

Community Gardening in Trenton, NJ Harvest Report

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The community development organization Isles was our local partner in this project.



Overview

This report summarizes research on the state of community gardens in Trenton, New Jersey, with a focus on the production and distribution of food. The specific aims of this project were to measure the quantity of food grown in community gardens and to learn how gardeners distribute and use the harvest. The broader goal of this ongoing research is to understand the roles and impacts of community gardens in building food security for households and communities. The project involved three components, all conducted in the summer of 2009:

- 1) On-the-ground survey of community gardens throughout the city of Trenton.
- 2) Weighing of harvest at four gardens in different sections of the city.
- 3) Interviews with gardeners about the distribution of harvest, as well as interviews with garden support staff.

This report is organized in the following sections:

- ***Acknowledgments***
- ***Introduction: Community gardening and urban resilience*** – An introduction to the issues explored in this report and the recent history of community gardening in Trenton.
- ***Methodology*** – A description of the research methodology.
- ***The garden tour*** – A photo essay tour of six different gardens, which introduce broad patterns of gardening and related activities.
- ***Production*** – Estimates of the quantity and economic value of food grown in community gardens in the city, based on the survey and weighing.
- ***Distribution and conclusion*** – A summary discussion of patterns of food distribution and community gardens' roles in urban food systems.
- ***Appendix*** – Survey and interview forms used in the study.

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Our local partner for this research in Trenton was the community development organization Isles, which supports virtually all community gardening in the city. At Isles, environment and health director Elyse Pivnick and garden staff director Meredith Taylor helped organize the project. Meredith, garden staffer Jim Simon, and summer interns Vanessa Kennedy (Rutgers University) and Reilly Kiernan (Princeton University) collaborated with us in all phases of the research. Chief Operating Officer Liz Johnson, founder of Isles' multi-garden activities, and Elyse provided valuable institutional memory; research director Leigh Gibson assisted with our research design; and Julia Taylor provided key spatial data. Isles founder and president, Marty Johnson, assisted in editing this report, elaborating its account of the organization. Together, Isles' gracious staff helped orient us to community development and gardening in Trenton, and made this summer's research a smooth and pleasurable experience.

We could not have calculated the volume of food produced in Trenton gardens without the help of gardeners who weighed their harvest at four gardens:

- Academy II Community Garden.
- Chestnut Street Community Garden.
- Rivera Elementary School Garden.
- Shards Community Garden.

Finally, we thank the many gardeners who generously took time to introduce us to their gardens, recount their histories, and inform us of their distribution patterns. It is to them and their efforts to feed fellow Trenton residents that we dedicate this study.

Introduction: Community Gardening and Urban Resilience

City planners and environmentalists view community gardening as a big part of urban sustainability. From city halls to the White House, government and advocates have recently envisioned urban agriculture as a strategy to address health, environmental, and economic problems in U.S. inner cities. Community gardening is by far the largest part of urban agriculture, dwarfing the newer urban farms in both production and the number of people engaged in growing food. In most cities, community gardens provide more fresh produce to people in poor urban neighborhoods than farmer's markets or urban farms. Yet we know relatively little about the contribution of community gardens to the diets and food economies of urban households and neighborhoods. This research aims to help close these gaps in our understanding of the relationships between community gardening and community food security.¹

This report is part of a three-city study that also includes Philadelphia, PA, and Camden, NJ, measuring vegetable production and tracing food distribution and other impacts of community gardens. In the Philadelphia report we focused on the recent decline of gardens and garden support systems, the vast scale of production, patterns of land use and ownership, and the porous boundaries between urban farming and gardening. The Camden report recounts the recent growth of gardening in that city, concentrating on the diverse ways people and community-based organizations employ gardening as one of many limited strategies to combat hunger in one of America's poorest cities. This report on Trenton, like those on Philadelphia and Camden, summarizes the recent history of community gardening in the city, our findings on food production and distribution, and introduces readers to a cross-section of gardens and gardeners. It also affords an

¹ Community food security is a state in which all people access adequate, safe, healthy, culturally appropriate food. Overviews of the research and literature on the links between urban agriculture and public health include: Kate H. Brown and Andrew Jameton, "Public Health Implications of Urban Agriculture," *Journal of Public Health Policy*, vol.21, no.1 (2000), 20-39; Anne Bellows, Katherine Brown, and Jac Smit, "Health Benefits of Urban Agriculture," Community Food Security Coalition North American Initiative on Urban Agriculture (2004).

opportunity to examine community gardening in the context of urban sustainability, neighborhood stabilization, and resilience.

Food security is a fundamental part of building resilient cities. Urban resilience is the ability of cities and communities to adapt to change, including the social and economic challenges wrought by deindustrialization and the more recent crises of climate change, energy, and public health. (In a sense, “resilience” is a more critical, sophisticated way of understanding “sustainability,” a term whose meaning has been diluted.) Community gardening helps address all of these problems, to varying degrees.² Gardens account for one of few streams of fresh, healthy vegetables and fruit entering inner cities. Since supermarket shelves contain on average enough food to feed urban populations for just five or six days, gardening represents a redundancy in the urban food supply, though for a limited number of people (especially for those who preserve vegetables for winter). With the significant rise in food prices in the last few years, community gardening also can help to offset some of those increases in the household food budgets of inner city residents – those who grow and people with whom they share the harvest. Gardens also play significant roles in neighborhood revitalization, cultural preservation, air and water quality, and other social, cultural, and ecological dimensions of resilience.³ Community gardening in Trenton offers a useful window into these and other aspects of urban resilience and community food security.

In Trenton, Isles is the community development organization that oversees community gardens. Overall, the mission of Isles is to help people in Trenton build self-reliance, restore the environment, and grow assets. In different words, this is an agenda for urban

² The links between community gardening and urban resilience have been explored in: William Rees, “Why urban agriculture?” (Vancouver: Urban Agriculture Notes, 1997) at City Farmer, <http://www.cityfarmer.org/rees.html>; Keith Tidball and Marianne Krasny, “From Risk to Resilience: What Role for Community Greening and Civic Ecology in Cities?” In Arjen Wals, Ed. *Social Learning Towards a Sustainable World: Principles, Perspectives, Praxis* (The Netherlands: Wageningen, 2007).

³ See for example, Jeffrey Hou, Julie Johnson, and Laura Lawson, *Greening Cities, Growing Communities: Learning from Seattle’s Urban Community Gardens* (Seattle: University of Washington Press, 2009); Bellows, Brown, and Smit, op. cit.

resilience. The name Isles is a metaphor for small-scale, self-sufficient urban development. Founded in 1981 by students and a professor from Princeton University, it has become a model diversified community development organization with over 65 employees at five locations in Trenton. Its services fall into four core building blocks for self-reliance:

- community revitalization (including affordable housing and open space development and community planning);
- training and education (including an alternative high school for education and job training, and for adults, green job training and placement);
- wealth creation (small business training and lending, a startup enterprise for environmental cleanup and weatherization of homes, and savings accounts) and
- environment and community health (urban agriculture, environmental hazard remediation) .

