy – if exports stayed steady. This would provide significant economic benefit to the regional growers and more healthy food for consumers.

Another way to look at this is that the opportunity for the region is \$4.7 billion if all food currently imported from outside the region was locally produced, it would generate \$4.7 billion in food income. A more realistic target would aim for an increase of 10 percent per decade for the next twenty years. This action would generate, at a minimum, \$470 million in increased local economic activity assuming adequate capacity to increase production by that amount.

**Potential Tools and Strategies:** Regional growers need to know which products to target for production and processing that have a ready local market channel. An on-line target market database is needed to detail food products for local consumption and define the best ways to integrate them into the distribution channels. The Ecotrust Food Hub ([www.ecotrust.org/foodhub/](http://www.ecotrust.org/foodhub/)) can be strengthened and physical food hub studies should be considered, such as the proposed James Beard Public Market in Portland.

## ***Value Added Processing***

Value-added food products will continue to be a major feature of the regional food economy and the region has significant food processing expertise. Currently small scale processing locations such as USDA certified collective kitchens and small-medium meat processors do not appear to be adequate to the potential demand

**Opportunity:** Stimulate a regional infrastructure of small scale food processing facilities for small and medium growers to increase value of food produced in the region and potential for exports.

**Potential Tools and Strategies:** Develop a vision and action plan for a regional network of food processing facilities that serve small and medium sized growers based on global best practices.

## ***Improved Distribution***

**Findings:** A major challenge for small growers is to bring their produce and other products to market efficiently. Small growers serving farmers' market and other markets of regional food may have as many as ten different delivery locations a week. In addition, small growers do not necessarily have the farm practices (for quality and timing) to gain access to larger West Coast and global markets through food distribution companies such as Provista and Organically Grown Company.

**Opportunity:** Develop a distribution cooperative that help growers access markets more systematically and efficiently. Provide a focus for growers to improve the energy and time efficiency of their distribution process, provide information on supply and demand for products, shared pick-up and drop-off sites, and other techniques to reduce the cost of distribution.

**Potential Tools and Strategies:** Develop a vision of a regional network for farm product distribution to serve small and medium sized growers based on best practices in other regions.

## ***Better Access to Healthy Local Food for Consumers***

As described in the Import Substitution section, Oregon consumes a very small percentage of the food that is grown in this region.

**Opportunity:** If this amount was to increase to 20 percent of food regional food purchases this would put approximately 900 million per year into the regional food economy – if exports stayed steady. This would provide significant economic benefit to the regional growers and more healthy food for consumers. Among the key opportunities is the possibility of focusing on addressing the twin challenges in Oregon of obesity and hunger

**Potential Tools and Strategies:** Develop a specific import substitution strategy that builds on expansion of small and medium sized growers in the region and increases their access to markets. Develop cross-sector approach—engaging public, private, non-profit, philanthropic, institutional and communities of faith-- to creating economic development opportunities while serving consumers with healthy food.

### **Regional Food Cluster Development**

At the current time the regional food economy is not a selected cluster for focus by regional economic development organizations, such as Greater Portland, Inc. and the Portland Development Commission. However, both Clackamas and Multnomah counties have made foodshed economic development important economic development goals. In addition, Metro and most local governments continue to focus on protection of prime productive farmland and not on the economic vitality of regional farming.

**Opportunity:** In order to maximize the potential and linkages within the regional foodshed economy regional public agencies need to identify the foodshed economic cluster as an economic development focus. Linkages among the elements of the food economic system need to more clearly understood.

**Potential Tools and Strategies:** Development of a foodshed economic cluster strategy and a regional civic ecology inventory, analysis, plan, and key performance indicators can help define current and potential linkages in the system to benefit producers, processors, distributors and consumers.

### **Improving Access to Capital**

Farmers identify the need for capital sources as a primary need for farm improvement and expansion.

**Opportunity:** Innovative approaches to providing capital to growers and information on capital sources will allow expansion and diversification of the farm economy. Increased capital access will result in grower access to land, water, labor and specialized equipment.

**Potential Tools and Strategies:** Improve access to existing and potential financial resources and intermediaries. Potential approaches include: pension fund investments, agricultural development banks, agricultural venture funds, mutual funds, cooperative private placements, farmland trusts and cooperative forms of ownership. Technical assistance tools include education and training packages and on-line databases.

## ***Making Land available for Growing Food***

Many farmers would like to increase their land base but cannot due to a lack of capital, conflicts with neighbors, urban growth and related uncertainties, conflicting adjacent land uses.

**Opportunity:** Because the region has a large amount of productive land available for food production or more intensive production there are several land use opportunities. These include, where economically viable: transition crops from nursery stocks and Christmas trees to food on prime land, produce food on marginal land, use urban transition land for food production, use urban agriculture strategies in urban development, employment lands and open space, and provide for distributed production sites in urban and suburban areas.

**Potential Tools and Strategies:** Expanded right to farm statutes, changes to model local ordinances, urban farming ordinances and plans for distributed site farming in the urban and suburban land uses.

## ***Improving Water Resources***

Water is a critical factor in production and farmers often do not control sufficient water sources to meet their needs.

**Opportunity:** The region is seen as water rich. Focusing on efficient (lower) and effective (multiple benefits) water use is a key opportunity to expand regional foodshed agriculture.

**Potential Tools and Strategies:** A total water cycle plan for regional agriculture would provide a comprehensive analysis of supply and demand and how efficiency and effectiveness strategies can provide more water for the foodshed. Plan elements would include all water sources (rain, surface, well, surface and stream water), storage, distribution, consumption and reuse (wastewater treatment systems). For example, Oregon receives rain seasonally in the winter and spring, while the prime growing season in summer and early fall is usually dry. Harvesting and storing rainwater can increase water available to growers.

## ***Strengthening the Food System Labor Force***

Labor issues include inspections, hygiene and safety, workers compensation and unemployment claims, access to/provision of affordable housing, documentation and the future of guest worker programs.

**Opportunity:** Develop tools to provide a more stable, educated and trained labor force.

**Potential Tools and Strategies:** Training packages for existing workers especially in safety and hygiene. Expanding of the guest worker program. Support development of safe and sanitary housing communities on farms and in agricultural communities as well as programs

that focus on the health and educational needs of children.<sup>4</sup> In addition, there may also be a need to examine the role way labor inspections are conducted.

## ***Education and Management***

Many farmers are unable to access farm business education services, including business planning, management, marketing, and finance. Currently there are few academic programs focused on urban foodshed agriculture, business operations, and the special needs of these growers.

**Opportunity:** Develop a linked set of programs tailored to the needs of the emerging metropolitan farm economy.

**Potential Tools and Strategies:** Oregon State University and Portland State University could work with one or more of the region's three community college systems to develop a set of linked programs or courses to meet the needs of the regional foodshed growers. Ideally, there would be an integrated on-line and course work curriculum available for different types of growers.

