



# Flower Farming in Baltimore

## Considering the Concept

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Baltimore is a leader and innovator in urban agriculture. As such, flower farming in Baltimore holds promise, and there are signs that a cut flower market is growing. There's a readily available market niche with the “buy local” and “farm to centerpiece” movements, awareness about where flowers are grown, and preferred consumer aesthetics. Because diversity is key to help manage risks on an urban farm, or any farm, flower growing could be added to existing farms in Baltimore City to capitalize on these trends.

The development of an urban flower farming industry will fulfill multiple priorities – greening vacant lots, providing business and employment opportunities, furthering the buy local movement and supporting the local economy. With the guidance and support of the Baltimore Office of Sustainability, the recommendations in this report can improve the viability of flower farming in the city and expand what urban agriculture means in Baltimore.

*In Partnership*



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# Process and Methods

Flower farming, for the purposes of this inquiry, is defined as production-based horticulture, or floriculture. Horticulture is defined as that branch of agriculture concerned with growing plants that are used by people for food, for medicinal purposes, and for aesthetic gratification. This report considers floriculture for two main categories, cut flowers and value-added products. Cut flowers are used to make bouquets. Value-added products include botanicals for medicine, body care products, and perfume. Farmer is used to describe an individual engaged in production growing of food or flowers for sales revenue. This inquiry focused on flower farming for generating sales and income.

The aim of this report is to consider flower farming on City-owned, vacant lots in a practical way, and to provide recommendations for policymakers to more robustly include flower farming for production. The main questions guiding this inquiry were as follows:

**What is the current state of the floral industry, and is there demand for locally grown flowers?**

**When is flower farming in Baltimore City successful? What are opportunities to increase success? What are challenges specific to flower farming in the city?**

**What are some short and long term issues for flower farming on public land?**

To answer these questions, the Office of Sustainability began initial research by convening a work group to explore flower farming. This work group consisted of City staff members

from related departments (e.g. Housing and Community Development, Planning), farmers, and entrepreneurs interested in sourcing local flowers and plants, and experts in the field of urban agriculture and sustainability from non-city government agencies and local non-profits. This group provided direction and advice on process and developing the recommendations.

The findings summarized in this report were largely developed through a series of over 50 individual interviews conducted with representatives from the following stakeholder groups:

- Local and national experts in urban farming, flower farming, and the buy local flowers movement;
- Urban and non-urban farmers in Baltimore, the region, and across the country, who are growing food and flowers for production;
- Potential buyers of local flowers such as floral wholesalers, floral designers/florists, restaurants, grocers, and specialty shops;
- Professionals working for organizations that train urban and non-urban farmers.

In addition to interviews, the findings were also informed by research into floriculture industry trends, articles from professional farming, floriculture and botanical organizations, research institutions, and government or quasi-government agencies.



Photo: Andy Cook

## Executive Summary

Baltimore City has established a uniquely supportive environment for farming in the city. The Office of Sustainability's Homegrown Baltimore program and Food Policy Initiative have set the stage for a favorable regulatory environment for urban farms through the Urban Agriculture Policy Plan and other practices. Mayor Stephanie Rawlings-Blake's Vacants to Value program, where vacant building demolition and lots are viewed as opportunities instead of liabilities, connects farmers to available land with low-cost leases. The Baltimore Department of Recreation and Parks developed a thriving City Farm program connecting hobby farmers to plots in the city. Community organizations including the Parks & People Foundation, the Farm Alliance of Baltimore and Future Harvest Chesapeake Alliance for Sustainable Agriculture, support farmers with skill development and resource sharing. These programs and other assets set Baltimore apart among cities in the United States as a leader in the contemporary urban agriculture movement.

With the launch of the Mayor's Growing Green Initiative in 2014, a project began to explore the viability of flower farming in the city as a way to return more vacant lots into productive use and identify short and long term issues. The Office of Sustainability pulled together a stakeholder work group to offer advice and direction on the project. The report that follows was developed through a series of interviews with farmers, industry experts and potential buyers, and online and literature research.

## Key Findings:

1. Flowers are currently overlooked as an urban agriculture product.
2. The floriculture industry is changing to a more localized industry.
3. Urban flower farmers have the same needs as other urban farmers.
4. Cut flowers are more lucrative than other value-added products.
5. Demand for locally grown flowers is gaining traction.



