

Governor's Summer Internship Program 2014

Community Gardens: Local Growth for a Sustainable Maryland

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“There is a quiet revolution stirring in our food system. It is not happening so much on the distant farms that still provide us with the majority of our food; it is happening in cities, neighborhoods, and towns. It has evolved out of the basic need that every person has to know their food, and to have some sense of control over its safety and its security...it is providing an oasis for the human spirit where urban people can gather... and teach their children about food and the earth. The revolution is taking place in small gardens, under railroad tracks and power lines, on rooftops, at farmers' markets...It is a movement that has the potential to address a multitude of issues: economic, environmental, personal health, and cultural.”

—Michael Ableman



Towson University, Community Garden, 2010

Marsh Market, Baltimore, 1930



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Executive Summary

Community gardening and urban agriculture have been on the rise across the United States as evidence mounts of their benefits to individuals and communities. They stimulate local economies; reduce food-related greenhouse gas emissions through local crop production close to the demand source; provide more nutritious options for food and reduce food insecurity; engage citizens with recreational, educational and philanthropic opportunities; can prevent crime; and help mitigate environmental degradation.

Marylanders are recognizing this potential, and residents all across the state are expressing strong interest in producing food from local sources. Many Maryland counties have plots for rent in community gardens, and nonprofits around the State are devoted to community agriculture and greening. Local food sources are expanding thanks to increasing demand and have proven successful revitalizing urban areas and providing better food options for residents.

The communities and residents of Maryland have the opportunity to reap all the benefits of community agriculture if a collaborative effort occurs between state and county officials, along with other experts and residents, to remove barriers and develop resources for the practice.

State and county officials who want to foster successful community gardens must not only encourage the practice, but also remove current barriers, such as difficulty maintaining long-term sustainability, restrictive and outdated zoning, identifying usable land, and lack of access to soil testing and other supplies. The State currently lacks a cohesive, central resource to provide and coordinate practical information for county officials and residents about community gardening. Community agriculture provides the state with an opportunity to support a practice that will bring a myriad of benefits to individuals and communities across the state, as well as contribute to the success of four of Governor O'Malley's Strategic Goals.

Therefore, we propose the creation of the Governor's Commission for Community Gardening (GCCG). We propose the following goals for the Commission:

- Compile necessary resources including information on sustainable practices, vacant lots or available areas of land, model zoning language and contact information. Then publish a webpage which contains this information for interested parties to use and reference.
 - Establish a grants program to supply funding for infrastructure, soil testing, and other costs.
 - Establish a statewide community garden contest as part of a social media campaign that will highlight successful gardens.
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- Provide direct technical assistance to community gardens that are facing regulatory or legal roadblocks.
- Work with Maryland schools to explore new options for serving school or community-grown produce at lunchtime.
- Develop mentorship and training programs.

The Commission will foster collaboration throughout the state to ease the process of locating information that is currently scattered in a variety of places. It will also be an advocate for community agriculture in the state and will bring national attention to the work of Maryland's gardens.

Introduction

For our purposes, we will be focusing on community gardening and agriculture across the state of Maryland, whether it be in urban or suburban areas, and discussing the overlapping benefits of both community gardens and urban agriculture. In this paper, we will be using the term "community agriculture" to refer to both of these practices in an all-encompassing fashion.

Community gardens are parcels of land that provide a means for community members to grow and share fresh food. Many already exist in many Maryland counties, such as in Kent County, Harford, Montgomery, and Anne Arundel counties.¹ Institutional gardens, such as those at the University of Maryland and the US Department of Agriculture Beltsville Agricultural Research Center, also already exist in Maryland.

