

Growing Urban Agriculture: Equitable Strategies and Policies for Improving Access to Healthy Food and Revitalizing Communities



Growing Urban Agriculture:

Equitable Strategies and Policies
for Improving Access to Healthy
Food and Revitalizing Communities

Allison Hagey

Solana Rice

Rebecca Flournoy







Table of Contents

7	Foreword	31	Working Towards Financial Sustainability and Scale
8	Executive Summary		
13	Introduction	31	Diversifying the Market
15	Improving Communities through Urban Farming	32	CASE STUDY // Growing Power, Milwaukee, Wisconsin: Providing Healthy, Affordable Food to All Communities
15	Improving Access to Healthy Food	33	Evaluating Impact and Success
18	Improving Economic Health	35	Policy Considerations and Recommendations
20	CASE STUDY // Taking Foods From Farm to Market: New Models for Change	41	Conclusion
21	Revitalizing Communities	42	Appendix: List of Interviewees
23	Common Challenges and Innovative Strategies	44	Notes
23	Lack of Land Security		
24	Inadequate Business Training		
25	Soil Contamination and Cleanup		
26	Start-Up and Operating Costs		
27	Insufficient Income Generation		
27	Insufficient or Expensive Water Access		
28	CASE STUDY // Transforming Challenges into Assets: Urban Agriculture in Older Core Cities		



Foreword

A vibrant movement is changing the landscape, economic outlook, and vitality of cities across the country. The recent recession affected many low-income communities—taking with it manufacturing centers, jobs, and people while leaving behind abandoned homes and vacant lots. Now a new crop of urban farmers, along with activists, and community organizations are turning that land into productive use and turning around their communities.

Urban farming brings a multitude of benefits to struggling communities: improved access to healthy food, workforce training and job development, and neighborhood revitalization. Innovative programs and policies are cropping up nationwide; and city governments are creating urban agriculture-friendly policies to support urban farming.

While the movement is exciting, PolicyLink is committed to ensuring that it is an inclusive one. Many of the emerging policies could better target low-income communities and communities of color—the very communities that would so greatly benefit from the economic opportunities and revitalization offered by urban farming.

Growing Urban Agriculture lifts up the policies, practices, and programs that are working to sustain urban agriculture efforts in low-income communities and communities of color, drawing from the Urban

Agriculture and Community Gardens tool in the PolicyLink Equitable Development Toolkit (located on our website). The report is grounded in extensive conversations with farmers, advocates, and policymakers to better understand the operational, financial, and social challenges that arise in making this work responsive and relevant to the needs of underserved communities. It highlights the creative solutions that are being implemented to make certain that the products remain affordable and accessible and that community interests are represented in the process. Tough issues like land security and access to water are addressed.

The scale of the efforts is impressive and the commitment to finding solutions no less so. Urban agriculture is not an oxymoron. It is a beautiful, productive, and unifying movement that is making a difference in our communities. With this report, we hope it will only continue to grow. The time is ripe to embrace such a system of food production.



Angela Glover Blackwell
Founder and CEO
PolicyLink

Executive Summary

In urban communities across America, urban agriculture is taking root as an innovative solution to increase access to healthy food while, at the same time, revitalizing the economic and social health of communities. For the purposes of this report, urban agriculture includes small and mini-sized agricultural operations in metropolitan areas that may include distribution, processing, and marketing efforts. *Growing Urban Agriculture* details the benefits of this new trend, lists many of the common challenges and solutions, and presents policy recommendations for further growing an equitable movement.

Improving Access to Healthy Food

In many low-income communities, the only places to buy food are fast-food and convenience stores that sell fatty, sugary, processed foods. Some communities have no food vendors of any kind. This lack of access to healthy foods makes it difficult for families to eat well, fueling the country's growing obesity epidemic and the severe health problems that accompany it. Studies have consistently shown that there are fewer supermarkets and other retail outlets selling affordable, nutritious food in low-income communities than in wealthier ones, and in predominantly African American and Latino neighborhoods than in predominantly white neighborhoods.¹ However, there is good news: Studies show that residents with greater access to fresh produce consume healthier diets and have lower rates of diet-related diseases than their counterparts in neighborhoods lacking food access.² Urban agriculture is one such innovative approach to improve access to healthy food. Strategies to distribute healthier food through urban agriculture include the following:

- **Sell produce through farm stands, farmers' markets, and community**

supported agriculture (CSA). Farmers can choose from a variety of these retail options to provide healthy foods to their communities and surrounding neighborhoods. Many urban farmers offer sliding price scales and accept EBT (Electronic Benefit Transfer) cards for low-income families in their community. (EBTs allow state government benefits—including food stamp benefits—to be deposited into electronic accounts similar to credit card or ATM accounts so that recipients can pay for food.)

- **Use community gardens to improve healthy food availability for farmers themselves, along with their families, friends, and neighbors.** Families who participate in community gardening are able to offset typically 30 to 40 percent of their produce needs by eating food grown in their own gardens.³
- **Use urban farms as an opportunity to grow and sell culturally appropriate food and connect multiple generations.** Many farming projects support often healthier ethnic diets and help people grow culturally appropriate foods for their families and communities, all while connecting multiple generations through farming and diet.

Improving Economic Health

The economic environment of a community—job opportunities, homeownership, and the presence of diverse businesses—affects the economic health of a community. Urban agriculture can improve that economic health by creating jobs, providing job training and skills development, incubating and attracting new businesses, and saving families money.

- **Create jobs by growing an urban farm's capacity, including choosing appropriate crops, growing techniques, and scaling up production.** Urban farms that offer packaging and processing in addition to cultivating are typically able to create a considerable number of jobs. Farms often spur additional business development and entrepreneurship opportunities.
- **Provide job training and skills development.** Numerous urban agriculture projects focus on helping individuals find jobs and providing basic job skills and support within their communities, all while using urban agriculture to provide productive and empowering transitional employment.
- **Save families money by offsetting produce expenditures.** Urban farmers and community gardens can supply most if not all of their families' produce needs, sometimes saving what can add up to a significant amount of money.

Revitalizing Communities

The physical environment in which people live, work, and play greatly impacts their health. Neighborhoods with safe and clean outdoor spaces for people to gather, exercise, and play have a positive impact on residents' health. Urban farms are often planted on previously vacant or underused urban spaces and are then transformed into safe, attractive, and welcoming places. Urban farms offer the following benefits to communities:

- **Provide safe, attractive, and welcoming spaces for neighbors to gather and play.** Many urban farm projects incorporate community gathering spaces in their plan site and typically offer open spaces to congregate as well as to hold educational workshops, gardening training, and food preparation classes for the surrounding community.
- **Foster a sense of community and create safer neighborhoods.** Community gardens often link different sectors of the city, including youth with elders; and diverse race, ethnic, and socioeconomic groups, all of which are in pursuit of one goal. Neighborhoods with community gardens also typically report reduced rates of crime, trash dumping, fires, and violent deaths, and an unexpected advantage: increased voter registration and civic responsibility.
- **Divert organic waste from city landfills into compost.** Many urban farms productively use food wastes from local retail outlets, restaurants, and residents, recycling this waste to generate compost for their farms.

Strategies for Addressing Common Challenges

Urban agriculture projects have great potential for improving neighborhood conditions; however, farmers face many challenges and obstacles when establishing and growing a garden in an urban environment. For instance, some of them face issues of land security, access to water, contaminated soil, high start-up and operating costs, inadequate business training, and insufficient income generation. Fortunately, communities are finding creative solutions to overcome these challenges.

- **Secure either long-term use of land, encourage investment in infrastructure through local government policies and land trusts, or secure permanent land ownership.** Some farmers hesitate to invest in infrastructure such as processing and sorting facilities, refrigeration, trucks, and on-site buildings because they fear their farms may be taken away either because of permitting or zoning issues or because they lack secure ownership of the land. A local government that owns the land can dedicate its use to urban agriculture through easements or informal agreements; organizations can also purchase and hold land in trust for an urban farm.
- **Work with the city or neighbors to make water more accessible.** Unlike traditional rural farming, many urban farmers set up their operations on a range of properties—from abandoned property to parking lots.

Accessing water lines is often very expensive and cost prohibitive for farmers who, consequently, have developed a variety of creative arrangements for accessing and paying for water. In some instances, farmers negotiate with nearby neighbors who have access and, in turn, pay them for usage; in other instances, city governments allow use of city hydrants at a set rate.

- **Deal with soil-quality issues by using raised beds, or hydroponics,^a if soil is contaminated.** Urban farms are often built on former gas stations, abandoned industrial sites, and parking lots—all with potential soil contamination. Soil remediation is often too costly for many farmers, who alternatively choose to use raised beds to avoid planting in contaminated soil.
- **Decrease high start-up and operating costs by collaborating with other farmers.** Urban farms are often small because of size constraints and, therefore, do not produce enough to warrant purchasing a lot of equipment. Small farmers can work together, sharing trucks, tools, refrigeration, and other farming needs. Pooling resources allows them to reach new markets, such as those that often require liability insurance, trucks, refrigeration, and sorting and distribution systems.
- **Identify resources offering technical assistance and business instruction to address inadequate business training.** Urban farmers often cite inadequate business training as a limitation to their growing and sustaining a business. Now available to them are urban farming programs, state extension offices, and the Small Business Administration,⁴ which offer business training for urban farmers wishing to start or expand an operation.
- **Increase potential revenue generation by extending the growing season and introducing economies of scale.** Urban farms can diversify the market to create

multiple income-generation opportunities, identify the market early to plan ahead, and evaluate success. Sustaining and growing an urban farm is often difficult, given the smaller size of the farm and lacking economies of scale. However, using greenhouses or hoop houses (greenhouses with plastic roofing wrapped over flexible piping) to extend the growing season can help create more efficient economies of scale and even move farmers into new markets. Farmers can increase profitability by selling food directly to consumers, grocery stores, corner stores, and community co-ops or by creating a value-added component, such as making salsa, to their operation. Strategic planning such as identifying the market early and establishing plans to sell and distribute food can also help pave a path towards financial sustainability and success. Finally, data supporting urban farming are important to help farmers to either change their operations or investigate potential financial opportunities.

Policy Considerations and Recommendations

Advocates and policymakers are instituting policies to support urban agriculture. While some of these policies support low-income communities and communities of color, there is still room to advocate for policies that focus more on the very communities that stand to greatly benefit from urban farms in their neighborhoods. Examples of supportive policies include the City of Seattle's Department of Neighborhoods, which has inventoried land for urban farming with a concentration on low-income communities and individuals of color. The Brownfields Economic Development Initiative (BEDI), a federal grant program, assists cities with redeveloping abandoned, idled, and underused industrial and commercial facilities. The program primarily targets the redevelopment of such brownfields sites that increase economic opportunities for low- and moderate-income individuals. Following is a summary of several policy approaches for building an urban agriculture movement:

^a Hydroponics is the cultivation of plants by placing the roots in liquid nutrient solutions rather than in soil.

