

What is Urban Agriculture?

What is Urban Agriculture? Examples from Maryland and Beyond

Interest in urban agriculture is high, with many nonprofits, businesses, municipalities, and individuals launching urban agriculture ventures as diverse as vacant-lot vegetable farms, hydroponic greenhouses, backyard chicken coops, youth gardening education programs, native plant nurseries, and therapeutic gardens. These individuals and organizations engage in urban agriculture to achieve a range of private and public goals to: improve their health and economic situations; expand food access in their communities; generate income and jobs; beautify their neighborhoods; educate people about gardening and farming; create a feeling of community; and provide environmental services (Santo, Palmer, & Kim, 2016).

But what is urban agriculture? How is urban agriculture defined by government agencies, researchers, and growers? What does urban agriculture look like? What production systems and business models do urban producers use?

This factsheet will explore the definition of urban agriculture, with a focus on the state of Maryland. Within urban agriculture, this factsheet will further explore the definition of urban farming. We will introduce readers to the wide variety of production practices and business models that urban growers use, with photographs and examples.

Most Definitions of Urban and Rural Areas Are Based on Measurements of Population Density and Land Use

Because urban agriculture includes a broad variety of agricultural production systems unified solely by their

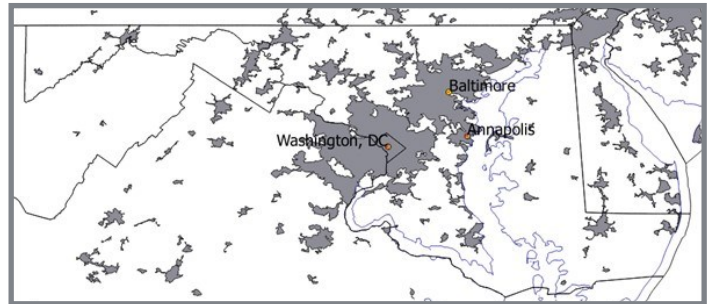


Figure 1: Urbanized Areas in Maryland, as defined by the U.S. Census Bureau. Map made by Neith Little, using open-access mapping software Grass GIS and TIGERLINE shapefiles provided by the U.S. Census Bureau: <https://www.census.gov/geo/maps-data/>

location in and near urban areas, defining “urban” is necessary for defining “urban agriculture.” Different branches and agencies of the U.S. government use slightly different thresholds and scales to delineate between urban and rural areas (John & Reynnalls, 2016).

The U.S. Department of Agriculture’s (USDA) Economic Research Service and the Office of Management and Budget define rural and urban at the county level (Cromartie & Parker, 2018; Donovan, 2015). This can be helpful in identifying counties where nearby metropolitan areas are likely to influence prices and markets (Heimlich & Anderson, 2001). Agriculture in these areas might be considered “peri-urban” (Diekmann et al., 2016; Hendrickson & Porth, 2012; Oberholtzer et al., 2014). To define urban agriculture, however, the U.S. Census Bureau’s Urbanized Areas and Urban Clusters are more useful (Ratcliffe, Burd, Holder, & Fields, 2016) because they are defined and mapped at a more fine-grained scale (Figure 1).

At the local level, zoning boards often differentiate between locations prioritized for urban development and those prioritized for rural open space preservation. How a plot of land is zoned affects which land uses and activities are legally permissible, such as farming, composting, keeping livestock, and constructing road-side farm stands

or other agricultural structures. These zoning maps can also be helpful in defining urban agriculture (Figure 2).

What is the Definition of “Urban Agriculture”?

Wagstaff and Wortman (2013) most concisely defined **urban agriculture** as “*all forms of agricultural production (food and non-food products) occurring within or around cities.*” Government agencies and the peer-reviewed literature have reached consensus on this broad definition of urban agriculture, which includes **all production plants or animals in or near cities, whether for personal use or for sale, whether soil-based or hydroponic** (Diekmann et al., 2016; FAO, 2016; Hendrickson & Porth, 2012; Oberholtzer, Dimitri, & Pressman, 2014; USDA, 2016).

Urban Agriculture Encompasses a Broad Spectrum of Production Methods and Business Models

Production systems can be broadly categorized as:

- ▶ Ground-based outdoor urban gardens and farms (Figure 3);
- ▶ Controlled Environment Agriculture (CEA), including greenhouse, hydroponic, and aquaponic indoor production methods (Figure 4);
- ▶ Rooftop gardens and farms (which can be open-air or in a CEA greenhouse) (Figure 5);
- ▶ Landscaping and nursery businesses;
- ▶ Urban livestock.

