

# CLACKAMAS COUNTY BOARD OF COUNTY COMMISSIONERS

## Study Session Worksheet

**Presentation Date:** 06/05/2012    **Approx Start Time:** 10:30 a.m.    **Approx Length:** 1Hr

**Presentation Title:** Clackamas County Agriculture Investment Plan: Producer Outreach and Foodshed Strategic Plan

**Department:** Business & Community Services/Business & Economic Development

**Presenters:** Gary Barth, Catherine Comer, Jamie Johnk, Bob Wise-Cogan Owens Cogan, Analisa Fenix-Ecotrust, Todd Chase-FCS Group

**Other Invitees:** Project Team Members

### **WHAT ACTION ARE YOU REQUESTING FROM THE BOARD?**

To review and provide feedback on the final draft of the Clackamas County Agriculture Investment Plan: Producer Outreach and Foodshed Strategic Plan.

### **EXECUTIVE SUMMARY:**

On March 29, 2011 Business & Economic Development staff presented the Clackamas County Agriculture Investment Plan Implementation Strategy to the Board requesting their support and continued commitment of resources to carry out the scope of work.

With the Board's support and encouragement, staff moved forward with completing the Clackamas County Agriculture Investment Plan: Producer Outreach and Foodshed Strategic Plan. The scope of this project included extensive producer and processor outreach as well as completion of supply and demand study, and opportunities and economic benefit analysis. In addition, the project identifies an implementation strategy and the next steps for moving the strategy forward.

Staff requests review and feedback from the Board as we move forward with implementing strategies identified in the Plan.

### **FINANCIAL IMPLICATIONS (current year and ongoing):**

There are no identified fiscal impacts at this time other than Economic Development staff time.

### **LEGAL/POLICY REQUIREMENTS:**

N/A

### **PUBLIC/GOVERNMENTAL PARTICIPATION:**

There are elements of the implementation strategy that will require staff time. Please refer to the Implementation Worksheet in the Plan.

### **OPTIONS:**

This is primarily an informational presentation; however the Board has the opportunity to provide feedback prior to the completion of the final Plan.

**RECOMMENDATION:**

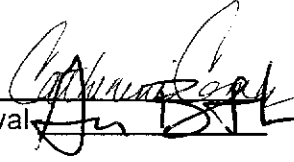
Staff recommends approving the draft Clackamas County Agriculture Investment Plan: Producer Outreach and Foodshed Strategic Plan.

**ATTACHMENTS:**

Attachments include the draft Clackamas County Agriculture Investment Plan: Producer Outreach and Foodshed Strategic Plan, corresponding PowerPoint presentation, Agriculture Investment Plan Overview, Map of Producers, and Implementation Matrix.

**SUBMITTED BY:**

Division Director/Head Approval



Department Director/Head Approval



County Administrator Approval



For information on this issue or copies of attachments, please contact Teresa Sears @ 503-742-4329



# Draft Clackamas County Agriculture and Foodshed Strategic Plan

---

May 2012



With  
MARStewart Group, LLC  
Crossroads Resource Center



# Acknowledgments

## Board of County Commissioners

Charlotte Lehan, Chair – Liaison to the Agricultural Investment Plan

Jim Bernard

Jamie Damon

Ann Lininger

Paul Savas

## Business & Economic Development Staff

Gary Barth, Business & Community Services Director

Catherine Comer, Manager

Jamie Johnk, Project Manager

Cindy Hagen

Teresa Sears

## Agricultural Task Force

Danielle Cowan, Clackamas County Tourism & Cultural Affairs

Susan Ziolko, Clackamas County Office of Sustainability

Eben Polk, Clackamas County Office of Sustainability

Tom Salzer, Clackamas County Soil & Water Conservation

Lisa Bucy, Clackamas County Soil & Water Conservation

Elizabeth Peters, Oregon Association of Nurseries

Laura Barton, Oregon Department of Agriculture

Mike Bondi, OSU Extension/North Willamette Research and Extension Center

Kathleen West, Multnomah County Office of Sustainability

Janine Leaper, Multnomah County Office of Sustainability

## Primary Consultant Team

Bob Wise, Cogan Owens Cogan

Steve Faust, Cogan Owens Cogan

Kirstin Greene, Cogan Owens Cogan

Mary Stewart, MARStewart Group

Ken Meter, Crossroads Resource Center

## Contributing Consultants

Michael Mertens, Ecotrust

Analisa Fenix, Ecotrust

Todd Chase, FCS GROUP



# Table of Contents

Executive Summary.....	1
Overview.....	3
Regional Food System.....	6
Supply Analysis.....	7
Demand Analysis.....	16
Gaps and Opportunities Analysis.....	25
Economic Benefits Analysis.....	30
Recommendations and Strategies.....	37
Next Steps.....	43
Appendices	
<i>Appendix A. Implementation Matrix</i>	
<i>Appendix B. Producers Survey Results</i>	
<i>Appendix C. Aggregators Survey Results</i>	



# Executive Summary

## Purpose

This Agriculture and Foodshed Strategic Plan (Plan) is a strategic analysis of the potential to expand the County and regional food system cluster. The Plan is an addition to the County's ongoing focus on large or fast-growing economic clusters including, nurseries and greenhouses, food and beverage manufacturing, Christmas trees and wood products among others. It furthers Clackamas County's goal of supporting economic development and job creation in natural resource-related businesses. The Plan is an important building block in the County's Agricultural Investment Plan (AIP) and associated implementation strategies. The AIP seeks to build upon the County's rich agricultural tradition by focusing on three major areas of potential growth: Regional Foods; Agricultural Tourism; and Renewable Energy.

Primary data was collected through interviews and surveys conducted with more than 1,000 agricultural producers in Clackamas County. Interviews and surveys also were conducted with 42 unique processors, distributors and institutional purchasers. The Plan also relies on other reports commissioned by Clackamas County and related national and regional sources.

## Major Trends Driving Opportunity

Clackamas County is an agricultural powerhouse:

- First in Oregon and the U.S. for sales of Christmas trees
- First in Oregon for poultry and egg sales
- First in Oregon for horse sales
- Second in Oregon for hog and pig sales
- Second in nursery, greenhouse and horticulture
- Sixth in Oregon for vegetable sales
- Seventh in Oregon for fruit, nut and berry sales

Trends point to increased demand for food production for local consumption and export. There also is widespread interest in the Plan exhibited by a high rate of participation in the research and the willingness of partner organizations to contribute to Plan implementation. Other major trends driving opportunity include:

- Clackamas County has a wide range of farm sizes focused on a variety of markets. This farm infrastructure provides a stronger and more resilient foundation for innovation and growth in regional and export markets.
- The Portland region is a leader in developing an internationally-recognized regional foodshed economy and there is strong interest in a regional food supply.
- The Portland region currently imports approximately 95 percent of the food we eat from outside the region.
- The region, and Clackamas County in particular, has the productive capacity to meet many of the region's food needs.
- Oregon ranks third in the nation in hunger, while at the same time, more than 25 percent of



Oregonians are obese. Producing more local healthy food is a major opportunity to address these challenges.

- The global food price index jumped 32 percent in the second half of 2010; the largest increase on record.

## Recommendations

The analysis of supply and demand reveals gaps in the regional food system as well as opportunities that have the potential to drive market development and job creation in Clackamas County. The following recommendations address these barriers, gaps and opportunities. Most of these recommendations focus on the productive capacity, profitability and market expansion of small farms of fifty acres or less. Farms of this size are often family-owned and need assistance to expand, reach a market, or obtain efficiencies available to larger farms or farms that work together. A complete matrix of implementation strategies can be found in Appendix A.

- Develop an agriculture economic cluster strategy
- Focus on Import Substitution
- Maximize by-product resources
- Invest in specialty and organic agriculture
- Support food processing and distribution industries
- Increase the markets available to small farmers
- Assist farmers with ownership, management and succession planning
- Support provision of small business assistance and training for farmers
- Improve access and training for a qualified farm labor force
- Diversify agricultural incomes including as agricultural tourism
- Reduce conflicts between farmers and non-farm neighbors
- Help farmers reduce costs through water and energy conservation
- Support growers' efforts to protect their crops and workers

The implementation strategy includes recommendations on ways to promote agricultural investment, protect and grow the regional foodshed and support foundational farmland. The strategy incorporates innovative approaches to increasing production and marketing specialty foods. These can lower costs, create new marketing opportunities for larger-scale distribution, distribute products more efficiently, and expand production for large institutional purchasers and export distributors. The Plan recommends further analysis to help producers identify areas suitable for production of crops that are in high demand.

Implementation of these recommendations could lead to important local economic benefits. An increase of 10 to 20 percent of regional purchases of County food products would result in increased Clackamas County economic output of up to \$115.5 million and add between \$21.8 and \$43.6 million in gross domestic product.





## Overview

With quality soil, productive farmlands, a climate conducive to high crop variety and yields, many rivers and water reserves, and major arterial transportation corridors, Clackamas County is a key foundational area for agriculture in the Portland Metropolitan area. The County possesses a diversified land base that can adequately support many types of agricultural uses while maintaining the area's rich natural assets. In 2011, the County ranked fourth among Oregon counties with \$332 in gross farm sales.

The Clackamas County Agriculture and Foodshed Strategic Plan (Plan) is part of the County's Agricultural Investment Plan (AIP) to expand countywide economic growth by fostering and capturing emergent markets and business opportunities in the agricultural sector. The AIP seeks to build upon the County's rich agricultural tradition by focusing on three major areas of potential growth: Regional Foods; Agricultural Tourism; and Renewable Energy. This Plan is an addition to the County's ongoing focus on large or fast-growing economic clusters including, nurseries and greenhouses, food and beverage manufacturing, Christmas trees, and wood products among others.<sup>1</sup>

### Purpose and Organization

The Agriculture and Foodshed Strategic Plan analyzes the County and regional food system cluster through an economic development lens. The first portion of the Plan is an analysis of the County's current and potential agricultural supply, including food and nonfood production. The Plan also incorporates information on agricultural tourism, as it is a supplementary source of income for a number of agricultural producers. This is followed by a demand analysis that examines regional food consumption, purchasing, processing and distribution.

An evaluation of the gaps between supply and demand identifies barriers to sustainable food production and diversified agricultural activities. It also examines barriers that limit processors, distributors and retailers from sourcing local and regional products. The supply-demand analysis also identifies opportunities to grow the agricultural economy.

The economic benefits analysis outlines the potential economic impacts of an enhanced regional food system cluster, including qualitative and quantitative measures of community benefits, direct and indirect jobs created, economic output and gross domestic product value added.

The implementation strategy includes recommendations on ways to promote agricultural investment, protect and grow the regional foodshed and support foundational farmland. The strategy incorporates innovative approaches to increasing production and marketing specialty foods which in turn can lower costs, create new marketing opportunities for larger-scale distribution, distribute

---

<sup>1</sup> Clackamas County Economic Landscape: Emerging Trends and Opportunities, March 1012.





products more efficiently, and expand production for large institutional purchasers and export distributors.

## Methodology

As mentioned in the overview, the purpose of this report is to provide a strategic analysis of the County and regional food system cluster for use in the AIP and associated implementation strategies. Primary data was collected through interviews and surveys conducted by Clackamas County with more than 1,000 agricultural producers in the County. Interviews and surveys also were conducted with 42 processors, distributors and institutional purchasers. Additionally, the Plan relies on other reports commissioned by Clackamas County and regional sources, including:

- Clackamas County
  - ✓ *Clackamas County Agricultural Investment Plan*, Clackamas County, 2010
  - ✓ *Developing Scenarios for Ecosystem Services and Resilience in the Greater Portland Region*, Ecotrust, 2012
  - ✓ *Clackamas County Economic Landscape*, FCS GROUP, 2012
  - ✓ *Draft Master Plan for the Development of Agri-tourism in Clackamas County, Oregon*, MARStewart Group, 2012
  - ✓ *Food Safety and Security in Clackamas County*, MARStewart Group, 2012
  - ✓ *The Equine Industry Impact Analysis in Clackamas County, Oregon*, MARStewart Group, 2012
- Region
  - ✓ *Lane County Local Food Market Analysis*, Community Planning Workshop, University of Oregon, 2010. <http://csc.uoregon.edu/cpw/>
  - ✓ *Portland Regional Foodshed Current Situation Report*, Cogan Owens Cogan with Ken Meter for the U.S. Department of Agriculture (USDA) Western Sustainable Agriculture Research and Education (Western SARE) program, 2011
  - ✓ *Draft Portland Regional Foodshed Policy Toolkit*, Cogan Owens Cogan for the U.S. Department of Agriculture (USDA) Western Sustainable Agriculture Research and Education (Western SARE) program, 2012
  - ✓ Interviews with Retail Chains, Multnomah County, 2012

A database of agricultural producers was created with a list of tax deferral properties from the County Tax Assessor's Office and supplemented with mailing lists of various Oregon-based commodity groups. Several commodity groups were not willing to share their mailing lists, but did distribute information provided by the project team.



A cornerstone of the outreach effort included two direct mailings to the approximately 5,600 addresses in the agricultural producers database. The mailing consisted of a paper survey and information directing recipients to an identical online survey. The four-page survey included a series of questions about farm type, size and location. Follow-up phone calls were made to each address for which phone numbers were available and County staff met with several major producers for in-person interviews.

In addition to direct mailing and phone calls, several strategies were used to increase awareness of the producer survey: counter-top or bulletin board displays with informational postcards designed and placed in all major farm and feed stores in the County; presentations at formal and informal gatherings of agricultural producers; and articles about the study in industry newsletters and websites. These efforts resulted in responses from 1,008 Clackamas County-based agricultural producers. Additional outreach efforts included surveys and interviews with food processors and distributors and the equine industry.



## Regional Food System

The “foodshed” is defined as the geographic area for which Clackamas County aspires to increase its markets share of food-related agricultural products. It is also a mechanism for understanding the systems in place that drive food supply.<sup>2</sup> Foodsheds exist at many scales: regional (e.g., Portland metro area, Willamette Valley, Pacific Northwest), state, national and international. This Plan focuses on the regional foodshed by examining the role of Clackamas County in production, and the Portland region in processing, distribution and consumption. Unless otherwise noted, the Portland region is defined as Clackamas, Columbia, Multnomah, Washington and Yamhill Counties.

This analysis of the regional food system cluster is organized according to the four closely interrelated sectors of the food economy:

Production. People, places and supplies needed to grow food. Producers refers to growers/farmers and their suppliers.

Processing. Methods and facilities where raw foods and by-products are processed and packaged for distribution.

Distribution. Various distribution channels and market outlets by which food gets to consumers.

Consumption. Those who consume and utilize food and its by-products made by producers and processors at all geographic scales and delivered by various distribution methods.

---

<sup>2</sup> Blum-Evitts, Shemariah, *Designing a Foodshed Assessment Model: Guidance for Local and Regional Planners in Understanding Local Farm Capacity in comparison to local food needs*, May 2009.



## Supply Analysis

The following supply analysis provides an overview of food production and associated infrastructure within Clackamas County and the Portland region. The analysis includes a review of existing agricultural data sources, a summary of the results of County outreach efforts, and an examination of the potential for increasing supply and developing supplemental revenue streams.

### Production

The *Portland Regional Foodshed Current Situation Report (SARE report)* summarizes agricultural production data for Clackamas County and the region from the 2007 U.S. Census of Agriculture and other federal sources.<sup>3</sup> According to the 2007 Census of Agriculture, there are 3,989 farms in Clackamas County, the highest number of any county in Oregon. This represents 43 percent of the farms in the Portland region and 10 percent of all farms in the State. Farms in the County cover 182,743 acres of land which is approximately 32 percent of the regional total and just under one percent of farm acreage in Oregon. More than 104,000 acres are classified as cropland, of which 86,400 acres are harvested.

Most farms in Clackamas County are small, with approximately 38 percent less than 10 acres and another 44 percent between 10 and 49 acres. The average farm size is 46 acres and the median size is 15 acres. More than 1,240 farms, 31 percent of the County-based farms, had less than \$1,000 in annual sales in 2007 and 73 percent had sales of less than \$10,000.

Farms in Clackamas County produce a broad mix of food and nonfood products. Food products include berries, fruits and nuts, grains, livestock, milk and eggs and vegetables. Nonfood products include Christmas trees, grass and other seeds, greenhouse, horses, nursery stock and timber. Statewide, the County ranks first in acreage of Christmas trees (23,295) and nursery stock (12,859), and fourth in acres devoted to hazelnuts (4,474). The County also ranks first in the inventory of laying hens<sup>4</sup> and pullets to produce laying hen stock,<sup>5</sup> fourth in mink inventory (4,859) and fifth in broiler chickens (3.2 million).

The agricultural economy is an economic engine for the region and a vital part of the County's industrial mix.<sup>6</sup> Agriculture in the County has a significant economic impact across the state. Farms in Clackamas County sold nearly \$400 million of agricultural products in 2007. This was second highest in Oregon and an increase of 20 percent over 2002. Crops made up the majority of sales with \$335 million and livestock sales accounted for the remaining \$62 million.

---

<sup>3</sup> Cogan Owens Cogan with Ken Meter for Western SARE, *Portland Regional Foodshed Current Situation Report*, 2011.

<sup>4</sup> Inventory data suppressed by USDA to protect confidentiality.

<sup>5</sup> Ibid.

<sup>6</sup> The geographic concentration of interconnected agricultural producers, processors, distributors and consumers.



As shown in Table 1, food products accounted for \$103 million in agricultural sales. Nonfood products accounted for more than two-thirds of total agricultural sales. Nursery products made up the majority of nonfood sales, totaling more than \$227 million, supplying a portion of the plant material used in food production. Sales for Christmas tree farms were nearly \$46 million. Poultry and eggs earned the highest sales for food products at more than \$41 million, followed by fruits, tree nuts and berries, vegetables and cattle and calves.

Table 1. Agricultural Products Sold by Farms in Clackamas County, 2007

Product	Food Sales	Nonfood Sales	Total Sales
Crops, including nursery and greenhouse	\$47,328,000	\$274,012,000	\$335,357,000
<i>Grains</i>	\$549,000		\$549,000
<i>Vegetables</i>	\$19,212,000		\$19,212,000
<i>Fruits, tree nuts and berries</i>	\$27,567,000		\$27,567,000
<i>Nursery, greenhouse and horticulture</i>		\$227,114,000	\$227,114,000
<i>Christmas trees</i>		\$46,898,000	\$46,898,000
<i>Other crops and hay</i>			\$14,017,000
Livestock, poultry and their products	\$56,110,000	\$2,306,000	\$61,962,000
<i>Poultry and eggs</i>	\$41,067,000		\$41,067,000
<i>Cattle and calves</i>	\$7,985,000		\$7,985,000
<i>Milk and dairy</i>	\$4,859,000		\$4,859,000
<i>Hogs and pigs</i>	\$994,000		\$994,000
<i>Sheep, goats and their products</i>	\$689,000		\$689,000
<i>Horses</i>		\$2,306,000	\$2,306,000
<i>Aquaculture</i>	\$516,000		\$516,000
<i>Other animals and animal products</i>			\$3,546,000
<b>Total</b>	<b>\$103,438,000</b>	<b>\$276,318,000</b>	<b>\$397,318,000</b>

USDA Census of Agriculture, 2007

Highlights of the County's rankings statewide include:

- First in Oregon and the U.S. for sales of Christmas trees
- First in Oregon for poultry and egg sales
- First in Oregon for horse sales
- Second in Oregon for hog and pig sales
- Second in nursery, greenhouse and horticulture
- Sixth in Oregon for vegetable sales
- Seventh in Oregon for fruit, nut and berry sales



Agricultural suppliers of farm equipment, such as machinery, greenhouses, buildings and chemicals are also part of the supply chain. Clackamas County has 103 agricultural suppliers that provide 916 jobs and approximately \$37 million in annual payroll.<sup>7</sup>

In 2007, 84 farms in the County sold certified organic foods totaling nearly \$5.8 million, representing more than six percent of Oregon's organic sales. These farms sold more than \$3.6 million of food directly to consumers.

### *Clackamas County Agricultural Producer Survey*

Clackamas County assembled a database of agricultural producers and conducted a survey (Producers Survey) and interviews to gain a better understanding of what types of agricultural resources are located in the County. 1,008 producers responded to the survey or were interviewed. The survey assessed crops, size of operations, number of farms, acres farmed and net economic value. A summary of information regarding Clackamas County producers gathered through the survey follows. Additional detail is included in Appendix B.

Responses from more than 900 of the respondents to the Producers Survey indicate that of the 74,733 acres reported, respondents own 48,766 acres and lease 25,967 acres as shown in Figure 1. The average acreage in production among survey respondents is 59.2 acres (total acres 30,859.50) per 563 respondents.

When asked about the products that make up their gross farm income, respondents cite a wide variety of crops and livestock as indicated in the 2007 USDA Census of Agriculture, including: berries; Christmas trees; grain or hay; grapes; grass and other seeds; greenhouse; horses; cattle and calves; milk or eggs; nursery stock; timber; tree fruits and nuts; and vegetables. Only 12 percent of respondents perform additional processing or packaging of their products before selling them to customers.

Approximately 29 percent of respondents generate at least some of their sales from organic production. A majority of organic farmers do not obtain any certification (82%). Most farmers who use organic production do so to practice good stewardship (69%). Other reasons cited for organic production include food safety (33%) and use as a marketing tool (33%).