- **Identify and provide land for farming.** Local governments can identify vacant lots and make this information publicly available, authorizing contracts with private landowners.
- **Provide grants and low-interest loans.** Local, state, and federal governments can financially support start-up and operating costs. Governments can tap into workforce development dollars, state bond initiatives, and programs and funding opportunities offered by the U.S. Department of Agriculture (USDA), the U.S. Department of Housing and Urban Development (HUD), and the Environmental Protection Agency (EPA).
- **Provide city services to reduce costs.** Localities can provide trash collection, composting, and access to water, tools, and storage to help reduce urban farmers' expenses.
- **Include urban agriculture-friendly policies in general plans and adopt urban agriculture-friendly zoning policies.** Cities and counties can adopt urban agriculture-friendly language in their zoning codes and general plans, which will help shield urban farmers from redevelopment and encourage them to invest in infrastructure.
- **Pass resolutions, initiatives, and legislation supporting urban agriculture.** Urban agriculture-friendly policies can and should be passed at all levels of government—local, state, and federal. At the federal level, Representative Marcy Kaptur (D-OH) introduced the Community Agriculture Development and Jobs Act to create an office of Community Agriculture in the USDA that would better support urban agriculture efforts.
- **Increase funding for programs that train urban farmers and offer technical assistance.** Numerous resources are available to help farmers operate more efficiently by teaching them skills in nonprofit management or business operations as well as skills in agriculture production—for instance, cooperative extension agencies, community colleges, and Small Business Administration programs.



Families who participate in community gardening are able to offset typically 30 to 40 percent of their produce needs by eating food grown in their own gardens.³

Introduction

Imagine: a small plot of land . . . growing lettuce, tomatoes, and other vegetables . . . filled with neighbors socializing and buying fruits and vegetables. It is hard to believe that this vibrant space was once the site of gang violence, vacant buildings, substance abuse, drug trafficking, and other criminal activity. This picture is becoming more commonplace as resident activists and community organizations harness the power of urban agriculture. Urban farms are cropping up in cities across America. They are taking over abandoned playgrounds, former industrial sites, and empty lots filled with trash, which often require police visits. Individuals and organizations are embracing urban agriculture as a means for improving food access, creating economic opportunities, and revitalizing communities. Improving access to healthy foods can improve diet and help prevent diet-related diseases, all while contributing to the economic health of communities by creating jobs and providing job training, incubating other local businesses, and saving families money. Moreover, urban farms foster a sense of community by providing safe, appealing spaces for neighbors to gather and form strong social networks and communities, which can help improve the health of residents. These urban farms offer exciting opportunities for advancing equity by providing a multitude of these benefits to low-income communities and communities of color.

Growing Urban Agriculture is in large part a product of over 40 interviews with urban farmers, advocates, and policymakers who are serving and including low-income communities and communities of color in their work. Most of the urban farmers, organizations, and officials interviewed herein faced similar obstacles in starting and expanding their urban farms—land insecurity, insufficient water access, soil contamination, high start-up and

operating costs, a lack of business training, and difficulties generating sufficient income. However, these farmers have shown resilience and creativity in addressing these challenges. Their struggles inspire and exemplify a wealth of lessons from which we can learn. Many of their strategies and solutions can be widely replicated by other urban farmers and policymakers. The opportunity is ripe at the local level to learn from these pioneers and adopt urban farm-friendly policies such as securing land, working with city water departments to ease access to water, and landing federal dollars for soil cleanup projects.

This report focuses on urban farming and agriculture as distinct from community gardens. While there are significant overlaps in the work and the outcomes, urban agriculture has distinct processing, distribution, and financial sustainability challenges that come with scale. While community gardens are addressed, most of the strategies here lift up efforts related to urban farming with scaled distribution and some processing.

Lastly, this report recommends local, state, and federal policies to support urban farmers who, in turn, are supporting low-income communities and communities of color.

With the help of flexible, adaptive policies, urban agriculture can be a catalyst for communities by providing access to healthy foods, transforming abandoned lots into thriving community spaces, sharing cultural traditions across generations, and promoting much-needed economic opportunities. The seeds of change are taking root, and with policymakers, advocates, and other stakeholders collaborating, urban farming can spread and flourish in even more communities throughout this nation.



One nationwide study found that low-income zip codes have 25 percent fewer chain supermarkets than middle-income zip codes. Compared to predominantly white zip codes, majority African American zip codes have about half the number of supermarkets, and mostly Latino zip codes have about a third as many.⁶

Improving Communities through Urban Farming

The concept of urban agriculture in the United States is not new. In the 1940s nearly 20 million people planted “victory gardens” to lessen the strain placed on the U.S. food system during World War II.⁵ During this time, the government rationed dairy, sugar, meat, coffee, and canned goods, but labor and transportation shortages made it difficult to harvest fruits and vegetables. The government thus turned to communities and encouraged them to start victory gardens as a way to provide for themselves and their communities and to do their part on the home front. These gardens accounted for 44 percent of the fresh vegetables produced in the United States. Citizens planted them in their backyards, in empty lots, and even on city rooftops. Neighbors pooled their resources, planted a variety of foods, and exchanged their foods with each other. A federal program, the victory garden utilized state extension agencies to provide seed, fertilizer, and simple gardening tools to gardeners. When the war ended, government promotion of victory gardens also ended. Over the past several years, however, an enthusiasm for urban gardening is being revived.

Today’s urban farmers break ground for a variety of reasons. Most, however, have one goal in common: improving their communities. Whether their purpose is to provide better access to healthy foods or to revitalize their neighborhoods, they are all providing a multitude of benefits to the communities. Farmers wanting to improve access to healthy foods in underserved communities help improve the diets of that community and, in turn, may decrease the prevalence of diet-related diseases such as obesity, overweight, and diabetes. Urban agriculture programs designed with workforce development in mind often generate jobs, sheltered or subsidized employment, or job training, which in turn helps revitalize the entire neighborhood. Many neighborhoods find the presence of an urban farm in their community economically stabilizing by establishing a safe place to congregate and exercise and encouraging other

businesses to locate there. Cities with an abundance of vacant land are finding that urban agriculture is one of the most economically efficient ways to reinvigorate an entire community.

There are several benefits to urban farming: improving access to healthy food, improving communities’ economic health, and revitalizing neighborhoods.

Improving Access to Healthy Food

In many low-income communities, the only places to buy food are fast-food and convenience stores that sell fatty, sugary, processed foods. Some communities have no food vendors of any kind. This lack of access to healthy foods makes it difficult for families to eat nutritiously, fueling the country’s growing obesity epidemic and the severe health problems that accompany it.

Low-income communities and communities of color are the ones most affected by limited access to healthy foods. Studies have consistently shown that fewer supermarkets and other retail outlets selling affordable, nutritious foods are located in low-income communities than in wealthier ones, and in predominantly African American and Latino neighborhoods than in predominantly white neighborhoods.

This pattern is clear for many urban areas. In Washington, DC, the city’s lowest-income and almost exclusively African American wards (Wards 7 and 8) have one supermarket for every 70,000 people while two of the three highest-income and predominantly white wards (Wards 2 and 3) have one for every 11,881 people. One in five of the city’s food stamp recipients lives in a neighborhood without a grocery store.⁷

Residents of underserved communities typically lack the transportation to make trips easily to stores in other parts of town. Low-income African American and Latino households are less likely to own cars than whites and households with higher incomes; as a result they often need to arrange rides with friends or relatives, piece together multiple bus routes, or pay for taxi rides to do their grocery shopping. With limited transportation options, low-income residents often must rely on the smaller convenience stores closer to their homes. These stores usually charge prices that are much higher than supermarkets' prices and their inventory is primarily high-fat, high-sugar snacks, soft drinks, and alcoholic beverages.

Access to Healthy Food Matters

Community environments affect people's eating and exercise habits. Scientists and medical professionals agree that lack of easy access to healthy foods and safe outdoor areas for physical activity are key contributors to obesity.⁸ The obesity epidemic, along with related health problems like diabetes and heart disease, is most severe for low-income people of color.⁹ Nearly a fifth of all African American children and nearly a quarter of Mexican American children are obese, compared to one in 10 white children. Children from low-income families are twice as likely to be overweight as those from higher-income families.¹⁰ Researchers estimate that for the first time in American history, today's generation of children will live shorter lives than their parents because of the health consequences of obesity and being overweight.¹¹

Studies have shown that better access to healthy food corresponds to healthier eating and lower rates of obesity and diabetes.

For example:

- One study examining several states found that African Americans living in a census tract with a supermarket are more likely to meet federal guidelines for fruits and vegetable consumption, and for each additional supermarket, produce consumption increased by 32 percent.¹²
- In rural Mississippi, adults living in counties without supermarkets were 23 percent less

likely to meet guidelines for daily fruit and vegetable consumption than adults living in counties with supermarkets.¹³

- A recent study found neighborhood access to healthy food and safe places for physical activity does matter for children's weight. The study found that children living in neighborhoods with healthy food and safe play spaces are 56 percent less likely to be obese than children in neighborhoods without these features.¹⁴
- Studies have concluded that New Yorkers and Californians living in areas with more fresh food retailers, along with fewer convenience stores and fast-food restaurants, have lower rates of obesity.¹⁵
- Researchers in Indianapolis found that adding a new grocery store to a neighborhood translated into an average weight loss of three pounds for adults in that community.¹⁶

Increasing access to healthy foods also brings economic benefits. A large, full-service supermarket creates between 100 and 200 full- and part-time jobs, and emerging evidence suggests that a grocery store can increase local tax revenues and stabilize or even increase local home values.¹⁷ A separate study found that tripling the amount of fresh produce that farmers sell directly to consumers at farmers' markets in Michigan could generate as many as 1,889 new jobs and \$187 million in additional personal income.¹⁸ Urban farms bring with them new job opportunities as well.

Distributing Healthy Food to Communities

Urban farming operations are being established in underserved neighborhoods to allow greater access to healthy, affordable produce for local residents. Local food from urban farms/community gardens is very fresh since the food does not need to travel long distances before being purchased and consumed. There are a variety of ways in which urban farms can distribute their produce and provide better access to underserved communities.

Urban farms can sell their produce through farm stands, farmers' markets, and community supported agriculture (CSA).¹⁹

For example:

- **The Food Project** in Boston sells its produce at four farmers' markets (all accepting EBT cards) in low-income neighborhoods in eastern Massachusetts. According to the organization, it also contributed 48,668 pounds to anti-hunger organizations in that area.
- **City Slicker Farms** in West Oakland, California, operates a farm stand on a sliding scale, allowing very low-income West Oakland residents to pick up produce for free, those with limited means to purchase produce at below-market rate prices, and higher-income customers to purchase at a standard rate.
- **Added Value Farm** in Brooklyn, New York, helped establish a new farmers' market in the underserved neighborhood of Redhook in Brooklyn and also runs a CSA for the surrounding Red Hook community that offers a sliding scale and work shares.
- In 2009, the **P Patch** community gardening program in Seattle, Washington, donated 25,000 pounds of food to local food banks, according to the organization.

Distributing Healthy Food to Farmers

Community gardens increase healthy food access for the farmers themselves, along with their families, friends, and neighbors. A traditional farm worker is typically unable to bring home the food he or she produces and is often left food insecure. A 2007 survey found that 49 percent of farm workers in California were food insecure, 49 percent in North Carolina, 82 percent in Texas, and 98 percent in Virginia.²⁰

- In **Seattle**, the Department of Neighborhoods found that families were able to cover 30 to 60 percent of their families' produce needs through the city's gardening programs.

- **City Slicker Farms** in Oakland surveyed its backyard gardeners and found that 61 percent of garden participants reported improving their diets by eating produce from their own gardens.
- Many urban farms and community gardeners, such as **The Food Project**, **Urban Adamah**, and **Clean Greens**, donate a portion of the food they grow to the community and to local food banks.

Growing and Distributing Culturally Appropriate Food

Urban farming and community gardening can help residents eat an often healthier traditional and culturally appropriate diet. For instance, as Mexican-origin women move from the first to the second generation, the quality of their diet deteriorates and approximates that of white non-Hispanic women. Second-generation Mexican American women stand a much higher risk of eating a poor diet than first-generation women.²¹ This same trend holds true for other ethnic groups. One study found a higher rate of Type 2 Diabetes in second-generation Japanese American men (20 percent) and women (16 percent) compared to first-generation Japanese Americans.²² When communities have closer connections to the farmers or are the farmers themselves, they can choose to grow foods they desire that may not be readily available locally.