## ***Regulations and Requirements***

Most farms require supplemental income to remain economically viable. Regulation is identified as one of the biggest barriers to generating new diverse on farmer and related income streams.

**Opportunity:** While maintaining a strong land use protections for farmland there are opportunities to change land use laws and regulations to accommodate a greater range of grower supplemental income opportunities.

**Potential Tools and Strategies:** Develop a model farm economy land use planning and regulatory framework designed to strengthen farm-related income and farm viability addressing accessory uses, farm stands, agri-tourism, direct sales, u-pick, fertilizer production, events and other potential sources of income. Farm-related building regulations may need to be modified to accommodate four-season growing structures such as large scale greenhouses.

## ***Transportation***

Farmers who travel to reach their markets travel an average of 32.5 miles. There is no coordinated farm to market transportation system for small growers with diverse markets.

---

<sup>4</sup> The Farmworkers Housing Development Corporation in Woodburn develops housing communities with support services for farm workers, community gardens, education and training programs. Their work has resulted in a 90 percent high school graduation rate for students living in their communities. There are opportunities for growers to partner with FHDC and other effective organizations to create on-farm and local communities for farmworkers and to develop related farm ownership succession and economic opportunity strategies.

**Opportunity:** There appears to be an opportunity to reduce costs to growers and reduce GHG production from farm-to-market trips.

**Potential Tools and Strategies:** Several strategies should be considered. A cooperative transportation system that would be designed specifically to reduce the cost and greenhouse gas (GHG) impacts of farm to market trips. Another approach would be to develop a self-managed and web based system, possibly through the Ecotrust Food Hub, to allow growers to share transportation to market. Another possibility is transportable processing services, such as mobile slaughterhouses.

## **Energy**

Growers use a significant amount of energy in the form of motor fuels, electricity and natural gas and these supplies are getting more expensive over time.

**Opportunity:** There appears to be opportunities for growers to conserve energy and substitute bio fuels, small-scale hydro, solar and wind energy for current non-renewable supplies.

**Potential Tools and Strategies:** Several strategies should be considered. On farm energy conservation and renewable production strategies should become a focus on innovation by Cooperative Extension and the Soil Conservation Districts. At this point in time demonstration and prototype development can produce replicable projects. Adjoining growers might also work together in an Agricultural Energy District (like an urban ecodistrict) to share costs and benefits of larger scale renewable systems.

## **Marketing**

Many farmers would like marketing support, such as assistance with websites, marketing, advertising and farm membership systems.

**Opportunity:** Increase marketing capacity through education and regional branding.

**Potential Tools and Strategies:** Develop a marketing educational and low cost consulting or peer-to-peer service for growers to build their marketing capability. Develop a regional brand so consumers can determine local sourcing.

## **Ownership/Succession Management**

Many farmers plan to transfer land/farm ownership but do not have land/farm transference plans formalized in a legal document.

**Opportunity:** Provide easy access to information and educational programs on alternatives for succession planning and related legal and financial tools.

**Potential Tools and Strategies:** Develop on-line and educational courses and a handbook on succession planning including relatives, employees (including farm labor), cooperatives, land trusts, bank trusts, institutional ownership, public agencies and other ownerships.

## Summary and Conclusions

Given the challenges and opportunities facing farmers in the Portland region, we believe that the food system can benefit from the development of tools to address a number of the barriers and opportunities described above. In chapter 4, we describe how we developed and organized a set of tools for farmers and producers and local policy makers and planners.



August 2012



# Chapter 4

## Toolkit Components

Farmers working in urban influenced areas face a number of challenges and opportunities - that may be different from those faced by farmers working in strictly rural settings. In chapter 3 we reviewed several kinds of evidence, including existing literature and interviews and surveys with farmers and aspiring farmers serving the Portland metropolitan region. We used this evidence to develop a list of barriers and opportunities, and strategies described at the conclusion to Chapter 3.

In this chapter, we describe how we developed, evaluated and revised tools for farmers and producers and policy makers and planners working in urban influenced areas. Paper copies of the tools are provided in Appendix 6. The tools are also found on line at the project web site <http://smallfarms.oregonstate.edu/pdx-foodshed>.

### Tool Development Process

We started with the list at the end of Chapter 3 and developed draft tools in two categories: tools for farmers/producers, policy makers and planners. We conducted extensive literature reviews looking for practices and evaluations of practices and other tools that might cover the same issues. We drafted the set of tools and then put the draft tools on our web site and asked a number of farmers and policy makers to evaluate the tools.

In order to have a thorough review of our tools for farmers we reached out to our local partners that work directly with farmers daily. Once the draft toolkit was complete, stakeholders participated in follow-up interviews or were directed to the website to review and comment on the tools. As part of an in-depth case study in Damascus, producers, consumers and planners/policy makers reviewed and commented on the tools. We sent emails for distribution to regional CSA and farmers markets networks directing them to the website to review the tools. OSU also directed producers to the website to review the tools. In addition, a joint meeting was held with Clackamas Agricultural Investment Management Team and Multnomah Counties to review the draft tools. Finally a review session was held with six Metro staff members to review the tools.

The following groups assisted us with outreach for the Farmer Producer Toolkit:

- OSU Small Farms program
- Multnomah County Beginning Urban Farmer Apprenticeship program
- Friends of Family Farmers

We received 38 completed responses from farmers from around the Metro area in a three week period in June. We used this feedback to make revisions to the tools. The results of the tool feedback is provided in Appendix 7.

The timeline for farmer tool review outreach was as follows:

- Farmer Survey to gather input on the draft tools was drafted at the end of April 2012.
- Outreach to Partners for help with responses occurred in May.
- We revised the of the tools and layout of the web site based on feedback from partners at the end of May-beginning of June.
- We asked for tool review/survey responses-during June.
- We analyzed the responses and made final revisions to the tools during July 2012.

The tools for policy makers and planners were identified through one round of interviews with key stakeholders and used the on line survey results from approximately 100 producers to help shape the tools. We conducted a detailed literature review and had conversations with officials at Metro, Clackamas County, and City of Damascus to further guide toolkit development. We had detailed discussions with Clackamas County officials leading development of the Agricultural Investment Plan, that closely parallels the tools developed in the SARE project. We also used the results of a survey of more than 1,000 Clackamas County agricultural producers as a source of tools recommendations.

## Toolkit components

The toolkit contains 23 tools. Table 4-1 lists the tools in alphabetical order and notes their target audience for each of the tools. As you can see, there is overlap between the tools targeted at producers and those targeted at planners and policy makers.

