

Community Gardening in Philadelphia

2008 Harvest Report

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October 2009

Overview

This report summarizes research on the state of community and squatter gardens in Philadelphia, with a focus on the production and distribution of food. The specific aims of this project were to measure the amount of food grown in community gardens and to trace its distribution. 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. It involved three sorts of research, all conducted in the summer of 2008:

- 1) On-the-ground survey of community and squatter gardens throughout the city of Philadelphia.
- 2) Weighing of harvest at six gardens in different sections of the city.
- 3) Interviews with gardeners and garden coordinators on the distribution of harvest, as well as interviews with garden support program staff.

This report is organized in the following sections:

- ***Introduction: Issues and definitions*** – An introduction to the issues and policy context of this report, including a definition of its scope.
- ***The garden tour*** – A tour of four different gardens, which introduce broad patterns of gardening and distribution on the ground.
- ***Methodology*** – A description of the research methodology.
- ***History and geography*** – An overview of the recent history, current geography, and key characteristics of community gardens in Philadelphia.
- ***Production*** – Estimates of the quantity and economic value of food grown in community gardens in the city, based on the survey and weighing.
- ***Distribution*** – A discussion of patterns of distribution and consumption.
- ***Appendix 1*** – Profiles of the city's fourteen largest gardens.
- ***Appendix 2*** – Survey and interview forms used in the study.

Acknowledgements

This research was made possible by financial support from the Dean's Office of the School of Design at the University of Pennsylvania and the Penn Undergraduate Environmental Health Scholars Program administered through the Center of Excellence in Environmental Toxicology.

It also could not have happened without the generosity of people and organizations dedicated to gardening and food security in Philadelphia. Joan Riley, Eileen Gallagher, Claire Baker, and Todd Baylson at the Pennsylvania Horticultural Society, and Doris Stahl and John Byrnes at the Penn State Philadelphia County Agricultural Extension shared critical data on the sites involved in their past and present community garden support programs. Joan, Eileen, Doris, and their colleagues including Sally McCabe and Christine Tilles also offered invaluable institutional memory and other input. The Penn Urban Studies Program provided office space and equipment for our tireless and meticulous research assistants Kevin Levy and Sarah Zuckerman, who followed up on this research in their senior theses documenting storm water absorption benefits of community gardens and neighborhood food security networks, respectively. Recent Penn Design alumni Kelly Porter and Sally Reynolds also participated in the survey and interviews; and Sally helped develop the project in its formative stages. Alan McHale introduced us to gardens and food networks in Northeast Philadelphia, and served as our partner and guide in that large part of the city. Noah Swistak helped us survey the city's three largest gardens again in the summer of 2009, and he created the maps in this report.

Colleagues engaged in urban agriculture in other cities offered helpful feedback on our research design and findings, including: Jac Smit of The Urban Agriculture Network in Washington, D.C.; Martin Bailkey from Troy Gardens in Madison, Wisconsin; Marcia Caton-Campbell from the Center for Resilient Cities in Milwaukee; Jerry Kaufman from the University of Wisconsin and Growing Power; Joe Nasr at Ryerson University in Toronto; Nevin Cohen at The New School in New York; Cynthia Price from the Greater Grand Rapids Food Policy Council; Betsey Johnson from the American Community Gardening Association; and Penn public health professor Jeane Ann Grisso, who has worked with us and Noah to replicate this study in Camden and Trenton, New Jersey, in the summer of 2009.

Special thanks are due to the gardeners and garden support organizations that were our partners in weighing: the "farmers" at the Organic Gardens at Manatawna Farm, managed by the Schuylkill Center for Environmental Education, which donated a garden plot for a weigh station; the Urban Tree Connection and its gardeners at the Montgomery Mini-Farm; Tomasita Romero and Iris Brown of Grupo Motivos at the Norris Square Neighborhood Project; the Brown Street gardeners and their neighbors at Mill Creek Farm; South Sixth Street gardeners; and the gardeners at St. Francis de Sales parish.

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 Philadelphians that we dedicate this study.

Introduction: Issues and definitions

With the recent growth of the local food movement, public interest in community gardening has expanded. From the White House lawn to Philadelphia schoolyards and vacant lots, vegetable gardening is on the rise. Policy makers, civic organizations, and individuals are looking to urban agriculture to address problems of hunger, nutrition, and global environmental crisis. The great majority of urban agriculture today takes place in community gardens, and this will remain the case for the foreseeable future.

Philadelphia has long been an important center of community gardening, with hundreds of gardens of diverse sorts. Yet the city's reputation for community gardening and the recent popularity of gardening belie a much more complicated situation. Since the mid-1990s, community gardening in Philadelphia has declined precipitously, as have the funding and support systems that helped sustain gardens. This research set out to document how many gardens survived, and found that between 1996 and 2008 the number of food-producing community and squatter gardens in the city declined from 501 to 226. The *history and geography* section of this report summarizes these findings and analyzes the major reasons for this decline.

This report also represents an initial effort to understand the impacts of community gardening on community food access and food economies. Most claims about the ability of urban agriculture to enable food access in cities lack grounding in empirical research.¹ Indeed, the impetus for the growth of community gardening in the 1970s, 80s, and 90s had little to do with food access and hunger, at least for most of the funders and institutions that supported gardens. Consequently, most research on community gardening has documented its social impacts. In the very different context of today's food system, with higher prices, concern about the sustainability of the global food

¹ The research on urban agriculture's health impacts is summarized in Kate Brown and Andrew Jameton, "Public Health Implications of Urban Agriculture," *Journal of Public Health Policy* vol.21, no.1 (2000), 20-39; and Anne Bellows, Katherine Brown, and Jac Smit, "Health Benefits of Urban Agriculture," Community Food Security Coalition, Urban Agriculture Committee (2003).

system, and greater awareness of its impacts on public health, the rationale for community gardening has shifted.

Yet how much food can and do community gardens actually produce, and what is its economic value for its producers and consumers? Who actually eats the food grown in gardens? Do community gardens promote access to food for anyone beyond gardeners' households themselves? Ultimately, what is their potential to impact community food security? As policy makers and practitioners of community development and public health seek to employ gardening in the service of community food security, this research helps establish a baseline understanding of the mostly informal economic life and impacts of community gardening in one city.²

Patterns of food production in community gardens are detailed in the *production* section of this report. This includes estimates of production of summer vegetables by pound and dollar value. Overall, we estimate that community and squatter gardens in Philadelphia produced some \$4.9 million worth of summer vegetables (a figure that does not include spring and fall plantings or the harvest from fruit trees and berry bushes). That is more food than all of the city's farmers markets and urban farms combined sold in 2008.

The ways in which gardeners distribute their harvest are the subject of the *distribution* section. Although community gardeners engage in relatively little sale of their harvest, they employ a wide variety of distribution strategies, many of which specifically aim to improve fresh food access. These range from delivery at food cupboards through the Horticultural Society's City Harvest Program to handing out bags of vegetables after church, from inviting children to help plant and harvest to leaving baskets on front porches for neighbors and strangers. Cumulatively, these patterns constitute the most direct form of fresh food production and distribution in cities.

² One study that explored similar questions in the context of an era of different food economies is Gail Feenstra et al., *Entrepreneurial Community Gardens: Growing Food, Skills, Jobs and Communities*, University of California Agriculture and Natural Resources Publication 21587 (1999). More recent studies have evaluated the impacts of community gardens on urban real estate values, for example Ioan Voicu and Vicky Been, *The effect of community gardens on neighbouring property values*, New York University: Furman Center for Real Estate and Urban Policy (2006).

The particular gardens in this study are a Philadelphia story, but the issues explored in this report are shared by other U.S. cities large, medium, and small. Food security – or people’s reliable access to a safe, healthy, culturally appropriate supply of food – has become a major public concern in recent years. The growth of urban populations and related real estate development have altered inner city land markets and resulted in development replacing community gardens, most dramatically in the cases of New York City and the South Central Farm in Los Angeles.³ In many cities, from Philadelphia to Trenton, New Jersey, aging populations of gardeners have brought about a more demographically driven decline in gardening. The USDA’s retreat from urban gardening in the mid-1990s is a national story. These and other social, economic, and political forces complicate the work of city governments and civic organizations, which respond with a variety of land use and garden support strategies. Throughout this report we touch upon public policy and community and economic development issues related to the findings of this study, focusing on questions of land planning, urban agriculture support systems, and social change among gardeners themselves. However, the central aim of this report is to share our findings from this research. (To address their implications for planning, policy, and community development, we have been working with city government and urban agriculture support organizations large and small).

Finally, a point about definitions: There is no widely accepted definition of community gardening. For the purpose of this study, we define community gardens as places where people from more than one household garden on land they do not own. Most people agree that the institutionalized gardens in urban neighborhoods such as Glenwood Green Acres in North Philadelphia or the Southwark/Queen Village Garden, where neighbors come together to tend the land, are gardens “of and in” their communities. There is also little question about the large allotment gardens such as Benjamin Rush State Park on the

³ See, for example: Lynn Staeheli, Don Mitchell, and Kristina Gibson, “Conflicting rights to the city in New York’s community gardens,” *GeoJournal* 58, 2-3 (October 2002), 197-205; Malve von Hassell, *The Struggle for Eden: Community Gardens in New York City* (Westport, CT: Bergin & Garvey, 2002); Christopher Smith and Hilda Kurtz, “Community gardens and politics of scale in New York City,” *The Geographical Review* 93, 2 (April 2003), 193-212; Clara Irazabal and Anita Punja, “Cultivating just planning and legal institutions: A critical assessment of the South Central Farm struggle in Los Angeles,” *Journal of Urban Affairs* 31, 1 (2009), 1-23.

city's northeast border in Poquessing or Manatawna Farm in Upper Roxborough, though relatively few immediate neighbors cultivate these sites.

More problematic are the large number of single-tender gardens on lots in neighborhoods with an abundance of vacant land. Such gardens are especially numerous in North Philadelphia from the Delaware to the Schuylkill and from Girard to Allegheny. We included such gardens when they were located on land owned by people other than the gardeners. We did not include backyard food production in this study. We did not include gardens when ownership data indicated the gardens were on land owned by adjacent residents. We did this partly since most of the single-person "squatter," or in today's parlance "guerrilla" gardens that we visited were once supported through the Penn State Agricultural Extension's garden support programs. This offered an opportunity to test the resilience of these gardeners in the absence of support from gardening programs. Moreover, the patterns of who used these spaces and of distribution of food from these gardens often extended well beyond the gardeners' households. They add important dimensions to an understanding of land use and social networks promoting community food security.

In sum, this is a study about more than community gardens, strictly defined. More accurately, it is about community and squatter gardens' impacts and implications for community food security and urban resilience. The garden tour section introduces some of the broad patterns of these gardens, including land use, social context, and their diverse production, distribution, and roles in various communities.

The garden tour

Community and squatter gardens in Philadelphia take many forms, grow many things, and involve all sorts of people. To start, we will visit four of them, which together represent a cross-section of land use, institutional, and food production and distribution patterns. They illustrate some of the various economic and social impacts of urban gardens.

It is important to recognize that not all community gardeners in the city grow food, and food is not the main reason many people garden. For some, gardening is simply a way to enjoy the outdoors, and for many older (and some younger) people it is an important form of exercise. Some people garden for their mental health, to relax or cope with their own aging or the passing of loved ones. Many Philadelphians garden to preserve and pass on their cultural heritage. Still others join community gardens more for social interaction, environmental education for their children, and to have a little green space of their own. While this study focuses on food production and distribution, these motivations and activities all intersect with gardeners' cultivation, consumption, and other food ways. This brief garden tour touches on some of these intersections.

Stop 1: Manatawna Farm

The first stop is Manatawna Farm, a 76-acre farm owned by Fairmount Park in Upper Roxborough. Most of its rolling hills grow hay for nearby Saul Agricultural High School, the second largest such public school in the urban United States. In one corner of the farm is a 5.25-acre allotment garden managed by the Schuylkill Center for Environmental Education for over 30 years. Its 574, 16-by-24-foot plots make up the city's third-largest community garden.

Many of the gardeners call themselves "farmers," and most rent multiple plots, permitting them to follow through on this title. The U.S. Department of Agriculture's definition of a "farm" is "any operation that sells at least one thousand dollars of agricultural

commodities or that would have sold that amount of produce under normal circumstances.”⁴ In other words, people who produce at least \$1,000 *worth* of food (or flowers or other agricultural products) reach the scale of a “farmer.” By this measure, there are hundreds if not thousands of farmers in Philadelphia.



