



# **Urban Farming** **in the Hudson Valley:** ***A Growing Movement***



Urban  
Action  
Agenda



Hudson Valley Pattern for Progress

April 2016



## INTRODUCTION

The Urban Action Agenda (UAA) is a multi-year initiative at Hudson Valley Pattern for Progress that aims to promote the revitalization of 25 urban centers in the Hudson Valley by attracting and retaining young, diverse families to the area. In addition to traditional focus areas that contribute towards sustaining a particular community (access to education, employment, housing, etc.), Pattern recognizes how specific amenities and anchor projects associated with each UAA community can contribute towards the growth and sustainability of these areas while creating a unique place to live.

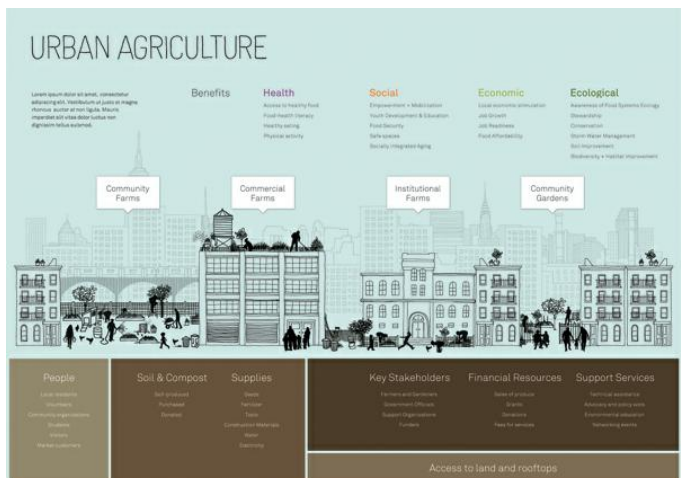
As part of the UAA, Pattern is interested in generating more public engagement and undertaking guided research about components of each UAA community that can retain core populations and attract or retain young, diverse families. Specifically, this report focuses on how urban farming strengthens communal ties by giving citizens incentives to reinvest in public spaces and support local initiatives aimed at growing their communities. In connection with the goals of the UAA, this report serves four purposes: (1) to establish a dialogue with local representatives from UAA communities with access to urban farming (2) to inform local representatives in UAA communities without access to urban farming how to implement and sustain these services through best practices (3) to inventory and help create an amenity that might serve current and future residents in participating UAA communities and (4) to investigate ways to increase access to quality foods in impoverished neighborhoods while instituting an ownership interest in the growth of healthy food itself.

According to American Farmland Trust, more than 4,000 farms in New York state have been lost to real estate development since the 1980s; however, in contrast to the decline of traditional farming in New York state, community-run projects in urban centers such as communal gardens, greenhouses, horticulture, and farmers markets, are becoming increasingly prevalent. According to the United States Department of Agriculture (USDA), 23.5 million people who live in low-income areas also have limited access to supermarkets.<sup>i</sup> These areas are also known as “food deserts” whereby access to affordable and nutritious food is not readily available. Participation in urban farming can help vulnerable populations in urban centers mitigate the effect of limited accessibility and availability of nutritious food. Through these initiatives, citizens can take control over their food security needs by ensuring that their nutritional needs are met while remaining within an

appropriate budget, as supermarket prices may, at times, exceed the price of local produce.<sup>ii</sup>

In a rebuttal to a *New York Times* op-ed piece entitled “Don’t Let Your Children Grow Up to Be Farmers,” *Huffington Post* blogger Jennifer Woginrich challenged reporter Bren Smith’s statement that small-scale farming almost invariably produces negative profit margins. Woginrich stated with conviction, “perhaps that *New York Times* writer will find himself in a much better place financially when local food goes from being a novelty of the so-inclined to the staples his community depends on when gas prices, natural disasters, political climates or any other disruption in the cattle cars of modern civilization start to hiccup.”<sup>iii</sup> Because small-scale farming is not based strictly on a profit margin, the pay-off for the community, especially in urban centers, is not always monetary gain; these services encourage communal space, self-sufficiency, biodiversity, community building, healthy eating habits, and local food security.