# 1. Flowers are currently overlooked as an urban agriculture product.

The contemporary urban agriculture movement was born out of the food justice and healthy food access movements, and emphasizes food, primarily vegetable, production. Growing flowers as a marketable product for sales has not advanced in the way food production has in cities. Many definitions of urban agriculture do not acknowledge flowers as part of the urban agriculture landscape; most specify the purpose of urban agriculture as feeding residents. There are fewer than fifteen known urban flower farms for production across the country varying greatly in scale and business model. This presents an opportunity to increase urban floriculture as a revenue-generating business.

Definitions of urban agriculture or urban farming corroborate this finding. For example, a report by The Johns Hopkins Center for a Livable Future highlighting urban agriculture practices from sixteen cities states that, “Most broadly,

urban agriculture refers to growing and raising food crops and animals in an urban setting for the purpose of feeding local populations.” Definitions of urban agriculture, including those by government agencies or non-profit and interest groups, either expressly state the purpose as food production, or are simply silent on flowers. Baltimore’s Office of Sustainability lists horticulture in its current definition of urban agriculture: “The cultivation, processing, and marketing of food within the City, which may or may not include the use of intensive production methods, structures for extended growing seasons, and on-site sale of produce. It may also involve animal husbandry, aquaculture, agro-forestry, vineyards and wineries, and horticulture.” Even the most highly regarded and frequently used reference sources in urban growing or flower growing don’t address small scale, urban flower production.



Photo: Justin Tsucalas : Plaid Photo



Photo: Andy Cook

## 2. Floriculture is changing to a more localized industry.

Although eighty percent of the cut flowers sold in the U.S. today are imported, attitudes are beginning to shift in the floriculture industry, and books, such as *Flower Confidential*, are prompting consumers to consider where their flowers are grown. The Slow Flowers movement has given a name to the increasing interest of consumers to buy local flowers. Even Washington, D.C. is taking note, as the White House used only American-grown flowers for a French diplomatic state dinner last year, and Congress established a cut flower caucus. Increased awareness around buying local flowers dovetails nicely with the buy local movement for food and other items. Additionally, consumers are seeking an aesthetic that mass produced flowers from the

global market can't meet – a sylvan-like bouquet with fewer blooms, and using more vines, tendrils, evergreens, ornamental kale, moss-covered branches and snow berries. These products are often what small-scale, local flower farmers grow. The convergence of these three things: buying local, awareness of where flowers come from, and the preferred aesthetic of consumers support the possibility of growth in the local flower industry in Baltimore and elsewhere in the United States.



### 3. Urban flower farmers have the same needs as other urban farmers.

Flower production requires similar inputs and similar degrees of effort to urban food production. More than 30 flower farmers were interviewed for this report and noted the same needs for success as urban food farmers:

- ☐ Land tenure
- ☐ Start-up funds/access to capital
- ☐ Water access
- ☐ Healthy soil
- ☐ Training/skill development
- ☐ Access to sales outlets
- ☐ Community support

All farming is a long term investment. Consistently, farmers interviewed for this project identified land security as the main issue for a successful flower farming business. One Baltimore urban agriculture expert noted, “Land tenure is a game-changer.” Start-up costs for a new farmer can be daunting, exceeding \$6,500 for the first year, even with a low-cost land lease on a city-owned lot. Water access can be challenging for urban flower farmers if a live water meter is not on the site, and installing a water hook up can be cost prohibitive.

Although users do not typically consume cut flowers or value-added flower products, healthy soil is needed due to potential lead exposure as farmers can track soil into their homes through clothing, shoes or tools. Healthy soil also affects plant quality. Knowing soil conditions and the prior use of a city-owned vacant lot, such as whether there was a building on the site, can save time on the front end for a farmer to mitigate conditions.

The Baltimore-area has many resources for farmer training. Though these quality training programs are well-respected, there is a gap in training for urban flower production specifically. Producing in cities can be of interest to farmers because of direct access to sales outlets and social networks. Just like food producers, identifying sales outlets and managing relationships with potential buyers can be challenging with the demands of growing. An urban farm creates a unique presence in a neighborhood, and the Johns Hopkins Bloomberg School of Public Health found that urban farms are more likely to thrive if they have community support, and that farms with community support were less likely to be vandalized or sabotaged.