The Organic Gardens at Manatawna Farm in early spring.

Some gardeners who do not sell their harvest are as productive and entrepreneurial as the city’s commercial farmers. At Manatawna, one “farmer” grew food on 874 square feet and weighed 1,235 pounds of vegetables, including 630 pounds of tomatoes and 158 of lettuce. It would have been more, had the deer not feasted on his tomato patch. He harvested the great majority of his food for Aid for Friends, an organization based in Northeast Philadelphia that prepares thousands of meals daily for homebound seniors and disabled people in the city and suburbs. In 2009, he aims to expand that production and

⁴ <http://www.ers.usda.gov/data/farmincome/Sizedefinition.htm> (visited June 15, 2009).

donation to a ton (2,000 pounds), by ripping up his flower garden and growing more cold crops to extend the season. Another gardener grows most of her harvest to deliver each week to a food cupboard run by a friend in West Philadelphia. Yet another farmer at Manatawna, who grew up on a farm in North Carolina, weighed close to 5,000 pounds of onions, okra, melons, beans, and other crops from his 12 plots (4800 sf) – and this tally does not include the two weeks in August when friends harvested his plots while he was on vacation. He gives some to his extended family and neighbors in Southwest Philadelphia, but distributes most out of the trunk of his car at church on Sundays.



Manatawna farmers with some of their harvest.

Then there are the for-sale farmers. One family rents nearly half an acre, and sells garlic, heirloom tomatoes, potatoes, and many other crops at a farmer’s market in Center City. Last year the state certified their operation to accept vouchers from the Seniors Farmers Market Nutrition Program. They canned another 890 pounds of vegetables to eat at home

over the winter. Another farmer at Manatawna harvested 808 pounds of lettuce, tomatoes, squash, carrots, fennel, beets, and tomatillos for the restaurant owned by his son; and grew an equal amount for home consumption and to give to friends. A few plots over, a woman who works as a waitress sold herbs and vegetables from her plots to her employer.

In all, we estimate that the gardens at Manatawna produced some 168,044 pounds of vegetables last season. Most of these were organically grown, and many were heirloom varieties. We estimate the value of this food at roughly \$412,252. And that's not counting the harvest from the 50 fruit trees and hundreds of berry bushes in this garden.

The gardeners at Manatawna represent a broad cross-section of ages and ethnic groups. They include a German berry gardener, a Puerto Rican woman growing pigeon peas, Mexicans raising creole corn, an Indian growing chilies, a Korean American tending cabbage for kim chi, and large expanses of collards and okra cultivated by African Americans who grew up in the South.

Yet Manatawna is somewhat exceptional in its size and location. Other large allotment gardens such as the Airport Garden in Eastwick and Benjamin Rush State Park in the far Northeast are also located on the edges of the city. For the volume of food production, size of course matters. Together these three gardens account for more than two-thirds of the food grown in community and squatter gardens in the summer of 2008. Access to large plots of land clearly matters for Philadelphians' ability to produce food through gardening.

Community gardens, however, exist in many sizes and in every section of the city. Not surprisingly, the greatest numbers of these gardens are located in North and West Philadelphia on lots where rowhouses once stood. These neighborhoods were once the city's industrial centers and now have substantial tracts of vacant land, and their gardens produce substantial amounts of food. Some Philadelphia neighborhoods have revived, especially those on the edge of the downtown, and community gardens have aided this

process, bringing neighbors together to take back vacant land and make streets safer, healthier, and more attractive for new and old residents alike. Our next three stops on this tour reflect these patterns in the context of three different neighborhoods. Unlike the larger scale allotments at Manatawna, they look more like what most of us think of as a “community garden.”

Stop 2: Warrington Garden

Located in University City behind the Baltimore Avenue commercial corridor, the Warrington Garden mirrors the changes that the University City neighborhood has experienced in the last 30 years. Founded in the 1970s reputedly on the site of a former movie theater, the half-acre site has about 70 plots, each with 225 square feet. The original gardeners made the Warrington Garden truly multi-cultural with whites, African Americans, and Southeast Asians gardening alongside each another, with sweet potatoes growing next to lemon grass. As the neighborhood has changed over the years, many of the older African American men who once were the mainstay of the garden have died and the Southeast Asians have moved away, replaced by younger professionals with children.

In 1993 rumors circulated throughout the neighborhood that a developer was eyeing the garden property. At the time this rumor seemed far-fetched, as the surrounding neighborhood was struggling with increasing vacancy, the potential loss of one its immediate neighbors, the Calvary Methodist Church, and the deterioration of the Baltimore Avenue commercial corridor. In addition, there was a large open space adjacent the garden where a former 4-story apartment building had just been razed after a devastating arson. The gardeners, however, were immediately galvanized and took the threat very seriously. They raised \$15,000 within a month and took a promissory note from the Neighborhood Gardens Association (NGA) for \$20,000 to acquire the property from the city for back taxes and penalties accrued by the former owner. Over a period of 5 years, the gardeners held bake sales and flea markets to raise the money to repay the promissory note, and by 2000 the note had been paid. The garden is now held in trust by NGA, a land trust that exists to preserve community gardens, though it has struggled to

compete in Philadelphia's revived real estate market in recent years. We asked a local real estate agent to value the Warrington property. She estimated it around \$500,000, a sum that would make its acquisition by the gardeners less likely today.

As property values rose during the 1990s and 2000s, the composition of the gardeners changed, as did their surroundings. On the site of the razed apartment building, three neighborhood men invested \$1.5 million to build a new restaurant. The Calvary Church evolved into the Calvary Center and now hosts a variety of congregations as well as arts and neighborhood groups. The Baltimore Avenue commercial corridor is now famous for its African and Southeast Asian restaurants, which helped stabilize the neighborhood and spur its gentrification. The four substantial community gardens in the area – Warrington, Squirrel Hill (now Chester Avenue and also preserved through NGA), St. Bernard, and 43rd and Baltimore (now a site cleared for development) – made important contributions to integrating newcomers, enabling apartment dwellers to garden, stabilizing the neighborhood, and spurring its gentrification.

Today, the Warrington garden can be considered one of the “heirloom tomato gardens,” where the gardeners grow less for sustenance and more for novelty. Gardeners practice the art of landscape design, combining paving, flowers, and even sculpture, along with rare varieties of tomatoes and potatoes. They grow almost as many flowers and herbs as vegetables. We estimate they produced almost \$11,000 worth of tomatoes, nearly \$2,000 of basil, and more than \$1,200 of peppers, their top three summer food crops by dollar value in 2008. The Sisters of the Religious Assumption tend strawberries and rhubarb that they grow for their famous pies, as well as roses and gladiolas that are used on the altar at St. Francis de Sales around the corner. Only organic gardening is allowed, so there are no pesticides or chemical fertilizers. There are large compost bins from which gardeners are encouraged to use the compost and, a shed stocked with garden tools used on the honor system.



Watering at Warrington (photo courtesy of PHS).

The Warrington Garden benefits from its close ties to Philadelphia's garden support institutions. In addition to its preservation through NGA, it is one of the Pennsylvania Horticultural Society's Keystone Gardens, fourteen gardens that receive ongoing support from PHS's Philadelphia Green program. The Keystone Gardens are older, mid-to-large scale gardens that symbolize the history and success of the city's community gardening movement. Over the past several years, Warrington gardeners have been active in City Harvest, PHS's program that connects individual gardens with local food cupboards supported by SHARE and visited by chefs from the Health Promotion Council, who demonstrate how to prepare the produce donated by gardeners. Warrington is paired with a nearby cupboard run by a local church; and several gardeners grow for other cupboards, as well.

While this description may illustrate the concerns of a middle class professional neighborhood in Philadelphia with close ties to the University of Pennsylvania, it belies the garden's most important function. The Warrington Garden is one of the true

community centers of a very active and involved neighborhood. With most gardeners coming 3 or 4 times a week, the garden provides an informal meeting space where family and community news are shared, trust built, networks formed, and plots hatched. Events are held on a regular basis, with experts giving a seminar on topics germane to gardening or to neighborhood affairs. Neighbors look forward every year to the annual flea market and bake sale where the brownies are heavenly and the cookies divine. These are the intangible benefits of community gardens and are one of their major contributions in building strong urban neighborhoods.

The patterns of land preservation, gentrification, and hobby gardening at Warrington are repeated throughout the neighborhoods in and around Center City, from Northern Liberties to Spring Garden and Powelton, Queen Village to Washington Square West and Fitler Square. These places have benefited disproportionately from the assistance of community garden support programs and community associations, partly since their residents have the means and know-how to navigate land markets and bureaucracies and to leverage institutional support. PHS and NGA support gardens in poorer sections of Philadelphia, but these places are more vulnerable and play somewhat different roles in their communities. For one, the food they grow tends to play a more essential economic role in the extended families and social networks of gardeners. Our next two stops on this tour visit North Philadelphia gardens that reflect the more and less institutionalized forms of community and squatter gardening in the inner city, and the roles they play in community food systems.

Stop 3: Las Parcelas

Every summer busloads of people arrive to tour Las Parcelas in Kensington's Norris Square neighborhood, to marvel at the murals, gardens, and colorful casita, and to sample the traditional Puerto Rican cuisine prepared by the women of Grupo Motivos. Like Warrington, it is a Keystone Garden and an important social and cultural center. But it is unlike Warrington in most other respects. A group of neighborhood women established Las Parcelas more than twenty years ago on the site of a former open-air drug market. In

partnership with Penn State and Philadelphia Green, the women transformed dispersed parcels of vacant land into six-award winning gardens with two outdoor kitchens and fruit trees. The gardens abound with crops such as tomatoes and onions as well as traditional Puerto Rican crops including pigeon peas, chilies, and beans. Along the sidewalk they grow herbs used for homeopathic medicine that are impossible to find fresh in Philadelphia. Over the years, Grupo Motivos has developed gardens on other vacant parcels near Las Parcelas. Across the street is Colobo, their African Village garden, with traditional huts and a storytelling room that celebrate the African roots of Puerto Ricans and their black American neighbors.



The outdoor kitchen at Las Parcelas.

The gardens serve as a site for formal environmental education programs of the Norris Square Neighborhood Project (NSNP), the parent organization of Grupo Motivos. They also provide informal environmental and cultural education, as gardeners pass on their heritage to young people growing up in the area. Most gardeners are over 50, and younger adults tend to come around mainly for the parties they put on. The women know

very well the prevalence and impacts of obesity and asthma in their formerly industrial neighborhood, and they view the garden as a tool for combating these and related health and economic problems. They hope that formalizing their various food programs will lead to more sustainable revenue streams and create jobs for the next generation, but a lack of formal programs beyond fledgling youth gardening keeps it mostly an informal community garden and kitchen.

Las Parcelas is a success by nearly all standards of community gardening. It is often viewed as an especially successful example of community organizing, in which neighbors came together to solve the problems of open-air drug markets, violence, and vacant land in the inner city. It is also an example of how women came together informally, supported by local and citywide organizations, to build support networks that help their families and neighbors address health, economic, and cultural needs. Grupo Motivos' hard work and creativity have led to many awards in the City Gardens Contest, as well as the prestigious international Terre de Femmes award for environmental justice conferred upon garden coordinator Iris Brown several years ago.



Drumming and dancing at party at a Las Parcelas.

But Las Parcelas is not a success in two particular respects: land ownership and funding. The garden is located on 19 separate parcels with 4 different owners including the Redevelopment Authority, the Philadelphia Housing Authority, the Norris Square Neighborhood Project, and one private owner. Although the gardens have helped make the neighborhood safer and more attractive, contributing to a rise in land values and recent speculation heralding gentrification, this unstable ownership pattern raises questions about the future of even this landmark of a garden. Grupo Motivos began catering to raise funds for a café and women's center in a building next to the gardens that the District Attorney gave them after the property's seizure in a drug case. They have built a deck out into the garden and a farm stand for a future neighborhood market, but they lack funds for renovation or new program staff. In an era when philanthropic support for urban farming is increasing, typically with the aim of building community food security, community gardens have been largely left out of these funding streams. The great irony in this is that community gardens produce far more food than the relatively few urban farms in the United States, and gardeners deliver that food more directly to people suffering from hunger and related diseases.