**Table 4-1. Target audiences for the Portland Metropolitan Foodshed Toolkit**

<b>Tool</b>	<b>Policy Makers/Local Planners</b>	<b>Producer</b>	<b>Consumer</b>
AgTools		●	
Access to Healthy Food	●		●
Accessing Capital		●	
Agricultural Permitting in Urban Zones	●	●	
Business Planning		●	
Certification		●	
Community Design	●		
Diversifying Agricultural Activities in Urban Zones	●	●	
Energy Efficiency and Renewables	●	●	
Exports	●		
Farm Management Workshops		●	
Farmworker Housing	●	●	
Farmers Markets	●	●	●
Food Cluster Development	●		
Import Substitution	●		
Institutional and Agency Procurement	●		●
Labor Laws		●	
Market Development and Regional Food Distribution	●	●	
Marketing		●	
Rainwater Harvesting	●	●	
Regional Branding	●	●	
Succession Planning		●	
Transferable Development Rights	●	●	

## Toolkit Contents

The format of the tools is as follows:

**Summary:** a precise statement of the tool's objectives and a grid articulating the type of tool (incentive, investment, plan, policy, program, project, regulation, or tax change) and the potential partners for developing and implementing the tool.

**Current Context:** a summary of the trends and conditions that call for the development and application of the tool, as well as a summary of current efforts toward meeting the tool's objectives.

**Barriers/Challenges:** A summary of the barriers and challenges as articulated by local farmers.

**Opportunity:** A summary of what might be gained by developing and applying the tool.

**Proposed Actions:** a description of the policy tool

**Resources, Models, and Best Practices:** resources for those working to develop, customize and apply the tool.

## Policy toolkit Contents

The purpose of this Policy Toolkit is to help producers, consumers and local governments strengthen the Portland metropolitan food economy. The Toolkit contains strategies to overcome the barriers and challenges faced by Portland-area farmers.

We divided the tools into several categories:

### **Economic and Market Development**

Food Cluster Development

Import Substitution

Increasing Exports

Market Development and Regional Food Distribution

Farmers' Markets

Institutional and Agency Procurement

Regional Branding

### **Food Access and Labor**

Access to Healthy Food

Farmworker Housing

## Land Use and Community Design

Agricultural Permitting in Urban Zones

Community Design

Diversifying Agricultural Activities in Rural Zones

Transferable Development Rights

## Resource Inputs

Energy Efficiency and Renewables

Rainwater Harvesting

## Farmer/Producer Toolkit Contents

The purpose of this Farmer/producer Toolkit is to help producers access resources and tools to help improve their operations. The Toolkit contains strategies to overcome the barriers and challenges faced by Portland-area farmers.

While there are some existing programs for small and medium producers to access education and technical assistance such as OSU Extension services, there is no single source for finding out where the best resources/programs are for urban area growers. The SARE Foodshed website features the most applicable programs and tools for business education and management seeks to address this gap in information or programs tailored to the urban area farmer.

Through our interviews and survey findings, we found the programs and tools that were most important or relevant to smaller producers in our area. Accessing capital and basic business education were frequently listed barriers for the area farmers. The website features links to the most relevant resources for these issues in our foodshed area. For instance, a rural farm bank is not set up to easily work with a small producer who farms a few plots of rented lands and operates on a direct to consumer sales basis; we found other sources of capital and tools to help prepare non-traditional farms to go to traditional Ag lenders.

In our survey and interview findings, we found the biggest barrier was access to capital. Through further investigation, we found that was related to a lack of business management educational resources. Without a sound business plan and basic business management essentials, it is difficult to get loans.

This quote pulled from our farmer survey illustrates this basic need-

***“I could use some help with using financial and planning tools. Would love to sit down with someone who could show me how to use excel and other planning tools more effectively. Would like to have an integrated system for planning and recordkeeping that integrates orders, invoices and to be picked list and harvest record.”***

Thus we decided to address the issues of Business Management and Access to Capital and we developed the following tools/pages on the following:

**AgTools-** a computer program designed to assist agricultural producers make long-run decisions on a whole farm and ranch basis.

**Farm Management Workshops-**Business planning worksheets and local classes specifically for small farmers

**Labor Laws-** Common issues and conflicts for small urban farmers and where to find answers to common questions

**Marketing-** Local marketing resources and opportunities and OSU's Growing Farms marketing plan worksheet and other resources

**Obtaining Financing-**Worksheets on preparing loan applications links to local lenders and financial resources, etc.

**Organic and Other Certification-** Often beginning farmers cannot decide how to choose a third party certifier for organic or other certification. We chose the most relevant certifiers for local farms and a link to a guide. This is an integral part of marketing.

**Succession Planning-** Our survey findings found that very few farms had a success plan in place so we worked with OSU to use their succession planning resources for small farms.

We discovered many groups working to support and engage small urban area farmers, but none are comprehensive in addressing the common issues. This forces a farmer to attend one-off workshops to learn about marketing, or soil conservation, or where to find out answers to common legal issues, etc. The gap we found was a lack of a local information clearinghouse on the most common issues and how/who to go to address them. We found the following local and regional organizations providing quality support services, and put them in one place so that we didn't reinvent the wheel, but directed people to the most relevant places to help them with their needs.

#### **Local and regional urban farm support**

**OSU Small Farms Program-** This is often the first stop for beginning farmers, their classes' workshops and resources are aimed at cultivating the skills and expertise of emerging small farmers. They cover technical aspects of soil and crop management, as well as business management and marketing topics. They work around the state and do not have an urban focused program, although their curriculum and expertise is helpful for urban area farmers which is why we have included many of their resources in the SARE tools.

**Ecotrust's Foodhub-** This online networking service has been effective in matching up local stores and restaurants with local growers and producers. They also do research and advocacy work for local farmers.

**Friends of Family Farmers-** This non-profit advocacy organization works with small and medium family owned farms throughout Oregon, and provides excellent networking and educational opportunities, especially for young beginning farmers. Their iFarm program helps match beginning farmers with land, tools and networking opportunities. They also host workshops and events focused on accessing capital and financing.

**Multnomah County's Beginning Urban Farmer Apprenticeship Program (BUFA)** BUFA is a 6 month program based on an Oregon State University Extension Small Farms program, "Growing Farms." The course is led by the OSU urban horticulturist in the Portland metro area in collaboration with Multnomah County's Sustainability department. Multnomah County provides financial support for most participants in the form of scholarships.

**East and West Multnomah County Soil and Water Conservation Districts-** These public agencies offer technical assistance regarding soil and water conservation techniques and practices. They also offer funding for related projects. Their staff also helps field questions regarding water rights issues, zoning and building permit questions and more. This year (2012) East MCSWCD is starting a small farm incubator program aimed at supporting new urban area farms.

**MercyCorps NW Agriculture-** This international organization also works in their own backyard with immigrant farmers and emerging farmers. They have a working farm outside Portland which hosts their training program for new farmers, including a matched savings account program, a micro-loan program, and local farming collective CSA program.

This is not an exhaustive list of the resources and groups we found in our research. There are numerous groups working in the NW helping to support farmers with specific needs or focuses.

