

Addressing Food Security through Area-Wide Brownfields Redevelopment in Lawrence, Massachusetts

by Robert Hersh¹

Introduction

In many urban neighborhoods, community gardens are created by “guerrilla gardeners,” local residents who, without the backing of city officials, take matters in their own hands and occupy vacant land or tax-delinquent lots to grow food. The results can be transformative: abandoned, derelict city blocks can become verdant, community directed, urban gardens, a means to stabilize neighborhoods and improve access to food. But such grassroots efforts at extracting value from vacant properties run certain risks. For example, without land tenure, community gardens can be seen by city officials and others as an interim use of surplus land rather than a permanent neighborhood asset, making them vulnerable to economic development pressures or rising land values.² In addition, few community gardening initiatives investigate past uses of a potential garden site or test the soil to ascertain if the site is contaminated. This policy brief looks at how a city-led area-wide approach to brownfields in Lawrence, Massachusetts, an old mill town located 30 miles north of Boston, is trying to address land tenure, site assessment, and community food security.

Lawrence is not the first city to use city-owned vacant property to encourage community gardens. Portland, Oregon and Vancouver, British Columbia developed city-wide inventories of brownfields and vacant property in 2005 to identify suitable locations for community gardens and urban agriculture. These efforts stemmed from broad public participation processes about the place of food in the life of the city and were led by groups such as the Portland/Multnomah Food Policy Council and the Vancouver Food Policy Council that worked on local food policies—increasing access to community gardens, developing farmers’ markets, and institutional purchases of local produce—with city and county governments. In these two cities, unlike Lawrence, the initiatives were buoyed by burgeoning local food cultures, a network of non-profit organizations working on food issues, and the ability of each city to allocate considerable municipal resources to get the initiative off the ground (*e.g.* a full time person to work on food issues).

Lawrence’s efforts cannot rely on this level of social capital or a pre-existing commitment to urban sustainability. By a number of measures, Lawrence is one of the poorest cities in New England. Its median household income of \$31,777 is half that of Massachusetts; its homeownership rate of 35% is less than half of the state’s average; and it has the highest rates of foreclosure in the state. Diet-related diseases, including obesity and Type II diabetes, are 76% higher than the state average.³ In this policy brief, I consider what prompted the city of Lawrence to spearhead this community gardening initiative; how the city identified appropriate sites; and

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² See Hersh 2010, “Taking Root: Land Tenure and Community Gardens in Providence, Rhode Island.” Available at <http://www.cpeo.org/pubs/TakingRoot.pdf>

³Groundwork Lawrence, personal communication Anna Rickards and Brad Buschur and <http://www.groundworklawrence.org/files/library/vacant-properties-presentation09.pdf>, (accessed May 12, 2011)

the challenges the municipality and neighborhood residents are likely to face in trying to create—through community gardens—economic and social value on former brownfield sites. Before addressing these questions, however, let us put Lawrence’s effort to use brownfields to meet community food needs into a larger context.



Lawrence, Massachusetts

Food Insecurity in America

The work being done in Lawrence to transform brownfields into urban garden plots has national relevance. In many American cities, particularly in poorer neighborhoods, many local residents do not have adequate physical and economic access to food of sufficient quality to provide a nutritionally adequate diet. Even before the current economic crisis, food security—defined by the Community Food Security Coalition as “all people in a community obtaining a culturally acceptable, nutritionally adequate diet through non-emergency (or conventional) food sources at all times”—has been a growing problem in the United States.⁴ According to a United States Department of Agriculture 2010 study, “14.7 percent of households were food insecure at least some time during that year.”⁵ This was “the highest recorded prevalence rate of food insecurity since 1995 when the first national food security survey was conducted.”⁶ This

⁴ http://www.foodsecurity.org/views_cfs_faq.html (accessed May 25, 2011)