Community gardening was one of Isles' first activities. It also includes environmental and nutrition education in schools, farm to school connections and food security education.

Isles got into community gardening through recognizing that vacant land brings opportunity for food production - an important part of self-reliance for households and communities. They also realized that gardening can be an effective community organizing tool that brings people together. It started with a single garden in 1981. The following year, leaders at Isles hired current Chief Operating Officer Liz Johnson, who formerly worked for Rutgers Agricultural Extension's urban gardens program in Newark, to start a full-fledged service in Trenton. She helped plant twelve more gardens that year, and by the time she left to work for city government in 1991 the organization was supporting 60 gardens. Isles supplied fencing, seeds, seedlings, and sometimes rototilling, and arranged for soil testing through Rutgers, truckloads of soil and compost, and City permits to use nearby fire hydrants. The organization would marshal volunteers for a big workday to start a garden, and to help out in senior citizens' gardens. For a time, Isles ran a citywide garden contest, and it still runs an annual bus tour of Trenton gardens.

Isles holds an annual Harvest Dinner, although it has grown into an annual awards dinner that celebrates the “harvest” of all of Isles’ programs, including local unsung heroes in housing, education, and other areas. The scope and focus of Isles’ urban agricultural work has evolved over time. In 2010 and beyond, Isles expects substantial growth in this area, given the increased interest and demand for local food production in urban areas.

In the 1990s and 2000s, urban gardening programs experienced important changes across the United States, as public and philanthropic funding for community gardening declined and a generation of gardeners aged and many passed away. The City of Trenton, for example, gradually cut Community Development Block Grant funding to Isles’ gardens, a pattern we have also observed in Philadelphia.⁴ Isles began working on brownfields remediation and other issues of environmental justice and restoration. With Liz Johnson’s help as the head of parks for the City of Trenton, it succeeded in preserving three of the city’s largest community gardens as part of the municipal park system. Today, Isles’ gardening and environmental education staff supports 32 community and school gardens, a decline in number of sites from the early 1990s, although most of the sites that were lost through budget cuts were small. Today, the number of sites and acreage is again on the rise, especially as Isles expands into school gardens and nutrition education.

Gardeners in Trenton are diverse in age and ethnicity, though community and school gardens are generally concentrated in the city’s poorer neighborhoods. Almost 75% of these gardens are located in census tracts where the median household income is below 200% of the poverty line. In a telephone survey of 39 gardeners conducted by our colleagues Vanessa Kennedy and Reilly Kiernan in 2009, 56% reported household incomes below \$20,000, and 71% below \$30,000. One third worked full time, 45% were retired or disabled, and the rest worked part time or were seeking work. All but 11% had a high school diploma or GED; and 22% had a college degree. Trenton has a very low literacy rate, but gardeners tend to have higher education levels than the city’s average.

⁴ For more in-depth analysis of the decline of community gardening and related support in the 1990s-2000s, see our report on Philadelphia.

Almost four-fifths of those participating in the survey of gardeners were black, including African Americans and immigrants from Africa and the Caribbean; while 10% were South and East Asian; 5% Hispanic; and 5% white. These figures are similar to the ethnic and racial distribution of adults we met in the gardens, who included immigrants from Jamaica, Liberia, Bangladesh, and Costa Rica, as well as Puerto Ricans and black Americans who came from the South. Gardens are an important source of vegetables and fruit for migrants whose “specialty” crops are not readily available at the supermarket.

The great majority of community gardeners are older people, though the students who tend Trenton’s six school gardens, of course, buck that trend. Still, not many children participate in gardening with their families. Of the 39 gardeners surveyed, 55% are women. Isles staff and gardeners reported that African American women tend to be the leaders of community gardens in Trenton, whereas men more often lead gardens in Philadelphia and Camden’s African American neighborhoods.

Also unlike community garden programs in other cities, Isles’ gardens are focused on both improving food access and building skills and self-reliance. This is manifested in school-based efforts, summertime environmental education in the city’s parks, and in spring and fall distribution of seedlings so gardeners can extend the growing season. Isles staff described gardening as an important life skill that saves people money, and through which people take control of at least a portion of their food supply and their neighborhood environment.

As Liz Johnson related, Isles’ leaders do not view their work as social service. They do not help Trenton residents enroll in Food Stamp or other food relief programs. Indeed, they try to avoid the use of the words *clients* or *programs* altogether, choosing instead to describe their work as offering products or services that people choose to use.

However, the community gardening program does support a great deal of charitable activity. Virtually all of the 22 community gardeners we interviewed in person in

Trenton share their harvest with neighbors and friends. They have extensive donation networks, most of which are informal, though sometimes gardeners will grow a row expressly for a soup kitchen. When gardeners have a surplus of crops, they sometimes contact Isles garden staff, who may pick up the vegetables and deliver them to a soup kitchen or food bank. This summer, one garden in the Isles network was harvested almost exclusively for food cupboards.

Even within the small city of Trenton, community and school gardens take a variety of forms and grow a range of crops that are distributed in diverse ways. They range from a peace garden in a rough neighborhood to gardens in parks to a garden where a woman helps young mothers develop life skills. Roughly two-thirds of the community gardens are on City land, technically rented for \$1 per year, while most of the rest are on private land, usually owned by a community-based organization. Urban institutions plant gardens for different reasons and engage many sorts of people. In Trenton, gardens are especially prevalent at public schools of all levels and at subsidized housing sites, including a large public housing project, senior housing developments, and a homeless shelter for teens.

The diversity of Trenton community and school gardens is reflected in the “garden tour” section of this report, which visits a cross-section of the city’s gardens and explores their various roles in growing food security and urban resilience. This tour follows a brief description of our research methodology, which begins on the next page. The remaining sections of this report summarize the broad patterns of food production and distribution from Trenton community gardens.

Methodology

The fieldwork for this study consisted of three distinct parts. Penn researchers worked with Isles' garden staff, Jim Simon and Meredith Taylor, and summer interns Vanessa Kennedy and Reilly Kiernan on each part.