## ***Farmer/Producer Toolkit Content***

As with the policy toolkit, we divided the farmer/producer toolkit into several sections:

### **Business Education and Management**

AgTools

Accessing Capital

Business Planning

Farm Management Workshops

Labor Laws

Marketing

Organic and Other Certification

Succession Planning

**Land Use Design and Policy Issues**

Agricultural Permitting in Urban Zones

Diversifying Agricultural Activities in Urban Zones

Farm Worker Housing

Transferable Development Rights

**Market Development**

Farmers Markets

Regional Branding

Market Development and Regional Food Distribution

**Resource Inputs**

Energy Efficiency and Renewables

Rainwater Harvesting



# Chapter 5

## Case Farm Scenarios

Once we developed the tools that address the key barriers and opportunities to urban influenced farming identified by growers, processors and policy makers, we tested the tools using both case farm scenarios and a case study in Damascus. This chapter describes and summarizes the results of the case farm scenario analysis. The full text of cases themselves are provided in Appendix 8; videos of the farmers describing their farms can be found at the project web site-<http://smallfarms.oregonstate.edu/pdx-foodshed>.

### Objectives

The objective of developing the case farm scenarios were to:

- Demonstrate the challenges of urban influenced farming for real farm operations;
- Show how these challenges affect the economic sustainability of individual farms;
- Identify tools that might be helpful for these specific farms;
- Apply financial analysis tools [AgTools™](http://smallfarms.oregonstate.edu/pdx-foodshed) available on the project's web site at <http://smallfarms.oregonstate.edu/pdx-foodshed>
- Demonstrate how application of the tools might improve the financial sustainability of these farms;
- Assess the usefulness of the tools for farms with similar issues.

### Structure of Case Descriptions

For each case, we developed a profile that includes the elements described below. The information was gathered through an extensive interview process.

- **Introduction** provides an introduction to the farmers and their operation.
- **Business structure** provides some basic information about the farm's size, what it grows, how long it has been in business, its finances, etc.
- **Risks and Threats to the Business** describes the issues the farm is facing that threaten its financial sustainability.

- **Analyzing threats and opportunities using Ag Tools™.** This section takes the threat perceived by the farm and proposes a solution then applies Agtools™ financial analysis to assess the impact of the proposed solution.
- **Summary: Potential results of applying tools.** This section describes the potential benefits for the farm of adopting the solution and analyzing it with AgTools™

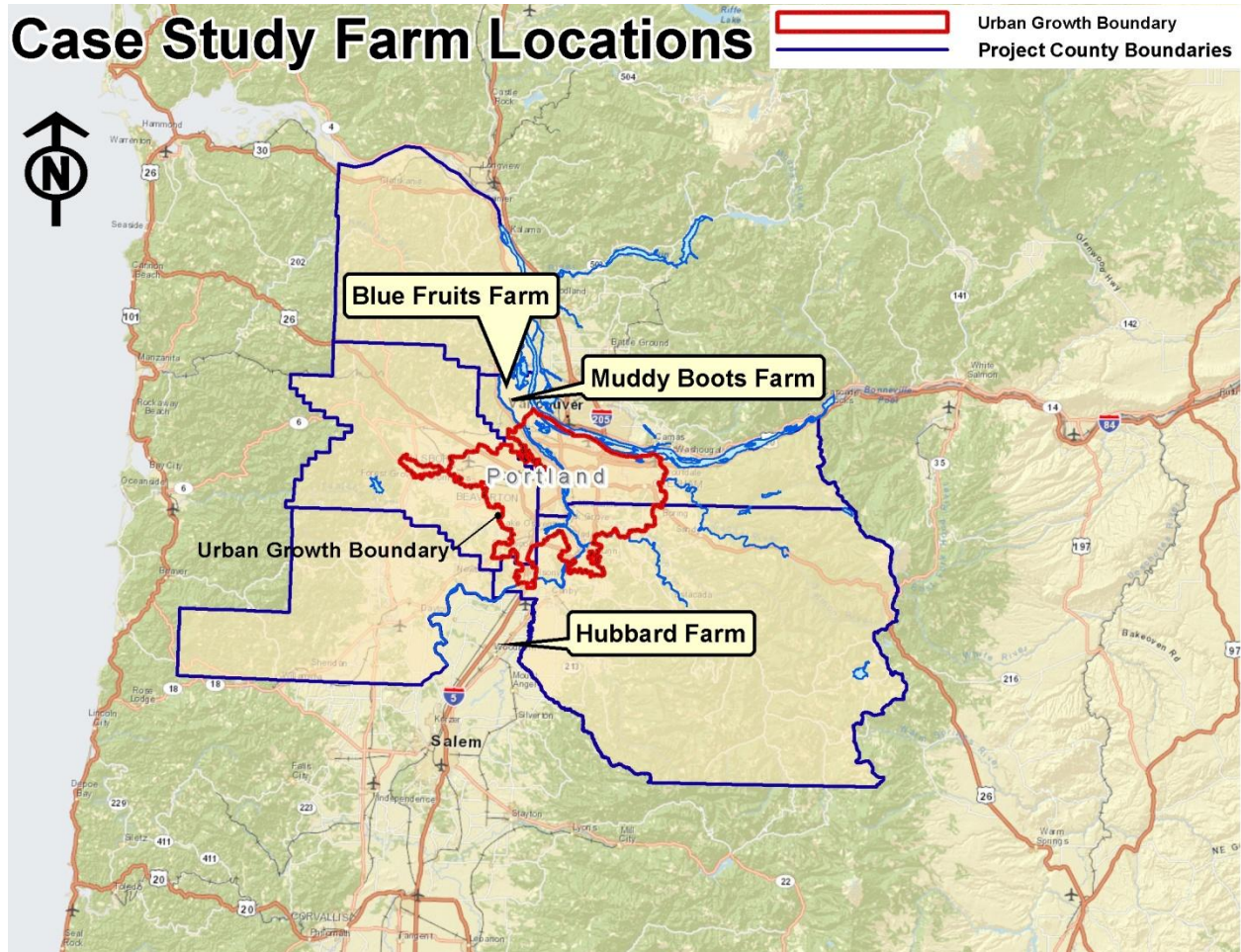
## Case Study Findings

The three farms featured in the case farm scenarios are identified as follows (Note: *the names of the farms and their operators have been changed to maintain confidentiality*). Their locations and proximity to the Portland urbanized area are shown on the map.

**Muddy Boots Farm** – a small farm operation serving the Portland Metro

**Hubbard Farms** – a wholesale vegetable farm within the Portland Metro

**Blue Fruits Farm** – A beginning farm operation in the Portland Metropolitan Region.



The three case farms were slightly different in size, market, and organizational structure.

Muddy Boots farm is slightly more than 18 acres of land planted in 40 different crops. It is certified Organic by Oregon Tilth and the majority of its business is Community Supported Agriculture (CSA).

Hubbard Farms is a 181 acre wholesale vegetable farm. Much of the land is leased.

Blue Fruits Farm is a new and small operation with three acres of U-pick blueberries on Sauvie Island, which is a Mecca for farm tourism.