- Many urban agriculture projects, such as **The Kansas City Center for Urban Agriculture (KCCUA)**, **The Seattle Market Gardens Program**, and **Viet Village** provide recent immigrants with the opportunity to grow culturally appropriate foods for their families and communities.
- Urban agriculture projects such as **The Detroit Black Food Security Network** and **Nuestras Raíces**, in Holyoke, Massachusetts, provide opportunities for urban residents to rediscover their food culture by connecting younger residents with elders in the community who can share their skills and perspectives on food.
- In Brooklyn, New York, **East New York Farms!** runs 12 community gardens that connect youth gardeners with older gardeners who need help

tending their plots. Many of the seniors receive food stamps, and their garden plots help supplement their diet with healthy and culturally appropriate food for this predominantly African American, Caribbean, Puerto Rican, Bengali, and West African community.

Improving Economic Health

The economic environment of a community has a critical impact on residents' health. Job opportunities, the presence of diverse businesses—grocery stores, banks, restaurants—and the amount of collective wealth, including homeownership and savings, can influence residents' health. Without a vibrant economic environment, residents must cope with joblessness or more tenuous job security and the higher crime rates that can be fueled by joblessness. When there are few local businesses, or local businesses are closing, there tends to be a spiraling effect wherein businesses do not want to locate in that area. In contrast, new business development tends to attract additional activity, bringing with it new jobs, as others try to capitalize on existing economic vitality.

Urban agriculture improves job and economic opportunities for local residents in a variety of ways.

Creating Jobs

Researchers estimate that urban farmers could earn reasonable incomes if they select the right crops and use the most appropriate growing techniques.²³

- A for-profit cooperative urban agriculture business called **Green City Growers Cooperative** is being launched in Cleveland, Ohio. The cooperative will include a five-acre hydroponic greenhouse growing leafy greens and herbs that will be sold to grocery stores, institutions, and wholesale produce businesses. Green City Growers expects to provide 35 to 40 long-term, living-wage jobs for low-income residents living in the surrounding area; and worker-owners will build about \$65,000 in patronage accounts over eight years.

- **SHAR (Self-Help Addiction Rehabilitation)** is a collaborative that involves over 50 organizations and seven universities formed to help launch one of Detroit's largest urban farms. The SHAR program will encompass approximately 30 acres of vacant land and will use an efficient, three-tier system and have three growing seasons. The farms will also have a packaging company on site. SHAR estimates that the project will create 150 jobs in about six months and 2,500 to 3,500 permanent jobs for local, low-income residents over the next 10 years. These jobs are expected to pay between \$10 and \$12 per hour plus benefits.
- **Viet Village Farm** in New Orleans plans to cultivate a community farm on 28 acres of land in a predominantly Vietnamese American residential area, next to a Catholic church that serves the community. Project leaders estimate that the farm will create 26 mostly full-time short- and long-term jobs for local residents.

Providing Job Training and Skills Development

The majority of urban farms are small operations with small staffs and thus are limited in the number of jobs they can create. However, several urban agriculture projects are specifically dedicated to helping individuals find other jobs or providing basic job skills that will allow them to enter other job markets, all while using urban agriculture to generate productive and empowering transitional employment. These urban farm projects often focus on youth, the homeless, and formerly incarcerated individuals.

- **The Food Project** annually employs approximately 150 youth from diverse backgrounds in urban and suburban eastern Massachusetts. It builds leadership by providing teens with deeply meaningful work—growing food—and placing them in highly responsible roles. Through their work—distributing the food they grow—teens also gain job experience and greater awareness of food justice issues.

- **Added Value Farm**, in a low-income neighborhood in Brooklyn, New York, has provided year-long training to more than 175 neighborhood teens since it began its program in 2001. Youth develop new skills, build their leadership capacity, and engage with their community, as they help operate the Red Hook Farmers' Market and explore issues of food justice. They also engage in educational and advocacy activities through media projects and related events.
- **Growing Home** in Chicago has trained approximately 150 formerly incarcerated individuals on its farms in and around the city since the program began in 2002. As of 2008, according to the organization, 59 percent of its participants had been homeless; 76 percent had previously been incarcerated. Of those who had been incarcerated, 95 percent did not return to jail, compared to the average recidivism rate in Illinois of 50 percent. Ninety percent of Growing Home's formerly incarcerated or homeless participants successfully rent their own apartments or find stable housing, according to the organization, and over two-thirds secure either full-time jobs or further job training after graduating.
- **The Pennsylvania Horticultural Society's (PHS) City Harvest** project works with inmates in the Philadelphia prison system and teaches them to grow vegetable seedlings, which are then grown to maturity at 30 participating community gardens. In 2010, PHS established an additional program for recently incarcerated people, including a work-release landscape job training program and job placement program for inmates. The program focuses on reentry and connecting greenhouse work at the prison to workforce opportunities. The participants receive landscape skills training as well as training for resumé writing and presentation skills. They are helped with housing, restoring licenses, and other transition services. In the first year, 12 of the program's 18 participants have secured jobs, nine of which are full-time.

Incubating Businesses

Urban agriculture operations can provide land, supplies, training, and technical assistance for community members to develop their own urban farming and food-related enterprises.

- **Nuestras Raíces** in Holyoke, Massachusetts, assisted the primarily Puerto Rican immigrant community of Holyoke with the creation of some two dozen food and agriculture businesses estimated to have added an annual \$2 million of economic activity to southern Holyoke.
- **Clean Greens** in Seattle establishes farm stands within parking lots and provides spaces where local entrepreneurs can also set up stands and sell local products.

Saving Families Money

Urban farms and community gardens can save families money by supplementing some of their produce expenditures and are often able to provide supplemental income. Studies have estimated that a community garden can yield between \$500 and \$2,000 worth of produce per family per year;²⁴ and that every \$1 invested in a community garden plot yields around \$6 worth of produce.²⁵

Community gardeners can supply all or some of their family's produce needs, saving money. Community gardeners sometimes sell their surplus produce as well, generating a small income.

- **City Slicker Farms** in Oakland surveyed its backyard garden participants and found that 92 percent of them saved money because of their garden, while 62 percent grew half or more of their families' produce in their gardens.
- **The Seattle Market Gardens Program**, operated by the city's **P Patch** Program, focuses on the large immigrant and refugee community in Seattle and helps these residents earn supplemental income while acclimating to their new homes. The training honors the agrarian skills that many immigrants and refugees brought

Taking Foods From Farm to Market: New Models for Change



Job Training and Youth Development in Holyoke, Massachusetts

In the late 1960s and '70s, numerous Puerto Rican farmers moved to Holyoke to work in its paper mills and tobacco farms, fleeing an economic recession. But the Holyoke economy was already changing, and the mills and farms were shutting down as the new workers arrived. The Puerto Rican population stayed and now accounts for almost 40 percent of the city's residents. The city has struggled with high unemployment and poverty since its industrial decline and contains nearly 100 abandoned brownfields.

Raíces—which means “our roots” in Spanish—is working to counter this dynamic of decline. Founded in 1992, the group has grown from a single community garden to a multifaceted organization. Nuestras Raíces is led by the residents and families who participate in its training programs.

Nuestras Raíces now manages eight community gardens and two youth gardens; more than 100 families participate. The gardens provide access to affordable food for low-income families: On average, families produce more than \$1,000 of organic produce per year. Some of the plots are for market production, to supplement incomes by selling produce to local stores, restaurants, and farmers' markets. The gardens provide opportunities for youth leadership development, as many youth sell the produce at farmers' markets, design and build nature trails, and participate in garden-centered environmental research and educational programs.

Beginning farmers go through an eight-week training to write a business plan; afterwards, they can then rent plots. Young people can farm rent-free, and there is a designated youth farm and a program for youth to learn farming techniques from the elder Puerto Rican volunteers.

As a result of these efforts, elders have been able to transfer their agrarian training, Puerto Rican heritage, and culture to the youth in Holyoke. This exchange continues to build a strong community that has created positive change in Holyoke, leading to greater community stability. Crime has decreased in the Puerto Rican community, and employment and youth leadership have increased.

Removing Barriers in California

In California, Juan Perez, along with his father Pablo, started a small organic farm on half an acre in Monterey County, California. Today, J. P., as he is known, farms five acres filled with organic corn, cilantro, strawberries, carrots, green beans, and more. Each week he delivers his produce to local families. He keeps his prices reasonable and accepts EBT.

J. P.'s farm and business model are a result of support and training from the **Agriculture and Land-Based Training Association (ALBA)**. Many of the aspiring farmers ALBA serves are farmworkers who have struggled to enter California's competitive farming economy hindered by language and cultural barriers, few economic resources, institutional exclusion, and a lack of government support. ALBA provides education and supplies land; it connects farmers to resources such as business consultants, loan officers, and training in sustainable land management practices.

ALBA helps farmers sell what they grow, creating programs to increase access to affordable, nutritious foods for low-income residents of Monterey County. Staff members train farmers in marketing and sales and connect them with ALBA Organics, a produce distributor that seeks to open up new direct markets for organic produce and to create alternatives for small-scale farmers. ALBA has partnered with local churches and elementary schools in underserved neighborhoods to host farm stands where ALBA farmers sell their produce. It has established three new farmers' markets serving low-income neighborhoods.

ALBA develops leadership capacity in its farmer partners and teaches them how to influence policymakers. Through their leadership development program, ALBA translates and distributes information about policy changes that might affect farmers' businesses, coaches them to provide testimony before elected officials, and facilitates networking between farmers and policy coalitions.

with them, while teaching needed skills for doing business in this country, such as how and where to market their produce.

- **The Kansas City Center for Urban Agriculture (KCCUA)** trains community members interested in urban agriculture to become farmers in either full-time or supplemental businesses. KCCUA runs a new Roots to Refugees program that currently works with 17 refugee farmers, each with one-fourth of an acre for a garden. The refugee farmers sell their produce to area markets and participate in a CSA with one to six members and provide traditional foods to their community.
- **East Bay Asian Youth Center** operates a four-acre organic strawberry farm in Sunol, California, for Oakland-based Mien families from Laos to grow strawberries commercially, as well as other products for their own consumption.

Revitalizing Communities

The safety and the social environment of a neighborhood affect the health of its residents. People need strong social networks to thrive. A lack of safe, well-maintained open spaces and parks can be a critical barrier to physical activity. In contrast, when these spaces are provided they can promote exercise and serve as places for neighborhood gatherings. Safe parks and walkable streets, along with open spaces that encourage community gatherings, are all protective factors that contribute to the health of a community and have a positive impact on the health of its residents. Also important is making more productive use of organic waste.

Providing a Safe, Appealing Space for Neighbors to Gather

Numerous urban farming operations use previously vacant or underused urban spaces, beautifying the areas, providing a sense of safety, and cultivating a greater sense of community.

- **Urban farms can provide an attractive and welcoming space for neighbors to gather, volunteer, or just enjoy the scenery.** Many urban farms and community gardens incorporate gathering spaces within their overall site plan;
- they often run educational workshops, gardening training, and food preparation classes for the surrounding community. In neighborhoods where access to parks and open space is limited, these urban farms can be a valuable asset for outdoor recreational and physical activity.²⁶
- **Urban farms can foster a sense of community.** Urban farms and community gardens link different sectors of the city—youth and elders, and diverse race, ethnic, and socioeconomic groups—in pursuit of a common goal. Research indicates that communities with high-participation gardens and farms have reduced rates of crime, trash dumping, fires, violent deaths, and mental illness,²⁷ and even increased voter registrations and civic responsibility.²⁸
 - **Urban farms and gardens can increase home values.** A New York University study examined more than 636 New York City community gardens and found a statistically significant, positive effect on sale prices of residential properties within a 1,000-foot radius of a community garden when compared to properties outside the 1,000-foot ring but still within the same neighborhood.²⁹ This is beneficial for current homeowners, but a cautionary note: current renters should not be forced to leave their neighborhood.