1) Site Survey

The goal of this task was to map community and squatter gardens growing food in Trenton in 2009 and to document summer vegetable production as comprehensively as possible. Isles staff support virtually all community and school gardening in the city/ Through inquiries to other community organizations and gardeners, we identified a total of 29 active community and school gardens growing vegetables. In late July and early August, when summer crops are generally at their peak size, the research team measured the square footage of each vegetable crop under production at those 29 gardens. These measurements, coupled with the next part of data collection, enabled us to estimate food production in community gardens citywide. Information recorded in this site survey also included the total area of the garden property, water sources, presence of fruit trees, and other data. Site survey forms are included as Appendix 1.

2) Weighing Harvest

In order to provide a basis for estimating the productivity by weight and dollar value of the food production tallied in the site survey, we arranged with gardeners and support organizations at four gardens to weigh the harvest from selected plots. These included gardens in four different neighborhoods, with diverse soils, growing conditions, gardeners, and institutional arrangements (or lack thereof) – and constitute a representative cross-section of Trenton's community and squatter gardens. They were:

- Academy II garden in the Hanover Academy neighborhood
- Three gardeners at the Chestnut garden in the Train Station district
- Rivera Elementary School garden in the Battle Monument district
- Shards garden in the Chambersburg neighborhood

Gardeners weighed their harvest by crop, recording their tally, sometimes with the assistance of our research team. Isles staff and Penn researchers collected tally sheets on a regular, usually bi-weekly basis. These figures were employed in calculations to estimate the average productivity of different crops. These averages were then used to estimate the production of all other gardens in the site survey. The results and more details of the assumptions behind this part of our methodology are discussed in the production section of this report. In sum, we consider this a conservative calculation of both the volume and dollar value of food grown in community gardens in the summer of 2009, especially since we did not count spring or fall crops and did not include the harvest from fruit trees or bush and cane berries in our calculations (we did include strawberries). Our estimates of the number of servings gardeners harvested are reported below in terms of how many people could eat their recommended three servings of vegetables daily, across the approximately three-month period of peak summer vegetable harvest (July through September in the Trenton area). Although most Trenton gardeners harvest food from their garden across a much longer season, this roughly represents the season of peak harvest for the summer crops we tallied.

3) Interviews

Penn researchers and Isles staff conducted 22 formal interviews with gardeners at a cross-section of Trenton gardens – of every size, ethnic group, institutional arrangement (or lack thereof), and section of the city. We also interviewed past and present garden staff at Isles. These interviews focused on the history, organization, production and distribution of food from the gardens, as well as the history of Isles' community development work and the broader food environments of Trenton neighborhoods. The results are discussed in the introduction, garden tour, production, and distribution sections of this report. The list of interview questions is included as Appendix 2. The separate telephone survey of 39 gardeners by Reilly and Vanessa focused on demographic data that offers an important complement to the information collected in these interviews.

The garden tour

Community gardens in Trenton take many forms, grow many things, and involve all sorts of people. This tour visits six gardens, which together represent a cross-section of land use, institutional, and food production and distribution patterns. They illustrate some of the various economic, social, environmental, and health impacts of urban gardens.

STOP 1: *Chestnut Street Garden*

Every spring oxen from the Howell Living History Farm outside Trenton plough the Chestnut Street Garden, located around the corner from the city's train station. An environmental education opportunity, Isles encourages school children to join this Spring Tillage event, which marks the official start of the gardening season.



Students from Grant Elementary School at Isles' Spring Tillage event.

The gardeners at Chestnut are mainly African Americans who live in the neighborhood and several immigrants from Bangladesh who commute to the garden from nearby Hamilton Township. A white couple who recently moved to the area began gardening there this year, as well. Chestnut is Trenton's largest garden, where people can find big plots to grow significant amounts of food. We estimate that the gardeners produced 4,190 pounds of vegetables this summer, worth \$8,800.



The garden in mid-summer.

The largest crops were corn, tomatoes, Bangladeshi gourds, and peanuts. We tabulated 1,123 pounds of beans , 658 pounds of corn and 489 pounds of squash. This translates into 6,177 servings of beans, 1,105 servings of corn, and 2,910 servings of squash. Assuming an optimum of 3 servings a day of vegetables, the quantity of these three vegetables alone provided 10,192 servings of vegetables or enough to provide about 38 people all the fresh vegetables needed during the three-month period of peak summer harvest.

The head gardener at Chestnut is Betty Fleming, who has recently served on Isles' board. Miss Betty grew up in South Carolina, moved north to New York City, and then to Trenton in 1973. Across from her new house was a vacant lot whose caretaker allowed Betty to garden in return for the harvest she shared with him. Each year, she expanded the garden, and in 1981 she contacted Isles for help to clean up the rest of the lot, removing old cars and tires so other neighbors could plant their own plots. In the 1990s, from her position in city government Liz Johnson worked with Isles to integrate the site into the city's park system, preserving it for gardening along with two other gardens.

Miss Betty enjoys cooking and finds gardening relaxing. She loves picking her tomatoes, which she finds really sweet. She freezes tomatoes and okra, and cans hot pickled peppers. On Saturdays and Sundays she bags tomatoes and gives them to her neighbors who need help. She also gives away collards to the neighbors who are mainly elderly women in the interfaith community. The gardeners gladly share their harvest, says Miss Betty. The only rule is that people have to ask – you can't just take it.



A gardener in his peanut patch.

Another longtime gardener at Chestnut, John, grows a lot of greens and gives much of his harvest to people in the seniors housing complex where he lives. This summer, he planted a big patch of melons, which he piled in his pickup truck and drove down to Georgia, where he grew up. He talked about selling them there, but mostly he just wanted to show people how productive his garden is in Trenton.

Yolanda moved away from the neighborhood last year, but still gardens at Chestnut. She freezes squash, greens, eggplant, and corn, which lasts “at least past Christmas.” But she prefers to eat her harvest fresh. “Whenever I pick, I usually cook it right then.” In the summer, she buys much less produce at the store. She has seen how high food prices have rose in recent years, and is thankful for how much gardening reduces her grocery bill, even if she doesn’t keep an exact tally.

Her husband and kids don’t like eggplant, so Yolanda gives a lot of that away to neighbors. She estimates that she gives away “at least 75%” of her overall harvest, mostly to neighbors. “If I see someone, or if someone asks me for something... if it’s there, I will give it.” When she lived next to the Chestnut Garden, she would place harvested vegetables in a blue plastic wagon and park it in front of her house as people arrived home after work, so her neighbors could take what they wanted. “I feel more comfortable” giving the food to neighbors she knows, says Yolanda, as opposed to the more anonymous experience of donating to food cupboards, partly since she knows what her neighbors are going through, the challenges they face getting by.

In its impacts on gardeners’ household budgets and control of at least a portion of their food supply, the garden helps promote self-reliance. But its impacts extend well beyond the food, to the broader social, economic, and ecological resilience of the neighborhood. “It’s beautiful to look at,” remarked Yolanda. It’s “something else” to watch it grow. Her kids used to think food just came from the store, but the garden has shown them otherwise. For the adults, she noted, it’s therapeutic to dig in the soil, and gardening offers a quiet time to relieve tension from the stresses of everyday life.