Each of the farms described slightly different issues threatening the sustainability of their farm.

Muddy Boots Farm is finding the CSA market is flattening out and this is affecting the operator's ability to continue her operation profitably while meeting other goals. To meet her goals of higher wages and year round employment for her workers, she must increase revenue.

Hubbard farms is facing increasing costs from current and expected changes in food safety regulations. The farm's operator is having difficulty negotiating higher prices with his buyers. He needs better information to ensure that he is covering his costs.

Blue Fruits Farm is struggling to produce and sell enough to support an adequate income for the two operators and pay the taxes on the property. The operators are interested in diversifying into a second U-pick crop and they need better information about what they can expect regarding crop yield, price, revenue and costs so they can plan for their cash needs.

Each of the farms applied the *AgTools*<sup>TM</sup> framework to analyze a potential strategy for addressing their issues:

Muddy Boots Farm analyzed the revenue and profit impacts of expanding their farm by renting 10 additional acres of vegetables. The analysis shows extended profitability but a limited long-term sustainability that requires additional strategies for changing the mix of crops.

Hubbard Farms used *AgTools*<sup>TM</sup> to analyze the cost impact of implementing the new food safety procedures. The operator will take this information to his buyers to negotiate a new price for his produce.

Blue Fruits Farm analyzed the revenue and cash flow impacts of adding a second U-pick crop. They can generate a substantial revenue stream by adding three acres of organic strawberries. The farm will still be short of cash the first two years.

## Summary and Conclusions

Although each of our case study farms differed in size, market, crops, and organizational structure, they confirm our survey results that indicate that farms face similar issues farming in an urban influenced area, including zoning and regulatory issues, access to adequate local markets, and capital availability, among others. Each benefitted from considering the opportunities and options evaluated with the producer tools in the toolkit:

- Muddy Boots farm has a strategy for extended profitability and understands the need to examine additional strategies for changing the mix of crops. Additional application of the *AgTools*<sup>TM</sup> can help to evaluate those strategies.
- Hubbard Farms has the information he needs to negotiate a new price for his produces that incorporates the cost of complying with new food safety standards.
- Blue Fruits Farm understand the potential additional revenue stream from adding three acres of organic U-Pick strawberries.

# Chapter 6

## Damascus Case Study

One of the project’s objectives was “to ensure the toolkit will be used by and useful to farmers, planners, public officials and others who participate in and influence the market environment for local food.” Aside from the evaluation of the tools by farmers and policy makers and the application of the tools in the case farm scenarios, we also reviewed and assessed the tools in a case study in the City of Damascus involving producers, local and state planners and consumers. This chapter summarizes the methodology and findings from that case study. The full case study is included in Appendix 9.

The project team was not able to “ensure” the toolkit will be useful because none of the tools were actually adopted or implemented. We were limited to analysis of opinions on the tools to test their potential efficacy due to the lack of ability to implement, enact or adopt certain policy tools within the timeframe of the grant. Changing policies and laws requires a considerable public process, which was not possible within this grant timeframe.

### Background

The City of Damascus was selected as the case study venue because it is within the region’s Urban Growth Boundary (UGB), and has incorporated as a city, but it has not yet developed as an urban area. It is still a heavily rural and agricultural landscape, with commercial farms and nurseries, as well as significant large-lot development.

The City has struggled to adopt a Comprehensive Plan land use plan that is acceptable to the local residents, many of whom are reluctant to see community changes implemented in a historically rural area. Many of the tools proposed in the 2010 Damascus Comprehensive Plan, *Envision Damascus*, were similar to those proposed in the toolkit, such as tools to preserve agricultural land and low impact development strategies; i.e. energy efficiency, rainwater harvesting, etc.. The previous inclusion of some of the study’s policy tools in *Envision Damascus*, indicates that there may be future acceptance of these types of tools from the toolkit in the next version of the City’s Comprehensive Plan, which would provide the opportunity for use and future analysis of the toolkit.

## *Methodology*

The City of Damascus used a two-tiered methodology to evaluate the regulatory tools that targeted three stakeholder groups: producers, local planners and consumers. Each stakeholder group was given the applicable set of tools to review. Producers also got agriculture-related sections of the formerly adopted *Envision Damascus* Comprehensive Plan document (adopting ordinance was repealed in May 2011). Each interviewee was then asked to answer a set of questions related to the tools. Some responded in writing as well as in the one-on-one interview. Responses were then recorded on the matrix in this report and conclusions made about the effectiveness of the toolkit.

## *Producers*

Two Damascus-area commercial farms were selected to participate in the case study to review the tools in relation to their farm operations:

**Thompson Farms**, owned by Larry Thompson and family; growers of pesticide-free fruits and vegetables; and,

**Siri & Son Farms**, owned by Fred, Jim and Joe Siri; commercial organic vegetable growers.

The two small farms are not necessarily representative of the farms that may use the tools, but they each have a distinct operation, Thompson sells through farmers' markets and stands only, and Siri sells through wholesalers to local and national chain grocers only.

Each producer answered questions about the tools' potential applicability, effectiveness and benefits to their operations, the community, economy and environment. As part of the case study producer participants received a set of the eleven (11) tools, listed below.

1. *Economic and Market Development*
  - A. Food Cluster Development
  - B. Farmers' Markets
  - C. Market Development and Regional Food Distribution
  - D. Regional Branding
2. *Food Access and Labor*
  - E. Farm Worker Housing
3. *Resource Inputs*
  - F. Rainwater Harvesting
  - G. Energy Efficiency and Renewables

4. *Land Use and Community Design*
  - H. Agricultural Permitting in Urban Zones
  - I. Diversifying Agricultural Activities in Urban Zones
  - J. Transferable Development Rights

Researchers provided a policy summary of the City's former Envision Damascus Comprehensive Plan as background information with highlighted sections of the Plan goals and policies (repealed May 2011) related to urban agriculture and food systems, as well as a SARE project fact sheet. Then, each participant considered the following questions as they read each of the policy tools.

### **Questions:**

1. Though Damascus does not currently have an adopted Comprehensive Plan, under the previous "*Envision Damascus*" Plan policies, did the policies highlighted in the enclosed Policy Summary address the broad direction needed to implement many of the enclosed policy tools? If so, which ones? What other policies do you think are needed?
2. Which tools in the toolkit would you find most useful in your farm operations and in your role as a food producer and why?
3. Which tools are you least likely to use? Please tell us why not.
4. Can you place a dollar value on efficiencies or savings resulting from implementation of any of the tools? Which ones? How much?

As a follow up, participants were subsequently directed to a project Web site, where the toolkit was provided for farmers (producers), planners and consumers and each participant was asked to respond to a different set of questions to evaluate the tools based upon their stakeholder category.

