

By Corinne Kisner

Developing a Sustainable Food System

Nationally, consumers are increasingly reflecting on their food's origin and impact on the environment, including energy and water demands, pollution, deforestation and greenhouse gas emissions associated with industrial food production. Concerns about rising obesity rates, declining health indicators and the environmental and financial costs of producing and transporting food have led city officials to consider local policies that support affordable, accessible and healthy food options. Consequently, the demand for fresh, local produce and other foods is rising, and city officials can play a significant role in supporting this trend.

Municipal governments can implement policies and programs that allow residents to grow, sell, buy and eat more sustainably produced and locally grown foods, while strengthening the community and region. Eliminating food deserts — areas where residents must travel twice as far or further to reach a grocery store as compared to a fast food chain or convenience store — is a growing priority in some cities. Comprehensive sustainability plans for food systems can jointly benefit public health, the local economy and the environment. Through a combination of community gardens, urban agriculture, farmers' markets and affordable, accessible grocery stores, cities and towns are finding innovative solutions.

Why Local?

- A strong local food system supports small farms and independent grocery store owners, creating steady local jobs and driving economic growth as capital stays within the city.
- People who eat fresh, nutritious food have less need for costly health care and related government and community programs.
- A small, decentralized food system is less vulnerable to disruptions in the supply chain or lapses in quality control.
- The average grocery store item in the United States travels 1,500 miles between production and consumption — local agriculture eliminates the costs of, and demand for, the energy resources needed for transportation and preservation, along with the related pollution.
- People who are self-sufficient producers have more food security and more disposable income to spend at local businesses.
- Multi-family gardens encourage individuals to share resources with neighbors for the benefit of the community — creating cohesion, cooperation and a sense of place.

A product of the National League of Cities, in conjunction with its Sustainability Partner, The Home Depot Foundation



A sustainable food system is one that:

- Provides healthy food at affordable prices that are competitive with low-cost, high-calorie foods;
- Ensures that all residents can walk, bike or take public transit to a full grocery store;
- Minimizes the environmental impact of food production and transport, including greenhouse gas emissions, water consumption and chemical fertilizer and pesticide use;
- Is socially equitable and provides local jobs that have fair working conditions and wages.

ENABLING URBAN AGRICULTURE

Seattle, Washington

Population: 608,660

Contact: Richard Macdonald, Supervisor, P-Patch Program, Department of Neighborhoods, City of Seattle, (206) 386-0088, rich.macdonald@seattle.gov

Website: www.seattle.gov/urbanagriculture/

The Seattle mayor and city council members declared 2010 the Year of Urban Agriculture as part of a campaign to increase community access to fresh food. This built on the council's 2008 vote to pass a non-binding resolution "establishing goals, creating a policy framework and identifying planning, analysis and actions for the purpose of strengthening Seattle's food system sustainability and security." The council approved a number of zoning code changes in 2010, including a bill that updates the land use code to allow urban farms and community gardens in all zones, and allow food production from rooftop greenhouses. Residents are also permitted to sell food grown on their property, and the number of chickens that can be raised per lot has been increased from three to eight. The City of Seattle's Department of Neighborhoods provides resources on how to create community gardens and has partnered with the Seattle Housing Authority to develop 12 gardens in three mixed-income communities. The department also manages the P-Patch Community Gardening Program. The program, which was established in 1973, has grown to include 73 sites cultivated by more than 4,000 gardeners — 55 percent of whom are low-income, 77 percent of whom have no gardening space at their residence, and all of whom agree to garden organically, per the program's requirements. In 2009, 40 percent of P-Patch gardeners donated to a food bank at least once a month, totaling a donation of 25,000 pounds. Interest in the program remains strong, with a waiting list of more than 1,900 individuals at the end of 2009.