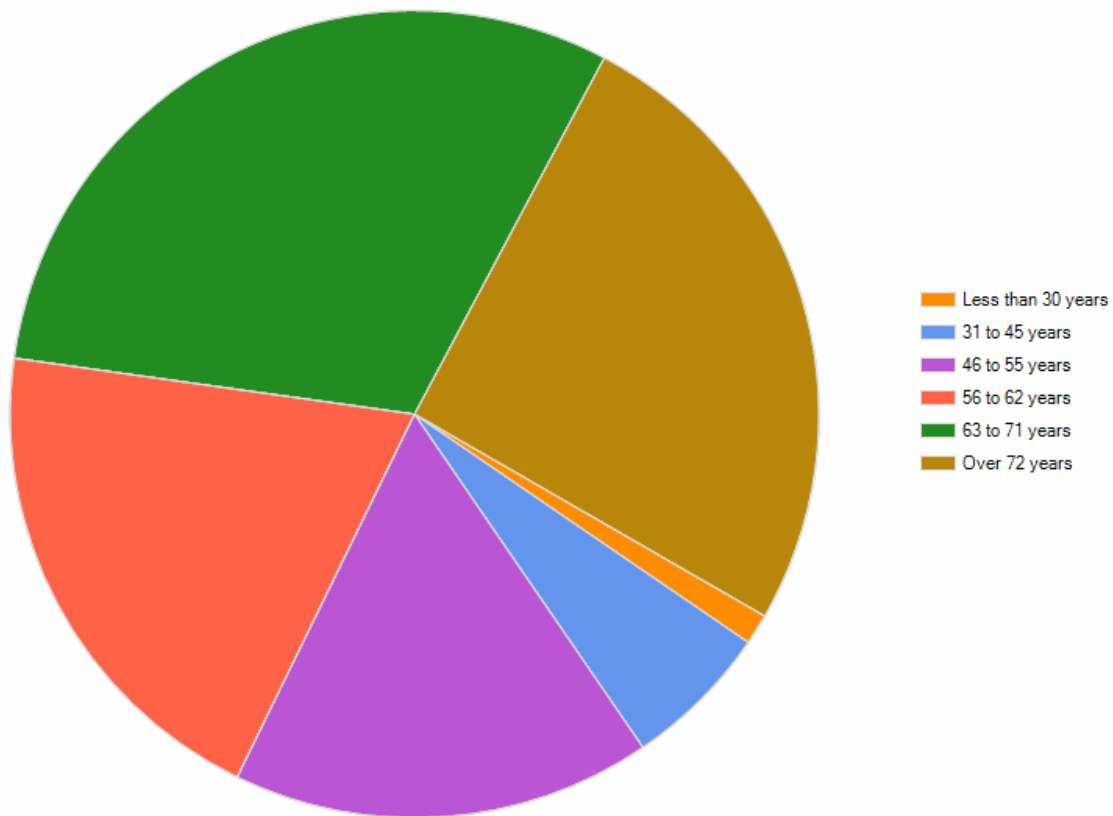
---

<sup>7</sup> Cogan Owens Cogan with Ken Meter, *Sustainable Agriculture Research and Education: Portland Regional Foodshed Current Situation Report*, 2011.



More than 30 percent of the 900 principal farm owners responding to the Producers Survey indicate their average age is between 63 and 71 years of age. Over 93 percent of farm owners are over 46 years old as shown in Figure 2. Less than 39 percent of respondents have a plan to transfer farm ownership when they retire, and only 43 percent of those who do have their transfer plan formalized in a legal document.

Figure 2. Average Age of Principal Farm Owners in Clackamas County



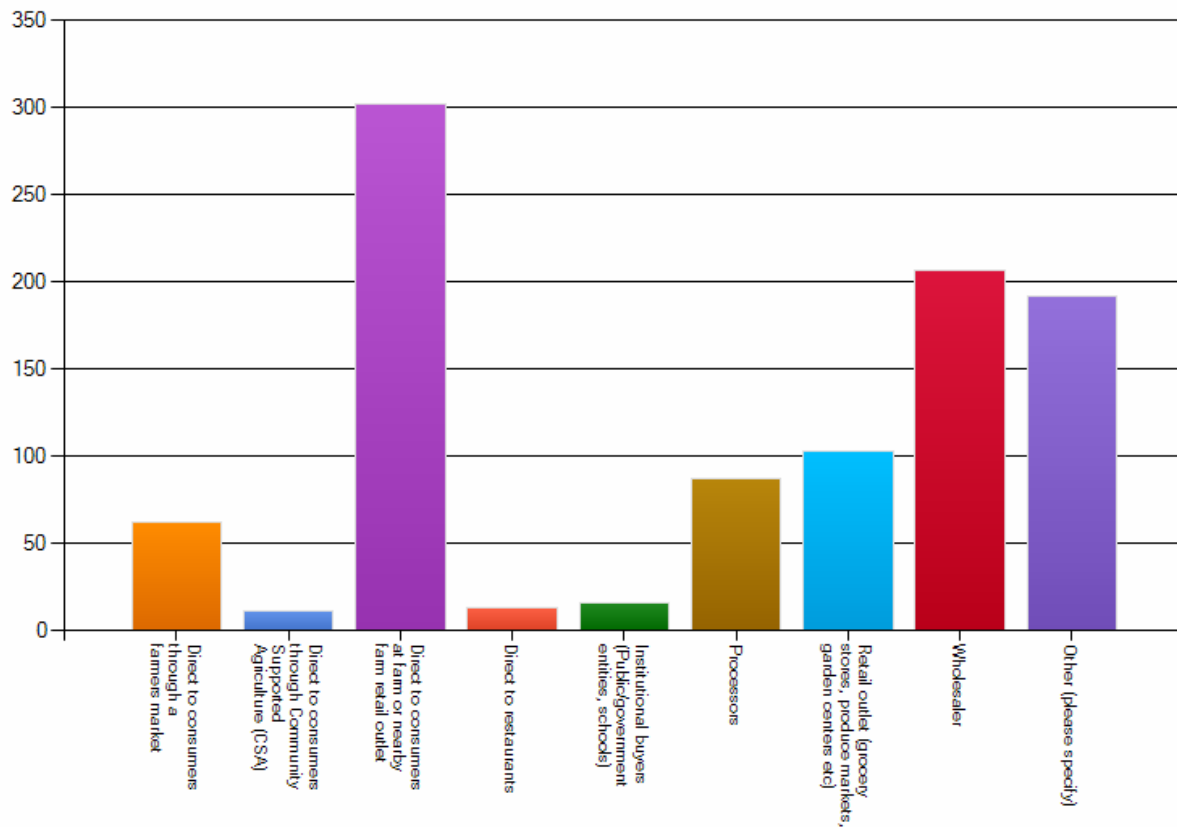
Clackamas County Agricultural Producers Survey, 2012





As illustrated in Figure 3, survey respondents primarily connect to their customers in person (66%). They primarily market their products direct to consumers who come to their farms or nearby retail outlets (45%) or to wholesalers (31%), retail outlets (15%) or processors (13%). Farmers also market their products to wholesalers, retail outlets, processors and directly to customers through farmers' markets. Other reported means of connecting with customers are via telephone and website. Approximately 76 percent of respondents are satisfied with current market outlets. However, 248 respondents indicate an interest in expanding to other outlets.

Figure 3. Primary Markets of Producers in Clackamas County

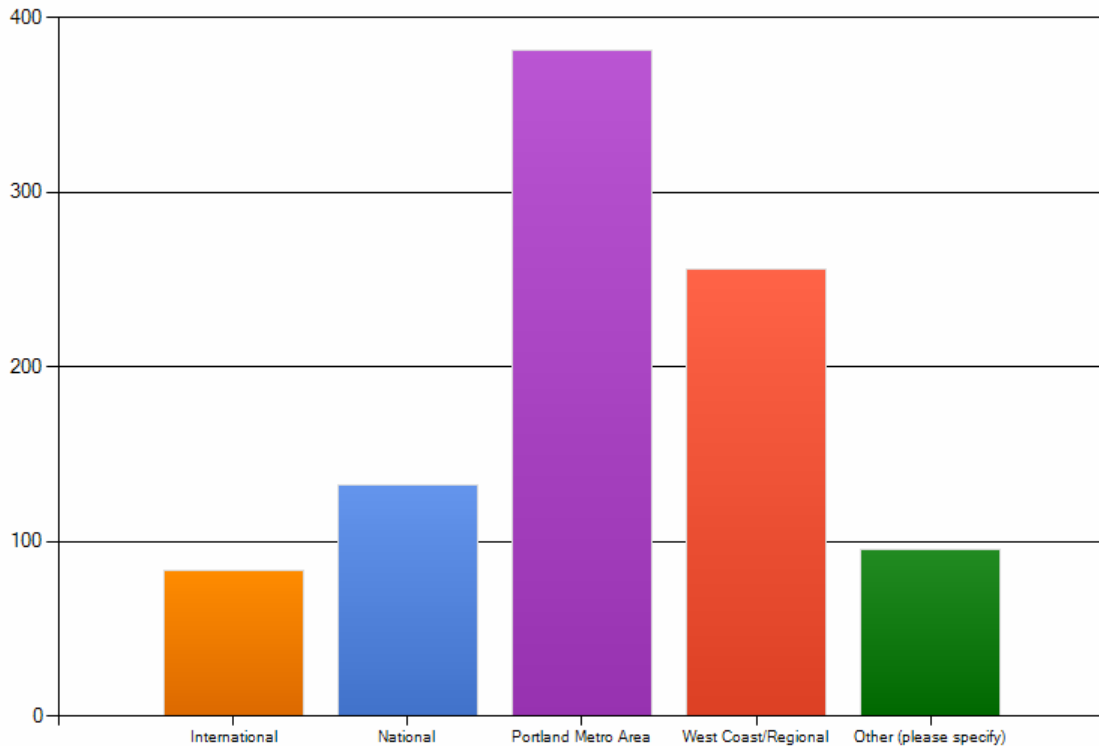


Clackamas County Agricultural Producers Survey, 2012



The primary geographic market for Clackamas County producers is the Portland Metro Area (53%), followed by the West Coast/Regional (36%), national (18%) and international (12%) as shown in Figure 4. The primary product of farms in the County travels an average distance of 254 miles to its first point of sale.

Figure 4. Primary Geographic Markets for Producers in Clackamas County



Clackamas County Agricultural Producers Survey, 2012

Producer Survey responses indicate that farmers and their families are the primary labor source for farming operations. Seventy-five percent of respondents indicate their main source of labor is non-seasonal, local or family employees. Approximately 69 percent of respondents do not employ non-seasonal workers and 71 percent do not hire seasonal workers. Just more than one quarter of respondents hire between one and five non-seasonal workers and 20 percent employ between one and five seasonal laborers. Thirty percent of respondents do not have an available, reliable labor force and 13 percent indicate their labor force does not have the appropriate skills for the tasks they are assigned.



When asked about their business, more than 36 percent of Producer Survey respondents are not satisfied with the size and productivity of their operation and would like to increase revenue and/or reduce costs. 15 percent of farmers would like to increase their land base. To do so, a vast majority would pay for the necessary investments themselves or with family assistance (81%). Only 18 percent said they would rely on a commercial lender.

Reported barriers to expanding products include:

- Current economic environment (33%)
- Cost, availability and skill of labor (31%)
- Size, capacity of their operation (21%)
- Marketing (20%)
- Access to land (18%)
- Financing (16%)

More than 30 percent of respondents would be interested in joining an association, cooperative or similar organization to access equipment, resources and other inputs, lower costs and expand their market. Approximately 26 percent are interested in crops/species they are not currently growing.

## Potential Supply

Although a range of public and private individuals and organizations have embraced the goal of greater regional food self-reliance, no current plans in the Portland region offer specific targets for satisfying regional demand. Therefore, Ecotrust conducted a landscape suitability exercise<sup>8</sup> in order to develop a baseline understanding of Portland-area foodshed potential.<sup>9</sup> The analysis matches potential production of general crop categories to current consumption of those same general crop categories in an attempt to address questions about whether the Portland region could feed itself and the number of proximate farmland acres required to feed the region.

The analysis aggregates multiple crops within broad crop categories and therefore does not address the diversity of demand within each category. For example, demand for nuts is currently met by production within the tri-county area. However, the majority of these nuts are hazelnuts produced specifically for export. This approach assumes that land suitable for production of a single product within any given crop category is suitable for all products within that same crop category. Furthermore, the analysis does not consider costs of production and therefore, while it may be ecologically feasible to grow some crops in the region, it may not be economically feasible.

---

<sup>8</sup> Ecotrust, *Partners with Nature: Developing Scenarios for Ecosystem Services and Resilience in the Greater Portland Region*, March 2012.

<sup>9</sup> For the potential supply analysis, the Portland-area foodshed is defined as the current 265,869 acres zoned for agriculture (i.e. “exclusive farm use” under state land use designations) within the Clackamas-Multnomah-Washington County area.



Table 2. Potential Satisfaction of Current Food Demand for the Tri-County Region

Crop category	Current production (acres, USDA)	Yield (lbs. / acre)	Existing production (lbs.)	Demand (lbs.)	Surplus (or shortfall) (lbs.)	Potential (acres)	Potential (lbs)	Current demand met (%)
Grain	43,379	6,500	281,960,655	276,186,359	5,774,296	43,379	281,960,655	102%
Berries and grapes	3,469	10,200	35,385,202	33,313,031	2,072,171	3,469	35,385,202	106%
Hay	38,869	12,000	466,423,402	305,478,851	160,944,551	25,684	308,204,582	101%
Nuts	6,414	1,500	9,621,469	7,302,610	2,318,859	5,150	7,725,664	106%
Oil seeds	261	5,800	1,515,621	6,441,500	(4,925,879)	1,132	6,568,121	102%
Tree fruit	1,609	12,000	19,305,653	96,000,606	(76,694,953)	7,975	95,695,619	100%
Vegetables	11,501	25,000	287,534,314	729,899,992	(442,365,678)	29,223	730,572,675	100%
Pasture	105,203			218,879*	(113,676)	105,203	n/a	48%
Other	15,426					4,916	n/a	
Sod and grasses	39,738					39,738	n/a	
<b>Total</b>	<b>265,869</b>					<b>265,869</b>		

\* Demand reported in acres

Ecotrust, *Partners with Nature: Developing Scenarios for Ecosystem Services and Resilience in the Greater Portland Region*, 2012

Note: Current demand met (%) represents the percent of current demand that could be satisfied by shifting crop production.

As shown in Table 2, the gross quantity of grain, berries and grapes, hay, and nuts produced already satisfies regional demand. Estimated production of oil seeds, tree fruit, and vegetables could meet demand if additional acres were devoted to them by shifting production from non-edible crops. Existing pasture lands could support roughly half of current beef consumption.

Given the limitations identified above, the analysis still provides us with a general sense of the productivity potential of agricultural lands and regional demand that, with supporting market conditions, might be met by Clackamas County producers.

## Agricultural Tourism

The *Draft Master Plan for the Development of Agri-tourism in Clackamas County, Oregon* indicates that agricultural tourism or “agri-tourism” is an alternative market channel for farmers to profit from the distribution of agricultural products.<sup>10</sup> Agri-tourism enables farmers to add a new revenue stream by offering activities, such as:

- For-fee farm recreation
- Education
- Entertainment and events
- Hospitality
- Off-farm direct sales
- On-farm dining
- On-farm direct sales
- On-farm stays

<sup>10</sup> MARStewart GROUP, et al, *Draft Master Plan for Development of Agri-tourism Development in Clackamas County, Oregon*, 2012.



More specifically, these activities include: hiking, biking and camping; tours; festivals and fairs; farmers markets; farm stands; overnight farm stays; World Wide Opportunities for Organic Farms (WWOOF); catering; on-farm dining; tasting rooms; pick-your-own operations; and rodeos. Due to its unique natural and agricultural assets, the County is uniquely positioned to become a center for agri-tourism. Agri-tourism in Clackamas County is growing due to popular attractions such as wineries, flower farms and specialty nurseries.

### *Equine Industry*

As reported in *The Equine Impact Analysis in Clackamas County, Oregon* study, the 2007 USDA Census of Agriculture indicates there are approximately 7,015 equines<sup>11</sup> on County-based farms.<sup>12</sup> It is the largest equine county in the state and one of the largest in the nation. Several different categories of horse use are found in the county, as are a variety of breeds, and various subsectors in the equine industry. The primary uses of equines in Clackamas County are for pleasure, teaching, competition, breeding, farm work and retired race or performance horses. Direct effect value of the equine industry in Clackamas County exceeds \$25 million.

The presence of these horses generates revenue for a variety of secondary businesses that care for them, including feed providers, stabling and pasturing, shoeing farriers, veterinarians and other horse care, photography, tack and clothing and transportation. Equine events, such as circuit shows, rodeos and clinics, are another important source of revenue for Clackamas County. Major horse shows in the County attract more than \$2 million in revenue per event. Manure processing for fertilizer, sales and related energy production provide on-farm opportunities.

---

<sup>11</sup> Horses, ponies, mules, burros and donkeys.

<sup>12</sup> MARStewart Group, *The Equine Impact Analysis in Clackamas County, Oregon*, 2012. The vast majority of equines in the County are horses with a small number of mules, donkeys and burros.



## Demand Analysis

The demand analysis is a regional assessment of market potential that examines demand resources and market trends, including socioeconomic data, import levels, institutional and governmental purchases and comparable markets. The analysis looks at regional consumption, processing and distribution.

### Consumption and Health

According to the *SARE Report*, in 2009, the 1.8 million residents in the Portland Metropolitan Statistical Area generated \$72 billion in income.<sup>13</sup> Real personal income has increased more than three-fold since 1969. Food consumption has consequently increased, as has the retail price of food.

As shown in Table 3, Portland region residents purchase \$4.8 billion of food each year; \$2.8 billion to eat at home.<sup>14</sup> Most of this food, an estimated \$4.3 billion, comes from outside of the region. Clackamas County residents spend \$1 billion on annual food purchases and \$598 million to eat at home. Approximately \$12 million in food products are sold by 1,796 regional farmers directly to consumers. These are not always to Portland region consumers, since these may include Internet-based sales.

Table 3. Food Eaten at Home in the Portland Region and Clackamas County, 2009

Food	Portland Region	Clackamas County	County % of Region
Meats, poultry, fish, and eggs	\$605,000,000	\$130,000,000	21.5%
Fruits & vegetables	\$512,000,000	\$110,000,000	21.5%
Cereals and bakery products	\$357,000,000	\$77,000,000	21.6%
Dairy products	\$299,000,000	\$64,000,000	21.4%
Other, including sweets, fats, & oils	\$1,011,000,000	\$217,000,000	21.5%
Total	\$2,784,000,000	\$598,000,000	21.5%

U.S. Bureau of Labor Statistics, 2009

The *SARE Report* indicates that approximately 26 percent of the region's residents earn less than 185 percent of the federal poverty guideline. At this level of income, children qualify for free or reduced-price lunch at school. In the regional foodshed, more than one out of every four people is uncertain about their ability to purchase essential foods. These lower-income residents constitute a significant market, spending \$900 million each year buying food, including \$359 million of Supplemental Nutrition Assistance Program (SNAP) benefits and additional millions of Women Infants and Children (WIC) coupons. From 1999 to 2009, farmers in the region received an average combined total of \$61

<sup>13</sup> Clark, Columbia, Clackamas, Multnomah, Skamania, Washington and Yamhill Counties.

<sup>14</sup> 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.



million in subsidies, mostly to raise crops such as wheat or corn that are sold as commodities, not to feed the region's residents.<sup>15</sup>

Improved health is another opportunity target. Just 24 percent of Portland region residents reported in 2009 that they eat five or more servings of fruit or vegetables each day.<sup>16</sup> This is a key indicator of health, since proper fruit and vegetable consumption have been connected to better health outcomes. Approximately 55 percent of the region's adults report they engage in at least 30 minutes of moderate physical activity five or more days per week, or vigorous physical activity for 20 or more minutes three or more days per week. 60 percent of the region's residents are overweight (36%) or obese (24%) and seven percent have been diagnosed with diabetes.<sup>17</sup> Medical costs for treating diabetes and related conditions in the metro region are estimated at \$1 billion per year.<sup>18</sup>

## Aggregation

### *Processing and Distribution*

The *SARE Report*, indicates that the Oregon food processing and distribution sectors include 197 companies not including final food preparation at retail supermarkets or other food-related businesses downstream of the initial food processors.<sup>19</sup> In addition to food processing, the expanded food cluster also includes farm production, packaging and machinery, transportation and warehousing. The sector in Oregon generates \$6.1 billion in added value and directly employs more than 23,000 workers (2006).<sup>20</sup>

Agricultural distributors, such as food banks, food brokers and delivery companies, play a critical role in the food system cluster. Distributors obtain and consolidate agricultural products from numerous producers and make them available to consumers through various distribution channels. As confirmed by the *SARE Report*, there is no known data source that accurately measures internal and external regional food supplies as distributed.

FCS GROUP prepared an *Economic Landscape* report for Clackamas County to provide insight and improve understanding of the County's economy, specifically within the context of the greater Portland regional economy. FCS GROUP analyzed emerging trends and strategies to convey economic forces that are currently driving the County's economy. Two of the 10 key industry clusters identified in the report are related to the food economy: 1) Food and Beverage Manufacturing and 2) Agriculture and Food Systems.

---

<sup>15</sup> 2000 U.S. Census, Bureau of Labor Statistics and Bureau of Economic Analysis.

<sup>16</sup> Centers for Disease Control and Prevention.

<sup>17</sup> Centers for Disease Control.

<sup>18</sup> American Diabetes Association medical cost calculator.

<sup>19</sup> Includes companies of at least 20 employees or estimated annual sales of \$1 million or more.

<sup>20</sup> Oregon Business Plan: [www.oregonbusinessplan.org](http://www.oregonbusinessplan.org).





Food and beverage manufacturing is an emerging cluster in Clackamas County. Establishments within this cluster range in size from small independents to large international practices. Food processing and manufacturing includes milking, baking and refining food products to produce food and other edible items such as coffee and seasoning. Beverage manufacturing encompasses bottling, producing, fermenting and distilling beverages and includes breweries, wineries, bottling plants and liquor distilleries. This cluster now derives the majority of its sales from customers outside Clackamas County, and includes seven of the County's Top 100 private employers.

The average compensation in this cluster is well above the county-wide average for all jobs and the value added increased by 25 percent from 2009 and 2010. However, direct employment decreased by three percent during the same time period. This cluster currently accounts for only one percent of the County's annual gross domestic product (GDP), but derives 35 percent of its sales from customers located outside the region (domestic and foreign trade). This cluster should continue to experience positive growth as overall economic conditions improve nationally and internationally.

According to the FSC GROUP, there is a growing trend towards buying locally produced food and organic products. According to the U.S. Bureau of Labor Statistics, people spend approximately 10 percent of their gross earnings on food. This level of spending amounts to nearly \$1.9 billion in Clackamas County and \$7.5 billion in the nine-county Portland MSA region every year. In addition, there is a significant level of food purchased by businesses, such as food processors, breweries, and restaurants. While the agriculture and food systems cluster represents only two percent (\$99 million) of the annual GDP produced by Clackamas County, a supplemental analysis by FCS GROUP indicates that increasing local purchases by 20 percent could increase regional GDP by \$44 million, with Clackamas County capturing 15-20 percent of this increase.

While average compensation in the agriculture and food systems cluster is well below the county-wide average for all jobs, the potential for future growth is strong. This cluster derives nearly half of its sales from customers located outside the region (domestic and foreign trade). As the trend towards buying local increases, this cluster should continue to improve.