Diverting Organic Waste from City Landfills into Compost

Some urban farmers make productive use of food wastes from local food retail outlets, restaurants, and residents by converting them into compost for their farms.

- **Growing Power** in Milwaukee obtains massive amounts of organic waste from Milwaukee businesses, such as the byproducts from the breweries located in the city, to use in its composting operation. Last year it produced over 11 million pounds of compost.
- **City Slicker Farms** in West Oakland has a bicycle compost pick-up program that removes compost from local restaurants by bicycle and takes the waste back to its farms to compost.



One recent survey found that only 5.3 percent of gardens in 38 cities were permanently owned.

Common Challenges and Innovative Strategies

Urban farmers across the country encounter a set of similar challenges and obstacles. With creativity and commitment, they are overcoming many of those obstacles, as depicted in the strategies below. Admittedly, many challenges remain that are not addressed here, the largest of which are those related to the practice and science of growing vegetables and raising animals, which are particular to regional climates. Besides those technical challenges, other challenges exist in attracting and retaining dedicated people, especially people of color, due to the historical and social stigmas associated with farming. As was mentioned by a number of advocates and observers in the field, young people are reluctant to participate in growing because it is associated with their ancestors or older generations and work that is not profitable.

CHALLENGE:

Lack of Land Security

Urban farms are often built on vacant land that offers little security in terms of long-term land access. Community gardens are typically established on vacant or abandoned land, and the farmers/gardeners often do not own the land they tend. Many operations lease or have permission to use land and do not own it outright. One recent survey found that only 5.3 percent of gardens in 38 cities were permanently owned.³⁰

Gardeners farming on vacant public land run the risk of losing years of hard work if a developer wants to purchase that land and there is no protection from eviction. This lack of security makes urban farmers reluctant to invest in infrastructure inputs such as water line access, machinery, sorting and refrigeration/storage facilities, educational /community gathering centers, or cooking/processing facilities.

- The 14-acre **South Central Farm/South Central Community Gardens** in Los Angeles lost its farm when the city sold the land to a previous property owner under a right-to-repurchase clause in the original contract the city used to acquire the land. The landowner, who wanted to put the property towards a more profitable use, had the farm razed and the farmers evicted, resulting in multiple court battles and protests by the farmers.

STRATEGY:

Secure Long-term Use of Land

Secure long-term use of land through local government policies and land trusts, or by securing permanent land ownership. In many instances, a partnering organization or local government owns the land and has dedicated its use to urban agriculture through easements or more informal agreements. In other cases, organizations are able to purchase the land for their farming operations or hold it in trust for community farmers/gardeners.

- The Chicago City Council created a city-funded entity called **NeighborSpace**, which operates as a land trust and is authorized to purchase properties to protect them as open spaces, including community gardens.
- **Growing Home** in Chicago owns its land outright as it obtained its land through the McKinney Act,³¹ which offers federal surplus land for organizations working with homeless individuals.
- **Southside Community Land Trust (SCLT)**, in Providence, Rhode Island, holds title to five acres of inner-city land in trust for community farmers to use. Its initial holdings were both purchased for a low price and received as donations from individuals. In addition, SCLT has supported the development of a network of community



gardens, farmers' markets, and school gardens built on land owned by churches, city parks, the state, schools, and businesses. Currently, around 750 low-income families grow food in 37 Providence-based community gardens, and seven limited-resource farm businesses collaboratively manage a 50-acre farm on the outskirts of the city. The growers include immigrants from Southeast Asia, Africa, the Caribbean, and Central and South America, as well as residents of the low-income neighborhoods surrounding the gardens and farms.

- **Growing Power** in Milwaukee and Chicago has multiple sites, some of which they own and some of which they lease or have permission to use. Further, one site was established in partnership with the Chicago Parks District and Moore Landscapes, Inc., a private landscaping firm.

CHALLENGE: Inadequate Business Training

Training in food production, distribution, marketing, and business planning is often needed. Agricultural training can help ensure greater farming success. Business training and support can help operations that are selling food to increase their ability to make a profit—contributing to increased incomes for the farmers and more funds for their ongoing expenses.

STRATEGY: Identify and Use Technical Instruction on How to Grow, Market, and Sell Food

This instruction can maximize yield for farmers and gardeners and profits for those selling their food.

- **Just Food** in New York offers an adult Farm School, which will provide professional training in urban agriculture through a two-year certificate program.
- **The Kansas City Center for Urban Agriculture** (KCCUA) runs programs to train urban farmers. In addition to teaching farming skills, KCCUA trains farmers in financial management, customer communication, marketing, and setting up CSAs.
- **The Latino Farmers Cooperative of Louisiana**, based in New Orleans, provides education and training assistance in Spanish to address the needs of emerging Latino farmers, so that they can ultimately run their own sustainable urban agriculture micro enterprises. Participating families also receive access to farmland, tools, and other types of support.
- **State extension services** have traditionally supported individual farmers and can provide technical assistance. While funding for state extension services has been rapidly declining, several states are finding ways to support urban farmers. The Ohio State University Extension is providing technical assistance along a wide spectrum of issues—from communications to business development, to plant science, to urban farmers across Ohio. Several states, like Michigan and Colorado, have hired urban agriculture specialists in their extension offices.



CHALLENGE: Soil Contamination and Cleanup

Much of the available land for urban agriculture is contaminated and requires cleanup. Many of the available, vacant plots for community gardens and urban farms may be contaminated with lead and other toxic chemicals from former industrial uses, lead paint, or gasoline.

- It is expensive to clean contaminated soil. Conventional brownfield cleanup, where tainted soils are removed and disposed of in toxic waste facilities, is cost-prohibitive without state and federal funding.
- EPA's Brownfields Program provides grant dollars for brownfields assessment, cleanup, revolving loans, and environmental job training. This program presents two obstacles, however, for urban farmers wishing to use these grant dollars: (1) the brownfields assessment program is limited to government or quasi-government entities (while the brownfields cleanup program is available to government, quasi-government, and nonprofit entities); and (2) municipalities wishing to establish urban agricultural projects on former residential land are forced to undergo the same stringent, and typically unnecessary, assessment standards that former industrial properties must meet to be eligible for cleanup funding.
- Large urban farms often consist of several parcels of land sometimes with different historical uses, thus making it hard to determine the soil quality for the entire farm. **SHAR** (Self-Help Addiction Rehabilitation) in Detroit is working to identify effective ways to ensure, on large tracts of land, that soil is suitable for growing food.

STRATEGY: Address Soil Quality Problems

Farmers and gardeners should address soil quality before attempting to plant food. Soil testing can help growers assess toxin levels. Farmers may also want to get a detailed land use history of the site they are considering gardening, as organic contaminants may not show up in a soil test. Additionally, many large urban farms consist of several plots of land that may have varying levels of lead and other toxins depending on where the soil is tested. If the land is polluted, farmers can use raised beds/hydroponics, remediate the soil, or choose another location. Approaches for planting in areas with contaminated soil include:

- If planting directly in the ground, test the soil. There are labs (for example, see UMASS³²) that will test for heavy metals. Agricultural soil tests will look more at nutrients, pH, and other qualities important for growing plants. Remediation techniques for cleaning soil include phytoremediation (using highly absorptive plants to take up heavy metals), bioremediation (using microbes to eat certain harmful chemicals), and mycoremediation (using fungi to remove toxins from the soil). Urban farmers/gardeners more commonly use the raised-bed method since it more directly avoids problems of potential soil contamination.
- Build raised beds or develop a hydroponic system to protect food from contaminated soil.³³ Some farmers, such as Growing Power, choose to use raised beds and hydroponics to avoid potentially contaminated soil and ensure a high-quality growing environment. These methods also help keep out weeds and some common garden pests.



CHALLENGE: Start-Up and Operating Costs

New urban farms must address start-up and operating costs, including expenses associated with gathering soil, seeds, and tools. The cost of starting and maintaining an urban farm varies widely depending on the size, location, and purpose of the farm. Community residents running a community garden may need approximately \$1 per square foot per year over five years³⁴ for soil, seeds, soil testing, basic turkey wire fence, and initial cleanup, assuming volunteer labor and a free water source. Other farming operations can be much more costly to start. For instance, the initial expense of tapping into water lines can be quite costly. And larger-scale farms often need refrigeration, sorting and packing facilities, delivery areas, compost areas, and trucks and tractors. Often urban farms face problems with soil contamination and need to pay for soil testing or building raised beds before beginning operations. Most urban agriculture programs struggle to understand and address a mix of city permits and policies that affect their ability to garden or farm, which can lead to increased time and costs. It is often difficult to recruit banks to invest in start-up loans or other capital needs for operating a larger-scale urban farm, and smaller-scale farmers often need assistance as well.

STRATEGY: Collaborate with Other Farmers to Secure Tools, Trucks, Refrigeration, and Other Farming Needs and Look for Donations and Financial Assistance

Small farmers can work together to reach new markets by sharing expenses such as liability insurance, trucks, refrigeration, sorting, and distribution systems. They can also supplement their own offerings by selling other farmers' produce and added-value products.

- Programs such as the **MUD's Truck Share** allow the Missoula community to borrow a truck for occasional use. A \$5 nonrefundable application fee is required, and a farmer can borrow the truck for \$5/hour and \$0.45/mile in usage fees.
- **Urban Tilth** in Richmond, California, is working to offer a tool-lending library that allows community gardeners to borrow tools instead of purchasing them permanently.
- Other sources of support include donated supplies and grants from foundations or individuals, along with government-based grant and loan programs, which can provide assistance with initial infrastructure investment and in some cases ongoing operating support as well.



CHALLENGE: Insufficient Income Generation

Urban farms often generate only small or supplemental incomes for a limited number of people. The income generated from farm sales typically does not provide sufficient wages for full-time employment for farmers. In addition, there are often limits on the number of farmers that can farm on relatively small plots of land in urban areas.

STRATEGY: Increase Production

Increase potential revenue by extending the growing season or creating economies of scale. Net revenues can be increased by extending the production of the season or area. Expanding the size of urban farms can be helpful in reaching greater economies of scale.

- Farms such as **Growing Power** use hoop houses to extend the growing season.
- **Green City Growers Cooperative** uses a greenhouse to grow lettuces and herbs year-round.
- **SHAR** (Self-Help Addiction Rehabilitation) in Detroit will use 30 acres of land for farming as well as value-added food production.

CHALLENGE: Insufficient or Expensive Water Access

Tapping into a water main for an urban farm can be very expensive, costing as much as \$20,000. In addition to a hefty price tag, many farmers are both unable and reluctant to make a huge investment in infrastructure when land ownership is not guaranteed.

STRATEGY: Identify Ways to Access Water

- In cases where use of land for a garden or farm is not permanent, some farmers arrange with a neighboring resident to pay them for use of that home's water.
- In Cleveland, the city water department allows people to access fire hydrants for urban agricultural use. This is a creative stop-gap measure until the city can address issues of land tenure, which will encourage farmers to invest in linking to the city water main.

