Boston’s Edible Landscapes: Feeding Low-Income Areas

Introduction

In 2011, 14.9% of all households in the U.S. were food insecure; of these, 34.5% were low-income households below the poverty line. To be food insecure means to lack access at all times to enough food for a healthy and active lifestyle. Community gardens and other forms of edible landscapes are growing solutions to increasing food insecurity especially in areas of low-income populations. For this project, I wished to locate edible landscapes in proximity to areas of low-income populations as a solution to increase their healthy food access and help alleviate food insecurity.

Characteristics for mapping suitable edible landscaping sites in Boston included pervious land cover, education potential, accessibility, and areas with at least access to grocery stores. Education potential of land was analyzed according to walkability from schools and community gathering places (community centers). Walkability from MBTA stops was another factor included in the final analysis as a means to gauge accessibility. Finally, potential edible landscaping outside of ¼ mile walkability from grocery stores was factored into the analysis as a way to find areas with limited access to fresh produce. Through spatial analysis of these factors, identified potential edible landscapes to grow nutritious, fresh food accessible for low-income populations are possible solutions to improving food security in the city of Boston. As a pilot project, I hope for this analysis to be of use for querying any urban areas with growing potential to serve as a stepping stone towards a more thorough analysis of edible landscapes within food insecure and low-income areas.

Methodology

There are a total of 3203 acres that meet at least three designated suitability criteria of an edible landscape. Of these, 613 acres are located in Census Tracts (2010) with greater than 30% of households in poverty. This analysis shows the potential of pervious surfaces in an urban city like Boston for growing food and not just larger open spaces. Community gardens are usually limited to areas greater than 1 acre; however, even small patches of land that meets suitability requirements would be able to grow fresh produce for the community to eat, especially low-income families. The City of Boston and organizations should consider looking at any small area of land as a means to alleviating food insecurity for low-income households while increasing the city’s food self-sufficiency.

Results

In a larger project, additional factors can be included in the analysis and weighted to identify more appropriate land for growing food. For example, these factors could include slope, land ownership and public access, accessibility by road and a buffer away from roads. With further research, food insecure areas can be determined based on further factors other than low-income for a more rounded analysis.