2010

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Withers, Denissia Elizabeth (2010) "Community Learning Garden Programs in the Portland Area: How do Learning Gardens Help Low-Income Families Access Fresh Locally-Grown Foods?," *PSU McNair Scholars Online Journal*: Vol. 4: Iss. 1, Article 9.
<https://doi.org/10.15760/mcnair.2010.75>

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Community Learning Garden Programs in the Portland Area: How do Learning Gardens help low-income families access fresh locally-grown foods?

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Citation: Withers, Denissia. Community Learning Garden Programs in the Portland Area: How do Learning Gardens help low-income families access fresh locally-grown foods? Portland State University McNair Scholars Online Journal, Vol. 4, 2010: pages [75-113]

**Community Learning Garden Programs in the Portland Area:
How do Learning Gardens help low-income families access fresh locally-grown
foods?**

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January 17, 2010

Abstract

Community learning garden programs help families grow and prepare their own food. The skills and knowledge gained from these programs can help families access more fresh locally-grown foods. However, locally-grown foods are often perceived to be too expensive for low-income families. Economic barriers such as transportation and access to convenient food sources and the perceived high cost of fresh foods limit the amount of fresh foods available to low-income families and individuals. This study was designed to analyze how participation in community learning garden programs helps increase low-income families access to organic and/or fresh locally-grown foods. Although the preliminary sample findings are relatively small, key trends and findings identified can be used for further research.

The community partner selected for the study was the Oregon Food Bank's (OFB) Seed to Supper learning garden program. The OFB learning garden programs "address the root causes of hunger through increased nutrition, self-reliance and community food security (Learning Gardens, n.d. para.1)." An analysis of OFB survey results helped assess the effectiveness of the Seed to Supper program and the impact the program has on food security for targeted populations. In addition, participants from the program were interviewed to document qualitative outcomes of the program. The interview and survey process clarified how much fresh produce the participants grew and where and how much produce they purchased. Two Seed to Supper instructors and two key community members were interviewed as well to gain valuable insight from their perspectives about the program. The suggestions and recommendations in this study offer many creative and practical solutions to help alleviate food insecurity.

Community Learning Garden Programs in the Portland Area:

How do Learning Gardens help low-income families access fresh locally-grown foods?

Introduction

Portland, Oregon is considered one of America's leading sustainable and "*green*" cities, and supports a growing urban agriculture community. There are dozens of community gardens and learning gardens located in neighborhoods throughout the city. Community supported agriculture (CSA), farmer's markets and food co-ops have prospered and grown in membership and participation over the past few years and Portland ranks high in sustainability areas such as land use planning, recycling, green buildings and green economies.

In spite of this growth in urban agriculture, there are serious food insecurity issues for many low-income populations in the city. Food insecurity is the term used to define the number of households that struggle to afford food. Currently, "nearly a half-a-million Oregonians can be described as food insecure"(VanderWonde, 2008, p. 2). Food insecurity is addressed by the Oregon Food Bank's Nutrition Education and Learning Garden programs which offer cooking, nutrition and gardening classes in order to help carry out their mission to address the root causes of hunger. The Oregon Food Bank developed these educational programs to foster greater food security for families in Portland. "Community gardening is an educational process for changing the minds and actions of people so they can "help themselves" attain economic and social well-being" (Patel, 1991). Although home and community gardens supply only 8% of the food

supply for families surveyed by Oregon Food Bank in the *Profiles of Hunger & Poverty in Oregon 2008*, community learning gardens play a large role in today's focus on sustainability and greater self reliance.

This study focuses on the impact of the community learning garden education program--Seed to Supper--offered by OFB to families and individuals who meet low-income guidelines. The Seed to Supper program goals include reducing root causes of hunger, empowering people to grow their own food, and providing classes and services to support these efforts. This study seeks answers to the following questions: What impact do community gardening classes and cooking with fresh foods have on participating families and individuals? Do families and individuals continue to use fresh foods in daily food preparation after the classes and gardening season ends? What are the barriers to growing gardens in their yards, neighborhoods and region? Where do participants purchase additional fresh produce? What services are available to them to ensure success in the garden? Does Oregon Food Bank's Seed to Supper program provide these services? This study attempted to answer questions and examine the root causes of food insecurity in the Portland Metro and surrounding area.

The Environment/Landscape

The perception that Portland is a green city with a rapid expansion of sustainability projects is important to keep in the foreground as one analyzes this community learning garden program. Although the city is a leader in sustainable practices, the need for a major cultural food shift is apparent because the impact of food policy on public health issues such as food insecurity and community gardens is critical for real change. Sustainability has become a focal point in Portland with a movement

toward local, earth-friendly food and public health policies to support these trends. There is a growing movement to integrate these trends and create a more unified approach to food policy and social justice with sustainability and public health in mind. Portland's food policy council was formed in 2004 confirming its role as a progressive city dedicated to creating a sustainable model. However, the lack of a national food policy has been identified as a major issue for the 21st century by authors and activists Michael Pollan – *In Defense of Food*, Francis Lappé – *Hope's Edge*, and Mark Winne in *Closing the Food Gap*. Cities like Portland help lead the way and set the standard for a national food policy.

