

**HOMEGROWN VEGETABLES:  
OPPORTUNITIES FOR PUBLIC GARDENS  
IN AN AGE OF AGRICULTURAL DISCONNECT**

by

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A thesis submitted to the Faculty of the University of Delaware in partial fulfillment  
of the requirements for the degree of Master of Science in Public Horticulture

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## **ABSTRACT**

Food gardening, a skill essential to survival for much of our history, has been making a comeback in recent years. Concerns about the environment, health and well-being, and the economy have all contributed to its popularity. Many businesses and organizations have been joining in to support the movement, including public horticulture institutions. This research aimed to ascertain the interest and involvement of the public horticulture community in this topic, to identify the educational needs of food gardeners, and to develop recommendations for public gardens considering a role for food gardening in their mission.

Targeted electronic surveys, selected case studies, and interviews with professionals yielded pertinent data for this research. Surveys indicated that most gardens were already offering or interested in offering food gardening resources to their audience. Food gardeners are equally interested in taking advantage of those resources. However, while public gardens offered the classic display garden and lecture-style classes, food gardeners were additionally interested in online resources, demonstrations, and networking opportunities with other gardeners. The case studies represented a wide array of successful food gardening efforts that responded to their particular community's needs. Benefits of such efforts included increased community interest, increased diversity of audience, and increased publicity. Common challenges included harvesting, distribution of crops, increased garden maintenance requirements, and pest control. Among the recommendations developed for other institutions

considering food gardening were building awareness for the value of strategic planning and mission relatedness, educational goals and physical site goals.

## **Chapter 1**

### **INTRODUCTION**

Public horticulture institutions, like many other non-profit organizations, are focused on serving their community within the realm of their expertise. One growing area of interest across the United States is food gardening, yet it is unclear whether public gardens focus on the currency of this topic. For the purposes of this study, the term “food gardening” is defined as, “ a self-sufficient effort to raise, harvest and consume food plants. (National Gardening Association, 2008)” Food gardening has been relegated to the field of agriculture, while public gardens focus on horticulture (Creasy, 2010). Can public horticulture institutions support their community in this topic while staying true to missions and objectives?

Food gardening has transformed from an essential part of life to a hobby in the last century (Tucker, 1993). Food production technology has advanced to a point where minimal human involvement is needed, as indicated by the fact that raising food crops has dwindled to less than 2% of jobs held in the United States (Levin, 1999). With such efficient production methods, the concepts of growing plants for consumption and pleasure have become separated. As a new century begins, however, our population is interacting more and more with the growth, harvest and sale of food crops. Food gardening in particular has become a popular activity, which has been integrated within conventional landscape design and blurs the line between

horticulture and agriculture (Kleinrock, 2010). Interest in food gardening occurs across a range of economic backgrounds and ethnicities in the United States (Haseneca, 2009). Another perspective of food gardening focuses on environmental issues that are also of concern to many public horticulture institutions. Increasing transparency in the food industry has brought to light the challenges of pollution, erosion, invasive species and dwindling natural resources. Furthermore, the United States population has become increasingly aware of many issues of food contamination and decreased nutritional value of mass-produced food crops (Bareuther, 2008).

Already armed with display vegetable gardens, knowledgeable horticulturists, reference materials, and a strong history of public education, public horticulture institutions have the potential to make a huge contribution to the efforts of new home food gardeners. In turn, this movement supports the conservation-minded missions of many public gardens, could revitalize and increase the garden's visitation in number and diversity, and results in a growth of interest and support from the local community (Simmen, 2010).

The objective of this research was to ascertain the interest and involvement of the public horticulture community food gardening, to identify the educational and support needs of food gardeners, and to develop recommendations for public gardens considering engagement in this discipline in the future. Specifically, this research addressed:

- Are public gardens currently offering resources on food gardening?
- Why and how are they approaching this topic?
- Where do food gardeners currently go for resources and troubleshooting?
- What do food gardeners feel that public gardens should offer as resources?

The results of this research aim to encourage and assist public horticulture institutions in the pursuit of food gardening practices that help them become a better resource to their community.



## **Chapter 2**

### **LITERATURE REVIEW**

#### **A Brief History of Food Gardening**

Cultivating plants for consumption and other practical purposes has had a significant impact on our society, with the first evidence of these practices dating back approximately ten thousand years ago in South and Central America (Diamond, 1999). These first American gardens were purely utilitarian, cultivating the wild ancestors of corn, squash, beans, and gourds. The slow change from hunter-gatherer to farmer resulted in a change from a nomadic lifestyle to village settlements, as Native Americans chose locations based upon gardening conditions in the area. Gardening became part of the culture and religion of many Native American tribes (Langer, 1975).

The 17th century migration of Europeans, also food gardeners, added another dimension to American gardens. Both Native American and immigrant cultures began learning and borrowing from one another's gardening styles and species cultivated (Langer, 1975). The 18th century was a period of enlightenment when gardening evolved into a science, ushering in a new type of gardener embodied in the likes of Thomas Jefferson, Benjamin Franklin, and John Bartram (Tucker, 1993). New gardening improvements were proper scientific concerns, Franklin said, as

were “all new discovered Plants, Herbs, Trees, Roots, their Virtues, Uses Methods of Propagating them” (Tucker, 1993).

Gardening as a science caused a paradigm shift whereby gardeners began to depend on the latest information from scientists, seed companies, and advertising rather than on traditions and methods passed from generation to generation, as evidenced by the increasing use of pesticides and fertilizers in gardens. As urban areas [and their associated health problems] grew exponentially in the 19th century, Americans turned to a garden “lifestyle” as a solution. Many writers of the time expounded upon the virtues of gardening; a primarily vegetable diet, exercise, and mental health were the benefits extolled. The creation of suburbs in this century, a happy compromise between urban and rural living, allowed many Americans to continue gardening. By the turn of the 20th century, the use of chemicals in the garden and field had its opponents, and the Dust Bowl phenomenon of the 1930’s amplified a concern for the environment (Tucker, 1993). The official Great Plains Committee reported against new technology, declaring, “It is our ways, not Nature’s, which can be changed (Tucker, 1993),” and in 1943 J.I. Rodale first published the magazine, *Organic Gardening*, which advocated the benefits of natural home food gardening (Rodale, 2011).

The World Wars caused large fluctuations in American home food gardening and “Victory gardens” were a patriotic response of many Americans to supplement their war rations. Families and communities rallied around this self-sufficient war effort (Tucker, 1993). After World War II, however, American munitions plants were left with the challenge of “beating their sword into a

plowshare.” The resulting use of aluminum nitrate as fertilizer gave birth to the current food industry (Vileisis, 2010). With applied fertilizers, corn and soybeans yields surpassed records, and America moved quickly into the industrialization of farming. Consequently, the thought was that the average American did not have to spend time growing food because chemical fertilizers and mechanization enabled a fraction of the population to provide food for all (Pollan, 2006).

Despite the movement toward industrial agriculture, home food gardens were still popular in the 20th century (Vileisis, 2010). Interest in how food was grown jumped in the 1960’s with the birth of the anti-establishment youth culture and the publication of *Silent Spring* (Carson, 1962). The 1970’s brought the relatively new concept of community gardens in urban areas (Whorton, 1974) and, although interest waned in the 1980’s, a small subculture of home food gardeners remains intact today (Tucker, 1993). A significant portion of the American population, however, is not aware of their food’s source, how it was grown, whether it is in season, or even what part of the plant it comes from. Today, less than 2% of employed Americans are working in agriculture. In 2002, farmers earned their lowest real net cash income since 1940 while corporate agribusiness profits have nearly doubled since 1990. Of about 890 million acres of land available for agriculture use in the U.S. in the early 1990’s, only 1.3 million were used for home food gardens (Levin, 1999).

Home food gardening has, however, been making a comeback. In 2008, an estimated 31% of all U.S. households participated in food gardening, and an additional 19% planned to do so in 2009; of these, over nine million were new to gardening (National Gardening Association, 2008). Overall, these food gardeners are

broadly distributed in terms of education, income, and region of the U.S. (National Gardening Association, 2008). Most stated an interest in better tasting food and economic savings as their reason for food gardening (National Gardening Association, 2008). More recently, the number of food gardeners in the U.S. has been estimated at 53%, suggesting a total increase of 23% in two years. Fresh produce, at 90%, and the ability to share with their friends, at 66%, have become the strongest reasons to grow (Garden Writers Association Foundation, 2010).

### **Economic Benefits of Food Gardening**

The popularity of food gardening is also evidenced by the green industry's growth. U.S. food gardeners are estimated to invest \$2.5 billion in their gardens each year (National Gardening Association, 2008), and in 2010, more than one in four Americans planned to spend most of their garden budget on edible plants (Garden Writers Association Foundation, 2010). At W. Atlee Burpee, the world's largest seed company, vegetable seed sales jumped an estimated 25% in 2009 (Higgins, 2009). As stated by Chairman George Ball, "It's weird to have everyone else you talk to experiencing plunging markets. We're on a roll (Higgins, 2009)." In the spring of 2009, Landreth Seed Company sales registered a 75% increase from 2008, with vegetable seed sales overtaking flower seed sales (Horovitz, 2009). Ferry-Morse also reported a decline in flower seed sales, and subsequently changed the ratio of flower to vegetable seeds in stock from 1:1 to 2:3 (Horovitz, 2009). Even Wal-Mart Stores, Inc. experienced a 30% increase in seed sales in 2009, and sales of vegetable seedlings had a 28% increase (Higgins, 2009). Garden centers across the country are reporting

similar financial successes. Gateway Garden Center of Delaware has reported doubling their sales of fruit trees and shrubs since 2008 (D. Quinn, personal communication, 2/25/2011) and steady increase of vegetable sales in the past three to four years (Nancy Bell, personal communication, 2/8/2011). In Ohio, Baker's Acres Greenhouse saw a near doubling of their vegetable seedling sales in 2009, and have been expanding their edible offerings since then (Chris Baker, personal communication, 2/11/2011). Many of these garden centers have begun offering classes or workshops (Nancy Bell, personal communication, 2/8/2011) and have experienced an increase in customer questions related to food gardening (Chris Baker, personal communication, 2/11/2011).

Food gardening practices are becoming integral to many existing businesses and organizations. It is now an employee benefit via gardening plots, boosting morale and increasing health and wellness (Flandez, 2009). Farmer's markets have seen an exceptional 214% increase since 2000, bringing the U.S. count to over 2,000 locations (Powell, 2010). Even large corporations are subscribing to the food gardening movement, such as Triscuit®'s new vegetable garden planning website (Home Farming, 2011). Non-profit organizations such as the Pennsylvania Association of Sustainable Agriculture have seen an unexpected influx of homeowner membership, while most members in the past have been farmers (Mark Highland, personal communication, 11/20/2009). Slow Foods is benefitting from current popularity as more chapters are established throughout the country (Slow Food, 2011). Newly created businesses include online vegetable garden planners (GrowVeg.com, PlanGarden.com, 2011), home food gardening services (Severson, 2008), and edible

landscaping companies (J. Appleseed Food Garden Company, 2011). Non-profits such as Kitchen Gardeners International and the American Community Garden Association are focused on food gardening and have been created in the past two years (KGI, ACGA 2011).

### **Environmental Effects of Food Gardening**

Large-scale industrial food production has fed the American population for decades, but research indicates that this practice is non-sustainable (Levin, 1999). Our natural resources are overtaxed, valuable species and habitats are disappearing as a consequence (Deumling et al., 2003). The current U.S. food system depends heavily on petroleum for fertilizers, pesticides, and equipment; the resulting carbon dioxide released accounts for nearly one third of the emissions created by the U.S.. From a water and soil standpoint, industrial agriculture uses 70% of the world's freshwater resources annually leading to a depleted water table and detrimental fertilizer runoff (Lappé, 2010). The U.S. is losing five billion tons of topsoil annually (National Family Farm Coalition) that would take 500 years to replace naturally. Industrial agriculture relies on crop monoculture to succeed, which leaves the plants vulnerable to pests, diseases, and climate change (Deumling et al., 2003).

Consumers do not understand the origin of their food or the nature of sustainable food production (FoodRoutes, 2001), but food gardening can effect change through multi-sensory and participatory learning (Covel, 2010). Agricultural biodiversity must be maintained by empowering people to become stewards of their food and food culture (Bahnson, 2010). This understanding and participation in a food

system would allow gardeners to understand that smaller, less intense food production conserves more soil, water and habitat than conventional agriculture (National Family Farm Coalition, 2002). Food gardeners would be better informed so as to make food purchases based on decisions other than convenience and price (FoodRoutes, 2001).

### **Societal Benefits of Food Gardening**

Food gardening benefits the U.S. in a variety of ways. The U.S. industrial agriculture system produces upwards of 3,900 calories per citizen per day, about twice as much as needed (Pollan, 2006) and the root of the need for processing most of the bounty (Levin, 1999). This results in a diet of highly processed, calorie dense foods, and an obese but malnourished population (Bareuther, 2008), with low-income and minority individuals affected most (Mascarenhas, 2003). Over 40% of the caloric intake of 2 – 18 year olds is either a fat or sugar derivative (Science Daily, 2010) and the USDA estimates that healthier diets might reduce medical costs by around \$71 billion per year (Mascarenhas, 2003).

Fortunately, a local diet focused on seasonal foods can both decrease the volume of food consumed and increase the intake of fruits and vegetables (Byker et al., 2010). Food gardening also provides food security: affordable access of culturally diverse, nutritious foods to diverse populations (Bahnson, 2010). Gardening is a strong support mechanism for those who choose to eat locally (Byker et al., 2010), in addition to farmer's markets, working with local farmers, and advocacy (Mascarenhas, 2003). No fewer than 21 studies report that fresh, organically grown foods contain significantly higher amounts of vitamin C than their non-organically grown

counterparts (Levin, 1999), and dietitians are even connecting healthy soils to healthier produce (Palmer, 2009). Home food gardening is being promoted as part of a healthy lifestyle (Getz, 2009; Schaeffer, 2009), and Michelle Obama's new vegetable garden at the White House may also be inspiring people (Higgins, 2009).

The recent recession and potential economic savings of raising food at home may have boosted food gardening's media popularity (Horovitz, 2009). It is estimated that global food cost will increase 15 to 45 % in the next several years (McDermott, 2010), and food gardening may buffer this increase (Stuijt, 2009). A similar study by the National Gardening Association estimates that an average-size home garden - about 600 square feet - can generate more than \$600 of organic produce, from a starting cost of \$70 (Brozana, 2011). A survey of 1,000 British residents found that 26% were saving as much as \$400 a year by growing their own fruits and vegetables. (Whysall, 2011).

Still, other literature cites community development as a reason to begin food gardening. The U.S. lost six million acres of agricultural land to development between 1992 and 1997 alone; one suggested solution to this loss is to retrofit suburbs with agricultural spaces (Arieff, 2010). Others have emphasized that lawns and front yards are often an unwise use of our natural resources; and edible gardens would be a step in the right direction (Haeg, 2010). John Hantz's goal to transform Detroit's abandoned lots into the world's largest urban farm is seen as a way to revitalize the city, create green jobs, help the environment and supply food to the region (Arieff, 2010). Community gardens are popular (Smetanka, 2011) and can offer the unique blend of regional nature and culture (Covel, 2010). These public gardens have



provided work for refugees (Davis, 2011) and inmates (Laskawy, 2010), helped in fighting urban decay through revitalization of neighborhoods (Mazzoni, 2011), and fed impoverished residents (Laskawy, 2010). The practice of growing food is beneficial across many age and interest groups; seniors enjoy reminiscing about gardens or farms in their past, families have healthier, less expensive choices for their children, gourmets are able to grow regional cuisine, and immigrants can grow local substitutions for traditional foods (Byker et al., 2010).

### **Food Gardening at Public Horticulture Institutions**

Many public horticulture institutions have a history of food gardening and agricultural pursuits, with most experiences based on the original use of the land and answering the needs of visitors. Monticello is one of the oldest examples, but not considered a public garden during its time. Thomas Jefferson conducted scientific studies on food plants, taking nearly 20 years' of detailed records of daily garden activity, which was eventually published for the benefit of other gardeners. His 1,000 foot terrace, nearly two acres of food gardening space, was a living laboratory for 70 species and 250 varieties of edible plants. He grew many new species and varieties from the Lewis and Clark expeditions and pioneered the cultivation of tomatoes, as well. His research at Monticello was of seminal importance, assisting many gardeners of his era through writings and publications (Monticello, 2011).

Missouri Botanical Garden has a more classic example of food gardening in a public horticulture institution. Henry Shaw, garden founder, had an extensive vegetable garden and farm on the property when it was opened to the public in 1859. As this public garden continued to flourish, an “economic garden” was established; of special note was the way in which this section was used during the World Wars. In order to assist with war efforts, 38 of its planting beds displayed the proper growing methods for Victory Gardens. The research division focused its efforts on ethnobotanical assistance for the war efforts as well, sending information on rubber production and quinine extraction. The Missouri Botanical Garden hosted a Victory Garden Harvest Show in 1942 (Missouri Botanical Garden Archives, 2011).

The Los Angeles, California land that became the Huntington Library, Art Collections, and Botanical Gardens had a major focus on productive horticulture when purchased by Henry Huntington in 1903. What Huntington purchased was essentially a ranch, with hundreds of acres of fruit and nut trees. He was interested in research on these crops, and created a test plot for exotic fruit trees, as well as a kitchen garden. Huntington also established what is generally known as the first commercial avocado grove in the state. This piece of the founder’s interest in horticulture was lost after his death (Blackburn and Turner-Lowe, 2010).

From a slightly different perspective, the Brooklyn Botanic Garden was a leader in the field of food gardens. One of the earliest areas established after the institution’s opening in 1914 was the Children’s Garden. This one acre area was a dedicated space for children to learn about and grow food plants, essentially a children’s community garden. It has continued in this vein for nearly a century, and is

known as the longest-operating Children's Garden in the country (Brooklyn Botanic Garden, 2011).

Public horticulture institutions are once again beginning to focus on food gardening. Some are doing so with special events and exhibits. At the top of its field, the New York Botanical Garden (NYBG) has recently completed four months of "The Edible Garden," an exhibit consisting of multiple aspects, including a daily chef demonstration. The chefs were anyone from a member of the education staff to celebrities such as Martha Stewart, Mario Batali, and Lidia Bastianich. This was unmarked territory for NYBG, requiring much research, construction, and staff time; but in the end it was quite popular with their audience (Rothman, 2010 a). Many appliance companies, grocery stores, and other culinary vendors were more than happy to partner with the institution to help pull off the exhibit (Rothman, 2010 a). Another recent NYBG innovation is its annual Greenmarket (Leshi, 2010). On the institution's free day each week, during the summer and fall, the community is invited to come and purchase affordable, locally grown produce (Leshi, 2010). According to the Bronx Borough President, this effort is going a long way toward supporting the increased health of the community (Leshi, 2010). Fairchild Gardens began its "International Mango Festival" 17 years ago as a way to fund research on the fruit crop. Thousands of guests come to this weekend festival in July to celebrate, learn, and taste the fruit of the Garden's research (Campbell and Maunder, 2008).

Some public gardens are investing in food gardens for the long term. Atlanta Botanical Garden transformed what was once a parking lot into an aesthetic, edible experience venue. The design includes innovative structures such as an edible

wall and outdoor kitchen, as well as creative plant designs. This new Edible Garden will help the staff to communicate messages about living a sustainable lifestyle (Fromme, 2008). Further west, Powell Gardens has devoted six acres to food gardening in its, “Heartland Harvest Garden.” With a formal French design that can be viewed from the silo at the garden’s termination, the Heartland Harvest Garden is a combination of beauty and outstanding example of organic growing techniques . It has spaces for both youth and adult education, special events, weddings, food demonstrations, café, gift shop, and tasting stations. Powell Gardens hopes that this new garden will be its signature feature, and so far its visitors agree (Tschantz, 2009).

Public gardens are also diving into community food gardening efforts. The Cleveland Botanical Garden has been running the Green Corps program for 14 years, a work study program for teenagers essentially focused on urban farming. It has become increasingly popular in the past three years, and this interest has resulted in the garden itself increasing its focus on food (Ronayne, 2010). Further south, the Franklin Park Conservatory and Chihuly Collections has become known for its connection with community gardens. They are part of the “Growing to Green” program, helping to establish or renovate community gardens in Central Ohio; 90 such gardens have been assisted or created since 2000. In 2006, the Conservatory became national headquarters for the American Community Garden Association and its homepage features “food education” as one of the main navigational buttons (Franklin Park Conservatory, 2011). At the Delaware Center for Horticulture, their focus on urban greening has led them to create an Urban Farm. This quarter acre plot serves several purposes for its community; plots are available for local residents to grow their

own food, and the production area is worked by local teenagers who also sell the produce on the weekends to the community. The Urban Farm consists of raised beds built on a brownfield in a downtown neighborhood; it provides beauty and nutrition to one of the many food deserts in Wilmington (Delaware Online, 2009).

## **Chapter 3**

### **MATERIALS AND METHODOLOGY**

#### **Research Design**

This research utilized a mixed methods approach, which leads to a diverse data set and adds depth to the research (Creswell, 2009). This research included two surveys, four case studies and two expert interviews. The surveys investigated the shared recognition and knowledge between public horticulture institutions and food gardeners, existing food gardening resources, and interest in new or future possibilities on the topic throughout the United States. The case studies examined the diversity of approaches that public horticulture institutions are taking regarding food gardening. Expert interviews rounded out the research methodology.

#### **Human Subjects Research Board**

Research methods conformed to the guidelines of the University of Delaware's Office of the Vice Provost for Research; the primary investigator received training from the Human Subjects Research Board (HSRB) in April 2010. Additional information is available in Appendix A. The entirety of the research in all its forms was considered to be exempt as seen below:

Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior, unless a) information obtained is

recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects, AND b) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liberty or be damaging to the subjects' financial standing, employability, or reputation.

### **Quantitative Data Collection**

Quantitative data were collected through two electronic surveys, each sent to national non-profit organizations (see below) from June to October 2010. These surveys were created, distributed and analyzed through Qualtrics, a Web-based survey tool that is licensed by the University of Delaware.

#### **Survey 1: APGA Institutional Membership Survey**

This 45 question survey aimed to clarify the current and planned participation in food gardening efforts in the public horticulture community. It was emailed as a link to all 490 institutional members of APGA with an introduction that encouraged recipients to forward it to appropriate staff, calling attention to the gift certificate raffle at the survey's conclusion.

This survey used built-in logic and categorized questions (Table x). An opportunity to register for a raffle of a \$50 gift certificate to Seed Savers' Exchange was offered to motivate more participants to complete all of the entries. The survey was edited by the Graduate Committee, Longwood Graduate Program students, and the University of Delaware Qualtrics staff before it was administered.

**Table 1      Public Garden Survey Question Categories**

<b>Question Category</b>	<b>Items on Survey</b>
Mission Relatedness	Questions 2, 3, 20, 21, 38
Educational Resources	Questions 3, 4, 15, 21, 22, 32, 33, 39, 40
Special Events	Questions 5 – 9, 23 – 27
Partnerships with Organizations	Questions 10 – 14, 28 – 31
Case Study Recommendations	Questions 16 – 18, 34 – 36, 41
Institutional Background	Questions 43, 44, 45

**Survey 2: Food Gardener Survey**

This 16 question survey focused on current food gardener knowledge about public horticulture food gardening resources, and what resources they need. A purposeful selection of non-profit organizations commonly or closely associated with food gardening was contacted to receive the survey, including Slow Foods, Rodale Institute, Master Gardeners, Kitchen Gardeners International (KGI), Earth Eats, and Pennsylvania Association of Sustainable Agriculture (PASA) (Appendix B). The survey was sent as a link to the members of each organization as specified by the organization's staff: Slow Foods website, Rodale Institute and Earth Eats social media, national Master Gardeners listserve, KGI and PASA electronic newsletters. Each included an introduction that explained the purpose of the survey and highlighted the raffle at its end.

This survey questions were categorized by personal preferences and knowledge of public gardens (Table x) and the same raffle incentive was included. The survey was edited by the Graduate Committee, Longwood Graduate Program students, and the University of Delaware Qualtrics staff before it was administered.



**Table 2      Food Gardener Survey Question Categories**

<b>Question Category</b>	<b>Items on Survey</b>
Food Gardening Interests	Questions 2, 3
Food Gardening Knowledge	Questions 4, 5, 6
Relation to Public Gardens	Questions 7, 8, 9
Food Gardening at Public Gardens	Questions 10, 11, 12
Background Information	Questions 13, 14, 15, 16

### **Qualitative Data Collection**

Qualitative data were collected through four institutional case studies and two interviews with food gardening professionals between September 2010 and December 2010.

### **Case Study Selection**

Public horticulture institutions were selected from a pool of volunteers and suggested candidates from Survey 1. Purposeful sampling criteria included:

- Location of the institution
- Size and budget of the institution
- Diverse efforts in food gardening
- Scale and focus of food gardening efforts.

Using these categories of criteria, case study sites were selected with an emphasis on representing the broad diversity of public gardens in the United States. After an initial list was created, the appropriate staff from each institution were contacted to ascertain willingness to participate in a case study. The case study sites were as follows:

**Table 3      Overview of Case Study Sites**

<b>Classification</b>	<b>Case Study Site</b>	<b>Food Gardening Initiative</b>	<b>Location</b>
New feature garden	Powell Gardens	Heartland Harvest Garden	Kingsville, MO
New research garden	Huntington Library, Art Collections and Botanical Gardens	The Ranch	San Marino, CA
Temporary programmatic perspective	Brookside Gardens	“Food for Thought”	Silver Spring, MD
Renovation and continuation	Brooklyn Botanical Garden	Multiple	Brooklyn, NY

### **Case Study Protocol**

Case studies included interviews with staff involved in the programming or site in question, visiting the site or observation of the programming, and the collection of published materials on the topic. The date and details of each case study were discussed electronically with all institution staff concerned. Interviewees received questions in advance. In three of the case studies, these interviews were conducted in person. In the fourth, Brooklyn Botanical Garden, interviews were conducted over the phone. In all cases, the interviews were digitally recorded and transcribed. See Appendix C for questions.

### **Expert Interviews**

In order to round out the research, interviews were conducted with professionals in the field. Interviewees were purposefully selected to broaden the perspective of this research, by having well-known expertise in one or more of the categories below:

- Organic garden maintenance or other alternative methods
- Agricultural biodiversity conservation
- Edible landscaping
- Culinary expertise with local and/or homegrown foods

Rosalind Creasy, garden writer and landscape designer, and Margaret Falk, horticulture director at the New York Botanical Garden, were chosen due to their extended experience with food gardening. In each case, the interviewee was initially contacted over the phone, gave consent electronically, and was digitally recorded during the interview. See Appendix D for more information, and Table 4 below.

**Table 4      Overview of Interviewees**

<b>Name</b>	<b>Position</b>	<b>Reason for Selection</b>
Rosalind Creasy	Edible Landscape Designer, Author	Edible landscape knowledge, experience with public gardens
Margaret Falk	Horticulture Director, New York Botanical Garden	Recent “Edible Garden” theme, working with chefs, experience with organic maintenance

## **Chapter 4**

### **RESULTS**

This chapter includes descriptions of significant findings only; for a complete display of the results please see Appendix B4 and B5.

#### **Survey 1: APGA US Institutional Membership Survey**

This survey was sent electronically to 476 United States institutional members of the American Public Garden Association (APGA), and was available from August 31 to September 29, 2010. There were 163 responses, a response rate of 34.2%. See Table 1 for survey design and Appendix B for a complete outline of the survey. Incomplete responses were removed from analysis, leaving 129 or 27.1%, with a margin of error of  $\pm 7.37\%$  within a 95% confidence level.

A majority of the respondents (64%) was either currently involved in offering food gardening to their audience, or planning to do so (17%). A smaller group of respondents were not involved in food gardening (19%) (Fig. 1).

All respondents currently involved in offering food gardening believed that the topic related to the garden's mission. Another major reason for offering food gardening is their audience's interest in the topic (64%) (Fig. 3). Popular methods of offering food gardening were display gardens (84%) and traditional lecture-style classes (80%) (Fig. 4). Most offer related special events (56%) (Fig. 5), including demonstrations (75%), tours (79%), and speakers (81%) (Fig. 7). On the topic of

partnerships, a large number (61%) felt that such a partnership would be beneficial (Fig. 10). Gardens want to partner with organizations they are familiar with, such as Slow Foods, Cooperative Extension, Seed Savers Exchange, and the Rodale Institute (Fig. 11). Most of these food gardening efforts began in the past four years (41%) or over 10 years ago (32%) (Fig. 12).

