

ABSTRACT

As urbanization has increased in recent decades, urban food systems have become stressed, reducing food security (Gregory, Ingram, and Brklacich 2005). Community gardens that occupy a city's vacant lots have been known to combat food insecurity (Oulton 2012, Colasanti 2009), but many compact cities lack space to garden. One solution has been the development of rooftop gardens (Tian and Jim 2012). In recent decades, Seattle, Washington has increased the number of community gardens, but like many urbanizing centers, the city lacks vacant lots for gardening. With limited ground availability in Seattle and an ever increasing demand to expand upon the city's community garden program, otherwise known as P-Patches, to combat this rapid expansion and improve food security, the city has started to become more creative with its urban spaces through activities such as rooftop gardens (Forbes 2013, Cronin 2013, Greene 2013, Seattle.gov 2014). The goals of this thesis are the following: (1) determine criteria to represent Seattle's food system in a site-suitability analysis to improve food security; (2) rank 33 potential buildings using this spatial index; (3) and perform a ground-truthing exercise to complete and on-site assessment of the seven highest ranked buildings. By taking a more holistic approach when selecting variables, buildings were identified that not only provided the structural needs of a rooftop community garden, but are optimally located within the city's food system based on availability, accessibility, utilization, the three main components that comprise an urban food system (Gregory, Ingram, and Brklacich 2005). Future studies should examine further modification of selecting for these food system variables, which could then provide a more accurate and realistic representation of urban food systems as a means to improve food security.