The two key community leaders interviewed for the study identified the need to integrate cultural and economic diversity when addressing food security issues in the Portland region. There are areas of Portland where there are few options to low-income families in terms of obtaining healthy fresh foods. In addition to the economic disparity that plagues many families in our community, commercial agribusiness and its retail culture offer few nutritious foods to low-income families. One public official interviewed for the study, pointed out that many street intersections in business and neighborhood sections throughout the city offer only fast-food restaurants or convenience stores on each corner. Research and investigative reporting by authors like Eric Schlosser (2001) of *Fast Food Nation* and documentaries such as *Super Size Me* by Morgan Spurlock (2004) have shown us that the food sold in these establishments is highly processed and lacks nutritional quality. Many neighborhoods in Portland offer little more than fast and convenience foods creating “fresh-food deserts” for its inhabitants. According to the United States Department of Agriculture (USDA, 2009) the

need to understand the effects of food deserts on low-income populations became a goal of the 2008 farm bill, and published a report to Congress in June 2009. It is in this landscape and political setting that organizations like OFB work to counter food insecurity. Community learning gardens are one alternative to the prevailing fast food culture and diverse populations often embrace gardening and bring their knowledge to learning garden programs and the community.

Literature Review

In order to fully to assess the value and success of a community learning garden program, it is necessary to understand the history and context of community gardening. The following provides a framework for the discussion and analysis of community learning garden programs and some of the key issues and trends.

Agencies and non-profit organizations like Oregon Food Bank have been drawing attention to the realities of food insecurity over the past few decades. Food insecurity has been defined as being “uncertain of having or being able to acquire enough food to meet basic needs of all household members because of insufficient money and other resources for food” (USDA, 2009). This definition is the grim reality for many Oregonians and according to the Oregon Center for Public Policy (OCP) and the Oregon Department of Human Services, 11.9 percent of Oregon households were food insecure during 2004-2006 (OCP, 2008).

Much of the literature and research about food insecurity focuses on developing nations. However, by the mid-1990s research revealed increasing food insecurity in the United States. The authors of *Food Insufficiency Exists in the United States: Results*

from the *Third National Health and Nutrition Examination Survey*, report that “some Americans do not get enough food to eat [and has] existed for decades, and recent studies conducted by advocacy groups suggest that food insufficiency is a persistent problem in the United States” (Alaimo, et. al, 1998, p. 419). This report focused on populations living in a home (not homeless) between 1988 and 1994. The interviews, which included socioeconomic demographics and food insufficiency data, revealed “an inadequate amount of food intake due to lack of resources” (Alaimo, et. al, p. 420). The evidence of increasing food insecurity has reached a critical point and Oregon Food Bank has had to expand its services in order to supplement state and federal food aid programs (i.e. food stamps, WIC and other food aid programs).

More recently, author Mark Winne (2008) in *Closing the Food Gap*, describes the growing food insecurity in the U.S. and quotes a U.S. Department of Agriculture survey showing up to 12% of the U.S. population is food insecure. The Oregon Food Bank Seed to Supper program is a response to the increased need for fresh fruits and vegetables and focuses on teaching about gardening and nutrition to help bring an increased awareness and understanding of nutrition, self-reliance and food security.

Researchers have shown the positive impact of community gardening in developing countries in Central America, Asia and Africa. These studies focus on the potential for a daily increase of vegetable consumption and the positive effect of building gardens based on indigenous knowledge (Marsh, 1998). Similarly, Patel (1991) found that gardening improved economic and social well-being in the United States. The study’s findings showed community garden programs have significant benefits that help increase fresh nutritious food among low-income families and individuals.

Much of the research about the benefits of urban agriculture in low-income communities has focused on small-scale agriculture in third world countries. In *Biotechnology in development, Experiences from the south*, Ruivenkamp (2008) illustrates how scientists and farmers have worked to create effective and safe farming techniques for urban and rural settings. Ruivenkamp (2008) writes of the importance of “a network era in which scientific knowledge has become an integral part of economic production” (p. 31).

In the United States, there is evidence of a “social” movement to grow more urban gardens in communities, schools and civic centers. However, there is a need for more research with data showing the results of this movement. There are numerous national magazine articles extolling positive impacts of community gardens in cities across the United States. Cities like Portland and San Francisco have planted public community gardens in front of their city halls to exhibit the positive outcomes of gardening in urban settings. There is also increasing participation in Master Gardener programs and nutritious school lunch programs, but the true outcomes of these programs require closer examination.

This study explores the question, “who benefits from these activities”? The assumption is often that organic and fresh locally-grown foods are an elitist food privilege, and not affordable for low-income populations. Moschitz (2008), in *Knowing food-a privilege for the concerned consumer?*, quotes researchers Goodman and Dupais (2002) “...community supported agriculture ‘is an utopian entertainment for a few middle class consumers and their fortunate few farmer friends’” (p. 1). This same critique can be made for gardening training programs. The cost to become a Master Gardener is

relatively high and therefore most low-income families may not be able to afford programs like the Master Gardener program. Does the Seed to Supper program, to which low-income populations have easier access, provide an effective level of training comparable to the Master Gardener program? Understanding the needs of low-income populations as we create public agendas that push for more access to locally grown foods is imperative for real change.

During the 2008 Presidential campaign, author Michael Pollan (2008) wrote a fifteen-page letter to the incoming “Farmer in Chief” addressed to the President Elect of the United States regarding the need to re-design food policy. He stressed the need to address the food crisis we face as a nation. He makes the case that food will be the number one issue for the United States within the near future. In his letter he lays out a detailed plan for the incoming President regarding U.S. food policy and frames his argument as a “critical issue of national security.” This lack of a national food policy has had the biggest impact on low-income families and has become a major social justice issue for many people.

The urban community garden has a long history dating back to the late 1800s as a strategy to help low-income families access fresh grown produce. According to Winne (2008), the significance of the urban agriculture movement over the past thirty years is small when compared to the need (p. 156). In Pollan’s (2008) letter to the “Farmer in Chief”, he makes the case for the renewal of victory gardens. Victory gardens developed during World War II and contributed to feeding the nation during war-time. Pollan suggests more federal grant programs for community garden development and more land acquisition should be considered for the future food security of our nation state.