Survey respondents who were planning food gardening efforts felt that the effort was related to their mission (82%) (Fig. 13). In addition to mission relatedness, many of these gardens (64%) also listed the topic's popularity as a reason for making plans (Fig. 14). Display gardens were still the number one plan (77%), but they were tied with demonstrations (77%) (Fig. 15). As for special events, most hoped to offer them (67%) (Fig. 16) in the form of tours (95%), garden (90%) and cooking demonstrations (75%) (Fig. 18). In terms of partnerships, these gardens were mostly interested (77%) (Fig. 21), and wanted to pursue partnerships with organizations they were familiar with (Fig. 22). These gardens hope to begin offering food gardening resources within a year (55%) (Fig. 23), and long term (45%) (Fig. 24).

The final group of respondents in the public garden survey were those who have no involvement with food gardening. A majority of these gardens (+67%) feel it is simply not related to their mission (Fig. 25). A vast number of these gardens (88%) have never offered food gardening in the past, either (Fig. 27).

Respondents in this survey were distributed throughout the country (Fig. 28). The %age of respondents for each region compared to the number of actual gardens varied from 18.5% to 29.7% (Table 5).

**Table 5      Regional Public Garden Respondent Breakdown**

<b>Region</b>	<b>Total Gardens</b>	<b>Respondents</b>	<b>Response Rate</b>
Interior West	30	6	20%
Mid-Atlantic	92	18	19.6%
Midwest	111	33	29.7%
Northeast	51	13	25.5%
Pacific	67	15	22.4%
Southeast	124	23	18.5%

## **Survey 2: US Food Gardeners Survey**

This survey was sent electronically to a purposeful sampling of food gardening related organization members (Appendix B). It remained open from August 23, 2010 to January 5, 2011, at which point 187 were received; however 16 were removed as incomplete. The remaining 171 responses had a margin of error of  $\pm 7.49\%$  within a 95% confidence level. Table 2 outlines question categories and Appendix B is a complete survey outline.

A large number of the respondents regarded their knowledge of food gardening as “casual” (48%) (Fig. 36) and almost all relied on the internet to find answers to their gardening questions (92%) (Fig. 37). When asked about their preferred learning methods; reading online or print articles came out on top (77.2%) and interacting with other food gardeners in person was second (67.2%) (Fig. 38). A majority of these food gardeners lived within commuting distance of at least one public garden (60%) (Fig. 39), and many (39%) visited several times a year (Fig. 40). Nearly all respondents felt that public gardens should be offering food gardening resources, their reasoning included mission relatedness (71%) and community interest in the topic (69%) (Fig. 41). While these public garden visitors primarily notice the display food gardens there (71%) (Fig. 42), they would like to see more hands-on learning experiences (Fig. 43). Respondents were mostly from the mid Atlantic states (54%) (Fig. 46), and part of the Pennsylvania Association of Sustainable Agriculture (62%) (Fig. 47).

## **Case Studies and Expert Interviews**

### **Case Study Sites**

The four case studies for this research were purposefully selected from public gardens suggested by survey respondents, in most instances it was also self-selection as the case study sites participated in the survey. Data regarding the food gardening efforts of each garden were collected through personal interviews.

### **The Ranch, Huntington Library, Art Collections, and Botanical Gardens**

#### *Development and Timeline*

The Ranch began to take shape in the past decade, as the popularity of urban agriculture increased in southern California. Huntington itself began as a ranch, and the institution's founder was interested in exploring the agricultural potential of the region. The Ranch was opened as a permanent addition to the Huntington Botanical Gardens in November of 2010 (Kleinrock, 2010).

#### *Goals and Objectives*

The Ranch serves as a resource for urban agricultural research in southern California. The space is used for experiments focused on urban agricultural techniques, educational programming, hands-on learning opportunities, and tours. It is not open to the public, unlike the rest of the garden, but research will be published as a resource for the public (Connolly, 2010)



### *Physical Space*

This 15-acre parcel contains Valencia orange and avocado groves dating back to the 1920's and a newly opened section includes experimental plots, container gardens, demonstration and programming space, a tool shed, permaculture areas and food forestry. The remainder of the land is yet to be developed. The Ranch is not visible to visitors.

### *Programming*

Hands-on programming has been developed and will be conducted by newly hired instructors in the Botanical Education Department. This new garden has already hosted a conference of urban agricultural professionals, and anticipates doing so again.

### *Staffing*

The new full-time project coordinator overseeing The Ranch is assisted by summer interns and volunteers. Other Huntington staff assist in programming, interpretation, and marketing efforts. For staff interviewed during the case study, see table below.

**Table 6      Huntington Botanical Gardens Interviewees**

<b>Name</b>	<b>Title</b>
Scott Kleinrock	Ranch Project Coordinator
Kitty Connolly	Associate Director of Education

## **Heartland Harvest Garden, Powell Gardens**

### *Development and Timeline*

Plans for this garden were 10 years in the making and began when the International Vegetable Garden was removed to make way for a new visitor center. Powell Gardens' audience demanded another vegetable garden which opened in 2009.

### *Goals and Objectives*

The Heartland Harvest Garden continues Powell Gardens' mission of, "conveying the spirit of the Midwest," by representing the agricultural roots of the region. More specifically, this new garden is focused on illustrating that local, homegrown crops can be delicious, and that using organic or biological gardening techniques can work and be aesthetically pleasing (Tschantz, 2010).

### *Physical Space*

Built on an undeveloped section of Powell Gardens, the Heartland Harvest Garden encompasses 12 acres of edible landscape. Highlights include the garden authors' section and interpretive signage and tasting station; program space includes a café, gift shop, program and special event space, an area for cooking demonstrations, and a "silo" from which visitors can view the garden from on high.

### *Programming*

To date, there are adult classes, regular cooking demonstrations, semi-annual special events and festivals, tours, and school field trips. The educational components and specific objectives are still being developed for this new area of Powell Gardens.

### *Staffing*

Ideally, the Heartland Harvest Garden requires three full time horticulturists, three seasonal gardeners, interns and an education specialist. Education, marketing, and horticulture staff work cooperatively on relevant projects. In the youth section, education plays a larger role in the design and maintenance of the beds. For staff interviewed during the case study, see below table.

**Table 7      Powell Gardens Interviewees**

<b>Name</b>	<b>Title</b>
Eric Tschantz	Director
Alan Branhagen	Director of Horticulture
Matt Bunch	Heartland Harvest Horticulturist
Eric Jackson	Director of Education

### **Food For Thought, Brookside Gardens**

#### *Development and Timeline*

Brookside Gardens, in order to increase audience interest and conserve resources, began offering three-year themes in 2007 with a focus on trees. Beginning in 2010, the focus was shifted to, “Food for Thought.” This theme is carried throughout much of what Brookside Gardens does, from garden designs to interpretation and special events.

### *Goals and Objectives*

The goal of this theme is to focus on a current topic that greatly interests the Brookside Gardens' community, become a resource on said topic, reinvent the garden in a positive way, and increase visitation (Oberle, 2010).

### *Physical Space*

Throughout the annual display spaces at Brookside Gardens, edible plants were incorporated in creative ways. The horticulturists grew these plants in unusual ways, and included unusual varieties. Each year, the edible plant palette expands and a slightly varied theme occurs. Interpretive signs with the "Food For Thought" logo explain general thoughts behind the displays, while horticulturists act as educators if Brookside visitors have any specific questions.

### *Programming*

Through extensive initial research, classes, special events, and symposiums were developed for the three-year period of, "Food For Thought." Some classes experienced a simple shift in subject, while other offerings were brand-new. Food gardening experts were scheduled as guest speakers and the annual Green Matters Symposium took on an edible flavor. In addition, Brookside Gardens partners with the Montgomery Parks Department Community Gardens (Richardson, 2010).

### *Staffing*

The three-year focus allows staffing for this focus to be the same as what Brookside Gardens normally requires. All staff is involved in some capacity: horticulturists learn how to design and maintain a new plant palette, new interpretation

was created, and new programming was researched and created. Staff included in case study interviews can be found below.

**Table 8      Brookside Gardens Interviewees**

<b>Name</b>	<b>Title</b>
Stephanie Oberle	Director
Mark Richardson	Adult Education Programs Manager
Ellen Bennett	Advancement Programs Manager
Ursula Sabia Sukinik	Community Gardens Coordinator
Phil Normandy	Plant Collections Manager
Jim Deramus	Horticulturist
Lisa Tayerle	Horticulturist

**Children’s Garden, Herb Garden, GreenBridge; Brooklyn Botanic Garden**

*Development and Timeline*

Brooklyn Botanic Garden has been offering food gardening throughout its history. However, in recent years these offerings have been brought to the forefront. The nearly century-old Children’s Garden programming continues to fulfill its community’s needs (Smith, 2010). Originally a Works Progress Administration project of the 1930’s, the Herb Garden underwent a total transformation in 2009 (Leech, 2010). In the past five years, a new program called, “GreenBridge” has been facilitating outreach activities to the urban gardeners in their community (Simmen, 2010).

*Goals and Objectives*

The goals of these projects fall in line with the mission of the garden to teach their community about plants at a popular level, reaching out to help their

neighborhood, and promoting awareness of environmental issues (Robin Simmen, Brooklyn Botanical Gardens).

### *Physical Space*

The Herb Garden, a visitor favorite, reopened in its new location in the summer of 2010. It was designed in the style of a modern potager, through collaboration between staff and a landscape designer. Plant selection focuses on demonstrating possibilities within an urban agriculture setting. The Children's Garden is a half-acre parcel divided into small beds for each child; a small building holds their tools, a small kitchen, and bathrooms.

### *Programming*

The GreenBridge program offers much for the Brooklyn community, an estimated 20% of which relates to food gardening. There is a free annual symposium, "Making Brooklyn Bloom," and in order to facilitate networking among the many Brooklyn community gardens, GreenBridge created "Community Garden Alliance" and provides educational resources. One of the newest additions is "Brooklyn Urban Gardener (BUG) Certificate Program," which gives Brooklyn residents a thorough background in urban horticulture.

### *Staffing*

Within the Herb and Children's Gardens, staff fulfills the role of both horticulture and education. These two departments hold most of the responsibility for the spaces and its programming and interpretation. The GreenBridge program has three full time staff. Staff interviewed for the case study can be found below.

**Table 9      Brooklyn Botanical Garden Interviewees**

<b>Name</b>	<b>Title</b>
Caleb Leech	Herb Garden Curator
Robin Simmen	Director of GreenBridge
Marilyn Smith	Director of Children's Education

### **Case Study and Expert Interview Themes**

Ten major themes were identified from the data using the ‘pawing’ method in which the research searches the data for commonly occurring ideas, trends, or phrases. These were further divided into 42 individual categories (Table 5). The quotes below give a sampling of the interviewee responses that resulted in these themes and categories.

#### **Theme 1: Mission**

##### *Focus on institution origins*

- We think this was the first children's garden program in a public garden anywhere in the world. And we've been running the program since 1914 without a break. I mean certainly our society has changed tremendously, and I'm sure in many ways how we work with children has probably changed a lot. (Marilyn Smith, Brooklyn Botanic Garden)
- Mr. Huntington was very interested in the agricultural and horticultural potential of the area. This history coupled with current environmental imperatives of living sustainably in cities meant that developing a model for local urban agriculture could be very useful to the region (Kitty Connolly, Huntington Botanical Gardens)

### *Currency of mission interpretation*

- The Herb Garden has really evolved into urban agriculture and sustainable horticulture. Its previous location didn't naturally lend itself to that type of gardening. (Caleb Leech, Brooklyn Botanic Garden)
- This was something that Brookside had never done. I felt like we're kind of getting stale with our displays, we're using the same kind of plants, the same kind of patterns... we should be more creative. So the "Food for Thought" theme was a way to challenge the staff to do something different, out of their comfort zones. Getting out of comfort zone (Stephanie Oberle, Brookside Gardens)
- Our mission statement is to capture the spirit of the Midwest, and with the agricultural emphasis of the region the Heartland Harvest Garden is a definite fit. (Eric Tschantz, Powell Gardens)

### *Variation on a mission... one step away*

- I think it's important for anybody to know what is the bottom line of a given program? And, for us, it's about the plants themselves and wanting that real experience for the kids. (Marilyn Smith, Brooklyn Botanic Garden)
- I think food gardening supports quite divergent approaches relating to different gardens' missions. The Ranch particularly supports our mission through its focus on botanical science and public impact. (Kitty Connolly, Huntington Botanical Gardens)
- Early on we realized through surveys that people come to Powell Gardens for serenity and awe, and I think you still get that out in the new garden. (Eric Tschantz, Powell Gardens)

### *Public gardens' unique niche*

- The vegetable gardening series that we ran twice this year really wasn't as successful as I would have hoped. I think, however, when we combined food in some way with aesthetics so it



seems like it's working well. (Mark Richardson, Brookside Gardens)

- Public gardens can do amazing things with an edible landscape that just aren't possible on a home gardener scale. (Rosalind Creasy)

#### *Serving the community*

- Our program, GreenBridge, has grown quite a bit over the last couple of years. Originally we were founded in order to consolidate the botanic garden's outreach activities in one area. (Robin Simmen, Brooklyn Botanic Garden)
- We are constantly trying to assess who we are serving, who aren't we serving to the degree we wish we were, whether it's special needs or certain demographics or geographic areas here. (Marilyn Smith, Brooklyn Botanic Garden)
- Our main goal is to teach kids where their food comes from, showing them the whole process, planting a seed, seeing the plants, putting them in the garden, harvesting, and even taking that plant and composting it. Long range, we'd really like to deal with the local issue of childhood obesity. (Eric Jackson, Powell Gardens)

#### *On the Cutting Edge of Horticulture*

- In the BUG program, we're looking at things like at current issues in urban horticulture, like microclimates and irrigation challenges. I think that that really is making BUG really a pretty unique program. (Robin Simmen, Brooklyn Botanic Garden)
- The first area that we mostly focused on is the half acre programmatic core; that's where we'll be doing experiments and programming on new techniques. The food forest is a larger area where we're going to research a more extreme ecological technique with Mediterranean climate food production. (Scott Kleinrock, Huntington Botanical Gardens)
- We wanted the Heartland Harvest Garden to be an example of biological gardening and edible landscaping, in addition to

showing our audience new varieties. (Alan Branhagen, Powell Gardens)

## **Theme 2: Changing Perspectives**

### *Agriculture versus horticulture*

- Urban gardening could be really any activity in which plants are grown in the city. Then urban horticulture, I suppose, to me, means the art of plant selection and cultivation in the city. So it brings a more steady consciousness to the act of growing things. (Robin Simmen, Brooklyn Botanic Garden)
- Please put some flowers in, it's bad horticulture to grow just edibles in such a utilitarian fashion. (Rosalind Creasy)
- I would define agriculture as productive into our food system. That could be gardening edible or useful plants... To me, horticulture is the care and growing of plants. If agriculture is a messy conception, then you might just be talking about gardening with plants that give a yield. There's a lot of fertile ground in the middle of agriculture and horticulture. (Scott Kleinrock, Huntington Botanical Gardens)

### *Becoming part of an important discussion*

- People are really interested in doing things naturally and organically. So I model how I manage the garden based on those expectations. (Caleb Leech, Brooklyn Botanic Garden)
- I worried about the trend sticking before, that I was just flailing my arms... But now with nutrition issues, health scares, environmental discussion, we have much more of a foundation for food gardening. If I can then come in and add that these gardens can be beautiful, too, it's the frosting on the cake. (Rosalind Creasy)
- We are in a unique position, in addition to having the garden itself, to host a discussion about the role of urban agriculture in southern California, which we consider to be very important. (Scott Kleinrock, Huntington Botanical Gardens)

- There was so much obvious interest in the local food movement and sustainability that we really felt that it was important for us to speak to our audience about food. (Ellen Bennett, Brookside Gardens)

*Obstacles to overcome and how public gardens can help*

- There are some issues with permaculture: it's not the easiest pursuit if you have children, it's not aesthetically pleasing, Americans tend to move frequently, and it is an intellectual practice. Other challenges include the imagined necessity of a lawn, and our perception of what a yard should include. It would be ideal for public gardens to offer information and examples of beautiful edible spaces that fit our population's needs more accurately. (Rosalind Creasy)

### **Theme 3: Opportunity**

*Increasing public garden audience*

- Our GreenBridge participants are for the most part a different audience than BBG visitors. So it's thrilling for me to finally have a very, very relevant garden here at BBG to invite people to come and visit and get ideas from. (Robin Simmen, Brooklyn Botanic Garden)
- I would say that some of our Children's Garden families are regular visitors, but I think it's more frequent for families to become members and regular visitors once they get to know the Garden through our Children's Garden program. (Marilyn Smith, Brooklyn Botanic Garden)

*New garden design directions*

- The Herb Garden had to be relocated because they decided they were building a visitor's center. We were able to really site it in a good, sunny location and generate interest in the south end collections. In fact, the way it turned out, the new Herb Garden was a kind of signature garden for our centennial (Caleb Leech, Brooklyn Botanic Garden)

- Councilmember Ervin had the notion that maybe some of these public areas, since we're not maintaining them anymore, could be used as public space for community gardens. (Ursula Sabia Sukinuk, Brookside Gardens)
- Once we started in to the design of the Heartland Harvest, I think all of us realized that this is really much bigger than just a vegetable garden... it has become our signature garden, what we are really known for. And that was before all the nutritious, fresh, local buzz got going. I tell people we weren't brilliant, just lucky with timing. (Eric Tschantz, Powell Gardens)

#### *New education and programming opportunities*

- One of the things that GreenBridge is charged with doing is not only reaching out into the neighborhoods with Brooklyn Botanic's resources but also to bring back the diversity of knowledge that exists in horticulturists who live around Brooklyn. (Robin Simmen, Brooklyn Botanic Garden)
- Ranch programming takes us back to our hands-on gardening classes which were the first continuing education classes offered here. Our current offerings are very weak in this area, so this renewed emphasis is most welcome. (Kitty Connolly, Huntington Botanical Gardens)
- Probably the biggest component we talked about was the need for education. Not just youth education, but everyone's education. Early on we decided that Heartland Harvest would have a stronger educational component than any of the other gardens we've done. (Eric Tschantz, Powell Gardens)

### **Theme 4: Audience**

#### *Supplying the demand*

- Every garden should somehow be able to work in some edibles, in any way shape or form, if you've got the sun to do it. Edibles are just such a draw. It's like water, people have to get to water. (Caleb Leech, Brooklyn Botanic Garden)

- My latest description of our program is that it was like a firestorm, it can't be stopped because it is so popular. There's such a big demand out there right now. (David Visamera, Brookside Gardens)
- There was an outcry from our public and our members when the old vegetable garden was closed. We were kind of surprised. And then when we would do surveys of our public, asking what kind of gardens would you like to see us develop in the future, vegetable gardens always came out on top. (Eric Tschantz, Powell Gardens)

#### *Engaging diverse audiences*

- We have such a diverse group of visitors in Brooklyn; the Herb Garden is a great way to represent the mesh of cultures here. And these populations are very excited and very involved in their food; they like to share that knowledge a lot. (Caleb Leech, Brooklyn Botanic Garden)
- One of the main responses that people have to these plants is that they remind them of certain kinds of foods, or to their home countries, or their grandparents, and I wanted to respond to that, Food represented their heritage. (Lisa Tayerle, Brookside Gardens)
- There are a number of people who came to the Ranch opening who, if I had to stereotype our typical Huntington audience, one would say maybe fall outside of that. This is a new hipster kid hangout... I do think that it opens it up for new audiences. (Scott Kleinrock, Huntington Botanical Gardens)

#### *Attracting new audiences*

- The "Food For Thought" focus on our Green Matters symposium was kind of a gamble because it wasn't a traditional landscape topic, so we were really pleased that we did diversify our audience quite a bit. We had a lot of our traditional customers as well as new. (Stephanie Oberle, Brookside Gardens)

- Compared to past years of food gardeners, the younger generations are becoming more interested. The public gardens I have spoken with have been very pleased with the new, younger audiences that have shown up for food gardening efforts. (Rosalind Creasy)
- We absolutely plan on attracting a new audience of students with Ranch programming. (Kitty Connolly, Huntington Botanical Gardens)
- We have gotten new visitors because of the diversity of Heartland Harvest... especially the “foodies.” There are quite a few gardeners here that say, if it’s not edible, it’s not in my garden (Allan Branhagen, Powell Gardens)

#### *Filling garden visitors’ needs*

- Making Brooklyn Bloom is a free public community horticulture symposium that we do; with 14 free workshops, a keynote speaker and annual theme, it’s really a fantastic day of networking and learning that goes on in the first or second week of March. (Robin Simmen, Brooklyn Botanic Garden)
- We do have a farmer’s market. We’ve had that for years, every Wednesday. Our grounds are open free to the public on that day. (Margaret Falk, New York Botanical Garden)
- The Ranch is focused on research that can help to reveal the role of urban agriculture in southern CA, using gardening techniques that average people who are working full time and are not trained farmers can do... what yields can they expect? Can they make a difference in their diet? Does raising your own crops save money? How much time is put into these various techniques? (Scott Kleinrock, Huntington Botanical Gardens)

#### *Positive reactions to food gardening efforts*

- I received overwhelming positive comments to say the least.. a lot of people love the new Herb Garden. However, I think for some it was a really hard sell; they were attached to the way things were. (Caleb Leech, Brooklyn Botanic Garden)

- I was a little concerned that people wouldn't be that interested in the food theme. But, I think, nine visitors out of ten came and said, wow, look at that okra, it's beautiful— I've never seen anything like that before. Or they're really intrigued by the food theme and became really interested in it, and kind of blown away by it in some respects. (Mark Richardson, Brookside Gardens)
- Generally people are very interested in edible gardens and have been asking many questions. (Margaret Falk, New York Botanical Garden)

#### *Filling community needs*

- In Brooklyn, we are dealing with immediate human needs for an experience of the natural world. I think the best outreach programs are the ones in which the botanic garden really listens to the community and responds to what the individual community's needs are. (Robin Simmen, Brooklyn Botanic Garden)
- We donated much of the food that was harvested to Martha's Table, a local foodbank. I was able to get some nice coverage from the local newspapers on that and build awareness for what Brookside was doing. (Ellen Bennett, Brookside Gardens)
- Edible landscapes are a way for communities to connect and get to know one another; lawns do not start nearly as many conversations with your neighbors. (Rosalind Creasy)

#### *Assisting in community schools*

- Our botanical education department has for quite a while been working with teachers who are interested in doing school gardens, and they've been nomads on the property using a little neglected here or there. While this is kind of realistic because that's what a lot of teachers have to deal with, it's nice to have the Ranch to support this programming we already have... providing a permanent home (Scott Kleinrock, Huntington Botanical Gardens)

- We just had a schoolyard gardening workshop here, where we had teachers and volunteers come in. We think in this is the beginning of something big, but there's all sorts of avenues we can pursue with it- we are still learning. (Eric Jackson, Powell Gardens)

## **Theme 5: Horticulture**

### *Advance preparation*

- Not being open to the public is a matter of control for the Ranch. Without a full-time guard, the research plots would likely be disturbed. We will have other display gardens showing agricultural methods, but the working garden is set aside for research and programming. (Kitty Connolly, Huntington Botanical Gardens)
- Something on a smaller scale is obviously a lot easier to keep tweaked, and you could still convey a lot of food plants in that design. (Matt Bunch, Powell Gardens)

### *Design elements*

- We were pleasantly surprised with the quality of the gardens. It was challenging but fun to work with a whole new palette of plants. We tried normal vegetables in unusual situations and a huge number of unusual crops. I've also maybe cheated a little, by using edible flowers. (Lisa Tayerle, Brookside Gardens)
- My goal as an edible landscaper is to show that edible plants can be beautiful in addition to their many other benefits. (Rosalind Creasy)

### *Design challenges*

- Our hardest time in the Children's Garden is probably when summer sessions end and we have about three weeks before our fall session will start; you know, late August/early September weeds are growing like gangbusters. (Marilyn Smith, Brooklyn Botanic Garden)



- We didn't have too many issues with brides and the more edible displays, but it definitely is something to keep in mind if your garden offers space for weddings. (Ellen Hartranft, Brookside Gardens)
- It is difficult to design around crops that may fail, when you want it be interesting to visitors who may only see the garden once. Our gardens need to constantly look as good as possible, and that's not easy. (Margaret Falk, New York Botanical Garden)
- I guess aesthetics are always, you know, foremost in gardens and I know there are places where we definitely lack that. I think a part of the problem is ours is on such a large scale and not having the staff to keep it maintained organically. (Matt Bunch, Powell Gardens)

#### *Thoughts on maintenance*

- The more people became aware of chemicals, the more they desired to grow their own food. And so organic has come in concert with the popularity of food gardening. (Rosalind Creasy)
- When I ask our community gardeners why they join us, what I hear is that it's the oversight, it's the maintenance, it's the fact that they look good, that they're clean, that they can actually find their plot, that everybody has the same amount of vested interest. (Ursula Sabia Sukinuk, Brookside Gardens)
- We put the edible plants in pretty well-grown, so we give them a head start in the greenhouses and then put them out. We do direct sow a few crops for the educational value. (Margaret Falk, New York Botanical Garden).