One of the greatest, though less heralded successes of Las Parcelas is the amount of food produced in the gardens, which in 2008 had approximately 3,250 square feet under food production. There were thirty-eight, 75-square foot (15 x 5 foot) plots at Las Parcelas, tended by about twenty-five families (some people have more than one plot). Almost every vegetable gardener in Philadelphia grows tomatoes and here is no exception. We counted 996 square feet of tomatoes at Las Parcelas. Tomatoes yielded on average about 2.5 pounds per square foot in 2008, according to the gardeners who weighed for us and farmers we interviewed, bringing this garden's estimated tomato crop to 2,490 pounds. Grupo Motivos' African garden, Colobo, just across the street, grew more than 500 pounds more. These are organic, homegrown tomatoes, most comparable to those sold at farmers markets, where they fetch between \$2.50 and \$3.00 a pound. By the more conservative measure, Las Parcelas produced roughly \$6,225 worth of tomatoes, with more than \$1,300 more across the street. We estimate these two gardens grew more than

\$1,000 of peppers and almost \$800 of beans. In household budgets in Kensington, these are bigger numbers than they are for most households in Northern Liberties or Mt. Airy.

Las Parcelas gardeners participate in City Harvest. Every Thursday they donate the harvest from their dedicated City Harvest plot to the St. Francis Inn on Kensington Avenue, where the staff prepares daily meals for the homeless, largely intravenous drug users. One sticky Thursday morning in August we helped Tomasita Romero harvest tomatoes, eggplants, squash, and peppers along with a few remaining collards and drove them over to St. Francis Inn. Karen, one of the cooks, eagerly awaited the fresh produce and said to us that for the cooks, it was like getting dessert. Over the growing season, Las Parcelas contributed 386 pounds of produce to the St. Francis Inn. This is a low figure among City Harvest gardens, most of which are like Warrington located in middle class neighborhoods where gardeners know relatively few poor people themselves, and thus the logic of charitable donation is stronger. At Las Parcelas, the gardeners know plenty of hungry people with whom they share food outside of formal channels. They are among many, many gardeners in low-wealth communities who grow food as an explicit strategy to improve their families' and neighbors' access to fresh, healthy food.

Stop 4: Montgomery Mini-Farm

Our fourth stop on this tour is on the other side of North Philadelphia, in the African American neighborhood west of Temple University, on a narrow street often blocked off with a string and a homemade sign reading “play street.” We visited “Judith,” the garden coordinator, at her house several times over the summer. Each time we did, we were surrounded by eight-to-twelve children for whom she provides summer programs, including lunch. During the school year, the children are eligible for free school lunch programs. In the summer, Judith cobbles together the more meager federally subsidized snacks and lunches, adding fresh produce from the garden. This is often their only daily serving of fresh food, and sometimes their only meal. North Central Philadelphia has just one supermarket, one small farmers market started in 2008, but plenty of corner stores selling an abundance of junk food, soda, and tobacco products.

Across the street from her house, almost the entire city block is vacant, the old empty houses having been razed by the Neighborhood Transformation Initiative. There, Judith, her neighbors, and the kids garden with the support of the Urban Tree Connection, which also works in West Philadelphia. The Redevelopment Authority of Philadelphia (RDA) owns this lot of approximately 8,000 square feet. They also garden just around the corner on a 5,600 square foot (80 x 70 ft) lot they call the Montgomery Mini-Farm. Although local community development corporations have built some housing in the area, the population here is still declining, and there is plenty of vacant land to colonize.



Montgomery Mini-Farm.

Judith and the Urban Tree Connection graciously assisted us by weighing the Mini-Farm's produce. Judith and the kids harvested 912 pounds of fresh vegetables during the season in raised beds measuring 720 square feet in total. Their largest crops were beans

(159 lbs), melons (158 pounds), squash (140 lbs), and tomatoes (128 lbs). We estimate that they produced about \$2,360 worth of fresh produce, much of which went home with the neighborhood kids and was distributed to neighbors. They grew slightly more than this on the lot across from Judith's house, totaling nearly \$5,000 of vegetables in one of Philadelphia's most food insecure neighborhoods.

Judith is new to gardening, but is helping to perpetuate a longstanding pattern. Throughout many of the gardens in Philadelphia, especially in neighborhoods of low wealth, community and squatter gardeners develop distribution networks of greater and lesser (usually lesser) formality. North Philadelphia has dozens of small gardens on former rowhouse lots, where usually older African American and Puerto Rican men grow vegetables. They share the harvest with extended family, neighbors, and fellow parishioners at church. People stop by, anxiously awaiting the ripening tomatoes – not just for their taste, but also because people are hungry.



The garden on Judith's block.

Many of these gardeners are aging out of gardening, and passing away. As we searched for former gardens amidst the area's vacant lots, often neighbors would tell us, "Mr. Pete used to garden there, but he passed some years ago," or "that was Ms. Johnson's garden, but she got sick last winter and can't garden any more." Judith is one of several forty-something African American women we met in North and West Philadelphia who are getting into gardening in order to feed children of their own and other people. These and other personal and institutional strategies employing community gardening to grow community food security are the heart of our study. We seek to understand just how much food people grow, how the harvest is distributed, and ultimately what impacts community gardening can have on food access and food justice in urban America. Other sections of this report detail our methods, the history and geography of community gardens in Philadelphia, and findings related to their production and distribution of food.

Methodology

The fieldwork for this study consisted of three distinct parts.

1) Site Survey

The goal of this task was to locate community gardens growing food in Philadelphia in 2008, as comprehensively as possible. The Pennsylvania Horticultural Society and Penn State Agricultural Extension provided lists of the sites they currently and formerly supported through their various community and urban gardening programs since the 1970s.⁵ The research team visited these more than 600 sites (some of which were apparently never community vegetable gardens), plus others to which colleagues, gardeners, and community organizations pointed us. We also found some gardens simply by walking, biking, or driving down streets in neighborhoods we were surveying. We made a particular effort to do this in parts of North and West Philadelphia where the concentration of gardens was especially high. The research team recorded the status of each site as food producing, ornamental, or inactive. This survey enabled a comprehensive assessment of the geography of community gardens in the city, which is analyzed in the next section of this report.

This site survey was also the first step in estimating the volume of food produced in community gardens. At gardens where food was being produced, more detailed information was recorded, including the area (square footage) under production, water sources, evidence of support organizations, and other data. At smaller sites, we tallied the entire area under production by crop (e.g., 10 square feet of tomatoes, 6 square feet of beans, and so on). At larger sites, a representative sample of four plots or, at the largest gardens, 10% of all plots were tallied by crop. (Site survey forms are included as Appendix 1.) These tabulations, coupled with the next part of data collection, enabled us to estimate food production in community gardens citywide.

⁵ While PHS's community gardening programs have almost always supported what we characterize as "community gardens," only occasionally serving a backyard garden, PSU served many individual squatter gardens especially through the East Philadelphia initiative of its Urban Gardens Program.



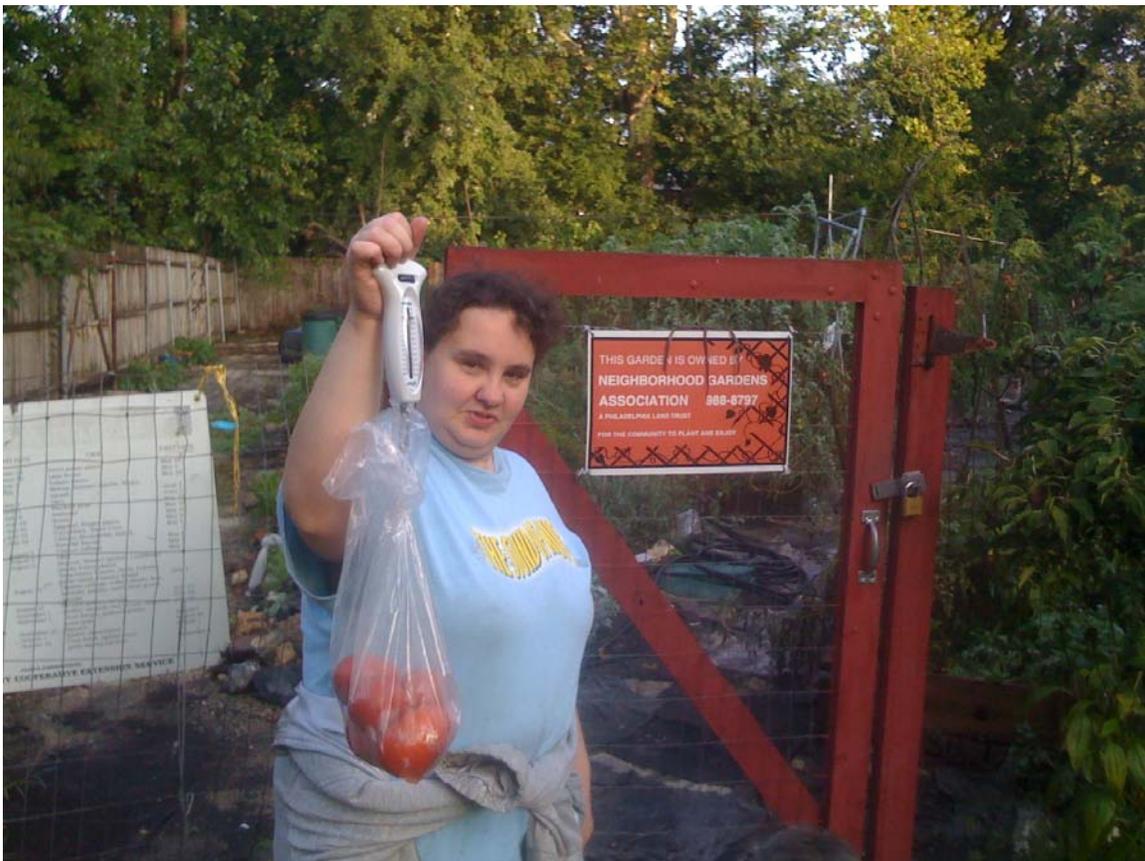
Site survey at Awbury Arboretum in Mt. Airy/Germantown.

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 six gardens to weigh the harvest from selected plots. These included gardens in six different neighborhoods, with diverse soils, growing conditions, gardeners, and institutional arrangements (or lack thereof) – and constitute a representative cross-section of Philadelphia’s community gardens. They were:

- Brown Street Garden, West Philadelphia.
- Las Parcelas, Norris Square Neighborhood Project, West Kensington.
- Schuylkill Center for Environmental Education Organic Gardens at Manatawna Farm (Fairmount Park), Upper Roxborough.
- South Sixth Street Garden, Queen Village.
- St. Francis DeSales Garden, West Philadelphia.
- Montgomery Mini-Farm, Urban Tree Connection, North Central Philadelphia.

Gardeners weighed their harvest by crop, recording their tally, sometimes with the assistance of support organization staff and our research team. 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 2008, 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).



Weighing the harvest.

3) Interviews

Gardeners told us many things about their gardens this summer, but the questions we consistently asked them concerned where the harvest from community and squatter gardens was distributed. Many of these were informal discussions that we recorded during the site survey, totaling more than 100 conversations. In addition, we interviewed gardeners and garden coordinators at a cross-section of 30 food-producing gardens – of every size, ethnic group, institutional arrangement (or lack thereof), and section of the city. We also interviewed longtime staff and directors of PHS, Penn State, NGA, and many smaller community garden support organizations. These interviews focused on the history, organization, and especially the distribution of harvest from the gardens. The results are discussed in the distribution section.

History and geography

Community gardening in Philadelphia has a long history, which has been well documented up to the mid-1990s. This section offers a brief overview, concentrating mainly on the next chapter of that history of gardeners and garden support programs, including a profile of the geography, land tenure, and social patterns of gardens today.

By most accounts, community gardening in Philadelphia dates to the 1897 founding of the Vacant Lot Cultivation Association. It helped people access land, involved children in gardening, and encouraged adults to start market gardens (what we today call “urban farms” like Weavers Way or Wyck in Germantown).⁶ Across the twentieth century, gardens and gardening waxed and waned, corresponding principally to broader economic and neighborhood trends. During World Wars One and Two, with consumer goods in short supply, people planted Victory Gardens that supplied a large portion of household diets. We found at least one World War Two Victory Garden that survives as a community garden today in the lower Northeast section of the city.

The roots of contemporary garden support programs date to the post-World War Two era. In 1953, Louise Bush-Brown organized fellow garden club members and settlement house workers into the Neighborhood Gardens Association, which supported beautification programs in poor neighborhoods and public housing projects. Beginning in 1960, the Penn State Cooperative Extension’s 4-H program helped the association develop mostly flower gardens on vacant lots. By 1978, according to former county extension director Libby Goldstein, the association had planted flower boxes and gardens on 850 blocks in the city.⁷

Community gardening really took off, though, in the 1970s, when the region’s industrial economy came crashing down. In that decade, the city lost over 100,000 manufacturing

⁶ Much of the history of community gardening in Philadelphia is recounted in Laura Lawson, *City Bountiful: A Century of Community Gardening in America* (Berkeley: University of California Press, 2005).