Transforming Challenges into Assets: Urban Agriculture in Older Core Cities



Once-thriving manufacturing cities such as Cleveland and Detroit have been facing huge inventories of vacant land and empty buildings due to lost economic downturn, foreclosures, and population loss. Both cities are faced with demolishing hundreds of abandoned, derelict houses, but residents are transforming this challenge into an asset through urban agriculture. Residents and community organizations are partnering to use vacant land productively and helping ensure that residents can live in safe, vibrant neighborhoods.^b In both cities, urban agriculture is completely transforming the land, access to healthy food, and the economic outlook. The efforts featured here focus on low-income communities and communities of color.

Detroit

Detroit community members have been engaging in urban agriculture to help revitalize Detroit. The **Detroit Black Community Food Security Network** works to empower African Americans in the Motor City by raising awareness about food: where it comes from, who controls it, and the role it plays in building healthy families and communities. The organization has established a four-acre organic farm within the city and organized a food co-op buying club. It also has taken leadership in promoting policy changes, successfully leading efforts to get the city council to create a food policy council and pass a food security policy. It is now working to establish legislation protecting gardens and farms; encourage stability by creating a program for organizations and individuals to lease land with an option to purchase it; encourage the city to provide resources for urban agriculture; identify a model state program to support small farms with funding, marketing, etc.; and encourage

^b See Bloomberg.com, "Rust Belt Cities Demolish Homes as Defaults Blight Neighborhoods," retrieved from <http://www.bloomberg.com/news/2010-11-18/rust-belt-cities-demolish-homes-as-foreclosures-blight-cleveland-detroit.html>.

schools and institutions to purchase local foods. Moreover, it has provided leadership to the Undoing Racism in the Detroit Food System Initiative and has been selected as the Detroit Regional Outreach Training Center for Growing Power.

In 2008, **SHAR** (Self-Help Addiction Rehabilitation), a Detroit-based organization treating over 4,000 clients each year, decided to expand its approach to addiction treatment by incorporating urban agriculture into its program. SHAR has fostered a collaboration involving over 50 organizations, including the Detroit Black Community Food Security Network, and seven universities to help launch one of Detroit's largest urban farms.

The program **Recovery Park** will encompass approximately 30 acres of vacant land and will use Growing Power's three-tier system and have three discrete growing seasons. The effort's leaders estimate that this system will generate \$25,000 to \$35,000 per acre, compared to a traditional farm site, which can produce only \$5,000 to \$6,000 per acre. In addition to growing food, the farms will also have a packaging company on site. For example, the farmers will grow and package small two- to three-ounce packages of fruits and vegetables (instead of chips and other junk food) for schools. Just two school contracts for processing these small healthy snack packs will create 150 jobs in about six months. The full model, involving both growing and processing, is estimated to create 2,500 to 3,500 permanent jobs, paying between \$10 to \$12 an hour over the next 10 years.

The farms within Recovery Park will not use pesticides or fertilizers, making it possible for residents to continue living in the community next to this city farmland. The collaborative is looking to create bike trails, job training centers, and other community resources in and around the farms, helping to create a thriving community.



Cleveland

In 2007, **Neighborhood Progress**, a nonprofit organization working to restore and maintain the health and vitality of Cleveland's neighborhoods, launched a citywide planning initiative to tackle the issue of land vacancies. The group sponsored a study to identify productive re-uses of vacant land that could build healthy communities and protect people, current stakeholders, investments, and the value of homes. The highest recommended strategy for vacant land re-use was urban agriculture.

Neighborhood Progress is now working with the City of Cleveland to implement agricultural pilot projects throughout the city over the next several years. The most successful ones will be brought up to scale. A total of 66 projects aiming to renovate vacant land have been implemented throughout Cleveland, 31 of which are urban agriculture-related (13 are market gardens and the remainder are community gardens, orchards, or vineyards). The urban farms will provide supplemental income to many farmers and primary income for one or two farmers. While the projects are limited to city-owned land, of the 20,000 vacant lots in Cleveland, the city owns 7,500—well over one-third of the vacant land. The city has agreed to a five-year lease for the pilot projects, with the goal of transferring title to the community group or individual farmer after the expiration of the lease.

The city recognizes that converting vacant land into an asset saves the city money in the long run. It costs close to \$1,000 to maintain a vacant lot: mowing the lot, responding to police calls involving crime and violence at the sites, and cleaning up after illegal dumping. As a result, Cleveland has also been progressively amending its zoning and health codes to provide increased land security to farmers by allowing for composting toilets, on-site sales, changes to fencing requirements, and farm animal and honey bee provisions.

The city has also established an agreement with the water department to provide fire hydrant access to urban farms and community gardens so that farmers can access water without spending \$1,500 to \$4,500 to gain permanent access to a water line.

Cleveland is also home to the newly launched **Green City Growers Cooperative**, which will operate a five-acre hydroponic greenhouse that will produce leafy greens and herbs to be sold to nearby grocery stores and wholesale produce businesses. The greenhouse operation will be run as a cooperative, allowing opportunities for neighborhood residents/workers to participate at an ownership level, to select the board or become board members, and to become involved with the cooperative development. It will create 35 to 40 jobs, all at a living wage. The average salary in the University Circle and Central City area where the workers will reside is currently \$18,000. It is estimated that Green City Grower jobs will build about \$65,000 in patronage accounts in eight years. Green City looks forward to eventually expanding its operation beyond the five-acre greenhouse to include a network of greenhouses and related food processing and packaging. These combined urban agriculture efforts stabilize the community empowering it, as each food dollar kept in the city will help improve the local economy.

Urban agriculture efforts in Cleveland have benefited from a strong city council and mayor and a strong network of community members, planners, public health advocates, extension agents, and other stakeholders. Monthly network meetings bring together people interested in urban farming to understand its connection to improved health and neighborhood revitalization.



Studies have estimated that a community garden can yield between \$500 and \$2,000 worth of produce per family per year;²⁴ and that every \$1 invested in a community garden plot yields around \$6 worth of produce.²⁵

Working Towards Financial Sustainability and Scale

While urban farmers often choose to farm for many different reasons—improving food access, creating a stronger workforce through job training programs, or revitalizing the economic health of a community—many struggle with reaching financial sustainability. Given the often limited plot size of an urban tract of land, it can be difficult to reach efficient economies of scale for growing and distributing produce. However, many farmers are tackling the issue of financial sustainability and recommend the following:

Diversifying the Market

Many farmers have found that they can work towards greater profitability and long-term sustainability by diversifying their urban agriculture operation. Operations with multiple income-generating activities tend to have larger total revenues.

Sell food from the farm to the consumer.

Community supported agriculture (CSA), farmers' markets, and farm stands are all good ways to reach consumers directly.

- Some farmers use CSA as a distribution tool. This allows farmers to start small, with a consistent set of clients. In some cases, CSAs allow farmers to skip some expensive infrastructure investments such as refrigeration, but in other cases, refrigeration is needed to ensure that produce stays fresh in midsummer.
- Farmers can sell produce at farmers' markets and farm stands whether they are existing markets or new markets/stands that the farmers develop themselves.

Sell food directly to small grocery stores, corner stores, and community co-ops. Small stores and co-ops benefit from sales directly from farmers as they are able to cut out a middleman, which often makes for a less expensive product. Farmers are thus able to pocket dollars that would traditionally go to this middle player.

- In Oakland, **Mandela Foods Co-op** buys produce from local farmers to sell at the worker-owned cooperative, benefiting the farmers, as well as the community residents who can purchase fresh, locally grown produce.
- Nonprofit organizations such as **Red Tomato** in Massachusetts and **Community Alliance with Family Farmers** in California serve as middlemen and connect local farmers with markets.

Prepare and then sell foods. Some urban farms create value-added products, such as jams or prepackaged cut fruit, employing more people and generating additional income.

- **Nuestras Raíces** transformed an abandoned building on a vacant lot into the Centro Agrícola, a community center for small-scale business development. Included is a shared-use community kitchen, whose space can be rented by community members for the development of small-scale food preparation enterprises, such as catering, food processing, and the production of sauces.

Sell foods from the urban farm along with foods from other local farms. Urban farms can supplement their offerings with goods from other local farms and food producers, acting as a distribution site for locally produced food. This allows the farmers to offer a larger, and more consistent, mix of foods.

Growing Power, Milwaukee, Wisconsin: Providing Healthy, Affordable Food to All Communities



Near a large affordable-housing complex in Milwaukee, 14 greenhouses, livestock pens, and hoop houses stand, filled with salad greens, arugula, beets, tilapia, perch, beehives, hens, ducks, beehives, goats, and turkeys. The project is run by Will Allen (shown above), a charismatic farmer who has become a national spokesperson for urban agriculture and a more just food system.

“From the housing project, it’s more than three miles to the Pick ‘n Save,” Allen says. “That’s a long way to go if you don’t have a car or can’t carry stuff. And the quality of the produce can be poor.” In 1993, Allen created a national nonprofit and land trust organization called Growing Power, which provides communities like this one in Milwaukee with better access to healthy, high-quality, and affordable food and fosters a more sustainable, equitable food system. Growing Power has more than 25 employees—many from the neighborhoods served—and more than 2,000 volunteers.

The organization produces food using a sophisticated, organic system: It relies on recycled waste from local restaurants, breweries, farms, coffee houses, and worms to help generate nutrient-rich compost that helps their crops thrive. The organization also uses an aquaponics system that farms fish

while breaking their waste down into fertilizer, by filtering the fish tank water through a gravel bed and then a crop of watercress that filters the water a second time. Growing Power distributes the food through retail stores, restaurants, farmers’ markets, schools, and a community supported agriculture program. The CSA offers discounted shares to low-income consumers for \$16 weekly; in return, residents receive enough food to feed a family of up to four for a week.

The organization fosters school and community gardens throughout the city; it also provides training, outreach, and technical assistance, sharing its knowledge beyond the city’s borders, in places like Arkansas, Florida, Georgia, Illinois, Kentucky, Massachusetts, and Mississippi. One example of the organization’s expanding work is the Chicago Avenue Community Garden at Cabrini-Green. Growing Power is collaborating with the city’s Fourth Presbyterian Church to convert an unkempt basketball court into a thriving community garden. Plots are allocated to individual local gardeners. Growing Power supplies the materials, assists in designing and building the space, and provides daily staff and technical assistance during the growing season.

- **Added Value** in Brooklyn operates a CSA that sells produce from its urban farm combined with fruit and eggs from regional rural farmers.

Identify other ways to diversify the urban farming operation. Urban farmers can also operate a nursery selling food or non-food plants, raise bees, or provide consulting and training to local gardeners.

- **Greensgrow Farm** in Philadelphia brings in significant revenue to support the overall farming operation through sales of nursery plants, including many non-food plants.
- **Added Value** generates income from guided group tours of the farms that supplements the staffing costs associated with hosting the tours.

Identify your market early. Some urban farms make plans for selling/distributing the food they grow as an important first step of their operation.

- **Green City Growers** in Cleveland is developing agreements to supply lettuces and herbs to local institutions, including a variety of retailers and restaurants. This arrangement helps ensure a consistent, reliable client base. The project is estimated to provide 35 to 40 living-wage jobs for low-income community members from the surrounding community. It is projected that Green City Growers will break even in one-and-a-half to two years of operation. Also projected: that in approximately eight years, worker-owners will accrue about \$65,000 in patronage accounts in addition to good wages and affordable benefits.

Urban farmers do not select the same goals or approach them in the same way.

For example, some farms focused on jobs may work toward permanent job creation, while others may focus on supplemental income generation or general job-skill development. Others may be focused on healthy food access, reuse of vacant land, community revitalization, etc. The measures used must fit the goals of that particular farming operation. Some operations seek to reach full financial sustainability without ongoing operating support, while others do not have this goal but believe that the services they provide merit ongoing investment. Evaluators should account for the farming operation's philosophy and approach in developing an evaluation plan.