#### *Maintenance challenges*

- In urban horticulture, there's the whole issue of protecting food plants from vandalism and from theft. And certainly irrigation is huge in the city, because most plants are grown in containers using chlorinated tap water. We have built 65

rainwater harvesting systems in community gardens. (Robin Simmen, Brooklyn Botanic Garden)

- Part of all of our jobs, as gardeners, is to answer visitor's questions and this year, we prepared ourselves a little bit more because it was a new palette of plants. We spent probably 10-20% of our day answering questions (Phil Normandy, Brookside Gardens)
- We have more problems with four-legged critters than the two-legged. We have an electric deer fence, but raccoons and opossums have taken up residence (Matt Bunch, Powell Gardens)
- Part of our conclusions as we've been talking the Edible Garden over is that vegetables are not so easy to grow if you want it to be an aesthetic experience and you want it to fit in with the rest of your gardening maintenance, that it's –and it's hard to coordinate the cycle of vegetable gardening in with the kind of flower gardens. (Margaret Falk, New York Botanical Garden)

## **Theme 6: Harvest**

### *Planned destination for produce*

- I estimate that 40% in weight of our produce went to our local foodbank. (Jim Deramus, Brookside Gardens)
- We simply don't have the space to grow enough of anything to give any away. The produce was used in the cooking demonstrations and the weekend demonstrations done by our own public programs gardeners. (Margaret Falk, New York Botanical Garden)
- We do have uses for the food: some will be going home with staff and volunteers, some will go to the cafeteria, we'll be donating to food banks, but the goal of the project is not to produce a bunch of food- it's education. (Scott Kleinrock, Huntington Botanical Gardens)

- I would say about 30% of our strawberry harvest, about 2,000 pounds, went to a social service organization. They came out and gleaned a few different times. (Matt Bunch, Powell Gardens)

#### *Challenges with distribution*

- I still want to grow the funky cool vegetables, but it's harder to find a home for those. For crops like collard greens, chard, tomatoes, it's pretty simple. (Caleb Leech, Brooklyn Botanic Garden)
- One of the challenges of having a vegetable display is that once you harvest the aesthetic value is gone (Jim Deramus, Brookside Gardens)
- The cafés didn't get much of the strawberry harvest, mainly because I don't think they were ready for it. They kept saying, we're going to have strawberries, but preparation was not there and by the time they were ready, the strawberries were done. (Matt Bunch, Powell Gardens)

#### *Theft of produce*

- We've had a security presence in the Herb Garden, so I think that's been a deterrent to vegetable theft. Quite a bit. People know you're not supposed to for the most part. (Caleb Leech, Brooklyn Botanic Garden)
- Visitors helped themselves to the produce; I probably only got three pumpkins out of all the plants we had. It seems that where many people's ethics prevent them from picking flowers off of the ornamental plants or taking from a cultivated area, when it comes to food or our park-like setting, if there's free food there, you just take it (Jim Deramus, Brookside Gardens)
- We have noticed some theft, but it hasn't been drastic. The rabbits get more than the visitors do, I think. We have small signs that say, please don't pick. That seems to help. (Margaret Falk, New York Botanical Garden)

- Theft happens all the time, especially with fruits. But we put out signs here and there saying, please enjoy this crop down at the tasting stations. Or we point out the Tutti Frutti Maze, where they can eat their way through. (Matt Bunch, Powell Gardens)

## **Theme 7: Programming**

### *Advance preparation*

- I spend a lot of time researching and collecting ideas. Then, I sort of go through a very rapid fire process of lining things up based on the research that I've done. (Mark Richardson, Brookside Gardens)
- We hired all new instructors for Ranch programming since it has been years since we offered hands-on gardening classes. Additionally, all the programming was lined up in advance of the Ranch's opening. (Kitty Connolly, Huntington Botanical Gardens)

### *Simple shifts and solutions*

- A lot of it was kind of tweaking some things that we had already been doing. For example, we incorporated edibles in our container workshops and flower arranging demonstrations. (Mark Richardson, Brookside Gardens)
- One of our horticulturists is leading this push to do a "closer to home" series, where they focus on skills for eating locally... like a recent class on cabbage, or rather sauerkraut. (Eric Jackson, Powell Gardens)

### *Interpretation and signage*

- You know, I wonder if people feel like, well that's not as attractive, but I've really never heard of any complaints –there is signage, there's interpretation there, so I think people get it. (Marilyn Smith, Brooklyn Botanic Garden)
- Our librarian has told me people have come in after going through the gardens and reading the interpretation and asked for

more information on food. You know, they've read the signs, and they just want to know how to buy local food... So I think the interpretation has been pretty successful. (Ellen Bennett, Brookside Gardens)

#### *Taking tips from youth food gardening efforts*

- The essential scheme of the Children's Garden is timeless... each child with their own garden plot, doing all the work, harvesting and taking produce home. With all of the different programs that we do, food plants serve as a unifying theme that helps people to relate to plants. (Marilyn Smith, Brooklyn Botanic Garden)
- Our largest vegetable garden is actually the Family Garden; we have offerings for families and school groups on food gardening. It does not have the same aesthetic demands as the rest of the garden. (Margaret Falk, New York Botanical Garden)

#### *Providing an in-person network*

- We hosted a "speed-dating" session for community gardeners—everybody had to get up and move/switch tables, so that within a short amount of time you got to meet with everybody else there. It was really popular. (Stephanie Oberle, Brookside Gardens)
- You can put a sign right in front of somebody and they still wouldn't read it... face-to-face communication I think is definitely one of the better things. (Matt Bunch, Powell Gardens)

#### *Online resources*

- I would really like to see us do more with video... we do a minute-fifteen second clip each week that's called Brookside Clips & Tips, featuring one of our staff talking about something gardening related. (Mark Richardson, Brookside Gardens)
- Younger generations definitely rely much more on the internet, and great resources could be provided there- ideally by cooperative extension or institutions like public gardens. I am

really concerned, though, about the absolute inaccuracy of most internet resources. (Rosalind Creasy)

- I have long been envious of Missouri Botanical Garden's Plant Finder database; I'm helping to work on our database so we might be able to provide something similar for edibles. (Matt Bunch, Powell Gardens)
- Our website is going to be overhauled soon; we're all, as departments, bundling our requests for what we would like the new website to be able to do. We'd like to offer more educational resources there, but we just don't have the time or staff to handle that (Eric Jackson, Powell Gardens)

#### *Challenges with programming*

- Probably our first and biggest shortage is always the space-facilities, bathrooms, classrooms, and the like. (Marilyn Smith, Brooklyn Botanic Garden)
- I absolutely feel that without the correct educational resources, this movement will fail. It's not like reading the manual on your phone, which is the approach of many young people. One too many failures and aspiring gardeners give up. (Rosalind Creasy)
- For the Edible Garden, the education department were the ones who coordinated and organized all of the guest chef's visits, the big festival demonstrations, and daily cooking demonstrations. The actual growing part was the smaller aspect of the exhibition. The big question is basically, overall was it a good idea to do this? Because it was an enormous amount of work. (Margaret Falk, New York Botanical Garden)

### **Theme 8: Culinary**

#### *Opportunities and examples*

- Now, our cooking demonstrations are wildly successful. We've made some changes in the format of the room so that we can accommodate more people. (Mark Richardson, Brookside Gardens)

- Participants in the Children's Garden program definitely talk about it at home, and are harvesting things to take home to eat. We do simple things like sending home some printed recipe ideas, like what do we do with this big green leafy thing that we may not know about in our family. How do you prepare it? Or what is it? (Marilyn Smith, Brooklyn Botanic Garden)
- Food gardeners may know how to grow things, but not how to harvest them or know how to use them. We need for the organizations that provide information on growing to also provide information and resources on harvesting and preparing. (Rosalind Creasy)
- The Garden Chef Series has been fairly successful; since they are free and drop-in, these food demonstrations usually attract around 20 guests per demonstration. One thing that's probably one of the best interpretive pieces that we've got out there would be our tasting station. The volunteers who man the station are so knowledgeable; it probably been one of the greatest successes of this garden (Eric Tschantz, Powell Gardens)

*Challenges to be considered*

- One of the major problems is that chefs are not tuned into the garden yet, either. I actually had an argument with a chef the other day who felt that red peppers grew in the winter, because that's when he found them in the store. (Rosalind Creasy)
- When you have an edible landscape, people can't help but to sample things. They want to have a taste of something, whether through a food demonstration or otherwise. But you have to be very careful, and deal with legalities. We as a country are deathly afraid of lawsuits in this country, because people sue at the drop of a hat. (Rosalind Creasy)

## **Theme 9: Partnerships**

### *Non-profit examples*

- The GreenBridge workshops and educational programs are held in community gardens as part of the Community Garden Alliance, and some are hosted by the block associations that enter the Greenest Block in Brooklyn Contest. (Robin Simmen, Brooklyn Botanic Garden)
- The Huntington pitched this larger vision for the Ranch to the Annenburg Foundation, which would basically be both a way for the Huntington to get back to its agricultural roots as well as take part in this discussion that had been starting all over the country. That was funded with a just over one million dollar grant to get the whole project sort of up and going. (Scott Kleinrock, Huntington Botanical Gardens)
- We're hoping to partner with Teaching Teachers for the Schoolyard Garden– they're a big successful organization here. Helping to provide resources for them. (Eric Tschantz, Powell Gardens)
- For the past two years, we have featured Seed Savers Exchange heirloom varieties in the permanent vegetable garden displays (Margaret Falk, New York Botanical Garden)

### *For profit examples*

- We partnered with a number of companies for the demonstration kitchen: Whole Foods supplied some of the basic food components, Anolon supplied cookware, and Viking provided the equipment. The celebrity chefs often provided their time free of charge because of the coverage and book sales that resulted from their visit. (Margaret Falk, New York Botanical Garden)

### *Possible challenges*

- There's a couple things we started from the very beginning was that we wanted –there was this bad image about community



gardens, that they looked awful, they were an eyesore, property values would decrease, and all this, and we decided at the very beginning that that wasn't going to be the case with our gardens. (Ursula Sabia Sukinuk, Brookside Gardens)

- Another problem we had is that the celebrity chefs were difficult to get in contact with regarding the plans and design of their garden (Margaret Falk, New York Botanical Garden)

## **Theme 10: Staff**

### *Competence in edible gardening*

- Organic... It's not too hard to grow vegetables and world food crops this way. They can make you look good pretty easily I think. As long as you have a crew of people who are competent. (Caleb Leech, Brooklyn Botanic Garden)
- A newer generation is coming up and entering the workforce; they're environmentally aware and concerned but it often comes with this very specific interest in food. (Marilyn Smith, Brooklyn Botanic Garden)
- It's important to realize that you're dealing with high maintenance plants, and take serious thought into the scale of the project (Scott Kleinrock, Huntington Botanical Gardens)
- I'm finding that I have become more of a farmer than horticulturist at this point. Because some things, as far as aesthetics, you just have to wait on until the actual harvest comes in. (Matt Bunch, Powell Gardens)

### *Horticulturist educators*

- Visitors definitely ask us a lot of questions as we're working. Most of the questions are specific to particular plants and take very little time, but you do get a few more complicated inquiries. Our director said early on, though, that he wanted our gardeners to be educators and our educators to be gardeners in this garden. (Matt Bunch, Powell Gardens)

- We have an education specialist for the youth area of the Heartland Harvest, who helps with both education and horticulture as the primary gardener for the area. (Eric Jackson, Powell Gardens)
- The gardeners were, for the first time, looking at how to grow edible plants out in the display gardens, and so they were eager to kind of share that knowledge to develop some of the “drop-in” free kinds of programs (Mark Richardson, Brookside Gardens)

*Cross-departmental cooperation*

- A group of Brooklyn cross-department staff worked as a design committee had this series of charettes. We were very collaborative. I also work with the education and science departments here. (Caleb Leech, Brooklyn Botanic Garden)
- We featured an all-eggplant bed this year; they were grown from seed collected all over the world by one of our graduate students. They have been studying the medicinal and edible uses of eggplants as well as evaluating the great variety there is in eggplants. (Margaret Falk, New York Botanical Garden)
- The Heartland Harvest Garden is one in which we’ve involved education more on a daily basis. The horticulture staff helps to provide tours and answer questions, while the education staff is becoming more involved in horticulture, especially in the youth section. (Alan Branhagen, Powell Gardens)

**Table 10      Overview of Themes and Categories**

Theme	Category
Mission	Focus on institution origins
	Currency of mission interpretation
	Variation on a mission... one step away
	Public horticulture's unique niche
	Serving the community
	On the cutting edge horticulture
Changing Perspectives	Agriculture versus horticulture
	Becoming part of an important discussion
	Obstacles public gardens can help to overcome
Opportunity	Increasing public garden audience
	New garden design directions
	New education and programming opportunities
Audience	Supplying the demand
	Engaging diverse audience
	Attracting new audience
	Filling garden visitors' needs
	Positive reactions to food gardening efforts
	Filling community needs
	Assisting in community schools
Horticulture	Advance preparation
	Design elements
	Design challenges
	Thoughts on maintenance
	Maintenance challenges
Harvest	Planned destination for produce
	Challenges with distribution
	Theft of produce
Programming	Advanced preparation
	Simple shifts and solutions
	Interpretation and signage
	Youth gardens
	In person network
	Online resources

	Challenges
Culinary	Opportunities and examples
	Challenges to be considered
Partnerships	Non-profit examples
	For profit examples
	Possible challenges
Staff	Competence in edible gardening
	Horticulturist educators
	Cross-departmental cooperation

## **Chapter 5**

### **DISCUSSION**

#### **An Analysis of Food Gardening Efforts at Public Horticulture Institutions**

This research indicates that food gardening is being offered by most public gardens. A majority of these gardens began offering food gardening in times of economic recession, or popularity of food gardening. Public gardens offer food gardening when it relates to their mission and is popular within their community or with their audience. Most of these public gardens have at least one display food garden; other popular offerings include classes, special events, workshops and demonstrations.

Food gardening has been quite popular in recent years, and may continue to be a part of U.S. life as the surrounding environmental and health issues continue to prove its pertinence (Creasy, 2010).

#### **Mission**

Public gardens in this research were for the most part dedicated to their mission. Food gardening was only offered when it was perceived as mission focused; in these cases the reasoning was mostly based on an historic or modern interpretation of the mission. Conversely, those gardens that did not express an interest in the topic felt it did not relate to the mission and had rarely offered it in the past. For those that

do focus on food gardening, the topic does provide many approaches toward fulfilling a typical garden's mission (Connolly, 2010). It provides a way to motivate individuals toward environmental stewardship by improving their immediate surroundings and becoming aware of our dependence on the environment through increased self-sufficiency (Bahnson, 2010). Food gardening also offers the opportunity to serve the community by providing resources for improved economic and physical health (Stuijt, 2009). Most of all, food gardening can engage public garden visitors in plants through multi-sensory and participatory learning; taste is an important learning tool (Covel, 2010). The research indicates that public garden occupy a unique niche within food gardening and can provide examples of cutting edge design and research in the topic.

### **Changing Perspectives**

Consumer opinions about food production are changing; there is a growing awareness of the importance of sustainable food systems (Levin, 1999). For this research, this translates into a need for public gardens to also evolve in their perspectives on food gardens: it is no longer a strictly production-oriented pursuit. The recent popularity of food gardening offers a combination of ornamental and production focuses (Creasy, 2010). From edible landscaping to biological maintenance techniques, the research shows that the current movement offers opportunities for public gardens to pursue both sustainable and attractive approaches to food gardens. As known experts of ornamental landscapes, they are able to reveal beauty of an edible landscape and inspire their audience of the multiple dimensions of value offered by growing food.

Additionally, interviewees indicated that food gardening is a gateway to becoming part of the discussion about the production and processing of U.S. crops. Public gardens have engaged in current discussions before; for instance the Missouri Botanical Garden offered resources on Victory Gardens and research on rubber and quinine during the World Wars (Missouri Botanical Garden Archives, 2011). Today's discussion involves the questionable sustainability of large-scale industrial food production that has fed the American population for decades (Levin, 1999) and the lack of consumer knowledge about food origins (FoodRoutes, 2001). For two case study sites, food gardening efforts began because this discussion was prevalent in the community. It is more likely that the current food gardening trend will enjoy more permanence than in past years, due to this lively discussion about sustainability and the increasing transparency of our food system (Creasy, 2010).

### **Opportunity**

Food gardening offers new opportunities for growth in public gardens, an important consideration for the health of the organization (Ronayne, 2010). This research reveals three categories of opportunity: new garden design direction, new programming, and new audiences. Case study sites that chose to add new gardens or transform current designs with edible landscaping reported for the most part that they were able to try new techniques and design ideas. This topic even afforded Brookside Garden's overarching parks department a chance to better use public lands in the form of community gardens. Other gardens, such as the Atlanta Botanical Garden, have

reported that food gardens offer a fresh, popular addition to their garden (Fromme, 2008).

Several case study sites indicated that food gardening was a way in which they could expand the diversity of their programming. Especially in the example of the Huntington Botanical Gardens, the topic afforded the opportunity to once again offer hands-on gardening programs, a component of the mission that had been missing for a number of years. Fairchild Gardens began its “International Mango Festival” 17 years ago as a way to fund research on the fruit crop. Thousands of guests come to this weekend festival in July to celebrate, learn, and taste the fruit of the Garden’s research (Campbell and Maunder, 2008). All case study sites expressed that food gardening attracted new and regular visitors; increasing their total visitorship.

### **Audience**

Food gardening is a topic of much popularity with a large, diverse sector of the U.S. population: an estimated 41 million in 2010 with nearly 10 million new to gardening (National Gardening Association, 2008). This research indicates that food gardening does supply a demand, as is evidenced by positive visitor reactions. Additionally, more recent food gardening efforts have been created in large part because of the popularity in public gardens’ audiences. Food gardeners themselves feel that the topic should be offered if it is important to public gardens’ local communities. Throughout the research, an overwhelming majority of public garden audiences had positive reactions to food gardening offerings that focused on a unique angle, such as edible landscaping.



The practice of growing food is beneficial across many age and interest groups; seniors enjoy reminiscing about gardens or farms in their past, families have healthier, less expensive choices for their children, gourmets are able to grow regional cuisine, and immigrants can grow local substitutions for traditional foods (Byker et al., 2010). Case study sites all report both an increase in audience numbers and diversity with the introduction of food gardening. Both Brooklyn and Brookside Gardens experienced an increase in ethnic diversity; regional crops excited this audience, evoked nostalgia, and represented their heritage. The Huntington Ranch has experienced an increase in visitors, especially of younger generations. Gender shifts have occurred as well, while utilitarian, production-focused food gardens in the past have primarily been a masculine pursuit, newer perspectives such as edible landscaping have increased the number of women involved. Powell Gardens has noted an increase in visitation from those primarily interested in food. Food gardening has also been shown by this research to be a topic that is of interest for public garden visitors as well as outreach for the local community. For food gardening outreach such as GreenBridge, many of those that are served through the program have never visited the garden. Other case study sites have plans to support local schools and teachers with school garden resources through their new food garden efforts.

### **Horticulture**

Research indicates that display gardens are a common approach to offering food gardening resources at public gardens, and one of the most popular with visiting food gardeners. It would be difficult for most public gardens to offer any other

resources without first having a food garden display. Thorough preparation and research prior to the garden installation is key, considering aspects such as design and maintenance techniques. This research also shows the importance of considering the primary focus of the food garden: aesthetic value, harvest, or research.

New design perspectives for food gardens are endless: retrofitting suburbs with agricultural spaces (Arieff, 2010), tearing out front lawns in favor of a more sustainable edible design (Haeg, 2010), urban agriculture and edible landscaping (Creasy, 2010). None of the case study sites designed traditional row crop layouts, relying instead on these newer designs that play off of the public garden's strengths. Maintenance of these new gardens, however, was shown to be challenging. All case study sites used organic techniques; Powell Gardens used a newer technique termed biological gardening. In addition to keeping the crops safe for consumption, considering this topic is important because it became popular along with home food gardening (Creasy, 2010). Responses about maintenance varied from challenging to extremely difficult to maintain an organic edible garden at the high level of perfection expected in other areas. In addition to insect and herbivore pests, many times the ornamental quality of an edible garden is the produce itself; one must sacrifice aesthetic or productive value of the garden (Fromme, 2008).

### **Harvest**

A majority of the case study sites had plans for the produce from their display food gardens. Food banks were the recipients of the largest portion, followed by staff and volunteers, on-site cafes or restaurants, and finally on-site culinary

demonstrations and tastings. In the case of New York Botanical Garden's Edible Garden, the amount of produce was not sufficient for more than supplying the cooking demonstrations. Harvest is one of the largest challenges of offering display food gardens. The time required for doing so properly means that edible gardens require more staffing than it would take to maintain an ornamental garden of the same size, and it is challenging to harvest and maintain the aesthetic value of the space.

Additionally, research indicates that plans for the harvested produce mentioned above often go awry. Food banks offer fresh produce to their participants as an option, but it has a relatively short shelf life and many food bank participants are unaware of how to use the produce (Delaware Online, 2009). Case study sites experienced difficulty donating exotic crops and working with the public garden's cafes and restaurants, who are not generally experienced in dealing with fresh, local produce (Creasy, 2010). Three of the four case study sites experienced theft of their produce by garden visitors. The victims were typically fruits, berries, tomatoes and pumpkins: items that were clearly visible and easily identified.

### **Programming**

Within this research, food gardeners indicated a desire not only for display food gardens, but also programming. Programming as defined by this research includes any educational efforts above and beyond a display garden, such as interpretation, classes, special events, and outreach. Food gardeners in this research are interested in hands-on programming offered by public gardens. This fulfills their desire for in person networking with other food gardeners as a key learning method on the topic

(Creasy, 2010). Conversely, the same audience is also interested in seeing online resources offered by public gardens. The internet is the number one resource used by food gardeners, but is not a consistently reliable source (Creasy, 2010). Case study sites were interested in offering online resources, but lacked the staff expertise and time to approach such a project. Social media has been used for both Brookside Gardens and New York Botanical Garden's food gardening efforts, with good success.

Historically, research such as the Huntington Botanical Gardens' work into potential crops for southern California (Blackburn and Turner-Lowe, 2010) and outreach like New York Botanical Garden's Greenmarket (Leshi, 2010) have been offered. This research falls into a dissimilar pattern, in which traditional offerings include classes, demonstrations, workshops and publications. Food gardeners are not as aware of these programs as they are of food garden displays.

Public gardens are also known for their education; offering resources on vegetables alone has been surpassed in popularity by offering programming such as edible flower arrangements, cooking demonstrations, and edible container gardening (Richardson, 2010). Youth gardens seem to have the advantage in terms of food garden programming, and adult programs may be able to take inspiration from them (Jackson, 2010). Interpretation is a great tool for explaining the relative lack of aesthetic value in some food gardens, and for encouraging visitors to become more engaged in the topic (Bennett, 2010).

### **Culinary Approach**

Research indicates that food gardeners' primary interests in growing vegetables are improved health and better tasting food, and they deeply interested in learning how to cook with their produce. There is often a lapse of knowledge between successful growing edibles and harvest, processing, and preparing them to eat (Creasy, 2010). Culinary offerings go a long way in keeping the food gardening community interested. Public gardens are catching on to this; special events often focus on the culinary perspective: cooking demonstrations, tastings, guest chefs, special dinners, even hosting farmer's markets. When culinary programs were offered by case study sites, they met with great success for the most part. Case study sites such as Powell Gardens found that simply offering tastes and samples of the produce being grown was one of their best pieces of interpretation. The Edible Garden and daily chef demonstrations hosted by New York Botanical Garden in 2010 was very popular with their audience, but it was challenging due to the amount of staff resources and time needed to host such complex demonstrations (Rothman, 2010a). Hosting cooking efforts is not a primary focus for most public gardens; research indicated that it is best to begin such a focus on a small scale and with awareness of the surrounding legalities.

### **Partnerships**

As demonstrated by this research, it is highly beneficial to invest in partnerships for food gardening efforts. In terms of partnerships with for profit companies, many appliance companies, grocery stores, and other culinary vendors were more than happy to partner with New York Botanical Garden to pull off the

Edible Garden theme. They also partnered with celebrity chefs such as Martha Stewart and Mario Batali, who in most cases offered their time in exchange for the publicity and book sales that resulted. These chefs, however, were sometimes challenging to work with, particularly for the event's celebrity chef garden designs, planting lists, and interpretation (Rothman, 2010 a). Case study sites partnered with nonprofit organizations such as block associations, community gardens, Teaching Teachers for the Schoolyard Garden, and Seed Savers Exchange. Most public gardens in the research are interested in partnerships with local non-profit organizations they are familiar with, such as Cooperative Extension, Rodale Institution, Slow Foods USA, and Seed Savers Exchange. Many do partner with Cooperative Extension and Master Gardeners. According to survey text responses, the largest number of existing partnerships are with Cooperative Extension and Master Gardeners; food gardeners expressed interest and use of this organization as well. Case studies partnering with local chefs, restaurants and farmer's markets indicated that these were mutually beneficial and successful, especially in terms of legalities. Pairing with chefs or restaurants can be mutually beneficial, but many chefs are still not aware of issues with eating locally and using a "farm to table" approach (Creasy, 2010). Partnerships are noted as beneficial due to shared resources, staff, publications, expertise, jointly offered programs, and larger audiences for all involved (Mascarenhas, 2003).

### **Staff**

This research reveals that competency, cooperation and flexibility are important traits for staff working in food gardens. In approaching a new type of display garden, such as edible landscaping, biological gardening, organic gardening or permaculture, it is essential that the horticulture staff are competent (Rothman, 2010a). The Herb Garden, Heartland Harvest Garden, and Ranch all have recently hired horticulturists who have backgrounds in organic techniques, community supported agriculture, new techniques in growing edibles, as well as ornamental horticulture.

More than any other area of a public garden, this research indicates that the horticulturists in a display food garden are called upon to interpret the collection of plants and way in which they are maintained. Case study sites estimated 10-20% of horticulturists' time was spent with visitor interactions, and in the case of Powell Gardens, a special hybrid staff member was hired to work in both horticulture and education. Overwhelmingly this research revealed a need for cross-departmental cooperation within food gardening offerings, through planning, training, marketing and programming.

## **Chapter 6**

### **RECOMMENDATIONS**

Food gardens have great potential to benefit both public gardens and their audience. The recommendations below are meant to assist public gardens currently offering or interested in offering food gardening resources.

#### **Research Your Audience**

In order to make your efforts worth the time and resources used, it is worth taking a candid look at your current audience and intended audience for food gardening topics. Much of this information could be found in the recent census results, including ethnic diversity, generations, and economic levels. Additionally, take a look at local concerns that may relate to food gardening: agriculturally caused pollution, lack of biodiversity and natives, abundance of lawns, and availability of healthy food. Find other organizations in the area that are offering resources on food gardening that could potentially be partnered with.

#### **Consider Your Resources**

Shifting to an internal focus, consider if your institution's mission could potentially fit with food gardening. If so, think about how it could best answer your particular mission: by focusing on heirloom conservation, improving the health of your community, attracting a new audience to horticulture, and so on. Next consider



what resources your institution has available for the new topic. A display food garden is of foremost importance as you delve into this topic. Before breaking ground, take into account whether you have knowledgeable staff with available time, garden space appropriate for edibles, a plan for the design and maintenance, and goals for the harvest are all issues to resolve. For food garden programming, it is essential to research current thoughts in food gardening before laying out classes and events. Think about whether there is staff time available for such preparation, or any insight into the topic due to staff interest. If considering a culinary angle, such as cooking demonstrations or passing out samples, it is highly recommended to consider local culinary partnerships to avoid unnecessary complications. Bear in mind whether your institution has cooking equipment available or would need to invest in the tools and legalities involved.

### **Fill Your Niche**

Combine your knowledge of the public garden's audience and resources in order to create a unique approach to food gardening that fills the needs and uses the strengths of your garden's culture, climate and vision. It is strongly recommended to start on a small scale, especially in terms of a display food garden, before approaching a more challenging addition. Consider simply altering the content of a seasonal display bed as a first step. Depending on the area in which your garden would like to focus, there are a number of initial approaches for programming that this research suggests would be successful (Table 11).

**Table 11     Suggested Food Gardening Offerings**

<b>Programming Area</b>	<b>Suggestion</b>
Horticulture	Encourage gardeners to act as interpreters
	Add a tasting station to deter theft
Community outreach	Join local conversation on food issues
	Host a network of area food gardeners
Website	Start a food gardening conversation via social media
	Enrich website with dependable food gardening resources
Culinary Offerings	Offer cooking demonstrations, partnering with area restaurants
	Host local farmer's markets
Classes	Focus on "added-value" offerings, such as edible landscaping rather than row crops
	Try simple shifts in offerings: edible flower arrangements, for instance
	Take a tip from youth gardening use of food gardening in programs

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**Appendix A**

**UNIVERSITY OF DELAWARE HUMAN SUBJECTS REVIEW BOARD**

## **A.1 Certification of Training in Human Subjects Protocol**


***Certification of Human Subjects Training***

The University of Delaware certifies that Laura Aschenbeck  
(Name of researcher)

attended an institutional training session on the use of human subjects in research on  
February 16, 2010.  
(Date)

The session included the following topics:

- The Belmont Report
- Federal regulations for using humans in research (45 CFR 46)
- The University's Federalwide Assurance
- Informed consent
- Institutional procedures
- Sources for additional information.

  
Elizabeth Duggins Peloso  
Director of Compliance

Research Office  
University of Delaware  
Newark DE 19716  
302-831-2136

## **A.2 Approved Protocol from the Human Subjects Review Board**

DATE:	August 20, 2010
TO:	Laura Aschenbeck, B.S.
FROM:	University of Delaware IRB
STUDY TITLE:	[186586-1] Homegrown Vegetables: Opportunities and Goals for Public Gardens in an Age of Agricultural Disconnect
IRB REFERENCE #:	
SUBMISSION TYPE:	New Project
ACTION:	DETERMINATION OF EXEMPT STATUS
DECISION DATE:	August 20, 2010
REVIEW CATEGORY:	Exemption category # 2

Thank you for your submission of New Project materials for this research study. The University of Delaware IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will put a copy of this correspondence on file in our office. Please remember to notify us if you make any substantial changes to the project.

If you have any questions, please contact Elizabeth Peloso at 302-831-8619 or [epeloso@udel.edu](mailto:epeloso@udel.edu). Please include your study title and reference number in all correspondence with this office.

cc:



UNIVERSITY OF  
DELAWARE

RESEARCH OFFICE

210 Hullihen Hall  
University of Delaware  
Newark, Delaware 19716-1551  
Ph: 302/831-2136  
Fax: 302/831-2828

DATE:	November 16, 2010
TO:	Laura Aschenbeck
FROM:	University of Delaware IRB
STUDY TITLE:	[201109-1] Case Study and Interviews at Huntington Ranch.
IRB REFERENCE #:	
SUBMISSION TYPE:	New Project
ACTION:	DETERMINATION OF EXEMPT STATUS
DECISION DATE:	November 16, 2010
REVIEW CATEGORY:	Exemption category # 2

Thank you for your submission of New Project materials for this research study. The University of Delaware IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will put a copy of this correspondence on file in our office. Please remember to notify us if you make any substantial changes to the project.

If you have any questions, please contact Elizabeth Peloso at 302-831-8619 or [epeloso@udel.edu](mailto:epeloso@udel.edu). Please include your study title and reference number in all correspondence with this office.

cc:



**RESEARCH OFFICE**

210 Hulihan Hall  
University of Delaware  
Newark, Delaware 19716-1551  
*Ph:* 302/831-2136  
*Fax:* 302/831-2828

DATE:	November 22, 2010
TO:	Laura Aschenbeck
FROM:	University of Delaware IRB
STUDY TITLE:	[201110-1] Case Study at Powell Gardens.
IRB REFERENCE #:	
SUBMISSION TYPE:	New Project
ACTION:	DETERMINATION OF EXEMPT STATUS
DECISION DATE:	November 22, 2010
REVIEW CATEGORY:	Exemption category # 2

Thank you for your submission of New Project materials for this research study. The University of Delaware IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will put a copy of this correspondence on file in our office. Please remember to notify us if you make any substantial changes to the project.

If you have any questions, please contact Elizabeth Peloso at 302-831-8619 or [epeloso@udel.edu](mailto:epeloso@udel.edu). Please include your study title and reference number in all correspondence with this office.