According to the April 2009 *Organic Gardening* “About 1 million people belong to the estimated 18,000 to 20,000 community gardens in the United States.”

Winne(2008) in *Closing the Food Gap* has also suggested a historical context for “looking back at lessons learned” (p. 66) and lists the following as barriers to successful community gardens: skepticism towards growing healthy food in the city, lack of funding, lack of government support – in terms of land-use policies, toxicity of urban plots, crime and vandalism, and lack of gardening and farming skills (p. 67). These barriers are critical to analyzing a community garden education program and the context/climate in which it operates. Lastly, Joan Twiss (2003) and colleagues have published a report in the American Journal of Public Health showing enhanced nutrition and physical activity in California cities where successful community gardens exist. They point to social capital, improved access to resources and a multitude of other garden initiatives as improving overall community health.

One of the perceived barriers to organic urban/rural agriculture is the belief that production cannot maintain yields to support populations with enough foods. The emphasis has been on large-scale agricultural activities with an assumption that these activities would have the biggest impact on food security. The agricultural models in countries like Cuba, India and Ecuador challenge these assumptions (Ruivenkamp, 2008). The linkages between science and urban agriculture may be critical to create successful community garden programs. This research study examines the local agricultural expertise and the impact this expertise has on garden training programs like the Seed to Supper Program. Are low-income populations receiving access to adequate training to produce fresh locally grown foods? To help us understand the impact of learning gardens

programs, we asked this question along with the eating and shopping habits of Seed to Supper participants.

Methodology

Quantitative

A survey using a combination of forced choice questions with Lickert scales and open-ended questions was used to assess the Seed to Supper program (see Appendix A: OFB Survey). The survey was administered by the Oregon Food Bank staff and volunteers to participants of the Seed to Supper program beginning in April 2009 and continues through the fall of 2009. This study reflects the results of 36 surveys through July 2009.

Qualitative

Open-ended interviews based on a standard series of questions (see Appendix B), ranged between 10 – 30 minutes long and were held either in the participant's garden or in a nearby reception area. The interviews were audio recorded and notes were taken. The study used grounded theory analysis to categorize interview results using coding and heading methods developed from content. Interviewees included nine participants in the OFB Seed to Supper training program, two instructors from the same program and two community leaders active in the area of food security and urban agriculture training. The majority, but not all of the Seed to Supper participants live in public housing projects or have access to community center with a community garden.

Results/Findings

Using grounded theory methodologies of coding, participants' strengths and weaknesses in relationship to the research question of assessing fresh locally grown food were determined. All of the interviewees recognized the importance of eating fresh locally grown fruits and vegetables, and indicated that the classes gave them some of the tools needed to grow their own fruits and vegetables. However, the issues of cost, space, transportation and availability dominated the interviews. Most of the survey respondents and interviewees had grown some of their own foods over the past two years – mainly through their involvement with the Seed to Supper program and had access to a community garden in their public housing complex. Having access to a garden plot in their housing project often made the difference between having a garden and not having a garden. This highlights the need for more community resources to develop more garden spaces for low-income families.

The sense of independence and satisfaction gained by interviewees in the program were important to key participants who became active volunteers in the program. They shared how they often helped others in their community succeed in accessing more fruits and vegetables and in learning about food preparation. In each community garden setting the Seed to Supper program succeeded in building community ties and networks within the public housing or community center project. Participants and key community leaders stressed the need for more educational opportunities and public policy addressing land reform. Lastly, educators and leaders who are creating public policy or educational

curriculum for learning garden programs need to consider the importance of cultural diversity.

The following question, headings and categories evolved from the interview process and analysis of the data: What are the barriers to low-income families in accessing fresh-locally grown foods? Using grounded theory methodologies of coding, the following headings/patterns developed which showed the participants' strengths and weaknesses in relationship to the research question of accessing fresh locally grown foods.

Economics/Food Insecurity

- ❖ Cost
- ❖ Space to grow gardens
- ❖ Conveniently located grocery stores with local options
- ❖ Transportation
- ❖ Access to community resources

Social Conditions and Issues

- ❖ Human aspects – healthy lifestyles
- ❖ Community – Public Health
- ❖ Educational
- ❖ Public Policy

Economics: Food Security and the high cost of fresh foods

The majority of the survey respondents and interviewees agreed cost is a major consideration when purchasing fruits and vegetables (see Figure 1). One instructor explained how people often have to make difficult and careful choices when using a limited amount of food stamps to purchase foods, especially fresh fruits and vegetables. Although the majority of the participants interviewed reside in public housing projects and have a degree of stability in their lives, the issue of cost, a space to garden in, and transportation were major barriers to accessing fresh fruits and vegetables. Some of the

participants have problems with access to more affordable discount grocery stores like WinCo and Food for Less, often due to the lack of transportation. Public transportation is viewed as too cumbersome for shopping long distances from their home.

Figure 1 – Factors that prevent access to fresh fruits and vegetables

Table 1 Interview question <i>What influences your decision to buy fruits and vegetables?</i>		
Most important Influences		Least mentioned influences
Cost – 6	Availability – 2	Taste – 1
Nutritional Value - 5	Transportation – 2	Other - 0
Interviewees were given the above choices for the question.		

Most participants shop at the grocery store nearest to their home due to limited transportation. When respondents were asked in the interview what influences their decision to buy fruits and vegetables, cost was the number one factor (Table 1). This was

consistent with survey results, which showed 32% of the respondents checked cost as a factor in obtaining fruits and vegetables (see Figure 1). The second factor that interviewees said influenced their positive decision to buy fruits and vegetables was nutritional value – see Table 1. 70% of the survey respondents agreed that they purchase more fruits and vegetables - when they filled out the survey following their Seed to Supper workshop (Figure 2). However, when asked during the interview if they felt they ate enough fruits and vegetables during the interviews, one half of the interviewees said they do not eat enough fruits and vegetables.