Maya Kosok harvests flowers at her farm site in East Baltimore.  
Photo: Andy Cook



## 4. Cut flowers are more lucrative than other value added products.

Value-added products, such as essential oils, from flowers and herbs proved less promising and less lucrative than cut flowers for farming on a small scale. For example, it requires 12 pounds of lavender to create one ounce of essential oil and this quantity of fresh lavender can earn a higher price than the oil it would produce.

Urban flower farmers interviewed for this project reported that flowers are often more lucrative to sell than vegetables. Because they are viewed as a luxury item, cut flowers have a mark-up of 30-40% on average, compared to the mark-up for locally produced vegetables of 15-25%. Because no average gross sales revenue per acre could be determined for cut flowers in Baltimore, a 0.5 acre vacant lot was used as a model to demonstrate potential revenues as illustrated in the table below. A sales range per stem was employed, resulting in projected sales revenues of \$33,600 to \$57,600 for the growing season.



Photo: Andy Cook

Flower	Stems per Plant	Total Stems in 1 Planting Bed	Total Stems in 10 Planting Beds	Minimum Price per Stem	Minimum Gross Revenue per 12 Weeks	Maximum Price per Stem	Maximum Gross Revenue per 12 Weeks
Celosia	3	2,400	24,000	\$0.40	\$9,600.00	\$0.65	\$15,600.00
Gomphrena	5	2,000	20,000	\$0.10	\$2,000.00	\$0.35	\$7,000.00
Sunflower (branching)	3	1,200	12,000	\$0.50	\$6,000.00	\$0.75	\$9,000.00
Zinnia	5	4,000	40,000	\$0.40	\$16,000.00	\$0.65	\$26,000.00
<b>Projected Revenue</b>					<b>\$33,600.00</b>		<b>\$57,600.00</b>





Walker Marsh, who is starting Tha Flower Factory on City-owned vacant land in East Baltimore.  
Photo: Alexander Dobson

## 5. Demand for locally grown flowers is gaining traction.

Based on interviews with grocers, restaurateurs, wholesalers, and florists, all were favorable to the idea of purchasing locally grown flowers. Most interviewees did note that their organization values buying local, as do their customers. Flower wholesalers can generally procure the products they seek at any time of year on the international market, but prefer the freshness and longevity of locally grown flowers. Furthermore, flowers produced in the region follow current aesthetic trends more closely than imported flowers, and present uniqueness that sets them apart from what is typically available.

However, potential buyers were concerned about year-round supply, ease of purchase, quality and price. Imported flowers are grown with cheaper labor, and are comparatively inexpensive. Currently, most businesses source less than 5% of their flowers locally, except Local Color Flowers, which reported sourcing 5% from within Baltimore City and the rest from within 100 miles. While there are challenges to meeting accepted price points, the values-driven local movement creates significant potential to expand the supply of local flowers to local buyers.



# Recommendations

The five key findings of this report informed the recommendations. These recommendations do not supplant those made in the Urban Agriculture Plan, but instead are practical ways to make flower farming viable in the city and aim to answer the question: How can city government and community organizations support urban flower farmers? As a result, there are seven recommendations:

1. Increase land leases for City-owned lots to ten years
2. Leverage funds to help flower farmers with start-up costs
3. Provide ready-to-plant sites for qualified flower farmers
4. Create a virtual one-stop-shop for farmers
5. Support the creation of a flower aggregator
6. Expand Homegrown Baltimore to include local flower growing and buying
7. Encourage existing training programs to adapt to include production flower farming

## 1. Increase land leases for City-owned lots to ten years.

Because land tenure is the main concern for flower farmers, the City should increase the land leases for city-owned lots to ten years. Most leases executed with farmers through the Homegrown Baltimore RFP process are for five years, with a renewal option of two additional years - for a total of seven years. Recently a new clause was added to an executed lease for five years with automatic 2 year renewal, but the initial terms are still limited to five years. The City of Baltimore has not executed ten year leases primarily due to leases longer than seven years being subjected to property taxes. The Baltimore City Council recently passed an Urban Agriculture Tax Credit, which would reduce the property tax burden by 90% for urban farms that produce at least \$5,000 of produce per year and remain in operation for at least five years. This tax credit could make longer leases a more feasible option.