Practiced in most UAA communities, urban farming is the practice of cultivating food within city limits, or on the periphery of urban centers. According to the Food and Agriculture Organization of the United Nations, urban agriculture is practiced by 800 million people worldwide. Although not a new concept, urban agriculture has moved beyond community gardens and farmers markets; urban farming has grown to encompass repurposing existing structures for sustainable use, farm-based learning, farm-to-table school programs, and the overall promotion of green space. Urban farming in the Hudson Valley can provide quality food options for low-income residents; help reinvent spaces that no longer serve functional purposes; enhance community cooperation and collaboration; and promote the growth and sustainability of the region as a whole.



Source: <http://www.fiveboroughfarm.org/>

## UAA Community Access and Interest

In addition offering ecological, social and economic value to each community, these initiatives have allowed local farming communities, schools, colleges, churches, and governmental agencies to collaborate on ideas consistent with sustainable development aspirations. New York City began to transform rooftops and vacant lots into arable farm space in the 1970s, urban dwellers around the country have followed suit by reinventing unproductive space into productive, communal property.

The experience of UAA community leaders who have implemented these kinds of services provides a basis for best practice options that can be utilized for future reference. The creation of the community garden in Haverstraw was initiated by support from local farmers and supplied with necessary tools though grant funding provided by the New York State Department of Health. Similarly, according to Historic Preservation Vice Chairman, Barry Benepe, the Saugerties Farmers Market was started through a volunteer effort aimed at providing support to local farmers by establishing a venue to sell their produce. Along with local support, and a call from the Saugerties community, Cornell Cooperative Extension (CCE) assisted in the initial preparatory stages of the community garden. The Saugerties Farmers Market has been operating for 15 years and provides support to 25 vendors whose products range from fruits and vegetables, to dairy products made from locally raised ingredients. The communal garden in Highland Falls has been operating for three years, says Olga Anderson, who was asked by the Church of Holy Innocents (the site location for the community garden) to assist in the creation of the communal garden given her previous experience assisting with the management of the local farmers market. In Nyack, the "Please Pick" project was launched with support from local residents, coupled with help from the Rockland Farm Alliance. This project was

founded in September 2014 by Suzanne Foley, whose vision was to create an 'edible town' with gardens accessible from the sidewalk dedicated to organic fruit and vegetables available for public consumption.

The Liberty community garden was developed with



assistance from Sullivan Renaissance, a community development program funded by the Gerry Foundation. The grant funding was administered

through the Sullivan Community Action Commission to Help the Economy (CACHE) and funded through the Catskill edible garden. Like CCE, Sullivan Renaissance receives proposals from communities within Sullivan County to help reinvigorate their neighborhood and improve their aesthetic appeal through 'beautification' and maintenance programs.<sup>iv</sup> The Liberty elementary school has implemented an edible garden which helps the students learn more about food sources. In conjunction with CCE, the Village of Liberty was also able to develop an edible garden, greenhouse, and a high tunnel, or "hoop house", which "provides an easy and cost-effective way to establish greater control over your growing environment and extend your growing season."<sup>v</sup>

While not always easy to implement and sustain these kinds of operations due to space constraints, lack of volunteerism, or scarce funding, most UAA community representatives have acknowledged that these projects provide their urban centers with more than healthy food options; the projects also impact job performance, the education system, and the overall aesthetics of the community.



## UAA COMMUNITY ACCESS TO URBAN FARMING

Community	Farmers Market	Adaptive Reuse of Existing Structure	Community Garden	Supermarket	Access to Farm Based Education	Participate in Farm to School Program*
Beacon	●	●	●	●	●	●
Brewster	●	●	●	●	●	●
Catskill	●	●	●	●	●	●
Ellenville	●	●	●	●	●	●
Fishkill	●	●	●	●	●	●
Haverstraw	●	●	●	●	●	●
Highland Falls	●	●	●	●	●	●
Hudson	●	●	●	●	●	●
Kingston	●	●	●	●	●	●
Liberty	●	●	●	●	●	●
Middletown	●	●	●	●	●	●
Monticello	●	●	●	●	●	●
Mount Vernon	●	●	●	●	●	●
Nanuet/Clarkstown	●	●	●	●	●	●
New Rochelle	●	●	●	●	●	●
Newburgh	●	●	●	●	●	●
Nyack	●	●	●	●	●	●
Peekskill	●	●	●	●	●	●
Port Jervis	●	●	●	●	●	●
Poughkeepsie	●	●	●	●	●	●
Saugerties	●	●	●	●	●	●
Walden	●	●	●	●	●	●
Wappingers Falls	●	●	●	●	●	●
White Plains	●	●	●	●	●	●
Yonkers	●	●	●	●	●	●
Legend	● = yes		● = pending		● = no	
* See United States Department of Agriculture “Farm to School Census” for a list of schools that participate in farm-to-school programs						

