

Urban Agriculture Education in Parks: Fostering Civic Engagement

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1. Urban Agriculture in Parks

The Battery, a park in lower Manhattan, provides more than a breathtaking view of the Statue of Liberty and New York Harbor. In summer, as thousands of visitors rush through the park towards its waterfront, their eyes meet a lush garden called the Battery Urban Farm. But few people realize that, in addition to supplying fresh produce, this outdoor classroom for organic farming also strengthens civil society by involving youth in addressing social and environmental issues.

Most urban parks are designed for leisure and recreation, and for democratizing public space by helping people from different backgrounds share a common space (Maller et al., 2002; Sherer, 2006). Trees, bike lanes, playgrounds, and picnic areas are examples of amenities that help parks fulfill these functions (Tinsley et al., 2002). In addition, parks are designed to provide regulatory ecological services, such as controlling stormwater runoff through bioswales, and to boost biodiversity by supporting semi-wild forest patches (Konijnendijk et al., 2013). Yet, in parks we rarely encounter raised beds, container gardens, or other attributes of urban agriculture. Indeed, in cities such as New York City (NYC) urban agriculture occurs mostly in school gardens, community gardens, community farms, and commercial farms (Cohen et al., 2012), but rarely in public parks.

However parks and urban agriculture can and do coexist in cities throughout the United States? Historically, “victory gardens” were common in American urban parks during the two world wars as a means for citizens to contribute to national food security and express patriotism. One could find victory garden plots in Golden Gate Park in San Francisco, Rock Creek Park in Washington, DC, the Boston Commons, and Jackson Park in Chicago (Heuchling, 1944; Lawson, 2014). Today, you can find urban farms run by nonprofits, schools, and individuals in public parks such as Fresh City Farms in Downsview Park, Toronto, (Gorgolewski, 2011) and Beacon Food Forest on the west slope of Jefferson Park, Seattle (McLain et al., 2012). Moreover, some new public green spaces include urban agriculture in their initial design, such as Lafayette Greens in Detroit, which functions both as a park and as an urban garden (Philips, 2013, p. 72).

Although parks epitomise leisure and gardens support food production, they share some goals. Both enable city residents to spend time outdoors, socializing with friends and neighbors. Both allow people to participate in public life and civic engagement. In parks, for example, people can participate in outreach programs and political events, whereas in urban gardens people can engage in sustained discussions of local social issues and support alternative food networks (Renting et al., 2012). Given that parks and gardens share the goal of fostering civic

engagement, one may ask how they could amplify their impact on civic engagement by working together.

To strengthen civic engagement among urban residents, parks management may allocate a portion of their land and funding for urban agriculture education programs. Hypothetically, such programs could engage youth in civic life by helping them grow and distribute healthy food, conduct nutrition education with their peers and families, and promote food justice in urban communities. In this chapter, we highlight the value of civic engagement and review three real-life urban agriculture education programs to encourage urban policy makers to transform some park lawns into gardens.

2. Civic Engagement

Before establishing urban agriculture educational programs and curricula that contribute to civic engagement, park leaders and educators need to agree on definitions and answer important questions. What is civic engagement? Why is it important for cities? How can urban agriculture education programs in parks foster it? Definitions of civic engagement greatly vary:

- *Civic engagement can be defined as the feelings of responsibility toward the common good, the actions aimed at solving community issues and improving the well-being of its members and the competencies required to participate in civic life* (Lenzi et al., 2013)
- *Civic engagement includes any activity, individual or collective, devoted to influencing the collective life of the polity* (Macedo, 2005).
- *Civic engagement refers to the ways in which citizens participate in the life of a community in order to improve conditions for others or to help shape the community's future* (Adler and Goggin, 2005)

Most definitions emphasize citizens' contributions to addressing public issues beyond their self-interest. At the same time, scholars distinguish between individual forms of civic engagement such as recycling and giving money to charity, and collective forms of civic engagement such as volunteering in nonprofits and participation in community-based organizations (Ekman and Amnå, 2012). Further, while some authors view political participation as part of civic engagement (e.g., Macedo, 2005), others suggest that political actions such as voting, demonstration, signing petitions, and contacting political representatives are outside civic engagement (Ekman and Amnå, 2012). In addition, publications describe additional concepts that resemble or overlap with civic engagement, such as political socialization and civic service (Sherrod et al., 2010), as well as civic participation and civic involvement (Putnam, 2000).

A consensus exists that civic engagement is an important factor of urban sustainability (Zeemering, 2009), not least because it leads to citizens' stewardship of urban parks (Fisher et al., 2015). Further, parks can join other institutions that foster civic engagement. To help youth become full-fledged civic actors, parks can establish urban agriculture education programs, which apply research about fostering civic engagement. For example, such programs can help youth become knowledgeable about issues facing local communities (cf. Flanagan and Levine, 2010), and gradually increase their responsibility in planning and performing civic actions (cf. Camino and Zeldin, 2002). At the same time, urban agriculture education programs can adapt ideas about fostering youth's civic engagement from existing programs, such as we describe below in NYC.