The Chestnut Garden has helped stabilize a neighborhood that still has some vacancy but is beginning to experience gentrification pressures. Yolanda echoed other gardeners' view that it "brings some kind of pride to the neighborhood." For older residents, it is a place beyond their own properties where they have taken control of the neighborhood environment, replacing an old dumping ground with a community asset. The garden has also been one of few places where new and old residents have come to know one another. The newest gardeners, a white couple, told us they started gardening to know their community better and gain a sense of belonging, and to get their hands dirty and grow more of what they eat. Though some tensions existed when new gardeners first arrived, through personal contact and watching each other cultivate different crops they have gained a greater understanding and respect for each other's cultures and contributions to the garden and the neighborhood. Many of these same impacts on neighborhood stabilization are evident at the next stop on our tour, as well.



A gardener from Bangladesh shows off his bitter melon crop.

STOP 2: *Shards Garden*

The Shards Garden fills one of those spaces in the city that, like Chestnut, used to be a good spot for dumping. It is in the middle of the block, ringed by houses and garages on all sides. Started a decade ago, it is cultivated by a group of men from the immediate neighborhood. Isles supplied wood for raised beds, soil, mulch, and fencing. Two of the gardeners have planted fruit trees, shrubs, and flowers in the alleyway leading from the street to the garden, beautifying a former eyesore and making the entire space one of those green urban oases that community gardens often are. They keep the paths mowed, and nobody dumps here any more. The head gardener, Juan, lives in one of the homes adjacent to the garden. He works his plot in the morning and evening, and keeps a close eye on the garden.



The alleyway with fruit trees, flowers, and shrubs. The house at the left was being renovated by the end of the summer.

With one exception, all of the gardeners come from Puerto Rico, where they learned to farm as boys. The Chambersburg neighborhood was historically an Italian enclave, but Italian families have been moving to the suburbs in recent decades. The area has subsequently become home to Puerto Ricans and now Mexicans and more affluent Anglos. As at Chestnut, the work of neighborhood residents reclaiming and beautifying spaces like the Shards Garden has helped reverse the area's physical decline. At the beginning of the summer, one of the twin houses adjacent to the garden and the alley stood vacant. By the end of the summer, contractors were renovating the home.

The gardeners get some of their bean and pigeon pea seeds from Puerto Rico, as well as some seedlings and seeds from Isles. They dry their bean harvest for cooking throughout the year, and save some seeds for planting the following spring. All of the gardeners freeze a portion of their peppers, beans, and other crops. Juan keeps rabbits and fertilizes his crops with their droppings.



A gardener in his plot, with roughly one quarter of the garden visible in this photo.

We estimate the gardeners at Shards harvested a total of 1,950 pounds of vegetables, worth \$4,100 in aggregate. Their top crops included 570 pounds of tomatoes, 550 pounds of squash, and 426 pounds of beans. The quantities harvested of these three vegetables alone represent a total of 8,409 servings, or enough to provide all the vegetables needed for 31 persons during the three months of summer. Juan expressed that the garden is important for people's everyday access to fresh vegetables, especially the pigeon peas and beans central to Puerto Rican cooking.

Juan derives genuine pleasure from sharing the harvest with everyone, neighbors and strangers alike. He doesn't much mind that kids sometimes steal the food, but he doesn't like the fact that they jump the fence, and he hates it when they waste the tomatoes by throwing them at each other. He would like them to learn to ask for the food, which he would gladly give. Indeed, sharing the food is a vital part of what it means to garden, in his view. Juan recounted an incident in which someone asked one of the other gardeners for a bunch of cilantro, but he refused. The other gardeners viewed this as a serious transgression, violating a sort of social code that many community gardeners share.

The Shards and Chestnut gardens illustrate some of the many ways in which community gardens are vital sites for community building. They have aided informally in their neighborhoods' social and physical transformation, providing space for older, often less affluent neighbors to remain rooted in the community and for new neighbors to put down new roots, both literally and metaphorically. The food they grow makes significant contributions to household budgets and diets, especially for people who are retired or work part time and have the hours to devote to gardening. Their distribution of food helps build and sustain social networks that make communities more resilient. This story of newcomer integration, cultural preservation, neighborhood stabilization, and copious food production continues at the next two stops on this tour, at two of Trenton's most productive gardens.

STOP 3: *Academy II Garden*

The Academy II Garden is located next to the Isles' parking lot so we had the opportunity to talk with Marvin, the head gardener, almost every time we visited. Marvin's nine-year old son was usually with him, learning the art of gardening. Most afternoons as we left, the garden was filled with other Costa Rican immigrants deep in conversation while Marvin tended the barbeque.



Marvin and his son with some of their harvest.

Marvin grew up on a large family farm in Costa Rica tended by his father and two brothers. It was hard work. His father died young, after which the farm was sold to a large corporation. Marvin emigrated shortly thereafter. His dreams, however, remain in Costa Rica and he plans to return with his family in the coming years. He wants his young son to experience the traditional life of Costa Rica.

The summer of 2009 was Marvin's third year of gardening at Academy II. The garden is approximately 5,000 square feet with only two gardeners, so each has substantial land on which they can grow most of the vegetables they eat during the year. Marvin complained about the rising expense of having such a large garden. As fuel prices increased, Marvin

reported that the cost of 10-10-10 fertilizer that he uses in the garden, increased from \$10 for 40 lbs in 2008 to about \$28 for the same amount in 2009. He estimated that he spends at least \$500 annually on plants, fertilizer, and other materials. We estimated that the garden produced 2,662 pounds of vegetables worth almost \$6,000. So it seems that the \$3,000 of vegetables that Marvin harvested far exceeded his \$500 investment. Still, the rising cost of materials is an issue and potential barrier for some gardeners.

Marvin and his wife use the produce and distribute it to neighbors and the network of Costa Rican immigrants. His zucchini was ready for harvesting in early July. It didn't really interest him, but he grows it for his wife who loves it. He estimated that he distributes vegetables to approximately 30 people, primarily neighbors who live around the garden. They stop by asking when things are ready. He loves the lettuce, tomatoes and especially the beans that he grows. Almost half the garden was planted with beans, and Marvin estimated that in a normal year he can grow more than two tons. In 2009, however, because of the cool, wet June, his yield was considerably less – not just for beans, but for tomatoes, peppers, and other mid-summer crops as well. He also estimated that he had only harvested 1.5 – 2 lbs of cabbage by the end of June.



The late afternoon gathering begins.