### FARM BASED EDUCATION



A growing consensus held among UAA communities is the desire to sustain their urban farming services, increase their production capacity, and incorporate educational workshops through their projects. According to Rachel

Schneider, the co-director of the Institute for Mindful Agriculture, Hawthorne Valley Farm was the vanguard for farm-based education programs for the children in the Hudson Valley.<sup>vi</sup> This approach has caught on in UAA communities and has provided these urban centers with informative, farm-based workshops in addition to first-hand access to the local produce. Paul Adams, President for the board for Stony Kill Farm Environmental Education Center in Fishkill hopes to make Fishkill a destination spot, or as Adams referred to it as, "a little Williamsburg." Taught by retired teachers, educational workshops for children and adults are offered at Stony Kill throughout the year; the proceeds of these workshops are reinvested

into the farm.<sup>vii</sup> Olga Anderson encourages her community garden in Highland Falls to serve as a tool for local cub scouts to earn merit badges. In addition, the communal garden in Highland Falls operates as a 'demonstration garden' and hosts informal workshops whereby children engage in the implementation process of cultivating seeds indoors and eventually transferring the plant to the garden. Similar to Olga Anderson's approach in Highland Falls, the community gardens throughout Haverstraw are also located near school districts so as to encourage children to be involved in the community. The City of Kingston also located their community gardens near local schools; the Community and School Gardens Committee hoped to initiate a citywide gardening network to promote volunteerism in support of local produce and sustainable development. Seeking to better identify their target customer and grow their consumer base, the Saugerties Farmers market maintains a personal, interactive approach to work-shopping and educating their customer base.



Cornell Cooperative Extension has 56 offices in New York State; out of these offices, four serve the residents of UAA communities in Orange County, Putnam County, Sullivan County, and Ulster County. In Haverstraw, Mayor Mike Kohut said that CCE was directly involved in the implementation phase of their community garden. In Brewster, CCE assists in the management of their community garden located near Tilly Foster (a village in Brewster named after a nearby iron mine owned by Tillingham Foster in the 19<sup>th</sup> century).

The Poughkeepsie Plenty Fresh Market offers a mobile service that distributes local, sustainable fruits and

veggies to the Poughkeepsie area. This service accepts food assistance benefits and can provide affordable, local produce to the entire community. Partnering with CCE, the Poughkeepsie Plenty Fresh Market provides farm-to-school educational resources, as well as cooking and recipe demonstration.<sup>viii</sup>

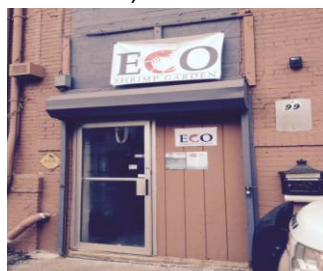
Through these informative workshops aimed at educating the youth in urban centers, communities turn theory into practice by encouraging hands-on learning. In addition to eating healthy, these students can then establish their own connection between place and space and how their local efforts can impact regional durability.

## REPURPOSING AND REINVENTING URBAN SPACE

By speaking with a representative from each participating UAA community, it is clear that urban farming in the Hudson Valley has developed into an innovative industry that one might not typically associate with some of these urban centers. Urban farmers continue to defy traditional farming boundaries through their constant evolution. Whether urban farmers are utilizing compost waste to fertilize their crops, repurposing existing, industrial structures for multipurpose use, tracking their yields through mobile applications, or growing produce in refrigerated shipping containers, this industry is far from stagnant.

In addition to two local farmers markets and a community garden, Brewster is also home to Community Supported Agriculture (CSA), whereby members are entitled to a designated amount of seasonally grown produce (herbs, squash, tomatoes, etc.); these services are available to everyone, not just those residing in the Tilly Foster community. In Brewster, the CSA is sustained through Ryder Farm Cottage Industries. Vendors at the farmers market in Brewster go directly to, and participate in, CSA.