3. New York City Examples

Three NYC examples illustrate how urban agriculture education programs are fostering civic engagement among urban residents, including school students. These case studies are based on the first author's program observations from 2012 to 2020, and semi-structured interviews with urban agriculture education program leaders in 2020.

The Battery Urban Farm

The Battery, located at the southern tip of Manhattan, was created by landfilling in the mid-19th century, though even earlier, this area was a popular promenade for its spectacular view of the New York Harbor (Rosenzweig and Blackmar, 1992). Today, The Battery is a public waterfront park operated by the Battery Conservancy. In the late 2000s, students and teachers who were members of an environmental club in nearby Millennium High School reached out to the park management, and proposed creating an urban farm, which could support environmental and science learning. Thus, as a response to community needs, the Battery Conservancy brought in soil, installed a fence, and built raised beds to establish an educational organic farm in The Battery.

The Battery Urban Farm serves students who come from schools around the city, often in underserved communities with few grocery stores or located near brownfield sites. Most school groups visit the farm 2-3 times a year to plant, care for, and harvest vegetables in their own raised beds. In addition, student groups conduct ecological investigations in the farm, observe birds in the surrounding park, and monitor oysters in New York Harbor in partnership with the Billion Oysters Project. Educators from the Battery Conservancy organize tours and learning activities related to the environment and science at the farm. They also facilitate discussions about food justice and introduce students to food production techniques that students can implement in their own communities, including by starting new gardens in neighborhoods that lack green spaces.

Through these activities, the Battery Urban Farm helps students (1) become stewards of their communities and open space, (2) promote wellness and health among their community, (3) learn how to grow organic produce, and (4) use ecological design principles in their projects. To advance these goals, the Battery Urban Farm aims to involve high school students not only in intermittent volunteer opportunities, but also in a long-term program called "Stewardship Lab." This program will expand current educational offerings including hands-on urban agriculture activities, learning about food justice and environmental issues, and social-emotional development through teamwork and mentorship. Educators at the Battery Urban Farm expect that students who regularly participate in these activities will develop critical thinking, systems thinking, and leadership skills, which will enable them to become community leaders who address food security, justice, and other social and environmental issues in their neighborhoods.



Figure 1. Youths are washing harvested vegetables before selling them at a temporary farmers market in the Battery Urban Farm.

GrowNYC Teaching Garden

Offering a sweeping view of the Manhattan skyline, Governors Island was a Native American fishing camp prior to the 16th century, and later a US Army post, followed by the US Coast Guard base until its closure in 1996. More recently, this island in New York Harbor with historical buildings and spacious parkland was opened to the public, who enjoy the outdoors, and the park's festivals, educational programs, and art installations. GrowNYC, a nonprofit organization, established the Teaching Garden in 2014 on the island as a temporary land use near an area that is still undergoing redevelopment. As a learning and demonstration site, this 1-acre farm offers urban agriculture educational programs and skill-building workshops for students, teachers, volunteers, and families.

Each year, several thousand students and other urban residents disembark at the island and stroll through the parkland to the garden. During one-time or multiple visits, students use raised beds, cold frames, a greenhouse, rainwater harvesting, and other farm systems to learn about growing, harvesting, nutrition, cooking, and the environment. GrowNYC educators facilitate student learning by using urban agriculture curricula that focus on science, inquiry, and agriculture, including STEM topics such as plant parts and nutrient cycles.

Educators in the Teaching Garden also teach youth about food justice, culturally-relevant food, equitable food systems, and local and global impacts of food choices. Through this new curriculum, students learn about factors leading to food deserts and poor nutrition, donate produce from the garden to food pantries, and involve their peers in stewardship. Urban agriculture educators expect that program participants will become active citizens who address environmental racism and equitable food systems through urban agriculture and other projects. Some students already take actions outside the Teaching Garden: they post food justice ideas

on social media, share healthy recipes with friends, sign up for environmental justice workshops, apply for urban agriculture summer jobs, and engage in community-based environmental projects that range from promoting energy technologies to stewardship of urban ecosystems.



Figure 2. Seedling containers surrounding an outdoor classroom with the Manhattan skyline in the background.

Riley-Levin Children's Garden

In a lesser known corner of upper Manhattan, Swindler Cove Park features tree-shaded pathways and a shoreline along the Harlem River. The nonprofit organization New York Restoration Project (NYRP) opened this park to the public in 2003 after cleaning a former illegal dumping site. In the heart of the park is the Riley-Levin Children's Garden, which provides a rare opportunity to grow food in a part of the city characterized by public housing projects and former industrial sites. School teachers, after-school educators and volunteers can adopt garden plots to tend vegetables, flowers, and herbs with the commitment to serve educational needs of at least several children or young adults.

During the school year and in summer, NYRP educators also use the children's garden to conduct programs for elementary and middle school students who come with their teachers several times a year, or participate in longer summer programs. Educators use the garden for a wide spectrum of hands-on activities and as an open classroom to teach about gardening, science, food processing, and healthy eating habits. To empower children and youth to discuss their community's environmental health and social well-being, NYRP developed a curriculum "What's Good in My Hood" (Price, 2011). In this curriculum, food and gardens are viewed as elements of larger urban systems that influence human well-being.