Cleveland, Ohio

Population: 396,815

Contact: Marie T. Barni, Program Director, County Operations, Ohio State University, (216) 429-8200, barni.4@osu.edu

Website: http://caselaw.lp.findlaw.com/clevelandcodes/cco_part3_336.html

Since 1950, the population of Cleveland has declined by nearly 50 percent, leaving behind an estimated 17,000 vacant lots covering 3,300 acres. Community gardening has risen in response to the surplus of vacant land. As of 2006, 3,500 residents cultivated food in 163 community gardens, producing more than \$1.4 million worth of produce. However, urban agriculture remained vulnerable to displacement. In March 2007, the Cleveland City Council created the nation's first zoning designation for an Urban Garden District. The zoning code defines community gardens and market gardens — the two permitted main uses for land in an Urban Garden District — and specifies a lengthy list of permitted accessory uses



and structures. The zoning designation legitimizes urban agriculture, affording communities a voice in the public zoning process and providing a layer of protection against development that threatens to displace community gardens. The council expanded upon these zoning efforts in 2009 with an ordinance permitting small livestock, including bees, in all neighborhoods. The “Chickens and Bees” ordinance has since been reauthorized and 15 applications were approved in its first year.

In addition to fostering a supportive environment for grassroots urban gardening, Cleveland’s initiative also attracted state and federal investment in local food production. In 2010, the city announced the Cleveland Urban Agriculture Incubator Pilot Project, which will transform six acres of publicly owned vacant land into a farm. The city and the Ohio Department of Agriculture each contributed \$100,000, and Ohio State University Extension will fund \$740,000 through a grant received from the U.S. Department of Agriculture’s Beginning Farmer and Rancher Development Program, making the Cleveland project the first urban project in the nation to receive such funding from the U.S. Department of Agriculture. Ohio State University Extension will develop a half-acre demonstration plot for educational uses. The remaining land will be divided into quarter-acre parcels to be leased to participating farmers, serving as an economic development program fostering entrepreneurial opportunities for residents, while improving the sustainability of the city’s food system.

Detroit, Michigan

Population: 713,777

Contact: Michael W. Hamm, C. S. Mott Professor of Sustainable Agriculture, Michigan State University, (517) 432-1611, mhamm@msu.edu

Website: www.detroitagriculture.org

In the wake of a long wave of economic distress, Detroit is seeking to transform itself from a single-industry hub to a renewed, livable city with an emphasis on a sustainable food system. Amidst the economic suffering that includes nearly 40 square miles of abandoned buildings and vacant lots, a culture of creative resilience is taking root in the form of urban farming.

Currently, more than half a million Detroit residents live in a food desert. This imbalance of healthy food options has severe diet-related health effects, including statistically higher risks of obesity, cardiac disease, bone and joint pain, diabetes and a lower life expectancy. Another sign of the problem: of USDA Food Stamp Retailers in Detroit, only 8 percent of locations accepting electronic benefits are grocery stores, while 92 percent are gas stations, liquor stores, pharmacies and convenience stores selling alcohol, tobacco and prepackaged food high in sugar, fat and salt.

“This imbalance of healthy food options has severe diet-related health effects...”

To counteract this lack of accessible, affordable and healthy food, a coalition of nonprofits, farmers and community members are turning the abundance of available land and labor into a source of local produce. Now, Detroit has nearly 1,200 registered gardens, ranging from single-family plots to community and school gardens to three dozen market gardens, which sell their produce at farmers' markets. According to a report by the C. S. Mott Group for Sustainable Food Systems at Michigan State University, there are more than 4,800 acres of publicly owned vacant land in the city. By using a fraction of that land in combination with small scale, intensive growing methods and technologies to extend the otherwise short growing season, the city can potentially produce 76 percent of the fresh vegetables residents consume annually. Though urban farming is not a panacea, and significant barriers still exist — including city zoning regulations that prohibit agriculture as the primary use of urban land — Detroit is demonstrating the potential for a sustainable food-centric revitalization.