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DATE:	November 29, 2010
TO:	Laura Aschenbeck
FROM:	University of Delaware IRB
STUDY TITLE:	[201748-1] Case Study at Brookside Gardens
SUBMISSION TYPE:	Other Reportable Event
ACTION:	DETERMINATION OF EXEMPT STATUS
DECISION DATE:	November 29, 2010
REVIEW CATEGORY:	Exemption category #2

Thank you for your submission of Other Reportable Event materials for this research study. The University of Delaware IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will put a copy of this correspondence on file in our office. Please remember to notify us if you make any substantial changes to the project.

If you have any questions, please contact Clara Simperts at 302-831-2137 or [csimperts@udel.edu](mailto:csimperts@udel.edu). Please include your study title and reference number in all correspondence with this office.

## **Appendix B**

### **SURVEY RESEARCH**

#### **B.1 Email Sent to Public Garden Survey Pool**

Greetings!

Thank you for participating in this study of public gardens and the topic of home food gardening. The purpose of this survey is to gain insight into the potential connections and collaborations between public gardens' education efforts and this up-and-coming area of interest.

The definitions for "home food gardening" and "educational resources," as defined for this survey, are located at the bottom of each page.

The survey should take less than 10 minutes. If you have any questions, please contact the principal investigator below:

Laura Aschenbeck  
Longwood Graduate Program Fellow  
laschenb@udel.edu

#### **B.2 Public Garden Survey Questions**

1. Home food gardening is a topic of increasing interest to the general public. Which statement best describes your garden's current involvement with home food gardening?
  - a. Our garden is currently offering educational resources about home food gardening.
  - b. Our garden does not currently have any plans to offer educational resources about home food gardening.
  - c. Our garden is interested in offering educational resources about home food gardening.
  - d. Unsure



### **Gardens currently offering home food gardening educational resources**

2. Do you feel that providing educational resources to your audience about home food gardening fits within your garden's mission?
  - a. Yes
  - b. No
  - c. Unsure
3. Why, primarily, do you feel that your garden offers educational resources for home food gardening? (Check all that apply)
  - a. The topic fits within our mission
  - b. The topic is currently popular in the media
  - c. Our audience has requested information on the topic
  - d. The topic has always been well-received by our audience
  - e. It is an area of staff interest
  - f. Other
4. Which options below are offered by your garden to educate your audience about home food gardening? (Check all that apply)
  - a. Display food gardens
  - b. Interpretive signage
  - c. Educational volunteers/docents
  - d. Educational brochures
  - e. Library access
  - f. Website resources
  - g. Classes
  - h. Workshops
  - i. Tours
  - j. On-site demonstrations
  - k. Other
5. Does your garden offer special events on the topic of home food gardening? For the purpose of this survey, special events are defined as temporary or limited-time offerings meant to attract audiences of 50 or more.
  - a. Yes
  - b. No
  - c. Unsure
6. How often does your garden offer special events about home food gardening?
7. What activities are included in the home food gardening special events? (Check all that apply)
  - a. Guest speakers
  - b. Display booths for related non-profit businesses

- c. Display booths for related businesses
  - d. Cooking demonstrations
  - e. Gardening demonstrations
  - f. Onsite tours
  - g. Offsite tours
  - h. Other
8. About how large of an audience do these special events attract (per day)?
  9. Please describe any unique aspects of your garden's home food gardening special events below.
  10. What home food gardening-related organizations are you familiar with? (Check all that apply)
    - a. Cooperative Extension
    - b. Slow Food
    - c. FoodRoutes Network
    - d. Kitchen Gardeners International
    - e. Seed Savers Exchange
    - f. Rodale Institute
    - g. Other
  11. Does your garden partner with any home food gardening-related organizations? Please list:
  12. From your perspective, would a partnership with a home food gardening-related organization be of interest to your garden?
    - a. Yes
    - b. Unsure
    - c. No
  13. Which home food gardening-related organizations do you feel would be of potential partnership interest to your garden? (Check all that apply)
    - a. Cooperative Extension
    - b. Slow Food
    - c. FoodRoutes Network
    - d. Kitchen Gardeners International
    - e. Seed Savers Exchange
    - f. Rodale Institute
    - g. Other
  14. Please describe the benefits of your garden's home food gardening partnership(s) below.
  15. How long has your garden offered educational resources about home food gardening?
  16. If you would like your garden to be considered as a case study for this research, please enter the appropriate contact information below:

- a. Name
  - b. Position
  - c. Phone #
  - d. Email
17. If you answered yes, please also include a brief justification for including your garden in this research below:
18. Please list any North American public gardens that you might recommend as a case study for this research:
19. Any additional comments about public gardens and home food gardening:
- Gardens interested in offering home food gardening educational resources**
20. Do you feel that providing educational resources to your audience about home food gardening fits within your garden's mission?
- a. Yes
  - b. No
  - c. Unsure
21. Why, primarily, do you feel that your garden should offer educational resources for home food gardening? (Check all that apply)
- a. The topic fits within our mission
  - b. Our audience has requested information on the topic
  - c. It is an area of staff interest
  - d. The topic is currently popular in the media
  - e. The topic has always been well-received by our audience
  - f. Other
22. Which options below might your garden be interested in using to educate your audience about home food gardening? (Check all that apply)
- a. Display food gardens
  - b. Interpretive signage
  - c. Education volunteers/docents
  - d. Educational brochures
  - e. Library access
  - f. Website resources
  - g. Classes
  - h. Workshops
  - i. Tours
  - j. On-site demonstrations
  - k. Other
23. Do you think that your garden would offer special events on the topic of home food gardening?
24. For the purpose of this survey, special events are defined as temporary or limited-time offerings meant to attract audiences of 50 or more.

- a. Yes
  - b. No
  - c. Unsure
25. What activities might be included in the home food gardening special events?  
(Check all that apply)
- a. Guest speakers
  - b. Display booths for related non-profit organizations
  - c. Display booths for related businesses
  - d. Cooking demonstrations
  - e. Gardening demonstrations
  - f. Onsite tours
  - g. Offsite tours
  - h. Other
26. About how large of an audience might these special events attract (per day)?
27. Please describe any unique aspects of your garden's plans for home food gardening special events below.
28. What home food gardening-related organizations are you familiar with?  
(Check all that apply)
- a. Cooperative Extension
  - b. Slow Food
  - c. FoodRoutes Network
  - d. Kitchen Gardeners International
  - e. Seed Savers Exchange
  - f. Rodale Institute
  - g. Other
29. From your perspective, would a partnership with a home food gardening-related organization be of interest to your garden?
- a. Yes
  - b. Unsure
  - c. No
30. Which home food gardening-related organizations do you feel would be of potential partnership interest to your garden? (Check all that apply)
- a. Cooperative Extension
  - b. Slow Food
  - c. FoodRoutes Network
  - d. Kitchen Gardeners International
  - e. Seed Savers Exchange
  - f. Rodale Institute
  - g. Other

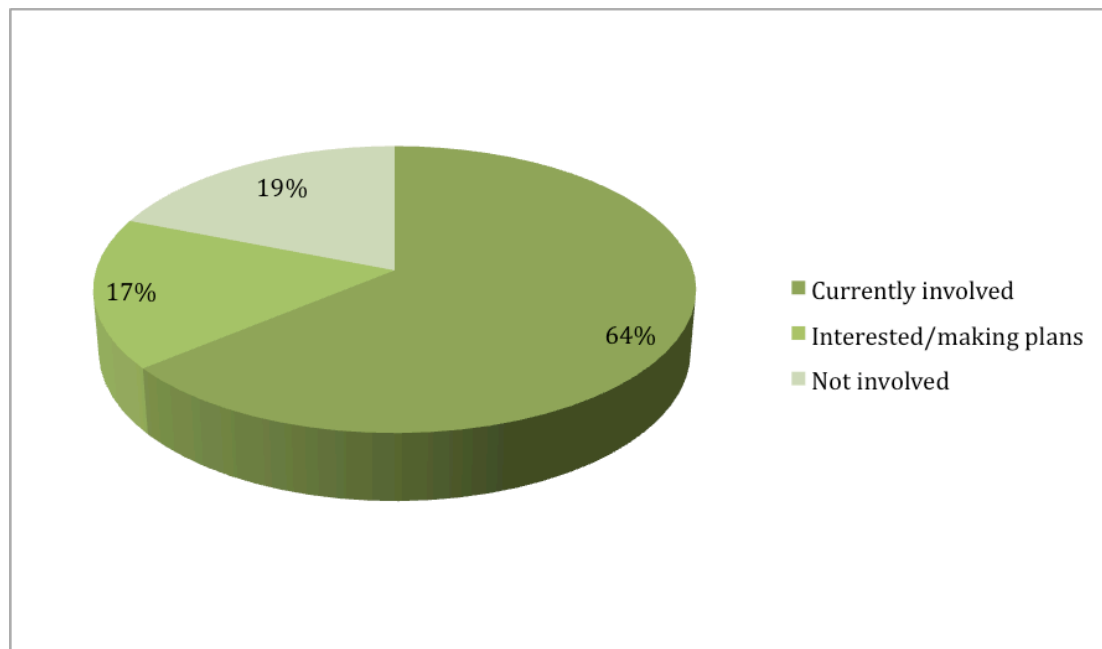
31. Please describe the benefits your garden might experience because of home food gardening partnership(s):
  32. How soon do you think your garden might begin offering educational resources for home food gardening?
  33. In your opinion, for how long might your garden consider offering educational resources about home food gardening?
  34. If you would like your garden to be considered as a case study for this research, please enter the appropriate contact information below:
    - a. Name
    - b. Position
    - c. Phone #
    - d. Email
  35. If you answered yes, please also include a brief justification for including your garden in this research below:
  36. Please list any North American public gardens that you might recommend as a case study for this research:
  37. Any additional comments about public gardens and home food gardening:
- Gardens not interested in offering home food gardening educational resources**
38. Do you feel that providing educational resources to your audience about home food gardening fits within your garden's mission?
    - a. Yes
    - b. No
    - c. Unsure
  39. Why, primarily, do you feel that your garden is not offering education resources for home food gardening? (Check all that apply)
    - a. Audience has not expressed interest in the topic
    - b. Lack of available staff and resources
    - c. Other
  40. Has your garden offered home food gardening educational resources in the past?
    - a. Yes
    - b. Unsure
    - c. No
  41. How long did your garden offer educational resources for home food gardening, and what reasons led to its current absence?
  42. Please list any North American public gardens that you might recommend as a case study for this research:
  43. Any additional comments about public gardens and home food gardening:
  44. Background Information
  45. Please enter your background information below (optional):

- a. Name
- b. Position
- c. Email

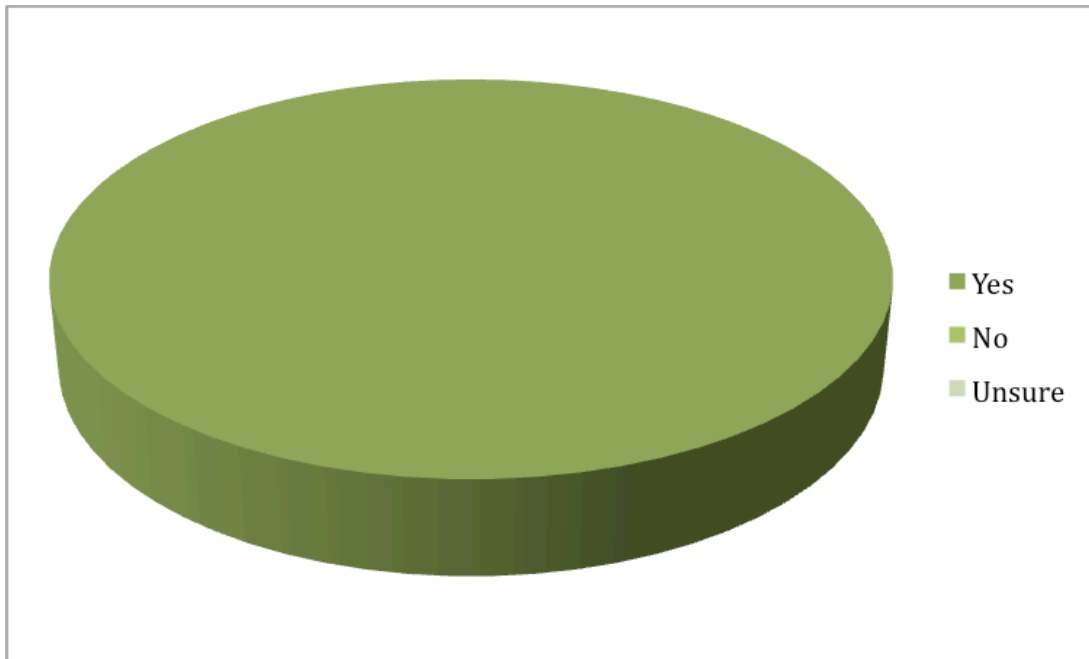
#### **Background Information**

- 46. What is the name of your garden?
- 47. In what region are you located?
- 48. If you would like to be entered in a raffle for a \$50 gift certificate to Seed Savers Exchange, please enter your email address below:
- 49. Home food gardening: the practice of individuals raising fruit and vegetable crops on their property or a shared property.
- 50. Educational resources: any methods by which a public horticulture institution may inform their audience about home food gardening. This may include direct methods (such as classes) or indirect methods (such as signs).

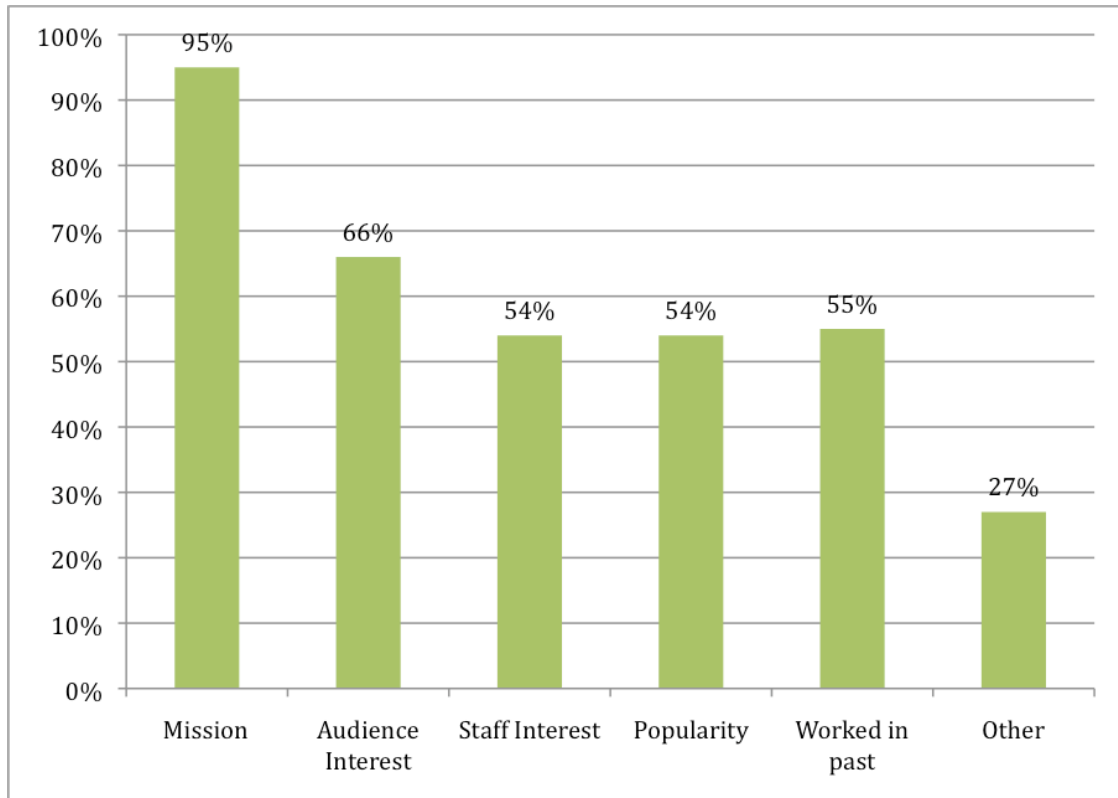
### **B.3 Additional Results of Public Garden Survey**



**Figure B.1 Survey 1, Question 1: Which statement best describes your garden's current involvement with food gardening? N=129**

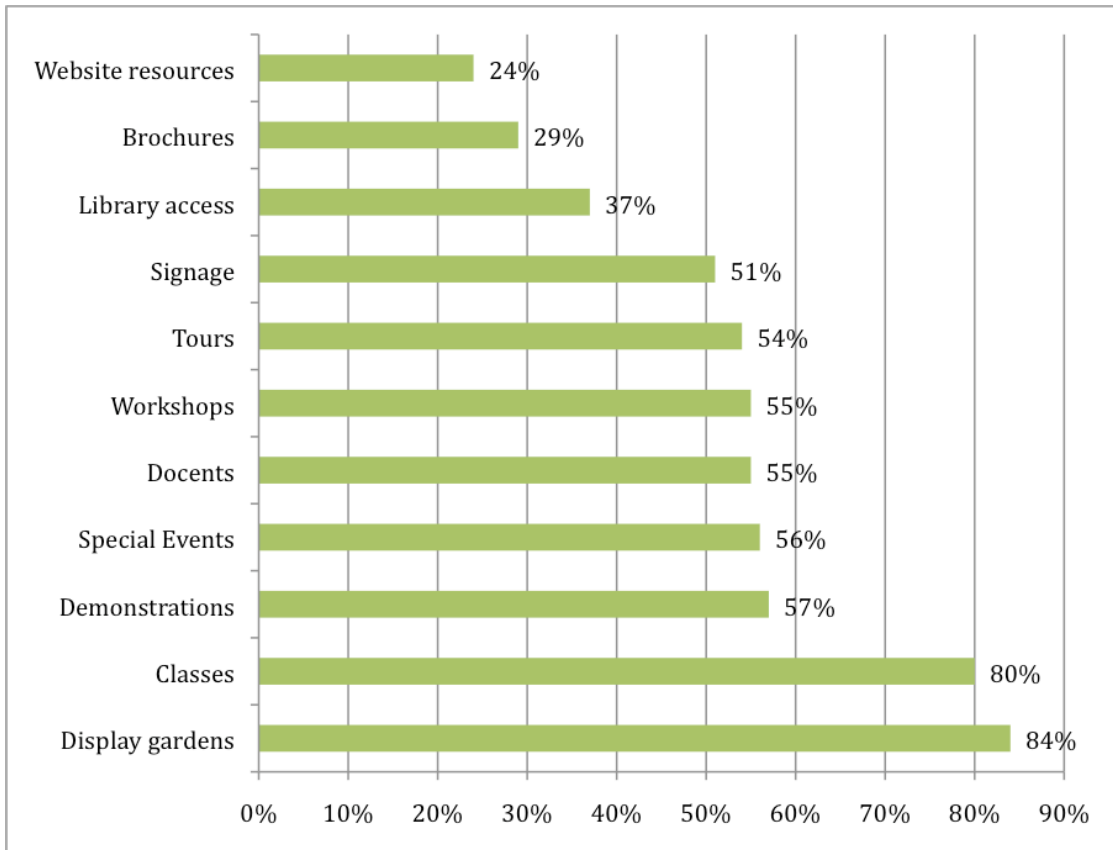


**Figure B.2** Survey 1, Question 2: Do you feel that providing educational resources to your audience about home food gardening fits within your garden's mission? N=80

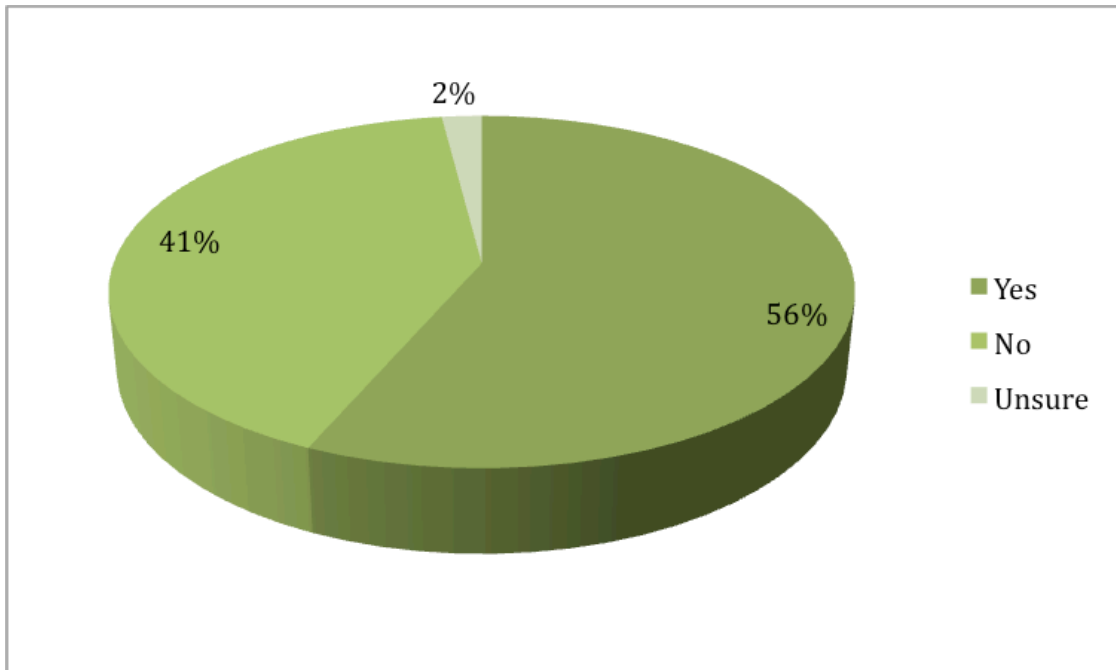


**Figure B.3** Survey 1, Question 3: Why, primarily, do you feel that your garden offers educational resources for home food gardening? (Check all that apply) N=83

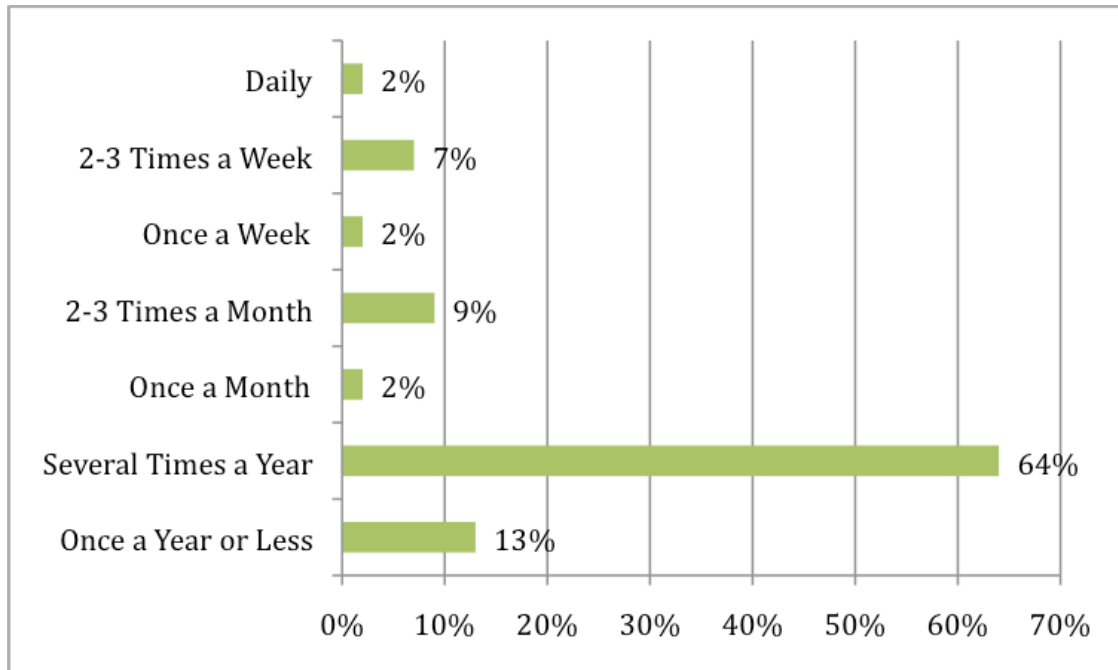




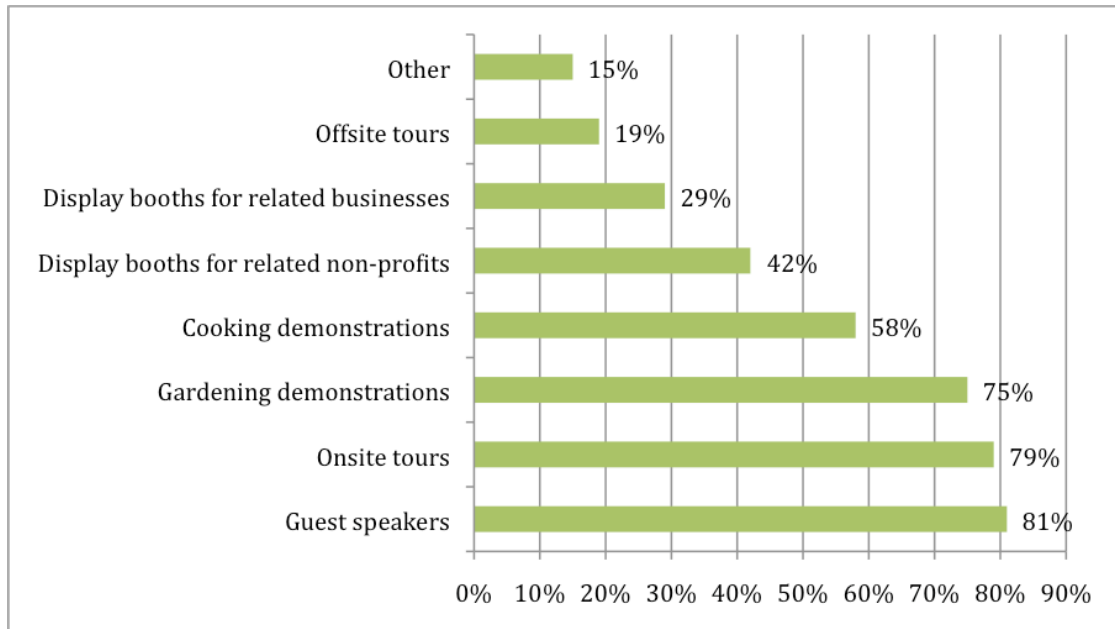
**Figure B.4** Survey 1, Question 4: Which options below are offered by your garden to educate your audience about home food gardening? (Check all that apply) N=82



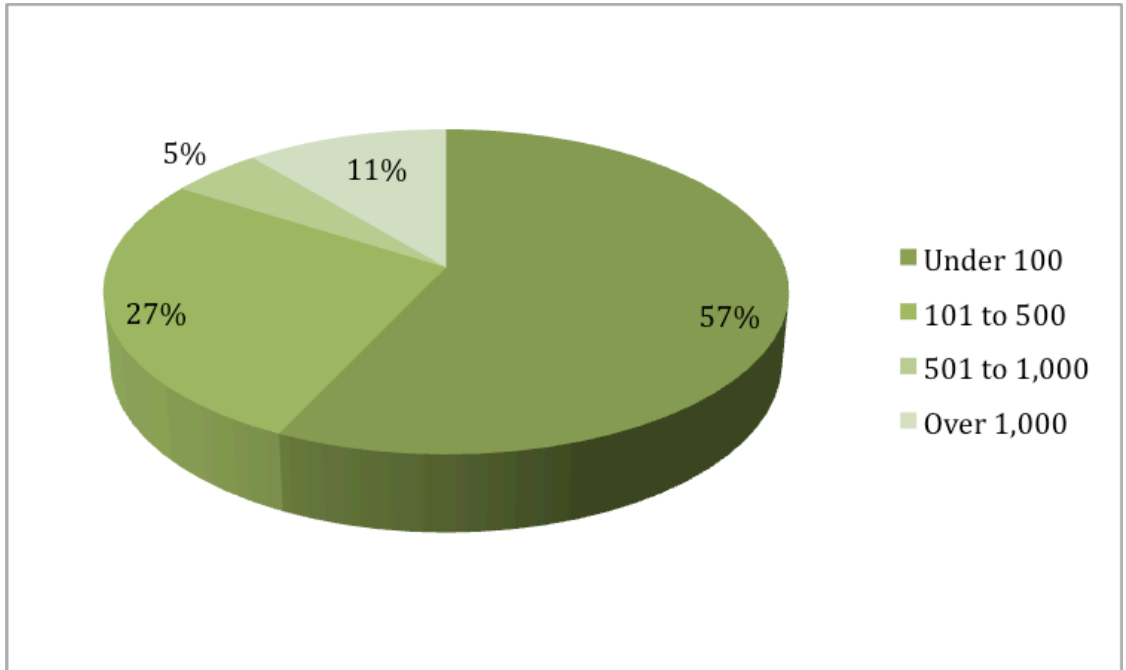
**Figure B.5** Survey 1, Question 5: Does your garden offer special events on the topic of home food gardening? For the purpose of this survey, special events are defined as temporary or limited-time offerings meant to attract audiences of 50 or more. N=82