In Maryland, the majority of self-identified urban farmers produce vegetables, fruit, and cut flowers, either outdoors or in high tunnels. Less than 25% of urban farmers in a 2019 survey in Maryland used hydroponic, aquaponic, or rooftop growing methods (Little et al. 2019a).

Urban agriculture encompasses a spectrum of business structures (Figure 6). A large grey area exists between gardening and farming. For example, “market gardening” is a term for a type of small-scale, market-oriented operation, growing a diverse variety of vegetables and fruit on small plots for direct marketing to local customers. Some community gardens are experimenting with Community Supported Agriculture (CSA) subscription programs. CSA community members can access food either by the sweat-equity method of

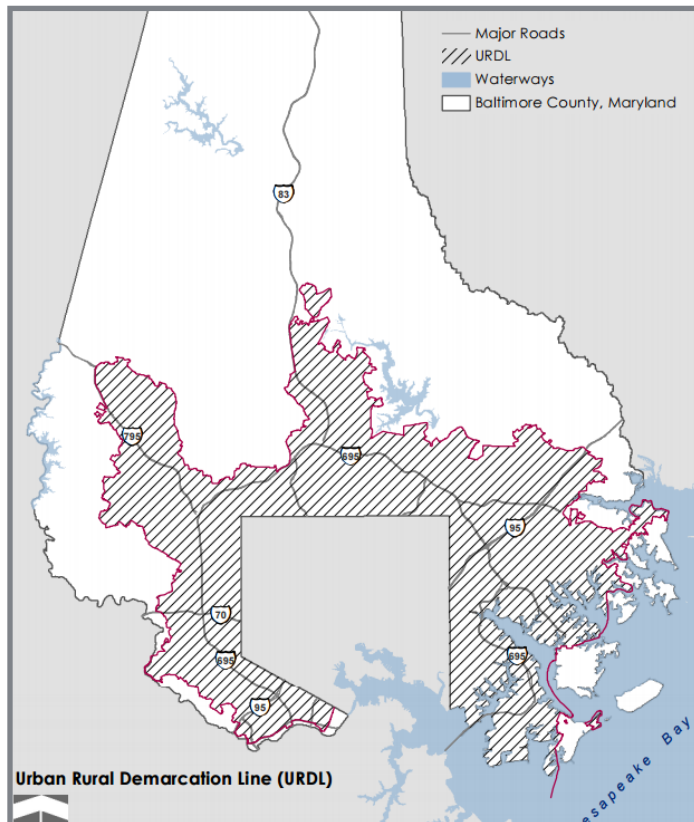


Figure 2: Urban Rural Demarcation Line in Baltimore County, MD. Mapped by the Baltimore County Planning Department: <http://www.baltimorecountymd.gov/Agencies/planning>



Figure 3: Outdoor urban agriculture can be done in raised beds or containers, in-ground in native or imported soil, and in high tunnels or hoop houses. Picture taken at Whitelock Community Farm, Baltimore, MD by Neith Little, UMD Extension.

working in the garden (commonly called a “work share”) or by the market-based method of buying into the garden (a paid farm share).

Urban agriculture producers use a variety of words to describe themselves and the work they do. Some growers

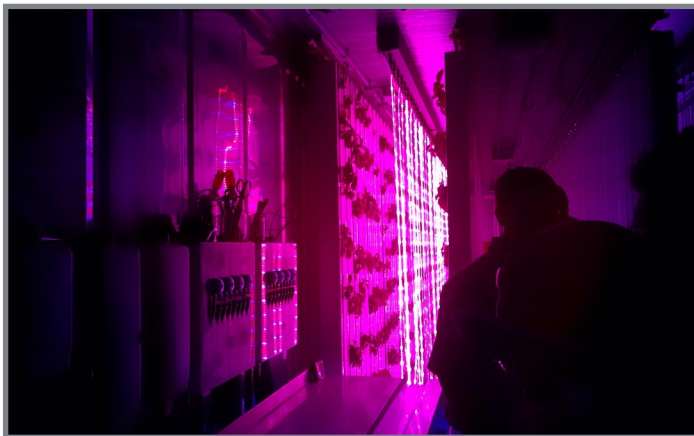


Figure 4: Basil grown hydroponically in a modified shipping container at Urban Pastoral in Baltimore, MD. Photo by Neith Little, UMD Extension.