The *SARE Report* confirms that no comprehensive study of food processing has been completed for Clackamas County or the Portland region. Five processing sectors in Oregon make up \$7.6 billion or 62.3 percent of processing sales: frozen food manufacturing; dairy; fruit and vegetable canning, pickling, and drying; breweries, wineries, and distilleries; and bakery goods, pasta, and tortilla manufacturing.<sup>21</sup>

In 2009, processing comprised the largest portion of direct agricultural sales in Oregon, with an output of more than \$12 billion. The processing sector employed 31,308 people and contributed

---

<sup>21</sup> Oregon State University Extension Service, Rural Studies Program, *Oregon Agriculture and the Economy: An Update*, February 2011.



more than \$2 billion in value added expenditures. This sector has an even broader impact on Oregon's economy when looking at direct and indirect expenditures, accounting for more than \$20 billion in sales, employing approximately 98,000 people and contributing nearly \$7 billion in value added expenditures.<sup>22</sup> In the Portland region food sector, food manufacturing generates \$500 million in personal income, while retail food workers earn about \$670 million, and dining service workers earn \$1.6 billion.<sup>23</sup>

### *Institutional Purchasers*

Interviews were conducted with a variety of key institutions (e.g., schools, hospitals, agricultural aggregators) and retail chains.<sup>24</sup> They play a key role as major purchasers of regional food and ability to influence the regional food economy. Key findings from those interviews are as follows:

- Definitions of "local and regional food," range from products sourced anywhere between 200 and 800 miles from the Portland region.
- Reasons for purchasing local products include quality and supporting the local economy. Purchasing targets range from undefined to 80 percent.
- Increased awareness, decreasing prices, political pressure and economic development opportunities will amplify the demand for locally/regionally sourced food over the next ten years.
- Institutional purchasers indicate that the primary barriers to sourcing local foods are availability, cost, distribution, processing and promotion.
- Market opportunities include: purchasing growing season extension equipment; developing procurement strategies with institutional purchasers, including schools and large employers; and pursuing aggregated cooperatives or land trust farms.

### *Agricultural Aggregator Overview*

As with producers, Clackamas County conducted a survey and interviews with regional agricultural aggregators (processors and distributors). The following profile is a summary of information regarding the region's processors and distributors gathered through the survey.

---

<sup>22</sup> Ibid.

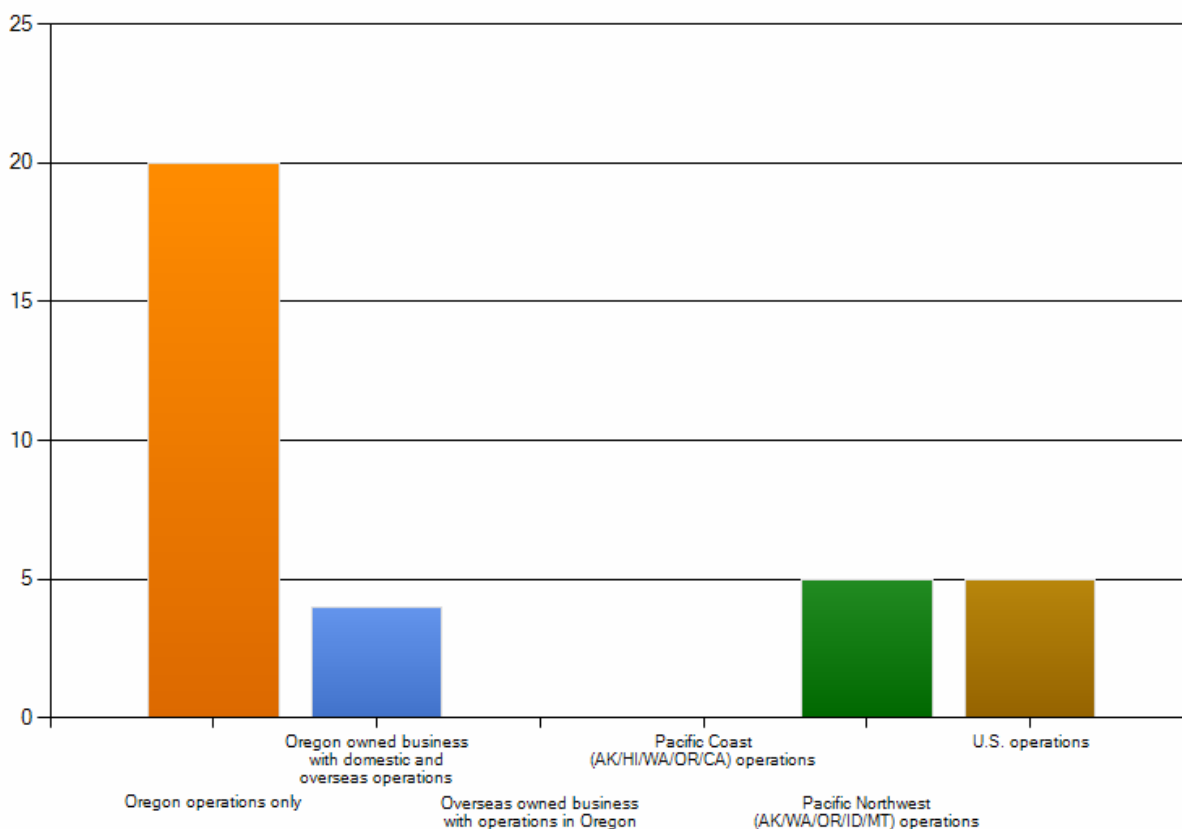
<sup>23</sup> This total was calculated by multiplying the average household change in net assets (reported in surveys of consumers by the Bureau of Labor Statistics Consumer Expenditures survey) by the number of households in the region.

<sup>24</sup> Information is derived from efforts conducted by Clackamas and Multnomah Counties. For a more detailed description, see Appendix A.



The 34 aggregator responses were evenly mixed between processors and distributors along with some importers, exporters and cold storage respondents. Approximately 76 percent of respondents were located in Clackamas County, 15 percent in Multnomah County and the remaining nine percent in Marion County. As shown in Figure 5, 20 respondents categorize their operations as Oregon only. Five self-identify as operating on the Pacific Coast and five in the U.S. Four respondents identify as Oregon-owned with domestic and overseas operations. A majority of these businesses are private corporations or limited liability corporations. Other ownership structures include sole proprietorships, public corporations and cooperatives.

Figure 5. Operations of Processors and Distributors in Clackamas County

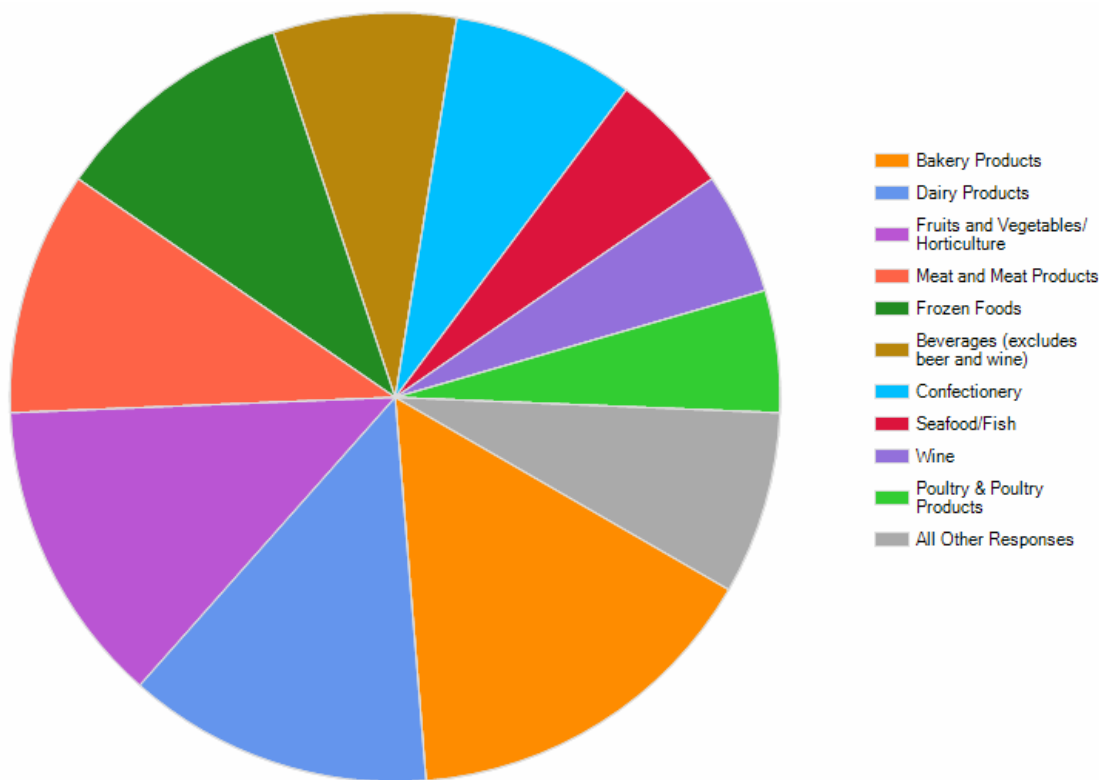


Clackamas County Agricultural Processors and Distributors Survey, 2012



Processors and distributors are involved in a variety of industries, as illustrated in Figure 6. The most common industry sectors include bakery products, fruits and vegetables/horticulture, dairy products, frozen foods and meat products. More than half of food processors identify their principal activity as manufacturing food products for human or animal consumption. Other food processing activities include distribution, primary processing of raw agricultural products and supplying semi-prepared food products for use in further processing.

Figure 6. Primary Agricultural Industry Sectors for Processors and Distributors in Clackamas County



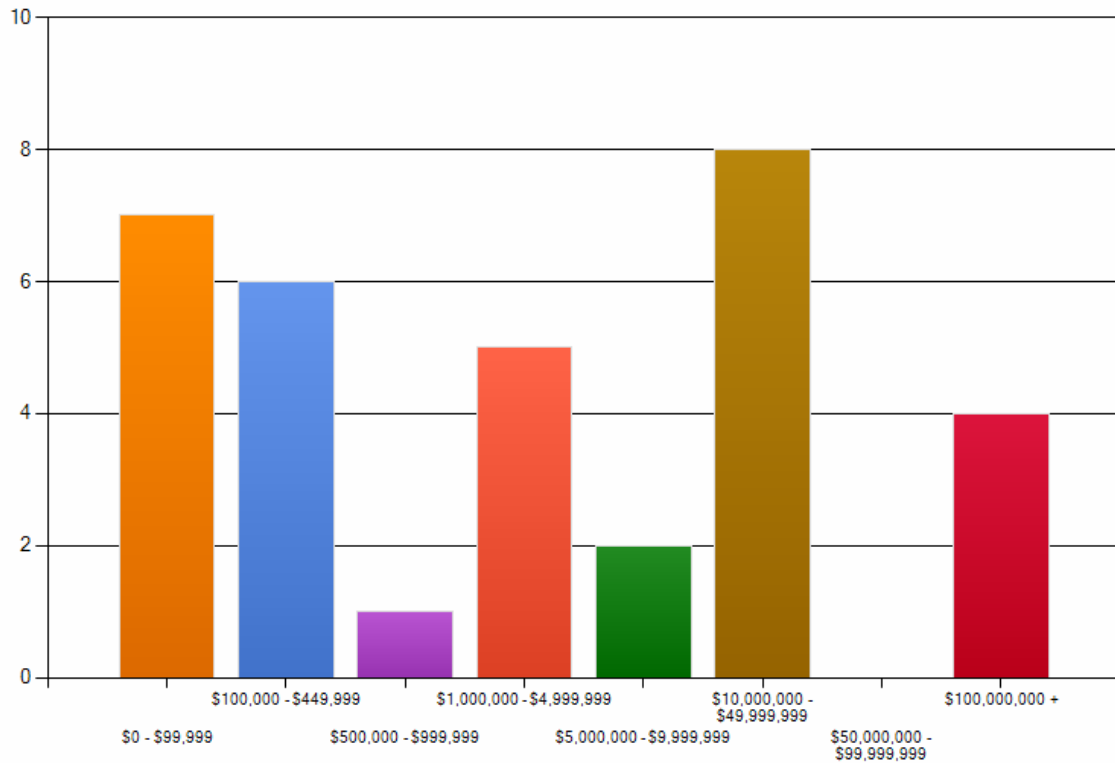
Clackamas County Agricultural Processors and Distributors Survey, 2012

Most suppliers for these processing and distribution businesses are located within the Portland metro area, with a large number also coming from California. Approximately 40 percent have national suppliers and another 31 percent have international suppliers. The most common barrier to using Clackamas County suppliers is limited availability of needed products. This gap between supply and demand appears to be a major opportunity for food production. Price, quality and connecting to these suppliers are concerns.



As shown in Figure 7, processors and distributors report a wide range of revenues that includes multiple small, medium and large-revenue-generators. Fourteen respondents have total annual sales of less than \$1 million. Seven report sales of between \$1 million and \$10 million. Eight respondents have sales of between \$10 million and \$50 million and four report sales of more than \$100 million. Distribution, wholesale sales, processing and restaurants are the largest sources of revenues.

Figure 7. Total Production Sales for Processors and Distributors in Clackamas County, 2010 Fiscal Year



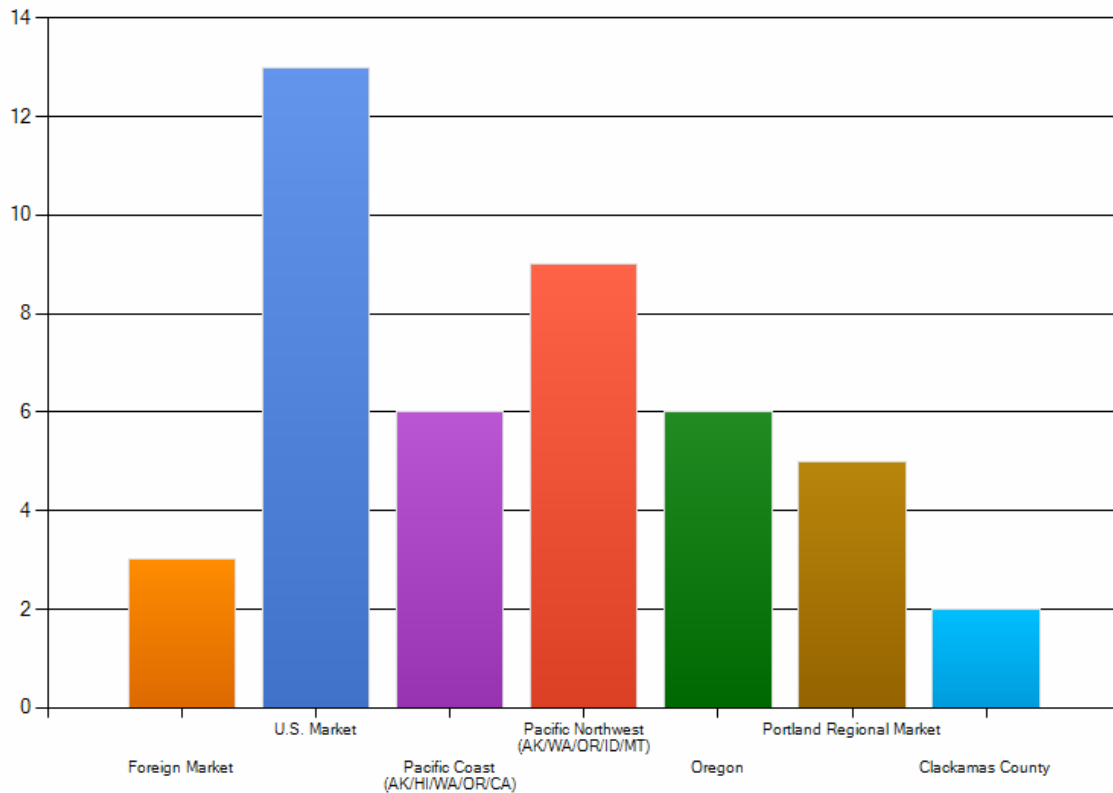
Clackamas County Agricultural Processors and Distributors Survey, 2012



Thirteen respondents indicate that they do not export their products and have no intention of doing so. Another ten state that they do not export currently, but intend to do so within the next five years. Eight respondents currently export some or all of their products. Fourteen processors/distributors who export their goods, ship them a distance of greater than 1,000 miles.

As shown in Figure 8, Respondents indicate the most common market for their products is the United States, followed by the Pacific Northwest, including Alaska, Washington, Oregon, Idaho and Montana. Additional markets include the Pacific Coast (AK/HI/WA/OR/CA) and Oregon, the Portland region and foreign markets. While there appears to be a relatively small interest in foreign exports among respondents, there is a growing interest in regional and national markets. Among foreign markets, Canada and Japan are the most popular current and future export targets, with additional interest in South Korea, China and Taiwan.

Figure 8. Primary Geographic Markets for Clackamas County Processors and Distributors



Clackamas County Agricultural Processors and Distributors Survey, 2012

One-half of processors and distributors employ fewer than 20 workers and 95 percent have fewer than 250 employees. Nearly all processors and distributors are satisfied with their labor force and indicate their workers are adequately skilled. However, 44 percent are interested in training resources.



Processors and distributors identify several forces that impact their bottom line performance, including consumer preferences, the cost of fuel and logistics and food safety. Survey respondents report that access to capital and the lack of programs designed to facilitate expansion are significant barriers to growth. Other barriers include regulatory compliance, financial incentives and the ability to realize return on investment.

## Agricultural Tourism

As shown in Table 4, an excerpt from the *Draft Master Plan for the Development of Agri-tourism in Clackamas County, Oregon*, Agri-tourism is growing nationwide as farm operators in many states offer agri-tourism activities as one way to diversify and increase their on-farm profits.

Table 4. Agri-Tourism Adds Value to Agriculture Production

Raw Products	Value Added	Value Added Plus
Nursery Stock	Cut flowers, Landscaping	Lavender Festival, Garden Centers
Christmas Trees, Woodlands	Choose 'N Cut, Wreaths, Firewood	Christmas Show, SummerYule
Berries and Nuts	Jams, Syrups, Candied Nuts	Gourmet Food Shops, Catalogs
Horses	Riding Lessons, Trail Rides	Horse Shows, Tours
Vegetables, Fruits	Packaged, Processed, CSA baskets	Farmers Markets, Restaurants
Wine Grapes	Wines	Wine tastings, Events
Alpacas and Llamas	Fiber, Garments	Events, Tours
Livestock, Poultry	Goat Cheese, Eggs, Feathers	Rodeos, Events, Tours, CSA

MARStewart Group, 2009

The *Draft Master Plan for the Development of Agri-tourism in Clackamas County, Oregon* states that although the economic impact of agri-tourism has not been thoroughly researched, a variety of recent state surveys have indicated its importance to the local farm economy. National data supports the economic development potential of agri-tourism. Nearly two-thirds of all adults took a trip to a rural destination from 2002 to 2005, and more than 82 million people visited farms during a one-year period in 2000 and 2001, including approximately 20 million youth and children under the age of 16. In Vermont, a 2003 survey revealed that one-third (2,200) of farms received an average of \$8,900 from agri-tourism activities in 2002. In California, half the operators responding to a state survey reported less than \$10,000 in agri-tourism revenues for 2008, while 21 percent (55) had agri-tourism revenues of \$100,000 or more.





## Gaps and Opportunity Analysis

The supply and demand data analysis reveals gaps in the regional food system as well as opportunities that have the potential to drive market development and job creation in Clackamas County. The following is a summary of regional food system barriers, challenges and opportunities.

### Agricultural Economic Cluster Strategy

Clackamas County has made foodshed development an important economic development goal. However, 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. The State of Oregon continues to focus on protection of prime productive farmland and exports and has limited focus on increasing the economic viability of small-medium sized farmers surrounding the Portland urban region. There appears to be an opportunity for regional and state economic development officials to focus more attention on the regional food economic cluster given its large relative size and extent of exports outside the region.

Manufacturing food products for human or animal consumption is the most common principal food processing activity reported by survey respondents. When food processors and distributors were asked to describe their industry, the primary responses were bakery, dairy, and fruits and vegetables/horticulture. These industries could serve as the basis of a food cluster in Clackamas County.

A majority of respondents to the processor and distributor survey believe that a coordinated regional brand could be beneficial to the local agricultural industry. One quarter of producer survey respondents feel that a collaborative branding campaign would be of value to their operations.

### Import Substitution and Exports

The *SARE Report* indicates that the Portland region currently imports over 95 percent of the food consumed. Direct farmer-to-consumer sales are a relatively small part of the regional foodshed economy at \$12 million. If ten percent of food currently imported from outside the region was locally produced, this would generate approximately \$470 million in increased local economic wealth per year, not including economic multipliers. This assumes adequate capacity for additional production by that amount while maintaining food exports.

There appears to be capacity in the region to produce more food for local sales and exports. Ecotrust's 2012 study of the potential for food production in Clackamas County found that there is significant opportunity to grow local food to substitute for a large portion of currently imported food crops, especially fruits and vegetables.

No regional comprehensive economic development strategy designed to increase regionally produced food currently exists. In addition, there is no regional organization currently charged to coordinate development of such a strategy. This presents an opportunity to fill the gap.



## By-product Resources Business Models

Clackamas County is exploring opportunities for waste-to-energy projects and included questions on the agriculture producer survey inquiring as to whether their agricultural operations generated residual waste. More than 53 percent of survey respondents affirm a residual waste product from operations, such as surplus Christmas trees, clippings, slash and animal waste. The most reported waste management practices by respondents include composting the waste and spreading on fields, burning, grinding and chipping.

## Specialty and Organic Agriculture

Results of the Producers Survey indicate that organic production comprises more than 29 percent of all farm sales generated in Clackamas County. One reason Clackamas County agricultural producers cited for expanding organic production is their interest in increasing the size of their operation in order to create new market opportunities. Oregon has a specific focus on foreign exports to the Pacific Rim. An example is the recent trade success of the South Korean market opening to Oregon blueberries, which grow abundantly in the County and the region. Interviews with processors and distributors indicated there is a gap in the development of emerging industrial food production techniques, such as hydroponics, aquaponics, aquaculture, vertical farming and intensive greenhouse production in the region.