STOP 4: *Bellevue Cottage Garden*

Pulling up to the Bellevue Cottage Garden we avoided a large puddle in the driveway across which a large turtle was making his way. Looking at the garden we spotted callaloo, a leafy green that is a relative of our native amaranth and a traditional ingredient in Caribbean cooking. Then we heard the lilting Caribbean accents of the gardeners and knew that we had arrived at an island enclave. The Bellevue Cottage Garden is located next to the Delaware and Raritan Canal on land that had previously been used for short dumping. There had recently been a large cleanup during which garbage and construction materials were removed and a gate installed across the driveway to impede access. Since that time, the gardeners have kept the area looking neat and clean.

The gardeners at the Bellevue Cottage Garden are Jamaican men between 50 and 70 years old. There are a few women who garden here but no children. Trenton has a large Jamaican community since the 1930s and 1940s, with many people arriving via New York City. Most of the gardeners learned to garden in Jamaica, and have come to Trenton in recent decades. In addition to beans, tomatoes, and peppers, they grow Jamaican delicacies like callaloo and searing hot peppers that are not readily available in Trenton. The garden was founded in 1983.

Errol McKenzie has been gardening at Bellevue Cottage for six years. He generally begins in early April, buying his seeds and starters at Home Depot. He usually stops by the garden every day from April through October. Like many of the gardeners, he immediately cooks much of the food he grows, freezing some for use during the winter. He also distributes the excess through the local Jamaican community and gives the food away to people who stop by the garden. Mr. McKenzie mentioned several times that the real joy of gardening at Bellevue Cottage was being able to offer food to those who need it.

Even though the Bellevue Cottage Garden was about one-third the size of the Chestnut Ave. Garden, it produced almost the same amount of food. It was planted so densely it

was hard to find places to walk between rows. We estimate that Bellevue's gardeners grew 3,762 pounds of produce worth \$7,900. This total includes 2,115 pounds of tomatoes worth \$3,400 and 1,365 pounds of callaloo worth \$4,775 at the going rate in the area's Caribbean markets.



Bean harvest.

Besides the callaloo and the hot Scotch Bonnet peppers, over half of the garden is planted with tomatoes. We estimated that Bellevue's gardeners grew 2,115 pounds of tomatoes, 418 pounds of collards and 211 pounds of peppers. This produce would translate into 5502 servings of vegetables or enough to provide three vegetable servings a day for 20 people during the three months of peak harvest.

STOP 5: Escher Street SRO Garden

While measuring crops with our surveyor wheel in the garden at the Escher Street Single Room Occupancy housing site, we looked up to one of the second floor windows to see one of the residents eyeing us with a mix of bemusement and suspicion. Before we knew it, Barbara was down in the garden showing it off to us.

Trenton has a transient and declining population (40% of public school students move schools each year) and like many other post-industrial east coast cities, a large homeless population. The Escher Street SRO facility addresses the problem of transitional housing by offering 100 private residential units and a 26 bed transitional housing facility, all supported with an array of social services. The average stay for a resident is three years.



Touring the garden at Escher.

Frank Stillwell has been the building manager since 1998. Before coming to Escher, he worked at Isles. Frank started the garden in 2004, with eight individual raised beds. In 2005, he added four more, and then a long bed along the back in 2006. In 2008, the gardeners put in a small fishpond with live goldfish. The garden at Escher SRO is

supported by Isles, and Frank is an active participant. The garden at Escher is regularly featured in the Isles' tour of Trenton gardens. Frank receives seeds and starter plants from Isles, mostly tomatoes and peppers. The number of gardeners varies year-to-year depending on who is living at the Escher Street SRO. In 2009, every plot was tended. The gardeners are primarily middle aged or elderly, both Caucasian and African-American.

Resilience has a popular meaning as well – the ability to bounce back after shocks. The beauty of the garden at the Escher Street SRO may be in assisting in that process. The garden helps root people by offering an outdoor space to grow food and share it with other people. Gardeners each have their own plot, which many decorate with art and objects that reflect patterns other scholars have identified through which transient inner city residents use gardening to make a place of their own.⁵ The residents have a communal kitchen where they have the opportunity to share meals or eat alone. According to Frank, the produce from the garden is often used in the communal meals when residents are able to share the food grown with other residents thereby helping to build a sense of community among the residents.



Barbara and Frank with some of their harvest.

⁵ See in particular, Margaret Morton and Diana Balmori, *Transitory Gardens, Uprooted Lives* (New Haven: Yale UP, 1995).

The residents produced 570 pounds of vegetables, primarily peppers and tomatoes, all of which was used at the facility. Peppers were the largest crop with 273 pounds harvested, followed closely by tomatoes at 252 pounds. There was also cabbage and lettuce growing in some plots. For the first time at Escher, pumpkins were planted in anticipation of a fall harvest. Some residents planted corn, which did not grow well. Frank attributed the crop failure to Barney, the groundhog living in the woods adjacent to the garden. Next year Frank plans to merge some of the plots for the gardeners interested in having more space to grow.

STOP 5: Lawrenceville School and Central New Jersey Networks

One day this summer, we piled into Meredith's car and took a drive about ten minutes north of Trenton to the Lawrenceville School, one of the elite boarding schools of New Jersey. We parked in the middle of the campus, next to two sizable gardens planted with vegetables and herbs. One belonged to the school's chef, a nationally known figure in the local food movement whose reform of Lawrenceville's cafeteria has helped the school compete for students on new levels, beyond academics and athletics. The other garden was planted for Isles. Its harvest was stored in a cooler in the cafeteria building adjacent to the garden, where we collected several boxes of Swiss chard.

We drove back to Trenton, stopping around the corner from Isles headquarters, at a food cupboard run by Crisis Ministry, where we delivered the greens. They would be given out later that day, during drop-in hours. Like other food cupboards around the United States, Crisis Ministry has experienced a sharp increase in the number of people seeking free and reduced-price food in the past two years, as food and energy prices have risen and the economic crisis has left many people out of work. In a longer-term pattern, in the last two decades food cupboards have lost their status as providers of "emergency" food relief, becoming part of the regular "shopping" routine of working poor people whose earnings don't cover their expenses. Like garden-to-cupboard programs in other cities, such as the Pennsylvania Horticultural Society's City Harvest program in Philadelphia,

the fresh vegetables from Isles are much appreciated but there are not enough to give to everyone who comes by. Typically, the first 20 or 30 people in line are the lucky ones who get the harvest from the garden along with the usual canned and dry goods.



The garden planted for Isles, with the cafeteria building at the left.

The garden at Lawrenceville is one of two harvested for Crisis Ministry's two cupboards in Trenton and Princeton. The other garden is down the street from Isles in Roberto Clemente Park, which Isles has restored and tends largely with the help of volunteers.