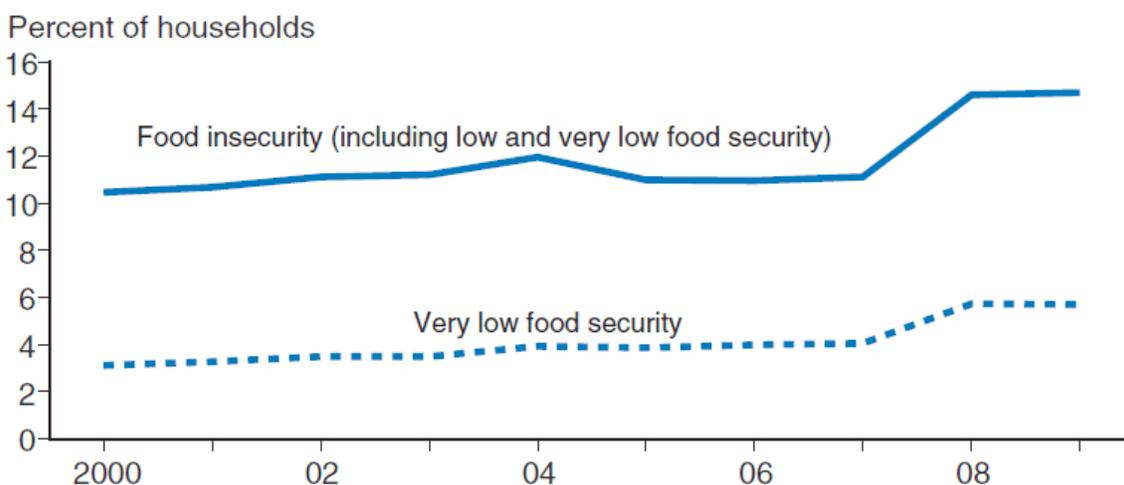
⁵ Nord, Mark, Alisha Coleman-Jensen, Margaret Andrews, and Steven Carlson. *Household Food Security in the United States, 2009*. ERR-108, U.S. Dept. of Agriculture, Econ. Res. Serv. November 2010, p iii.

⁶ *Ibid.*, p. iii.

amounted to nearly 50 million Americans living in food-insecure households, including 16.7 million children.⁷

Among the 14.7% of Americans who were food insecure, 8.9% (10.4 million people) suffered from low food security and 5.7% (6.7 million people) experienced very low food security. Low food security households are defined as ones which are “uncertain of having, or unable to acquire, enough food for all household members because they had insufficient money and other resources for food” but were able to “avoid substantial reductions or disruptions in food intake in many cases by relying on a few basic foods and reducing variety in their diets.”⁸ Very low security households are defined as ones in which, “eating patterns of one or more household members were disrupted and food intake was reduced at least some time during the year because they couldn’t afford enough food.”⁹ Of these very low food security households, 96% reported that the food they bought just did not last and they did not have money to get more; 94% reported that they could not afford to eat balanced meals; and 97% reported that an adult had cut the size of meals or skipped meals because there was not enough money for food.¹⁰

Prevalence of food insecurity and very low food security in U.S. households, 2000-09



Source: Calculated by USDA, Economic Research Service based on Current Population Survey Food Security Supplement data.

Food insecurity is not evenly distributed across socio-demographic groups. Very low food security was more prevalent than the national average (5.7 percent) for households with children headed by single women (12.9 percent), women living alone (7.4 percent), men living alone (7.1 percent), Black and Hispanic households (both 9.3 percent), and households with incomes below 185 percent of the poverty line (14.4 percent).¹¹ As the chart above indicates during the past decade, food insecurity in aggregate has increased roughly 40% from 2000 to 2009.

⁷ *Ibid.*

⁸ Nord, Mark, Margaret Andrews, and Steven Carlson. *Household Food Security in the United States, 2008*. ERR-83, U.S. Dept. of Agriculture, Econ. Res. Serv. November 2009, p. 4.

⁹ *Ibid.*, p. 4

¹⁰ *Ibid.*, p. 5

¹¹ *Ibid.*, p.11.

Lawrence's Neighborhood Community Garden Initiative

In the spring of 2010, the City of Lawrence launched a program called the "Neighborhood Community Garden Initiative" to utilize strategically situated, city-owned brownfields for food production in poor neighborhoods. The initiative was the city's response to what was happening on the ground. Residents in low-income neighborhoods, particularly many recent Latino immigrants,¹² who have a tradition of gardening and running local farm stands, were developing garden plots on Lawrence's vacant lots and brownfields without city authority or soil testing. Many of these properties, the city believed, were likely to be contaminated with coal-ash wastes from the industrial furnaces used in the mills. The coal ash, used as a fill material, likely contains small quantities of toxic substances such as cadmium, chromium, arsenic, and dioxins. In addition, many of these sites are likely to have elevated levels of lead from flaking lead-based paints that have mixed with the soil over the years and from lead-laden automobile emissions. The city was concerned that gardeners and children accompanying them to the site could have direct dermal contact with the contaminants as well as ingesting them in food.