## Aggregation

Most farms in Clackamas County are relatively small in terms of acreage and production. Currently, there are multiple and uncoordinated efforts focused on helping these small producers improve their business operations or market, brand products, process and distribute their food within the region. Few funding sources exist to cultivate key grower/distributor partnerships necessary to expand regional markets. Organizations like the Clackamas County Extension Office and Molalla-based Friends of Family Farmers, could be strategic partners focused on Clackamas County. Few funding sources exist to cultivate key grower/distributor partnerships necessary to expand regional markets.

On-site processing of agricultural products is of particular interest for urban area farmers. Thirty-six percent of respondents to a regional survey identify “value added and processing activities” as a primary source of their gross farm income. 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 meet the potential demand. Interviews with regional processors and distributors support these findings, citing inefficient distribution systems and processing facilities that do not serve the needs of small farmers.

The USDA supports expansion of food hubs which are businesses or organizations that connect producers with buyers by offering a suite of production, distribution, and marketing services. It's an innovative business model that allows farmers of all sizes to meet the growing consumer demand for fresh, local food by gaining entry into commercial and larger volume markets such as grocery stores,



hospitals and schools. Ecotrust currently operates an online virtual food hub to link buyers and sellers. Several other models exist including physical locations to create markets between buyers and food producers.<sup>25</sup>

Approximately 30 percent of agricultural producers would be interested in joining an association or cooperative to explore new market opportunities, expand their current market and gain access to equipment and resources they are currently lacking.

### Farm Ownership, Succession and New Farmers

Results of the Producers Survey indicate that the average age of the principal owner/farmer is between 63 and 71 years old. Succession planning is an area where additional assistance and resources may be needed as a majority of producers do not currently have a plan of transfer.

### New Markets

Research suggests there are a variety of opportunities to expand into new industry product and geographic markets. According to the Producer Survey, Clackamas County growers are considering expanding into markets such as direct on-farm sales, nearby retail outlets, wholesale markets, retail outlets, direct to consumers through farmers markets, and direct to restaurants.

There appears to be a growing interest in national, Pacific NW and Pacific Coast markets among respondents to the Clackamas County Producers and Processors and Distributors Surveys. The current primary geographic market for farmers surveyed in Clackamas County is the Portland Metro Area with secondary markets of West Coast/Regional, national and international. Producers are interested in expanding into the Portland Metro, West Coast/Regional, national and international markets. Current primary markets for processors and distributors responding to the survey are the United States and the Pacific Northwest.

Interviews with aggregators indicate there are opportunities to sell more products in the region year-round and in larger volumes. A fast food aggregator indicates that they would like regional sources of organically and humanely grown pork, turkeys, and chickens. They could also purchase lettuce and tomatoes in four seasons if they are available. Other aggregators indicate that growers need guidance to grow products organically and sustainably, seasonally, and of high quality for storage and when they reach the market.

### Small Business Assistance and Training

Producers Survey respondents indicate a need for financial, legal, tax and workforce development assistance. OSU Extension (Corvallis), as part of the SARE project, identifies improved farm business practices as a major target for development of future education and training packages.

---

<sup>25</sup> <http://www.usda.gov/wps/portal/usda/usdahome?contentid=2012/04/0127.xml>



## Labor

Responses to the processors and distributors survey indicate that the availability of a skilled work force impacts their bottom line performance and is a barrier to growth. Approximately 44 percent of processing and distribution employers are interested in workforce training resources.

More than 31 percent of Producers Survey respondents who are considering producing or expanding current product for market say that labor costs and availability are one of the most significant barriers to doing so. In addition, a survey and interviews conducted with producers for the *SARE Report* indicates that worker education on safe food handling practices is a specific need.

## Diversification/Agri-tourism

Agri-tourism is another economic growth opportunity in Clackamas County. However, state and local land use regulations designed to protect agricultural land, or the interpretation of these regulations, appear to limit the level of activities that can take place on farms.<sup>26</sup> This can present barriers to diversifying agricultural activities on rural lands. Additional barriers identified for the equine industry include a lack of event grounds, shortage of hospitality (lodging and restaurants) and the high cost of liability and legal protection.

Survey respondents are most interested in learning about agri-tourism opportunities including: selling products direct to consumers on the farm through a stand or shop; farm tours, educational experiences and wine or product tasting; and hosting celebrations, events and/or festivals on the farm.

## Regulatory

Respondents to the Producer Survey cited a number of regulatory barriers, the most common of which are land use/zoning/permitting, fertilizer/pesticide regulations and labor laws and regulations. Other regulatory barriers cited include water rights, tax structure and organic and other certification systems.

## Conservation

Many Clackamas County producers are interested in conservation opportunities. One of the primary reasons cited by producers who would like to increase the size of their land base is “for the protection/preservation of the environment.” One area of interest cited is rainwater harvesting. Also, as the cost of energy has increased, growers are also interested in energy efficiency and developing renewable sources. Oregon’s energy plan and the West Coast trends suggest emerging opportunities for agricultural producers in Clackamas County in carbon management, offsets, sequestration and adaptation.

---

<sup>26</sup> For more information, see the *Draft Master Plan for the Development of Agri-tourism in Clackamas County, Oregon*.



## Food Safety

Agricultural producers, processors and distributors all cite food safety regulations as having a major impact on their bottom line performance. New legislation related to food safety, including the federal Food Safety Modernization Act and Oregon Farm Direct Bill, were passed within the past year. This legislation provides an opportunity to develop policies and procedures to promote and implement sustainable and safe practices for producers and suppliers.



## Economic Benefits Analysis

The following 2032 scenario presents some of the actions necessary to achieve a 10-20 percent increase in regionally produced food consumed in the region. It provides a high level scenario based on supply, demand and gaps analysis. The scenario describes the driving forces externally and locally and summarizes their potential impacts. Finally, it provides a summary of the economic benefits of local food purchases measured by money spent locally, direct and indirect jobs created, output and GDP value added. In addition, the scenario identifies the sectors benefiting from the growth in local food purchases in terms of GDP value added.

### Food System Cluster Benefits Scenario

In his book the *Art of the Long View*, Peter Schwartz describes the scenario development process where managers invent and then consider stories of a plausible future.<sup>27</sup> The story is researched, appropriately detailed, oriented toward real life decisions and, ideally, brings forth unexpected results. Multiple scenarios are sometimes developed to illustrate alternative futures. The following scenario describes the possible food and related agricultural industry in Clackamas County, Oregon in 2032. It integrates information and outcomes from the research and outreach summarized in this document.

There are several driving forces in the external environment:

- Global demand for food is on the rise. The World Watch Institute reports that there are 925 million undernourished people worldwide.<sup>28</sup> The world population is growing. There are an estimated 80 million new mouths to feed every year. Food prices have been increasing. The global food price index jumped 32 percent in the second half of 2010; the largest increase ever recorded.
- Regional competition. Several metropolitan areas in North America, including New York, Vancouver, B.C., Minneapolis, San Francisco, Eugene and Seattle, have undertaken studies or developed strategies to strengthen their metropolitan food economies.
- Increased market focus on local healthy food and nutrition. Recent studies have focused on two unintended consequences of the current food system: hunger and obesity. Oregon ranks third in the nation in hunger,<sup>29</sup> while at the same time, more than 25 percent of our residents are obese.<sup>30</sup> Getting local and healthy food from farmers to people in a sustainable manner can address these challenges simultaneously and create jobs.
- Global cost of motor fuels and supply disruptions. The last fifty years have seen gasoline and diesel fuel prices increase from \$0.30 per gallon to more than \$4.00 per gallon. Even with increased availability of Canadian tar sands and U.S. oil shale-based fuels, oil-based

---

<sup>27</sup> *Art of the Long View*. Peter Schwartz. Currency Doubleday, 1991, pages xii- xvi and 241-248.

<sup>28</sup> *State of the World, 2011*. Worldwatch Institute, Washington, DC.

<sup>29</sup> Daily Beast: <http://www.thedailybeast.com/articles/2009/11/18/our-ranking-of-the-hungriest-states.html>.

<sup>30</sup> Trust for America's Health: <http://healthyamericans.org/report/88/>.



commodities will be priced on the global market and may well become more expensive. Consumption in Asia alone is forecast to double between 2005 and 2030 to a total of two times U.S. consumption.<sup>31</sup>

- Climate refugees. One possible external force on the region is the forecasted influx of climate refugees from areas of water shortages and reductions of arable land in the American Southwest and Southeast. Researchers at Portland State University assume that impacts of climate change on Oregon's Willamette Valley will not limit water resources or arable land to a great extent. They hypothesize that this situation could result in dramatic increases in Oregon's population.<sup>32</sup>
- Increasing productivity of small farms through four-season growing season-extending technologies. Global innovations in intensive small farm agriculture, aquaculture, hydroponics, aquaponics, Spanish Tunnels and large-scale greenhouses can dramatically increase productivity on relatively small-scale farms. These technologies are used elsewhere internationally and in the United States and appear to have major potential in Clackamas County.

### **Clackamas County 2032 Scenario – A Center for Food Business Innovation**

Summary: Clackamas County, already a leader in the Christmas tree and nursery industries is now a center for food business innovation. Key scenario elements include:

- The County is positioned with its land use laws, productive soils, moderate climate and access to West Coast and Asian markets as one of the West Coast's most crop-diverse and productive landscapes.
- Clackamas County is considered an agricultural food center by regional, national and international businesses.
- Food production is focused on fresh and processed food products consumed regionally, in North America and internationally.
- The food economy is connected and works together – including growers, processors, distributors/distributor channels and consumers.
- Innovation is focused on “changing the yield or resources or changing the value and satisfaction derived from resources by the consumer.”<sup>33</sup>

Key forces in the local/regional environment include:

- The Portland region is a leader in developing an internationally-recognized regional foodshed economy.

---

<sup>31</sup> Asia energy outlook to 2030: Impacts of energy outlook in China and India on the world. Ryoichi Komiyama, The Institute of Energy Economics, Japan (IEEJ) – EDMC.

<sup>32</sup> Environmental Migrants and the Future of the Willamette Valley: A Preliminary Exploration. USP 594: Planning in the Pacific Northwest, Fall 2011.

<sup>33</sup> Innovation and Entrepreneurship: Principles and Practices. Peter Drucker. Harper and Row, 1985.





- Continuing analysis finds that the region, and Clackamas County in particular, has the productive capacity to meet many of the region's food needs.
- Clackamas County has a wide range of farm sizes focused on a variety of markets. This farm infrastructure provides the foundation for innovation and growth in both regional and export markets.
- By 2032, ten to twenty percent of the food consumed in the region is produced here. Currently, most of this food, at an estimated value \$4.3 billion, is sourced outside of the region. Approximately \$12 million of food products are sold by farmers in the Portland region directly to consumers, but not always to Portland region consumers, since these may include internet sales.<sup>34</sup>
- Oregon's land use system continues to place a priority on protection of farm and forest lands from conversion to other uses while supporting on-farm incubation and innovation, diverse farm ownership patterns, agricultural tourism, use of organic fertilizers, and farm related processing and distribution.
- Clackamas County works closely with the Food Innovation Center<sup>35</sup> and the North Willamette Research and Extension Center<sup>36</sup> and other regional resources to help support farmers in Clackamas County and the evolution of the regional foodshed economy.
- Strong public, private, academic, non-profit and community-based partnerships exist to support the foodshed economy.

### *Scenario Factors Summary*

The summary below attempts to assign qualitative rankings to the importance of internal and external factors. More pluses or minuses assigned to each factor represent greater opportunities or challenges to the future of Clackamas County agriculture and its potential for expansion. Some are both challenges and opportunities.

- External Factors
  - ✓ Global demand for food is on the rise +++
  - ✓ Increased market focus on local healthy food and nutrition ++
  - ✓ Increasing productivity of small farms ++
  - ✓ Regional competition +
  - ✓ Global cost of motor fuels and supply disruptions + --
  - ✓ Climate refugees + --
- Internal Factors
  - ✓ Productive agricultural land and capacity for production ++++
  - ✓ Crop diversity and specialization +++
  - ✓ Potential regional demand +++

---

<sup>34</sup> Agricultural Census, 2007.

<sup>35</sup> <http://fic.oregonstate.edu/>.

<sup>36</sup> <http://oregonstate.edu/dept/NWREC/>.





- ✓ County and regional partnerships exist and are evolving to support the regional foodshed economy +++
- ✓ Range of farm sizes ++
- ✓ Regional/local healthy food movement ++
- ✓ Strong land use protections protects farm lands ++
- ✓ Strong land use protections may limit industry diversification and growth --

### *Scenario Summary*

The County leverages major strategic advantages including productive soils, climate, water supply and a strong base of growers. With healthy regional processing and distribution industries, the County develops strategies for both local/regional import substitution and value-added export markets. Due to regional and county branding, local markets are expanding and the area is recognized as a North American hub for innovative food system leadership. The local food movement supports expanding agriculture serving farmers' markets, Community Supported Agriculture (CSAs), institutional purchases, caterers, regional markets (e.g., New Seasons), restaurants and fast food establishments (e.g., Burgerville), distributors (e.g., Organically Grown Co.), processors, major national markets (e.g., Fred Meyer), and processors of value-added products for export.

The County is an active partner in expanding these linkages to all institutional purchasers and larger employers in the County and region. Land is protected for future agriculture while allowing multiple farm ownership patterns, supporting farm incubation and product development, farm-related processing and storage, organic and bio-based fertilizers, bio-fuel production and expanded agricultural tourism. Higher wages are encouraged by focusing on small business and farm ownership strategies and expanding the processing and distribution industries. Strongly branded marketing to regional consumers strengthens demand for County-produced foods.

Working with regional partners, Clackamas County benchmarks against other regional foodshed strategies and considers and addresses global food needs appropriately. Food marketing strategies are focused, at least in part, on addressing both hunger and obesity challenges and increasing access to local healthy foods. Through cooperative activities, efficiencies are achieved for both small and large farmers and distributors.<sup>37</sup> The County scans the horizon to identify regional, North American and global trends and food demand. The timing and possible impact of climate refugees on regional population growth is factored into strategies. The County works closely with small growers to become a hub of innovations in season-extending and intensive advanced industrial farming techniques.

Taking advantage of external factors and internal assets, Clackamas County attracts and grows its own food system cluster innovators to serve the region and as a major center on the Pacific Rim.

---

<sup>37</sup> Specific analysis is needed to address the challenge of high motor fuel prices on food distribution.



### Potential Benefits and Measures of Progress:

- Production – It is reasonable to assume that Clackamas County can provide food products to replace a portion of the \$4.3 billion in food imported from outside the Portland region.<sup>38</sup>  
Measure: The dollar value of food sold to the Portland region and for export.
- Processing – There appears to be increased employment possible in local value-added processing. These jobs are often in the export or traded sector and frequently support higher wages than food production. Measures: Employment in food processing and dollar value of food exports.
- Distribution – Due to the County’s location along I-5, I-205 and I-84, and access to the Port of Portland facilities, the County becomes a major hub for food distributors (e.g., Fred Meyer).  
Measure: Employment in food distribution industry.
- Food consumption –The consumption of County-produced food can expand substantially.  
Measures: Percentage of on-farm sales, percentage of County and regionally produced food in these market channels: farmers’ markets, CSAs, institutional purchases, caterers, regional grocers, restaurants and fast food establishments, distributors, processors, major national grocers, and processors of value-added products for export.
- Food economic cluster development – A clear focus on the food economic cluster (production, processing, distribution and consumption of local food and exported food and food products) can provide synergies within the cluster. Specific sales strategies can be targeted to each market channel described previously. Measures: Percent of County/regional food dollar value provided through each of these industry segments.
- Rural land use and landscape – Facilitating food system cluster innovation and business expansion is a key requirement for success. A key part of this innovation process can be supporting incubation and innovation, multiple farmer ownership patterns, agricultural tourism, use of organic fertilizers, bio-fuels and farm related processing and distribution.  
Measure: Land use regulations and practices review and revision.
- Rural economic vitality – Ideally, major farm business innovation can take place in the County’s small cities, hamlets and villages. Measure: Farmers’ market sales for each local market.
- Public health – Addressing the food access challenges related to obesity and hunger can be a key strategy in growing the market for local healthy foods. Measure: The percentage of school, hospital, Food Banks, WIC, SNAP and other programs used to purchase local healthy foods.
- Resiliency – There is a growing body of literature indicating the need to design regional ecosystem services strategies to encourage regional resiliency based on the assumption that

---

<sup>38</sup> 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.



healthy ecosystems are necessary to support human life.<sup>39</sup> These services are based on the region’s biological systems (e.g., forests, soils water supply), green infrastructure (parks, etc.) and food production. For regional human communities to be resilient in the face of change, it is assumed that the region is not dependent on food from outside the region for survival. Measures: Percentage of imported and locally produced food, soil fertility, carbon storage on farms and miles of “healthy” waterway habitat.

Based on an analysis of the regional agriculture and food systems cluster, one preliminary estimate projects the following economic benefits of 10 and 20 percent increases in local purchases of County food products as shown in tables 5 and 6.

Table 5. Increasing Regional Purchases of Locally Produced Food

	<b>Scenario A: 10% increase in local food purchases</b>	<b>Scenario B: 20% increase in local food purchases</b>
Increase in local Purchases	10%	20%
RPC factor (4.2% currently)	4.6%	5.0%
Additional local purchases (\$M)	\$43.1	\$86.1
Direct Jobs Created	34.5	68.9
Indirect/Induced Jobs Created	17.9	35.8
Total Jobs Created	52.4	104.7
Output (direct & secondary)	\$57,749,695	\$115,499,389
GDP valued added (direct & secondary)	\$21,809,558	\$43,619,116

FCS GROUP, 2012

<sup>39</sup> *Partners with Nature: Developing Scenarios for Ecosystem Services and Resilience in the Greater Portland Region*, Ecotrust, 2012.



Table 6. Top 10 Job Sectors Benefited, Annual GDP Value Added

<b>Sector</b>	<b>Scenario A: 10% increase in local food purchases</b>	<b>Scenario B: 20% increase in local food purchases</b>
Farming	\$7,771,326	\$15,542,652
Food Processing	\$4,202,489	\$8,404,978
Transport by truck	\$934,295	\$1,868,590
Fertilizer manufacturing	\$2,083,238	\$4,166,476
Real estate establishments	\$999,546	\$1,999,091
Health Care	\$219,861	\$439,722
Food services and drinking places	\$205,835	\$411,669
Services to buildings and dwellings	\$187,792	\$375,583
Support activities for agriculture	\$97,328	\$194,656
All other crop farming	\$81,438	\$162,877
Other Sectors	\$5,026,411	\$10,052,821
<b>Total</b>	<b>\$21,809,558</b>	<b>\$43,619,116</b>

FCS GROUP, 2012



## Recommendations and Strategies

The following recommendations respond to the barriers and opportunities identified earlier in the Plan. Most of the challenges outlined above can be addressed by focusing on the productive capacity, profitability and market expansion of small farms of fifty acres or less. Farms of this size are often family-owned and need assistance to expand, reach a market, or obtain efficiencies available to larger farms or farms that work together. Strategies in *italics* are not yet included in the Implementation Matrix found in Appendix A.

### Agriculture Economic Cluster Strategy

Markets for agricultural production depend on producers' connections to processors, distributors and consumers. Understanding the current relationship among these four sub-sectors of the economy is critical to economic development strategies to help smaller farmers thrive.

1. Undertake regional marketing/branding. The County can develop a County brand and explore how this brand will nest with brands for the Portland region, Willamette Valley and Oregon.
2. Deepen the economic landscape analysis. The County initiated an *Economic Landscape Analysis* of the food system cluster in the County. This work can be continued and expanded, possibly in cooperation with Multnomah County or Greater Portland, Inc.
3. Link resources. Define key links necessary to expand markets for local foods through local regional processors, distributors and consumer outlets. Focus market expansion initially on institutional purchases and large employers, wholesalers/distributors and small and regional commercial markets.
4. Research, development and innovation. Work closely with the Food Innovation Center and North Willamette Research and Extension Center to help develop value-added food products.
5. *Process. Develop a strategy to attract and grow more food processing companies. Focus especially on processing for small farmers and incubating new value-added products.*
6. *Engage. Consider how the diverse food and agricultural interests can be engaged and assisted regionally in the future.*
7. *Fund. Conduct a feasibility analysis of reforming property tax farm deferrals to provide a funding stream for the County's Agricultural Investment Plan.*

### Import Substitution and Exports

Many agricultural producers are focused on exporting products to markets outside the region. This strategy is often not available to small farms. In addition to export strategies there needs to be a major focus on the opportunity to sell food to the region.

1. Initiate an import substitution strategy. There is clear opportunity for local producers to increase production and sales of local food products within the region. There also is a very large opportunity to expand local food consumption. An import substitution strategy can be developed in cooperation with Multnomah County.
2. Deepen information on demand and production capacity. To help increase local grower incomes, the County can provide information on potential target markets such as regional distributors (e.g. Organically Grown Company) and products (e.g. carrots) where there are



clear opportunities to substitute locally grown products for those currently imported into the region.

### By-product Resources Business Models

The County has major farm, forest and Christmas tree biomass assets. These assets can potentially be converted to energy production or other uses.

1. Conduct outreach on biomass opportunities.
2. Prepare case studies of innovative bio-energy model farms, such as Stahlbush Island Farms in Corvallis, Oregon (<http://www.stahlbush.com>).
3. Provide information to farmers on potential projects such as bio-generation opportunities, including wood pellets for heating, manure for methane, bio-based fertilizers, soil amendments and other bi-products.

### Specialty and Organic Agriculture

Clackamas County and Oregon are known for highly specialized agriculture, such as blueberries and hazelnuts. Based on Ecotrust's research on potential future crop production, there is capacity in Clackamas County to supply the entire region's needs for many fruits and vegetables. In addition, new technologies in industrial food production such as vertical farming, intensive greenhouse, hydroponic, and aquaponic production may revolutionize food production.

1. Productive capacity. Provide information on alternative crops and farm suitability. The County can build on current Ecotrust work to develop and update a dynamic database on existing cropping patterns and crop suitability in the County, targeting regional potential demand. This database, ideally, will support growers in understanding the size of potential regional markets and select crops that would be suitable for their farm's location.
2. Expand organic and sustainable certification. Work with the Clackamas County Extension Office to provide information and technical assistance on a variety of organic certification systems and processes.
3. *Recruit and support incubation of industrial food production businesses in aquaculture, hydroponics, aquaponics, Spanish Tunnels and large-scale greenhouses.*
4. *Identify major national and global demand trends, such as flax production that can stimulate new specialty crop production.*

### Aggregation

Processing and distribution are major and growing industries in the Portland metro area. To be successful in the regional foodshed economy, small farmers need assistance to scale up, add value, jointly market and distribute their products.