This story may appear an anomaly in what is otherwise a tour of community and school gardens in the city. But it helps make a critical point about Isles and its gardening activities: namely, that Isles is a *regional* institution focused on connecting the relatively poor, isolated city of Trenton to the communities and assets of comparatively affluent Mercer County around it.



Isles' garden director Meredith Taylor at Crisis Ministry's Trenton cupboard.

Isles' gardening activities are a product of regional networks of people, institutions, and agriculture. The Lawrenceville School and Crisis Ministry are just part of this picture. The Jones Farm correctional facility in Ewing grows seedlings in its greenhouse for distribution to community and school gardens in Trenton across three seasons. Fernbrook Farm in Bordentown, which includes a community-supported agriculture farm, nursery, and environmental education center, hosts students and teachers from Isles' school gardens on regular trips. In the fall, Isles planted two new sites outside Trenton. One is a garden for the after school program at the Princeton Community Village, an affordable housing development in Princeton. The other is the new Canal Farm in Kingston, a project with Terra Momo Restaurant Group that includes an area to grow produce for Crisis Ministry's cupboards, while the rest of the farm will grow for local restaurants.

Perhaps most importantly, beyond the movement of seedlings and vegetables across city lines, Isles' gardens get people to cross those boundaries. They take Trenton residents, especially children, out of the city to visit the fields, animals, and people on "real farms." They draw volunteers from schools, companies, and community groups around the region to work in Trenton gardens, engaging suburbanites in the work of urban revitalization. Many of these volunteers overcome their fears of the city in the process. Some gardens in Trenton also attract residents Ewing and Hamilton who lack sizable yards of their own and who travel to their plots in the city on an almost daily basis.

These regional patterns remind us that urban gardening is just one part of regional food systems, even within a single organization's scope of work. Connecting Trenton residents to agriculture in central New Jersey is a vital part of overcoming the limits of inner cities as sites for food production and distribution. Farms outside of cities will continue to produce the great majority of food for Americans, yet most inner city residents rarely connect with those sources of food. Building more resilient cities and food systems requires making these sorts of connections. It also requires engaging new generations in gardening.

STOP 6: *Rivera Elementary School Garden*

Creating and preserving local knowledge, including how to grow food locally, is a key element of resilience. School gardens are increasingly common in the United States, promoted by Michelle Obama and many others, and are one way to teach our youngest generation lifelong healthy eating habits. Isles' school gardens are expanding. One of the new gardens is located at the Rivera Elementary School, where teacher Louellen Smith-Monard and her students weighed their harvest for us with help in the summer from Isles' garden staffer Jim Simon.

At most school gardens, the focus is on the instructional aspects and not the amount of the food grown. They can help demonstrate concepts in biology, mathematics, history,

and science as well as become sites for art classes. Through a partnership with the Trenton Board of Education's Model Healthy School Program and Rutgers University Cooperative Extension, Isles school gardens help students make the connection between the environment and health and learn from where our food comes.



The garden at Rivera. Photo by Jim Simon, Isles.

School gardens have a particular issue. Much of the food on the east coast grows during the summer when school is not in session. It takes the dedication of teachers like Louellen and often the aid of garden support groups like Isles to tend the garden during that period to ensure the plants are healthy and productive when students return in early September. At that time they enjoy the fruits of their labor that they began in May when they planted the garden. Louellen's students find the garden stimulating. They grow crops such as tomatoes and collards with which most students are familiar as well as rows of sweet corn. The seemed most excited about the popcorn they grow.

Louellen noted that an unintended effect of the garden is that it has helped strengthen ties between the neighbors and the school. It is located in a corner of the school's front yard, across from a block of rowhouses. While the schoolyard is fenced, the gate is often open. The residents vigilantly guard the garden from unwanted intruders and in return are welcome to come over and pick the ripe produce.

Production

The Trenton gardens we surveyed reflect the differing missions and intents of the various gardens. The production in the older community gardens such as the Chestnut Street Garden or Bellevue Cottage Garden reflects experienced gardeners growing produce for their own use and for distribution to others. In the school gardens production was lower in volume, but the emphasis was on learning, including how to produce food.

Although Trenton's gardens are relatively small, they are generally no-nonsense gardens devoted to growing food. The ratio of crop area to gross area was the largest (52%) of the three cities we studied, indicating that gardeners wasted very little space. Over half of the 29 gardens growing food in 2009 are less than 1,000 square feet, and of these eight are located at schools or other public institutions whose main goal is generally education. To maximize production in such a small space, almost all use raised beds. Only the Chestnut Ave. Garden is greater than one-half acre. Tables 1 and 2 below summarize the number, size, and food production of the city's gardens.

TABLE 1: Summary Production Statistics

Number of Gardens	Total Area of Gardens	Area under Crop Production	% Crop area to Gross area	Estimated Pounds of Summer Crops Grown	Estimated Value of Summer Crops Grown
29	115,325 sf 2.64 acres	59,902 sf 1.4 acres	52%	22,688	\$47,645

TABLE 2: Size of Trenton's Gardens

Size	<100 sq. ft.	<1,000 sq .ft.	< acre approx. 11,000 sf	Between ¼ and ½ acre	½ acre
Number	4	12	10	2	1

The production figures in Table 1 are lower than the total amount of food grown in Trenton community and school gardens in 2009, and are unusually low for even just the production of summer crops. Several factors explain this. Our research began in late

June 2009, and focused on summer crops. Spring crops such as lettuces, spinach, and greens had already gone to seed and been replaced by the summer crops such as tomatoes, peppers, and eggplants that love heat. Summer 2009 was a disappointment for most common garden and farm crops because of the relatively cool and wet summer in the Northeast. Fruit production on tomatoes was reported as about half as much as in the summer of 2008. Most gardeners we interviewed reported problems with the weather. The yields recorded by the gardeners who weighed their harvest for us, as well as those from other gardens and farms in the region, were lower than just about any year in recent decades. However, most gardens we visited in Trenton had healthy vegetable plants and few weeds, thus our square footage figures permit us to estimate levels of food production in a more average year for climate and vegetable gardening.

The cool, rainy weather mentioned above in the first half of summer was the main problem. Temperatures in June were 2°F below average temperatures during the day and almost 3°F below average during the night. The average low nighttime temperature for June was barely 3°F above the minimum of 55°F needed for the members of the nightshade family, tomatoes, peppers, and eggplants, to set fruit. Consequently, these crops did not reliably ripen until weeks later than normal. June 2009 was also one of the rainiest Junes since weather records have been kept, with rainfall about 1.52 inches above normal, further causing a delay in many of the summer fruits and vegetables. The cooler early summer weather and large rainfall was, however, a boon for lettuce and other spring greens, which we did not measure.