INCREASING ACCESS TO HEALTHY FOOD

Philadelphia, Pennsylvania

Population: 1,526,006

Contact: Yael Lehmann, Executive Director, The Food Trust, (215) 575-0444, ylehmann@thefoodtrust.org

Website: www.phila.gov/green/localFood.html

During the 1990s, Philadelphia had the second-lowest number of supermarkets per capita in the U.S. and an inequitable distribution of fresh food among residents. Many independent grocers lacked the start-up capital necessary for workforce training and inventory preparation, and recent economic pressures and a tightened credit market have exacerbated this obstacle.

A single grocery store in Philadelphia increases municipal tax revenue by \$540,000 and provides an immediate boost to nearby homes' value.

To counteract this severe “grocery gap” and remove financial barriers to investment, the state, supported by a strong coalition of nonprofit groups, grocers and lending institutions, created the Pennsylvania Fresh Food Financing Initiative (FFFI), a public-private partnership to stimulate grocery store development in

underserved communities. An initial \$30 million seed grant from the state was leveraged with an investment of \$117 million from The Reinvestment Fund, a community development organization that aggregates private and philanthropic capital and serves as the finance intermediary for FFFI. In the five years since its inception, FFFI has catalyzed 83 new or renovated grocery stores in Pennsylvania, resulting in 5,000 jobs and improving access to healthy food for 400,000 residents. A dedicated FFFI grant enabled 29 Philadelphia corner stores to purchase efficient refrigeration units, allowing the sale of fresh fruit at affordable prices; consumer demand for the produce has exceeded expectations. Motivated by multiple objectives, such as reducing the incidence of diet-related diseases, spurring economic development in low-wealth neighborhoods and creating living-wage jobs, the FFFI program has succeeded in improving the sustainability of Philadelphia's food system, and has quickly become a model for public-private collaboration.

Minneapolis, Minnesota

Population: 382,578

Contact: June Mathiowetz, Homegrown Minneapolis Coordinator, Minneapolis Department of Health and Family Support, (612) 673-2027, June.Mathiowetz@ci.minneapolis.mn.us

Website: www.ci.minneapolis.mn.us/dhfs/homegrown-home.asp

Despite the presence of large farmers' markets in Minneapolis, low-income neighborhoods were underserved and many residents lacked access to fresh fruits and vegetables. Some low-income residents reportedly threw away food vouchers because a lack of transportation made the markets where they could use the vouchers inaccessible.

Studies show that farmers markets benefit local businesses, and the multiplier effect means that money is re-invested locally. For every dollar spent at a farmers market, \$3 is spent in the surrounding community.

Anticipating demand, the Institute for Agriculture and Trade Policy collaborated with the city council to increase the number of small farmers' markets — defined as having five or fewer farmers selling locally grown produce — in low-income areas. Previously, an expensive and complex licensing system deterred potential farmers; now, a streamlined permitting process enables organizers to create small markets at



community centers, senior residences and neighborhood associations. With a reduced, one-time \$100 permit, farmers who were previously excluded from the city's food system are now able to sell their produce where it is most needed.

Twenty-one mini-markets are currently operating in Minneapolis, enabling residents to integrate fresh produce into their diets. One market is part of a city-funded, non-profit-operated youth summer employment program where participants spend 28 hours per week gardening at an urban farm and staffing the market, learning valuable business skills. Many markets donate unsold produce to local food pantries. The city of Minneapolis has succeeded by focusing on the removal of barriers – the financial and bureaucratic barriers preventing farmers from selling produce, and the location barrier preventing individuals from accessing fruits and vegetables.

Baltimore, Maryland

Population: 620,961

Contact: Laura Fox, Co-coordinator, Virtual Supermarket Project, Baltimore City Health Department, (410) 545-7544, laura.fox@baltimorecity.gov

Website: www.baltimorehealth.org/virtualsupermarket.html

Nearly 20 percent of Baltimore's residents live in a food desert and more than two-thirds of adults and half of high school students are overweight or obese. To tackle the public health and social equity concerns stemming from a lack of access to fresh food, the city has implemented several unique policies and programs. First, Baltimore hired a food policy director, making the city one of the first in the nation with a paid staff person dedicated to increasing fresh food options. A food policy task force made 10 recommendations, including expanding access to farmers' markets and encouraging markets to accept electronic benefit cards, supporting community gardens, improving school food options and adopting zoning legislation favorable to food production and sales.