1. Form a producers' association, cooperative, limited liability corporation. Explore development of a Clackamas County-based organization to help small farms meet their food processing, distribution and marketing needs in the region. Organically Grown Company started as a producers' cooperative to support joint marketing and evolved to a West Coast distributor of organic produce. There appears now to be the need for an organization similar to the original cooperative to focus on the Portland regional foodshed market.



2. Form a CSA cooperative. CSAs currently have an informal organization, Portland Area CSA Coalition, for mutual support and sharing information. This organization currently is not a legal entity and has no staff. It can be formalized as a nonprofit corporation and staffed to support the needs of the CSAs in the region.
3. Expand farmers' markets. Support development of a farmers' market in each city in the region and work with Clackamas County Extension Office to develop a support system for all farmers' markets in the County.
4. Marketing. Promote farm-to-fork dining to expand direct sales to restaurants, bars, chain markets, major employers and cafes.

## New Markets

Several ways to increase the markets available to small farmers should be explored.

1. Develop a growers' website. Work with existing networks, including Ecotrust's Food Hub, to develop a Craigslist-like website for farmers to contact customers and facilitate the sharing/exchange of services and equipment among growers in the County.
2. Develop markets to address food access and obesity. Work with Multnomah County to develop target markets such as health care, social services and educational institutions to expand demand for local healthy and nutritious food and address obesity and hunger.
3. *Link Institutional purchasers and farmers. Develop a program or organization to link large employers and institutions in the County to farmers and local product distributors in the County.*
4. Identify high demand regional targets. Work with food processors, distributors and markets to identify high demand products that can be produced in the region. For example, Food Alliance, Burgerville, New Seasons, and Bon Appétit could support development of new businesses in organically and humane raised pork, chickens and turkeys and four season vegetable crops, especially tomatoes and lettuce.
5. Expand target markets. Pursue expanding markets (Asia, west coast, food chains, fast food). Develop targeted plans to expand markets for producers including institutional purchasers, regional markets, major west coast distributors and fast food companies.

## Farm Ownership, Succession and New Farmers

One of farmers' major concerns is how to transfer their land and expertise to family members or a new generation of farmers so their farmland can be preserved.

1. Support training. Work with Clackamas County Extension Office and Austin Family Business Center to expand and further develop training programs that address succession planning.
2. Support farm ownership succession. Work with Clackamas County Extension Office to develop educational materials that can be distributed to producers who want help in planning farm ownership succession. Build the capacity of family counselors to assist farmers with difficult transitions.
3. Identify capital source for succession. Work with Clackamas County Extension Office to identify capital sources/models for farm transfers (e.g., transfer farm assets over time through an exchange of equity for labor and payments).





4. Support new farmers. Work with Clackamas County Extension Office, Clackamas Community College and other regional resources to support new farm business formation and success. Focus on high priority needs for land acquisition strategies.

### Small Business Assistance and Training

Farmers play the roles of producers and business managers. Several strategies to support small farm business should be considered to improve chances of success.

1. Build awareness of capital sources. Develop a contact database of funding sources for growers.
2. Provide assistance and information. Develop and maintain an online list of agencies providing assistance to agricultural businesses, including financial resources.
3. Expand business practices training. Work with Clackamas County Extension Office to access or provide farmers' education and training resources for business practices, including business expansion.
4. Investigate local industry incubation. Determine the feasibility of attracting and incubating more local processing and other industry needs to support regional cluster sales and exports, possibly in cooperation with the Northwest Food Processors Association.
5. Undertake marketing/customer relations training. Develop a specific training package for growers on customer relations. This training package can define various customer targets (e.g., personal, CSA, institutional, processor, distributor, major market, restaurants, and fast food) and tailored customer relations strategies for these targets.

### Labor

Labor is an essential and challenging factor in successful farming. Many aspects of farm labor are outside the purview of County government. The areas with the most promise for positive results include the following:

1. Support agricultural-specific workforce training program. Encourage the Workforce Investment Council of Clackamas County (WICCO) to develop programs tailored to address the specific needs of agricultural producers.
2. Create shared labor opportunities. Work with a small group of growers to determine the feasibility of sharing farm workers given seasonal needs.
3. Develop food safety and handling information. Develop a food safety and handling education package for growers and their employees recognizing new state and federal legislation.
4. Support farmworker housing in communities. Work with farmers, affordable housing organizations and other partners to investigate farmworker housing programs. Support the development of farmworker housing in communities with support services focused on early childhood development, education and incubation of new agricultural and other businesses.

### Diversification/Agri-tourism

Agri-tourism is a successful source of income for farmers in places like Vermont, California, Italy and France. Opportunities should be explored to support initiatives that expand these value-added opportunities while supporting long term land conservation.





1. Support agri-tourism. Support Clackamas County agri-tourism as a value-added strategy for farms and ranches. Work with the Clackamas County Department of Tourism and Cultural Affairs to implement elements of the *Draft Master Plan for the Development of Agri-tourism in Clackamas County, Oregon*. Develop policies and programs to support agri-tourism activities, such as wine-tasting, dining, short and long-term farm stays, farm dinners, farmers markets and equine activities.
2. Review land use policies and interpretation. Review land use policies regarding agri-tourism areas of interest; advocate for changes. Work with County staff and growers to review and make recommendations for change in the County's land use, zoning and development codes and interpretation of these codes to allow more farm-focused economic development in rural zones.
3. Approved farm models. Develop pre-approval packages for on-farm economic development permitted uses (e.g. Portland has a similar program for "skinny" houses). These pre-approved packages might include on-farm stays, dining, storage, processing, education/training, and distribution facilities as well as intensive greenhouse, vertical farming, hydroponic and aquaponic developments.

## Regulatory

Challenges exist between farmers and non-farm neighbors over spraying and fertilizers. These tensions can be addressed as follows:

1. *Review land use regulations. Review and update land use regulations to remove barriers to agricultural production. Advocate for changes to state regulations as needed.*
2. Develop spraying mitigation plan. Identify/develop spraying mitigation plan or strategy (e.g. no spray area utilizing GIS, signage, and other techniques).
3. Safe spraying support program. Support develop safe spraying support program similar to the WeedWise program to help growers with safe spraying practices.
4. Encourage use of organic fertilizers. Support development of a guide to best practices and streamline the use of organic fertilizers in the County. In some cases organic fertilizers (e.g. food waste and manure) are more highly regulated than synthetic bio-accumulating pesticides and herbicides.

## Conservation

Water and energy are two primary and increasingly expensive inputs to food production that are of concern to small farmers.

1. Develop a water system strategy. Develop a model farm demonstration for comprehensive water cycle planning and use including rainwater harvesting, storage, irrigation, reuse, in-stream, and well water management.
2. Support rainwater harvesting innovations. Work with Clackamas Soil and Water Conservation District and others to foster rainwater harvesting efficiency and reuse on small farms.
3. Encourage farm energy efficiency. Encourage outreach and education on energy efficiency assistance and water conservation programs for farmers to better connect farmers to existing resources and build momentum for implementation. Support development of on-farm



models for energy conservation and renewable energy production.

4. Research innovations in carbon credits and ecosystem services. Explore the potential for producers to gain income from various forms of carbon sequestration and offsets and ecosystem services (e.g., stormwater management, soil management, stream protection, groundwater protection).

## Food Safety

Food safety continues to be a challenge, as foodborne illnesses occur regularly in the U.S. Several steps can be taken to support growers protect their crops and train their workers.

1. Provide information of food safety rules. Provide accurate and timely information to producers and processors in the County.
2. Support outreach and training. Provide outreach and training for farmers who are interested in serving food to farm visitors. Include information on obtaining permits and restaurant licenses and about best practices for safe food service on farms.
3. Participate in Partnership for Food Safety. Send a representative to the next “Partnership for Food Protection” conference, and be part of the dialogue about new food safety laws and regulations.
4. Establish a pilot location for policy implementation trials. With the large population of farmers and processors in the County, this would be a proactive way to ensure food safety strategies are suitable for the Clackamas County agriculture community.
5. Provide Oregon Department of Agriculture (ODA) best practices information. Disseminate ODA best practices information on federal and state rules as they become available.
6. Work with health department. Work with the County Department of Community Health to consider whether further County action is required.



## Next Steps

The Implementation Matrix in Appendix A details action plans and assignments. The Matrix represents the results of a consultation process with key partners identified above in the Acknowledgement section of this report. These partners, together with several agencies of County government are critical to successful implementation.

The following next steps should be considered as implementation is pursued:

1. Encourage partner agencies to work together to address all of the implementing actions.
2. Conduct further outreach to industry associations such as the Oregon Association of Nurseries, Clackamas County Extension Office, and key commodity commissions. These organizations can work with the County to ensure that the food system plan and implementing actions are presented to the larger agricultural community in a productive manner. It will be important to show how the Plan fits within the context of existing and planned County strategies to support all elements of the County agricultural economy.
3. Prioritize first and second year actions outlined in the Matrix. Later year actions should be carefully monitored and pursued if demand increases or special funding or partnerships become available.
4. Consider additional actions for implementation as they arise from partners and industry needs.
5. Support agricultural tourism as a major opportunity for the County. Review the forthcoming *Draft Master Plan for the Development of Agri-tourism in Clackamas County, Oregon* and add key recommended actions to this implementation matrix.
6. Prioritize further Ecotrust GIS mapping of potential productive crops based on emerging food market trends and opportunities. For example, commercial demand appears to exist for local tomatoes, cucumbers, and humanely raised turkeys, chickens and hogs. Data on existing and potential crops will need to be updated on a regular basis.
7. Build on existing momentum to identify and engage additional federal, state and regional partners. These include: the USDA Natural Resources Conservation Service, Economic Development Administration, Department of Housing and Urban Development and Department of Energy; Oregon Department of Agriculture, Travel Oregon and Business Oregon; Metro, Greater Portland Inc., Portland Development Commission and Washington County.
8. Target innovative funding sources such as the Meyer Memorial Trust emerging agricultural investment strategy, other regional foundations and USDA for future funding.
9. Designate a Clackamas County point person to lead and coordinate implementation and further development of the plan.

# Appendix A. Implementation Matrix

Clackamas County Agriculture and Foodshed Strategic Plan Implementation Matrix

Appendix A. Implementation Matrix

Prioritization: H (high importance), M (moderate importance), and L (low importance).  
 Timeline: 1 (within 6 months), 2 (6 months to 1 years), 3 (1-2 years), 4 (2-3 years), 5 (more than 3 years).

Implementation Strategy	Recommended Action	Lead Agency	Partnering Agencies	Priority	Timeline
<b>Agricultural Economic Cluster Strategy:</b>					
Regional Marketing/Branding	Develop a regional brand and explore how this would complement and bring value to existing brands within the region, Willamette Valley and Oregon.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Tourism & Cultural Affairs Multnomah County No. Willamette Research & Extension Ctr (NWREC) OSU/Clackamas County Extension Office Oregon Department of Agriculture Oregon Association of Nurseries	H	3
Economic Landscape Analysis	Continue to expand upon Clackamas County's <i>Economic Landscape Analysis</i> of the food system; possibly in cooperation with Multnomah County or Greater Portland, Inc.	Clackamas County Business & Economic Development	Multnomah County	M	3
Resources	Define key links necessary to expand markets for local foods through local regional processors, distributors and consumer outlets. Focus initially on institutional purchases, wholesaler-distributors and small and regional commercial markets.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Office of Sustainability Multnomah County No. Willamette Research & Extension Ctr (NWREC) OSU/Clackamas County Extension Office Oregon Department of Agriculture Oregon Association of Nurseries	H	2
Research, Development and Innovation	Work closely with the Food Innovation Center and North Willamette Research and Extension Center to help develop value-added food products.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Multnomah County No. Willamette Research & Extension Ctr (NWREC) OSU/Clackamas County Extension Office Oregon Department of Agriculture	M	3
<i>Processing Engagement</i>					
<i>Funding</i>					
<b>Import Substitution and Exports:</b>					
Import Substitution Strategy	Identify opportunities for local producers to increase production and sales of local food products within the region. Identify opportunities to expand local food consumption. An import substitution strategy can be developed in cooperation with Multnomah County.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Multnomah County No. Willamette Research & Extension Ctr (NWREC) OSU/Clackamas County Extension Office Oregon Department of Agriculture Oregon Association of Nurseries	H	2
Demand and Production Capacity	Increase local grower incomes by providing information on potential target markets such as regional distributors (e.g. Organically Grown Company) and products (e.g. carrots) where there are clear opportunities to substitute locally grown products for those currently imported into the region.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Multnomah County No. Willamette Research & Extension Ctr (NWREC) OSU/Clackamas County Extension Office Oregon Department of Agriculture Oregon Association of Nurseries	H	2
<b>By-Product Resources Business Models:</b>					
Biomass Opportunities	Conduct outreach on biomass opportunities.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Business & Economic Development Clackamas County Office of Sustainability	M	2
Model Farms	Prepare case studies of model farms, such as Stahlbush Island Farms in Corvallis, Oregon ( <a href="http://www.stahlbush.com">http://www.stahlbush.com</a> ), to identify successful models of bi-fuel and bio-product production.	OSU/Clackamas County Extension Office	Clackamas County BCS-Natural Resource & Ag Program Mgr Clackamas County Soil & Water Conservation No. Willamette Research & Extension Ctr (NWREC) Oregon Department of Agriculture	M	3

## Clackamas County Agriculture and Foodshed Strategic Plan Implementation Matrix

Implementation Strategy	Recommended Action	Lead Agency	Partnering Agencies	Priority	Timeline
Bio-Generation Projects	Provide information to farmers on potential bio-generation opportunities, including wood pellets for heating, manure for methane, bio-based fertilizers, soil amendments and other bi-products.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Office of Sustainability No. Willamette Research & Extension Ctr (NWREC) OSU/Clackamas County Extension Office Oregon Department of Agriculture	M	3
<b>Specialty and Organic Agriculture:</b>					
Productive Capacity/Alternative Crops and Farm Suitability	Expand Ecotrust work to develop a database on crop suitability in the County and regional crop demand. This database would allow growers to understand the size of regional markets and select crops that would be suitable for their farm's location.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Office of Sustainability Clackamas County Soil & Water Conservation Multnomah County No. Willamette Research & Extension Ctr (NWREC) OSU/Clackamas County Extension Office Oregon Department of Agriculture USDA Natural Resources Conservation Services	H	2
Organic and Sustainable Certification <i>Incubation</i> <i>National/global demand trends</i>	Work with partnering agencies to provide information on a variety of organic certification systems and processes.	OSU/Clackamas County Extension Office	Clackamas County Office of Sustainability No. Willamette Research & Extension Ctr (NWREC) Oregon Department of Agriculture	H	1
<b>Aggregation:</b>					
Producers' Cooperative	Explore cooperative or Limited Liability Company to support small growers produce, improve business and food handling practices, process and distribute food in the region.	OSU/Clackamas County Extension Office	Clackamas County Office of Sustainability Multnomah County No. Willamette Research & Extension Ctr (NWREC) Oregon Department of Agriculture Private Industry	M	3
CSA Cooperative	Explore formation of a CSA cooperative. CSAs currently have an informal organization for mutual support and sharing information in the region. This organization can be formalized to support the needs of the CSAs in the region.	OSU/Clackamas County Extension Office	Clackamas County Office of Sustainability Multnomah County No. Willamette Research & Extension Ctr (NWREC) Oregon Department of Agriculture Private Industry	M	2
Farmers' Markets Expansion	Strengthen and/or expand farmers markets throughout Clackamas County. Explore the value of a supporting organization.	Clackamas County Office of Sustainability	Clackamas County Soil & Water Conservation Farmers Market Association Friends of Family Farmers No. Willamette Research & Extension Ctr (NWREC) Oregon Department of Agriculture	M	3
Marketing	Work with groups that promote <i>farm-to-fork</i> dining and buy local opportunities (e.g. Farm to Table-Portland) to expand direct sales to restaurants, bars, chain markets and cafes.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Office of Sustainability Farmers Market Association Multnomah County OSU/Clackamas County Extension Office Oregon Department of Agriculture	M	3
<b>New Markets:</b>					
Growers' Website	Develop a growers' website for farmers to contact customers. This website can facilitate the sharing/ exchange of services and equipment among growers in the region.	OSU/Clackamas County Extension Office	Clackamas County Soil & Water Conservation Friends of Family Farmers Oregon Department of Agriculture	M	3
Target Markets <i>Link Institutional Purchasers and Farmers</i>	Work with Multnomah County to identify target markets with health care, social services and educational institutions to expand demand for local healthy and nutritious food and address obesity and hunger.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Business & Economic Development Clackamas County Community Health Multnomah County Oregon Department of Agriculture	M	2
Specialty Product Development	Work with Food Alliance, Burgerville, New Seasons, Bon Appétit, and others, to support development of new businesses in organically and humane raised pork, chickens and turkeys and four season vegetable crops, especially tomatoes and lettuce.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Food Innovation Center Multnomah County OSU/Clackamas County Extension Office Oregon Department of Agriculture Oregon Restaurant Association	M	3

## Clackamas County Agriculture and Foodshed Strategic Plan Implementation Matrix

Implementation Strategy	Recommended Action	Lead Agency	Partnering Agencies	Priority	Timeline
Expanding Markets	Pursue expanding markets (Asia, west coast, food chains, fast food). Develop targeted plans to expand markets for producers including institutional purchasers, regional markets, major west coast distributors and fast food companies.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Business & Economic Development Oregon Department of Agriculture	M	3
<b>Farm Ownership, Succession and New Farmers:</b>					
Training	Develop online training program designed to address succession planning options and contacts for assistance.	OSU/Clackamas County Extension Office	American Farmland Trust Oregon Department of Agriculture	M	3
Educational Materials	Develop a set of educational materials for distribution to producers in need of assistance in planning farm ownership succession.	OSU/Clackamas County Extension Office	American Farmland Trust Oregon Department of Agriculture	H	1
Capital Sources / Models	Identify capital sources/models for farm transfers (e.g. transfer farm assets over time through an exchange of equity for labor and payments).	OSU/Clackamas County Extension Office	American Farmland Trust Oregon Department of Agriculture	H	2
Succession Planning Capacity Building	Build capacity of family counselors to assist farmers in succession and/or transition planning.	OSU/Clackamas County Extension Office	American Farmland Trust Oregon Department of Agriculture	M	4
<b>Small Business Assistance and Training:</b>					
Capital Sources	Develop a contact database of funding sources for growers.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Business & Economic Development Oregon Department of Agriculture USDA Food Hub	H	2
Assistance and Information	Develop and maintain an online list of agencies providing assistance to agricultural businesses, including financial resources.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Business & Economic Development Oregon Department of Agriculture Small Business Development Center USDA Food Hub	H	1
Business Practices Training	Provide farmers' access to education and training resources for business practices, including business expansion.	OSU/Clackamas County Extension Office	Clackamas County Business & Economic Development Clackamas County Office of Sustainability Oregon Department of Agriculture Small Business Development Center	H	2
Industry Incubator	Determine the feasibility of attracting and incubating local processing and other industry needs to support regional cluster sales and exports.	Clackamas County Business & Economic Development	Business Oregon Clackamas County BCS - Natural Resource & Ag Program Manager No. Willamette Research & Extension Ctr (NWREC) OSU/Clackamas County Extension Office	M	3
Marketing / Customer Relations	Develop a specific training package for growers on customer relations. This training package can define various customer targets (e.g., personal, CSA, institutional, processor, distributor, major market, restaurants, and fast food) and tailored customer relations strategies for these targets.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Office of Sustainability No. Willamette Research & Extension Ctr (NWREC) OSU/Clackamas County Extension Office Oregon Department of Agriculture Oregon Restaurant Association Small Business Development Center	H	2
<b>Labor:</b>					
Agricultural Workforce Training	Develop programs tailored to address the specific workforce needs of agricultural producers.	Workforce Investment Council of Clackamas County (WICCO)	Clackamas County BCS - Natural Resource & Ag Program Manager OSU/Clackamas County Extension Office	H	2
Shared Labor Opportunities	Work with a small group of growers to determine the feasibility of sharing farm workers given seasonal needs.	Workforce Investment Council of Clackamas County (WICCO)	Clackamas County BCS - Natural Resource & Ag Program Manager OSU/Clackamas County Extension Office	H	2
Food Safety and Handling	Develop a food safety and handling education package for growers recognizing new state and federal legislation.	Clackamas County Community Health	OSU/Clackamas County Extension Office Oregon Department of Agriculture	H	1
Farmworker Housing	Support the development of farmworker housing in communities (e.g., Farm Worker Housing Development Corporation in Woodburn) with support services focused on early childhood development, education and incubation of new agricultural and other businesses.	Clackamas County Housing & Community Services	OSU/Clackamas County Extension Office	M	3