⁷ Libby Goldstein, “Philadelphia’s Community Garden History,” *City Farmer*, <http://www.cityfarmer.org/Phillyhistory10.html#Philly%20History> (visited June 25, 2009).

jobs, and neighborhoods began to empty out on a dramatic scale. Deindustrialization and population loss left much vacant property, which in turn provided a key impetus for residents to band together to “take back” derelict land and beautify their neighborhoods with gardens. Penn State’s Urban Gardening program and the Pennsylvania Horticultural Society’s Philadelphia Green program were born in the mid-70s to aid this process.

At the Pennsylvania Horticultural Society (PHS), Ernesta Ballard established the Philadelphia Green program in 1974. It would grow to become arguably the most important urban greening nonprofit in the United States. Penn State’s Urban Gardening Program began in 1977, part of a six-city demonstration project that grew into a nearly two-decade program of the USDA. By every measure, the Philadelphia program was one of the largest and most active in this national program. The PHS and Penn State programs complemented one another. PHS helped organize prospective gardeners to gain access to lots, and provided compost, fencing, and other materials. Penn State offered training, seeds, and technical assistance with crops, also ultimately to individuals and families squatting on land in Eastern North Philadelphia and Frankford, extending its support beyond strictly community gardens.

The broader social changes that spurred community gardening had mostly to do with the migration of people from agricultural regions in the second half of the twentieth century. The majority of community gardeners in the 1970s, 80s, and 90s came to Philadelphia in the Second Great Migration of African Americans after World War Two, the contemporaneous Great Migration of Puerto Ricans, and the Southeast Asian migrations following the Vietnam War. Gardening offered opportunities for a combination of cultural preservation and, especially where gardens involved a mix of ethnic groups, for social integration as well.⁸ It was an activity principally for first generation migrants, rarely passed on to their children, and often something people did – or did much more –

⁸ Libby Goldstein, the first garden coordinator at the Philadelphia office of the Penn State Extension, wrote about the ways in which gardens and their crops reflected ethnic diversity. Libby Goldstein, “Ethnic diversity in the gardens of Philadelphia: Pigeon peas and banana trees,” *City Farmer*, <http://www.cityfarmer.org/Phillyethnic11.html#Philly%20Ethnic> (visited June 25, 2009).

upon retirement. Gardening was an important factor in the quality of life of older migrants still living in the city.



The Southerners Garden in West Philadelphia, with collards, okra, and crowder peas.



A Puerto Rican gardener shows off gourds he grows to make musical instruments.

In neighborhoods devastated by deindustrialization, depopulation, and segregation, people took over vacant lots, mostly where rowhomes had once stood. A similar pattern characterized Brewerytown, Strawberry Mansion, Tioga, West and South Kensington, Fairhill, Point Breeze, Grays Ferry, Belmont, Mantua, and Mill Creek in North, South, and West Philadelphia. Tadpole Baldwin's house in Belmont was practically the only one left on the block when, in the later 1970s or early 80s this man born in the South organized a large garden. He invited his immediate neighbors, who grew in raised bed plots. Seeing this, other neighbors started their own gardens, often with the help of PHS and Penn State. Gardeners with vehicles procured wood chips and other supplies.



A community garden in Southwest Philadelphia.

A patchwork of gardens arose on dozens of vacant lots of different sizes throughout these neighborhoods. Most sat on just a few rowhouse lots, but some were larger. In terms of their growing techniques and people's view of what they were doing, as Doris Stahl of

Penn State put it, “some of them were really, really farms.” Aspen Farms on 49th Street became a PHS Keystone Garden with flowers and shrubs, a pergola, and a mural painted with the Mural Arts Program. Around the corner, the “Brown Street Farm... was a no nonsense, all you can grow garden” and remains so today. (They have been joined by a new generation of urban farmers, as Mill Creek Farm began growing on the other half of their site four years ago, part of a Water Department stormwater management initiative on RDA land.)



The Brown Street Farm in the Mill Creek section of West Philadelphia.

By the mid-1990s, Penn State’s Urban Gardening Program supported some 500 gardens in the city, all growing food. The Philadelphia Green program supported most of these, plus hundreds more ornamental gardens and green spaces – close to 2,000 greening projects in all.⁹ While USDA funding sustained Penn State’s program, city government

⁹ Goldstein, “Urban agriculture in Philadelphia.”

and local foundations including Pew and William Penn supported the growth of Philadelphia Green, which engaged in gardening and later vacant land management on an ever-increasing scale. PHS's Greene Countrie Towne program helped community groups establish gardens on multiple blocks in the 1980s; Las Parcelas and about ten nearby flower, shade, and vegetable gardens made up one of these "townes." In the 1990s PHS and the New Kensington Community Development Corporation piloted a neighborhood-wide greening strategy for vacant lots. The Neighborhood Gardens Association, under the umbrella of PHS, became a land trust preserving community gardens of various types, some growing food while others were ornamental gardens or passive parks.

City government's approach to community gardens has been uneven. Had gardeners' access to land not been enabled by PHS and managed by the city's Redevelopment Authority (RDA) and sometimes the Department of Commerce and Fairmount Park, community gardening in Philadelphia from the 1970s to 90s might be considered one of the greatest episodes of squatting on urban land in the late 20th century United States. But city government did regulate gardening, mostly through the RDA's yearly contracts, which spelled out the terms of gardeners' access and use of sites held by the RDA and in some gardens continue to be signed and enforced today. In the 1970s the Department of Recreation collaborated with the nonprofit gardening programs. In the 1980s the Department of Commerce helped fund garden programs, and in the 1990s the Office of Housing and Community Development spent some of Philadelphia's federal Community Development Block Grant dollars on community gardens supported by PHS and community-based partner organizations. The names of these agencies and the William Penn and Pew foundations are on many hundreds of fences around active and inactive gardens (and in the case of Greene Countrie Townes scores of telephone poles) throughout especially North, West, and South Philadelphia. For a short time in the 1980s and 90s, Libby Goldstein of Penn State headed a Food and Agriculture Task Force advocated to city government. But until the administration of Mayor Michael Nutter issued a food charter in October 2008, the city lacked any overarching policy on food and urban agriculture.



Roots Community Garden in Olney's Fisher Park, a food and ornamental garden.

Significantly, food production was only sometimes a goal of Philadelphia's community gardening programs. For the Agricultural Extension and its funders at USDA, the Urban Gardening Program aimed to improve nutrition and help low-income households save money on food. Outwardly, PHS and NGA's community gardens programs focused relatively little attention on food, though they supported many gardens growing vegetables and sometimes fruit. Instead, they articulated their programs' goals principally in terms of bringing city residents together to clean up and beautify their neighborhoods, creating attractive, positive community spaces in an urban landscape marred by a vast supply of vacant lots and buildings. Often, one or two individuals who got tired of looking at a rubbish-strewn vacant lot reclaimed the space by planting trees and flowers. Ultimately, though, both of the large community gardening programs of the late 1970s through mid-1990s supported considerable food production.



Thompson Street Peace Garden in North Philadelphia, an effort to beautify the block.

As part of its USDA grant requirements in the 1990s, Penn State's staff was required to calculate the amount of food produced on sites supported through the Urban Gardening Program. Evaluation of its economic, dietary, and social impacts found gardeners harvested an average of \$160 worth of produce per plot (about \$240 in 2008 dollars), increased their consumption of many vegetable types, reduced their consumption of sweet foods and drinks, and reported increased life satisfaction and community involvement.¹⁰ In 1994, Goldstein reported \$1.95 million worth of vegetables and fruit grown in 501 community (and squatter) vegetable gardens. An estimated 2,812 families (12,093 individuals) were involved in these gardens.¹¹ This data represents a key baseline and point of comparison for our survey in 2008.

¹⁰ Dorothy Blair, Carol Giesecke, and Sandra Sherman, "A Dietary, Social and Economic Evaluation of the Philadelphia Urban Gardening Project," *Journal of Nutrition Education* 23 (July/August 1991), 161-67.

¹¹ Goldstein, "Urban agriculture in Philadelphia."



A squatter garden in North Philadelphia, formerly supported by Penn State.

A lot changed in Philadelphia community gardening between the mid-1990s and late 2000s. The first change was basically natural, namely the aging and dying of gardeners. Outside of the retirement destinations of Florida and the Southwest, Philadelphia is among the oldest cities in the United States, demographically. And as noted already, community gardeners were mostly older people who migrated to the city from the South, Puerto Rico, and Asia, many of whom have been returning south or moving to the suburbs and other regions in recent decades. They were not often replaced, as new immigrants and potential community gardeners rarely gained access to existing gardens or new land to cultivate, though the reasons for this were not as “natural.”

The second big change is that in the span of relatively few years the city’s community gardening support systems were almost entirely dismantled. In 1996 Congress cut the funding for USDA’s urban gardening programs, and by 2000 Penn State’s Philadelphia Extension office effectively ended its support of community gardens. During the same period, the Horticultural Society’s philanthropic funding shifted out of its community gardening programs. Its Philadelphia Green program continued to support a reduced number of mostly larger gardens, though it began to focus more on public landscaping

and other work. Philanthropy's shift away from community gardening resulted largely from funders' understanding of these programs as supporting an individual hobby whose social and economic impacts were not well documented. The gardens whose stories were told most often in the press, and those most visible to public and private funders, were the "heirloom tomato" gardens in gentrifying neighborhoods. Even in areas well beyond the downtown, in the late 1990s and early 2000s the need for groups of residents to take back vacant lots appeared to diminish as the city's real estate market began to revive. This last trend became the focus of Mayor John Street's Neighborhood Transformation Initiative (NTI), which aimed to assemble large tracts of vacant land for new development.

The interaction of these two trends – the aging of gardeners and the decline of support programs – was sometimes as important as each of these factors individually. Some of this predated the funding cuts, as the spread of drug activity and related crime drove gardeners off the land in Mantua, Belmont, and other neighborhoods. Crack addicts stealing cabbages and collards discouraged gardeners, and street-level drug gangs intimidated them. The decline of garden support services took away what for many gardeners was an important factor keeping them engaged in their gardens, which had helped bolster their gardens and their spirits against some of the destructive forces in their neighborhoods. Some neighbors we met in North and West Philadelphia told us that when Penn State and PHS stopped coming around with seeds and informal services, from mulch and seeds to small lawnmower repair, it simply became harder to keep growing as they grew "old and tired." Gardens with mostly women tended to decline first and faster; while older men remained able to till, carry soil and plants, and do other heavy work that kept their gardens alive longer.

Most gardens that disappeared were smaller sites in North, South, and West Philadelphia, though some mid-sized gardens also ceased activity. On the smallest sites, one or two rowhouse lots wide, when the one or two individuals who tended them moved on, nobody replaced them. Larger forces impacted larger gardens. The decades-old Garden of Eatin' at 25th and Dickinson in South Philadelphia, for example, was sold by the Redevelopment Authority to a private investor around 2005. Gardeners were given three weeks to vacate

the site, which was then bulldozed, though the property remains undeveloped after the buyer defaulted on his payments. The Neighborhood Gardens Association helped reinforce the pattern of gardens in low-wealth neighborhoods disappearing while those in middle class neighborhoods more often survived. NGA logically prioritized preservation of gardens where neighbors were organized and presumably able to maintain their sites and manage the succession of plot-holders. This was of course more feasible in more affluent, stable neighborhoods with a wider range of households of different ages, compared to poorer neighborhoods characterized by many old and very young people and in between a generation that has had little to do with gardening.

The third major force impacting the decline of community gardens and support for gardening was city land policy, which in the 2000s compounded the trends described above. The Neighborhood Transformation Initiative funded PHS to scale up vacant land management, further shifting its work away from vegetable gardening. Certainly, this part of NTI stabilized many lots across the city. But NTI also destroyed many gardens, especially in North Philadelphia. Significantly, most community gardens were (and remain) on land owned by the city or by private owners whose absence often enables the city to take control of the land. In our survey of sites formerly supported by Penn State and PHS, we encountered perhaps a dozen people who told us something to the effect of, “a man came from the city one day, told me we couldn’t garden here anymore; and in a week or two a bulldozer came and cleared the garden.” (In at least one instance, the sequence of these events was reversed, with the explanation arriving post-bulldozing.) Some older men in Strawberry Mansion and Fairhill told us they had gardened on three or four different lots over the years, as city inspectors and occasionally affordable housing development moved their gardens on. We met more people who told us that displacement had stopped them from gardening. Most of these sites remained vacant in 2008, adding more than a touch of irony to this trend. Beyond NTI’s goal of promoting real estate development as opposed to land uses that do not pay taxes, displacing gardeners was made easier by the fact that most community gardens are listed on city property databases, including the Board of Revision of Taxes, as “vacant land” and often

look little different from nearby vacant lots in the winter or on aerial images such as Google Earth.