Figure 2 – Shopping patterns in the Seed to Supper Program

One interviewee belonged to a Community Supported Agriculture (CSA) organization and occasionally shopped at New Seasons (a local grocery store known for its excellent selection of locally grown foods) and Trader Joes. Only 2 people shopped at farmer's markets, and everyone agreed that farmer's markets are too expensive. All participants in interviews shop at the supermarket closest to where they live: primarily

Albertsons and Safeway (see Table 2). They shop at these stores because of convenience, not necessarily because they are less expensive. WinCo was often mentioned as a shopping place to find good value – but getting to a WinCo store is difficult for most, because they rely on public transportation. Several of the interviewees said they preferred fruit and vegetable stands to farmer’s markets and three participants regularly shop at local fruit stands because of freshness and good prices. Traveling to fruit stands was an issue for them all, but they felt it was worth the savings if they could get there.

Table 2 Interview Question <i>Where do you purchase or obtain most of your fresh produce?</i>			
Locally grown Fresh Food Sources	Large-scale Grocery Stores	Public and Community Food Assistance*	Non-traditional food sources
Community Supported Agriculture - 1	Albertsons - 5	Food Pantry - 0	Ethnic grocery - 1
Farmer’s Market – 2	Food For Less -1	Oregon Food Bank - 2	Fruit & Vegetable Stand - 3
Food Co-op - 0	New Seasons - 1		
Natural Food Store - 0	Safeway - 3		Trader Joes- 1
Your garden - 0	WinCo - 2		
Totals: 3	12	2	5
* Food from food pantries and Oregon Food Bank range from USDA commodities to state and local foods.			

This pattern of shopping closest to home is consistent with national trends (USDA 2009), and contributes to lack of access to fresh locally-grown foods. And according to author Mark Winne, since the early 1970s, the growing gap in food quality between upper and lower income populations has soared. Mark Winne(2008), a long-time advocate for equity in our food systems makes a case for “history repeating itself”

(preface). He is referring to the 1970s when food prices soared due to the oil embargo and striking truck drivers. This historic period also created an imbalance in food availability because small grocery stores began to close, and supermarkets located in the suburbs created price gaps between those most in need of affordable food and those with plenty. Affordable fresh food became difficult for inner city and poorer populations to access. Since this time, conservative free market economics and less government regulation have led to an aggressive large-scaled industrialized and globalized food system.

This system has led to many food and health related issues for Americans – hunger, obesity, diabetes, heart disease, and many believe cancer has increased as well (Winne, p. 10). Winne’s (2008) main point is that there are “growing food gaps” and food deserts in our cities; Portland is not an exception to this trend especially in light of the Oregon Food Bank’s data (see *Profiles of Hunger & Poverty in Oregon 2008*). Winne (2008) makes the case that in spite of efforts to alleviate food insecurity – the percentages of food insecurity has not changed since the mid 1990s. He advocates addressing the root causes of hunger – social and economic inequity. Until we resolve these issues --- history will continue to repeat itself (Winne, 2008).

The issue of equity was apparent when listening to the stories and responses shared by the interviewees. Their struggles with health, transportation and sudden life changes impacted their ability to access fresh food. One instructor’s main mission is to bring less processed foods to what he refers to as his “congregate” and meals distribution program. For one gardener, food independence and the comfort of growing your own food means he can survive and he is empowered by this – life has been better for this

individual and he is motivated by sharing what he has with others in his community.

Food equity is a public health issue and one that contributes to the overall health of the community, according to the elected public official interviewed for the study. This interviewee pointed out the connection between needed health reform and food security and healthy lifestyle trends in our Portland communities.

These responses from survey respondents and interviewees give us greater insight into food equity issues and insecurity in the Portland area. The Seed to Supper classes provide skills and knowledge that empower individuals to create an environment of self-sufficiency. For many these skills help provide comfort.

Human Aspect

During the interviews participants often used terms such as self-sufficiency, satisfaction, comfort and security when discussing their involvement with gardening in the Seed to Supper program--all of which were important to their lives. These were dominant themes. 100% of the interviewees referred to their participation and involvement in gardening and the classes with satisfaction. The OFB survey results also showed satisfaction and respondents agreed they would use something they had learned from the class and they felt encouraged (Figure 3).

Figure 3 – Positive results showing satisfaction and encouragement

In addition to adding value to their lives and enhancing their lives, a small core of the interviewees had very active roles in the Seed to Supper program as volunteers and stressed the importance of self-reliance, satisfaction, security and comfort. They indicated that volunteerism was an important part of their lives, and these few were dedicated to spreading the word about gardening, nutrition, and food preparation to others in their community. It was apparent in the interviews that they were active and had created healthy lifestyles. They were busy growing gardens, teaching about nutrition and networking in their communities. One participant interviewed was involved in five different community gardens; his role was to help distribute the harvests from the gardens to his community meal program.

The public official interviewed expressed that gardening and cooking with fresh fruits and vegetables helps to create healthy lifestyles. She indicated this is critical to successful communities and to health reform. She expressed the need for public incentives to encourage these kinds of activities in schools, public housing, and in city and county buildings.

Community Health

Figure 4 Raised garden bed - Seed to Supper Plots

The participants of the Seed to Supper program all mentioned the community-building process that had resulted from their experiences in the community gardens and the gardening classes in their public housing projects and community centers. At one housing project, a table is put out during harvest time for sharing extra fruits and vegetables – even those who can't garden or do not have a garden space can access fresh fruits and vegetables during the height of the harvest season.