## Clackamas County Agriculture and Foodshed Strategic Plan Implementation Matrix

Implementation Strategy	Recommended Action	Lead Agency	Partnering Agencies	Priority	Timeline
<b>Diversification/Agri-Tourism:</b>					
Clackamas County Agri-Tourism	Develop programs, materials and packages to support agri-tourism activities, such as wine-tasting, farm stays, farm dinners, farmers markets and equine activities.	Clackamas County Tourism & Cultural Affairs	Clackamas County Planning Department Clackamas County Office of Sustainability Clackamas County Soil & Water Conservation Multnomah County	H	2
Land-Use Policies	Review and make recommendations for change in the County's land use, zoning and development codes to allow more farm-focused economic development in rural zones.	Clackamas County Tourism & Cultural Affairs	Clackamas County Planning Department Clackamas County Office of Sustainability Multnomah County	H	2
Agri-Tourism Resource Materials/Farm Models	Develop pre-approval packages for on-farm economic development permitted uses (e.g. Portland has a similar program for "skinny" houses).	Clackamas County Tourism & Cultural Affairs	Clackamas County Planning Department Multnomah County	M	2
<b>Regulatory:</b>					
<i>Review Land Use Policies</i>					
Spraying Mitigation Plan	Identify/develop spraying mitigation plan or strategy (e.g. no spray area utilizing GIS, signage, and other techniques).	No. Willamette Research & Extension Ctr (NWREC)	Clackamas County BCS - Natural Resource & Ag Program Manager Clackamas County Soil & Water Conservation-WeedWise OSU/Clackamas County Extension Office Oregon Department of Agriculture	M	3
Safe Spraying Support Program	Develop safe spraying support program similar to the WeedWise program to help growers with safe spraying practices.	No. Willamette Research & Extension Ctr (NWREC)	Clackamas County BCS - Natural Resource & Ag Program Manager Clackamas County Soil & Water Conservation-WeedWise OSU/Clackamas County Extension Office Oregon Department of Agriculture	M	3
Organic Fertilizers	Develop a proposal to guide best practices and streamline the use of organic fertilizers in the County. In some cases organic fertilizers (e.g. food waste and manure) are more highly regulated than synthetic bio-accumulating pesticides and herbicides.	No. Willamette Research & Extension Ctr (NWREC)	Clackamas County BCS - Natural Resource & Ag Program Manager Clackamas County Soil & Water Conservation OSU/Clackamas County Extension Office Oregon Department of Agriculture USDA Natural Resource Conservation Services	H	2
<b>Conservation:</b>					
Water System Strategy	Develop a model plan for comprehensive water cycle planning and use including rainwater harvesting, storage, irrigation, reuse, in-stream, and well water management.	Clackamas County Soil & Water Conservation	Clackamas County BCS - Natural Resource & Ag Program Manager Clackamas County Office of Sustainability OSU/Clackamas County Extension Office Oregon Department of Agriculture	H	3
<i>Rainwater Harvest Innovation</i>	<i>Foster rainwater harvesting, efficiency, and reuse on small farms.</i>				
Agricultural Energy Efficiency	Expand outreach and education on energy efficiency and water conservation assistance to better connect farmers with existing resources and build momentum for implementation.	Clackamas County Office of Sustainability	Clackamas County BCS - Natural Resource & Ag Program Manager Clackamas County Soil & Water Conservation OSU/Clackamas County Extension Office Oregon Department of Agriculture Energy Trust of Oregon USDA Natural Resource Conservation Services	M	3
Carbon Credits and Ecosystem Services	Explore the potential for producers to gain income from various forms of carbon sequestration and offsets and ecosystem services (e.g. stormwater management, soil management, stream protection, groundwater protection).	Clackamas County Office of Sustainability	Program Manager Clackamas County Soil & Water Conservation OSU/Clackamas County Extension Office Oregon Department of Agriculture USDA Natural Resource Conservation Services	M	4
<b>Food Safety:</b>					



### Clackamas County Agriculture and Foodshed Strategic Plan Implementation Matrix

Implementation Strategy	Recommended Action	Lead Agency	Partnering Agencies	Priority	Timeline
Food Safety	Provide accurate and timely food safety information to producers and processors in the County.	Clackamas County Community Health	Clackamas County BCS - Natural Resource & Ag Program Manager Multnomah County OSU/Clackamas County Extension Office Oregon Department of Agriculture	H	2
Food to Farm Outreach and Training	Include information on obtaining permits and restaurant licenses and about best practices for safe food service on farms.	Clackamas County Community Health	Clackamas County BCS - Natural Resource & Ag Program Manager Multnomah County OSU/Clackamas County Extension Office Oregon Department of Agriculture	M	2
Partnership for Food Protection Conference	Send a representative to the next "Partnership for Food Protection" conference, and be part of the dialogue about new food safety laws and regulations.		Clackamas County Office of Sustainability OSU/Clackamas County Extension Office Oregon Department of Agriculture	H	1
Policy Implementation Trials	Establish a pilot location for policy implementation trials. With the large population of farmers and processors in the county, this would be a proactive way to ensure that the establishing, monitoring and modification of food safety responsibilities were as suitable as possible to the Clackamas County agriculture community.	No. Willamette Research & Extension Ctr (NWREC)	Clackamas County Office of Sustainability OSU/Clackamas County Extension Office Oregon Department of Agriculture Clackamas County BCS - Natural Resource & Ag Program Manager	M	3
ODA Best Practices	Disseminate ODA-developed best practices information as it becomes available.	Oregon Department of Agriculture	Clackamas County BCS - Natural Resource & Ag Program Manager Clackamas County Office of Sustainability OSU/Clackamas County Extension Office	H	2
Clackamas County Department of Community Health	Work with the County Department of Community Health to consider if further County action is required.	Clackamas County Office of Sustainability	Clackamas County BCS - Natural Resource & Ag Program Manager OSU/Clackamas County Extension Office	H	1

# Appendix B. Producers Survey Results

## 1. How many acres do you own or lease

	Response Average	Response Total	Response Count
owned acres	54.49	48,766	895
leased acres	104.71	25,967	248
answered question			919
skipped question			89



## 2. How many acres are in active production?

	Response Count
	563
answered question	563
skipped question	445







### 3. What percentage of your gross farm income is from the following commodities?

	Response Average	Response Total	Response Count
% from Berries or Non-tree Fruits	34.06	2,759	81
% from Christmas Trees	63.93	13,042	204
% from Grain or Hay	46.03	10,035	218
% from Grapes	27.78	1,611	58
% from Grass or Other Seeds	23.83	1,501	63
% from Greenhouse	33.19	2,456	74
% from Horses	42.91	3,991	93
% from Livestock	60.49	16,938	280
% from Milk or Eggs	18.67	1,848	99
<b>% from Nursery Stock</b>	<b>64.71</b>	<b>8,736</b>	135
% from Timber	31.60	3,097	98
% from Tree Fruits and Nuts	40.56	3,650	90
% from Vegetables	31.46	2,863	91
% from Other	39.62	4,398	111
	<b>answered question</b>		<b>816</b>
	<b>skipped question</b>		<b>192</b>



#### 4. Do you perform additional processing or packaging to your product before you sell to customers?

		Response Percent	Response Count
No		88.1%	736
Yes		11.9%	99
If Yes, percentage of gross income			72
answered question			835
skipped question			173

#### 5. What is the age of the principal owner/farmer?

		Response Percent	Response Count
Less than 30 years		1.2%	11
31 to 45 years		5.9%	53
46 to 55 years		16.8%	151
56 to 62 years		20.0%	180
63 to 71 years		30.6%	275
Over 72 years		25.6%	230
answered question			900
skipped question			108

## 6. Is there a plan to transfer land/farm ownership?


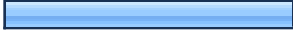
		Response Percent	Response Count
No		61.3%	545
Yes		38.7%	344

If Yes, to whom will the ownership be transferring? 329

answered question 889

skipped question 119

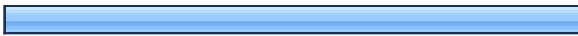

## 7. Is your plan formalized in a legal document?

		Response Percent	Response Count
No		57.0%	334
Yes		43.0%	252

answered question 586

skipped question 422

## 8. Do you need assistance identifying transfer options?

		Response Percent	Response Count
No		86.8%	518
Yes		13.2%	79

answered question 597

skipped question 411



### 9. Do you need assistance in the following areas?

		Response Percent	Response Count
Legal		42.5%	51
Tax		37.5%	45
<b>Finance</b>		<b>45.0%</b>	<b>54</b>
Other (please specify)		30.0%	36
<b>answered question</b>			<b>120</b>
<b>skipped question</b>			<b>888</b>










### 10. What is the primary method of connecting to your customers? (Check all that apply)

		Response Percent	Response Count
Facebook		4.5%	33
<b>In person</b>		<b>66.0%</b>	<b>483</b>
Phone		39.5%	289
Trade shows		14.8%	108
Twitter		0.4%	3
Website		20.2%	148
All of the above		1.8%	13
Other (please specify)		28.7%	210
<b>answered question</b>			<b>732</b>
<b>skipped question</b>			<b>276</b>

## 11. Do you need assistance connecting with your customers?




		Response Percent	Response Count
No		85.8%	643
Yes		14.2%	106
answered question			749
skipped question			259

## 12. Of which marketing resource organizations are you aware? (Check all that apply)



		Response Percent	Response Count
Clackamas County Tourism and Cultural Affairs		30.4%	174
Community Supported Agriculture (CSA)		19.9%	114
Cooperatives		29.7%	170
Farm Loops (Locally-Organized Driving Tours)		28.3%	162
Industry Marketing Associations		32.9%	188
Interactive databases such as Food Hub and nurseryguide.com		12.2%	70
Oregon Department of Agriculture Development and Marketing		32.7%	187
<b>OSU Extension Service</b>		<b>79.2%</b>	<b>453</b>
Other (please specify)		6.3%	36
answered question			572
skipped question			436



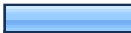



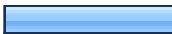
**13. Could Clackamas County collaborative branding, logo or a marketing campaign add value to your product's marketability?**

		Response Percent	Response Count
No		76.0%	562
Unknown		4.5%	33
Yes		19.5%	144
<b>answered question</b>			<b>739</b>
<b>skipped question</b>			<b>269</b>










**14. Are there barriers for you to effectively market your product?**

		Response Percent	Response Count
No		76.0%	547
Yes		24.0%	173
If Yes, Describe:			170
<b>answered question</b>			<b>720</b>
<b>skipped question</b>			<b>288</b>

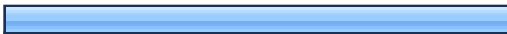

## 15. Do you need assistance with marketing support?

		Response Percent	Response Count
Branding		19.1%	29
<b>Connections</b>		<b>57.2%</b>	<b>87</b>
Planning		28.3%	43
Strategies		46.1%	70
Other (please specify)		25.0%	38
		<b>answered question</b>	<b>152</b>
		<b>skipped question</b>	<b>856</b>




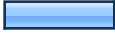





## 16. What is your current market for your farm products? (Check all that apply)

		Response Percent	Response Count
Direct to consumers through a farmers market		9.3%	62
Direct to consumers through Community Supported Agriculture (CSA)		1.6%	11
<b>Direct to consumers who come by my farm or to a nearby farm retail outlet</b>		<b>45.1%</b>	<b>302</b>
Direct to restaurants		1.9%	13
Institutional buyers (Public/government entities, schools, et al)		2.4%	16
Processors		13.0%	87
Retail outlet (grocery stores, produce markets, garden centers, big box stores)		15.4%	103
Wholesaler		30.9%	207
Other (please specify)		28.7%	192
		<b>answered question</b>	<b>669</b>
		<b>skipped question</b>	<b>339</b>






## 17. Are your current market outlets satisfactory?

		Response Percent	Response Count
Yes		76.0%	528
No		24.0%	167
	If No, please explain (i.e. price, yield, demand, transportation, et al)		123
		<b>answered question</b>	<b>695</b>
		<b>skipped question</b>	<b>313</b>






**18. What other market opportunities are you interested in expanding to? (Check all that apply)**

		Response Percent	Response Count
Direct to consumers through a farmers market		17.7%	44
Direct to consumers through Community Supported Agriculture (CSA)		14.1%	35
<b>Direct to consumers who come by my farm or to a nearby farm retail outlet</b>		<b>32.7%</b>	<b>81</b>
Direct to restaurants		16.1%	40
Institutional buyers (Public/government entities, schools, et al)		13.7%	34
Processors		8.1%	20
Retail outlet (grocery stores, produce markets, garden centers, big box stores)		30.2%	75
<b>Wholesaler</b>		<b>32.7%</b>	<b>81</b>
Other (please specify)		20.2%	50
<b>answered question</b>			<b>248</b>
<b>skipped question</b>			<b>760</b>

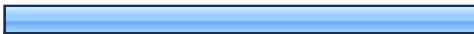


**19. Which of the following represents your current geographic market for your farming products? (Check all that apply)**

		Response Percent	Response Count
International		11.5%	83
National		18.3%	132
<b>Portland Metro Area</b>		<b>52.9%</b>	<b>381</b>
West Coast/Regional		35.6%	256
Other (please specify)		13.2%	95
<b>answered question</b>			<b>720</b>
<b>skipped question</b>			<b>288</b>

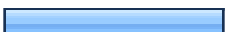



**20. Which of the following geographic markets is a consideration for your farming products in the next five years? (Check all that apply)**

		Response Percent	Response Count
International		15.5%	70
National		25.2%	114
<b>Portland Metro Area</b>		<b>54.2%</b>	<b>245</b>
West Coast/Regional		43.1%	195
Other (please specify)		8.8%	40
<b>answered question</b>			<b>452</b>
<b>skipped question</b>			<b>556</b>






**21. How much of your annual farm sales are generated from organic production?**

		Response Percent	Response Count
None		70.9%	522
Some		13.3%	98
All		15.8%	116
answered question			736
skipped question			272

**22. If some or all of your production is organic, do you use organic production as: (Check all that apply)**

		Response Percent	Response Count
Food safety		32.7%	48
Marketing tool		32.7%	48
<b>Stewardship practices</b>		<b>69.4%</b>	<b>102</b>
Other (please specify)		13.6%	20
answered question			147
skipped question			861

### 23. If some or all of your production is organic, what certification do you use?




		Response Percent	Response Count
Food Alliance		1.2%	2
<b>None</b>		<b>82.0%</b>	<b>141</b>
Oregon Tilth		5.2%	9
Salmon Safe		0.0%	0
USDA Organic		2.9%	5
Other (please specify)		8.7%	15
<b>answered question</b>			<b>172</b>
<b>skipped question</b>			<b>836</b>

### 24. What is the average distance your PRIMARY product travels to its first point of sale?





		Response Average	Response Total	Response Count
<b>Miles</b>		<b>254.56</b>	<b>143,571</b>	<b>564</b>
<b>answered question</b>			<b>564</b>	
<b>skipped question</b>			<b>444</b>	



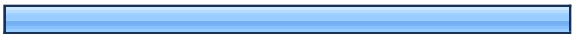

## 25. Are there closer markets that are currently inaccessible due to marketing barriers?

		Response Percent	Response Count
No		88.7%	555
Unknown		2.9%	18
Yes		8.5%	53
If Yes, what are those barriers?			41
answered question			626
skipped question			382

## 26. Are you satisfied with the size and productivity of your operation?

		Response Percent	Response Count
No - I would like to increase my output/revenue		11.1%	83
No - I would like to reduce my costs		5.2%	39
No - I would like to both expand my output/revenue and reduce my costs		20.2%	151
Yes - I am satisfied with the size and productivity of my operation		63.4%	473
answered question			746
skipped question			262

## 27. Would you like to increase your land base?

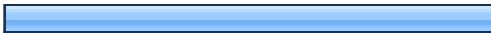

		Response Percent	Response Count
No		85.1%	659
Yes		14.9%	115

If Yes, give the reason to increase your land base (Meet the demand in your current market, Create new market opportunities, Gain economies of size with equipment, Enable family members to establish a farming operation, Other...) 115

answered question 774

skipped question 234

## 28. Are there crops/species you are not currently growing/raising that might be of interest to you?




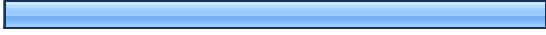

		Response Percent	Response Count
No		73.6%	519
Yes		26.4%	186

If Yes, please describe: 153









answered question 705

skipped question 303

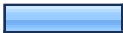














**29. If you were expanding your current farming operation, how would you pay for the necessary investments? (Check all that apply)**

		<b>Response Percent</b>	<b>Response Count</b>
Commercial lender		17.7%	91
FHA		2.7%	14
Investors		2.5%	13
<b>Self/Family</b>		<b>81.3%</b>	<b>417</b>
Other (please specify)		5.8%	30
<b>answered question</b>			<b>513</b>
<b>skipped question</b>			<b>495</b>




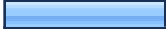





**30. In order to increase your capacity to generate new markets, increase revenues, or reduce costs, what are your business needs? (Check all that apply)**

		Response Percent	Response Count
Access to inputs not readily available		7.3%	34
Employee/workforce training		6.4%	30
Improved regulatory environment		18.2%	85
Larger tractors and equipment		15.0%	70
<b>None</b>		<b>38.9%</b>	<b>182</b>
Refrigeration to increase food quality		6.4%	30
Strategic business guidance		16.2%	76
Other (please specify)		20.3%	95
		<b>answered question</b>	<b>468</b>
		<b>skipped question</b>	<b>540</b>


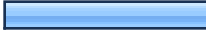
**31. What is the most significant barrier(s) to producing or expanding your product for your market? (Check all that apply)**

		Response Percent	Response Count
Access to land		17.5%	77
Climate change		5.4%	24
<b>Economic environment</b>		<b>33.1%</b>	<b>146</b>
Education/training		4.1%	18
Financing		16.3%	72
Food handling		0.9%	4
Food safety		1.6%	7
Health insurance		7.9%	35
Labor (availability, cost, skilled)		30.8%	136
Marketing		20.0%	88
Processing equipment		7.3%	32
Size/capacity of operation		21.3%	94
Soil productivity		10.4%	46
Water quantity		6.8%	30
Other (please specify)		20.6%	91
		<b>answered question</b>	<b>441</b>
		<b>skipped question</b>	<b>567</b>




**32. What technology would help you produce or expand your products? (Check all that apply)**

		Response Percent	Response Count
Don't know		43.2%	189
Efficiencies of applying inputs		9.6%	42
Greenhouses		12.3%	54
Irrigation systems		23.7%	104
Labor savings		20.8%	91
Robotics		1.6%	7
Sensors/sensor networks (light, insects, et al)		5.0%	22
Solar		12.1%	53
Other (please specify)		9.4%	41
		<b>answered question</b>	<b>438</b>
		<b>skipped question</b>	<b>570</b>



**33. If available, would you be interested in joining a cooperative or similar organization?**

		Response Percent	Response Count
No		69.8%	448
Yes		30.2%	194
		<b>answered question</b>	<b>642</b>
		<b>skipped question</b>	<b>366</b>







### 34. If you answered Yes to Q #33 - what is your primary reason?

		Response Percent	Response Count
Access to equipment and resources you do not currently have		29.4%	48
Better access to inputs		20.9%	34
Lower costs		26.4%	43
Expansion of your current market		50.3%	82
<b>New market opportunities</b>		<b>63.8%</b>	<b>104</b>
Other (please specify)			20
		<b>answered question</b>	<b>163</b>
		<b>skipped question</b>	<b>845</b>

### 35. Are your employees primarily:









		Response Percent	Response Count
Seasonal		36.5%	192
<b>Non-Seasonal/Local/Family</b>		<b>75.1%</b>	<b>395</b>
What percentage of your workforce?			242
		<b>answered question</b>	<b>526</b>
		<b>skipped question</b>	<b>482</b>

### 36. How many NON-SEASONAL workers do you employ?

		Response Percent	Response Count
None		68.9%	195
1-5		25.1%	71
5-10		2.5%	7
10-25		2.1%	6
25-50		1.1%	3
50-75		0.0%	0
75-100		0.0%	0
100+		0.7%	2
		Other	0
<b>answered question</b>			<b>283</b>
<b>skipped question</b>			<b>725</b>






### 37. How many SEASONAL workers do you employ?

		Response Percent	Response Count
None		70.8%	201
1-5		19.7%	56
5-10		3.2%	9
10-25		2.8%	8
25-50		1.8%	5
50-75		1.1%	3
75-100		0.7%	2
100+		0.7%	2
		Other	1




answered question 284

skipped question 724



### 38. Do you have an available, reliable labor force?

		Response Percent	Response Count
No		29.9%	201
Somewhat		4.2%	28
Yes		66.0%	444
		answered question	673
		skipped question	335



**39. Is your labor force adequately skilled for the tasks expected of them?**

		Response Percent	Response Count
No		13.1%	81
Somewhat		3.2%	20
Yes		83.7%	518
answered question			619
skipped question			389

**40. Would you be interested in receiving information about Clackamas County workforce development opportunities?**

		Response Percent	Response Count
No		81.7%	572
Yes		18.3%	128
answered question			700
skipped question			308

**41. Do you encounter conflicts in producing your products in a safe and efficient manner?**

		Response Percent	Response Count
No		81.7%	593
Yes		18.3%	133
answered question			726
skipped question			282













#### 42. If you answered 'Yes' to question 41, what is the primary conflict?

		Response Percent	Response Count
Dust		17.4%	23
Field/Slash Burning		17.4%	23
Noise		12.1%	16
<b>Spraying</b>		<b>40.2%</b>	<b>53</b>
Transportation		15.9%	21
Vandalism/Theft		30.3%	40
Other (please specify)		31.8%	42
<b>answered question</b>			<b>132</b>
<b>skipped question</b>			<b>876</b>













#### 43. If you answered 'Yes' to question 41, with whom do you have conflicts?

		Response Percent	Response Count
Local government		33.9%	40
<b>Non-farm neighbors</b>		<b>54.2%</b>	<b>64</b>
Other Farmers		9.3%	11
Other (please specify)		24.6%	29
<b>answered question</b>			<b>118</b>
<b>skipped question</b>			<b>890</b>



#### 44. What, if any, regulatory barriers do you face? (Check all that apply)

		Response Percent	Response Count
Air quality regulations		7.5%	27
Certification systems		18.5%	67
Farmers markets rules/regulations		3.0%	11
Fertilizer/pesticide regulations		35.6%	129
Labor laws/regulations		31.2%	113
<b>Land use/zoning/permitting</b>		<b>35.9%</b>	<b>130</b>
Organic waste disposal		5.0%	18
Tax structure		20.4%	74
Transportation access		8.0%	29
Water quality		8.8%	32
Water rights		20.2%	73
Other (please specify)		11.3%	41
		<b>answered question</b>	<b>362</b>
		<b>skipped question</b>	<b>646</b>

## 45. What service agencies do you contact for advice or information?

		Response Percent	Response Count
City		3.1%	17
County		25.8%	142
Federal		6.4%	35
International (WTO)		0.7%	4
Oregon Dept of Ag		46.4%	255
<b>OSU Extension</b>		<b>72.9%</b>	<b>401</b>
Regional (Portland/Metro)		2.0%	11
Soil and Water Conservation District		18.5%	102
State		10.7%	59
USDA-Ag Statistics		7.3%	40
USDA-NRCS or FSA		9.5%	52
Other (please specify)		12.2%	67
<b>answered question</b>			<b>550</b>
<b>skipped question</b>			<b>458</b>

**46. WASTE TO ENERGY: Does your operation generate residual waste (clippings, slash, animal waste, et al)?**

		Response Percent	Response Count
No		46.5%	348
Yes		53.5%	401
	If Yes, which type?		308
	answered question		749
	skipped question		259









**47. WASTE TO ENERGY: If you answered 'Yes' to question 46, what is the approximate quantity/weight of the generated residual waste?**