Yields for mid-summer vegetables, measured in pounds per square foot, were much lower in Trenton in 2009 than those we had measured in Philadelphia during the summer of 2008, when temperature and rainfall were relatively normal. The yield for tomatoes, the top crop by weight and value in Trenton, was 0.83 pounds per square foot while in Philadelphia the year before it was closer to 2.25 pounds per square foot. From Maine to Virginia, in 2009 tomato and potato plants were ravaged by late blight that started in large production nurseries throughout the East Coast and distributed through large nurseries like those at Home Depot. Because their distribution throughout the region was

so widespread and because of the cool, wet weather, late blight killed plants which would normally not have been affected and decimated production. Still, we estimate that Trenton community gardeners harvested roughly 6,890 pounds of tomatoes worth approximately \$12,060. If the summer weather had been closer to normal with higher temperatures and less rain in June and consequently with similar yields to what we found in Philadelphia in 2008, we estimate gardeners in Trenton would have produced approximately 19,420 pounds of tomatoes worth approximately \$34,000.

Altogether, we estimate the value of the top four crops at \$32,180 or about 67% of the total value of all crops grown in Trenton. It is also sobering to see how weather affects the production and value of crops. Using yields found in Philadelphia during normal summer weather, the total value of the four top crops would be \$77,557, or 2.4 times what we found in 2009.

TABLE 3: *Top Ten Crops in Trenton Community and School Gardens*

Crop	Pounds Harvested	Number of Servings
TOMATOES	6,887	34,366
PEPPERS	3,124	22,961
BEANS	2,815	15,483
COLLARD GREENS	2,637	13,844
CORN	1,638	2,752
SQUASH	1,544	9,187
MELONS	709	2,035
EGGPLANT	516	1,729
CABBAGE	284	2,513
TOTAL of Top 10	20,153 lbs.	84,200 servings

Table 3 details our estimates for the top ten crops harvested in Trenton community gardens. The number of servings provided from each crop ranges from 34,366 servings of tomatoes to 1,729 servings of eggplant. Based on the recommended USDA diet of three servings a day of vegetables (plus two servings a day of fruit), the tomatoes alone could provide all 3 servings/day during a three-month period for 124 persons; peppers could provide 3 servings a day for an additional 83 persons. Just adding up the number of servings provided for these 10 crops, they would be enough to provide 3 servings a day for 305 persons for a three-month period. Clearly, community gardens in Trenton

provide a large quantity of locally grown fresh vegetables (and some fruit) for themselves and their neighbors in the poorest regions of the city.



The garden at the Trenton Housing Authority's headquarters at Donnelly Homes, which is used mainly by youth..



Surveying a community garden in Trenton.

Distribution and Conclusion

One of the most important findings of this research is that the great majority of vegetable gardeners with whom we spoke told us that they and fellow gardeners share the harvest with people who are hungry. Trenton's community gardeners are by and large generous people, who recognize the challenges of food access and related health and economic problems of one of the poorest big cities in America. The formal (institutional) and informal (non-institutional) networks through which people distribute food from community gardens mirror the diversity of gardens and gardeners themselves. The garden tour section of this report elaborates on these patterns in some detail, and the following table summarizes the range of institutional and informal distribution outlets.

TABLE 4: Food distribution from community gardens

Within each category, recipients are listed in order of their prevalence in our findings.

INFORMAL DONATION
Delivery to neighbors and friends
Neighbors stopping by
Delivery to seniors
Strangers stopping by
Basket or wagon on front porch or lawn
Food cupboards
Fellow parishioners at church
Colleagues at work
FORMAL/INSTITUTIONAL DONATION
Kids eating and taking home from school and summer programs
Food cupboards
Soup kitchens

Most gardeners reported that they do not grow enough food to make substantial donations to food cupboards or other institutions serving scores or hundreds of people. However, they do grow and distribute copious amounts of food, as illustrated in the preceding section on food production and in the many interviews in which gardeners related that they give away more than half of the food they grow. The most common recipients through non-institutional channels are neighbors, extended family, and senior citizens. All gardeners interviewed in this study said they were unaware of any sale or bartering of

produce from community gardens, though some related stories of people who used to sell some of their harvest.

Most gardeners noted that vegetable gardening makes significant contributions to the quality of their diet and to their household food budgets. Most reported that they purchase very few vegetables in the summer months, and that this makes a notable difference in their grocery bills. Some work to extend the growing season as far as possible into the spring and fall, as does Isles through its distribution of cold weather seedlings, especially hardy greens. More than half of the gardeners interviewed preserve a portion of their harvest, usually in their freezers, and sometimes through canning or drying. Most of these people related that they preserve enough to eat regularly “from the garden” at least into the next calendar year.

As a group, community gardeners are generally more attuned to the challenges and opportunities of healthy food procurement in inner cities than many of their neighbors. Most gardeners in Trenton shop at ShopRite and other supermarkets in and on the outskirts of the city. Some also shop at more expensive markets such as Whole Foods, though typically on an occasional basis and for a select few products.

Community gardeners’ distribution of their harvest reveals the specific workings of social networks that scholars of community development often describe in abstract terms. Within their neighborhoods, community gardeners generally know who is hungry, who lacks access to fresh food, and who has particular nutritional needs. These are the main reasons they deliberately target senior citizens and children with their donations. Most gardeners we met spoke of this in a matter of fact way. They explained that they gardened as a way to feed people who are hungry, and because it was something with which they grew up.

For older residents of Trenton, who are the majority of community gardeners, gardening helps make their households and communities more resilient in a variety of ways. Aging is a constant issue in many gardens, and gardeners regularly reported that illness and

death have resulted in considerable turnover and decline of certain gardens. Isles' staff also noted that many gardens they supported over the past few decades have disappeared as a result. Moreover, as one person at the Cole Street Garden related, new gardeners often don't stay long when they find out how much work it is to keep their plots well weeded and watered. Notwithstanding these challenges, older gardeners reported that they find gardening an important source of low-impact exercise, cultural preservation, and food supply for themselves and other seniors in their neighborhoods. Isles' plays an important role in enabling older gardeners to continue gardening, as the garden staff and volunteers often perform heavier tasks in the gardens.

Isles' school and preschool-based services and other youth activities developed in recent years hold out the promise of engaging a new generation in gardening. They operate in schools in low-wealth communities, and they play important roles in teaching children about food and nutrition. One program operates at Trenton's largest public housing project, with kids from the Weed and Seed garden. A recently constructed greenhouse has extended the growing season and hence children's involvement in gardening. Agricultural Extension nutrition educators have used the harvest from this garden in presentations for kids in the Police Explorers Club summer camp. Most garden support professionals, though, recognize that even after the most intense youth gardening experiences, most teens and young adults tend to exhibit little interest or involvement in growing food. More long-term research is needed to track whether the current generation of urban agriculture youth activities yield different results.