Food Policy Task Force Recommendations:

- Expand access to farmers' markets;
- Encourage markets to accept electronic benefit cards;
- Support community gardens;
- Improve school food options; and
- Adopt zoning legislation favorable to food production and sales.

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costs and allowing the city to subsidize the delivery fee. Customers pick up their orders and make payments at the library. Students at the Maryland Institute College of Art developed a website and marketing materials to publicize the program. Residents benefit from a wider selection of food options than is offered at neighborhood corner stores, as well as a central community location that, unlike supermarkets, is accessible without a vehicle. The supermarket enjoys higher sales, and the city health department makes progress in its campaign to reduce the obesity epidemic. By partnering with existing local institutions and infrastructure, Baltimore has removed a barrier to healthy foods and developed a promising program with significant public health benefits.

The Baltimore City Health Department partnered with two public libraries in low-income neighborhoods to develop Baltimarket, an innovative solution to food deserts. Residents can use library computers to order groceries from a longtime, locally owned supermarket. All orders are aggregated and delivered together, reducing transportation



REDUCING WASTE

Santa Monica, California

Population: 89,736

Contact: Resource Recovery & Recycling Division, (310) 458-2223, recycling@smgov.net

Website: www.smgov.net/Departments/PublicWorks/ContentSolidWaste.aspx?id=10152

The city of Santa Monica launched an innovative program for creating a more sustainable food system, recognizing that managing the city's food waste is an essential component of decreasing its environmental impact. Motivated partially by a high incidence of clogged sewers in residences and businesses, the city now collects fats, oils and grease (FOG) from restaurants, free of charge. Residents can also participate by bringing waste cooking oil to the city's hazardous waste facility. This decreases the volume of waste entering sewers or landfills and reduces the amount of pollution entering the urban ecosystem. The FOG is converted into biofuel for energy, reducing the demand for fossil fuel and decreasing related greenhouse gas emissions. By capitalizing on the FOG to create energy and help mitigate climate change, Santa Monica is repurposing waste as a resource.

To manage solid food waste, the city sells compost bins to residents at a subsidized rate and provides information on its website about backyard composting and vermicomposting, which employs worms to decompose organic matter. By home composting, residents divert food waste and yard trimmings from the landfill, while also reducing both the fuel required for garbage collection and the cost to the city of transporting the waste. In 2010, Santa Monica initiated a pilot program that distributed green carts to 600 single family homes for the municipal collection of all food scraps. A private company composts the food and returns it to city hall, where the nutrient-rich soil is distributed at no cost to residents. By finding a productive use for both FOG and food scraps, Santa Monica has made considerable progress toward its goal of producing zero waste.

Rapid City, South Dakota

Population: 67,956

Contact: Karl Merbach, Superintendent, Solid Waste Operations, City of Rapid City, (605) 355-3496, karl.merbach@rcgov.org

Website: www.rcgov.org/Public-Works/solid-waste.html

Faced with a quickly diminishing volume of available landfill space, the city of Rapid City implemented a municipal composting program for yard waste and municipal solid waste. In 2003, the city opened a combined compost and recycling plant that generates valuable compost by mixing organic matter from the city's materials recovery facility and liquid biosolids from the city's water reclamation facility. The technology has expedited the compost process from four or five months to 30 days by carefully balancing

"Rapid City has extended its landfill's lifespan by decades."

oxygen, moisture and temperature. In 2010, Rapid City diverted 17.5 percent of its municipal solid waste from the landfill to the compost facility and distributed the product to residents, free of charge. By removing organics and yard trimmings from the waste stream, Rapid City has reduced the heat-trapping methane emissions produced through anaerobic decay, and also decreased the toxicity of leachate, the liquid byproduct from landfills. Furthermore, Rapid City has extended its landfill's lifespan by decades. Through a comprehensive waste management plan that includes recycling, reusing and composting the city's solid waste, Rapid City achieved a 39.9 percent diversion rate overall in 2010, preventing 64,302 tons of material from reaching the landfill.