	Response Count
	151
answered question	151
skipped question	857













**48. WASTE TO ENERGY: If you answered 'Yes' to question 46, how do you currently manage/dispose of waste?**

	Response Count
	387
answered question	387
skipped question	621

**49. AGRI-TOURISM: Are you interested in learning more about agri-tourism opportunities?  
(Check all that apply)**

		Response Percent	Response Count
Agri-tainment such as corn mazes, animals, horseback riding		4.4%	29
Develop a winery, Choose-N-Cut/Ready-Cut tree program, garden center or other value-added tourism destination on my farm.		7.2%	47
Farm/Ranch overnight stays		5.6%	37
Farm tours/educational experiences/wine or product tastings		10.5%	69
Holding celebrations, events, or festivals on farm		9.3%	61
<b>No interest</b>		<b>74.7%</b>	<b>491</b>
Selling products consumer direct on my farm through a stand or farm shop		11.6%	76
Selling at a farmers market		5.8%	38
		<b>answered question</b>	<b>657</b>
		<b>skipped question</b>	<b>351</b>

**50. SALES: What category best describes your annual gross farm sales?**








		Response Percent	Response Count
\$1 to \$999		22.6%	159
\$1,000 to \$2,499		11.9%	84
\$2,500 to \$4,999		8.9%	63
\$5,000 to \$9,999		14.3%	101
\$10,000 to \$19,999		8.8%	62
\$20,000 to \$39,999		7.1%	50
\$40,000 to to \$49,999		3.1%	22
\$50,000 to \$99,999		7.0%	49
\$100,000 to \$249,999		7.0%	49
\$250,000 to \$499,999		2.7%	19
\$500,000 to \$1,000,000		2.3%	16
Over \$1,000,000		4.4%	31
		<b>answered question</b>	<b>705</b>
		<b>skipped question</b>	<b>303</b>

**51. Additional comments or information you would like to share:**











	Response Count
	235
<b>answered question</b>	<b>235</b>
<b>skipped question</b>	<b>773</b>



## 52. How did you hear about this survey?

		Response Percent	Response Count
Clackamas County Website		1.0%	9
Newsletter		1.3%	12
<b>Postcard/Mailer</b>		<b>79.1%</b>	<b>729</b>
Publication		0.5%	5
Roundtable/Forum Discussion		0.4%	4
Word of Mouth		1.8%	17
Researcher - Name:		18.3%	169
		<b>answered question</b>	<b>922</b>
		<b>skipped question</b>	<b>86</b>

**53. Completing this section is optional; however we will be able to better respond to opportunities and concerns if we have contact information for you.**

		Response Percent	Response Count
Name:		96.5%	547
Company:		47.1%	267
Address:		91.2%	517
Address 2:		2.5%	14
City/Town:		92.8%	526
State:		92.6%	525
ZIP:		85.7%	486
Country:		18.7%	106
Email Address:		37.2%	211
Phone Number:		78.0%	442
<b>answered question</b>			<b>567</b>
<b>skipped question</b>			<b>441</b>

# Appendix C. Aggregators Survey Results



# REGIONAL FOOD PROCESSOR & DISTRIBUTOR SURVEY






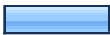
## 1. Please Complete the Following Information:

		Response Percent	Response Count
Contact Name/Title:	<input type="text"/>	97.1%	33
<b>Business Name:</b>	<input type="text"/>	<b>100.0%</b>	<b>34</b>
Address:	<input type="text"/>	97.1%	33
Address 2:	<input type="text"/>	14.7%	5
City/Town:	<input type="text"/>	97.1%	33
State:	<input type="text"/>	97.1%	33
ZIP:	<input type="text"/>	97.1%	33
Email Address:	<input type="text"/>	85.3%	29
		<b>answered question</b>	<b>34</b>
		<b>skipped question</b>	<b>0</b>








## 2. Which of the following best describes your business?

		Response Percent	Response Count
Processor		66.7%	22
Distributor		60.6%	20
Other (please specify):			6
<b>answered question</b>			<b>33</b>
<b>skipped question</b>			<b>1</b>

## 3. Please categorize your company's manufacturing and processing operations.

		Response Percent	Response Count
Oregon operations only		60.6%	20
Oregon owned business with domestic and overseas operations		12.1%	4
Overseas owned business with operations in Oregon		0.0%	0
Pacific Coast (AK/HI/WA/OR/CA) operations		0.0%	0
Pacific Northwest (AK/WA/OR/ID/MT) operations		15.2%	5
U.S. operations		15.2%	5
Other (please specify):			0
<b>answered question</b>			<b>33</b>
<b>skipped question</b>			<b>1</b>






#### 4. Which of the following is the primary market for your company?

		Response Percent	Response Count
Foreign Market		8.8%	3
<b>U.S. Market</b>		<b>38.2%</b>	<b>13</b>
Pacific Coast (AK/HI/WA/OR/CA)		17.6%	6
Pacific Northwest (AK/WA/OR/ID/MT)		26.5%	9
Oregon		17.6%	6
Portland Regional Market		14.7%	5
Clackamas County		5.9%	2
Other (please specify):			1

answered question 34

skipped question 0


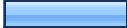





#### 5. What is the ownership structure of your company?

		Response Percent	Response Count
<b>Private Corporation</b>		<b>48.5%</b>	<b>16</b>
Public Corporation		6.1%	2
Limited Liability Corporation		27.3%	9
Sole Proprietorship		15.2%	5
Cooperative		3.0%	1
Other (please specify):			2




answered question 33

skipped question 1

## 6. What were your company's annual total production sales for the fiscal year ending in 2010?

		Response Percent	Response Count
\$0 - \$99,999		21.2%	7
\$100,000 - \$449,999		18.2%	6
\$500,000 - \$999,999		3.0%	1
\$1,000,000 - \$4,999,999		15.2%	5
\$5,000,000 - \$9,999,999		6.1%	2
<b>\$10,000,000 - \$49,999,999</b>		<b>24.2%</b>	<b>8</b>
\$50,000,000 - \$99,999,999		0.0%	0
\$100,000,000 +		12.1%	4
	Other (please specify):		1
<b>answered question</b>			<b>33</b>
<b>skipped question</b>			<b>1</b>

## 7. Which answer best describes your company's export activity?

		Response Percent	Response Count
We currently export some or all of our products.		25.8%	8
We do not currently export but intend to export within the next 5 years.		32.3%	10
We do not export and have no intention of exporting.		41.9%	13
	Other (please specify):		7
<b>answered question</b>			<b>31</b>
<b>skipped question</b>			<b>3</b>

## 8. What percent of your company's gross annual sales revenue is attributed to export sales?









		Response Average	Response Total	Response Count
Exports as a percent of annual sales revenue:		6.19	99	16
Don't Know		0.00	0	0
<b>answered question</b>			<b>16</b>	
<b>skipped question</b>			<b>18</b>	












## 9. What percent of your company's revenue is from the following market sectors?

	Response Average	Response Total	Response Count
Distribution	68.64	755	11
Food Service	28.11	253	9
Institutional	12.50	25	2
Processing	51.29	359	7
Retail/Grocery	35.56	569	16
Restaurant	49.00	245	5
Wholesale	64.62	840	13
Other	35.80	179	5
<b>answered question</b>			<b>31</b>
<b>skipped question</b>			<b>3</b>

## 10. To which countries does your company export?

		Response Percent	Response Count
Canada		75.0%	9
China		8.3%	1
Europe		16.7%	2
India		0.0%	0
Japan		50.0%	6
Mexico		41.7%	5
Singapore		25.0%	3
South Korea		33.3%	4
Taiwan		25.0%	3
	Other (please specify)		10
<b>answered question</b>			<b>12</b>
<b>skipped question</b>			<b>22</b>














## 11. To which countries do you want to export?

		Response Percent	Response Count
Canada		66.7%	6
China		44.4%	4
Europe		33.3%	3
India		22.2%	2
Japan		55.6%	5
Mexico		33.3%	3
Singapore		33.3%	3
South Korea		44.4%	4
Taiwan		44.4%	4
	Other (please specify)		8
<b>answered question</b>			<b>9</b>
<b>skipped question</b>			<b>25</b>





## 12. How far do you ship your goods?

		Response Percent	Response Count
1-20 miles		3.3%	1
20-100 miles		13.3%	4
100-300 miles		13.3%	4
300-1,000 miles		23.3%	7
<b>Greater than 1,000 miles</b>		<b>46.7%</b>	<b>14</b>
Other (please specify):			6
<b>answered question</b>			<b>30</b>
<b>skipped question</b>			<b>4</b>

### 13. Which of the following best describes the food processing or distribution industry sector your business operates?

		Response Percent	Response Count
Bakery Products		25.0%	6
Beer		4.2%	1
Beverages (excludes beer and wine)		12.5%	3
Confectionery		12.5%	3
Dairy Products		20.8%	5
Flour Milling and Cereal Foods		0.0%	0
Fruits and Vegetables/ Horticulture		20.8%	5
Meat and Meat Products		16.7%	4
Oils and Fats		4.2%	1
Pet Food		4.2%	1
Seafood/Fish		8.3%	2
Wine		8.3%	2
Frozen Foods		16.7%	4
Eggs & Egg Products		0.0%	0
Poultry & Poultry Products		8.3%	2
Other (please describe):			11
<b>answered question</b>			<b>24</b>
<b>skipped question</b>			<b>10</b>

**14. What is the principal food processing activity of your establishment based on proportion of annual total food sales?**

		<b>Response Percent</b>	<b>Response Count</b>
Primary processing of raw agricultural products (e.g. flour milling, feed milling, oilseed processing, animal processing).		24.1%	7
Supplying semi-prepared food products for use in further processing (e.g. flour mixes, fruit desert fillings, dairy based ingredients).		10.3%	3
<b>Manufacturing food products ready for human or animal consumption (e.g. breakfast cereal, frozen dinners, canned foods, sausages, salad dressing, pet food).</b>		<b>51.7%</b>	<b>15</b>
Distribution		27.6%	8
	Other (please specify):		4
	<b>answered question</b>		<b>29</b>
	<b>skipped question</b>		<b>5</b>

**15. From the list of food industry issues and trends defined below, please rate on how they impact your company's bottom line performance.**







	Low	Medium	High	Not Applicable	Response Count
Access/availability of competitively priced agricultural products for processing	15.6% (5)	12.5% (4)	<b>46.9% (15)</b>	25.0% (8)	32
Mergers and acquisitions by competitor firms	32.3% (10)	19.4% (6)	9.7% (3)	<b>38.7% (12)</b>	31
Consolidation of equipment and/or packaging suppliers	<b>50.0% (16)</b>	18.8% (6)	9.4% (3)	21.9% (7)	32
Consolidation of food retailers and/or wholesalers	28.1% (9)	<b>31.3% (10)</b>	25.0% (8)	15.6% (5)	32
Access to distribution channels because of listing fees, exclusivity, etc.	30.0% (9)	26.7% (8)	10.0% (3)	<b>33.3% (10)</b>	30
Buyer requirements/standards for food safety and quality	12.5% (4)	34.4% (11)	<b>46.9% (15)</b>	6.3% (2)	32
Food safety requirements	12.5% (4)	21.9% (7)	<b>59.4% (19)</b>	6.3% (2)	32
Consumer demand preferences	0.0% (0)	31.3% (10)	<b>68.8% (22)</b>	0.0% (0)	32
Availability of skilled workforce	21.9% (7)	<b>43.8% (14)</b>	31.3% (10)	6.3% (2)	32
Labor costs	9.4% (3)	37.5% (12)	<b>53.1% (17)</b>	0.0% (0)	32
Cost of logistics and transportation	3.1% (1)	34.4% (11)	<b>59.4% (19)</b>	3.1% (1)	32
Natural resources and sustainability (e.g. water, energy)	25.0% (8)	<b>28.1% (9)</b>	25.0% (8)	21.9% (7)	32
Investment capital availability	31.3% (10)	15.6% (5)	<b>40.6% (13)</b>	12.5% (4)	32
Packaging differentiation and innovation	12.9% (4)	<b>48.4% (15)</b>	19.4% (6)	19.4% (6)	31
New information technologies	21.9% (7)	<b>43.8% (14)</b>	15.6% (5)	18.8% (6)	32
R & D access and capability	25.0% (7)	25.0% (7)	10.7% (3)	<b>39.3% (11)</b>	28
Collaborative partnerships	22.6% (7)	22.6% (7)	25.8% (8)	<b>29.0% (9)</b>	31

Fuel costs	6.3% (2)	25.0% (8)	<b>68.8% (22)</b>	0.0% (0)	32
Quality of roads and bridges	<b>37.5% (12)</b>	21.9% (7)	25.0% (8)	15.6% (5)	32

Other (please specify): 2

<b>answered question</b>	<b>33</b>
<b>skipped question</b>	<b>1</b>

### 16. How important do you believe a coordinated regional "brand" approach can be for the agricultural industry?












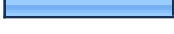

		Response Percent	Response Count
Very important		33.3%	11
Somewhat unimportant		3.0%	1
<b>Somewhat important</b>		<b>33.3%</b>	<b>11</b>
Very unimportant		3.0%	1
Neither important or unimportant		9.1%	3
Don't know		18.2%	6

Other (please specify): 1









<b>answered question</b>	<b>33</b>
<b>skipped question</b>	<b>1</b>










## 17. Where are your suppliers located?

		Response Percent	Response Count
Clackamas County		46.9%	15
Hood River County		21.9%	7
Marion County		40.6%	13
Multnomah County		43.8%	14
Washington County		34.4%	11
Yamhill County		25.0%	8
Other Oregon County		31.3%	10
Washington (State)		46.9%	15
<b>California</b>		<b>56.3%</b>	<b>18</b>
National		40.6%	13
International		31.3%	10
Idaho		25.0%	8
Montana		9.4%	3
	Other (please specify):		4
		<b>answered question</b>	<b>32</b>
		<b>skipped question</b>	<b>2</b>



## 18. What, if any, challenges do you face using Clackamas County suppliers?

		Response Percent	Response Count
Limited availability of product		55.0%	11
Quality		15.0%	3
Regulatory		0.0%	0
Transportation		10.0%	2
Price		20.0%	4
Food safety		5.0%	1
Connecting to suppliers		15.0%	3
Fuel costs		5.0%	1
Economic Conditions		5.0%	1
	Other (please specify):		6
<b>answered question</b>			<b>20</b>
<b>skipped question</b>			<b>14</b>



**19. How many employees (including permanent, seasonal and casual, but excluding contract employees) did your business employ during its last fiscal year ending in 2010?**

		Response Percent	Response Count
None		5.9%	2
1-9		32.4%	11
10-19		17.6%	6
20-49		11.8%	4
50-99		11.8%	4
100-249		14.7%	5
250-499		0.0%	0
500-999		0.0%	0
1,000 or more		5.9%	2
Other (please specify):			0
<b>answered question</b>			<b>34</b>
<b>skipped question</b>			<b>0</b>

**20. Do you have an available, reliable labor force?**

		Response Percent	Response Count
Yes		94.1%	32
No		5.9%	2
If NO, please explain:			2
<b>answered question</b>			<b>34</b>
<b>skipped question</b>			<b>0</b>



**21. Is your labor force adequately skilled for the tasks expected of them?**

		Response Percent	Response Count
Yes		88.2%	30
No		11.8%	4

If NO, please explain: 5

answered question	34
skipped question	0

**22. Would you be interested in receiving information about Clackamas County workforce development resources?**

		Response Percent	Response Count
Yes		44.1%	15
No		55.9%	19

answered question	34
skipped question	0

## 23. Rate the importance of the following innovation categories to your company.

	Very Important	Somewhat Important	Neither Important or Unimportant	Somewhat Unimportant	Very Unimportant	Don't Know	Re (0)
New product development	<b>40.6% (13)</b>	25.0% (8)	25.0% (8)	3.1% (1)	9.4% (3)	0.0% (0)	
New process or production techniques	25.8% (8)	<b>45.2% (14)</b>	9.7% (3)	9.7% (3)	6.5% (2)	3.2% (1)	
Packaging development	25.0% (8)	<b>40.6% (13)</b>	21.9% (7)	6.3% (2)	6.3% (2)	0.0% (0)	
Waste management	21.9% (7)	<b>37.5% (12)</b>	28.1% (9)	0.0% (0)	6.3% (2)	6.3% (2)	
Supply chain	<b>37.5% (12)</b>	31.3% (10)	18.8% (6)	0.0% (0)	6.3% (2)	6.3% (2)	
Information technology	22.6% (7)	<b>45.2% (14)</b>	19.4% (6)	3.2% (1)	3.2% (1)	6.5% (2)	
Customer and consumer insights	<b>53.1% (17)</b>	25.0% (8)	12.5% (4)	0.0% (0)	6.3% (2)	3.1% (1)	
Environment conservation and sustainability	<b>34.4% (11)</b>	<b>34.4% (11)</b>	18.8% (6)	9.4% (3)	3.1% (1)	0.0% (0)	
Energy conservation	<b>43.8% (14)</b>	34.4% (11)	15.6% (5)	6.3% (2)	3.1% (1)	0.0% (0)	
Renewable energy	21.9% (7)	<b>31.3% (10)</b>	25.0% (8)	15.6% (5)	3.1% (1)	3.1% (1)	
Water technologies	28.1% (9)	18.8% (6)	<b>34.4% (11)</b>	3.1% (1)	9.4% (3)	6.3% (2)	
Streamlined distribution systems	28.1% (9)	28.1% (9)	<b>34.4% (11)</b>	0.0% (0)	6.3% (2)	3.1% (1)	

Other (please specify)

answered question

skipped question

**24. Please rank your top 3 priorities for growth that relates to your company over the next 5 years.**

**Response  
Count**

29

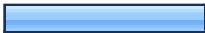








**answered question**

**29**

**skipped question**

**5**

**25. What, if any, challenges does your company face implementing these priorities for growth?**

		Response Percent	Response Count
Regulatory compliance		30.0%	9
<b>Availability of programs designed to facilitate expansion</b>		<b>36.7%</b>	<b>11</b>
Financial incentives		23.3%	7
Skilled workforce		23.3%	7
Ability to commercialize and realize return on investment		33.3%	10
<b>Access to capital</b>		<b>36.7%</b>	<b>11</b>
Direction or support from head office		0.0%	0
Transportation and infrastructure improvements		13.3%	4
Not relevant for your business		3.3%	1
Don't know		3.3%	1
	Other (please specify)		2
<b>answered question</b>			<b>30</b>
<b>skipped question</b>			<b>4</b>

**26. Select the option that best reflects your company's opinion on who should address each issue defined below.**



	Industry	Government Agencies	Collaboration Industry/Government	Don't Know	Response Count
Building and leveraging a coordinated regional "brand".	33.3% (10)	0.0% (0)	<b>40.0% (12)</b>	26.7% (8)	30
Facilitation of collaborative organization and association networks.	<b>53.3% (16)</b>	0.0% (0)	36.7% (11)	10.0% (3)	30
Development of commercial networks, expertise and market information.	<b>62.1% (18)</b>	3.4% (1)	31.0% (9)	3.4% (1)	29
Coaching and mentoring of industry participants in business growth process development.	<b>50.0% (15)</b>	6.7% (2)	33.3% (10)	10.0% (3)	30
Facilitating access to capital and funding for business growth initiatives.	34.5% (10)	13.8% (4)	<b>41.4% (12)</b>	10.3% (3)	29
Development of supply chain infrastructure.	<b>60.0% (18)</b>	3.3% (1)	30.0% (9)	6.7% (2)	30
Development of educational programs tailored to the food industry.	36.7% (11)	6.7% (2)	<b>53.3% (16)</b>	3.3% (1)	30
Development and management of sustainable environmental services.	26.7% (8)	6.7% (2)	<b>56.7% (17)</b>	10.0% (3)	30
Transportation and infrastructure improvements.	10.0% (3)	<b>43.3% (13)</b>	40.0% (12)	6.7% (2)	30
			Other (please specify)		1
			<b>answered question</b>		<b>31</b>
			<b>skipped question</b>		<b>3</b>



**27. Please share any additional comments or suggestions.**

	Response Count
	4
answered question	4
skipped question	30

**28. Would you like a representative from Clackamas County Business & Economic Development to contact you to further discuss and understand your needs and what the County might do to assist you?**

		Response Percent	Response Count
Yes		32.3%	10
No		67.7%	21
	Other (please specify):		8
	answered question		31
	skipped question		3

## Appendix A. Implementation Matrix

Prioritization: H (high importance), M (moderate importance), and L (low importance).  
 Timeline: 1 (within 6 months), 2 (6 months to 1 years), 3 (1-2 years), 4 (2-3 years), 5 (more than 3 years).