Once used as the commercial space for a mattress warehouse, an industrial basement in the city of



ECO Shrimp Garden

Newburgh has been reinvented by entrepreneur Jean Claude Frajmund as the Eco Shrimp Garden, the only indoor shrimp farm in New York state. Frajmund provides this urban center with 'tank to table' options

by encouraging local, Hudson Valley shrimp farming through an "Indoor Zero Water Exchange System" (IZWES). The system utilizes recycled water which limits the impact on the environment by mitigating excessive water and land use by replicating the natural environment indoors. In addition to selling his product to places like the Culinary Institute of America (CIA), Frajmund also attends the Union Square Greenmarket on Fridays and Saturdays in New York City.

With help from the City of Newburgh, the Newburgh Community Land Bank, and the Downing Park Planning Committee, coupled with a Community Development Block Grant, Downing Park in the city of Newburgh is undergoing a necessary make-over. Virginia Kasinki, Outreach Manager for Downing Park Greenhouses, said that the park's greenhouses are being rebuilt to encourage more activity by way of 'brown bag lunch' tours and informational workshops through their raised bed and in-ground demonstration gardens. These greenhouses use "locally harvested bio-mass to heat the spaces, aquaponic systems, and a seasonal nursery for intensive production of vegetables."<sup>ix</sup>

In addition to using an existing structure for the creation of a farmers market, the layout of a warehouse or building is an ideal site location for vertical farming; this technique is ideal for these locations because the planting beds are stacked vertically and can benefit tremendously from the amount of light exposure from surrounding windows. Vertical farming can also benefit urban centers where the amount of outdoor green space is limited, as well as provide longer growing seasons in areas that experience inclement weather conditions or long, cold

winters. This method is one way to utilize unproductive space and meet the rising demand for high-quality, locally grown produce. The site location for Vertical Harvest, a farm operation based in Jackson, Wyoming transformed a parking garage into a vertical farm with a three-story greenhouse. Founders Penny McBride and Nona Yehia distribute the produce to local restaurants and local grocery stores while maintaining a retail market inside the greenhouse. “[McBride and Yehia] sold 95 percent of their crop output to restaurants and grocery stores and... set aside 5 percent to sell in their retail store.” In places such as Jackson, Wyoming where the soil is unfit for harvesting for eight months out of the year, vertical

farming “create[ed] self-sufficient food sources without relying on imports.”<sup>x</sup>

“Adaptive reuse projects can turn underused buildings into economically viable operations, reduce the costs associated with new construction, and help preserve historic landmarks.” In fact, “local residents and tourists are likely to be attracted to locations in which aesthetics and historic integrity of the space have been maintained.”<sup>xi</sup> Utilizing unoccupied space to its full capacity can help spur entrepreneurship within municipalities while also encouraging community residents to engage in the overall vision of the project.

## IMPLEMENTATION AND IMPEDIMENTS

The creation and sustainability of urban farming in the Hudson Valley has presented community leaders with constant challenges associated with executing the initial vision and maintaining a volunteer base that can provide dedicated and directed support to implement this vision. Haverstraw Mayor Michael Kohut said that “[creating and maintaining these projects] has been a learning process for [the village].” Some of the challenges faced by the town of Haverstraw range from incentivizing more low-income families to shop at the farmers market to finding new ways to appeal to their target citizenry by offering quality, low-price produce.

As a way to inform best practices in the area, the communal garden at the Church of Holy Innocents in Highland Falls believes that local communities need to constantly reinvent themselves and try to utilize their space to meet achievable goals. For a short time the garden supplied the local food pantry, but due to the space constraints, the garden was unable to meet increasing demands. Now, the community garden focuses on utilizing the space for educational purposes. The farmers market in Walden is also inhibited by its size.

Walden Village Manager John Revella said that the farmers market has been in operation for nine years, and that they offer local chocolate, pickles, and honey, but that “it

is not that big” and it currently faces competition from the local supermarket. In addition to the scope of their farmers market, the village has also prohibited its citizens from raising chickens due to the inability to oversee the upkeep and maintenance of these animals. Unlike other UAA communities, the community of Wappingers Falls has continued to express interest in establishing a local farmers market and community garden but has not yet achieved a suitable plan for this development. Although this community did implement a Friday morning farmers market located in Village Green, Mesier Park, the farmers market was unsustainable due to the location of this particular venue. Mayor Matthew Alexander said that “a berm... hid the vendors from the 15,000 cars/day traffic,” and that the village “found that it was incredibly difficult to keep the vendors interested in returning.”