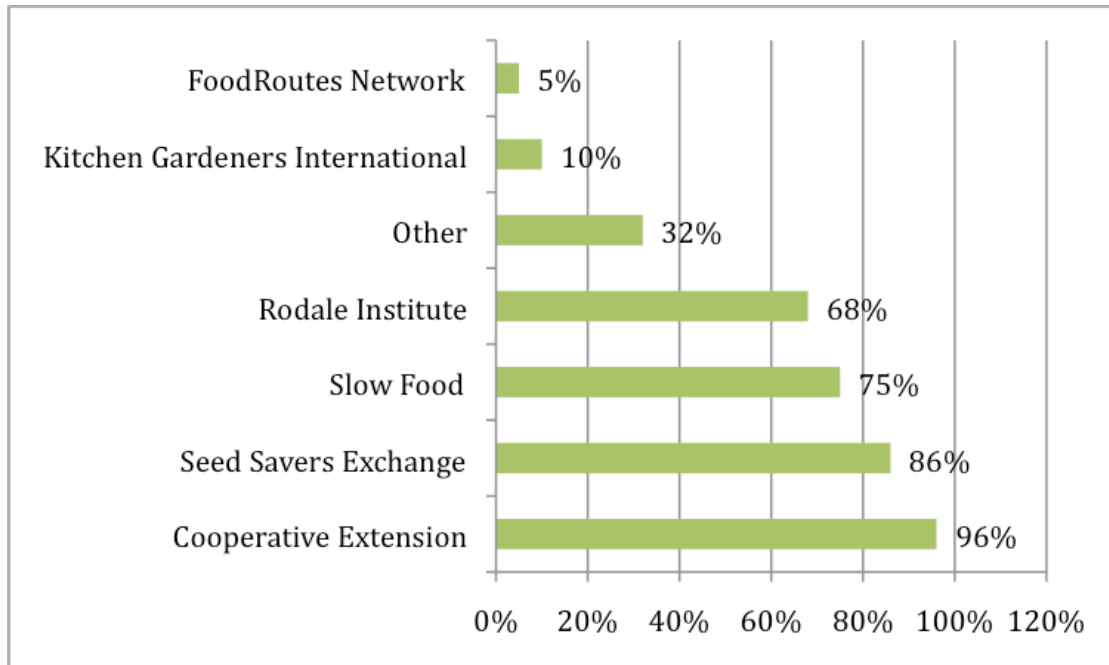
**Figure B.6** Survey 1, Question 6: How often does your garden offer special events about home food gardening? N=45



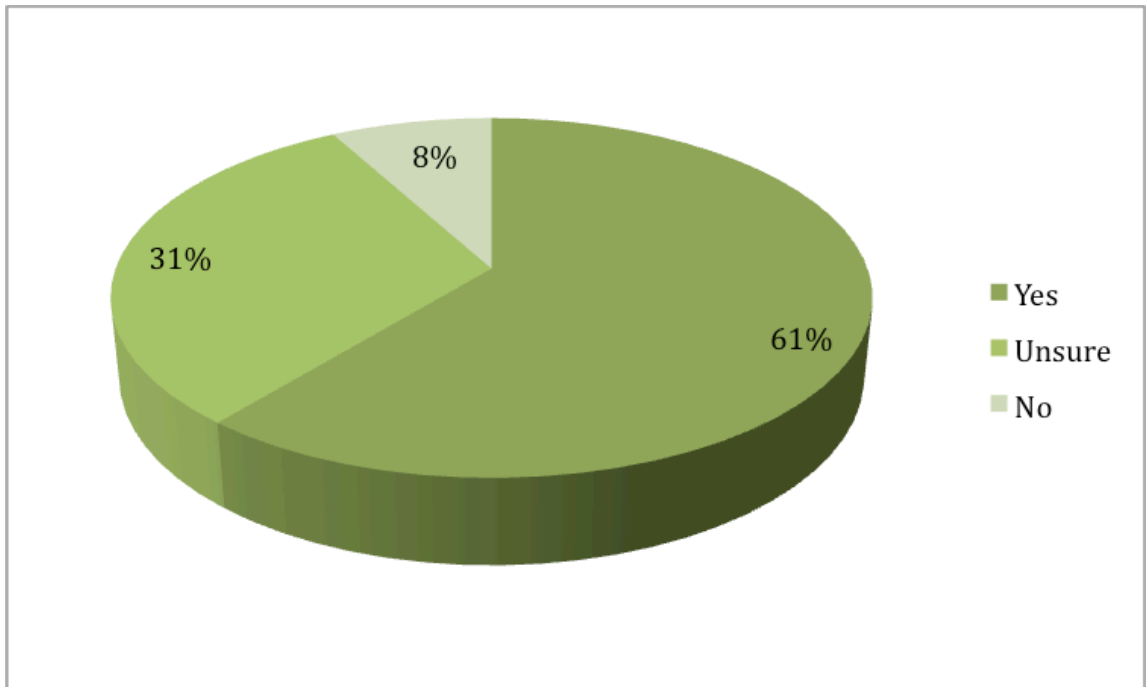
**Figure B.7 Survey 1, Question 7: What activities are included in the home food gardening special events? (Check all that apply) N=48**



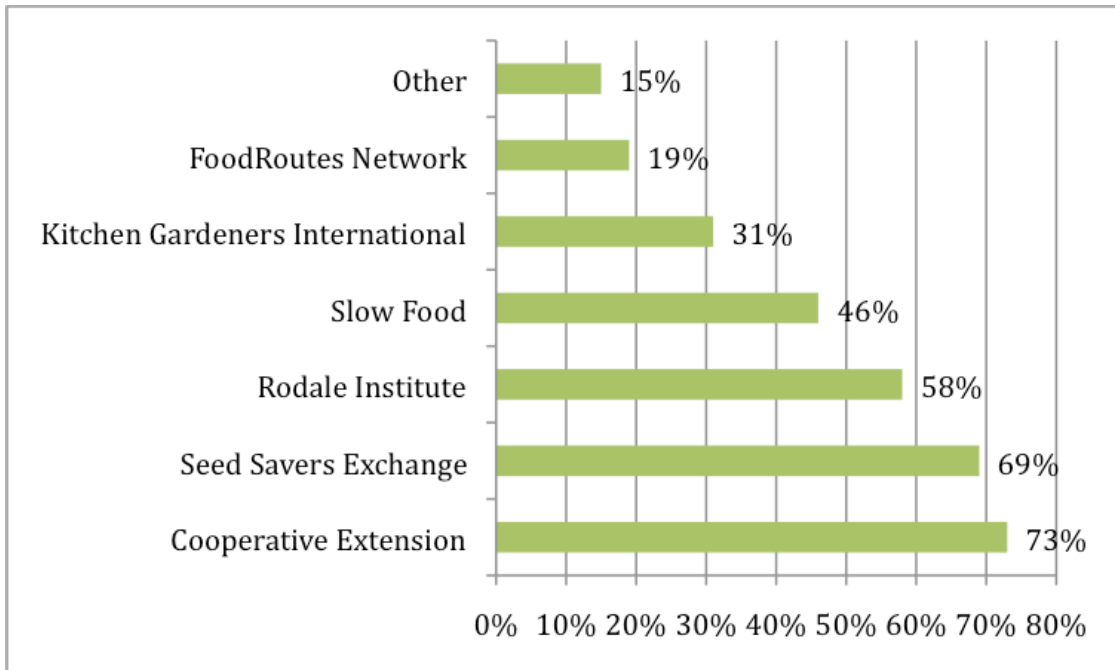
**Figure B.8** Survey 1, Question 8: About how large of an audience do these special events attract (per day)? N=44



**Figure B.9** Survey 1, Question 10: What home food gardening-related organizations are you familiar with? (Check all that apply) N=77

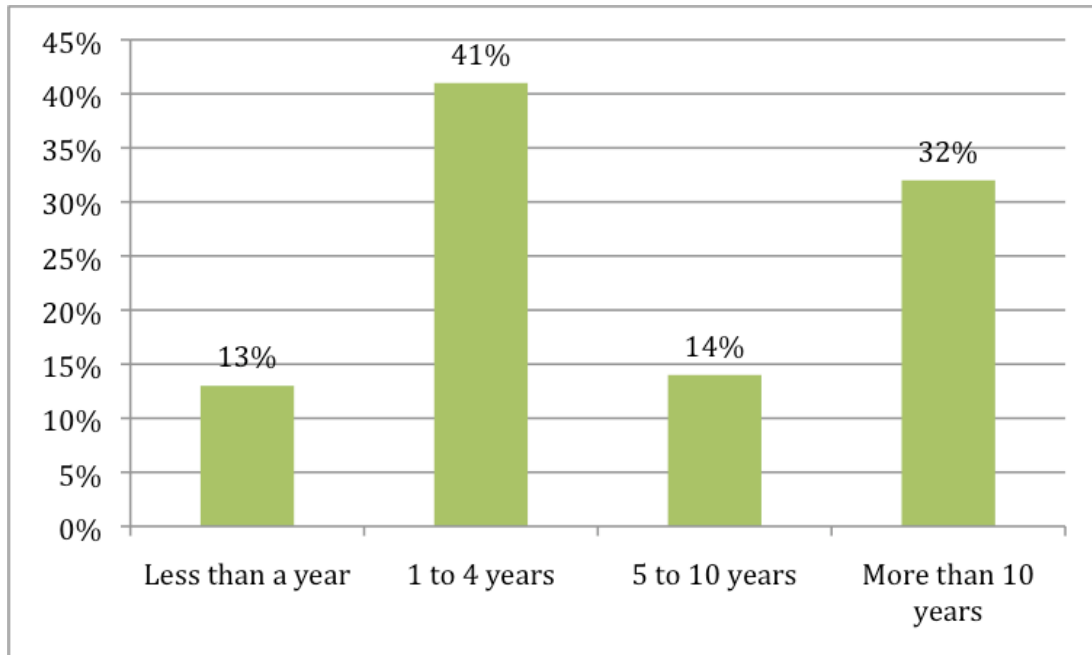


**Figure B.10** Survey 1, Question 12: From your perspective, would a partnership with a home food gardening-related organization be of interest to your garden? N=36

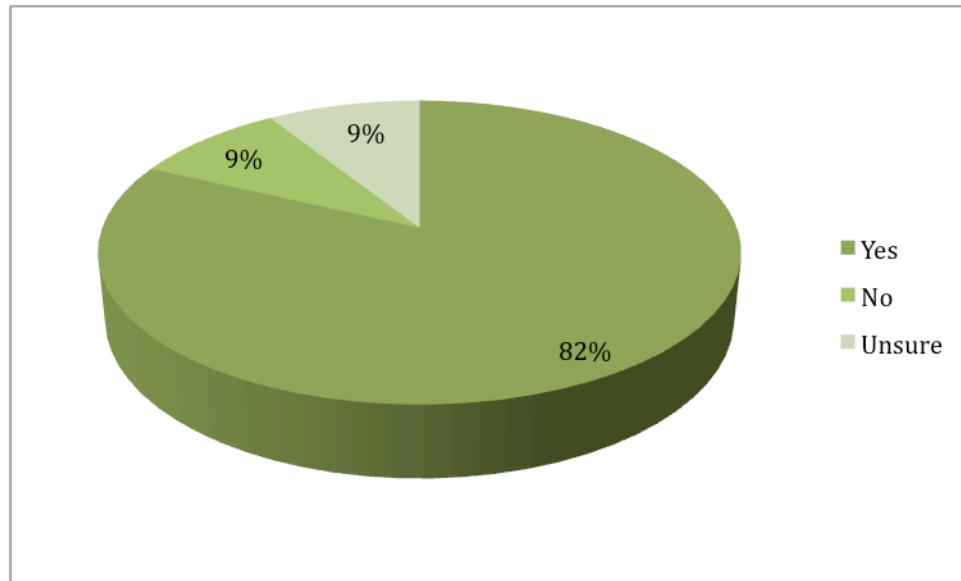


**Figure B.11 Survey 1, Question 13: Which home food gardening-related organizations do you feel would be of potential partnership interest to your garden? (Check all that apply) N=26**

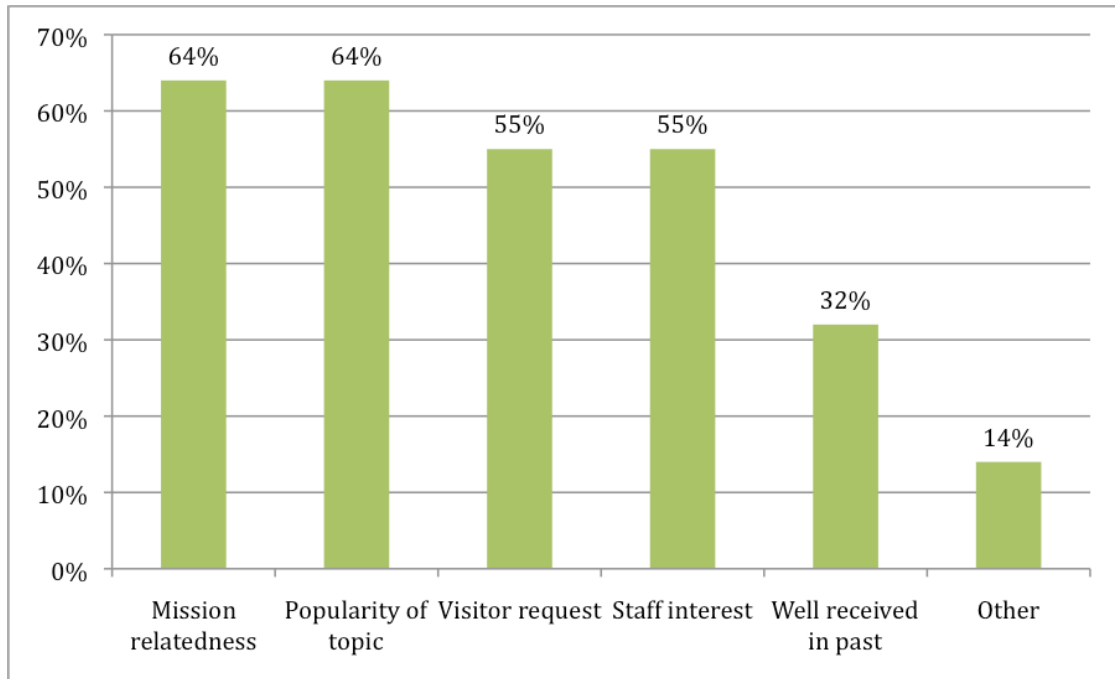




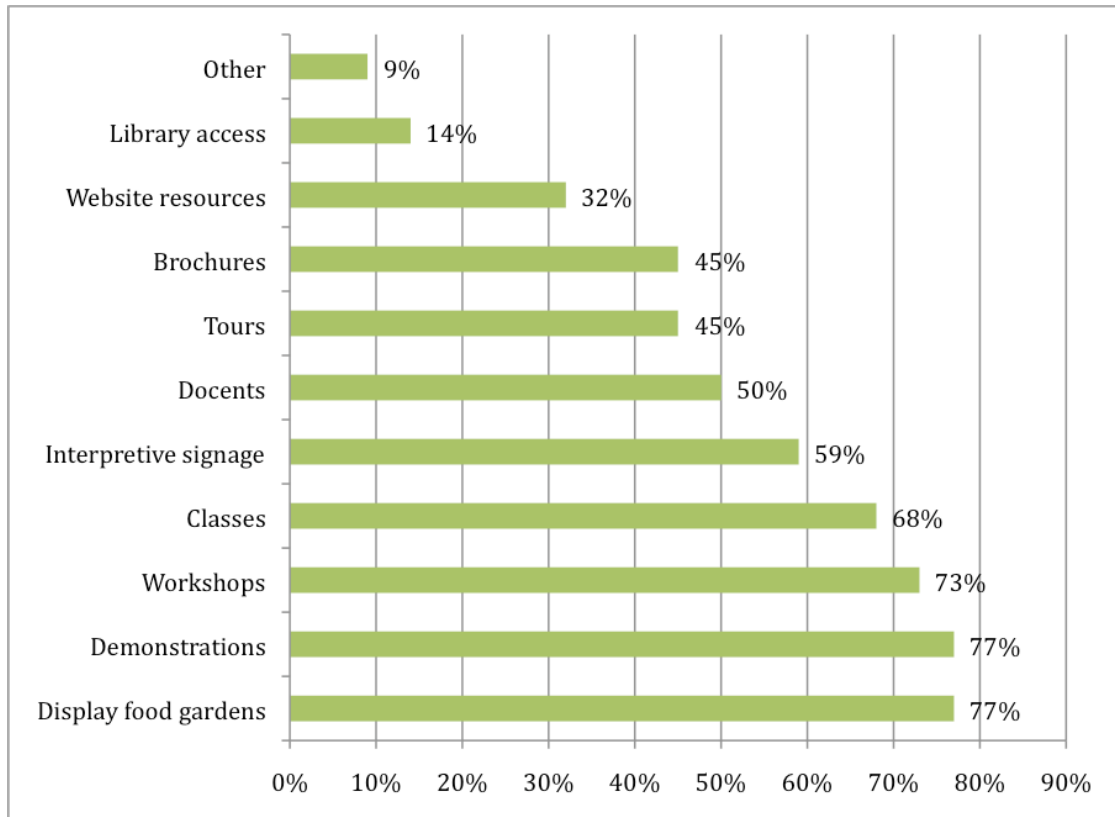
**Figure B.12 Survey 1, Question 15: How long has your garden offered educational resources about home food gardening? N=78**



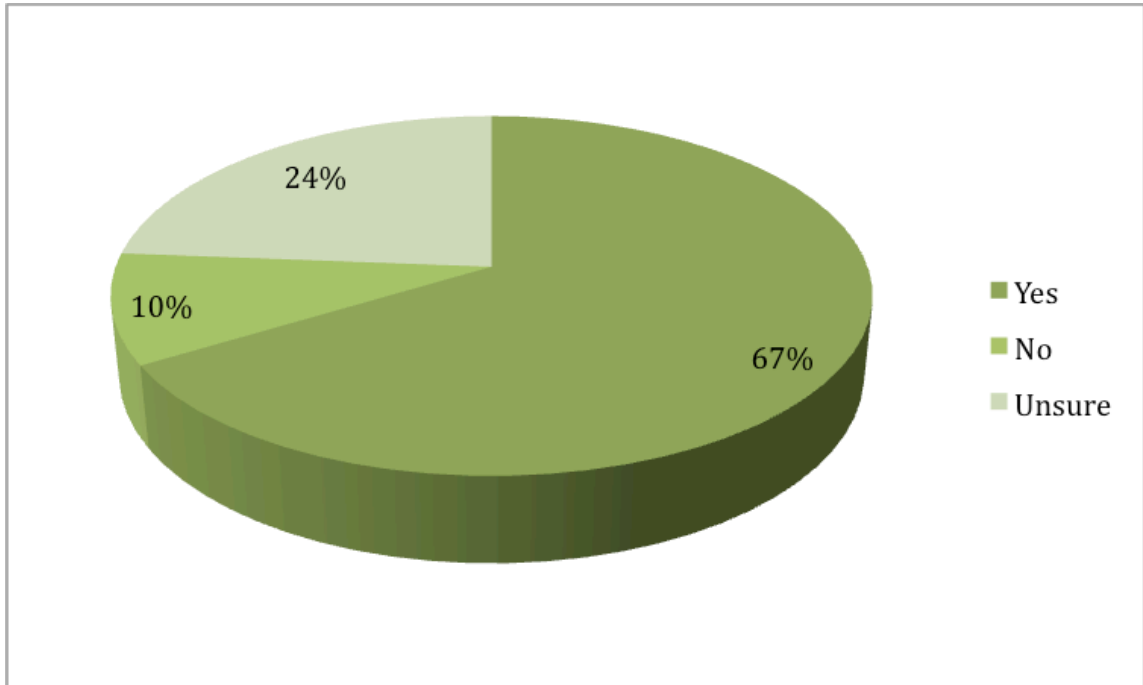
**Figure B.13** Survey 1, Question 20: Do you feel that providing educational resources to your audience about home food gardening fits within your garden's mission? N=22



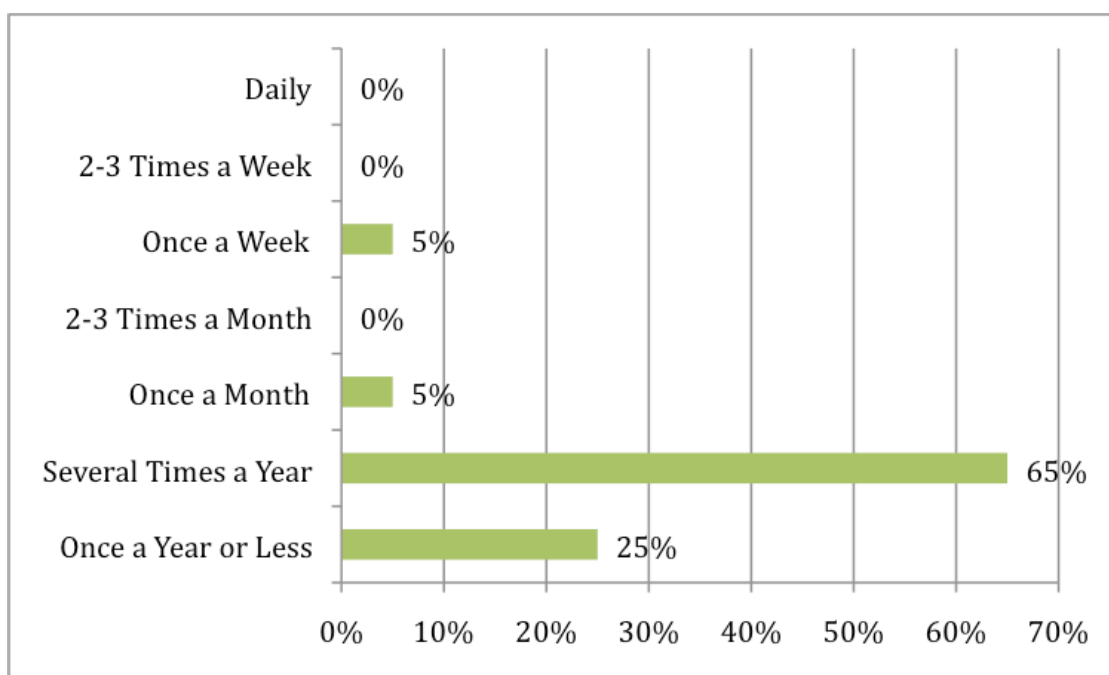
**Figure B.14 Survey 1, Question 21: Why, primarily, do you feel that your garden should offer educational resources for home food gardening? (Check all that apply) N=22**



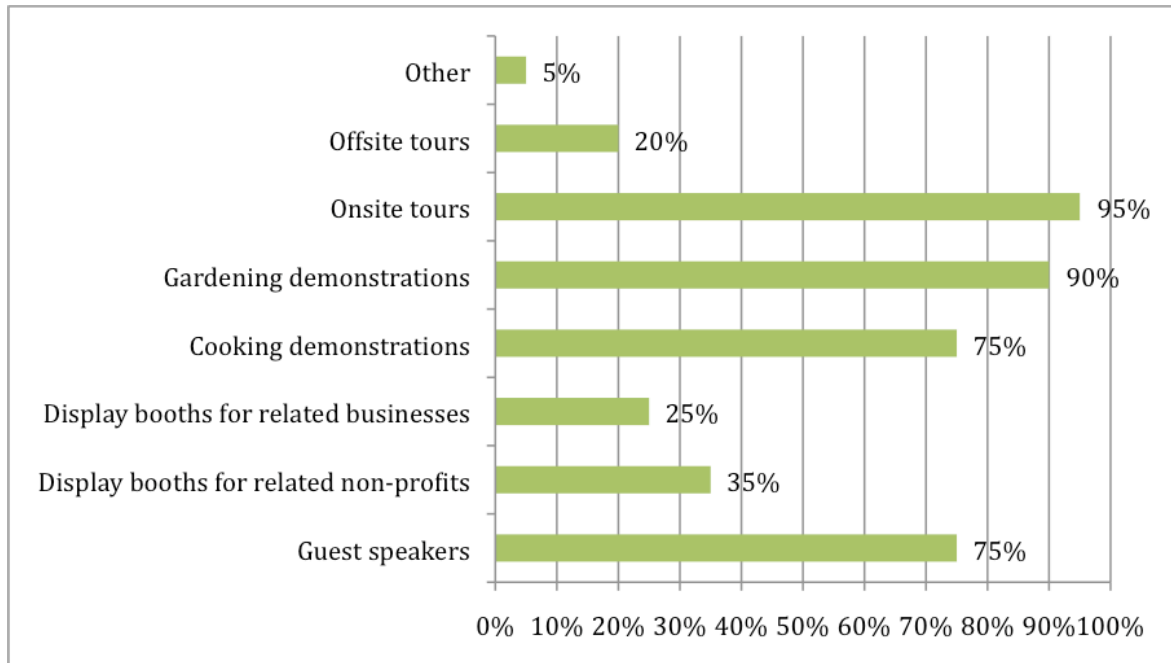
**Figure B.15 Survey 1, Question 22: Which options below might your garden be interested in using to educate your audience about home food gardening? (Check all that apply) N=22**



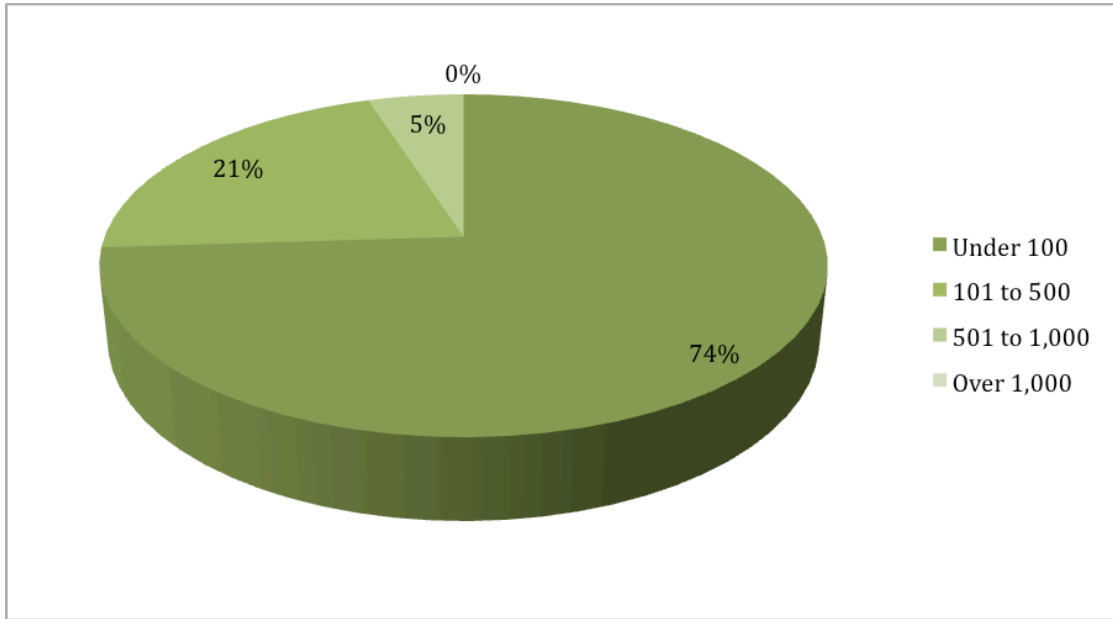
**Figure B.16** Survey 1, Question 23: Do you think that your garden would offer special events on the topic of home food gardening? For the purpose of this survey, special events are defined as temporary or limited-time offerings meant to attract audiences of 50 or more. N=21



**Figure B.17 Survey 1, Question 24: How often do you think your garden might offer special events about home food gardening? N=20**