NYRP plans to adapt its programs for high school students, who tend to view their communities through a more critical perspective, and who want to be contributing members in

their neighborhoods. Thus NYRP will use the garden to foster high school students' civic engagement, empowerment, and positive youth development. While improving the garden and discussing social injustices, these students will identify issues in their communities that they care about and then take actions to address these issues. For example, depending on their interest, students may create environmental art or organize cooking demonstrations to address communities' critical needs.



Figure 3. At the teaching circle near the garden, students knead dough to make organic pasta.

4. Implications for Parks

Scholars of youth development, along with the NYC examples, suggest that urban agriculture education programs in parks can contribute to youth's civic engagement. Therefore, city officials and park managers may want to partner with nonprofits, schools and educators to establish such programs for urban youth and other participants (Figure 4).

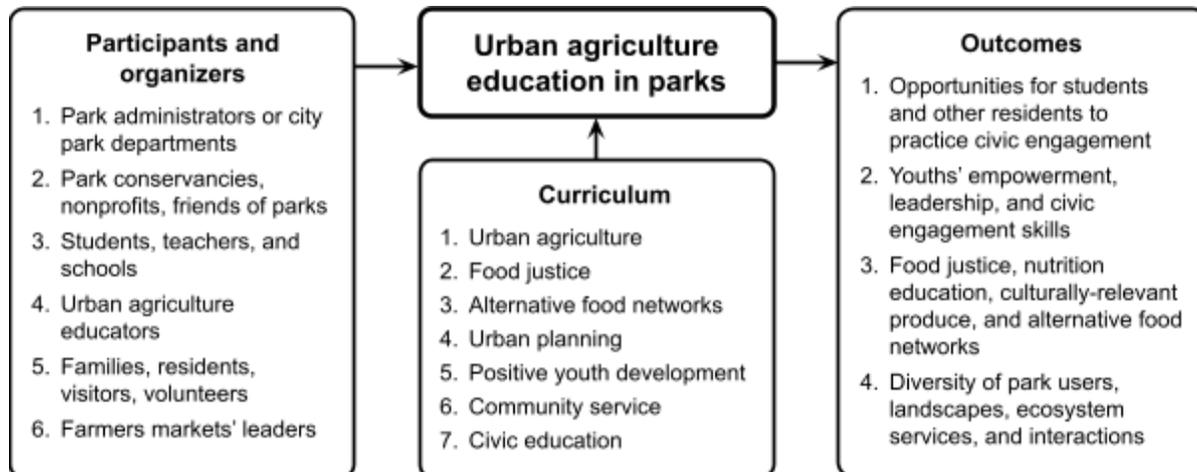


Figure 4. Elements of urban agriculture education programs in parks.

Depending on participant demographics and desired educational outcomes, these programs can integrate a wide variety of curricula – from urban agriculture and STEM, to positive youth development and civic education. For example, urban agriculture education programs that collaborate with schools may integrate topics and practices from official learning standards, such as from social studies (e.g., social structures, governance, and cultural identity) or science (e.g., evaluating and communicating information, and carrying out investigations). Other programs that promote food justice may collaborate with civic organizations to teach about community health and healthy nutrition. Regardless of the particular topics, these programs will involve youth in civic education to help them become contributing members of the society.

Parks can achieve various outcomes by conducting urban agriculture education. First, they can foster direct involvement of residents in civic action. When youth address social, environmental and health issues through urban agriculture education, they practice civic engagement skills. Second, these programs strengthen precursors of youth's future civic engagement. Empowered students can use their new skills in leadership, their self-efficacy, and their critical thinking to address a variety of urban issues from environmental justice and public health, to urban planning and climate change. Third, urban agriculture education in parks can contribute to food justice. Urban farms can trigger the development of alternative food networks, help residents improve their nutrition habits, and provide culturally relevant food. Fourth, urban agriculture education can benefit parks by attracting new audiences interested in urban agriculture and who otherwise would not visit parks.

Urban agriculture education programs in parks may encounter roadblocks, but these can be mitigated. For example, some may disagree that parks should promote civic life; yet this normative statement is counteracted by parks' history and current case studies. Further, some people may believe that parks with valuable landscapes and history (e.g., Central Park) are incompatible with urban agriculture; yet public perception and expectation of such parks may change. In addition, parks may not strengthen civic engagement among participants if urban agriculture programs focus merely on food production without a critical discussion of food justice, inclusion, and other civic topics. Finally, such programs are unlikely to succeed without a

genuine collaboration among nonprofits, schools and community leaders who bring various perspectives on urban issues and solutions.

Urban agriculture education programs that foster civic engagement can be successfully integrated in many public parks. Program participants, as well as regular park visitors who informally observe such programs, will carry the practices of food justice and civic life from these programs to other communities. By implementing such programs, parks can join other institutions that foster civic engagement among urban residents.

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