### ***Planners and Policy-Makers***

While the original grant application cited adoption of a number of governmental policies, regulations and/or programs, voters repealed the City of Damascus' ordinance that adopted the 2010 Comprehensive Plan, *Envision Damascus*, in May 2011. The original project suggested that the grant work would result in adoption of the tools by different jurisdictions. Since staff at City of Damascus conducting the case study are not in a position to compel adoption of specific policies by the City or any other governmental entity, we proposed that the tools be reviewed within the context of the repealed goals and policies that address urban agriculture and food provision. The tools will be included as background

information to local planners as they draft a new Comprehensive Plan for the City of Damascus.

Agencies and individual planners were asked to review the applicable tools as they pertained to local, regional, or state solutions to identified barriers/challenges and opportunities and respond to the following questions:

1. Is the tool on target with identifying issues?
2. Are there barriers or challenges that have not been addressed that need to be?
3. Are the proposed actions/recommendations on target?
4. Are there modifications that should be made to the tool?

P. Elise Scolnick, AICP, CSBA, Senior Planner, City of Damascus conducted the interviews with assistance from Kristin Greene from Cogan Owens Cogan. She interviewed the following policy/planning officials:

Katherine Daniels, AICP, Farm and Forest Specialist, Oregon Department of Land Conservation and Development:

Ray Valone, AICP, Principal Planner, METRO regional government planner:

## **Consumers**

Consumers were included in the review as “eaters,” those most instrumental in assessing the success at the delivery end of the local food system. A group of consumers that are participating in a related grant project, the Kaiser Health Initiatives funded, “Access to Healthy Food: The Healthy Damascus Food Plan”, were presented with a set of tools and questions that applied to three specific tools in the toolkit: Access to Healthy Food, Farmers’ Markets and Institutional and Agency Procurement. Their responses were included in an online evaluation survey, but not in this case study.

## **THE TOOLKIT DISTRIBUTION<sup>5</sup>**

The following table shows the tools evaluated by the three stakeholder groups.

---

<sup>5</sup> Note: although the complete kit contains additional tools, not all of them were reviewed for the case study.. This table contains only the tools that were reviewed by the case study.



**Table 1. Portland Metropolitan Foodshed Toolkit**

Tool	Policy Makers/Local Planners	Producer	Consumer
Access to Healthy Food	●		●
Agricultural Permitting in Urban Zones	●	●	
Community Design	●		
Diversifying Agricultural Activities in Urban Zones	●	●	
Energy Efficiency and Renewables		●	
Exports	<i>To be evaluated at the county, regional or state level</i>		
Farm Worker Housing	●	●	
Farmers Markets	●	●	●
Food Cluster Development		●	
Import Substitution	<i>To be evaluated at the county, regional or state level</i>		
Institutional and Agency Procurement	●		●
Market Development and Regional Food Distribution		●	
Rainwater Harvesting		●	
Regional Branding		●	
Transferable Development Rights*	●	●	

## Conclusions

The matrix of interview responses is provided in the complete case study in Appendix 9. The key findings from the case study include the following:

Land use tools administered by land use regulatory agencies (State, regional, local) need to be revised or updated to reflect more integrated land use patterns that allow value-added farm activities in rural zones and farm/agricultural activities in urban zones. These changes will help diversify agriculture increase the viability of farming, making it profitable for producers, in the hopes of retaining this use close to cities. This will potentially reduce transportation costs and greenhouse gas emissions.

Tools to conserve agricultural land, such as conservation easements, transferable development rights, etcetera, may be feasible, but the costs and benefits must be clear to the public, landowners and jurisdictions.

Tools that require high expenditures by farmers/producers will not likely be introduced on the farm unless there is affordable financing or a demonstration project. This is most applicable to the rainwater harvesting and energy efficiency tools. For rainwater harvesting, federal regulatory standards may need to be considered for organic farms.

The regional marketing and branding may already be underway within a variety of organizations and formats. There may not be a need for a new organization to take on this role. This tool has limited applicability to the Portland metropolitan region.

The applicability of some of the tools should be tested after they are adopted at some jurisdictional level to really ascertain their viability. This “case analysis” was limited because, given the political situation in the City of Damascus, the tools were not adopted as had originally been intended at the time of the grant proposal.

The tools in the toolkit that have the broadest applicability for regional and statewide capacity-building through public, nonprofit and/or private partnerships are those that:

- increase access to healthy food
- improve farmworker housing options
- enhance market development and regional food distribution
- support farmers markets
- encourage food cluster development
- increase agency and institutional procurement
- increase exports
- increase import substitution

Some of the tools require changes in state and/or local land use planning standards, such as

- agricultural permitting in urban zones, and
- diversification of agricultural activities in rural zones.

Changing state laws and updating state and local codes is a long-term prospect. Some work has been done at the legislative level to address the diversification issue through passage of HB 3280 and SB 960. The subsequent work to be done involves counties and cities updating their policies and codes to reflect the legislative changes. The diversification tool should be updated to reflect the legislative changes.

Market development and regional food distribution are already being done at some level, but increased coordinated efforts could provide the assistance that is needed through partnership with distributors and processors for additional value-added services that provide top-quality products to buyers and bring high value prices back to the grower, as stated by Farmer Thompson. While Oregon Fresh Market Grower’s Association (OFMGA)

does some of the work statewide, more regional level work is needed, as indicated in the tool.

Clackamas County is addressing the potential for implementation of many of the proposed tools in their Draft Agriculture and Foodshed Strategic Plan (May 2012). This report was finalized and approved by the Board of County Commissioners in July, 2012. The implementation of many of these tools may be realized in the work that results from the Plan within Clackamas County. One other county in the Portland Metropolitan Foodshed, Multnomah, is similarly working on efforts to improve the foodshed. Efforts are needed in Washington and Columbia Counties.

As for the City of Damascus, it is at a crossroads of rural and urban existence, a perfect laboratory for use of these tools, if and when there is an opportunity to put them into play.



# Chapter 7

## Project Impact, Evaluation, and Conclusions

This chapter presents the evidence that the project reached its objectives based on the objectives and performance measures established in the project proposal.

### Review of Objectives and Performance Measures

The project objectives were reviewed in the report introduction. We aimed to define the Portland Metropolitan foodshed, identify agricultural and economic trends and develop an understanding of the barriers and opportunities facing farmers and other food system actors. Upon gaining a better understanding of those barriers and opportunities, we designed a tool kit that would assist growers, consumers, and policy makers in overcoming those barriers and taking advantage of opportunities to create a more sustainable Portland Metropolitan foodshed.

To assess our work, we proposed a number of metrics:

- Acceptance of the concept of the Metropolitan Foodshed vision and definition by producer groups and local governments;
- Adoption of tools in the Toolkit by producers, consumers, and government officials;
- New or expanded forms of partnership among producers, consumers and government officials to strengthen the regional food economy;
- The use of and acceptance of Triple bottom Line and the Natural Step and relationship to regional agriculture by producer and public organizations;
- New links between food supply and demand and increasing the demand for and supply of local food products;
- Increasing farm performance or reducing the cost of operations from the case farm scenario work;
- Adoption of farm land policies in the City of Damascus according to the Damascus case study;
- Use of or acceptance of the Toolkit by Cooperative Extension and Soil and Water Conservation districts to focus more attention on urban and fringe agriculture.