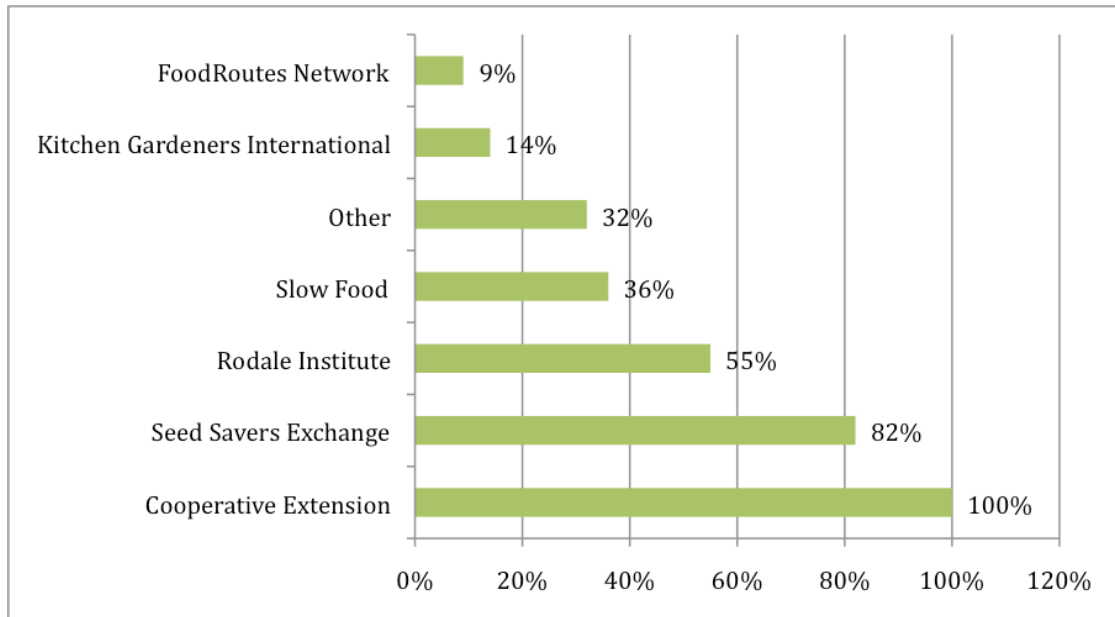


**Figure B.18 Survey 1, Question 25: What activities might be included in the home food gardening special events? (Check all that apply) N=20**

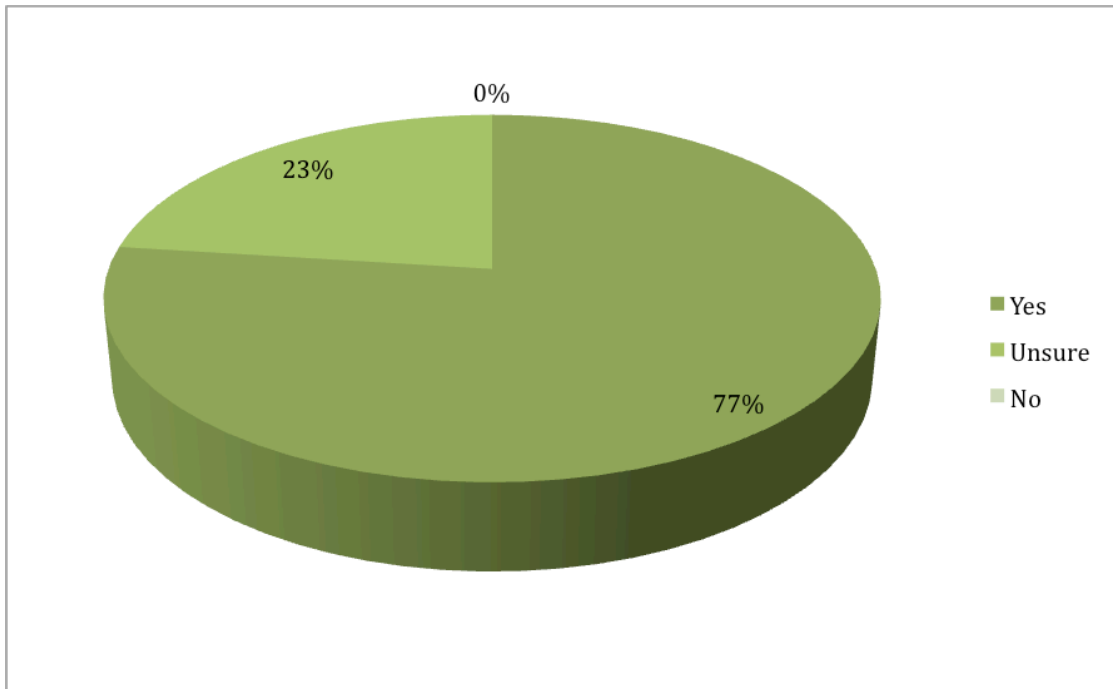


**Figure B.19** Survey 1, Question 26: About how large of an audience might these special events attract (per day)? N=19

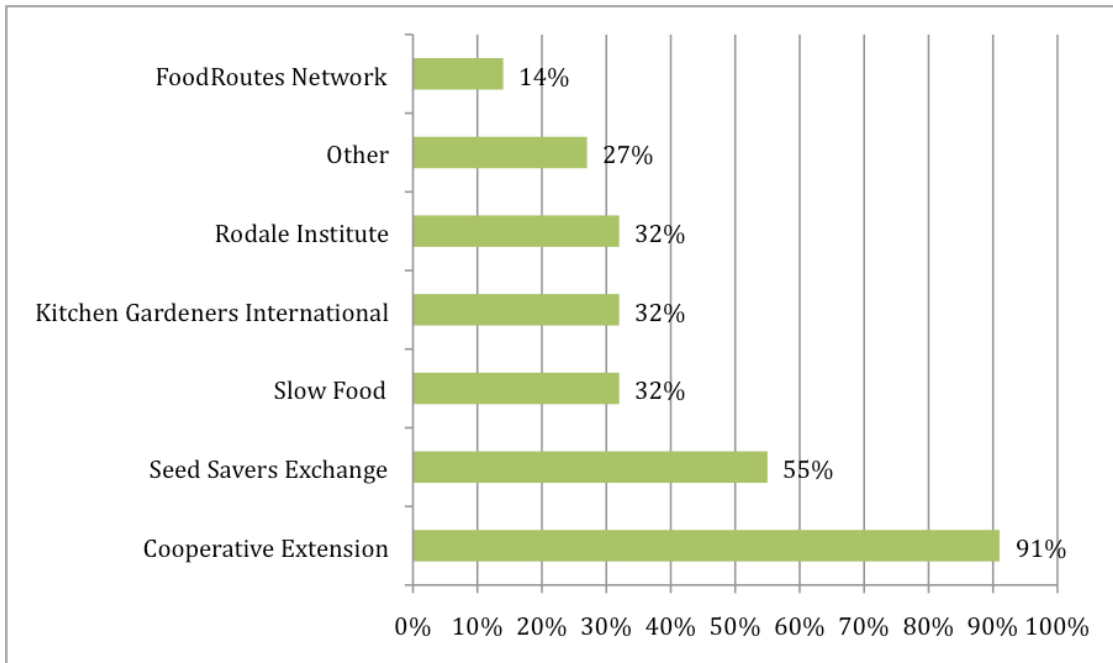




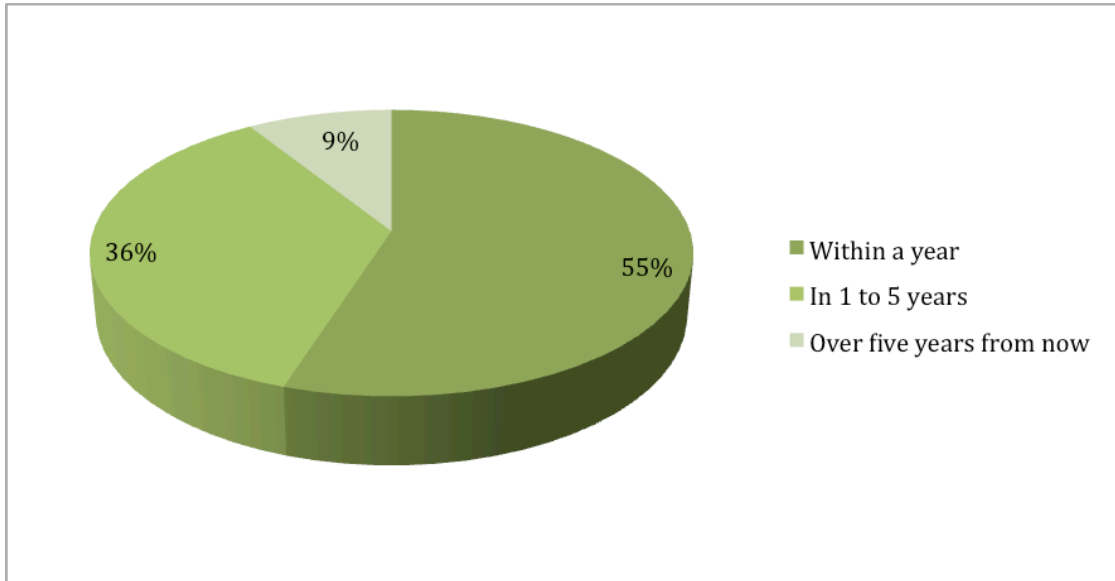
**Figure B.20 Survey 1, Question 28: What home food gardening-related organizations are you familiar with? (Check all that apply) N=22**



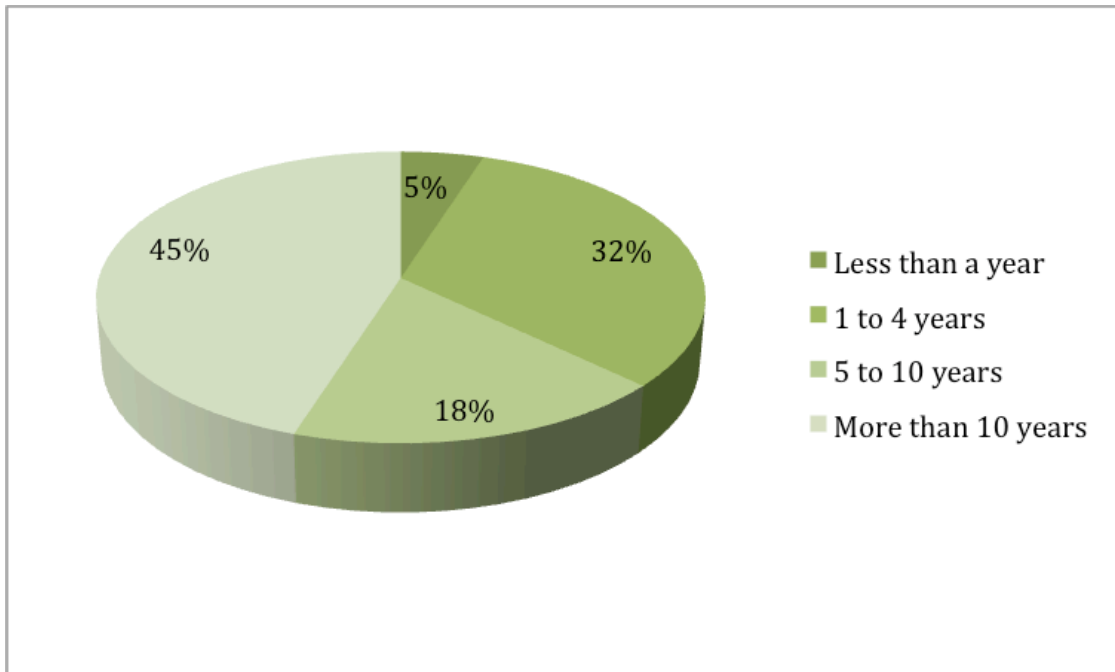
**Figure B.21** Survey 1, Question 29: From your perspective, would a partnership with a home food gardening-related organization be of interest to your garden? N=22



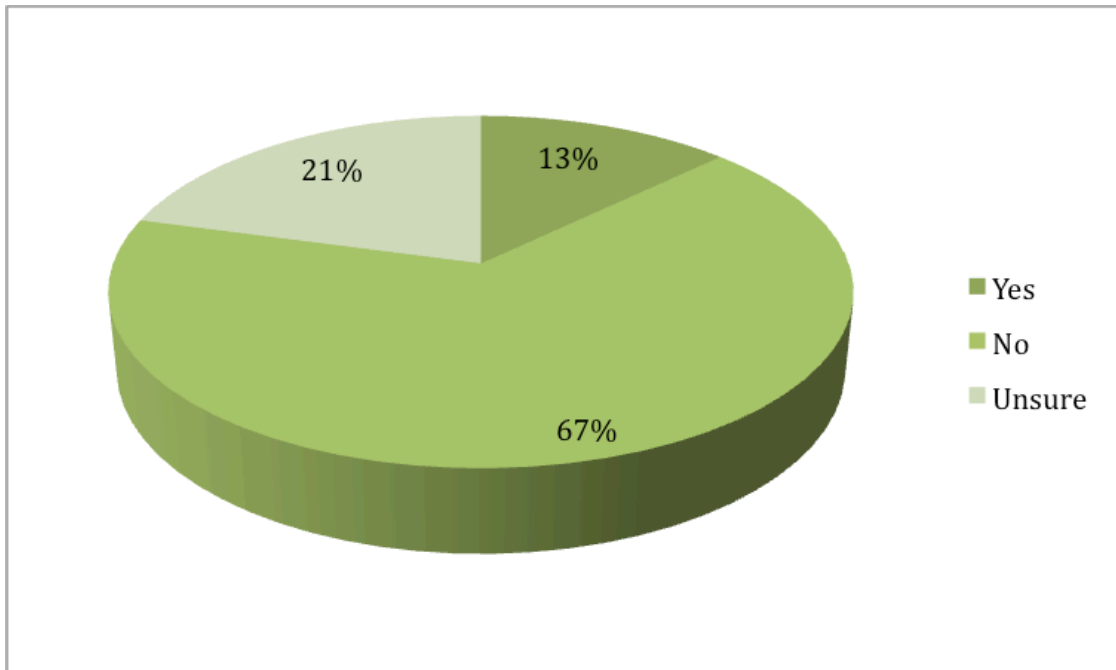
**Figure B.22 Survey 1, Question 30: Which home food gardening-related organizations do you feel would be of potential partnership interest to your garden? (Check all that apply) N=22**



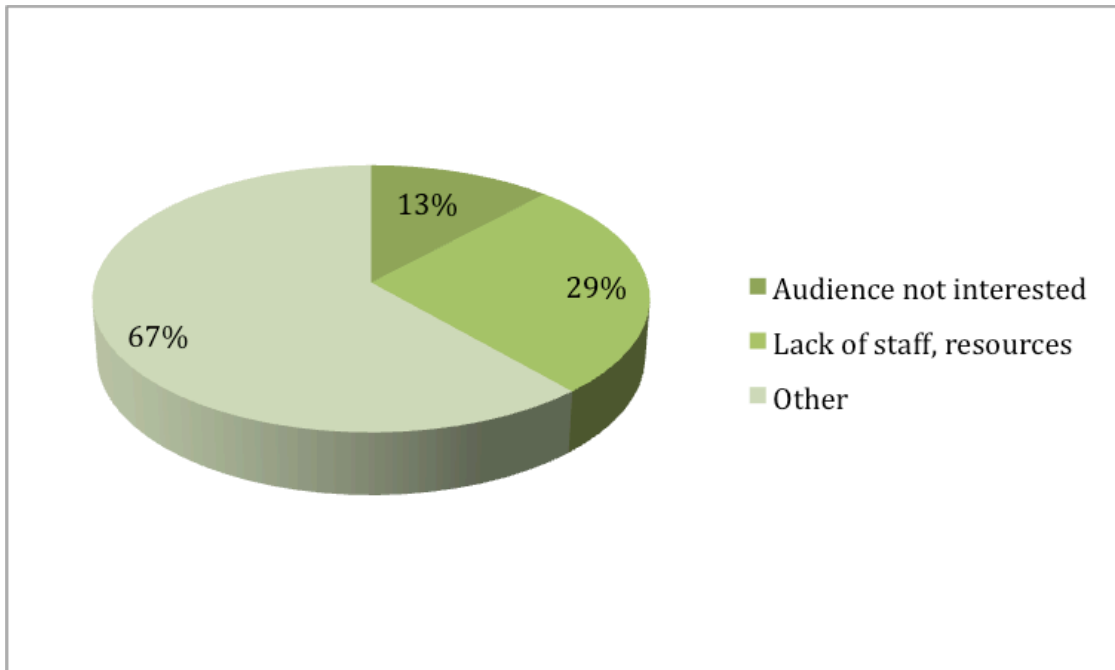
**Figure B.23** Survey 1, Question 32: How soon do you think your garden might begin offering educational resources for home food gardening?  
N=22



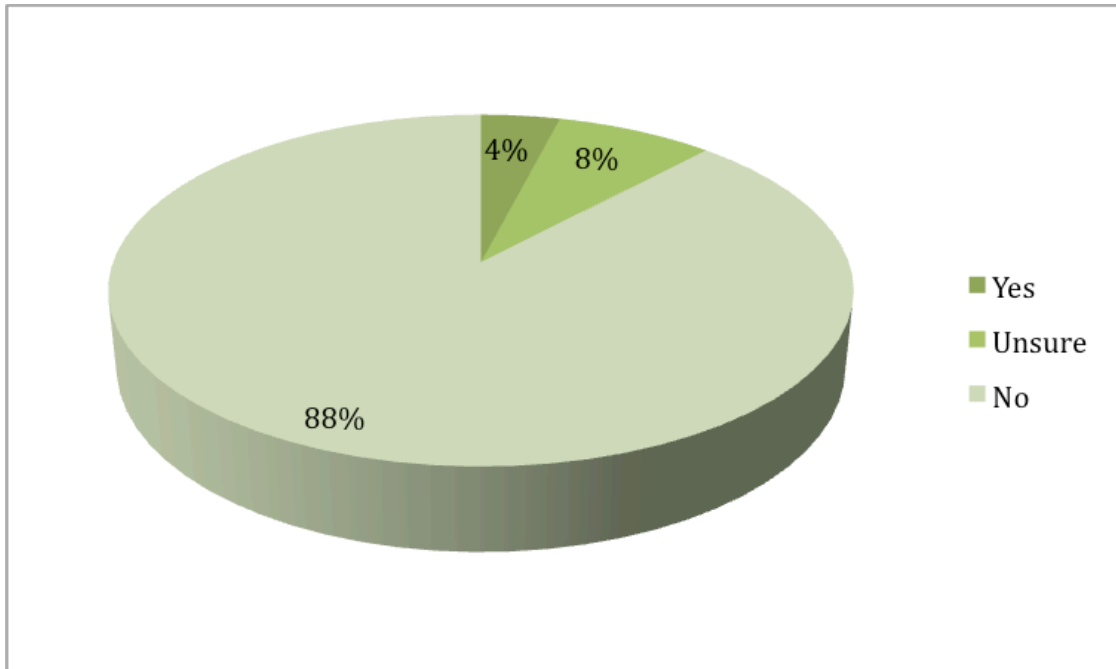
**Figure B.24 Survey 1, Question 33: In your opinion, for how long might your garden consider offering educational resources about home food gardening? N=22**



**Figure B.25 Survey 1, Question 38: Do you feel that providing educational resources to your audience about home food gardening fits within your garden's mission? N=24**

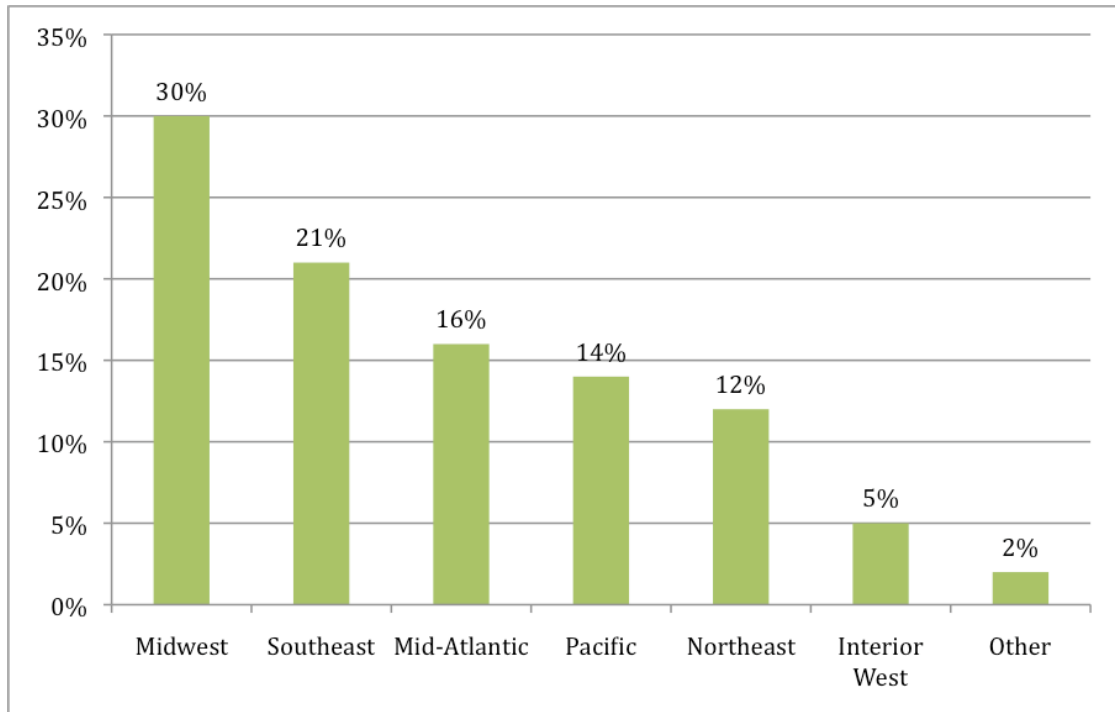


**Figure B.26 Survey 1, Question 39: Why, primarily, do you feel that your garden is not offering education resources for home food gardening? (Check all that apply) \*60% of “Other” were mission relatedness N=24**



**Figure B.27** Survey 1, Question 40: Has your garden offered home food gardening educational resources in the past? N=24





**Figure B.28 Survey 1, Question 46: In what region are you located? N=110**

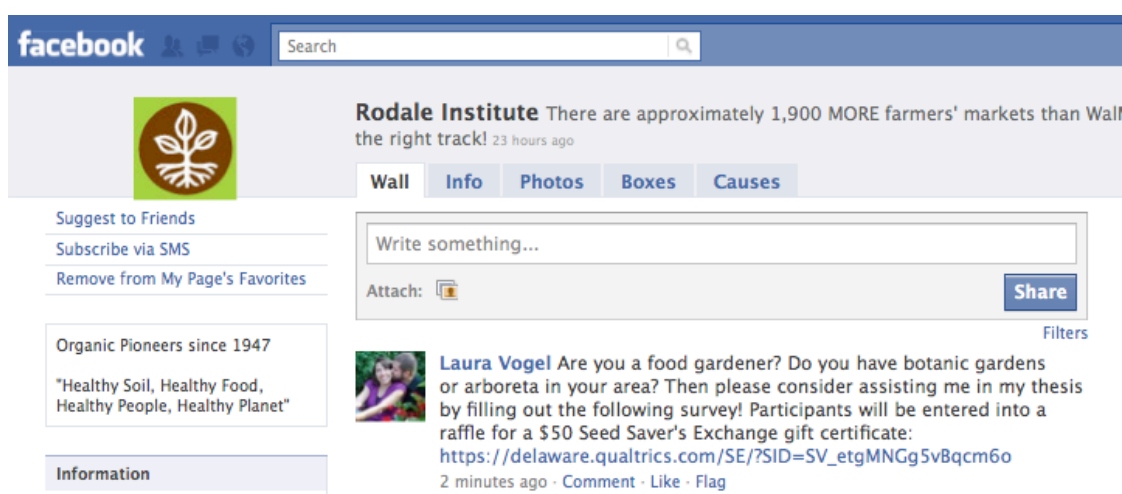
## **B.4 Publication of Survey to Food Gardener Pool**



**Figure B.29 Earth Eats Survey Publication**



**Figure B.30 Kitchen Gardeners International Publication**



**Figure B.31 Rodale Institute Publication**



← Newsletter: September 2010

"Dig In" Event Recap in The Triangle →

## Study of Public Gardens, Home Food Gardening

Posted on [September 21, 2010](#) by [Slow Food Philadelphia](#)

Have you ever visited a public garden that has cooking classes or display vegetable gardens? Help public gardens to improve their offerings on the topic of food gardening by taking [this survey](#). If completed, you can be entered into a raffle for a gift card to [Seed Savers Exchange](#)!

» [Take the survey now!](#)

This entry was posted in [Misc](#) and tagged [food gardening](#), [Seed Savers Exchange](#), [survey](#). Bookmark the [permalink](#).

← Newsletter: September 2010

"Dig In" Event Recap in The Triangle →

**Figure B.32 Slow Food® Philadelphia Publication**

### **B.5 Food Gardener Survey Questions**

Greetings!

Who should take this survey: Any food gardener who is always on the lookout for educational opportunities.

Thank you for participating in this study of public gardens and the topic of home food gardening. The purpose of this survey is to gain insight into the potential connections and collaborations between public gardens' education efforts and this up-and-coming area of interest.

The definitions for "home food gardening" and "educational resources," as defined for this survey, are located at the bottom of each page.