The enthusiasm generated by the gardening activities at another public housing site prompted the members of the project to petition the management to plant a public orchard. The interviewees were confident that there was enough collective knowledge to manage the orchard. A blueberry patch has already been successfully installed and a decision on the orchard should be reached by fall of 2009.

Public policy leaders in Portland have identified community health as a key factor for encouraging healthy urban agriculture activities. The city of Portland formed a Food Policy Council (FPC) in 2004 that oversaw several studies including *Diggable City*, and the impact of Measure 37 on Portland's local food system. This progressive council addresses public health and nutrition policy for Multnomah County. The activity of a food council along with the support of public officials and community volunteers for urban agriculture creates a friendly environment to support healthy communities and foster urban agriculture for local food production (see Appendix C: FPC Governing

Principles). This kind of support is critical for future growth of community garden programs. One official spoke positively about the Seed to Supper program and other learning garden programs throughout the city and the important role they play in providing learning environments for participants.

Community health and cultural diversity are important concepts to focus on when we examine public health. Portland has a culturally diverse population which could contribute to a natural learning environment that could teach us more about food preparation using fresh locally grown foods, including food culture from many divergent ethnic groups such as the Mexican, African, and Ukrainian populations.

One community garden that was observed for this study has a large group of multicultural gardeners, who are known for their gardening abilities. When talking to many of the gardeners they spoke with admiration and respect for each other and their ability to garden successfully. One gardener suggested that any expansion of the garden could easily be accomplished because of the collective expertise. This is a positive way to integrate diverse populations and one example of what other cultures teach us about healthy eating, daily food preparation and gardening.

Education

Over half of the participants--61% of the survey respondents and half of the interviewees--indicated they had gained enough experience to grow some of their own fruits and vegetables. Additionally, 64% of the survey respondents indicated they would like more garden training. A positive educational example of the Seed to Supper model was evident in an early childhood education program, where the teacher (an interviewee) arranged for a one-time container gardening class, 25 people arrived (the parents and

children) to learn how to grow tomatoes, basil, and salad makings on their balconies and small yards. The container gardening workshop connected the school's curriculum for growing plant starts at school and sending the plants home for successful gardening. The Seed to Supper program organizers brought containers, soil, plants and amendments. By bringing the Seed to Supper program to the parents, they were able to use the school curriculum to create a positive gardening experience for children and parents. The opportunities for educational experiences and examples are numerous showing the success of the Seed to Supper program.

Nutrition

Nutrition is an area of education that can provide critical knowledge for low-income participants and their families. Many of the participants indicated in the interviews they needed to know more about nutrition and connection between growing your own food and healthful consequences. Health-related issues like Diabetes influenced several of the interviewed program participants. According to the Centers for Disease Control and Prevention's 2007 website, "23.6 million people or 7.8 percent of the population has diabetes"

(http://diabetes.niddk.nih.gov/DM/PUBS/statistics/#i_people).

One gardener shared that she had recently learned she had adult-onset diabetes. She has utilized the Seed to Supper program and has learned as much as she can about gardening and cooking with fruits and vegetables. She recently had started teaching cooking classes to others in her housing project and will work one-on-one with members of her community tailoring lessons for special dietary needs, like food allergies, heart

disease and other health conditions. She wants to spread the word; all of her efforts and work are voluntary.

Demystifying the process of growing your own food!

There are those in the industrial agricultural system who maintain that growing our own food is too complex and requires specialized equipment and chemicals. In the July 2009 edition of *The American* a critic of “agri-intellectuals” wrote a front-page editorial entitled: *The Omnivore’s Delusion: Against the Agri-intellectuals*. The article is largely targeted against food writer Michael Pollan and those who follow his advice for small-scale farming and seasonal eating practices focused on locally grown fresh fruits and vegetables. In an interview with a Seed to Supper instructor, he expressed that his primary goal is to demystify the process of growing your own food. His second goal is to serve fresh foods instead of processed foods to his congregation. He convincingly made the relationship between working the soil in the past and now. For centuries people have farmed the Willamette Valley – farming starts with a seed and our hands in the soil, there is no great mystery. He made this strong connection to the past, which adds a poetic element to teaching gardening – whether on roof tops, plots in front of city hall to a backyard in Vancouver, Washington. This instructor finds inspiration from the history of the region and is motivated to find public spaces to farm and people to help him deliver fresh locally grown food to his “congregation.”

One of the interviewees is a community educator who trains Master Gardener students, these students often teach in the Seed to Supper program. He stressed the need for training low-income gardeners using a Master Gardener curriculum that would be more specific to the needs and issues of gardeners in public housing projects. The

existing Master Gardener program is a 10-month rigorous course – which costs approximately \$350 and requires giving 70 hours of volunteer hours back to the community. Several of the Seed to Supper participants interviewed, volunteer upwards of 30 – 40 hours per week – so meeting that criteria would be no problem. However, the cost, transportation and format of the Master Gardener model might need to be adapted to the needs of this population. This community educator also suggested the need for more data on the benefits of gardening education and the correlation between these programs and increased access to fresh fruits and vegetables.

The miracle of gardening and the awe of growing your own food is an important component of gardening education. One Seed to Supper interviewee, who was previously a farm worker for ten years, spoke passionately about the wonderment of growing food. Although she had spent years in a commercialized farm setting, the Seed to Supper experience taught her about the soil and the amendments needed to create healthy microorganisms. She spoke of her reluctance to add chicken manure to soil that would produce food she gave her children. But once she understood how it improved the soil she realized its importance. She gained respect and wonderment for the miracle of growing things.