Some other changes are worth noting. We found that the majority of gardens at sites of institutional (usually affordable) housing and those supported by community development corporations and sometimes other local nonprofits had fallen into disuse between the mid-1990s and 2008. Property managers and community development professionals with whom we spoke noted that when there has been funding from foundations and public agencies, and when the Horticultural Society and Penn State were more active, they have started and sustained gardens. But when financial, material, and technical support for gardening waned, so did their gardens.

Probably the two greatest hits on food production in Philadelphia community gardens occurred at what were the second- and seventh-largest gardens, respectively, prior to 2008. “The Farms,” an eleven-acre garden of mostly older Italian men, was sold by the city, and some gardeners moved to three and a half acres adjacent to the seven-acre Common Ground garden, making the consolidated Airport Garden the largest in the city (both The Farms and Common Ground were previously called the “airport gardens”). Sunflowers still sprout on The Farms site, though the fruit trees, topsoil, buildings, and goats, chickens, pigs, and snails that the farmers tended have been bulldozed or carried away. In an unrelated case, CSX placed official-looking signs announcing that railroad work would begin in the spring or summer of 2007 in a garden adjacent to the railroad but on Fairmount Park property, implying that the entire garden belonged to the railroad. Only a handful of the retired railroad workers from North Philadelphia who once gardened there returned in 2008. The total area of its plots make up the city’s sixth largest community garden, but most lay fallow, partly since this is an informal garden on an inconspicuous site.

By 2008, when we began this study, nobody knew what had become of the vast landscape of community gardens that thrived just a decade before. PHS supported roughly thirty-seven gardens through its City Harvest program (up to forty-five in 2009).

The often-repeated estimate that the city was home to some 400 or 500 community gardens had become little more than hearsay. What we found on the ground was a significant decline in the number of active gardens growing food, but also a remarkably resilient group of gardeners who sustained a large number of productive gardens.

In our ground survey of over 600 sites once (and sometimes currently) supported by PHS and Penn State gardening programs, we found:

- 226 community or squatter gardens growing food;
- 154 ornamental gardens, including sites with flowers, seating, shade, sometimes play equipment, and always some indication that they were in use (including mowed or weeded spaces);
- 255 inactive sites, including:
 - 157 vacant lots;
 - 35 sites with new buildings;
 - A modest number of institutional sites without active gardens, including institutional housing, schools, and other sites; and
 - A small, undetermined number of sites supported by past community gardening programs, but which were never developed as community or squatter gardens.¹²

The big change documented by our survey of sites is the decline in active community and squatter vegetable gardens from 501 in 1994 to 226 in 2008. The major factors influencing this trend have been discussed above, and their implications are analyzed further in the discussion section at the end of this report. It is impossible to determine the exact changes in ornamental gardens, due to incomplete data on that activity historically. Because of this, and since our study focuses principally on food production, our more detailed analysis concentrates on the 226 vegetable gardens.

Citywide, three major geographic patterns are discernible. As the maps in this section illustrate, the greatest concentrations of community and squatter vegetable gardens are in

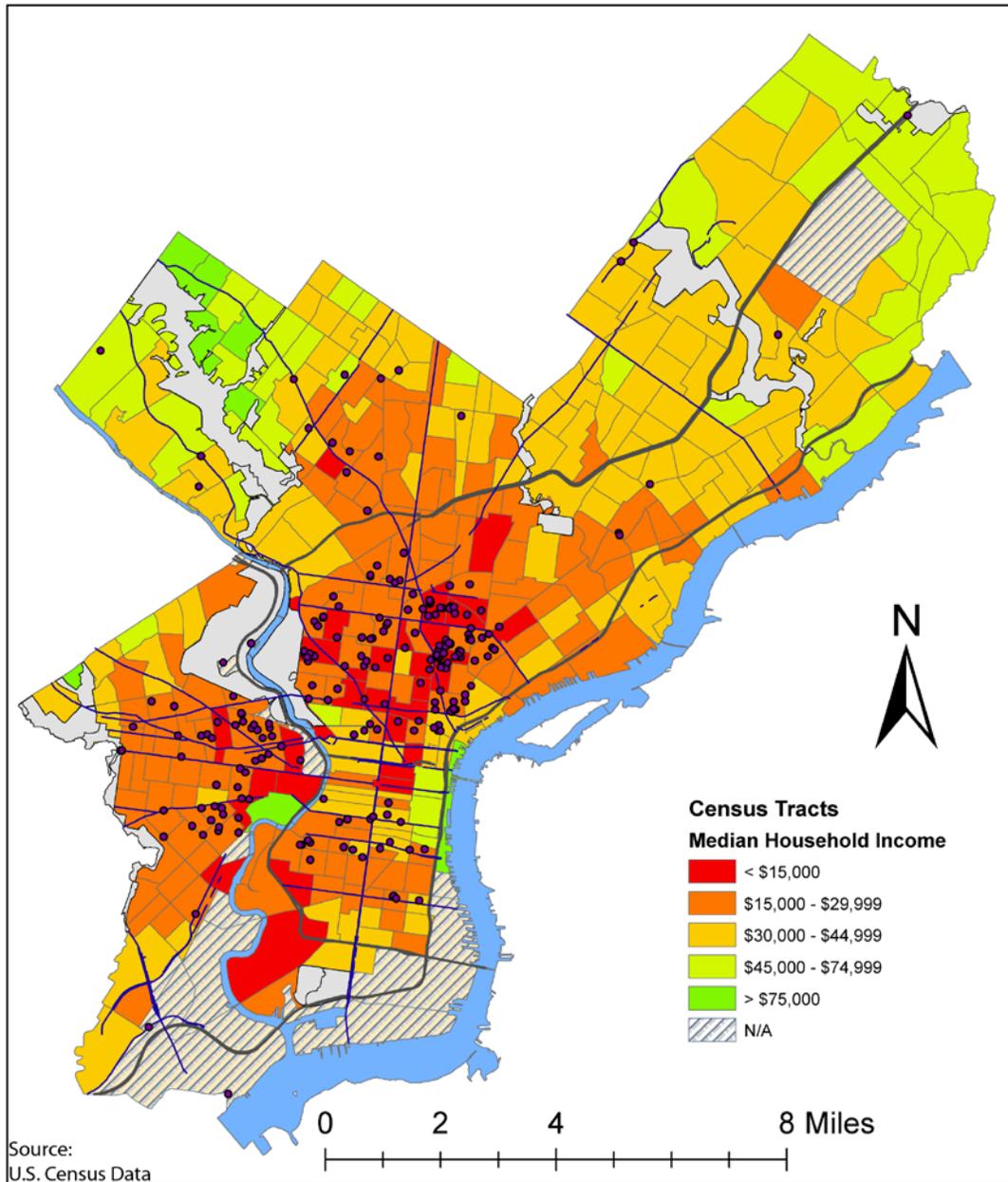
¹² These sites include private yards as well as sites involved in PHS's Garden Tenders program for starting community gardens, but which never became actively cultivated.

North and West Philadelphia, in neighborhoods of lower wealth, much vacant land, limited healthy food retail. Most of these gardens are small, as shown on the map of lower Eastern North Philadelphia gardens. They often occupy a few lots where rowhouses formerly stood, with tenuous land tenure, though some are larger and institutionalized. South Philadelphia's working class communities, especially Grays Ferry and Point Breeze, once exhibited similar patterns of gardens, though the great majority of these are now inactive. The second major geographic pattern characterizes the neighborhoods in and around Center City, which have been gentrified in recent decades, and where gardens are generally larger, as illustrated in the map of gardens in the Squirrel Hill section of West Philadelphia. These gardens are also more often institutionalized in their management and ownership, and some have waiting lists for people to get plots, sometimes estimated as much as four years long. Finally, a small number of gardens dot Northeast, Northwest, and Southwest Philadelphia. These are generally larger and include the three biggest community gardens in the city: the Airport Garden next to (and owned by) the Philadelphia International Airport, Benjamin Rush State Park in the northeast corner of the city, and the Schuylkill Center Organic Gardens at Manatawna Farm straddling the city line in Roxborough. These are allotment gardens with large plots, where gardeners typically arrive by car.



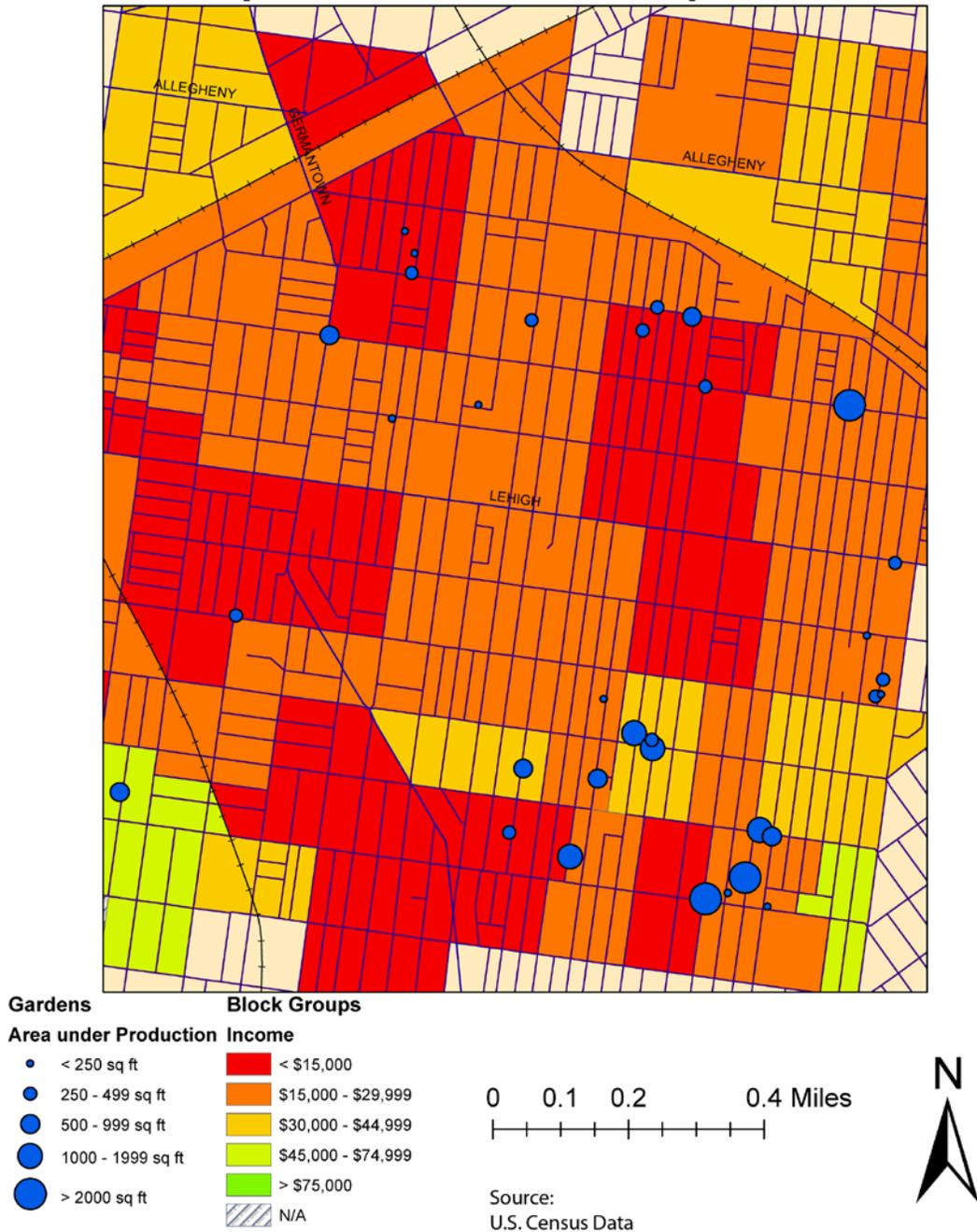
Benjamin Rush: the other end of the garden is at the tree line in the far distance.