The survey should take fewer than 10 minutes. If you have any questions, please contact the principal investigator below:

Laura Aschenbeck  
Longwood Graduate Program Fellow  
laschenb@udel.edu

1. Are you a home food gardener?
  - a. Yes
  - b. Unsure
  - c. No
2. Why do you grow your own food? (Check all that apply)
  - a. Better tasting food
  - b. More healthy food
  - c. Safer food
  - d. Seed and heirloom conservation
  - e. To be environmentally responsible
  - f. To live more locally
  - g. Other
3. What types of food do you grow? (Check all that apply)
  - a. Vegetables
  - b. Tree fruits
  - c. Berries
  - d. Herbs

- e. Other
- 4. How would you rate your food gardening expertise?
  - a. Beginner
  - b. Casual
  - c. Expert
- 5. When you need information about food gardening topics, what sources do you turn to? (Check all that apply)
  - a. Local garden center
  - b. Cooperative Extension
  - c. Friends or family
  - d. Local public garden
  - e. Internet
  - f. Library
  - g. Local college or university
  - h. Television
  - i. Other
- 6. Please rate your preference toward the following learning methods (in regards to food gardening):
  - a. Reading (print and online)
  - b. Listening and participating in lectures
  - c. Hands-on workshops
  - d. Demonstration of techniques
  - e. Touring others' food gardens
  - f. Sharing ideas online with other food gardeners
  - g. Sharing ideas in person with other food gardeners
- 7. The following questions are focused on public gardens. Public gardens combine the art and science of cultivating plants in spaces for public use and enrichment. This category may include places such as arboreta, municipal parks and gardens, botanic gardens, museums and nature centers. Do you live within a commuting distance (30 minutes or less of travel) from a public garden?
  - a. Yes
  - b. Unsure
  - c. No
- 8. Please list any public garden(s) you know of in your area:
- 9. How often do you visit public gardens, as defined above?
- 10. Do you feel that public gardens should offer educational resources for home food gardeners? (Check all that apply)
  - a. Yes- because there is a strong interest from the community
  - b. Yes- because it supports their mission

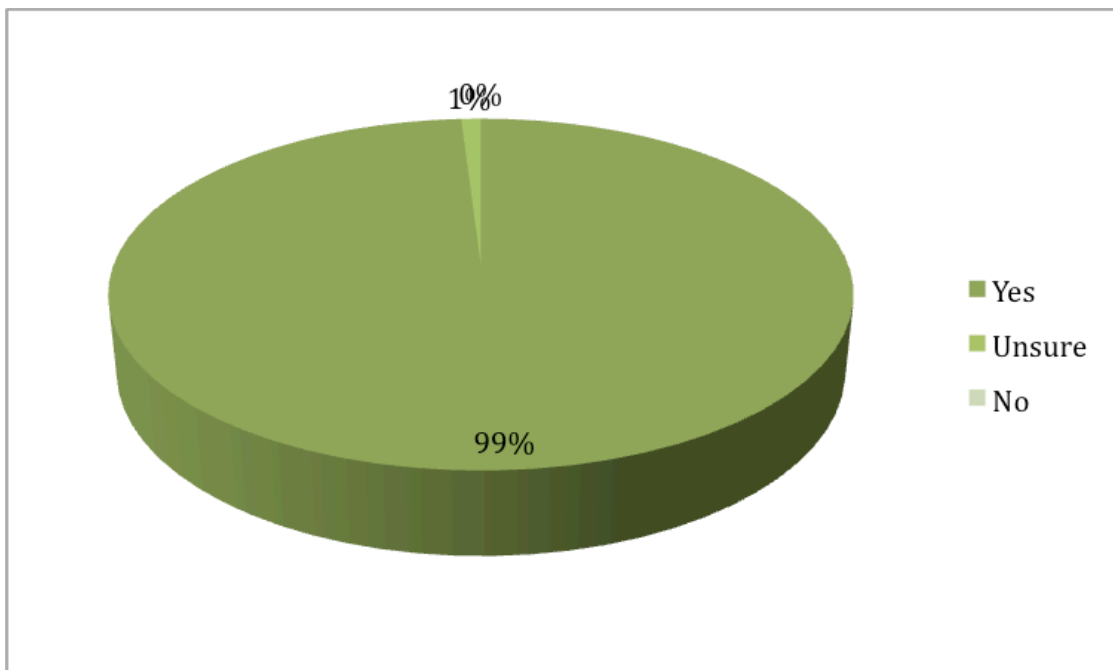
- c. Yes- because the topic is currently popular in the media
  - d. Yes- other reason
  - e. No
11. From your observations, what food gardening educational resources are offered by public gardens? (Check all that apply)
- a. Display food gardens
  - b. Education volunteers/docents
  - c. Educational brochures
  - d. Library access
  - e. Website resources
  - f. Classes
  - g. Workshops
  - h. Tours
  - i. On-site demonstrations
  - j. Online interactions with other food gardeners
  - k. A club or group for food gardeners
  - l. Other
12. What food gardening educational resources would you like to see offered by public gardens? (Check all that apply)
- a. Display food gardens
  - b. Education volunteers/docents
  - c. Educational brochures
  - d. Library access
  - e. Website resources
  - f. Classes
  - g. Workshops
  - h. Tours
  - i. On-site demonstrations
  - j. Online interactions with other food gardeners
  - k. A club or group for food gardeners
  - l. Other

**Background Information**

13. What is your gender?
- a. Male
  - b. Female
  - c. Prefer not to answer
14. What is your age?
15. In what region are you located?
16. Please select any home food gardening-related organizations are you a part of:  
(Check all that apply)

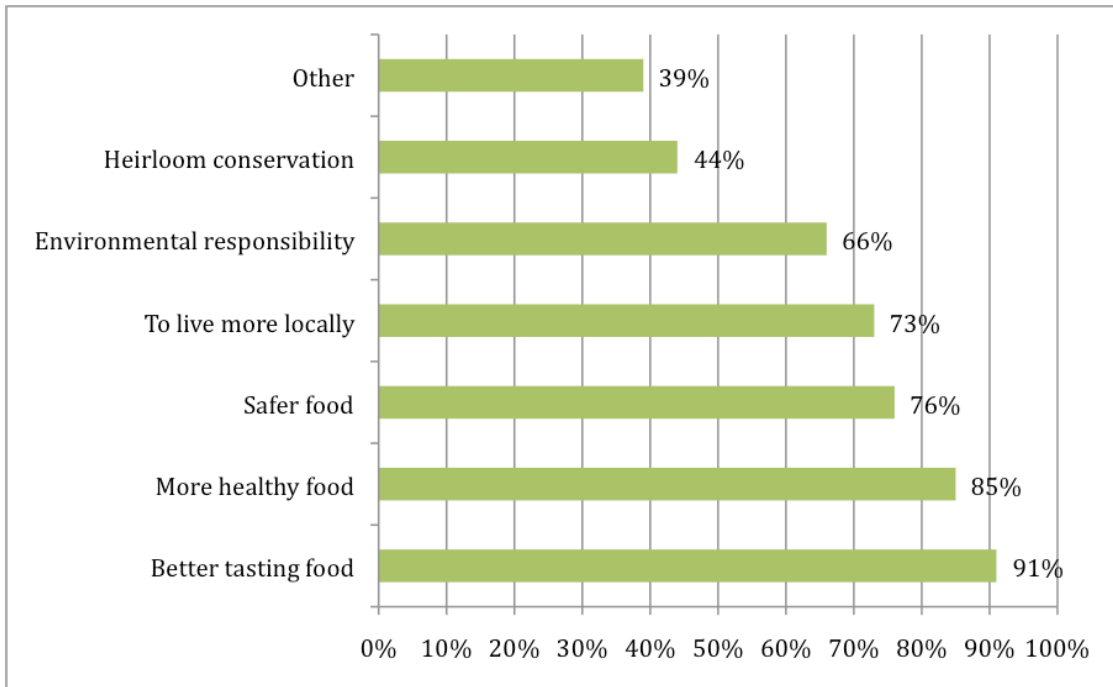
- a. Cooperative Extension
  - b. Slow Food
  - c. FoodRoutes Network
  - d. Kitchen Gardeners International
  - e. Seed Savers Exchange
  - f. Rodale Institute
  - g. Other
17. Any additional comments about public gardens and home food gardening:
18. If you would like to be entered in a raffle for a \$50 gift certificate to Seed Savers Exchange, please enter your email address below:
19. Home food gardening: the practice of individuals raising fruit and vegetable crops on their property or a shared property.
20. Educational resources: any methods by which a public horticulture institution may inform their audience about home food gardening. This may include direct methods (such as classes) or indirect methods (such as signs).

### **B.6 Additional Results of Food Gardener Survey**

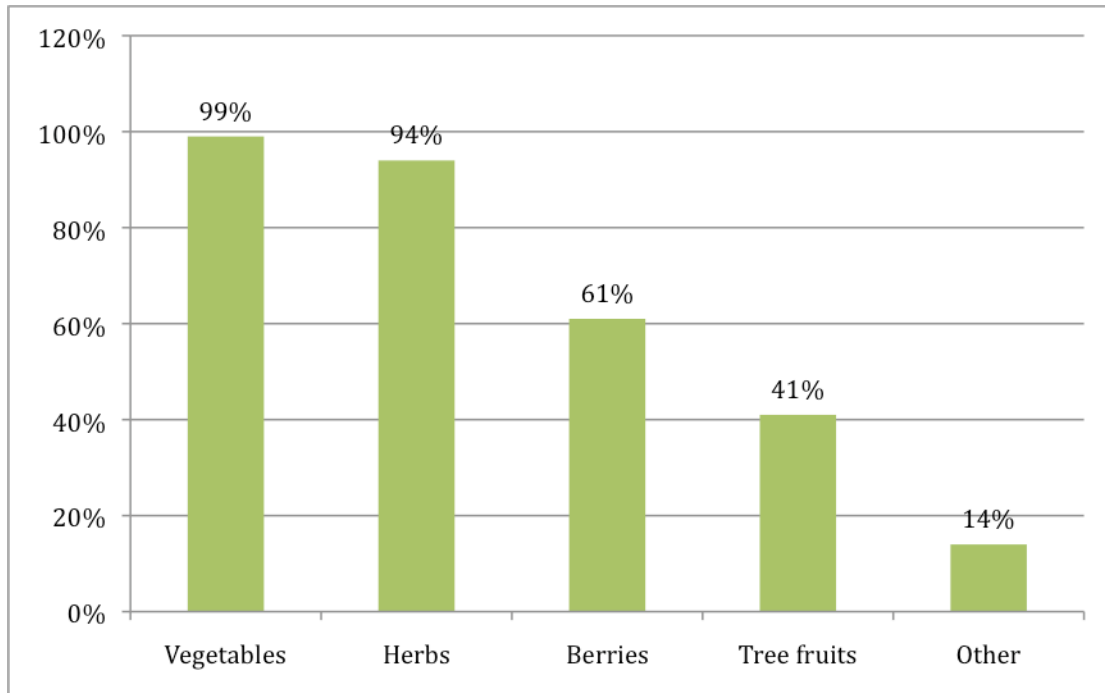


**Figure B.33 Survey 2, Question 1: Are you a home food gardener? N=171**

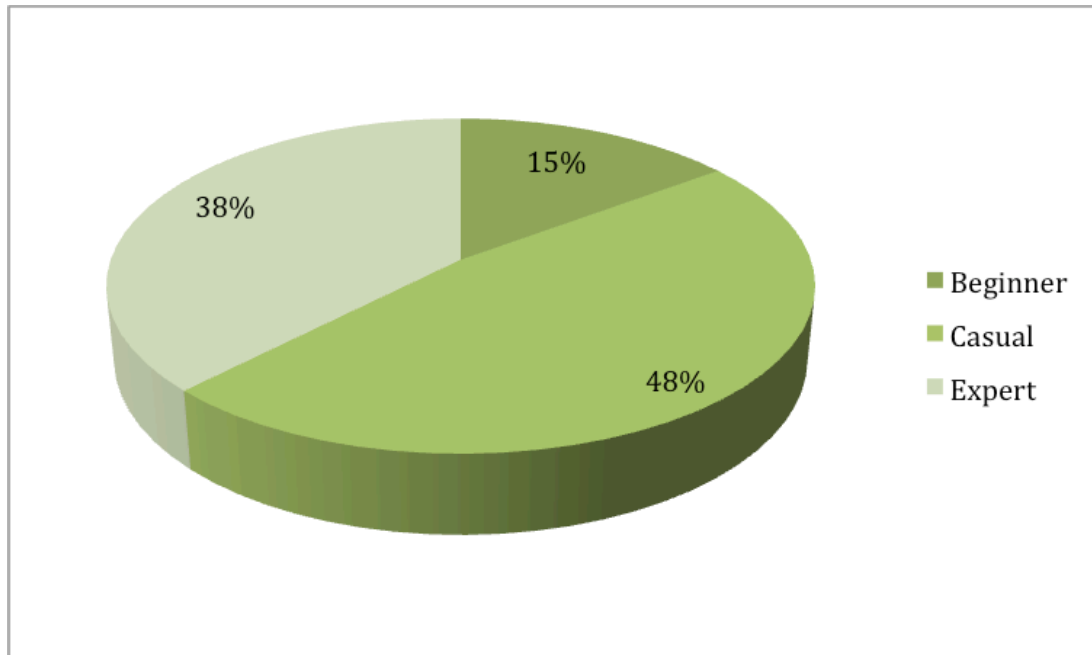




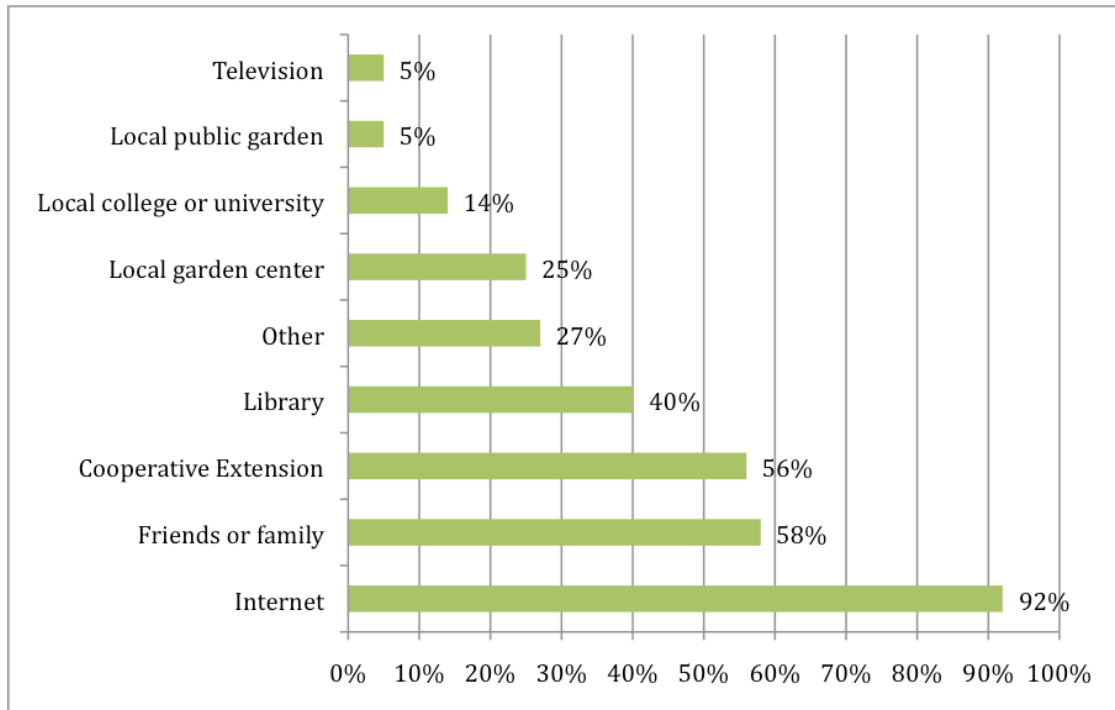
**Figure B.34 Survey 2, Question 2: Why do you grow your own food? (Check all that apply) N=170**



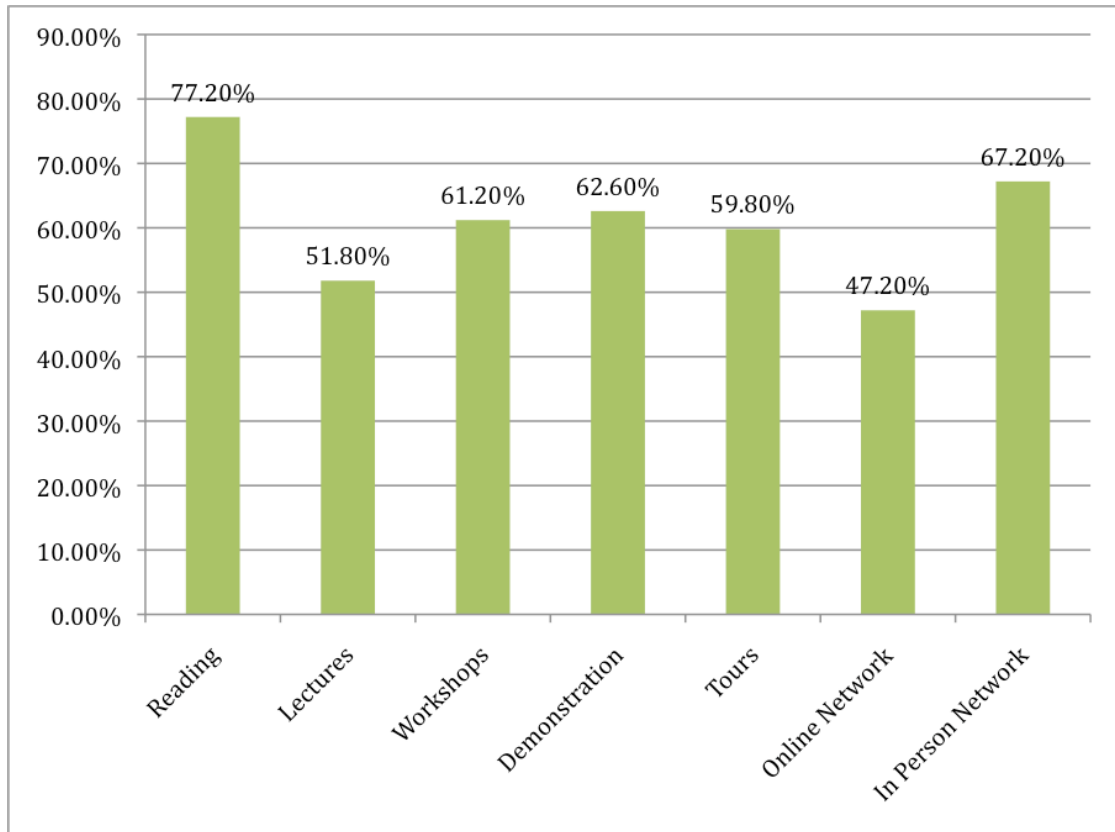
**Figure B.35 Survey 2, Question 3: What types of food do you grow? (Check all that apply) N=170**



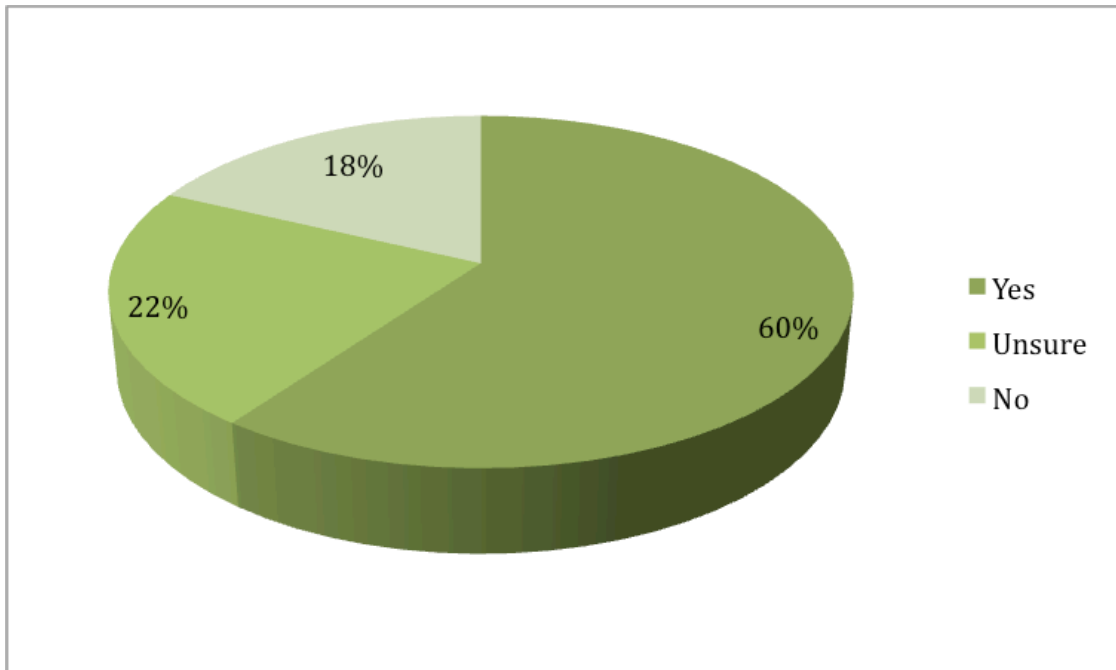
**Figure B.36 Survey 2, Question 4: How would you rate your food gardening expertise? N=170**



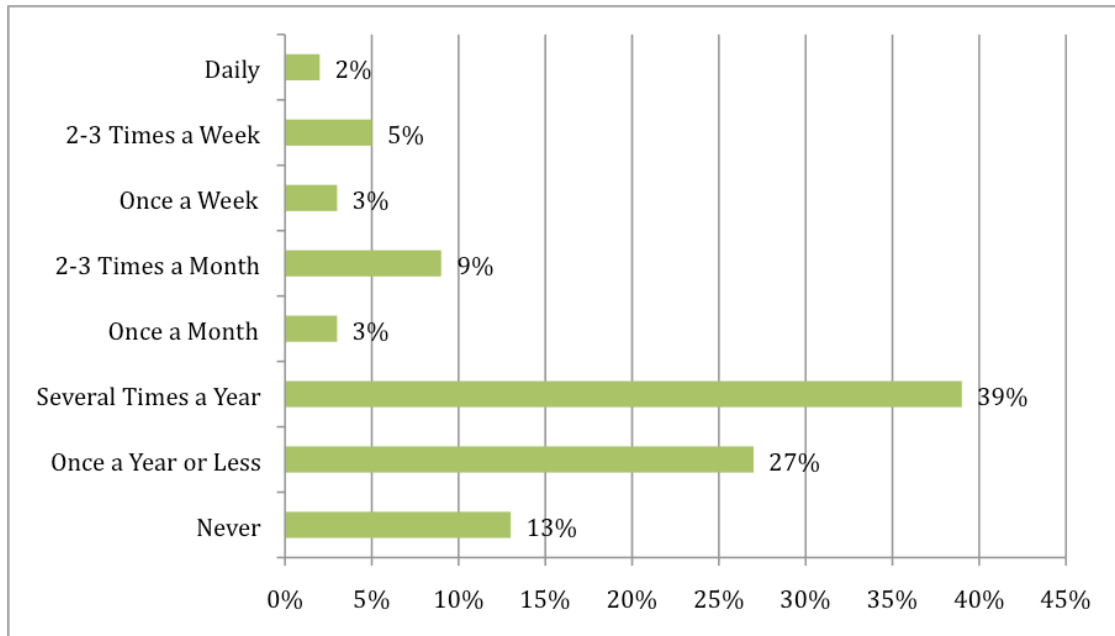
**Figure B.37 Survey 2, Question 5: When you need information about food gardening topics, what sources do you turn to? (Check all that apply) N=169**



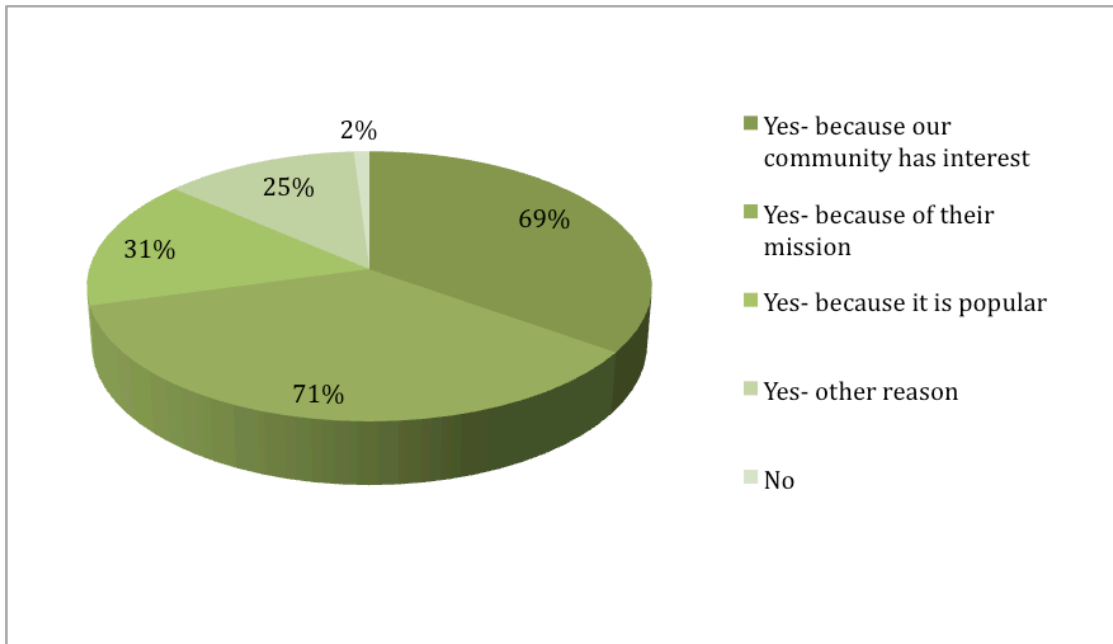
**Figure B.38 Survey 2, Question 6: Please rate your preference toward the following learning methods (in regards to food gardening) N=168**



**Figure B.39** Survey 2, Question 7: Do you live within a commuting distance (30 minutes or less of travel) from a public garden? N=167

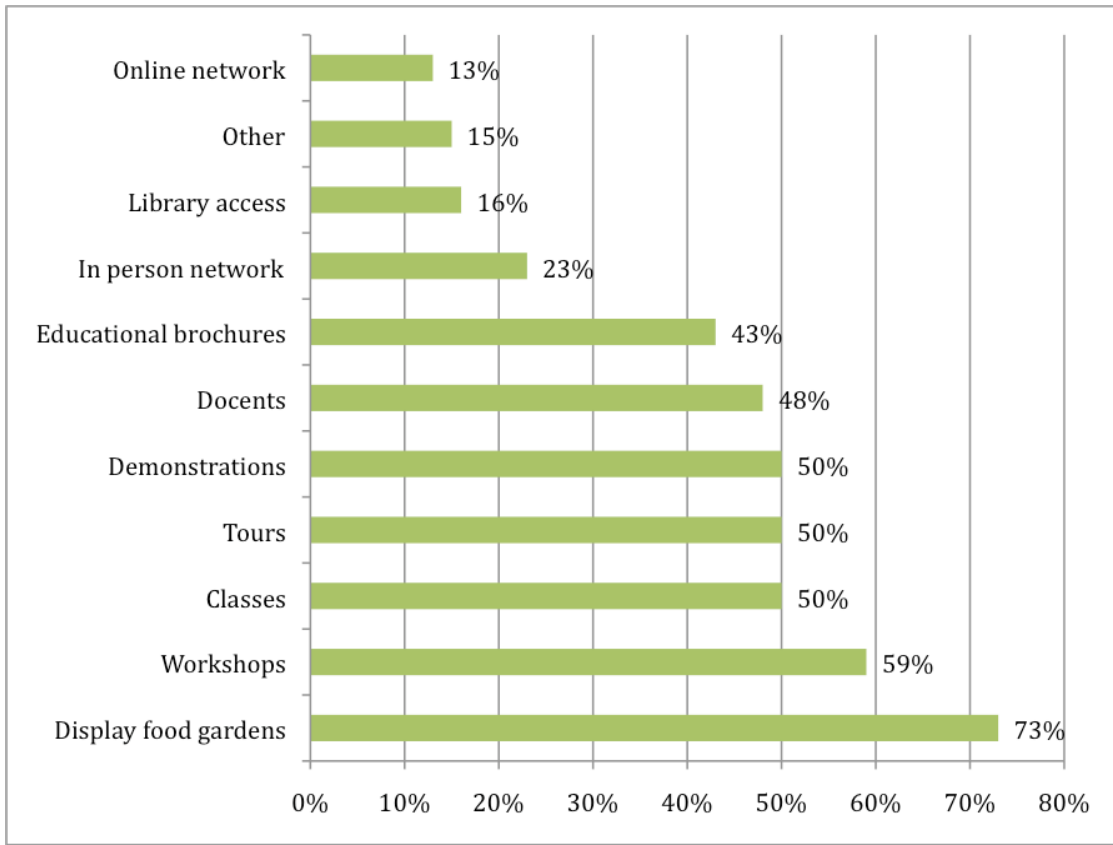


**Figure B.40 Survey 2, Question 9: How often do you visit public gardens, as defined above? N=129**

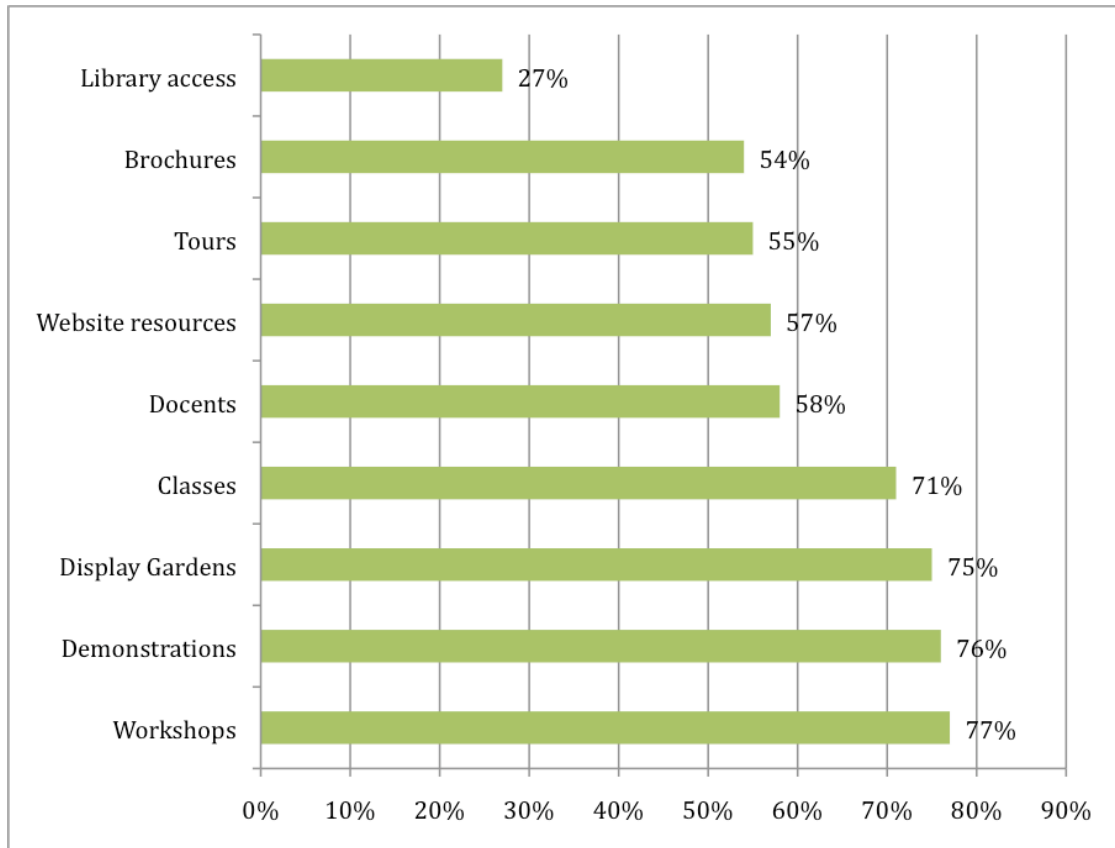


**Figure B.41** Survey 2, Question 10: Do you feel that public gardens should offer educational resources for home food gardeners? (Check all that apply) N=162