The city also recognized the broader public benefits of redeveloping tax-foreclosed properties. Many of the potential community gardens in the city were used as illegal dumps or impromptu parking lots, so part of the municipal strategy was to transform these eyesores into green oases, where community activities could help reclaim public space and address the need for greater social inclusion of the city's many recent Latino immigrants. The gardens could eventually become part of a refashioned urban streetscape or key nodes along a linear park connecting city neighborhoods and encouraging residents to be more active.

Along with the Merrimack Valley Planning Commission (MVPC), Groundwork Lawrence, and various neighborhood associations, the city successfully applied for a grant from the Parkland Acquisition and Renovations for Communities Program, administered by the Massachusetts Executive Office of Energy and Environmental Affairs. The grant was used to help put in place a process to identify new sites for the community garden network. This year the city, along with Groundwork Lawrence, is using the funding to design and build four community gardens with a total of about 100 garden plots. In subsequent years, additional gardens will be constructed along with storage structures and neighborhood farmers' markets on selected sites.

Identifying Community Garden Sites

The city worked with community partners to develop the following six-step evaluation process to identify potential community gardens from the many city-owned, vacant properties and brownfields:

- **Step 1.** The city first determined if the lot could be built upon. The city would consult primarily with the fire department to consider site access issues. The primary criterion here was whether or not the department could get a fire engine to the site easily. If access was difficult, the parcel would not be developed as housing and would be considered as a community garden.

¹² From 2000 to 2010, the percentage of Latino residents in the city increased from 59% to 74%.

- Step 2. The city would then determine if a neighbor would want to buy the property to use for parking or for some other purpose. If so, the site would be ruled out from further consideration.
- Step 3. For those parcels still in the running, the city would then survey the site to see if it could use current fences or if there has been encroachment on the site.
- Step 4. Given recent flooding, the city then considered the site's location in floodplain. Over the last five years, the 100-year floodplain along the Spicket River has been inundated twice. This was due to extremely heavy precipitation but also because the Spicket river has been channelized. The city would opt to use the sites as storage for floodwater rather than as a community garden.
- Step 5. The city would then consider the site's potential for food production by looking at its orientation and aspect, its slope, and the extent to which it was covered with tree canopy.
- Step 6. For the sites that emerged from the first five steps, the city conducted a Phase 1 Environmental Assessment funded by a US EPA site assessment grant to the MVPC. These assessments looked at past uses and ruled out those sites that were likely to be expensive to remediate. No soil sampling was undertaken at any of the sites since it was decided, for reasons of liability, to construct raised beds and to bring in organic compost from a regional supplier. To prevent contaminants in the existing soil from becoming intermixed with the organic compost, some of the raised beds are constructed above the ground while landscaping fabric is used in ground-level beds.



Community garden in alley



Guerilla garden on vacant property

Unlike some cities that convey tax-foreclosed properties to organizations, the city of Lawrence plans to keep ownership of the properties and maintain them as open space in perpetuity. The city wants to build into the evolution of the project a degree of flexibility about the long-term use of the parcels. In some cases, the city anticipates the community gardens will shift to other uses depending on neighborhood interests and changing dynamics. For example, the parcels could become pocket parks, horseshoe pits, or ornamental gardens.

Opportunities and Challenges

The Neighborhood Community Garden Initiative is not part of the city's economic development policy, where food production and distribution can lead to income generation and jobs. In Lawrence, community gardens will play a part in a subsistence economy, one that is family-based and rarely monetized. Community gardens, it is hoped, will help low-income families in Lawrence improve their diet, reduce expenses, mitigate the effects of poverty, and promote civic engagement.

To achieve this, the city and residents engaged in community gardens will have to resolve a number of issues. The city is now paying for water. If the community garden initiative is successful and attracts more residents, it will need to be determined who will ultimately pay the water bill. Moreover, the community gardens are, in effect, semi-public space. How can the city and growers reduce theft, which has plagued some community gardens, yet keep the gardens open to the public,. And finally, the city and its partners will have to attract and recruit some one hundred gardeners for the new community garden plots, anticipate and address the inevitable garden disputes (*e.g.*, space, access, communal versus individual garden responsibilities, the acceptable use of herbicides/pesticides, fencing, relation to adjacent properties, and so on). More broadly, the city will have to find the appropriate social and cultural means to encourage local residents in community gardens to draft and/or to adhere to gardening guidelines, and eventually, build the capacity to sustain the initiative over the long term.