Food-Producing Community Gardens and Median Household Income in Philadelphia, PA



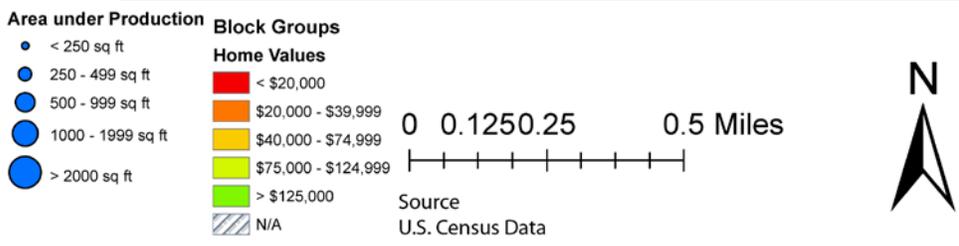
Community gardens cluster in census tracts with lower household income (2000 Census).

Food-Producing Community Gardens and Median Household Income in Zip Code 19133-Philadelphia, PA



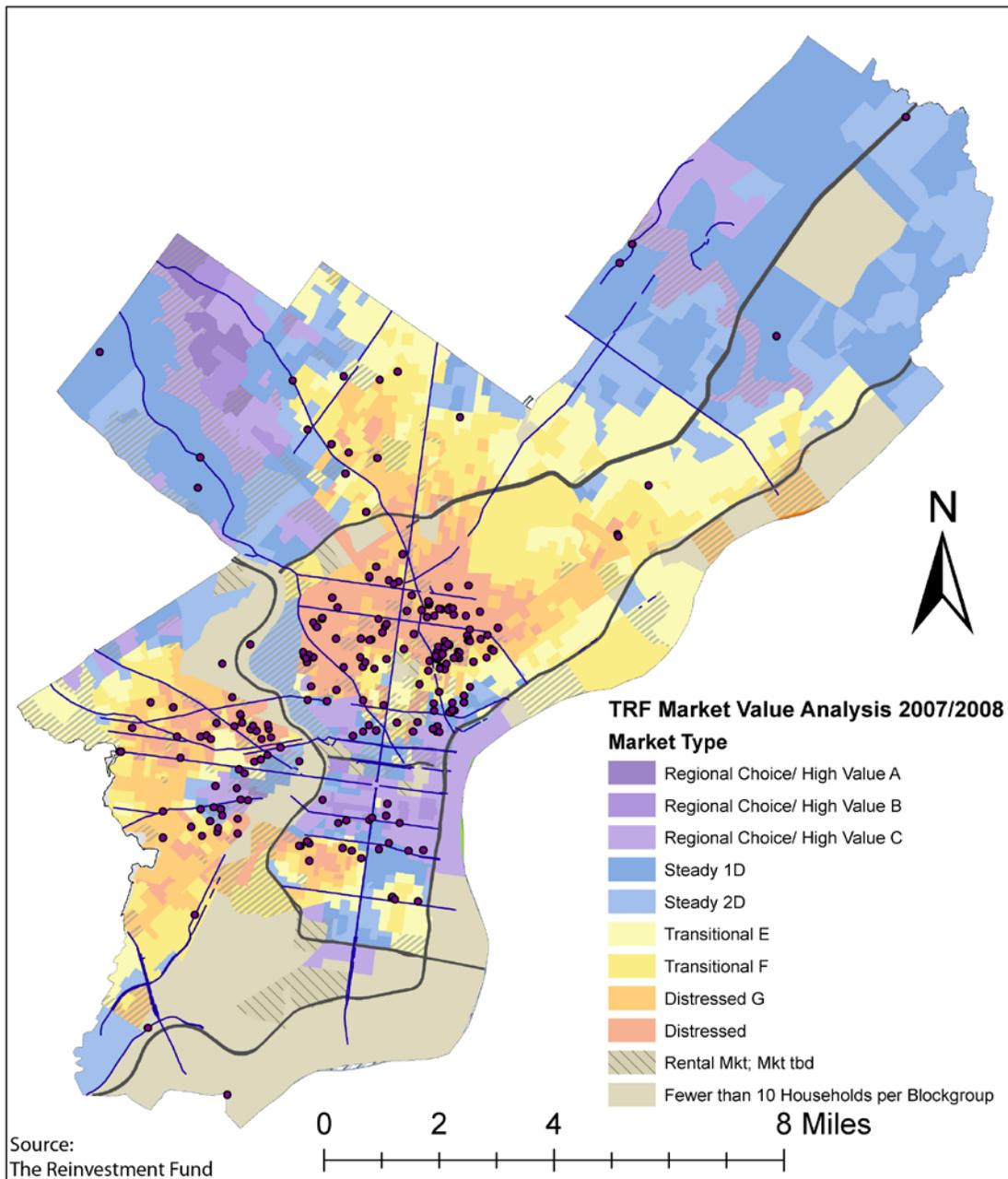
Community and squatter gardens in Eastern North Philadelphia vary by size, but are mainly small-to-medium sized and cluster in areas with much vacant land.

Food-Producing Community Gardens and Median Owner-Occupied Home Values in Zip Code 19143-Philadelphia, PA



Though home value data has changed significantly in the Spruce Hill and Squirrel Hill sections of West Philadelphia since year 2000, when the data on home sales in this map was collected, this map nonetheless shows a clustering of larger, preserved gardens in the relatively more affluent sections of University City and West-Southwest Philadelphia, in the area around Clark Park.

Food-Producing Community Gardens and Real Estate Markets in Philadelphia, PA



The Reinvestment Fund’s Market Value Analysis characterizes neighborhood real estate market trends more recently than the previous map. It helps illustrate that the largest number of gardens still cluster in low-wealth, weak-market sections of North and West Philadelphia, and that the “regional choice” markets of neighborhoods surrounding Center City have a significant cluster of usually mid-sized, more often preserved gardens.

Land ownership patterns among the 226 food-producing gardens help illustrate both how diverse and complex community gardens’ land tenure can be. The following table summarizes these patterns:

TABLE 1: Ownership of community and squatter vegetable gardens

Ownership Type	No¹³	
Institutional ownership		13%
Neighborhood Gardens Association (NGA) only	10	
Religious affiliated	5	
Not-for-profit	15	
Private ownership		19%
Singly owned	41	
Corporately owned	3	
Public Ownership		31%
City of Philadelphia Department of Public Property	34	
Redevelopment Authority of Philadelphia	19	
Philadelphia Housing Authority	5	
School District of Philadelphia	5	
Fairmount Park Commission	6	
Department of Aviation (Commerce)	1	
State of Pennsylvania (Conservation & Natural Resources	1	
Multiple ownership		31%
Private owners	11	
Mixed public and private owners	57 (including 2 NGA)	
Public sector owners	3	
No ownership information	9	4%

As this table suggests, ownership patterns are fragmented. No one city department or institution controls a majority – or even a quarter – of these gardens. This helps explain why it was easy for more than half of the city’s community vegetable gardens disappeared in little more than a decade.

¹³ The total number in this table adds up to 229, meaning that some of these categories overlap in at least four of the gardens (in addition to those listed in the “multiple ownership” category).

However, our findings also contradict one major assumption made by many city agencies and philanthropists, namely that community gardens are simply a “temporary land use.” To be sure, many gardens have fallen out of use. However, many also persist, including most of the larger gardens in the city, whose larger number of plots accommodate the succession of gardeners more easily than the smaller gardens. One large garden we visited, the Wissinoming garden at North Hills Cemetery on the edge of Frankford, has been continuously cultivated since World War Two, when it was established as a Victory Garden. Many others, including most of the largest gardens in the city, have been active for twenty-five, thirty, or more years. Small squatter gardens are indeed temporary land uses. But we submit that the false view of community gardens in general as “temporary land uses” is an inadequate excuse for city government not to develop a clear land policy that integrates community gardens into zoning, city and neighborhood planning, and community development. The detailed spatial and ownership data collected through this research, for every community and squatter garden in the city, provides a basis for public and private organizations to directly address these challenges and opportunities.

The social patterns we found also suggest that community gardens offer important opportunities to address the food access and community development issues of a broad cross-section of Philadelphia neighborhoods, especially in low-wealth communities where the greatest numbers of gardens are found. The 226 food-producing gardens comprise a great diversity of gardeners. They continue to reflect the migrant communities that built most of Philadelphia’s late twentieth century community gardens. Glenwood Green Acres, the garden visible from the SEPTA and Amtrak train lines near North Philadelphia Station, is only the most visible example of the many gardens where African Americans of the Second Great Migration still grow collards, okra, and sometimes peanuts. The Airport Garden is an amalgamation of two gardens, the Common Ground garden where African Americans and Southeast Asians have gardened for over 30 years, and the Gulf Oil garden whose gardeners, older Italian men, moved adjacent to Common Ground in 2008 as their old site was sold by the city. The Korean Senior Center garden in West Philadelphia and the Hmong garden in the Northeast are among few Asian gardens remaining. Puerto Ricans garden mostly on squatted land in

Eastern North Philadelphia, though the Friends Garden and Las Parcelas are among a small number of larger, more stable Puerto Rican gardens. Some South and Southeast Asians have plots at Benjamin Rush State Park in the far Northeast. A small number of youth gardening and farming programs, including Teens4Good, Weavers Way, and the Urban Nutrition Initiative, are getting youth into gardening. However, most gardeners are of retirement age, especially in low-wealth communities. Our interviews suggest that gardening is a vital factor enhancing the quality of life of older Philadelphians.



Glenwood Green Acres in North Philadelphia, with its caboose at the left.

Different social and land ownership patterns are found in higher-wealth neighborhoods, especially in Center City and surrounding neighborhoods such as Queen Village, Northern Liberties, and University City. There, largely white, middle class, often younger gardeners typically enjoy greater protection of the land they cultivate. These communities' greater wealth and access to resources have enabled them to preserve many

gardens through NGA and other nonprofit organizations, in most cases before the real estate market took off in the late 1990s. Gardens such as Warrington and Chester Avenue in University City, Southwark/Queen Village, and Seedy Acres and Liberty Lands in Northern Liberties make important contributions to the quality of life in neighborhoods where many residents lack sizable yards.

In recent years, these neighborhoods – and a few lower-wealth areas – have also become home to farmers markets, expanding fresh food access and local food economies. Yet community gardens in Philadelphia continued to grow more food than all the city’s farmers markets and urban farms combined sold last year. The details of gardens’ production are recounted in the following section, which also relates gardeners’ distribution patterns.

Production

Community and squatter gardens in Philadelphia produce a lot of vegetables. Beyond that, their patterns of food production and distribution are tremendously diverse. This section presents a broad overview of gardens' production patterns. After a brief discussion of our overall estimates and the assumptions behind them, most of the production data is presented in tables. Distribution patterns are detailed in the following section. Readers with limited interest in the detailed production figures may wish to skip directly to this discussion.

Our estimate of \$4.9 million worth of summer vegetables produced in the city's community and squatter gardens bears further explanation, especially in the context of baseline research done by the Penn State Agricultural Extension in the 1990s. Although the number of gardens declined by more than half, from 501 in 1996 to 226 in 2008, the dollar value of food produced in these gardens rose from Penn State's estimate of just under \$2 million (almost \$3 million in year 2008 dollars) to more than double that figure a dozen years later. We submit that three main factors help account for this. First and most important, the price of food has risen dramatically, especially in just the past few years due largely to rising energy costs. Second, the dramatic decline in the number of gardens does not correspond to an equal decline in the amount of land in gardens devoted to food production. The great majority of gardens that became inactive since the mid-1990s were small; and food production has expanded at some gardens, especially in very recent years.

The third factor accounting for this change is the fact that our methodology differed significantly from that of Penn State in the mid-1990s. To estimate crop production per square foot, Penn State's staff applied a USDA formula that was based on commercial crop research on plant yield and applied a standardized figure for all crops (i.e., the research did not involve differentiating between crops). By contrast, we counted the square footage of each crop under production, for example differentiating between corn (a relatively low-value crop) and peppers (which cost much more per pound). We also

worked with gardeners at a broad, representative cross-section of Philadelphia gardens to weigh what they actually harvested. Rather than relying on generalized results of research from a rather different sector of agriculture, we believe that our method more accurately accounts for what gardeners actually grew and harvested.