Evaluating Impact and Success

Data can help advocates highlight the importance of their work and can provide helpful documentation for changing their operations. On a broader scale, urban farmers could greatly benefit from additional analysis on the health, economic, and social impact of urban agriculture operations. Evaluating an urban farming project often requires different metrics from project to project, as different urban farms are typically developed to meet a range of different goals.



A 2006 study found that tripling the amount of fresh produce that farmers sell directly to consumers at farmers' markets in Michigan could generate as many as 1,889 new jobs and \$187 million in additional personal income.¹⁸

Policy Considerations and Recommendations

Urban agriculture policies must ensure that low-income communities and communities of color benefit by involving them in policy development and advocacy steps to identify and advance an urban agriculture policy agenda.

For a sampling of potential policy approaches, please see below:

Help identify and provide land and facilities for farming. Local governments eager to identify ways to make productive use of vacant land often turn to urban agriculture. Cities can inventory public and private land, authorize leasing agreements with private landowners, clear contaminated land, and authorize use of municipal land.

- **The City of Seattle’s Department of Neighborhoods**³⁵ has inventoried land and locations for community gardens, food bank gardens, and community kitchens that would strengthen and maximize accessibility for all neighborhoods and communities, especially low-income and minority residents.
- **The City of Cleveland** and the nonprofit **Neighborhood Progress** in 2009 created a competitive vacant land-reuse grant program to empower neighborhood residents and community leaders to turn vacant land into urban farms/ community gardens. Currently, 30 urban pilot projects are creating community and market gardens, orchards, vineyards, and farms. The city also has passed an “urban garden district zoning code.”³⁶
- The Chicago City Council created a city-funded entity called **NeighborSpace**, which is authorized to purchase properties to protect as open spaces, including community gardens. NeighborSpace secures land against potential development,

provides basic liability insurance for those using the land, and supports community control of and engagement in local green open spaces.

- **The Sustainable Food Center** in Austin, Texas, is working with the city and county to map land, advertise the available land to the community, and help arrange lease agreements with the city. It has also created a single point of contact to ease the process of creating urban gardens.
- As part of its crime prevention strategy, the Alameda County Sheriff’s Office in California has partnered with **Dig Deep Farms & Produce** to identify county-owned land and facilities and privately held land to ensure the farm can continue to grow and provide jobs for young people. Since 2010, Dig Deep has amassed over 36 acres of farmland.
- Cities including Cleveland,³⁷ Washington, DC, and Hartford, Connecticut,³⁸ collect and maintain an inventory of public or private vacant land suitable for gardens.

Provide financial support for start-up or operating costs through grants on a variety of issues and low-interest loans, available at the local, state, or federal levels.

- The City of Cleveland’s economic development department started a program in 2008 that provides grants up to \$3,000 to urban farmers for tools, irrigation systems, rain barrels, greenhouses, display equipment, and signage, through a program called “**Gardening for Greenbacks**.”³⁹
- Cities such as Madison, Cleveland, and Boston use Community Development Block Grant funds to develop urban agriculture projects.

- **The Food Project** in Massachusetts has received money from the North Shore Workforce Investment Board to support its youth programs as they relate to workforce development.
- **Growing Home** in Chicago has received state and city government support for its workforce development efforts with homeless and formerly incarcerated residents.
- **City Slicker Farms** in West Oakland was awarded a \$4 million grant through a state park bond to construct a 1.4-acre urban farm park, designed through a community-based planning process with local residents.

The Department of Labor Work Opportunity Tax Credit (WOTC) and Federal Bonding Program

could potentially help support urban agriculture efforts that create jobs. WOTC tax credits incentivize private-sector businesses to hire employees, such as formerly incarcerated individuals, who have consistently faced significant barriers to employment. The Federal Bonding Program provides no-cost Fidelity Bonds that offer reassurance to employers who are hesitant to hire formerly incarcerated individuals based on fears of theft or damage to property.

Department of Justice Second Chance Act Reentry Grants

could potentially be used to train formerly incarcerated workers for urban agriculture jobs. Second Chance Act Reentry Grants focus on reducing recidivism rates and state and local spending on corrections. The funding for reentry programs covers a number of areas, including job training, education, mentoring, substance abuse and mental health treatment, family-based services, literacy classes, housing, and employment assistance.

USDA programs can help support urban agriculture and community gardens.

These programs can be a great resource for urban farmers, but there is a need for greater coordination of urban agriculture opportunities across programs. A streamlined application process is needed for urban farmers who wish to access resources. In addition, many of these resources are oversubscribed, making it challenging for urban farmers to access these resources.

- **The Community Food Projects Competitive Grant Program (CFPCGP)** provides grant dollars for projects that fight food insecurity and help promote the self-sufficiency of low-income communities. Food Project funds have supported food production projects, including urban agriculture. Funding ranges from \$10,000 to \$300,000 for one to three years.
- **The Business and Industry Loan Program (B&I)** can support regional food systems. B&I loans are traditionally available only in rural areas, but loans may be made to cooperatives for value-added processing facilities in nonrural areas provided they service agricultural producers within 80 miles of the facility and help improve producer income.
- **The Value-Added Producer Grant Program** dedicates \$18 million in grants to farmers for adding value to their foods, including making pesto, jams, salsas, etc.
- **Know Your Farmer, Know Your Food.** This USDA-wide effort seeks to create economic opportunities by better connecting consumers with local producers. Farmers and ranchers who are not quite ready to obtain financing from commercial lending sources can apply for direct and guaranteed loans. Targeted funds are available to smaller-scale, beginning farmers and ranchers who have been in business for less than 10 years, as well as to farmers who are women, African Americans, American Indians, Alaskan Natives, Hispanics, or Asian American Pacific Islanders.
- **The Healthy Urban Food Enterprise Development Center (HUFED)** at the Wallace Center at Winrock International is funded by the USDA's **National Institute for Food and Agriculture** (formerly Cooperative State Research, Education, and Extension Service or CSREES). HUFED provides grants and technical assistance for enterprise development and focuses on getting more healthy food, including local food, into communities that have limited access. The program provides grant dollars for local and regional approaches to aggregate and distribute healthy foods.

The Department of Housing and Urban Development (HUD) could support urban agriculture through its revitalization and poverty reduction programs.

- **The Neighborhood Stabilization Program (NSP)** was created to help cities, counties, and states deal with the fallout from the national mortgage foreclosure crisis. Now in its third year, NSP should be authorized by legislators such that funds can be used for urban agriculture projects; NSP currently restricts funding to housing exclusively. The first round of NSP funding was more flexible and could be used for other areas such as public parks, mixed residential and commercial uses, and urban agriculture.
- For decades, Community Development Block Grants (CDBG) and Section 108 Loan guarantees have provided support for local and state governments to promote economic self-sufficiency and poverty reduction. Many cities are using their allocations for city gardens, farmer supports, and other economic development measures.
- **Green City Growers** has been able to access Brownfields Economic Development Initiative (BEDI) grants through HUD. The initiative is a competitive grant program that HUD administers to stimulate and promote economic and community development. BEDI is designed to assist cities with the redevelopment of abandoned, idled, and underused industrial and commercial facilities where expansion and redevelopment are burdened by *real or potential* environmental contamination. BEDI grant funds are primarily targeted for use with a particular emphasis on the redevelopment of brownfields sites in economic development projects and the increase of economic opportunities for low- and moderate-income persons as part of the creation or retention of businesses, jobs, and increases in the local tax base.

The Environmental Protection Agency (EPA) can ensure that nongovernmental entities can apply for EPA Brownfields Program assessment grants for urban agriculture projects. It can also ensure that projects to transform former residential properties into urban farms are not held to the same CERCLA and Superfund assessment standards used for former industrial land. This will enable more

urban agriculture projects to use brownfields funding for their efforts to reclaim vacant and abandoned land and will address the differing contamination assessment needs at former residential sites compared to former industrial sites. The EPA should also develop alternative guidelines that can be used to assess former residential property.

Other federal agencies, including the Department of Health and Human Services and the Treasury, may be able to play a role in supporting urban agriculture in the future as well. Green City Growers Cooperative has used **New Markets Tax Credits** through the Treasury to support the landlord of their greenhouse, who then leases the land to the cooperative for its urban agriculture operation.

The Sustainable Communities Initiative (SCI) supports planning for regional food systems.

SCI is a new collaboration among EPA, HUD, and the Department of Transportation and has funded numerous food-focused local and regional planning efforts across the country.

Cities can provide services to reduce costs.

Localities can provide trash collection service, compost from the locality's recycling program, and access to water, tools, and storage facilities to support community gardens and urban farms.

- In Cleveland, the city's water department allows urban farmers to use fire hydrants for urban farm use based on a predetermined rate. It has set water usage rates determined by a tiered system based on the size of the parcel.
- Minneapolis helps provide access to water and compost for local community gardeners.

Include urban agriculture-friendly policies in general plans and adopt urban agriculture-friendly zoning policies. Cities can make long-term commitments to community gardens and urban agriculture by adopting language in its zoning codes and its general plan. Supportive zoning designations can protect urban farms or community gardens from redevelopment and encourage farmers and gardeners to invest in infrastructure development. Some of these policies have an equity focus and give priority to low-income, underserved communities, such as in the cities of Berkeley⁴⁰ and Seattle.⁴¹

- Berkeley designates space for community gardens in its general plan and prioritizes community garden development in high-density residential areas and low-income communities.
- Seattle has committed to an “urban village” concept that assigns one garden per 2,500 residents and is committed to serving all residents. Seattle developed land use codes⁴² to encourage urban agriculture throughout the city. Some of the land use codes will allow residents to grow food in their backyards and sell it, increase the number of chickens allowed in a backyard, allow greenhouses on buildings and vertical spaces, allow more flexibility in farmers’ markets locations, and reduce permitting and fees.
- Also see Public Health Law and Policy’s Land Use and Planning Policies document,⁴³ which details model planning and zoning provisions for many cities.

Pass resolutions, initiatives, and legislation supporting urban agriculture and community gardens.

Broad policies supporting urban agriculture can be promoted at the local, state, or federal levels.

At the local level:

- Seattle’s City Council passed a resolution⁴⁴ in 2008 supporting community garden and urban agricultural development. The resolution called for the Department of Neighborhoods (DON) to identify land and locations for community gardens, food bank gardens, and community kitchens that would strengthen and maximize accessibility for all neighborhoods and communities, especially for low-income and minority residents. DON will partner with the Seattle School District, the Seattle Public Utilities, Seattle City Light, and Seattle Department of Parks and Recreation to propose a process and strategic plan for creating programs and policies to support urban agriculture.
- Philadelphia Mayor Michael Nutter has created a food policy council and released the Philadelphia Food Charter,⁴⁵ which includes a focus on urban agriculture. The city’s “**Greenworks**” initiative, designed to turn Philadelphia into “the greenest

city in America,” has a goal of increasing commercial agriculture within city limits.

- The City of Minneapolis adopted a resolution that will expand the consumption, production, and distribution of local, sustainably produced, and healthy foods. The resolutions came from a series of convenings coordinated by the mayor that included several city departments and community representatives. This group (calling themselves **Homegrown Minneapolis**) met over a six-month period and focused on advancing community gardens, small-enterprise urban agriculture, farmers’ markets, and the commercial use of locally grown food.
- Local governments could designate a “point” person to help local urban gardeners and farmers navigate these city permits and comply with city policies.