Spreading the Word - Volunteerism

Of all the participants, those that were active volunteers had greatest access to fresh fruits and vegetables. This was because of their networking and exposure to other gardeners and resources. Although only a few of the participants were involved in volunteerism, for this small group volunteering had become an important activity in their lives. For others, incorporating knowledge from the classes into their personal lives was

enough--they were dedicated to trying new fruits and vegetables and learning more about gardening and food preparation. (See previous sections **Nutrition** and **Human Aspects** for more examples of volunteerism in the Seed to Supper Program.)

Diversity

During one interview, a public official described the need to move from “processed to fresh foods” and the enormous task of educating the public about the benefits of fresh foods. She spoke of economic barriers and the cultural influences of the media, including the constant exposure to cheap processed foods advertised on billboards and on television. She pointed out that we have all been conditioned to think that when we arrive home from a long days work, we often open the freezer and pop a frozen (and usually highly-processed) food into the microwave oven for our dinner. People have come to expect convenience and speed. She pointed out that one key resource for improving this situation could come our diverse populations. She suggested these populations have a lot to teach us. She asks the question, “How can we access this knowledge?” She felt the community garden is a place where the cultural barriers can be crossed and we can benefit from learning about new foods and food preparation. The example used in the previous section on **Community Health** illustrates how effective an ethnic group can be in the gardening setting when given the opportunity, the Seed to Supper Program has helped facilitate this group by providing a classroom setting with interpreters to help facilitate the class.

Public Policy

The largest barrier to growing food in an urban environment is space--places to plant gardens. The public housing projects are fertile places to start community learning

gardens but space is the number one issue in the Portland metro area. The Portland Parks and Recreation Community Garden Program offers 32 city-wide gardens and there are over 1200 people on waiting lists to access community garden plots. Often it takes three-to-five years to get enrolled into a garden near your residence. In Portland, people have created other models like yard sharing and Growing Gardens. In addition, guerilla gardeners have taken to the streets using parking strips, empty lots and pieces of property in transition. Often these gardeners are using the land with permission. For many low-income populations, the costs, transportation, water, and garden supplies, like soil amendments, seeds, tools, etc. complicate the community garden experience. Land reform is needed to address the issues of equity. Property tax incentives for landowners can help to encourage use of fallow land and empty city lots. This kind of reform would contribute to the needs of low-income populations' ability to access fresh locally-grown foods. Portland has several public agencies and organizations addressing policy needs including the Multnomah County Food Policy Council, Oregon Food Bank, and other ad-hoc groups like Real Wealth of Portland, a faith-based group conducting informal information sharing about gardening and urban agriculture.

There are other viable urban agriculture models to learn from, mostly in the southern hemisphere, i.e. Havana, Cuba. Cuba developed a successful program where government intervention has structured land use laws for re-zoning of urban land, allowing for variances, and the use of empty city lots. An example in Portland of the creative use of fallow land owned by the county took place this summer when Multnomah County in cooperation with Hands On Greater Portland, a volunteer organization, decided to farm a two-acre tract of land in Troutdale – once part of a project called the “poor farm” in 1911

in order to grow fresh produce and distribute additional fresh produce through the Oregon Food Bank's network.

Figure 5 - Comparison of unused empty lot on left, and temporary community garden on future development site on right.

Suggestions/recommendations

Interviewees provided suggestions for improving the Seed to Supper Program. Often these suggestions related to the housing projects they occupied and are included here because of similarities in the participant's needs for the Seed to Supper program and the garden communities they live in. The survey responses are included separately as Appendix D.

Over half of the participants interviewed had participated in the Seed to Supper gardening classes for two seasons. Although not dissatisfied with the classes, the participants felt the program was somewhat repetitive (see Appendix E for Seed to Supper curriculum). The respondents had additional specific questions related to gardening techniques including adding soil amendments, crop rotations, pest management and watering. Several expressed the need for more one-on-one mentoring in the garden. Everyone indicated they needed more resources including soil and garden space, seeds, plants and fertilizers.

Creative ideas for expansion of community efforts in their housing projects ranged from creating a community kitchen for canning, to installation of a public orchard. Several individuals expressed the need for transportation services to grocery stores and shopping services. All felt repeating the courses had been beneficial, but they needed more hands-on and advanced gardening techniques. The majority of survey respondents and interviewees rely on friends and family for gardening advice. A compilation or online network of gardening suggestions might be useful, such as a handbook of where to access gardening expertise and resources or a gardening support group might be adapted to each community situation.

The instructors cited the need for more financial resources and more assistance with recruitment for classes. Each of the instructors was dedicated to expanding their students' awareness of the benefits of growing fresh fruits and vegetables and taking advantage of the resources available.

As one educator suggested, there is a need for more data collection in order to help justify additional gardening and nutrition training. He felt this would help agencies find resources to fund additional training programs. Additionally, he noted that more data on the role education plays in helping low-income populations access fresh locally-grown foods would contribute to improving and increasing these kinds of programs.

Many of the community leaders and educators interviewed conveyed how crucial land reform is to further the community garden effort in Portland. Also, a major cultural food shift towards more fresh and local foods is needed to improve the health of our communities and city. There is an opportunity for non-profit groups and agencies to capture the attention and focus of public officials for collaborative efforts to develop

more community partnerships and to raise money and volunteers to improve access to fresh foods for our low-income populations. There are innovative food distribution mechanisms and models throughout the state of Oregon and in the Southern hemisphere, if implemented on a larger scale these urban agriculture models could help improve the health of Portland's low-income populations. Portland's sustainability movement aspires to make the city a livable and healthy place with fair equitable food systems for all and by adapting more of these models Portland can achieve this goal.