Gardening has been integrated into the work of community organizations in United States cities for the past century, from settlement houses to schools to affordable housing developments. Though urban institutions' involvement in gardening has waxed and waned, it is presently on the rise. The recent expansion of Isles' school gardening and nutrition services is a notable example of this trend. Just as important is Isles' ability to support gardening at a great diversity of community-based organizations. In residential settings, these range from the Escher Street SRO to the Trenton Housing Authority to a shelter for homeless teens. Less formal organizations include the Cycle Kings

motorcycle group, whose members garden at the Prospect Street Garden and are involved in a variety of charitable activities, some of which include the distribution of food they grow.

As a garden support organization, Isles is notable not only for its longstanding community gardens work, the gardens it has preserved and sustained, and its growing school gardens. Two things set it apart from virtually every other urban garden support institution in the United States. First, it is a diversified community development organization. Its gardening work complements other efforts at stabilizing neighborhoods and building self-reliance for families and communities; and sometimes gardeners engage in other Isles services that impact their housing, health, and other assets. Second, Isles works regionally. This connects gardens, gardeners, and local organizations in Trenton to other people, places, and resources of central New Jersey. Since food systems and metropolitan economies do not stop at city boundaries, working at this scale is not only sensible, but it also helps build a more equitable regional community.

Community gardens in Trenton promote self-reliance and resilience in a variety of ways and at different scales, from the individual to the region. Gardeners distribute food in various ways that reflect the diversity of communities, their social networks and civil society organizations. Gardening can have significant impacts on food access and people's control of important parts of their food supply and of their neighborhood environments. In low-wealth communities, gardening is a strategy that many people employ to cope with poverty and its attendant health and social problems. It is one of many ways that people work to address the food needs and wants of their families and neighbors, an important part of building healthier, more resilient cities and communities.

Appendix – Forms used in site survey and interviews

Garden Site Survey

Date: _____

1. Name of garden: _____
2. Location:
 - a. Neighborhood: _____
 - b. Address: _____
 - c. OR: Addresses of adjacent properties: _____
 - i. AND # of parcels from cross-street: _____
 - ii. AND Cross streets: _____
 - iii. Side of street (N, S, E, W): _____
3. Size, layout, & organization:
 - a. **Size of garden – total area**
 - i. Front: _____ ft.
 - ii. Length: _____ ft.
 - b. **Number of Plots** _____
 - i. OR: Collective garden without individual plots: _____
 - c. **Size of one plot**
 - i. Length: _____ ft.
 - ii. Width: _____ ft.
 - d. Apparent **level of use** - % of plots:
 - i. Well-used/maintained: _____
 - ii. Some maintenance: _____
 - iii. Unused/vacant: _____
 - e. **% food** (of annuals & perennials growing, not counting weeds) _____
 - f. Posted **rules**: Y [] N [] (If yes, take notes below on contents of rules)
 - g. **Water**
 - i. City water source/hoses []
 - ii. Barrels/collection systems []
 - iii. No apparent water source []
 - h. Evidence of **support organizations**: _____
4. Trees:
 - a. **Fruit & nut trees**:
 - i. Number and types of food-producing trees (e.g., 2 apple, 1 peach): _____
 - ii. Size (diameter of entire canopy): _____ ft.
5. Other NOTES:

Name of garden: _____

Date: _____

	Crops (square feet)	Notes
General NOTES:		
Beans		
Beets		
Broc./Caulif.		
Cabbage		
Carrots		
Chard		
Chiles		
Collards		
Corn		
Cucumbers		
Eggplant		
Kale		
Lettuce		
Melons		
Okra		
Onion/Garlic		
Peanuts		
Peas		
Peppers		
Pigeon Peas		
Potatoes		
Radishes		
Spinach		
Squash/Zuch.		
Tomatillos		
Tomatoes		
Basil		
Cilantro		
Fennel		
Mint		
Oregano		
Parsley		
Rosemary		
Sage		
Thyme		
Strawberries		
Cane berries		
Bush berries		

Interview questions for community gardeners

NOTE: These questions are a basic guide for an unstructured interview/discussion, and are not intended as a script for a structured interview or survey. Ask broad, non-leading questions first; and ask more specific, follow-up questions to get gardeners to elaborate and clarify. Even if your conversation is brief and people do not wish to delve into detail, please try to have gardeners answer the question(s) about the distribution of harvest.

HISTORY

A good place to start is to ask for a narrative history of the garden – When did it start? How, by whom, and why? How has it changed over time? Have people come and gone?

GARDENERS

Who gardens here? What mix of ages, ethnicities? Are gardeners from the immediate neighborhood or farther away?

Why do these people garden? When did they start gardening? Where did they learn?

How have/do people learn about and get involved in this garden?

ORGANIZATION & SUPPORT

Are gardeners involved in PHS or other formal garden programs? If so, what activities do they attend? What services do they use?

*** At gardens tied to institutions (e.g., churches, housing sites, schools):**

Why did the organization get into gardening? Is gardening connected or related to other services or activities of the organization?

GROWING

What do people grow? (This is a good discussion to have while touring the garden. You can ask about specific crops and what people do with them.)

How many seasons/plantings do gardeners grow? Do gardeners employ strategies for season extension or maximizing food production?

DISTRIBUTION

What do gardeners do with their harvest?

(For food...) Do they eat it themselves? With others? How do they prepare it?

Do gardeners preserve the harvest (can, pickle, dry, freeze, etc)? If so, do gardeners give any preserved food away? How long into the winter does it last?

Do gardeners give away their harvest through formal or informal channels? How much? What proportion of the food they grow? Particular crops? To whom? To anyone outside of their family? To food cupboards? Only to people they know, or to strangers as well? By what means – e.g., delivered to other households, institutions; others invited to pick; basket put on porch/stoop; at church?

Does anyone ever sell food produced in the garden? Or trade it for anything? If not, why not?

FOOD ACCESS

Where do gardeners and others in the neighborhood shop for food? In the summer? In the winter? Does gardening make any difference in people's shopping or eating at different times of the year? What food do people buy at the store in the summer? How does that compare to the winter? Do gardeners eat vegetables in the winter? If so, which ones? Fresh, canned at home, canned from store, frozen from store, other forms? Are grocery bills lower in the winter, summer, or about the same? Does gardening make any impact on household food budgets?

NEIGHBORHOOD IMPACTS

What impacts has the garden had on the neighborhood?