At the state level:

- States can enact legislation or provide allocation of funds for programs that promote urban agriculture by supporting local and regional food. For example, in 2009, North Carolina (Senate Bill 1067),⁴⁶ Montana (House Bill 583),⁴⁷ Oregon (House Bill 2763),⁴⁸ Vermont (House Bill 313),⁴⁹ and Minnesota (House F 1122),⁵⁰ enacted legislation supporting local and regional food systems. (See National Conference of State Legislatures for a detailed listing of state policies.⁵¹)
- States can promote policy initiatives and vision statements to guide development, investments, and legislation. **The Michigan Good Food Charter** aims to promote policy changes that increase access to food that is healthy, green, fair, and affordable.

At the federal level:

- Rep. Marcy Kaptur (D-Ohio) introduced the Community Agriculture Development and Jobs Act (H.R. 3225)⁵² which would designate a point person within the USDA to ensure the department promotes community agriculture initiatives.

At the local, state, and federal levels:

- A pilot program could be developed to support financially sustainable urban agriculture operations that would need only limited, one-time,

start-up loan and grant assistance. Green City Growers Cooperative in Cleveland and SHAR in Detroit are both working to develop a financially sustainable model that will provide jobs and other benefits for residents. These efforts could be replicated in other parts of the country.

Increase funding for programs that provide urban farmers and community gardeners with training and technical assistance.

For urban agriculture projects to operate most efficiently and effectively, the farm managers and leaders must have strong skills in nonprofit management or business operations, as well as staff members who are skilled in agricultural production.

- Cooperative extension programs can provide training in farm-related skills. **The USDA's National Institute of Food and Agriculture** (NIFA), formerly the Cooperative State Research, Education, and Extension Service programs (CSREES), can provide technical assistance through its extension programs, which provide research and educational assistance to help farmers, ranchers, and community gardeners. Extension programs operated throughout the country can work to address the needs of urban farmers. For example:
 - **The University of Wisconsin Milwaukee County Cooperative Extension** program offers several programs for urban gardeners, including its rent-a-garden program, certified beekeeper programs, and a project that creates a network to link individual farmers and gardeners to each other.
 - Ohio State University Extension in Cuyahoga County has several urban agriculture and community gardening programs.⁵³ Among them: a market gardener training program, gardening for greenbacks program (a grant program providing up to \$3,000 to help establish market gardens), and programs to provide water access to gardeners.

Funding for extension programs has been declining, causing extension agencies to be constrained in the breadth and variety of services they can offer. With increased and targeted support, extension programs could operate across America to address the needs of urban farmers in underserved low-income communities and communities of color.

- Community colleges are starting to offer certificates and coursework in urban agriculture. Many courses are offered within a broader agriculture or “agro-ecology” concentration and add a business component as well.
 - Starting in 2010, **Engaged Community Offshoots (ECO)** began a partnership with Prince George’s County Community College in Maryland offering a course, “Commercial Urban Agriculture.”⁵⁴ The course focuses on farming techniques and how to plan and design a farm-related business.
 - **The Sustainable Agriculture Education (SAGE)** program in the Science and Math Division of Seattle Central Community College focuses on food systems, ecology, and business practices.
- Business training is key for running a successful operation. Many urban farmers have difficulty finding people who have both agriculture technical training as well as the skill set to run the business including balancing the books, advertising, and analyzing existing markets.
 - Cooperative extension agencies can provide this type of capacity building (in addition to technical agriculture training and assistance); however, these programs are severely underfunded, with many states no longer having cooperative extension agents able to provide this type of service.
 - **The Service Corps of Retired Executives (SCORE)** could be a good resource for urban farmers who would like help with business planning, accounting, marketing, or other business skills. SCORE receives grants from the Small Business Administration (SBA) to offer free and confidential small business advice to entrepreneurs. SCORE has over 364 chapters throughout the United States and relies on more than 13,000 volunteer mentors. Most volunteers are working or retired business owners, executives, and corporate leaders.



Conclusion

In cities across this nation, individuals, organizations, and advocates are embracing urban agriculture as a means for improving food access, creating economic opportunities, and revitalizing communities. Many urban farms offer exciting opportunities for advancing equity and for helping to provide these benefits, among many others, to low-income communities and communities of color. Interested parties should:

- **Take advantage of the multitude of benefits offered by urban farming, which opens the door for many policy opportunities.** The myriad goals and benefits (food access, new economic opportunities, and neighborhood revitalization, among them) allow urban farmers to seek funding opportunities from a variety of sources at all levels of government. Funding is available from a variety of federal agencies and programs—the USDA, HUD, EPA, HHS, and workforce development.
- **Implement tested strategies and policies to overcome common challenges.** Urban farmers face many similar challenges when starting or expanding an urban farm—lack of land security, poor access to water, and contaminated soil, among others. Progressive local governments have worked side by side with several urban farmers to help with many of these problems. Including urban agriculture in a city's general plan and creating urban agriculture-friendly zoning policies go a long way in providing long-term land security and encouraging infrastructure investment. Other cities have worked with their water departments to provide easier access to water.
- **Incorporate new business strategies to improve long-term financial sustainability.** A plan for long-term financial sustainability is vital for ensuring both long-term success and other funding opportunities. Urban farmers use a

variety of methods to increase income and work towards financial sustainability. Diversifying the markets where farmers sell their food in addition to processing and packaging food increases the breadth of the markets and can generate more income. Communication with individuals and institutions in the surrounding community as well as the location where a farmer will sell his or her food is vital, since this determines the success of the market. Farmers can even set up forward-looking contracts with neighboring institutions to grow crops specifically to the institutions' needs. More data showing the success of urban farms are necessary to support both start-ups of new farms and expansion of existing urban farms.

- **Focus policies and programs to better target low-income communities and communities of color.** Many of the urban farms applying for grants and low-interest loans are located in low-income neighborhoods and communities of color—the communities that stand to greatly benefit from the presence of urban farms in their neighborhoods. While some policies do target low-income communities, the majority of the policies could better prioritize funding for urban farms located in low-income communities. Input from the communities is vital when amending or creating urban agriculture policies.

Urban farming is transforming communities across the country into healthy and safe environments. It offers a variety of benefits and opportunities to collaborate in new ways with advocates and practitioners from a variety of issue areas and backgrounds. The time is ripe for policymakers, stakeholders, farmers, and community members alike to leverage the power of urban agriculture to encourage communities of opportunity for all.

Appendix: List of Interviewees

As noted in the Acknowledgments, *Growing Urban Agriculture* benefited immeasurably from the contributions—through both one-on-one interviews and an urban agriculture convening—of activists, advocates, and practitioners working in communities across the nation. Their thoughtful and candid input as well as their insight and experience informed this report. Following is a list of those whom we interviewed and their affiliations at the time of the interview.

Diana Abellera

Oakland, CA

John Ameroso

New York, NY

Marice Ashe

Public Health Law & Policy
Oakland, CA

Todd Baylson

City Harvest, Pennsylvania
Horticultural Society
Philadelphia, PA

Rodney Bender

Growing Gardens
Portland, OR

Matthew Brener

Greensgrow Farm
Philadelphia, PA

Pam Broom

Women and Agriculture
New Orleans, LA

Katherine Brown

Urban Agriculture Policy
Taskforce Southside
Community Land Trust (SCLT)
Providence, RI

Lauren Butz

Viet Village Urban Farm
New Orleans, LA

Majora Carter

Majora Carter Group
Detroit, MI

Stella Chao

Seattle, WA

Jill Clark

Ohio State University, Center for
Farmland Policy Innovation
Department of Agricultural,
Environmental and Development
Economics
Columbus, OH

Lottie Cross

Clean Greens
Seattle, WA

Sarita Daftary

East New York Farms!
Brooklyn, NY

Kathy Dickhut

Department of Zoning
and Land Use Planning
City of Chicago
Chicago, IL

Michael Dimock

Roots of Change
San Francisco, CA

Mary Donnell

Green City Growers Cooperative
Cleveland, OH

Melissa Dougherty

Majora Carter Group
Detroit, MI

Max Elliott

Youth Launch: Urban Roots
Austin, TX

Barbara Finnin

City Slickers Farms
Oakland, CA

Andy Fisher

Seattle, WA

Leslie Geathers

Merritt College
Oakland, CA

Greta Gladney

The Renaissance Project
New Orleans, LA

Mike Hamm

Michigan State University
East Lansing, MI

Nikki Henderson

People's Grocery
Oakland, CA

Diego Angarita Horowitz

Nuestras Raíces
Holyoke, MA

Ted Howard

Democracy Collaborative
College Park, MD

Michael Iceland

The Food Project
Boston, MA

Reverend Robert Jeffrey

Clean Greens
Seattle, WA

Katherine Kelly

Kansas City Center for
Urban Agriculture
Kansas City, KS

Navina Khanna

Consultant
Oakland, CA

Jill Kuehler

Zenger Farms
Portland, OR

Craig Lapine

Cultivating Communities
Portland, ME

Cara Letofsky

Office of the Mayor
City of Minneapolis, Minnesota
Minneapolis, MN

Paula Lukats

Just Food
New York, NY

Ian Marvy

Added Value
Brooklyn, NY

Diem Nguyen

Viet Village Urban Farm
New Orleans, LA

Rashid Nuri

Truly Living Well Natural
Urban Farms
Atlanta, GA

Bobbi Reichtell

Neighborhood Progress
Cleveland, OH

Harry Rhodes

Growing Home
Chicago, IL

Doria Robinson

Urban Tilth
Richmond, CA

Maitreyi Roi

Pennsylvania Horticultural
Society
Philadelphia, PA

Daniel Ross

Nuestras Raíces
Holyoke, MA

Ronda Rutledge

Sustainable Food Center
Austin, TX

Phyllis Shulman

Councilman Richard Conlin's
Office
City of Seattle, Washington City
Council
Seattle, WA