## 2. Leverage funds to help flower farmers with start-up costs.

Baltimore City's innovative partnership with the U.S. Environmental Protection Agency and the Chesapeake Bay Trust for the Growing Green Competition in 2014 provided start-up capital to potential flower farmers. One of the winners is beginning a flower farm in 2015 on City-owned vacant land in East Baltimore. The City of Baltimore should consider sharing resources such as greenhouse space or organic waste materials, in addition to grants for start-up costs.



Photo: Andy Cook



### 3. Provide ready-to-plant sites for qualified flower farmers.

Because of the start-up costs for potential farmers and unique challenges to urban production, vacant lots that are ready-to-plant will attract flower farmers. This would reduce costs, planning, and preparation for planting for new farmers. A ready-to-plant site would include: known soil conditions through testing and access to compost for soil mitigation (as needed), functional water access, and community support for flower farming on the site.

### 4. Create a virtual one-stop-shop for farmers.

Though Baltimore has created a uniquely supportive environment for urban producers, it can be a challenge for aspiring flower farmers to navigate the various resources available through City agencies and community organizations. Similar in concept to the One-Stop-Shop for permits through Baltimore Housing, this recommendation is for a virtual one-stop shop for urban agriculture in Baltimore. The one-stop shop would be a website to serve as the front door to link resources for Baltimore farmers – available sites, training resources, and funding options. This site would be meticulously maintained, curating the most useful and current information for farmers, linking together the various resources from city, state, and federal government, and community organizations.