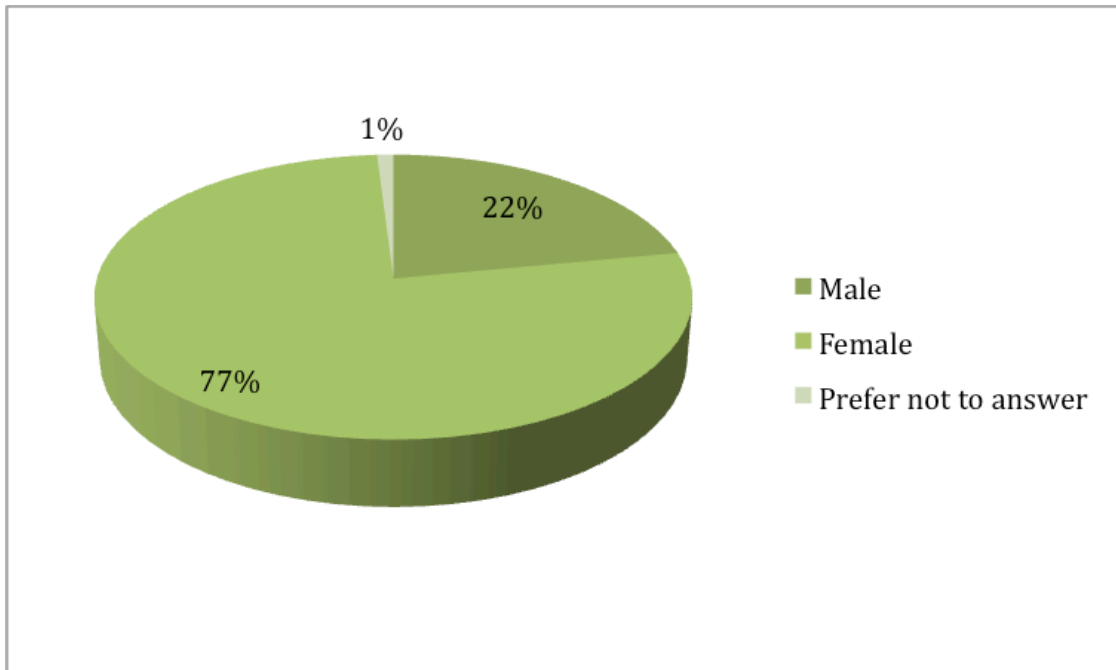




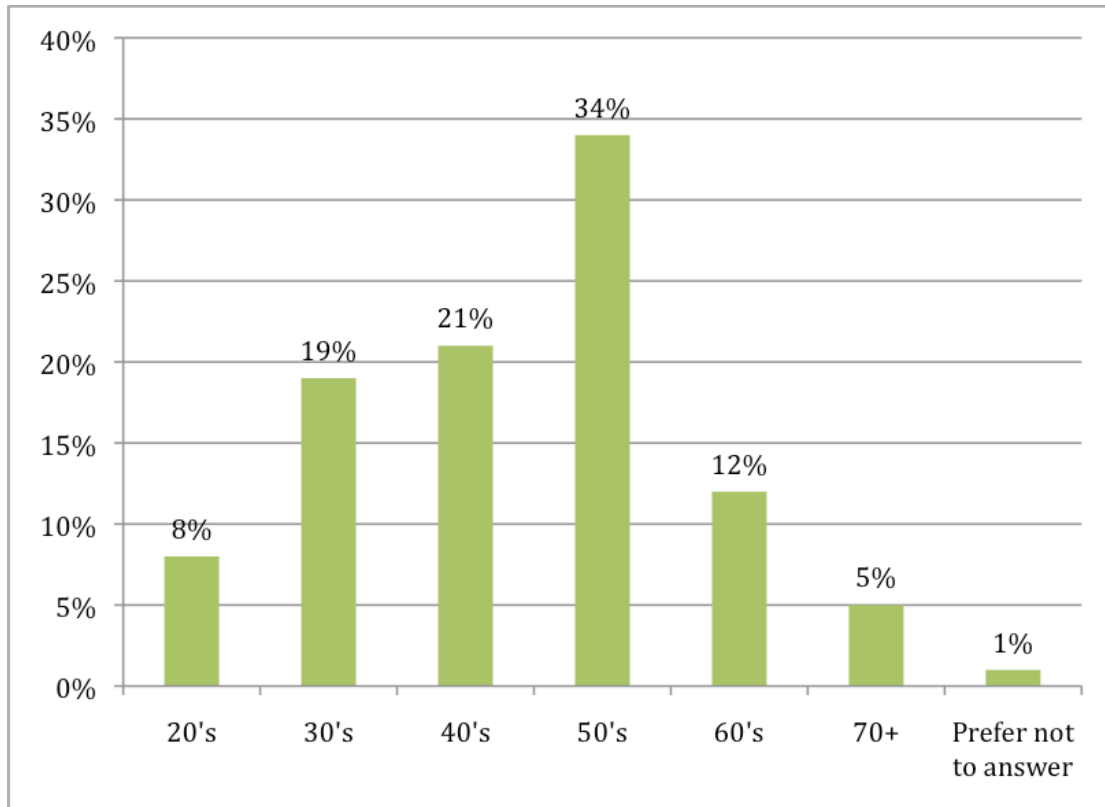
**Figure B.42 Survey 2, Question 11: From your observations, what food gardening educational resources are offered by public gardens? (Check all that apply) N=143**



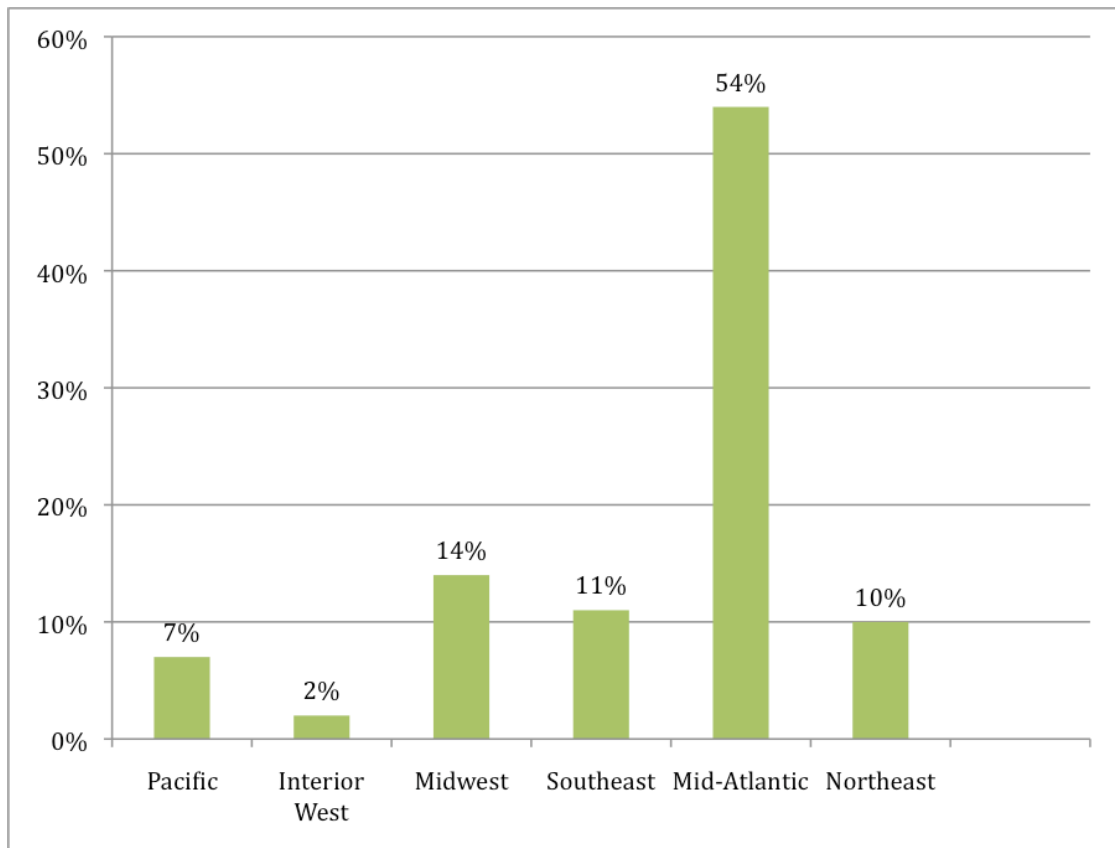
**Figure B.43 Survey 2, Question 12: What food gardening educational resources would you like to see offered by public gardens? (Check all that apply) N=161**



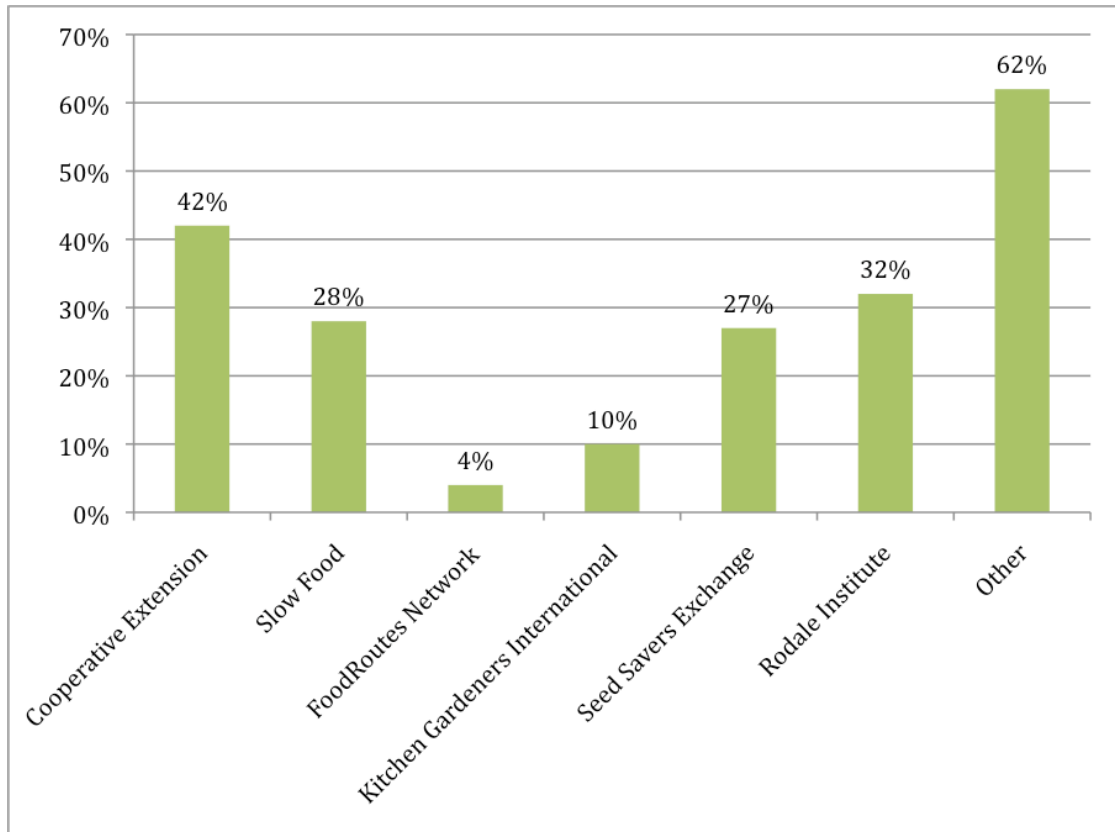
**Figure B.44** Survey 2, Question 13: What is your gender? N=162



**Figure B.45 Survey 2, Question 14: What is your age? N=162**



**Figure B.46 Survey 2, Question 15: In what region are you located? (map provided below) N=161**



**Figure B.47 Survey 2, Question 16: Please select any home food gardening-related organizations are you a part of: (Check all that apply)**  
**N=116**

**Appendix C**  
**CASE STUDY RESEARCH**

**C.1 Huntington Case Study Questions**

**Interview with Kitty Connolly**

1. The nature of the Huntington Ranch is rather unique among public gardens I have visited; it is not open to the public on a regular basis and is used solely for research and educational programming.
  - a. How did this concept come about?
  - b. Do you know of other public gardens or organizations that use this concept?
  - c. What are the challenges and strengths of having this “secret” garden of sorts?
2. The Huntington is a collections-based institution, and I would imagine that classes and other botanical education offerings in the past have focused on collections.
  - a. How do you feel that this new area of education fits within the Huntington’s mission?
  - b. How will the Ranch and urban agriculture fit into current offerings in botanical education, or will they at all?
  - c. What plans do you have for the expansion of your department’s offerings for the Ranch?
  - d. Are you utilizing your usual instructors for these classes, or are you finding that you need to reach out further?
  - e. Do you feel that these educational offerings will attract a different audience than your typical students?
3. The Huntington Ranch is an innovative model that may well be of interest to other public gardens.
  - a. Do you have any advice for public gardens interested in establishing a garden similar in nature to the Ranch?
  - b. Any other thoughts or comments regarding this research?

## **Interview with Scott Kleinrock**

1. General Questions
  - a. How was the initial decision made to create the Ranch?
  - b. How do you think the Ranch will change visitors' perception of Huntington?
  - c. What are your goals and objectives for the Ranch?
  - d. How do you see the Ranch growing in the next five years?
2. Horticulture/Management Questions
  - a. How many horticulturists and volunteers does it take to manage the Ranch? Were additional staff hired?
  - b. If I understood correctly, the Ranch will be managed organically. What are your thoughts on balancing this practice in the face of the high aesthetic expectations of visitors?
  - c. Do you envision having problems with visitors harvesting produce while in the garden?
  - d. Where will the produce from the Ranch go to?
  - e. Can you speak more about the Ranch's research efforts?
3. Education/Programming Questions
  - a. What is your educational plan for the Ranch?
  - b. In my survey to home food gardeners thus far, 89% of respondents have said that they turn to the internet for information on growing food. Are there plans to expand your website to include resources on growing food?
  - c. Methods of learning about food gardening most preferred by respondents of the above survey included the following: reading (print and online material), workshops, and in-person networking. Do you feel that the educational efforts of the Ranch will cover these areas?
4. Partnerships
  - a. In my survey of public gardens, the top food gardening-related organizations that were recognized included: Cooperative extension, Slow Food, Seed Savers Exchange, and the Rodale Institute. Do any of these organizations have representation in your area?
  - b. Have you thought about partnering with an above institution to share resources? What are the opportunities and challenges that may be presented by partnerships?



## **C.2 Powell Gardens Case Study Questions**

1. General Questions
  - a. How was the initial decision made to create the HHG?
  - b. Do you feel that these initial reasons still stand at the end of the first season?
  - c. How do you think this garden has changed visitors' perception of Powell Gardens?
  - d. What are your goals and objectives for the HHG?
  - e. How do you see the HHG growing in the next five years?
2. Horticulture/Management Questions
  - a. From the presentation at this year's APGA Conference in Atlanta, it sounds like extensive research and planning went into the plant selection for the HHG. How are plants doing at the end of the season?
  - b. The HHG is the largest edible garden in the country; how many horticulturists and volunteers does it take to manage?
  - c. If I understood correctly, the HHG is being managed organically. After one season, what are your thoughts on balancing this practice in the face of the high aesthetic expectations of visitors?
  - d. Do you have visitors harvesting produce while in the garden? What %age of the produce from the HHG goes where: the gift shop, restaurant, etc.?
  - e. Agricultural biodiversity and conservation of heritage food crops are becoming hot topics. Do you feel that the HHG will be focusing on these types of plantings at any time?
3. Education/Programming Questions
  - a. Your website has a good amount of detail on the HHG. In my survey to home food gardeners thus far, 89% of respondents have said that they turn to the internet for information on growing food. Have you thought about expanding these web pages to include resources on growing food?
  - b. Methods of learning about food gardening most preferred by respondents of the above survey included the following: reading (print and online material), workshops, and in-person networking. According to your survey response, you've covered the first two categories well. Do you feel that your programs or special events may offer opportunities for food gardeners to interact and share ideas?

- c. How did you decide on the “Food Fest” and “Garden Chef” series? Have these events been successful (in attendance, finances, meeting goals)? What are your plans for next year?
- 4. Partnerships
  - a. In my survey of public gardens, the top food gardening-related organizations that were recognized included: Cooperative extension, Slow Food, Seed Savers Exchange, and the Rodale Institute. Do any of these organizations have representation in your area?
  - b. Have you thought about partnering with an above institution to share resources? What are the opportunities and challenges that may be presented by partnerships?

### **C.3 Brookside Gardens Case Study Questions**

- 1. General Questions
  - a. How was the initial decision made to focus on food gardening for three years at Brookside?
  - b. Do you feel that these initial reasons still stand at the end of the first year?
  - c. How do you think this focus has changed visitors’ perception of Brookside Gardens?
  - d. What are your goals and objectives for this focus on food gardening?
- 2. Horticulture/Management Questions
  - a. After one year, what are your thoughts on balancing the practice of healthy vegetable production in the face of the high aesthetic expectations of visitors?
  - b. Your food gardens are themed by use (sweeteners, grains); how is this working horticulturally?
  - c. What are visitors’ reaction to these gardens? Do you have visitors harvesting produce while in the garden?  
Expected to lose plants, problem here because open at night
  - d. What %age of the produce from Brookside goes where: the gift shop, restaurant, etc.? (40% to food banks, visitors)
- 3. Education/Programming Questions
  - a. Summarize the educational efforts accompanying the display gardens. Have these events been successful (in attendance, finances, meeting goals)? What are your plans for next year?

- b. In my survey to home food gardeners thus far, 89% of respondents have said that they turn to the internet for information on growing food. Have you thought about expanding your website to include resources on growing food?  
Local TV
    - c. Methods of learning about food gardening most preferred by respondents of the above survey included the following: reading (print and online material), workshops, and in-person networking. According to your survey response, you've covered the first two categories well. Do you feel that your programs or special events may offer opportunities for food gardeners to interact and share ideas?
  - 4. Interpretation and advancement
    - a. How did you both prepare for this three year focus on food gardens?
    - b. How do you feel that this has changed how visitors viewed Brookside?
  - 5. Partnerships
    - a. In my survey of public gardens, the top food gardening-related organizations that were recognized included: Cooperative extension, Slow Food, Seed Savers Exchange, and the Rodale Institute. Do any of these organizations have representation in your area?
    - b. Have you thought about partnering with an above institution to share resources? What are the opportunities and challenges that may be presented by partnerships?
  - 6. Outreach/Community Gardens
    - a. Describe your efforts working with the county community gardens.
    - b. How long has this effort been taking place? Would you regard it as successful? How so?

#### **C.4 Brooklyn Botanical Gardens Case Study Questions**

- 1. Herb Garden
  - a. Changes for 2010
    - i. The Herb Garden has changed significantly this year. Can you talk about why the garden was redesigned?

- ii. What were some of the more common questions and comments from guests this year? What would you say was the overall reaction of guests to this section?
  - b. Management
    - i. What are your management practices in this garden, ideally (organic, biocultural, etc.)?
    - ii. What are your thoughts on balancing productive and aesthetic food gardening? Did guests ever complain about the look of the Herb Garden compared to other areas of the garden?
    - iii. Do you ever have guests harvesting produce while in the garden?
    - iv. How is the produce from the Herb Garden used when harvested?
  - c. Working with Education
    - i. Did you find that education staff wanted to use the Herb Garden this year?
    - ii. Education and horticulture departments at gardens can be at odds when it comes to guest interactions with the gardens. Did you have any problems with education's use of the Herb Garden?
  - d. Website
    - i. In a survey of food gardeners, it was found that 89% of respondents preferred to find information about food gardening through the internet. Did you contribute to the BBG webpage on the Herb Garden?
    - ii. Do you ever find that guests refer to the Herb Garden webpage during their visit? Do you recommend it to guests?
  - e. Concluding Thoughts
    - i. Where would you like the Herb Garden to be in five years?
    - ii. Do you have any suggestions or comments for other public gardens that may want to renovate a section of their garden to be similar to the Herb Garden?
2. GreenBridge
- a. Overview of GreenBridge
    - i. When was GreenBridge first created? What are its goals?
    - ii. How does GreenBridge fit into Brooklyn Botanic Garden's overall mission?
    - iii. Can you outline the different programs, events and aspects of GreenBridge?
  - b. Urban agriculture and food gardens

- i. Although food gardening is certainly not the only aspect of GreenBridge, it seems to be a popular topic right now. How much of your programming focuses on food gardening right now?
    - ii. What are the challenges of growing food crops in Brooklyn?
    - iii. How does GreenBridge help Brooklyn residents with these challenges?
  - c. Staff and resources
    - i. How is GreenBridge staffed? Do these staff work solely for GreenBridge, or contribute to other aspects of BBG?
    - ii. What other resources are used by GreenBridge (classrooms, tools, transportation for outreach, etc.)
    - iii. Describe additional staff and tools GreenBridge could use if funds were available.
  - d. Community reaction
    - i. How popular has GreenBridge been with Brooklyn residents?
    - ii. Are the participants in GreenBridge regular visitors to BBG, or a new audience?
    - iii. Are there any unexpected challenges or benefits that have arisen?
  - e. Concluding thoughts
    - i. Where do you see GreenBridge in five years?
    - ii. Do you have any thoughts or suggestions for other public gardens that may be interested in starting a program similar to GreenBridge?
- 3. Children's Garden
  - a. History and background
    - i. The Children's Garden at BBG is one of the oldest of its kind in the country. Can you briefly describe its beginnings?
    - ii. What are the goals of the Children's Garden? Have these changed over the years?
    - iii. Can you overview the teaching efforts in this garden currently?
  - b. Staff and resources
    - i. How is the Children's Garden staffed?
    - ii. What other resources are used by the Children's Garden (classrooms, equipment, etc.)
    - iii. Describe additional staff and tools the Children's Garden could use if additional funds were available.
  - c. Audience

- i. Where are your participants typically from? Are they part of BBG's regular guests?
  - ii. What changes does your staff see in these children over the course of the program? Is it possible to observe any effects on their parents and families?
  - iii. How do BBG guests on the "outside" view the Children's Garden?
  - iv. Have you noticed fluctuations in popularity of this program? How is it doing currently?
- d. Website
  - i. In a survey of food gardeners, it was found that 89% of respondents preferred to find information about food gardening through the internet. Does the education staff contribute to the BBG webpage on the Children's Garden?
  - ii. Does this seem to be a tool used by your students?
- e. Concluding thoughts
  - i. What are the challenges and rewards of this program?
  - ii. Where do you see efforts in the Children's Garden in five years?
  - iii. Do you have any thoughts or suggestions for other public gardens that may be interested in starting a program similar to the Children's Garden?

## **Appendix D**

### **INTERVIEW RESEARCH**

#### **Interview with Rosalind Creasy**

1. Professional Experience
  - a. You have long been a proponent of food gardening/edible landscaping. How did you get started?
  - b. Why do you feel that edible landscaping is an important topic?
  - c. From the time that kitchen gardens were moved around to the backside of the house, food gardens have been treated as purely utilitarian appendages of the landscape. How do you go about overcoming this assumption?
  - d. What are your top three suggestions for combining productive food growth and beautiful design?
2. The Food Gardening Movement
  - a. Food gardening was a part of daily life worldwide for thousands of years. In the recent century of agribusinesses in the U.S., food gardening and experienced rises and falls in popularity as a hobby. Do you think that the most recent rise in popularity is following this cyclical trend, or is it something different?
  - b. Do you feel that there are specific reasons for this topic to be of especial importance today in this country?
  - c. With your line of work, I'd imagine that you have met many food gardeners. Has the typical "profile" for these people changed over the years? How so?
  - d. What challenges may face the success of the current movement?
3. Educational Tools
  - a. The owner of the Landreth Seed Company, Barbara Melera, has recently been quoted saying the following: "without proper education the food gardening movement will fail". Would you agree or disagree with this statement? Other thoughts?
  - b. When you need to increase your knowledge of some area of vegetable gardening, where do you turn to (books, friends, internet, etc.)?

- c. In a survey sent out to various food gardening organizations, participants stated a preference toward networking, both online and in person. Does this surprise you? What are your thoughts?
  - d. Who, or what organizations, should be taking on the charge of educational opportunities in this topic?
  - e. The topic of food gardening cover not only the growth and production of the crops, but also harvesting, processing and cooking. If an organization is taking on one of these topics, how important do you feel it is that they follow up with the other topics as well?
4. Public Gardens
- a. Public gardens in a recent survey have overwhelmingly agreed that food gardening is in line with their mission. Yet at the same time, many hold these organizations to high expectations of beauty and perfection (not always in line with production). Do you feel that this challenge can be overcome? How?
  - b. How does one approach an edible landscape, to be experienced through taste, in a public setting where it is potentially unsafe, and detrimental to the garden to do so?
  - c. You have helped to design edible landscapes at public gardens, such as Powell Gardens in Kansas City. How did your designing process differ for a public vs. a private space?
  - d. What are your thoughts on the Ranch at Huntington?
  - e. These public edible landscapes can serve as great educational tools for the public through a variety of means- talking to the gardeners, reading signs, cell phone tours, etc. In your experience, how would you best learn from one of these public edible landscapes?
  - f. While demonstration or display edible landscapes are a popular and successful tool for public, not all have the space or money to complete such a project. What are other ways that public gardens could support this movement?
5. Do you have any other thoughts or suggestions for this research?

### **Interview with Margaret Falk**

- 1. Horticulture
  - a. Describe the planning that went into the physical design and installation that went into the Edible Garden display.
  - b. Did you work with the authors for the authors' gardens? Any thoughts on the interaction? What was the goal for maintenance of the EG (organic, ipm, etc.)



- c. What were the final themes for the sub-sections of the EG?
  - d. Were there particular aspects of plant varieties that figured into their selection for the EG (heirlooms, new varieties, exotic, etc.)
  - e. Day to day management
    - i. What are your thoughts on balancing productive and aesthetic food gardening? Did guests ever complain about the look of the EG compared to other areas of the garden?
    - ii. Did you have guests harvesting produce while in the EG?
    - iii. How was the produce from the EG used when harvested?
    - iv. What were some of the more common questions and comments from guests in the EG? What would you say was the overall reaction of guests to this section?
  - f. Working with education
    - i. Did you work with public education and events to plan the content of the EG?
    - ii. Education and horticulture departments at gardens can be at odds when it comes to guest interactions with the gardens. Did you have any problems with public education or event's use of the EG?
  - g. Concluding thoughts
    - i. Would you recommend that NYBG offer this type of temporary garden in the future? Why or why not?
    - ii. Do you have any suggestions or comments for other gardens that may want to plan an EG for their space?
2. Public Education
- a. the educational efforts accompanying the EG.
  - b. Have these efforts been successful (in attendance, finances, meeting goals)?
  - c. What age and interest groups were the education efforts geared toward (youth, family, urban farmers, beginning veggie gardeners, etc.)?
  - d. Types of education offered
    - i. In my survey to home food gardeners thus far, 89% of respondents have said that they turn to the internet for information on growing food. Did you contribute to the website and blog efforts accompanying the EG? How was the traffic for these webpages?
    - ii. Methods of learning at public gardens by respondents of the above survey also included the following: reading (print and online material), workshops, and in-person networking. Do

- you feel that your programs offered opportunities for food gardeners to interact and share ideas?
- e. Working with horticulture
    - i. Did you contribute to the physical layout and design of the EG?
    - ii. Education and horticulture departments at gardens can be at odds when it comes to guest interactions with the gardens. Did you have any problems with horticulture allowing you to use the EG?
  - f. Concluding thoughts
    - i. Would you recommend that NYBG offer this type of temporary garden in the future? Why or why not?
    - ii. Do you have any suggestions or comments for other gardens that may want to plan an EG for their space?
3. Events
- a. Cooking Demonstration set-up
    - i. Summarize the preparation that went into installing the kitchen demonstration area.
    - ii. How did you go about securing chefs for the cooking demonstrations
    - iii. How were these events supported financially? Can you describe how you gained partnerships with culinary companies?
  - b. Farmer's Market
    - i. What is the goal of the farmer's market?
    - ii. When did NYBG begin offering a farmer's market? How was this event put together?
    - iii. How is this event supported financially?
    - iv. Where do the contributing farmers come from?
    - v. Where do the customers come from?
  - c. Concluding thoughts
    - i. Are there additional events that were planned around the EG?
    - ii. Would you recommend that NYBG offer this type of temporary garden with accompanying events in the future? Why or why not?
    - iii. Do you have any suggestions or comments for other gardens that may want to plan an EG and accompanying events for their space?