Figure 5: Okra growing on a retrofitted green roof at Up Top Acres in Washington, DC. Rooftop farming can be outdoors, as in this example, or in a greenhouse (controlled environment agriculture). Photo by Neith Little, UMD Extension.

in urban areas introduce themselves with the title “Farmer” before their name, saying they want to show young people in their communities what a farmer can look like. Other growers describe themselves as gardeners while selling their produce at a roadside stand or farmers’ market. Some CEA growers consider themselves farmers, while others introduce themselves as entrepreneurs or agri-technology innovators.

Government agencies and academics often differentiate between gardening and farming, based on whether money changes hands. USDA defines a farm as “any place that produced or sold—or normally would have produced or sold—at least \$1,000 of agricultural products in a given year” (Hoppe and MacDonald 2013). This differentiation matters because as soon as a product is sold for money or a person is paid to do work, additional regulations, taxes, and liability begin to apply to an urban farm.

Urban farms can be organized as either for-profit or not-for-profit entities. Since profit is defined as income minus expenses, a not-for-profit entity might call this “net income” instead of “profit.” A for-profit business pays taxes on this profit and can use remaining profit to reinvest in the business or they can distribute it to the business owner and/or shareholders. A not-for-profit business does not pay taxes on net income, but is required to reinvest any net income back in the business. For more discussion on urban farm finances, see chapter 2 of *From Surviving to Thriving: Strategies for Urban Farm Success* (Little et al. 2019b).

Whether organized as not-for-profit or for-profit businesses, most urban farms include benefiting their communities among their goals. In a 2018 survey,

Figure 6: Urban agriculture includes activities undertaken for a wide variety of reasons, from home gardens growing vegetables for a family to communal gardens where the harvest is shared among the gardeners to urban farms launched by entrepreneurs, and everything in between. Figure developed by Neith Little, graphic design by Susan Barnes.



Maryland urban farmers were asked to choose their top two goals from a list of options. These urban farmers’ top two choices were “to provide food for my community” and “to earn a living.” The third most popular choice was “other,” with a wide variety of write-in responses related to financial, environmental, and social goals (Little et al. 2019a). For example, urban farms might focus primarily on producing healthy and affordable food for their community, on educating community members on how to grow their own food, on employing community members who face barriers to employment, or on providing environmental services such as cooling urban heat islands and growing pollinator habitat.

Urban farms often use a “sliding scale” business model, selling high-value crops to customers who can afford them, such as chefs and farmers market customers in high-income neighborhoods, to subsidize selling produce at affordable prices to their neighbors. For example, Soul Fire Farm in Troy, NY (Lennon et al. 2018) markets their produce via a sliding-scale CSA based on their customers’ self-reported income.

Urban agriculture can be economically important to the grower, whether by producing food for personal use, creating supplemental income through a “micro-enterprise,” or enabling urban residents to start businesses and become entrepreneurs.

Many market-oriented urban farms “direct-market” what they produce; that is, they sell directly to their customers through farm-stands, farmers’ markets, CSAs, and direct sales to restaurants and institutional customers. Economies of scale and proximity to customers means that selling to wholesale distributors is less economically viable for small-scale urban farms than direct-marketing produce to urban customers. Larger-scale urban farms, such as large hydroponic CEA operations, are more likely to sell their produce wholesale to grocery stores and institutions like university or hospital cafeterias.

Conclusion

Urban agriculture is broadly and inclusively defined. It includes people who use a wide variety of methods to produce food and other agricultural products in high-population areas for personal use, for sale, and for community benefit.

While there is no consensus on the definition of urban farming, many government entities and other organizations use the threshold of \$1,000 in annual sales before expenses. This sales-based definition still includes



Figure 7: Whitelock Community Farm, in Baltimore, MD is an example of a not-for-profit farm with a mission of providing affordable food for community members, creating a beautiful and inclusive community space, and caring for the environment. Photo by Lena McBean, © UMD AGNR Image Database.



Figure 8: The Greener Garden Urban Farm is an example of a for-profit family farm. Farmers Warren and Lavette Blue also value being able to provide fresh local produce in their community and bring youth to visit the farm to see how food is grown. Photo by Edwin Remsberg, © UMD AGNR Image Database.

a wide variety of production practices and marketing tactics which growers adopt to achieve multiple financial, community, and environmental goals.

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