The basis for our pricing of vegetables grown in community gardens also diverges from the standard USDA formula, which we believe under-values this produce. The great majority of vegetables in Philadelphia's community gardens are grown organically, without chemical fertilizers, pesticides, or herbicides. Many varieties are heirloom, especially tomatoes, the most prevalent crop we found. We compared vegetable prices at many different outlets throughout the city, from farmers' markets to traditional supermarkets. We visited stores in low wealth neighborhoods to observe the selection as well as the prices. In calculating the value of produce from community-gardens, we chose to use the prices we found at farmers' markets because the production methods were similar, the produce was grown and distributed locally, and it was fresh. We understand, however, that many shoppers regardless of income or wealth status use price as their main criterion for buying. Using supermarket prices for industrially-produced food, our research shows that the same harvest would be valued at \$2,219,500 or 46% of the value of locally grown organic produce.

As of the summer of 2008, the gross area of gardens was approximately 60 acres, with over 33 acres under direct cultivation. The gross area includes the total area of the lots on which the gardens are located. The net growing area, that is the overall garden area including service areas, paths, entries, etc. is approximately 38 acres. This figure represents only about 1.87% of Philadelphia's total vacant land inventory, which the most conservative estimates of city agencies put at some 1,790 acres. The three large allotment gardens located on the peripheries of the city account for almost 25 acres, 44.5% of the gross garden area. These and other basic characteristics of community gardens' size, area under production, and estimated production in the summer of 2008 are summarized in the tables on the following page and are discussed below.

TABLE 2 : Summary statistics for all Philadelphia community and squatter gardens

No. of Gardens	Gross Area/Lot Size	Net Area/Growing Area	Crop Area	% Crop area to Gross area	Estimated Pounds Grown	Estimated Value of Crops Grown
226	2,433,734 sf 55.9 acres	1,656,885 sf 38 acres	1,454,890 sf 33.4 acres	60%	2,037,143	\$4,860,364

TABLE 3: Summary statistics for community gardens – categorized by gross area**Gardens over 5 acres (43,560 square feet) in gross area**

No. of Gardens	Gross Area/Lot Size	Net Area/Growing Area	Crop Area	% Crop area to Gross area	Estimated Pounds Grown	Estimated Value of Crops Grown
3	1,303,304	1,121,574	1,128,864	81%	1,361,408	\$3,310,778

Gardens 1 acre to 5 acres

No. of Gardens	Gross Area/Lot Size	Net Area/Growing Area	Crop Area	% Crop area to Gross area	Estimated Pounds Grown	Estimated Value of Crops Grown
3	252,011	76,499	64,713	21%	91,892	\$212,270

Gardens one-half to 1 acre

No. of Gardens	Gross Area/Total Lot Size	Net Area/Growing Area	Crop Area	% Crop area to Gross area	Estimated Pounds Grown	Estimated Value of Crops Grown
8	264,988	148,571	125,337	47%	177,979	\$411,130

Gardens one-quarter to one-half acre

No of Gardens	Gross Area/Lot Size	Net Area/Growing Area	Crop Area	% Crop area to Gross area	Estimated Pounds Grown	Estimated Value of Crops Grown
20	329,125	146,537	123,753	38%	175,729	\$405,933

1,000 square feet to a quarter acre (approx 10,000 square feet)

No of Gardens	Gross Area/Lot Size	Net Area/Growing Area	Crop Area	% Crop area to Gross area	Estimated Pounds Grown	Estimated Value of Crops Grown
161	528,210	4,227,072	146,381	28%	207,861	\$480,159

Gardens under 1,000 square feet

No of Gardens	Gross Area/Lot Size	Net Area/Growing Area	Crop Area	% Crop area to Gross area	Estimated Pounds Grown	Estimated Value of Crops Grown
31	21,832	15,981	12,223	56%	17,357	\$40,094

We estimate that community gardens in Philadelphia produce over two million pounds of vegetables and herbs in the summer of 2008. Tomatoes were by far the largest crop, with approximately 837,550 pounds or 41% of the total. Other important crops included cabbage (218,556 lbs, 10.7%), collards (151,8300 lbs, 7.5%), beans (139,557, 6.9%), and squash (110,662 lbs, 5.4%). These five crops accounted for two-thirds of the total crop. At the other end of the scale, we estimated only 954 pounds of peanuts grown. We did not include the harvest from cane or bush berries (e.g., raspberries, blackberries, blueberries) or fruit trees in these calculations, though many gardens have significant numbers of these. Moreover, our survey covered mid-summer vegetables, not spring or fall crops, so we clearly missed a large amount of lettuce, kale, spinach, and other early and late season crops. Accounting for these other crops and seasons would yield significantly larger figures for the total amount of food grown in community and squatter gardens.

Roughly 80% of the summer vegetables we counted were in the 14 largest gardens, those over one-half acre in size. These make up just over 64% of the city's gross garden area, but they generate more food for several reasons. Most include plots laid out in ways that maximize the land available for production, with fewer paths, sitting areas, or ornamental plantings than many other gardens. At most of these gardens, people tend to grow food rather than flowers, yet their patterns of land tenure, gardeners' demographics, and social life are diverse. Brief profiles of these 14 gardens are included in Appendix 1, illustrating this diversity. Finally, it is worth noting that the Pennsylvania Horticultural Society, Philadelphia's citywide community garden support organization, actively supports only half of these fourteen gardens, reflecting the meager formal support of community gardening in the city more broadly.

There were 212 food-producing gardens under one-half acre in size, 94% of the city's total number of gardens. Together, we estimate they grew nearly \$1 million worth of vegetables and herbs. Of these smaller gardens, 161 (71%) are between 1,000 square feet and 10,000 square feet. Though small, this group of gardens produced nearly half a million dollars worth of food. These gardens are found in almost every neighborhood in

the city, but especially in North, West, and parts of Southwest and South Philadelphia. This means that the production of food in community and squatter gardens in Philadelphia is widely dispersed geographically (the citywide maps above help illustrate this pattern). And since gardeners at many of Philadelphia's largest gardens reside in various parts of the city, the distribution of food is similarly spread across the city. Distribution patterns are discussed in the following section of this report.



A garden in the Tioga section of North Philadelphia.

Distribution

Perhaps the most important finding 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. Philadelphia’s community and squatter 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. Both within and beyond City Harvest, the formal (institutional) and informal (non-institutional) networks through which people distribute food from community and squatter gardens mirror the diversity of gardens and gardeners themselves. The following table summarizes the range of institutional and informal distribution outlets.

TABLE 4: Food distribution from community and squatter gardens

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

INFORMAL DONATION
Neighbors stopping by
Dropping off to neighbors
At church
Kids to take home
Strangers stopping by
Kids eating in the garden
Basket on front porch
Food cupboards
Soup kitchens
Colleagues at work
FORMAL/INSTITUTIONAL DONATION*
Food cupboards (mostly operated by churches)
Kids eating in educational/childcare programs
Kids to take home from programs
Other church programs
Drug rehab and medical programs
Soup kitchens
SALE
Restaurants
Grocery stores
Farmers market
BARTERING

** All of the patterns listed in the “formal/institutional” distribution are extant within the City Harvest program as well as in other gardens not officially part of City Harvest.*

Distribution of harvest from community and squatter gardens is particularly prevalent in the North, West, and other Philadelphia neighborhoods where people are poor. The most common recipients through non-institutional channels are neighbors, extended family, fellow church members, and children. The garden tour at the beginning of this report elaborates on these patterns. Most older African American and Puerto Rican gardeners we met in North, West, Southwest, Northwest, and other neighborhoods, 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.

Gardeners employ a variety of resourceful techniques to procure materials (including seed saving and exchange), engage children and adult neighbors in cultivation and harvest, and get produce to people. Often the people to whom they give food are strangers to them, and this does not seem to be an issue with gardeners. Some gardeners leave vegetables and fruit in baskets on their porches, making the interface between gardeners and the people they feed sometimes anonymous, which evidently suits some recipients of food for whom hunger relief can have multiple layers of stigma. Gardeners regularly take steps to maximize production, sometimes on deceptively small plots, often without consuming much of the food at all themselves. For example, one gardener in Strawberry Mansion told us, out of the diverse crops on his 2,400 square foot lot, “I only eat some of the corn. The rest I give away to people who come by and ask for it. There are a lot of hungry people in this neighborhood.” The blackberries are reserved for the kids on the block, whom he invites into the garden to pick, but not more than they can eat on the spot. Teaching them to “leave enough for others” is an important part of this and other gardeners’ ethic of food and community.

However, because of their aging, and since public policy and the decline of community garden support programs present barriers to new communities starting to garden, these sorts of gardeners are a shrinking demographic. The story of “Judith” and other forty-to-sixty-something women getting into gardening, sometimes to directly replace seventy-to-eighty-year-old neighbors who used to supply them with fresh vegetables, may be termed an emerging pattern at best. We found few formal gardening programs working with

seniors, though many former garden sites at seniors housing complexes. The sizable garden at the Ascension Manor senior housing complex in East Poplar is a notable exception.

Formal youth programs developed in recent years hold out the promise of engaging a new generation in gardening. They work principally in and with low-wealth communities, and they play important roles in feeding children during the day and teaching them about food and nutrition. The staff of these programs typically send kids home with vegetables and sometimes fruit for their families. More formal programs include a growing number of school gardens and farms, such as those of the Urban Nutrition Initiative (UNI), Weavers Way's CSA at Saul Agricultural High School, and the kindergarten project of The Food Trust. Youth also participate in educational and employment programs with Mill Creek Farm, with Weavers Way at its Awbury Arboretum farm and at Stenton Family Manor homeless shelter, and with Teens4Good, which grows on dispersed sites in various neighborhoods.

Many of the educational and food distribution practices of youth farming programs are also prevalent in community gardens. The Hansberry garden in Germantown has become as much an environmental education center as a place for neighbors to tend plots of tomatoes and kale; and the gardeners' monthly flea markets make it a true community center. At Las Parcelas and in gardens supported by the Urban Tree Connection and East Park Revitalization Alliance, a range of more and less formal activities involve children in education about food, horticulture, and nature. As at UNI and Weavers Way, the kids typically eat there and take home some of the harvest. The extent to which community and squatter gardeners involve children informally in food production, distribution, and related activities is something we are just beginning to document systematically in Philadelphia, Camden, and Trenton. 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 programs yields different results.



Hansberry Garden and Nature Center.

The informal patterns through which community and squatter gardeners distribute fresh food to hungry neighbors are an old story, and the decline of these gardens in Philadelphia suggests this activity has waned in recent years. However, the Horticultural Society's City Harvest program has significantly expanded and strengthened the roles of community gardens in fresh food distribution. The program has institutionalized a pattern that PHS's longtime staff including Eileen Gallagher and Sally McCabe have long observed and indirectly supported. While PHS continues to support gardens in low-wealth neighborhoods, City Harvest has engaged mostly middle class gardeners in helping to improve local food relief. Participating gardeners delivered close to 12,000 pounds of vegetables to food cupboards in 2008.



The City Harvest sign posted in gardens participating in the program.

City Harvest has integrated gardeners into a diversified network of urban food distribution and education programs. These include greenhouses at the Roots to Re-Entry garden at the county prison and now at Weavers Way Farm, which grow seedlings for the gardens; the cooking and nutrition lessons of the Health Promotion Council; and the myriad creative ways that the SHARE food cupboards scramble to get hungry people food. Some gardeners, notably those at Southwark/Queen Village and Warrington, have become deeply involved with their neighborhood cupboards. They cook and share meals with the cupboards' "customers," invite them into the gardens, and volunteer year-round for food drives and distribution.

Within City Harvest, there is a wide variety of gardens, community organizations, and distribution patterns. Most, like Warrington, Southwark/Queen Village, and Spring Gardens involve mostly middle class gardeners in donating to their less fortunate neighbors through SHARE food cupboards. Others, like Las Parcelas, Aspen Farms, and Glenwood Green Acres, are characterized by a mix of formal donation to SHARE food cupboards, soup kitchens, and usually a much higher volume of informal distribution to neighbors, extended family, and other hungry people. The large raised-bed and

greenhouse garden at the County Prison, staffed by PHS through City Harvest, is one of the biggest donors of food, in 2008 harvesting more than 3,600 pounds of vegetables for a food cupboard in Frankford, in addition to sprouting some 25,000 seedlings for distribution to other gardens. One City Harvest garden is at New Jerusalem Laura, a faith-based recovery center for addicts around the corner from Judith's garden in North Philadelphia. New Jerusalem runs its cars on bio-diesel from Greensgrow Farm that it stores in a shed next to its dense vegetable plots and orchard. Last summer we estimate the garden produced over 2,500 pounds of vegetables, worth nearly \$6,000, including 80 pounds of beans, almost 750 pounds of tomatoes, more than 100 pounds of cabbage, and 140 pounds of broccoli. Seven hundred pounds went to its City Harvest-affiliated cupboard, and most of the rest was consumed by its residents and distributed to neighbors.