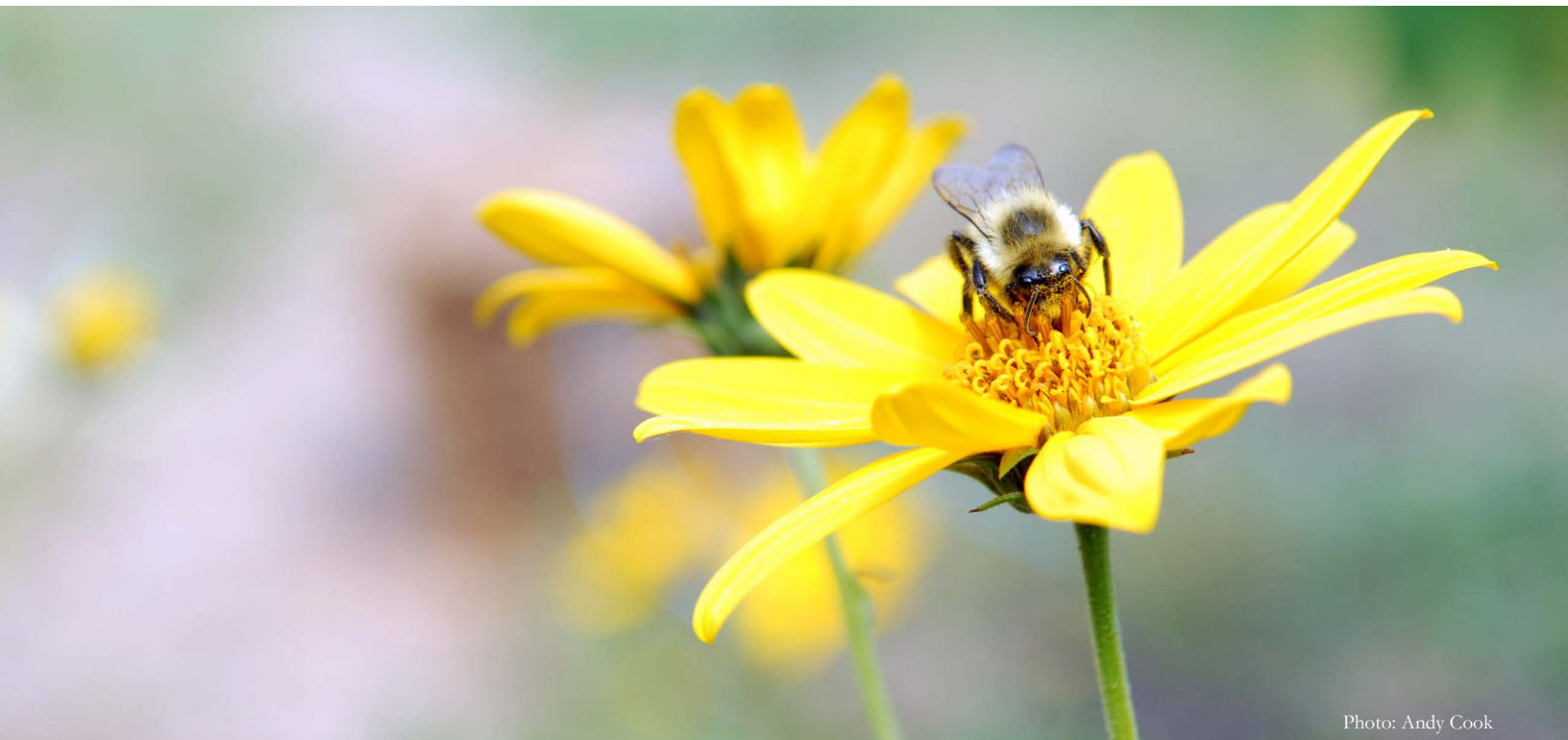


Photo: Andy Cook

## 5. Support the creation of a flower aggregator.

A flower aggregator manages the aggregation, distribution and marketing of local flowers. A flower aggregator connects farmers and buyers, allowing buyers to engage with one entity instead of several farmers, and allowing farmers to engage with one entity instead of several buyers. An aggregator makes it easier for new farmers and those operating on a smaller scale to have access to sales outlets by combining multiple smaller suppliers' products into a larger offer and connecting to buyers that otherwise may not be interested in small amounts of product. Currently, Local Color Flowers, an existing floral design studio exclusively using locally grown flowers, serves as a de facto aggregator for flower farmers and provides an existing, robust sales outlet, but as the supply grows a more formal aggregator will be needed.

## 6. Expand Homegrown Baltimore to include local flower production and buying.

Because Homegrown Baltimore was born out of the City's Food Policy Initiative, it is focused primarily on healthy food access for residents. One primary barrier is that flower production is not expressly included in the prequalification application for identifying farmers for the Homegrown Baltimore Land Leasing Initiative. Buying local flowers, like other local products, supports the local economy and raises tax revenues to support local government services.

## 7. Encourage existing training programs to include production flower farming.

Several resources already exist in the Baltimore region to train potential urban farmers. Programs like these provide needed training for would-be farmers in growing know-how, financial management, quality assurance, post-harvest handling, marketing and business planning, season extension, pest management, soils, nutrients, cover crops, and high yield growing. These comprehensive programs provide valuable skills to help farmers succeed. However, there's a gap in existing resources – none of the programs cover urban flower farming for production specifically. Combining the flower growing know-how of the University of Maryland Extension Master Gardener training program curriculum with Future Harvest's Beginning Farmer Training Program curriculum, and the urban farmer training component through Civic Works and the Farm Alliance of Baltimore, could fill this gap.



## Conclusion

Although urban agriculture has been expanding in Baltimore, there are few urban farms that grow food on a commercial scale and that are profitable. Flower farming may follow a similar trend and provide supplemental income as the market grows, but may not reach a commercial scale.

The specialty cut-flower business may fit well into a small-scale and part-time farming operation, since farmers can control startup costs by entering the business slowly through increasing investment and production as their businesses and markets grow. There's a readily available market niche with the "buy local" and "farm to centerpiece" movements, awareness about where flowers are grown, and preferred consumer aesthetics. Because diversity is key to help manage risks on an urban farm, or any farm, perhaps flower growing can be added to existing farms in Baltimore City to take advantage of these trends.

Baltimore is a leader and innovator in urban agriculture. The development of an urban flower farming industry will continue this upward trend and will fulfill multiple priorities – greening vacant lots, providing business and employment opportunities, furthering the buy local movement and supporting the local economy. With the guidance and support of the Baltimore Office of Sustainability, the recommendations in this report can improve the viability of flower farming in the city and expand what urban agriculture means in Baltimore.



Photo: Maya Kosok