Morgan Taggart

Ohio State Extension
Cleveland, OH

Owen Taylor

Just Food
New York, NY

Jonathan Tescher

Georgia Organics
Atlanta, GA

Bobby Wilson

American Community
Gardening Association
Columbus, OH

Gary Wozniak

SHAR, Inc.
Detroit, MI

Malik Yakini

Detroit Black Community
Food Security Network
Detroit, MI

Lilah Zautner

Neighborhood Progress Inc.
Cleveland, OH

Notes

- ¹ Sarah Treuhaft and Allison Karpyn, *The Grocery Gap: Who Has Access to Healthy Food and Why It Matters* (Oakland, CA: PolicyLink, 2010).
- ² Ibid.
- ³ See Seattle Department of Neighborhoods, “P-Patch,” retrieved from <http://www.seattle.gov/neighborhoods/ppatch/aboutPpatch.htm>.
- ⁴ See SCORE, retrieved from <http://www.sba.gov/content/score>.
- ⁵ See Living History Farm, “Victory Gardens,” retrieved from http://www.livinghistoryfarm.org/farminginthe40s/crops_02.html.
- ⁶ See L. Powell et al., “Food Store Availability and Neighborhood Characteristics in the United States,” *American Journal of Preventive Medicine* 44 no. 3 (2007): 189–95.
- ⁷ Ibid.
- ⁸ U.S. Department of Health and Human Services, *The Surgeon General’s Call to Action to Prevent and Decrease Overweight and Obesity* (Washington, DC: U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General, 2001).
- ⁹ Ibid.
- ¹⁰ National Council of La Raza, *Key Facts about Childhood Obesity in the Latino Community: A Fact Sheet* (Washington, DC: National Council of La Raza, 2006); U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality, National Healthcare Disparities Report, AHRQ Pub. No. 08-0041 (Washington, DC, 2007); and U. S. House and D. R. Williams, *Understanding and Reducing Socioeconomic and Racial/Ethnic Disparities in Health: Promoting Health Intervention Strategies from Social and Behavioral Research* (Washington, DC: Institute of Medicine/National Academy Press, 2000).
- ¹¹ S. J. Olshansky et al., “A Potential Decline in Life Expectancy in the United States in the 21st Century,” *New England Journal of Medicine* 352, no. 11 (2005): 1138–45, <http://content.nejm.org/cgi/content/short/352/11/1138> (accessed October 2009).
- ¹² K. Morland, S. Wing, and A. Diez-Roux, “The Contextual Effect of the Local Food Environment on Residents’ Diets: The Atherosclerosis Risk in Communities Study,” *American Journal of Public Health* 92 no. 11 (2002): 1761–67.
- ¹³ T. Blanchard and T. Lyson, *Food Availability & Food Deserts in the Nonmetropolitan South* (Mississippi State, MS: Southern Rural Development Center, 2006).
- ¹⁴ B.E. Saelens, J.F. Sallis, L.D. Frank, S.C. Couch, C. Zhou, T. Colburn, K.L. Cain, J. Chapman, K. Glanz. “Obesogenic Neighborhood Environments, Child and Parent Obesity: The Neighborhood Impact on Kids Study,” *American Journal of Preventive Medicine* 42 no. 5 (2012) :e57-64.
- ¹⁵ California Center for Public Health Advocacy, PolicyLink, and the UCLA Center for Health Policy Research, *Designed for Disease: The Link between Local Food Environments and Obesity and Diabetes* (Oakland, CA: California Center for Public Health Advocacy, PolicyLink, and the UCLA Center for Health Policy Research, 2008), available from http://www.policylink.org/atf/cf/%7B97c6d565-bb43-406d-a6d5-eca3bbf35af0%7D/DESIGNEDFOR_DISEASE_FINAL.PDF (accessed April 2009); and A. Rundle et al., “Neighborhood Food Environment and Walkability Predict Obesity in New York City,” *Environmental Health Perspectives* 117 (2009): 442–7.
- ¹⁶ S. Chen, R. Florax, and S. Snyder, *Obesity in Urban Food Markets: Evidence from Georeferenced Micro Data* (Ann Arbor, MI: National Poverty Center, 2009), available from http://www.npc.umich.edu/news/events/food-access/chen_et_al_revised.pdf (accessed April 2009).
- ¹⁷ The Prevention Research Center, Tulane University, *Report of the Healthy Food Retail Study Group: Recommendations for a Louisiana Healthy Food Retail Financing Program* (New Orleans, LA: The Prevention Research Center, Tulane University, 2009); and The Reinvestment Fund, “The Economic Impacts of Supermarkets on Their Surrounding Communities,” Reinvestment Brief Issue 4, and The Reinvestment Fund, “Access to Supermarkets in Inner-City Communities,” Reinvestment Brief, Issue 5.
- ¹⁸ P. Cantrell et al., *Eat Fresh and Grow Jobs, Michigan* (Traverse City, MI: Michigan Land Use Institute (MLUI) and the CS Mott Group, Michigan State University, 2006), as cited in The Farm and Food Policy Project, 2007).
- ¹⁹ See USDA, “Community Supported Agriculture,” retrieved from <http://www.nal.usda.gov/afsic/pubs/csa/csa.shtml>.
- ²⁰ California Institute for Rural Studies, “Increasing Food Security among Agricultural Workers in California’s Salinas Valley,” June 2010, <http://www.cirsinc.org/index.php/component/search/?searchword=food+security+Salina&ordering=newest&searchphrase=all>.
- ²¹ S. Guendelman and B. Abrams, “Dietary Intake among Mexican-American Women: Generational Differences and a Comparison with White Non-Hispanic Women,” *American Journal of Public Health* 85(1): 20–25 (January 1995), retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1615282/pdf/amjph00439-0022.pdf>.
- ²² See W. Fujimoto, D. Leonetti, J. Kinyoun, et al. “Prevalence of Diabetes Mellitus and Impaired Glucose Tolerance among 2nd generation Japanese-American men.” *Diabetes*. 36 (1987):721-29.

- ²³ See The Cornfield, “An ‘Eco-Econ’ Proposal from Farmlab,” retrieved from <http://notacornfield.com/pdf/ecoecon.pdf>.
- ²⁴ See Rob Baedeker, “What’s the Value of Home-grown Food?,” SF Gate, August 30, 2010, retrieved from <http://www.sfgate.com/cgi-bin/article.cgi?f=/g/a/2010/08/30/moneytales083010.DTL>.
- ²⁵ See Huntingtoncommunitygardens.com, “Gardening—A Holistic Approach to Civic Health,” retrieved from <http://www.huntingtoncommunitygardens.com/36.html>.
- ²⁶ See National Center for Biotechnology Information, U.S. National Library of Medicine, “Community Gardens: Lessons Learned from California Healthy Cities and Communities,” retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1447988/>.
- ²⁷ See Huntington Community Gardens, “Gardening: A Holistic Approach to Civic Health,” retrieved from <http://www.huntingtoncommunitygardens.com/36.html>.
- ²⁸ See vimeo.com, “Planting SEEDS: A Garden for Inner-City Youth,” retrieved from <http://vimeo.com/13584529>.
- ²⁹ See NELLCO Legal Scholarship Repository, “The Effect of Community Gardens on Neighboring Property Values,” http://lsr.nellco.org/cgi/viewcontent.cgi?article=1049&context=nyu_lewp.
- ³⁰ See communitygarden.org, “National Community Gardening Survey,” retrieved from <http://communitygarden.org/docs/learn/cgsurvey96part1.pdf>.
- ³¹ See U.S. Department of Housing and Urban Development, “McKinney-Vento Act,” retrieved from http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/homeless/lawsandregs/mckv.
- ³² See University of Massachusetts Amherst, “Soil Testing Introduction,” retrieved from <http://soiltest.umass.edu/>.
- ³³ The cost of constructing a raised bed ranges from about \$50 to \$125. For more information about hydroponics and raised beds, see City Farmer News, available from <http://www.cityfarmer.info/>.
- ³⁴ See Linda Scott Kantor, “Community Food Security Programs Improve Food Access,” *FoodReview* Volume 24, Issue 1, January 2001.
- ³⁵ See City of Seattle Food Action, “Local Food Action Initiative,” retrieved from http://www.seattle.gov/council/conlin/food_initiative/.
- ³⁶ See Robert Brown, “Building Assets for Clevelanders,” Opportunity and Equity, retrieved from http://planning.city.cleveland.oh.us/cwp/opp_oview.php.
- ³⁷ See neighborhoodprogress.org.
- ³⁸ See “Establishing Land Use Protections for Community Gardens,” March 2009, retrieved from http://www.michigan.gov/documents/mdch/communitygardenpolicies_303374_7.pdf.
- ³⁹ See City of Cleveland, OH, Small Business and Retail, retrieved from <http://www.city.cleveland.oh.us/CityofCleveland/Home/Government/CityAgencies/EconomicDevelopment/SmallBusinessandRetail>.
- ⁴⁰ See Open Space and Recreation Element Objectives, April 23, 2002, retrieved from [http://www.ci.berkeley.ca.us/uploadedFiles/Planning_\(new_site_map_walk-through\)/Level_3_-_General/GPIiteOpen_Space_policies.pdf](http://www.ci.berkeley.ca.us/uploadedFiles/Planning_(new_site_map_walk-through)/Level_3_-_General/GPIiteOpen_Space_policies.pdf).
- ⁴¹ See Resolution 28610, retrieved from http://eatbettermovemore.org/sa/policies/pdf/text/Seattle_p-patch.pdf.
- ⁴² See Urban Agriculture, “What is Urban Agriculture?,” Department of Planning and Development, retrieved from <http://www.seattle.gov/DPD/Publications/CAM/cam244.pdf>.
- ⁴³ See “Land Use and Planning Policies to Support Community and Urban Gardening,” retrieved from <http://www.urbantilth.org/wp-content/uploads/2008/09/communitygardenpolicyinventory-2.pdf>.
- ⁴⁴ See Resolution Number 31019, retrieved from <http://clerk.ci.seattle.wa.us/~scripts/nph-brs.exe?s1=&s2=&s3=31019&s4=&Sect4=AND&l=20&Sect2=THESON&Sect3=PLURON&Sect5=RESN1&Sect6=HITOFF&d=RES3&p=1&u=%252F~public%252Fresn1.htm&r=1&f=G>.
- ⁴⁵ See “The City of Philadelphia’s Food Charter,” retrieved from <http://www.phila.gov/green/greenworks/pdf/GreenworksExecSummary.pdf>.
- ⁴⁶ See Senate Bill 1067, S.L. 2009-530, 2009-2010 Session, retrieved from <http://www.ncga.state.nc.us/gascripts/billlookup/billlookup.pl?Session=2009&BillID=S1067>.
- ⁴⁷ See Western Perspective, “New Montana Law Supports Homegrown Food Infrastructure,” retrieved from <http://www.growmontana.ncat.org/docs/HB0583.pdf>.
- ⁴⁸ See House Bill 2763, retrieved from <http://gov.oregonlive.com/bill/2009/HB2763/>.
- ⁴⁹ See No. 54. *The Vermont Recovery and Reinvestment Act of 2009*, retrieved from <http://www.leg.state.vt.us/docs/2010/Acts/ACT054.pdf>.
- ⁵⁰ See Information for H. F. No. 1122, 2009–2010 Regular Session, retrieved from http://www.house.leg.state.mn.us/bills/billnum.asp?Billnumber=HF1122&ls_year=86&session_year=2009&session_number=0.

⁵¹ See National Conference of State Legislatures, “Promoting Healthy Communities and Preventing Childhood Obesity: Trends in Recent Legislation,” retrieved from <http://www.ncsl.org/default.aspx?tabid=20101>.

⁵² See Community Agriculture Development Jobs Act, retrieved from http://www.kaptur.house.gov/index.php?option=com_content&view=article&id=2964&Itemid=300242.

⁵³ See Ohio State University Extension, Agriculture and Natural Resources, retrieved from <http://cuyahoga.osu.edu/>.

⁵⁴ See Prince George’s Community College, “Prepare for Green Jobs at Prince George’s Community College,” retrieved from <http://www.ecoffshoots.org/>.

Acknowledgments

PolicyLink is grateful to the many individuals who were interviewed for their insights and wisdom, which guided the framing of this report. We appreciate The Kresge Foundation's support in developing and writing *Growing Urban Agriculture*. The authors would like to thank PolicyLink staff Judith Bell and Heather Tamir for their editing and guidance, Leslie Yang for publication design, and former intern Ben Simmons for his research that helped flesh out much of this report. Thanks also go to Paulette Jones Robinson, editing consultant, and the numerous people and organizations who are working to advance urban agriculture in communities across America.

Authors' Biographies

Allison Hagey, a senior associate at PolicyLink, is a leading authority on innovative policies and strategies for increasing access to healthy foods and decreasing obesity and diet-related diseases in low-income communities.

Solana Rice is a senior associate at PolicyLink. As a researcher and policy advocate, she works to advance opportunity for low-income communities and communities of color by promoting equitable solutions to community development through wealth building, small business development, and other economically focused strategies.

Rebecca Flourney is a former associate director at PolicyLink who has led efforts to improve access to healthy foods in low-income communities.

Lifting Up What Works®



Headquarters:

1438 Webster Street
Suite 303
Oakland, CA 94612
t 510 663-2333
f 510 663-9684

Communications:

55 West 39th Street
11th Floor
New York, NY 10018
t 212 629-9570
f 212 768-2350

www.policylink.org