City Harvest producers extend well beyond community gardens. Partners and participants in the program include Weavers Way, Teens4Good, Mill Creek Farm, UNI, Greensgrow, and other farms and community food projects. One thing this means is that Philadelphia farms, most of which are in some way committed to building food security, have been connected to a single, pervasive network that distributes fresh, healthy food as well as the seedlings, compost, and other gardening materials essential to producing that food. In today's diverse landscape of community gardens and farms in the city, nearly all commercial producers and certainly City Harvest staff recognize partnerships and networks as vital to what one prominent scholar of community food systems terms "re-weaving the food security safety net."¹⁴

In recent years, as formal urban farming has grown, some people have taken great pains to distinguish urban farms like Greensgrow or Mill Creek from community gardens. Promoters of commercial urban farming often make a distinction of scale, and always make the distinction that community gardening is an informal, not-for-sale activity, while farming is a formal, income-generating pursuit. But a fuller understanding of the

¹⁴ Patricia Allen, "Re-weaving the food security safety net: Mediating entitlement and entrepreneurship," *Agriculture and Human Values* 16 (1999), 117-29.

activities of both community gardeners and urban farmers suggests that these distinctions are both inaccurate and not especially useful for understanding either gardeners' or farmers' impacts on urban food economies and community food security.

In truth, urban agriculture in Philadelphia and most other US cities today constitutes a diverse set of activities that often blend together on the same sites. Nearly all urban farms and a small number of community gardens in Philadelphia and other cities engage in both sale and donation of their harvest. The garden tour section's stop at the gardens at Manatawna Farm introduced "gardeners" who sell at farmers markets and to restaurants. This is the most sales activity we found in Philadelphia, though we did find some other instances of formal and informal exchange. At one of the larger gardens in North Philadelphia, we met a woman who grows callaloo, a Caribbean herb, which she sells to Caribbean grocery stores in the city. A small number of gardeners suggested that other gardeners sold food on a casual basis, but we did not confirm this. Beyond these instances, no other community gardeners reported selling their harvest – with the notable exception of the neighbor children who garden at the Fair Hill Burial Ground, who set up an occasional vegetable stand at 9th and Indiana, a corner formerly notorious for its heroin market (though they were part of a youth program run by Friends of Fair Hill Burial Ground).



The Friends of Fair Hill Burial Ground youth farm stand (courtesy of FFHBG).

We met some gardeners who described bartering relationships in which they and fellow gardeners trade vegetables for other goods and services on a very informal basis. One gardener boasted he traded food for the affections of women, and we don't think he was joking. More often, people explained their distribution practices in terms of reciprocal gift relationships, for example "Mrs. Robinson's daughter gives me rides to the doctor from time to time, so I grow some of these collards for her." Most gardeners, however, responded that they do not sell or exchange their harvest because they know people who need the food, expressing a deep ethic of sharing with others in need. This was especially prevalent, of course, in low-wealth communities, especially in North and West Philadelphia. Some gardens, such as the Common Ground /Airport Garden in Eastwick, prohibit the sale of food in their bylaws.

With perhaps one exception, all formal farms in Philadelphia donate food through charitable means, mostly City Harvest. Mill Creek Farm, Weavers Way Farm, and the gardens of Teens4Good share their sites with community gardens that predate their programs; and the farmers have varying degrees of involvement with their gardener neighbors. Mill Creek's farm stand sells at below-market value in order to achieve its mission of growing healthy food that is affordable to its neighbors. Perhaps the most accurate characterization of urban agriculture in Philadelphia might be to call it a "hybrid system" in which the lines between gardening and farming, sales and donation are often blurred.

Community gardens face challenges of land tenure, generational succession, and declining and uneven support. In the face of these challenges, the resilience of gardeners is remarkable. They remind us that although institutionalized approaches to gardening and food distribution are important, informal gardening and distribution are equally important for growing and getting food to hungry people.

There is some tension between entrepreneurship and entitlement in debates about urban agriculture and food relief. We consider this something of a false dichotomy at least in

the experiences of gardeners and farmers in Philadelphia. We view many gardeners who grow food for hungry people as “entrepreneurs” of community food security, in a sense. They approach this work strategically, oftentimes distributing prodigious amounts of food, even if no money changes hands to constitute “economic activity” measured in a traditional sense. The recent fixation on entrepreneurial growing also tends to ignore the fact that the great majority of urban farms in the United States are presently subsidized, usually by philanthropy and often by cheap youth labor.

Community gardens grow more food – and distribute that food more directly to hungry people – than any other form of urban agriculture in the United States today. They distribute food in diverse ways that reflect the diversity of communities and civil society organizations. Gardening can have significant impacts on food access and people’s control of important parts of their food supply, though only some gardeners and recipients of their harvest get a lot of their food from gardens. In low-wealth communities, we found gardening is a strategy that many people employ to cope with poverty and its attendant health and social problems. Gardening is labor intensive, but not capital intensive, mainly involving investment of labor and improvement of the soil. 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.



An entry in the Benjamin Rush garden’s scarecrow contest.

Appendix 1: Philadelphia's 14 Largest Community Gardens

Brief descriptions of the fourteen community gardens larger than one-half acre in Philadelphia are below:

1. **Airport Garden, Eastwick, 430,445 square feet (gross area)**
Located in the flight path of the smaller plane runway at Philadelphia International Airport, the Airport Garden is the city's largest. In reality the garden is two gardens under different governance. The land is owned by the City and administered through the Commerce Department and the Philadelphia Department of Aviation. The larger is 'Common Ground,' which has been located at that site for 30 years. The majority group here is retired African-American men who spend much time growing food for home consumption and distribution at their churches and other institutions. Southeast Asians also garden here. In 1992 the Commerce Department leased the garden to the garden association for 15 years. This has now been changed to a year-to-year lease. The other part of the garden, known as the 'Victory Garden,' was relocated recently from 'The Farms,' on land near the lower reaches of the Schuylkill River that the city sold to a private buyer. The gardeners, largely older Italian-American men, have garden structures that resemble small houses.
2. **Benjamin Rush State Park, Far Northeast, 391,248 square feet**
This allotment garden is located within the boundaries of the city's only state park. Gardeners of every ethnicity and culture drive to the garden from many parts of the city, but especially the Lower Northeast. Every fall the garden is disassembled and ploughed by the state, and it is reconstituted again in the spring. Tomatoes are by far the largest crop, followed by cabbage and broccoli. Each year the garden holds a competition for the best scarecrow, for which the entries are both elaborate and humorous. Because the garden is unfenced and surrounded by the woods and meadows of the state park, deer are a real nuisance.
3. **Organic Gardens at Manatawna Farm, Upper Roxborough, 229,600 square feet**
The Organic Gardens managed by the Schuylkill Center for Environmental Education are described in greater detail in the "garden tour" section at the beginning of this report.
4. **Glenwood Green Acres, North Central Philadelphia, 125,042 square feet**
Located next to the Amtrak lines, Glenwood Green Acres and its caboose are visible to riders on the Northeast Corridor trains. In the late 1970s, neighbors got sick and tired of the short dumping that was occurring on this large abandoned lot that is reputed to have once been a whiskey distillery. Glenwood Green Acres is one of the Philadelphia Green Program's Keystone Gardens and is owned by the Neighborhood Gardens Association. Many of the original founders were born and raised in the South and had roots in the soil. Former garden coordinator Mr. Taylor, who passed in 2009, grew cotton and tobacco so he could show visitors what those crops from his rural Southern upbringing looked like.

5. The Spring Gardens, Spring Garden, 78,012 square feet
Noted for its custom made sculptural fence that encloses an entire city block, the Spring Gardens is the active and vibrant heart of the neighborhood. The garden has a large central area with tables and chairs used for socializing and relaxing. The Spring Gardens has one of the largest City Harvest plots, which is often tended by residents on the waiting list for garden plots. Once an important meeting place for Puerto Rican and white neighbors, most Puerto Ricans have moved away as the area has gentrified in recent decades.
6. Railroad Garden, West Fairmount Park, 48,957 square feet
The Railroad Garden is located on Martin Luther King Drive (West River Dr.) near the Boelson Cottage. The land is owned by Fairmount Park but is located adjacent the CSX tracks and right-of-way. Since CSX made claims to the garden property in early 2007, only about one-quarter of the garden (13,000 sf) was used in 2008, as most plots were abandoned (see the “history and geography” section of this report). The gardeners are primarily African-American men who are retired Conrail employees. It is one of the few gardens in Philadelphia where tomatoes are not the predominant crop. Okra and beans are grown in far larger quantities.
7. Wissinoming/North Hills Cemetery, Frankford/Wissinoming, 42,000 square feet
Originated as a Victory Garden during World War Two, this garden occupies a corner of North Hills Cemetery. It is laid out in a dense fashion, with large plots close together. In 2009, the youth entrepreneurial gardening program Teens4Good established a plot there, making it like their other sites a hybrid community garden and urban farm.
8. Awbury Community Garden, Mt. Airy/Germantown, 41,600 square feet
Located in Awbury Arboretum, this garden dates to the early 1970s and was one of the first supported by the Penn State Urban Gardens Program. Today it participates in the City Harvest program. It has recently been joined in this part of the arboretum by Weavers Way Farm, the Awbury landscaping apprentices’ garden, a Penn State children’s garden, and the garden and nursery of a landscaping company, making this one of the largest and most diverse concentrations of agricultural activity in the city.
9. Viola Harding Garden, North Central Philadelphia, 37,000 square feet
Viola Harding community garden is surrounded by much industrial land and the parking lot of a large new church. It is barely visible from the street. Its perimeter is securely fenced with multiple gates, as are its 25 plots, which each average roughly 1,800 square feet. Most gardeners drive to the garden from surrounding communities. Like the Airport Garden, it has little or no connection to any institutions that help support production or stabilize land tenure.

10. Summer-Winter Garden, Powelton, 35,700 square feet
The Summer-Winter garden, named for the streets that surround it, lies directly across the street from Drexel University, which is now lending the garden support. Located on land owned by the Redevelopment Authority, the garden results from a consent decree rendered by the Courts in the 1970s. To develop the land, the RDA would need to obtain unanimous consent of the neighborhood residents. The garden is divided diagonally by a walkway running from the neighborhood to the northeast to Drexel on the southwest and contains a significant amount of social space for use by neighborhood residents.
11. Peace Hermitage Garden, Northeast Philadelphia, 33,000 square feet
Located on the property of Peace Hermitage, a Catholic convent and retreat, this garden is surrounded by woods and landscaped grounds. It dates to the 1980s, when the Hmong, a Southeast Asian ethnic group from the highlands of Laos, were resettled in Philadelphia after fighting for the United States in the Vietnam War, principally along the Ho Chi Min Trail. The vast majority of Hmong resettled in the city quickly moved to Minnesota, partly since they encountered terrible violence especially in West Philadelphia. The garden at Peace Hermitage is one of the last vestiges of the Hmong community in nearby Olney. Community garden professionals around the United States generally consider the Hmong expert gardeners, and the people who still tend Peace Hermitage are no exception.
12. Aspen Farms, Mill Creek section of West Philadelphia, 28,362 square feet
One of the most recent gardens to be preserved by the Neighborhood Gardens Association, Aspen Farms is one of PHS's Keystone Gardens. Like Las Parcelas, it is bordered by a Mural Arts Program mural depicting a farming scene, in this case Happy Valley, the headquarters of Penn State. Its ornamental plantings and central pergola make this as much a community gathering space as a site for vegetable plots. Longtime garden coordinator Haywood Ford has recently passed this role to a younger generation of women from the neighborhood, part of the emerging pattern of 40-to-60-something women taking over from 70- and 80-something men.
13. Grays Ferry Garden, West Shore/Southwest Philadelphia, 25,600 square feet
The Grays Ferry Community Garden is owned by the Neighborhood Gardens Association and hence preserved. While the gross lot area is large, some of the site slopes steeply down to the Schuylkill River. There is approximately 9,000 square feet of growing area. NGA lists the number of gardeners at 15, indicating plot sizes are quite large. Tomatoes account for one-third of all the crops grown.
14. Warrington, University City, 21,700 square feet
The Warrington Garden is described in greater detail in the "garden tour" section at the beginning of this report.

Appendix 2 – 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 programs 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 programs or informally? 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?