Conclusion

In conclusion, this study set out to assess effectiveness of the Seed to Supper participants in gaining access to fresh grown foods. * It also sought to identify the strengths of this population. I found that this community possesses particular strengths such as community volunteerism and the strong desire to access and consume fresh locally grown fruits and vegetables. Yet, there are many barriers preventing this population from full access to affordable nutritional foods. These barriers include: cost, space and supplies to garden with, transportation and access to convenient local food sources and distribution of fresh foods to people in need. Oregon Food Bank and other food distribution groups can continue to support these populations by providing more opportunities to access fair-priced foods, greater education and training opportunities for the individuals interested in teaching and mentoring others in their communities. Additionally, state and local governments have identified food security and urban agriculture as key issues and are addressing policy changes for creating more land reform and venues for fair-priced foods. These policy changes along with stronger educational opportunities could encourage low-income populations to access more fresh-locally

grown foods. Clearly these populations want more fruits and vegetables and are willing to make lifestyle changes to accommodate more access. These changes and a national agenda for health care reform that would focus on preventative and healthy lifestyles could help to significantly diminish the current barriers that low-income families have in accessing fresh locally-grown foods.

* It is important to note that this study is presented as a preliminary, pilot study. The sample sizes are small so statistical inferences cannot be made at this point, and the samples are not intended to necessarily be representative (i.e., people are going to self-select for the interviews, so it is not surprising that everyone said they had a positive experience with the program, etc). Nonetheless, this preliminary study identifies some key themes and findings that can be followed up on in a larger study in a broader time frame.

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**Oregon Food Bank
Learning Garden Workshop Survey**

Appendix A

Workshop Title: _____ **Date (w/year):** _____

Please respond to the following statements with:

1 = disagree, 2 = maybe, 3 = agree

1. This workshop taught me something that I will be able to use in my garden.	1	2	3
2. This workshop has encouraged me to plant a garden.	1	2	3
3. I grow some of my own produce.	1	2	3
4. I have gained enough experience to grow some of my own fruits and vegetables.	1	2	3
5. I would like more gardening training.	1	2	3
6. Within the past two years I have grown some food.	1	2	3
7. I purchase more fresh fruits and vegetables.	1	2	3
8. I currently use a community garden space	1	2	3
9. I have a garden in my yard	1	2	3
10. I volunteer at Oregon Food Bank's Learning Gardens	1	2	3

Circle or check boxes.

11. How often do you eat fresh fruits and vegetables? (Circle most often)

3 times per day 1 time per day 5 times per week 1 time per week

12. What additional things do you need to grow a garden?

(Check all that apply)

- ☐ Seeds
- ☐ Garden Advice
- ☐ Labor in Garden
- ☐ Access to how-to Garden books
- ☐ Garden space
- ☐ Help putting in your garden
- ☐ Gardening Tools
- ☐ Money to buy garden supplies
- ☐ Other _____

13. What prevents you from obtaining fresh fruits and vegetables or growing your own?

(Check all that apply)

- ☐ Cost
- ☐ Availability
- ☐ Garden space
- ☐ No time to garden

**Oregon Food Bank
Learning Garden Workshop Survey**

14. What would you recommend changing or adding to improve these workshops?
15. Please share a story about your gardening as a result of this workshop?
16. Do you need more information or advice to grow a garden? If yes, please explain
17. Where do you get your gardening questions answered?

Income Information – Learning Garden

Oregon Food Bank's Learning Garden programs work to address the root causes of hunger through increased nutrition, community food security and self-reliance in our community. In order to make sure our programs are effectively reaching those who may be in need, we would like to find out how many volunteers and educational participants earn less than 200% of the Federal Poverty Level. This form is optional, but your participation will help us refine our programs and outreach efforts. This information will be kept completely confidential. Simply find the number of people in your household and determine whether you make more or less than the income listed. Check the appropriate box below.

- ☐ My family earns *less than* the amount listed below
- ☐ My family makes *more than* the amount listed below

Number of People in Household	Combined Annual Income	Combined Monthly Income
1	\$ 21,660	\$ 1805
2	\$ 29,140	\$ 2428
3	\$ 36,620	\$ 3052
4	\$ 44,100	\$ 3675
5	\$ 51,580	\$ 4298
6	\$ 59,060	\$ 4922
7	\$ 66,540	\$ 5545
8	\$ 74,020	\$ 6168

Appendix B

Seed to Supper: Interview Questions

1. As a result of taking a learning garden workshop, have you gained enough experience to grow some of your own fruits and vegetables. If yes, explain. If no, why.
2. As a result of taking a learning garden workshop, do you eat more fresh-grown produce? If yes, what kinds, did you grow them or purchase them?
3. Were you growing fruits and vegetables before the workshop Y/N, or after the workshop Y/N.
4. How has this workshop changed the kind of food you eat?
5. Where do you purchase or obtain most of your fresh produce?

Farmer's Market	Grocery Store	Your or your neighbor's garden
Food For Less	Food Pantry	Community Supported Agriculture
Oregon Food Bank	Food Co-op	Natural Food Store
Other_____		

6. What influences your decision to buy fruits and vegetables?

Cost	Availability	Convenience	Nutritional Value	Taste	Transportation
Other_____					

7. Why do you grow your own fruits and vegetables?

Taste	Availability	Cost	Do not grow my own produce	Other_____
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8. What would you recommend changing or adding to improve these workshops?