In addition, we aimed to involve as many producers as possible in the study to ensure that the toolkit benefited from the input of a wide variety of producers. We'll start our evaluation of our metrics with the involvement of producers.

## **Project Impacts**

### ***Producer Participation***

We engaged between 150 and 195 farmers in this project. The uncertainty in the total count stems from possible overlap in the different kinds of input we received.

For the initial survey that helped us to identify key barriers and opportunities, 81 growers completed the survey on line and another 65 completed part or all of the survey at the Northwest Horticulture Society meetings.

We conducted face to face interviews with five growers in the first phase of the data collection effort.

We engaged three farmers in case farm scenarios.

We interviewed two farmers as part of the Damascus case study;

38 producers evaluated the farmer tools.

### ***Acceptance of the Foodshed Vision***

To quantify our second metric, acceptance of the Foodshed vision and definition, we engaged policy makers and producers in an on-line survey and asked them to indicate the degree to which they agree with the statements listed in Table 7-1. Their answers are also tallied in the table.

Among the 4 policy makers and 37 producers who responded, most were positive about the vision and about policies that would move us toward that vision. There was some disagreement about whether the vision is attainable.

**Table 7-1. Results of assessment of acceptance of the foodshed sustainability vision**

Statement	Policy makers/Planners		Producers	
	Agree or Strongly Agree	Total responses	Agree or Strongly Agree	Total responses
This vision is consistent with my goals for the foodshed in our region.	5	4	33	37
I support policies that will move us toward this vision.	4	4	32	37
The vision is attainable and sustainable	2	4	27	37
The sustainability framework is consistent with my goals for the region	4	4	34	37
I support policies that are aligned with this framework	4	4	34	37
This framework is attainable.	2	4	27	37

### ***Tool Acceptance and Adoption***

To measure the extent to which the tools would be accepted and adopted we put draft versions of the tools on line and asked for feedback from policy makers and producers regarding their usefulness and relevance. We set up an online survey to collect responses after the respondents reviewed the website and tools.

Outreach to farmers involved direct requests to farmers we had been in touch with before, such as the case study farms, and each partner organization sent out emails and personal requests to their contacts with follow-up emails and phone calls to complete the survey.

The following groups assisted us with outreach:

- OSU Small Farms program
- Multnomah County Beginning Urban Farmer Apprenticeship program
- Friends of Family Farmers

We received four completed responses from policy makers and 38 completed responses from farmers from around the Metro area in a three week period in June. The detailed results of the evaluation are in Appendix 10.

### **Policy Tool Evaluation**

About 4 planners/policy makers completed the assessment of the policy tools. We asked them the following questions:

- This tool is easy to understand.
- This tool is relevant to the issues I face in my planning and policy work
- This tool provides new information or strategies that I have not seen or tried before
- I will use this tool to address my farm planning issues

Of the four responses from planners, most agreed that the tools were easy to understand and would be somewhat useful to address farm planning issues.

### **Consumer Tool Evaluation**

Several of the tools are aimed at consumers who want to know more about access to healthy food, farmers markets, and institutional and agency procurement. As part of the Damascus case study, we asked consumers in Damascus to tell us whether the tool was easy to understand and whether it would be relevant

Only six consumers completed the evaluation of the consumer tools. We asked them only two questions about the tools:

- This tool is easy to understand
- This tool is relevant to customers

They were generally positive about the tool.

### **Producer Tool Evaluation**

With respect to the producer tools, we received feedback from 38 producers, although not all respondents answered each of the questions. We asked producers to agree or disagree with the following statement:



- Generally these tools are easy to understand
- These tools are relevant to the issues I face in my farm operation
- These tools provide new information or strategies that I have not seen or tried before
- I will use these tools to address my farming or farm planning issues

The farmers were generally positive about the tools, especially the market development and business education and management tools. 21 of the 32 respondents said that they would use the land access and use tools; 27 said that they would use the market development tools, and 26 said that they would use the business education and management tools, and 23 said that they would use the resource input tools. The one area where the producers seemed somewhat negative was toward the idea that this was new information that they had not seen before.

### ***New or expanded forms of partnerships***

The Portland region is currently evolving rapidly with multiple food-related partnerships and initiatives. This is especially true in Multnomah and Clackamas Counties. Both counties have developed food/agriculture strategies that have been informed directly by the SARE project research and were prepared with assistance from SARE Project Sub-Contractor, Cogan Owens Cogan. Partnerships in Washington County are addressing the increased need to address hunger and improve nutrition. The County is not currently a participant in the local food movement that is being advanced by Clackamas and Multnomah Counties. Yamhill County is focused on two major dimensions of the food system – the globally significant wine agricultural economy and related visitation and tourism development.

Multnomah County, with hundreds of stakeholders, developed the Multnomah Food Initiative Action Plan ([http://multfood.org/Action\\_Plan\\_and\\_Reports](http://multfood.org/Action_Plan_and_Reports)). The Multnomah Food Action Plan builds upon the existing work of the community by providing a roadmap with a shared community vision and goals. It addresses: increasing production of local food, healthy eating, social equity in the food system and economic vitality. The Action Plan has been endorsed by over 500 organizations and stakeholders who are committed to carrying it out. In addition, Multnomah County worked in collaboration with Clackamas County on the Clackamas County Agriculture and Foodshed Strategic Plan.

Clackamas County has developed a multi-year Agricultural Investment Plan that includes a Clackamas County Agriculture and Foodshed Strategic Plan<sup>6</sup>. The Plan is regional in scope based on SARE research and extensive outreach to over 5,000 producers in the County. More than 1,000 producers completed the survey which was modeled after the survey

---

<sup>6</sup> We wish to acknowledge the cooperation of Jamie L. Johnk, Clackamas County Economic Development Coordinator and others involved in development of the Clackamas County Agriculture and Foodshed Strategic Plan, for their cooperation in coordinated development of the SARE project and the Clackamas Plan.

instrument used for SARE project outreach. In addition, Clackamas conducted a parallel survey with producers and distributors in the region, receiving more than 30 responses.

Based on the work of SARE research, in coordination with the Multnomah Food Initiative, Clackamas County produced a detailed action plan that engages state and local government, Multnomah County, producer organizations, and citizens in a multi-year action plan to strengthen the regional foodshed economy. The Clackamas County Agricultural Investment Plan includes a matrix (see Appendix 10) that details the actions and partnerships proposed with Multnomah County and several other public, private, and non-profit partners. The action plan addresses:

1. Agriculture Economic Cluster Strategy
2. Import Substitution and Exports
3. By Product Resources Business Models
4. Specialty and Organic Agriculture
5. Aggregation (Processing, Distribution and Consumption)
6. New Markets
7. Farm Ownership, Succession and New Farmers
8. Small Business Assistance and Training
9. Labor
10. Diversification/Ag. Tourism

### ***Use of Triple Bottom Line and Natural Step***

As indicated above in this chapter acceptance of the Foodshed vision and definition of sustainability was relatively strong. Of the 4 policy makers and 37 producers who responded, most were positive about the vision and about policies that would move us toward that vision. There was some disagreement about whether the vision is attainable.

