

Urban Agriculture— Cultivating ‘Life’ in the City

Building Blocks to Ensure Intended Impacts and Growth

Urban Agriculture is the production, processing and distribution of edible agricultural products through intensive plant cultivation and animal husbandry in and around cities. Urban agriculture and community gardening increase the access that residents have to fresh fruits and vegetables, providing better nutritional options for city-dwellers, influencing food security. These programs and related entrepreneurial opportunities can create an engine for economic development while also building urban soil and environmental quality, and improving human health.

Urban Agriculture, a Viable Investment for Income Growth and Improved Nutrition

As with any economic development activity, urban agricultural programs require a few essential building blocks. These structural qualities have been shown to form the foundation of a fruitful program.



Invested leadership. A leadership entity implements the vision driving the program. This coordinating body sometimes also organizes volunteer and training programs; oversees facilities and soil management; and identifies and facilitates access to land, credit, and markets.



Capital for initial program investments and plan to generate income after primary stages. There are many costs to urban agriculture; however access to credit, loans, and land in the initial stages of the program can lay a strong foundation. It is important, because most urban farmers are new to farming, that programs allow entry from all different levels of experience. The longevity of the program depends on an understanding of the marketplace financing options for initial investments in assets, development of cooperatives, and delivery of incentives that induce demand.



Acquisition and management of low-cost soil amendments for high-yield harvests. Managing inputs such as water and locally available soil amendments—composted food scraps or manure, approved biosolids, and lawn-based mulches—help ensure a plentiful harvest. Building soil fertility and tilth help to ensure successful harvests.



Transfer of knowledge about production, nutrition, and economics through training programs. Many urban farmers are new to agriculture and can benefit from training and educational experiences. Transfer of knowledge surrounding food preservation, soil and crop science, income and budget management, and understanding dietary needs is essential to long-term sustainability.



Factors increasing the value gleaned from an urban agricultural program

- Yield/marketability
- Low overhead and availability of financing
- Robust infrastructure
- Land (purchased/rented) and recognition of urban ag as a viable “redevelopment end use”
- Quality of food
- Soil amendments and moisture
- Safety of neighborhood
- Community-based organization or agency for assisting with resources and building grassroots ownership

The Ground-Up

Urban soils tend to be degraded due to the side effects of construction via compaction and removal of topsoil, resulting in poor physical and chemical properties—lack infiltration capabilities and are low in organic matter—and deficiency of plant nutrients. Degraded urban soil, therefore, will have to be substantially improved to support an increase in urban agriculture.

Soil quality, which is a function of fertility and tilth, is essential to plant growth. Improvements in urban soil quality will also yield benefits such as increased carbon sequestration, reduced storm water runoff, which carries nutrients and sediments to watersheds, and improved water-holding capacity. Composted food scraps or manure, approved biosolids, and lawn-based mulches can significantly improve soil quality, fertility and tilth so that urban agriculturalists can meet market needs and grow their programs.

Metrics of Success:

- Urban community gardeners and their families eat more fruits and vegetables, with their consumption only limited to the quantity they grow.
- Gardeners are more likely to know and trust neighbors because they feel a sense of connection and support that stems from the increased community involvement.
- Community gardens have positive effects on property values; in some cases values increase 9.4% within five years after the garden was started.
- Use of municipal waste products in urban agriculture can both improve soil quality and reduce the processing and transport costs associated with disposal.
- For urban residents increased consumption of fruits and vegetables translates into prevention of chronic diseases including obesity, diabetes, some cancers. Gardening also means increased exercise which is health promoting.



Q&A:

Question: *What are the properties of urban soils and how can they change with good soil management?*

Answer: Urban soils are compacted, which means plant roots and water are unable to penetrate. They are typically poor-quality subsoil that has been brought to the surface due to construction or residual materials left from prior development. As a result, the soils are often nutrient deficient, with little for plants or soil microbial communities to survive on. Additions of organic amendments will improve the ability of water and air to enter and move through the soil, as well as provide a rich source of nutrients for crops and the microbial communities that sustain productive soil.

Question: *What evidence is there of nutritional benefits from participation in urban agriculture?*

Answer: Urban agriculture provides affordable access to fruits and vegetables in urban areas often lacking grocery stores. Families who participate in community garden and/or farmers markets programs such as the Women Infant and Children (WIC) Family Nutrition Program (providing coupons for use at markets to low-income families) eat more fruits and vegetables than non-participants. Kids who garden are more likely to try and like fruits and vegetables, and eat more of them.



Speakers

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