9. Please share a story about your gardening or meal experience as a result of this workshop?

10. Do you need more information or advice to grow a garden?

11. Where do you get your gardening questions answered?

12. Have you taken other gardening classes? If yes, which ones.

13. Do you work outside of the home?

14. Is there anything you would like to share about the Seed to Supper Program experience?

Governing Principles - May 18, 2006

The City of Portland and Multnomah County will promote, support and strengthen a healthy regional food system, based upon the following principles:

- 1) Every City and County resident has the right to an adequate supply of nutritious, affordable and culturally appropriate food (food security).
- 2) Food security contributes to the health and well being of residents while reducing the need for medical care and social services.
- 3) Food and agriculture are central to the economy of the City and County, and a strong commitment should be made to the protection, growth and development of these sectors.
- 4) A strong regional system of food production, distribution, access and reuse that protects our natural resources contributes significantly to the environmental well-being of this region
- 5) A healthy regional food system further supports the sustainability goals of the City and County, creating economic, social and environmental benefits for this and future generations.
- 6) Food brings people together in celebrations of community and diversity and is an important part of the City and County's culture.

City and County commitment

In order to play its role in creating a healthy regional food system, the City and County will:

- 1) Support an economically viable and environmentally and socially sustainable local food system.
- 2) Enhance the viability of regional farms by ensuring the stability of the agricultural land base and infrastructure and strengthening economic and social linkages between urban consumers and rural producers.
- 3) Ensure ready access to quality grocery stores, food service operations and other food delivery systems.
- 4) Promote the availability of a variety of foods at a reasonable cost.
- 5) Promote and maintain legitimate confidence in the quality and safety of foods available.
- 6) Promote easy access to understandable and accurate information about food and nutrition.

For more information:

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Appendix D - OFB Survey Questions:			
	1 - Disagreed	2 - maybe	3 - Agreed
1. This workshop taught me something that I will be able to use in my garden.	0%	8%	89%
	1 - Disagreed	2 - maybe	3 - Agreed
2. This workshop has encouraged me to plant a garden.	0%	11%	86%
	1 - Disagreed	2 - maybe	3 - Agreed
3. I grow some of my own produce.	17%	6%	72%
4. I have gained enough experience to grow some of my own fruits and vegetables.	6%	28%	61%
5. I would like more gardening training.	11%	19%	64%
6. Within the past two years I have grown some food.	22%	14%	58%
	1 - Disagreed	2 - maybe	3 - Agreed
7. I purchase more fresh fruits and vegetables.	6%	11%	70%
8. I currently use a community garden space	42%	6%	47%
9. I have a garden in my yard	33%	14%	47%
10. I volunteer at the OFB community garden	75%	9%	12%
11. How often do you eat fresh fruits and vegetables?			
3x per day	30.60%		
1 per day	47.20%		
5 times per week	11.10%		
1 time per week	2.80%		
12. What additional things do you need to know or have in order to grow a garden?			
Seeds	36.10%		
Garden Advice	25.00%		
Labor in Garden	11.10%		
Access to how-to Garden books	13.90%		
Garden space	38.90%		
Help putting in your garden	11.10%		
Gardening Tools	23.00%		
Money to buy garden supplies	30.60%		
Other	25%		
13. What factors prevent you from obtaining fresh fruits and vegetables or growing your own?			
Cost	36.00%		
Availability	13.90%		
Garden space	44.50%		
Lack of time	16.70%		

Appendix E

Seed to Supper: A workshop series for beginning gardeners

General Description: This is a 5-week series of classroom-type, indoor gardening workshops designed to cover all of the information one would need to know to start a garden. These workshops are usually held in the fall, winter and early spring (before the gardening season starts).

Class Format: Each of the 5 classes is 1.5 hours long and covers a different topic (see below for the topic descriptions). Within each class, 3-5 different subtopics are covered (for example, the healthy soils class covers bed preparation, composting, cover cropping, crop rotation and organic fertilizers).

Assumptions: The workshops are focused on providing basic, practical information, but they do include some scientific and theoretical information to provide a foundation. We assume that people who sign up for a 5-week gardening class want some theoretical / scientific information to accompany the practical information. This has been affirmed in the workshop evaluations. Some of the slides use 'garden / agriculture' specific language, but it is assumed that the workshop presenter will define any of these words. The workshops are also focused on low-cost solutions because the target audiences are individuals who earn less than 200% of the Federal Poverty Level (less than \$44,100 annually for a family of 4). While we recognize that adults learn best by doing, it is not always practical to have hands-on activities built into the workshops; these workshops are designed to arm the new gardener with information and confidence as they start their new garden.

Class materials: For each class there is a set of 3-5 relevant handouts, a visual outline of the topics covered by the presenter (depending on the setting, this will be a flip chart or a PowerPoint presentation using a projector or an overhead projector), and demonstration materials when appropriate and feasible. There will also be laminated pictures to pass around.

Specific Workshop Descriptions:

Week 1: **Creating healthy garden soil.** Healthy soil is the foundation for a productive vegetable garden. Participants will learn how to maintain soil fertility throughout the years. Topics will include crop rotation, composting, cover crops and organic fertilizers.

Week 2: **Planting.** Different plants require different planting techniques. Participants will learn how and when to plant different vegetables, fruits and herbs. This workshop will cover direct seeding, transplanting, growing your own transplants and other common propagation methods.

Week 3: **Garden Maintenance.** Participants will learn to take care of their garden to maximize your harvest. Thinning, weeding and watering strategies will be covered as well as tips for caring for specific plants.

Week 4: **Organic Pest Management.** Participants will learn natural, organic ways to control pests in your garden. This workshop will cover beneficial insects, keeping plants healthy and recipes for simple pest control concoctions.

Week 5: **Garden Planning.** Careful planning is the key to growing a healthy, abundant garden all season long. Participants will learn how to create a garden plan that will guide them step by step as they plant and harvest throughout the spring, summer and fall.