The use of the Triple Bottom Line and Natural Step are currently used in the sustainability planning of both Clackamas and Multnomah Counties and in the Metro regional government's sustainability program. This project surfaced, for the first time as far as we were able to determine, the development and application of advanced sustainability concepts to a regional foodshed system. The sustainability concepts are integrated in the Policy Makers and Planners toolkit. More work is needed to apply the vision to foodshed strategies and regional economic development planning.

## ***Better Linkages between Supply and Demand***

The new and expanded partnerships section above and the Implementation Matrix for Clackamas County identify several strategies being pursued by the County and multiple partners to strengthen linkages between supply and demand. In addition, as indicated in the Policy Makers and Planners toolkit several tools address increased linkages between supply and demand including:

- Economic and Market Development
- Food Cluster Development
- Import Substitution
- Increasing Exports
- Market Development and Regional Food Distribution
- Farmers' Markets
- Institutional and Agency Procurement
- Regional Branding
- Food Access and Labor
- Access to Healthy Food

## ***Increasing farm performance/reducing costs***

The case farm scenarios gave us an opportunity to apply some of the tools directly to a farm's business case and test their benefits and applicability. Each of the farms benefited from applying the tools.

- Muddy Boots farm has a strategy for extended profitability and understands the need to examine additional strategies for changing the mix of crops. Additional application of the AgTools™ can help to evaluate those strategies.
- Hubbard Farms has the information he needs to negotiate a new price for his produces that incorporates the cost of complying with new food safety standards.
- Blue Fruits Farm understands the potential additional revenue stream from adding three acres of organic U-Pick strawberries.

## ***Adoption of land policies in the City of Damascus***

The City of Damascus has struggled to adopt a Comprehensive Plan land use plan that is acceptable to the local residents, many of whom are reluctant to see community changes implemented in a historically rural area. Thus, these policies have not been adopted.

Many of the tools proposed in the 2010 Damascus Comprehensive Plan, *Envision Damascus*, were similar to those proposed in the toolkit, such as tools to preserve agricultural land and low impact development strategies; i.e. energy efficiency, rainwater harvesting, etc.. The previous inclusion of some of the study's policy tools in *Envision Damascus*, indicates that there may be future acceptance of these types of tools from the toolkit in the next version of the City's Comprehensive Plan, which would provide the opportunity for use and future analysis of the toolkit.

We expect that outreach to growers, planners, policymakers and consumers will help to increase acceptance of these tools and increase the likelihood that they will be included in the new plan.

### ***Use of or acceptance of toolkit by cooperative extension, soil and water conservation districts***

This project included active participation by Oregon State University Cooperative Extension in the Metro area. The Clackamas County OSU Extension and the Clackamas Soil and Water Conservation District are included in implementation of the Clackamas County Agricultural Investment Plan based in part on the SARE project.

## **Conclusions**

The Portland Metropolitan Foodshed enjoys a number of opportunities for improving the sustainability of foodshed economy. Its farm economy is diverse, its consumers support local produce and participate in direct sales, and its producers are enthusiastic about embracing new markets and methods that can improve their environmental and economic sustainability.

But a number of threats and barriers may prevent the region from realizing the foodshed vision articulated for this project. shortages of capital, land and water; regulatory barriers to alternative revenue streams; lack of coordination and infrastructure for direct marketing; and inadequate training for new and aspiring farmers are just some of the issues faced by farmers working in areas influenced by urban development.

We have demonstrated that the tools developed for this project are useful, but they must be part of a larger effort to use the tools systematically to address regulatory, resource, and financial issues that face urban influenced farmers. This means that local governments, farm advocacy groups, environmental organizations, and universities must adopt the tools, help to improve them, and thereby strengthen the body of knowledge available to producers and policy makers alike.

## References

- Basu, Avik. April, 15, 2005. "Import Substitution as Economic Development." *University of Michigan Tubman College of Urban Planning Handbook on Economic Development*  
<http://www.umich.edu/~econdev/importsub/>
- Blum-Evitts, Shemariah. 2009. "Designing a Foodshed Assessment Model: Guidance for Local and Regional Planners in Understanding Local Farm Capacity in Comparison to Local Food Needs" (Master's Thesis, May, 2009).
- Brookings Institution. September 2011. "Exports Begin at Home" *Brookings Institution Presentation PowerPoint*
- Bureau of Economic Analysis. 2009. This total was calculated by multiplying the average household expenditure on food (reported in surveys of consumers by the Bureau of Labor Statistics Consumer Expenditure survey) by the number of households in the region.
- Champion, Benjamin L. 2007. "The political economy of "local foods" in Eastern Kansas." (Master's Thesis, May 2007 D, Phil, University of Oxford.)
- Daily Beast. November, 18, 2009. "Our Ranking of the Hungriest States" *The Daily Beast Blog*.  
<http://www.thedailybeast.com/articles/2009/11/18/our-ranking-of-the-hungriest-states.html>
- Meter, Ken. May 2011. "Crossroads Resource Center, Metro Portland (Oregon) Local Farm and Food Economy"
- San Francisco Food Alliance. 2005. "Collaborative Food System Assessment"  
<http://www.sffoodsystems.org/pdf/FSA-online.pdf>
- Seattle-King County Food Policy Council. January 2008. "Greenhouse Gas Emission and the Local Food System"
- Smith, Tim. October 5, 2006. "Civic Ecology" *SERA Architecture website*  
<http://www.serapdx.com/project.php?category=7&project=126>

Sustainable Business. June, 30, 2011. “Staggering Amount of Global Food Supply is Wasted.”

*Sustainable Business website*

<http://www.sustainablebusiness.com/index.cfm/go/news.display/id/22617>

Trust for America’s Health. July 2011. “F as in Fat: How Obesity Threatens America’s Future.”

<http://healthyamericans.org/report/88/>

USDA Economic Research Service. September, 2009. “Marketing Organic Foods.” ERS

*Report Summary*

[http://www.ers.usda.gov/media/185268/eib58\\_reportsummary\\_1\\_.pdf](http://www.ers.usda.gov/media/185268/eib58_reportsummary_1_.pdf)

USDA Trade and Agriculture. September 2009. “What is at Stake for Oregon?”

Union of Concerned Scientists. 2011. “Market Forces: Creating Jobs Through Public Investment in Local and Regional Food Systems”

World Watch Institute. 2011. “State of the World Report”. Washington, DC.