Space constraints, competition, and suboptimal location decisions can inhibit the efficacy of community gardens and farmers markets; these are just a few examples of the potential constraints associated with their implementation and maintenance. These examples are also indicative of the constant energy required to sustain these services, but they reflect the fulfillment associated with the pay-off upon enacting and sustaining these projects.

## CONTINUITY AND COMMUNITY

As realized through this report, managing and continuing farm to school programs, farmers markets, community gardens, local supermarkets, and adaptive re-use projects

require a synthesis of efforts from community leaders and citizens alike. The communal garden in Highland Falls is sustained through volunteers and grant funding that provides the necessary capital for supplies and

maintenance fees (fences, tools, etc.). Olga Anderson said that she “would like to see community gardens working together in surrounding areas,” adding that “there is synergy, but it is still developing.” Wappingers Falls Mayor Matthew Alexander has expressed interest in collaborating with a neighboring farm that currently provides locally grown produce to the area and Farm to Table Bistro in Fishkill. In addition to creating a farmers market, Wappingers Falls is also interested in establishing a community farm located in the center of the village, with possible support from the local Zion Episcopal

Church. If given the opportunity, a portion of the community has expressed interest in farming local, “in season” produce that will provide conveniently located healthy food options for the area.

As a bonafide way to create community cohesion, offering these services will provide opportunities for diverse neighborhoods to engage in team-building. These services can also promulgate concerted efforts aimed at engaging the youth through activities designed to encourage collective action.

## BEST PRACTICES

- ✱ Determine the feasibility of urban farming in your community by researching potential impediments as relates to zoning codes and city ordinances
- ✱ Seek out local partners, universities, non-profit organizations, stakeholders, and residents to help educate the community on the positive impact these projects can have in your community
- ✱ Encourage adaptive re-use of existing structures that no longer serve a functional purpose to be the site location for these kinds of projects
- ✱ Appeal to local residents through social media to garner more attention from millennials in urban centers with little or no involvement in their community
- ✱ Register with *the “Barn”* at Farming Concrete, an online tool intended to track the growth and sustainability of community gardens and urban farms. This tool will allow its users to collect and track data for informational purposes that may inform best practices in the future<sup>xii</sup>
- ✱ Register your community garden with the American Community Garden Association in order to be connected with a larger network of community-run projects<sup>xiii</sup>
- ✱ Locate your farmers market, garden, or communal space in an accessible location relative to foot and automobile traffic
- ✱ Apply for funding through a Community Development Block Grant, the Empire State Development Corporation Capital Program, or the USDA Community Food System grant

## RECOMMENDATIONS

- ✱ Jenny Hinsman, Chief Operating Officer of My Garden Systems develops products that make indoor and outdoor vertical gardening more manageable. These systems are perfect for urban spaces which may not necessarily have the capacity to overcome space constraints. Dickson Despommier, a professor of environmental health sciences at Columbia University also encourages vertical gardening. Professor Despommier said that these systems “could eliminate the need for soil by growing plants hydroponically (in a liquid) or aeroponically (in the air)” while utilizing space “in urban buildings as tall as 30 stories and covering a city block.” Not only would these systems “reduce water use and end runoff by recycling water in a closed irrigation system,” but “transportation costs would be next to nil.”<sup>xiv</sup>
- ✱ Market these services by educating the public on the environmental impact that urban farming can have on your community, and how it can attract and retain target demographics to your area while building upon existing educational facilities
- ✱ Mchezaji Axum, an Agronomist teaching at the University of the District of Columbia, the only urban land-grant university that currently exists in the United States, suggests that urban farmers tailor their crop selection to meet and adapt to city conditions, and to engage in various planting strategies to increase crop yield through intercropping, compost fertilizer, and crop rotation

- \* Ensure that communities have access to a local supermarket that can provide low-income residents with high quality fruits and vegetables. Local leader need to assess the cost of market based foods as compared to the aforementioned options in order to improve the quality of the current supply of food

## ABOUT HUDSON VALLEY PATTERN FOR PROGRESS

Having celebrated our 50th anniversary in 2015, we are now commencing our second half-century with an eye toward new horizons in research and policy work aimed at the best possible future for the Hudson Valley.