Millbrae, California

Population: 21,532

Contact: Shelly Reider, Environmental Programs Manager, City of Millbrae, (650) 259-2444, sreider@ci.millbrae.ca.us

Website: www.ci.millbrae.ca.us/index.aspx?page=236

To address waste from the food system, the City of Millbrae banned polystyrene food service products such as bowls, cups and plates in all restaurants, food vendors and city facilities. Instead, these types of products are required to be biodegradable, reusable, recyclable or compostable. Furthermore, all disposable utensils must be compostable. Millbrae has reduced the possibility that discarded polystyrene products will damage local ecosystems, and reduced the volume of polystyrene entering landfills, lowering the financial cost to the city of managing this waste. Residents can purchase discounted compost bins from the County of San Mateo Recycleworks Program and can also pick up a free reusable shopping bag made from 100-percent post-consumer recycled plastic bottles from the public works office. In another innovative sustainability program, Millbrae's municipal water treatment plant gets nearly all of its energy from waste kitchen grease.

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RESOURCES

- Leadership for Healthy Communities, a project of the Robert Wood Johnson Foundation, is designed to support local and state government leaders in their efforts to reduce childhood obesity through public policies that promote active living, healthy eating and access to healthy foods. Numerous resources, reports and toolkits are available online.
<http://www.leadershipforhealthycommunities.org>
- The U.S. Department of Agriculture offers a Food Environment Atlas to help community leaders evaluate the local food system. The tool maps indicators such as access to grocery stores, socioeconomic factors, public health and food expenditures to allow city officials to identify food deserts in their area.
<http://www.ers.usda.gov/FoodAtlas>
- First Lady Michelle Obama launched the *Let's Move!* initiative to end childhood obesity within a generation. Elected officials can enroll municipalities as a *Let's Move City* or *Let's Move Town* and commit to action in the four pillar areas:
 - Help parents make healthy family choices;
 - Create healthy schools;
 - Provide access to healthy and affordable food; and
 - Promote physical activity.<http://www.letsmove.gov/officials-step-1.php>



ABOUT THIS PUBLICATION

Corinne Kisner is an associate in the Sustainability Program in the Center for Research and Innovation at the National League of Cities. For additional information about cities and sustainability, visit the NLC website at www.nlc.org, e-mail sustainability@nlc.org, and follow on Twitter @NLCgreencities.

The National League of Cities is the nation's oldest and largest organization devoted to strengthening and promoting cities as centers of opportunity, leadership and governance. NLC is a resource and advocate for more than 1,600 member cities and the 49 state municipal leagues, representing 19,000 cities and towns and more than 218 million Americans. Through its Center for Research and Innovation, NLC provides research and analysis on key topics and trends important to cities, creative solutions to improve the quality of life in communities, inspiration and ideas for local officials to use in tackling tough issues and opportunities for city leaders to connect with peers, share experiences and learn about innovative approaches in cities.

The Home Depot Foundation, created in 2002, supports nonprofit organizations dedicated to creating and preserving healthy, affordable homes as the cornerstone of sustainable communities. The foundation's goal is for all families to have the opportunity to live in healthy, efficient homes they can afford over the long-term; to have access to safe, vibrant parks and greenspaces; and to receive the economic, social and environmental benefits of living in a sustainable community. For more information, visit www.homedepotfoundation.org and follow on Twitter @homedepotfdn. Created in 2009, the Sustainable Cities Institute (SCI) is a two-part initiative from The Home Depot Foundation that provides a one-stop shop for cities and sustainability professionals to find vetted best practices from across the country to help them identify and implement local sustainable practices and policies as well as communicate with other cities about sustainability related issues and topics. For more information, visit www.sustainablecitiesinstitute.org and follow on Twitter @sustcitiesinst.