Implementation Strategy	Recommended Action	Lead Agency	Partnering Agencies	Priority	Timeline
<b>Agricultural Economic Cluster Strategy:</b>					
Regional Marketing/Branding	Develop a regional brand and explore how this would complement and bring value to existing brands within the region, Willamette Valley and Oregon.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Tourism & Cultural Affairs Multnomah County No. Willamette Research & Extension Ctr (NWREC) OSU/Clackamas County Extension Office Oregon Department of Agriculture Oregon Association of Nurseries	H	3
Economic Landscape Analysis	Continue to expand upon Clackamas County's <i>Economic Landscape Analysis</i> of the food system; possibly in cooperation with Multnomah County or Greater Portland, Inc.	Clackamas County Business & Economic Development	Multnomah County	M	3
Resources	Define key links necessary to expand markets for local foods through local regional processors, distributors and consumer outlets. Focus initially on institutional purchases, wholesaler-distributors and small and regional commercial markets.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Office of Sustainability Multnomah County No. Willamette Research & Extension Ctr (NWREC) OSU/Clackamas County Extension Office Oregon Department of Agriculture Oregon Association of Nurseries	H	2
Research, Development and Innovation	Work closely with the Food Innovation Center and North Willamette Research and Extension Center to help develop value-added food products.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Multnomah County No. Willamette Research & Extension Ctr (NWREC) OSU/Clackamas County Extension Office Oregon Department of Agriculture	M	3
<i>Processing Engagement</i>					
<i>Funding</i>					
<b>Import Substitution and Exports:</b>					
Import Substitution Strategy	Identify opportunities for local producers to increase production and sales of local food products within the region. Identify opportunities to expand local food consumption. An import substitution strategy can be developed in cooperation with Multnomah County.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Multnomah County No. Willamette Research & Extension Ctr (NWREC) OSU/Clackamas County Extension Office Oregon Department of Agriculture Oregon Association of Nurseries	H	2
Demand and Production Capacity	Increase local grower incomes by providing information on potential target markets such as regional distributors (e.g. Organically Grown Company) and products (e.g. carrots) where there are clear opportunities to substitute locally grown products for those currently imported into the region.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Multnomah County No. Willamette Research & Extension Ctr (NWREC) OSU/Clackamas County Extension Office Oregon Department of Agriculture Oregon Association of Nurseries	H	2
<b>By-Product Resources Business Models:</b>					
Biomass Opportunities	Conduct outreach on biomass opportunities.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Business & Economic Development Clackamas County Office of Sustainability	M	2
Model Farms	Prepare case studies of model farms, such as Stahlbush Island Farms in Corvallis, Oregon ( <a href="http://www.stahlbush.com">http://www.stahlbush.com</a> ), to identify successful models of bi-fuel and bio-product production.	OSU/Clackamas County Extension Office	Clackamas County BCS-Natural Resource & Ag Program Mgr Clackamas County Soil & Water Conservation No. Willamette Research & Extension Ctr (NWREC) Oregon Department of Agriculture	M	3

**Clackamas County Agriculture and Foodshed Strategic Plan Implementation Matrix**

Implementation Strategy	Recommended Action	Lead Agency	Partnering Agencies	Priority	Timeline
Bio-Generation Projects	Provide information to farmers on potential bio-generation opportunities, including wood pellets for heating, manure for methane, bio-based fertilizers, soil amendments and other bi-products.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Office of Sustainability No. Willamette Research & Extension Ctr (NWREC) OSU/Clackamas County Extension Office Oregon Department of Agriculture	M	3
<b>Specialty and Organic Agriculture:</b>					
Productive Capacity/Alternative Crops and Farm Suitability	Expand Ecotrust work to develop a database on crop suitability in the County and regional crop demand. This database would allow growers to understand the size of regional markets and select crops that would be suitable for their farm's location.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Office of Sustainability Clackamas County Soil & Water Conservation Multnomah County No. Willamette Research & Extension Ctr (NWREC) OSU/Clackamas County Extension Office Oregon Department of Agriculture USDA Natural Resources Conservation Services	H	2
Organic and Sustainable Certification Incubation	Work with partnering agencies to provide information on a variety of organic certification systems and processes.	OSU/Clackamas County Extension Office	Clackamas County Office of Sustainability No. Willamette Research & Extension Ctr (NWREC) Oregon Department of Agriculture	H	1
<i>National/global demand trends</i>					
<b>Aggregation:</b>					
Producers' Cooperative	Explore cooperative or Limited Liability Company to support small growers produce, improve business and food handling practices, process and distribute food in the region.	OSU/Clackamas County Extension Office	Clackamas County Office of Sustainability Multnomah County No. Willamette Research & Extension Ctr (NWREC) Oregon Department of Agriculture Private Industry	M	3
CSA Cooperative	Explore formation of a CSA cooperative. CSAs currently have an informal organization for mutual support and sharing information in the region. This organization can be formalized to support the needs of the CSAs in the region.	OSU/Clackamas County Extension Office	Clackamas County Office of Sustainability Multnomah County No. Willamette Research & Extension Ctr (NWREC) Oregon Department of Agriculture Private Industry	M	2
Farmers' Markets Expansion	Strengthen and/or expand farmers markets throughout Clackamas County. Explore the value of a supporting organization.	Clackamas County Office of Sustainability	Clackamas County Soil & Water Conservation Farmers Market Association Friends of Family Farmers No. Willamette Research & Extension Ctr (NWREC) Oregon Department of Agriculture	M	3
Marketing	Work with groups that promote <i>farm-to-fork</i> dining and buy local opportunities (e.g. Farm to Table-Portland) to expand direct sales to restaurants, bars, chain markets and cafes.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Office of Sustainability Farmers Market Association Multnomah County OSU/Clackamas County Extension Office Oregon Department of Agriculture	M	3
<b>New Markets:</b>					
Growers' Website	Develop a growers' website for farmers to contact customers. This website can facilitate the sharing/ exchange of services and equipment among growers in the region.	OSU/Clackamas County Extension Office	Clackamas County Soil & Water Conservation Friends of Family Farmers Oregon Department of Agriculture	M	3
Target Markets	Work with Multnomah County to identify target markets with health care, social services and educational institutions to expand demand for local healthy and nutritious food and address obesity and hunger.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Business & Economic Development Clackamas County Community Health Multnomah County Oregon Department of Agriculture	M	2
<i>Link Institutional Purchasers and Farmers</i>					
Specialty Product Development	Work with Food Alliance, Burgerville, New Seasons, Bon Appétit, and others, to support development of new businesses in organically and humane raised pork, chickens and turkeys and four season vegetable crops, especially tomatoes and lettuce.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Food Innovation Center Multnomah County OSU/Clackamas County Extension Office Oregon Department of Agriculture Oregon Restaurant Association	M	3

**Clackamas County Agriculture and Foodshed Strategic Plan Implementation Matrix**

Implementation Strategy	Recommended Action	Lead Agency	Partnering Agencies	Priority	Timeline
Expanding Markets	Pursue expanding markets (Asia, west coast, food chains, fast food). Develop targeted plans to expand markets for producers including institutional purchasers, regional markets, major west coast distributors and fast food companies.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Business & Economic Development Oregon Department of Agriculture	M	3
<b>Farm Ownership, Succession and New Farmers:</b>					
Training	Develop online training program designed to address succession planning options and contacts for assistance.	OSU/Clackamas County Extension Office	American Farmland Trust Oregon Department of Agriculture	M	3
Educational Materials	Develop a set of educational materials for distribution to producers in need of assistance in planning farm ownership succession.	OSU/Clackamas County Extension Office	American Farmland Trust Oregon Department of Agriculture	H	1
Capital Sources / Models	Identify capital sources/models for farm transfers (e.g. transfer farm assets over time through an exchange of equity for labor and payments).	OSU/Clackamas County Extension Office	American Farmland Trust Oregon Department of Agriculture	H	2
Succession Planning Capacity Building	Build capacity of family counselors to assist farmers in succession and/or transition planning.	OSU/Clackamas County Extension Office	American Farmland Trust Oregon Department of Agriculture	M	4
<b>Small Business Assistance and Training:</b>					
Capital Sources	Develop a contact database of funding sources for growers.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Business & Economic Development Oregon Department of Agriculture USDA Food Hub	H	2
Assistance and Information	Develop and maintain an online list of agencies providing assistance to agricultural businesses, including financial resources.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Business & Economic Development Oregon Department of Agriculture Small Business Development Center USDA Food Hub	H	1
Business Practices Training	Provide farmers' access to education and training resources for business practices, including business expansion.	OSU/Clackamas County Extension Office	Clackamas County Business & Economic Development Clackamas County Office of Sustainability Oregon Department of Agriculture Small Business Development Center	H	2
Industry Incubator	Determine the feasibility of attracting and incubating local processing and other industry needs to support regional cluster sales and exports.	Clackamas County Business & Economic Development	Business Oregon Clackamas County BCS - Natural Resource & Ag Program Manager No. Willamette Research & Extension Ctr (NWREC) OSU/Clackamas County Extension Office	M	3
Marketing / Customer Relations	Develop a specific training package for growers on customer relations. This training package can define various customer targets (e.g., personal, CSA, institutional, processor, distributor, major market, restaurants, and fast food) and tailored customer relations strategies for these targets.	Clackamas County BCS-Natural Resource & Ag Program Mgr	Clackamas County Office of Sustainability No. Willamette Research & Extension Ctr (NWREC) OSU/Clackamas County Extension Office Oregon Department of Agriculture Oregon Restaurant Association Small Business Development Center	H	2
<b>Labor:</b>					
Agricultural Workforce Training	Develop programs tailored to address the specific workforce needs of agricultural producers.	Workforce Investment Council of Clackamas County (WICCO)	Clackamas County BCS - Natural Resource & Ag Program Manager OSU/Clackamas County Extension Office	H	2
Shared Labor Opportunities	Work with a small group of growers to determine the feasibility of sharing farm workers given seasonal needs.	Workforce Investment Council of Clackamas County (WICCO)	Clackamas County BCS - Natural Resource & Ag Program Manager OSU/Clackamas County Extension Office	H	2
Food Safety and Handling	Develop a food safety and handling education package for growers recognizing new state and federal legislation.	Clackamas County Community Health	OSU/Clackamas County Extension Office Oregon Department of Agriculture	H	1
Farmworker Housing	Support the development of farmworker housing in communities (e.g., Farm Worker Housing Development Corporation in Woodburn) with support services focused on early childhood development, education and incubation of new agricultural and other businesses.	Clackamas County Housing & Community Services	OSU/Clackamas County Extension Office	M	3

**Clackamas County Agriculture and Foodshed Strategic Plan Implementation Matrix**

Implementation Strategy	Recommended Action	Lead Agency	Partnering Agencies	Priority	Timeline
<b>Diversification/Agri-Tourism:</b>					
Clackamas County Agri-Tourism	Develop programs, materials and packages to support agri-tourism activities, such as wine-tasting, farm stays, farm dinners, farmers markets and equine activities.	Clackamas County Tourism & Cultural Affairs	Clackamas County Planning Department Clackamas County Office of Sustainability Clackamas County Soil & Water Conservation Multnomah County	H	2
Land-Use Policies	Review and make recommendations for change in the County's land use, zoning and development codes to allow more farm-focused economic development in rural zones.	Clackamas County Tourism & Cultural Affairs	Clackamas County Planning Department Clackamas County Office of Sustainability Multnomah County	H	2
Agri-Tourism Resource Materials/Farm Models	Develop pre-approval packages for on-farm economic development permitted uses (e.g. Portland has a similar program for "skinny" houses).	Clackamas County Tourism & Cultural Affairs	Clackamas County Planning Department Multnomah County	M	2
<b>Regulatory:</b>					
<i>Review Land Use Policies</i>					
Spraying Mitigation Plan	Identify/develop spraying mitigation plan or strategy (e.g. no spray area utilizing GIS, signage, and other techniques).	No. Willamette Research & Extension Ctr (NWREC)	Clackamas County BCS - Natural Resource & Ag Program Manager Clackamas County Soil & Water Conservation-WeedWise OSU/Clackamas County Extension Office Oregon Department of Agriculture	M	3
Safe Spraying Support Program	Develop safe spraying support program similar to the WeedWise program to help growers with safe spraying practices.	No. Willamette Research & Extension Ctr (NWREC)	Clackamas County BCS - Natural Resource & Ag Program Manager Clackamas County Soil & Water Conservation-WeedWise OSU/Clackamas County Extension Office Oregon Department of Agriculture	M	3
Organic Fertilizers	Develop a proposal to guide best practices and streamline the use of organic fertilizers in the County. In some cases organic fertilizers (e.g. food waste and manure) are more highly regulated than synthetic bio-accumulating pesticides and herbicides.	No. Willamette Research & Extension Ctr (NWREC)	Clackamas County BCS - Natural Resource & Ag Program Manager Clackamas County Soil & Water Conservation OSU/Clackamas County Extension Office Oregon Department of Agriculture USDA Natural Resource Conservation Services	H	2
<b>Conservation:</b>					
Water System Strategy	Develop a model plan for comprehensive water cycle planning and use including rainwater harvesting, storage, irrigation, reuse, in-stream, and well water management.	Clackamas County Soil & Water Conservation	Clackamas County BCS - Natural Resource & Ag Program Manager Clackamas County Office of Sustainability OSU/Clackamas County Extension Office Oregon Department of Agriculture	H	3
<i>Rainwater Harvest Innovation</i>	<i>Foster rainwater harvesting, efficiency, and reuse on small farms.</i>				
Agricultural Energy Efficiency	Expand outreach and education on energy efficiency and water conservation assistance to better connect farmers with existing resources and build momentum for implementation.	Clackamas County Office of Sustainability	Clackamas County BCS - Natural Resource & Ag Program Manager Clackamas County Soil & Water Conservation OSU/Clackamas County Extension Office Oregon Department of Agriculture Energy Trust of Oregon USDA Natural Resource Conservation Services	M	3
Carbon Credits and Ecosystem Services	Explore the potential for producers to gain income from various forms of carbon sequestration and offsets and ecosystem services (e.g. stormwater management, soil management, stream protection, groundwater protection).	Clackamas County Office of Sustainability	Program Manager Clackamas County Soil & Water Conservation OSU/Clackamas County Extension Office Oregon Department of Agriculture USDA Natural Resource Conservation Services	M	4
<b>Food Safety:</b>					

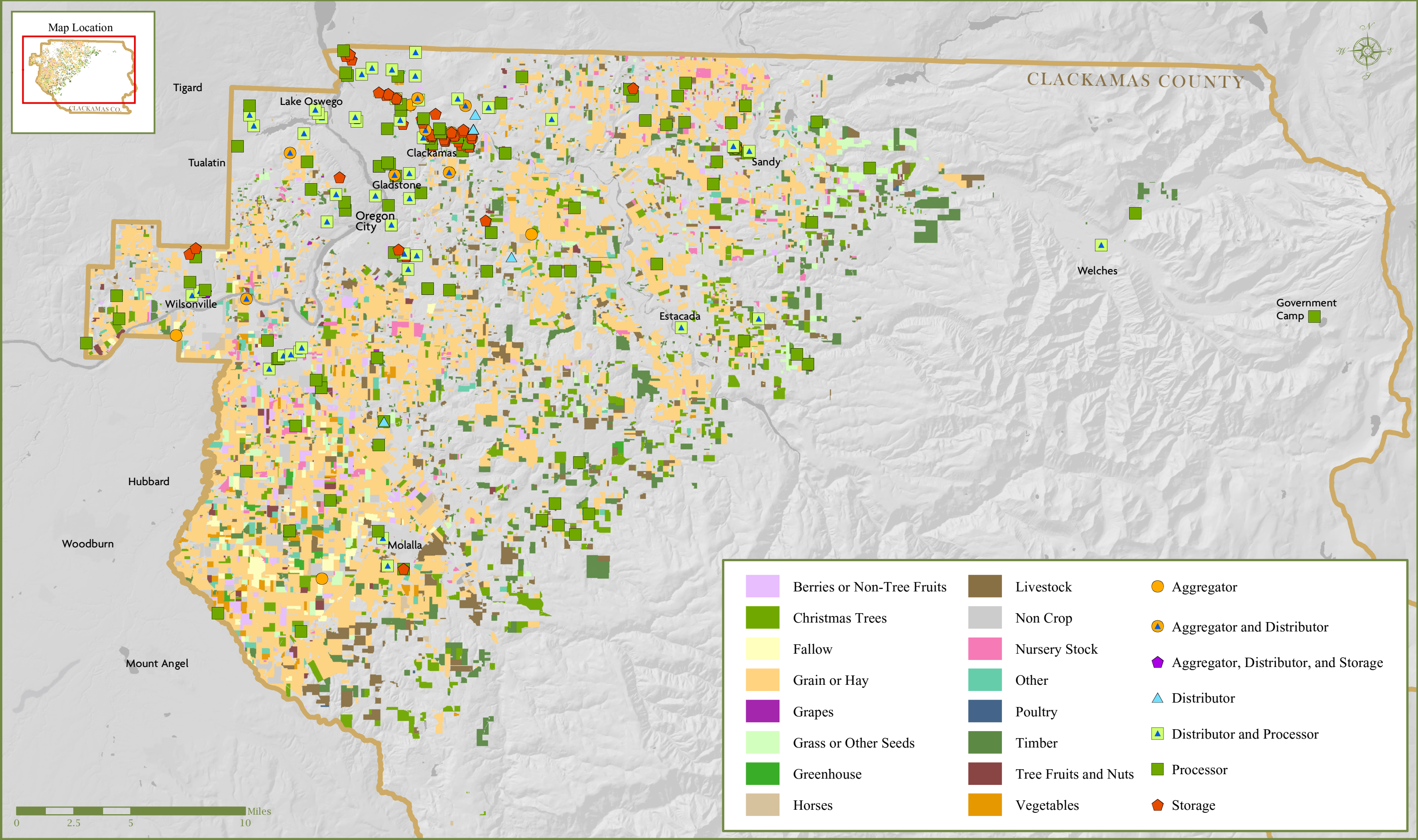
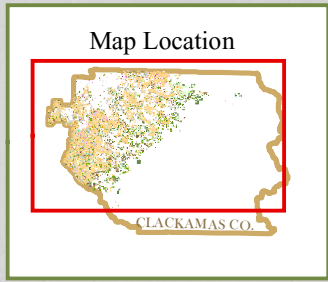
**Clackamas County Agriculture and Foodshed Strategic Plan Implementation Matrix**

<b>Implementation Strategy</b>	<b>Recommended Action</b>	<b>Lead Agency</b>	<b>Partnering Agencies</b>	<b>Priority</b>	<b>Timeline</b>
Food Safety	Provide accurate and timely food safety information to producers and processors in the County.	Clackamas County Community Health	Clackamas County BCS - Natural Resource & Ag Program Manager Multnomah County OSU/Clackamas County Extension Office Oregon Department of Agriculture	H	2
Food to Farm Outreach and Training	Include information on obtaining permits and restaurant licenses and about best practices for safe food service on farms.	Clackamas County Community Health	Clackamas County BCS - Natural Resource & Ag Program Manager Multnomah County OSU/Clackamas County Extension Office Oregon Department of Agriculture	M	2
Partnership for Food Protection Conference	Send a representative to the next "Partnership for Food Protection" conference, and be part of the dialogue about new food safety laws and regulations.		Clackamas County Office of Sustainability OSU/Clackamas County Extension Office Oregon Department of Agriculture	H	1
Policy Implementation Trials	Establish a pilot location for policy implementation trials. With the large population of farmers and processors in the county, this would be a proactive way to ensure that the establishing, monitoring and modification of food safety responsibilities were as suitable as possible to the Clackamas County agriculture community.	No. Willamette Research & Extension Ctr (NWREC)	Clackamas County Office of Sustainability OSU/Clackamas County Extension Office Oregon Department of Agriculture Clackamas County BCS - Natural Resource & Ag Program Manager	M	3
ODA Best Practices	Disseminate ODA-developed best practices information as it becomes available.	Oregon Department of Agriculture	Clackamas County BCS - Natural Resource & Ag Program Manager Clackamas County Office of Sustainability OSU/Clackamas County Extension Office	H	2
Clackamas County Department of Community Health	Work with the County Department of Community Health to consider if further County action is required.	Clackamas County Office of Sustainability	Clackamas County BCS - Natural Resource & Ag Program Manager OSU/Clackamas County Extension Office	H	1



# CLACKAMAS COUNTY

## PRODUCERS, AGGREGATORS, PROCESSORS, DISTRIBUTORS, AND STORAGE FACILITIES



	Berries or Non-Tree Fruits		Livestock		Aggregator
	Christmas Trees		Non Crop		Aggregator and Distributor
	Fallow		Nursery Stock		Aggregator, Distributor, and Storage
	Grain or Hay		Other		Distributor
	Grapes		Poultry		Distributor and Processor
	Grass or Other Seeds		Timber		Processor
	Greenhouse		Tree Fruits and Nuts		Storage
	Horses		Vegetables		





# CLACKAMAS COUNTY AGRICULTURAL INVESTMENT PLAN OVERVIEW

## Agricultural Impact by Market

• Nurseries & Greenhouses	57%
• Christmas Trees	12%
• Poultry	10%
• Fruits/Nuts/Berries	7%
• Vegetables/Melons	5%
• Other	9%

## 2007 USDA Census Data

	County	% Oregon
Number of Farms	3,989	10%
Land in Farms (by acres)	182,743	1%
Aver. Size of Farms (by acres)	46	11%
Market Value of Crops Produced	\$397,318,000	9%
Average per Farm	\$ 99,603	

## Traded Sector Direct Economic Impact

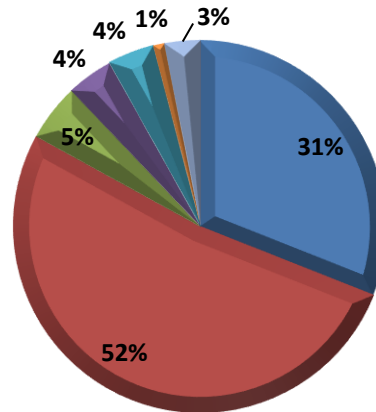
### Nurseries & Greenhouses:

- 4,700 Employees
- \$121 million in wages
- \$20.5 mil. direct business income
- \$239 million total economic output

### Wood Product Manufacturing:

- 1,500 Employees
- \$54 million in wages
- \$23.7 mil. direct business income
- \$350 million total economic output

## Economic Characteristics of Agricultural Production in Clackamas County



### Value of Sales:

- Less than \$1,000
- \$1,000-\$24,999
- \$25,000-\$49,999
- \$50,000-\$99,999
- \$100,000-\$249,999
- \$250,000-\$500,000
- More than \$500,000

# STRATEGIES

## Renewable Energy

### Biomass Strategic Plan:

OIT Prefeasibility Study  
(Completed 11/2010)

Biomass Feasibility & Sustainability  
Study (Completed 3/2011)

COGENTECH Project Assessments  
(Completed 3/2011)

### Implementation Strategy

- Business & Resource Development

## Regional Foods

### Foodshed Strategic Plan:

GIS/Soils/Ag Land Analysis/Mapping  
(Conducted by PSU grad student M. Mertens)

Regional Foodshed Analysis

Supply, Demand, Gap & Economic  
Benefit Analysis

### Implementation Strategy

- Materials & Resource Development

## Agri Tourism

### Equine Economic Impact Analysis

### Agri-Tourism Master Plan:

Research

Strategic Planning

### Implementation Strategy

- Materials & Resource Development



# AGRICULTURAL INVESTMENT PLAN

## IMPLEMENTATION STRATEGY

### Project Development and Outreach

For each component of the Ag Investment Plan Implementation Strategy the following tasks will be under taken:

- Develop database of property owners, operators, producers, processors, and distributors
- Conduct outreach/survey to identify growth and development opportunities

### Renewable Energy

#### Biomass Strategic Plan

**OIT Pre-Feasibility Study**  
*(completed 11/2010)*

**Fuelstock Feasibility Analysis**  
*(completed 3/2011)*

**Cogentech Project Assessment**  
*(completed 3/2011)*

**Implementation Strategy**

### Regional Food System

#### Foodshed Strategic Plan

**GIS Soils/Ag Land Analysis/Mapping**

**Regional Foodshed Analysis**

**Supply, Demand, Gap & Economic Benefit Analysis**

### Agri-Tourism

#### Equine Impact Analysis

#### Agri-Tourism Master Plan

*(Funded by TDC)*

**Research**

**Strategic Planning**

**Recommendations/Implementation**