Pattern is now at work on two broad-based initiatives that speak to that future.

These projects, **The Urban Action Agenda** and **The Center for New Models in Education**, are designed to put the region on a solid footing for decades to come.

Our work on the **Urban Action Agenda** is aimed at revitalizing the cities and urban centers of the Hudson Valley. Through a partnership with the Ford Foundation, Pattern has used a \$400,000 grant in combination with local support to get this work off the ground. Our most recent achievement has been the publication of baseline data profiles on each of the 25 urban centers in the project - Beacon, Brewster, Catskill, Ellenville, Fishkill, Haverstraw, Highland Falls, Hudson, Kingston, Liberty, Middletown, Monticello, Mount Vernon, Nanuet, Newburgh, New Rochelle, Nyack, Peekskill, Port Jervis, Poughkeepsie, Saugerties, Walden, Wappingers Falls, White Plains and Yonkers.

Pattern's effort to rethink the way public education is delivered in New York State and the Hudson Valley is embodied in **The Center for New Models in Education**. The Center is a place where innovation in the education system will be explored for its possibilities. The most promising new ideas will be tested here in the Hudson Valley. The Center has launched a research agenda among the Hudson Valley's 122 school districts that is aimed toward better educational opportunities and a more efficient and effective use of tax dollars and public aid that is spent on our schools.

## HUDSON VALLEY **PATTERN** *for* PROGRESS

<sup>i</sup> United States Department of Agriculture Economic Research Service. "Access to Affordable and Nutritious Food: Measuring and Understanding Food Deserts and Their Consequences." United States Department of Agriculture, 2009. Web. Accessed February 4, 2016.

<sup>ii</sup> Royte, Elizabeth. "Urban Farming is Booming, but what Does it Really Yield." *Ensia*. April 27, 2015. Accessed February 25, 2016. <http://www.policyinnovations.org/ideas/commentary/data/00415>

<sup>iii</sup> Woginrich, Jenna. "Let Your Children Grow Up to Be Farmers." *Huffpost Green*. August 13, 2013. Accessed February 15, 2016. [http://www.huffingtonpost.com/jenna-woginrich/let-your-children-befarmers\\_b\\_5674640.html](http://www.huffingtonpost.com/jenna-woginrich/let-your-children-befarmers_b_5674640.html)

<sup>iv</sup> Sullivan Renaissance. Accessed February 22, 2015. <http://www.sullivanrenaissance.org/>

<sup>v</sup> [http://www.growerssupply.com/farm/supplies/cat1a;gs\\_high\\_tunnels\\_cold\\_frames.html](http://www.growerssupply.com/farm/supplies/cat1a;gs_high_tunnels_cold_frames.html)

<sup>vi</sup> Schneider, Rachel. "Growing the Next Generation of Farmers in the Hudson Valley." *Cornell Small Farms Program*. January 12, 2015. Accessed February 15, 2016. <http://smallfarms.cornell.edu/2015/01/12/growing-the-next-generation-of-farmers-in-the-hudson-valley/>

<sup>vii</sup> Stonykill Farm Foundation. "Education and Workshops." Accessed February 25, 2016. <http://stonykill.org/>

<sup>viii</sup> <http://poughkeepsieplenty.org/>

<sup>ix</sup> Newburgh Community Land Bank. "Downing Park Greenhouse Project." Accessed February 25, 2016. <http://newburghcommunitylandbank.org/downing-park-greenhouses/>

<sup>x</sup> Martin, Claire, "Taking Produce to Another Level," *New York Times*, March 27, 2016. Print

<sup>xi</sup> Harvey, Shannon. "Adaptive Reuse – Bonus." Accessed February 9. <http://gogreenplus.org/nuts-and-bolts-guide/adaptive-reuse/>

<sup>xii</sup> "The Barn." *Farming Concrete*. Accessed February 25, 2016. <https://farmingconcrete.org/barn/>

<sup>xiii</sup> Urban Farming. "Garden Locations". Accessed February 9, 2016. <http://www.urbanfarming.org/garden-locations.html>

<sup>xiv</sup> Frail, T.A. "The Rise of Urban Farming: Grow fruits and vegetables in city towers? Advocates give a green thumbs up." *Smithsonian*. Accessed February 25, 2016. <http://www.smithsonianmag.com/40th-anniversary/the-rise-of-urban-farming-762564/?no-ist>