Simply put, urban agriculture is growing plants and raising animals in and around urban areas.² Urban agriculture and gardening can include non-food crops such as cotton and ornamental plants, and also describes the distribution, marketing, and sale of the products.³ Urban agriculture can take different forms. Home gardens; plots in community gardens (on land rented from a private entity or public agency); youth, educational or school gardens; institutional gardens; and entrepreneurial farms all fall into the category of urban agriculture. Community gardening and urban agriculture have been

¹ "Grow it, Eat It", University of Maryland Extension, Accessed July 5, 2014, <http://extension.umd.edu/growit>

² Urban Agriculture: A Tool for Creating Economic Development and Healthy Communities in Prince George's County, MD http://www.pgplanning.org/Resources/Publications/Urban_Agriculture.htm

³ Alison Houlihan Turner, "Establishing Urban Agriculture in Your Community: What You Need to Know Before You Get Your Hands Dirty," University of Louisville, Winter 2010, <http://louisville.edu/cepm/publications/practice-guides-1/PG27%20-%20Establishing%20Urban%20Agriculture%20in%20Your%20Community.pdf>

demonstrated around the United States to be revenue-generating, community building tools that can also improve community health.

After speaking with many planning and agricultural officials from county offices, it is clear that the needs of the various counties differ widely. However, in one form or another, most Maryland counties expressed interest in community agriculture. Even in more rural counties such as Charles and Worcester Counties, there is a demand from towns to have more flexibility for community agricultural practices. In these areas, there is little action at the county level for urban agriculture, but there are gardening projects managed by schools and libraries to promote food sustainability.^{4,5} Talbot County has not had any issues or reasons to regulate residential agriculture, but officials would be interested in learning about how its residents can get their products on the markets, as well as what the regulations on backyard livestock should be for safety.⁶ Anne Arundel County also expressed excitement at the prospect of working with the State on zoning ordinances and would like to see what the other counties are doing.⁷ Where organized community garden plots are available for rent, the demand often cannot be met. Frederick County's community garden plots are all full for 2014,⁸ Montgomery County lists 10 of 11 gardens having wait lists,⁹ and in Baltimore City people are "eagerly waiting for an open garden plot."¹⁰

Maryland residents, in both urban and suburban areas, are beginning to take a more vested interest in producing food outside of rural farms. Facilitating statewide collaboration would disseminate best practices and resources from counties with established gardens to ones that are new to the initiative. As our numerous discussions with county officials and experts in community gardening indicate, Maryland is already home to a passionate and robust base of community gardeners. The following sections of our report discuss the ways in which the state could provide further support and resources and therefore reap the many benefits that community gardens have to offer.

⁴ Interview on July 1st, 2014 with Charles Rice, Charles County.

⁵ Interview on July 1st, 2014 with Katherine Munson, Worcester County.

⁶ Interview on July 2nd, 2014 with Martin Sckolick, Talbot County.

⁷ Interview on July 2nd, 2014 with Lisa Barge, Anne Arundel.

⁸ "Community Gardens", Frederick County Parks and Rec, Accessed July 13, 2014, <https://frederickcountymd.gov/index.aspx?NID=4855>

⁹ "Community Gardens Program" MontgomeryParks.org, Accessed 7/21/14, http://www.montgomeryparks.org/permits/find/community_gardens_program.shtm

¹⁰ "Roosevelt Park City Farm: A Baltimore Community Garden", Allie Hu & Molly McCullagh, Center for a Livable Future, July 12, 2010, <http://www.livablefutureblog.com/2010/07/roosevelt-park-city-farm-a-baltimore-community-garden>

Framing the Opportunity

Governor O'Malley's Strategic Goals

Of Governor O'Malley's 15 Strategic Goals, community gardens can contribute to the solutions of four of them including crime prevention, bay restoration, greenhouse gas reduction and energy efficiency.

Crime Prevention

Vacant lots and buildings can attract criminal activity. Turning those areas into a community garden makes the area cleaner, and brings increased foot traffic. This results in less crime and a more active community, all with little or no cost to the city or town. In fact, community gardens are less expensive to develop and maintain than parkland.¹¹

The use of community gardens as crime prevention has been studied by Baltimore nonprofits in the past. Interest in the community garden initiative in Baltimore resurfaced around 1991, when "the problem of gun violence, drugs, and crime had reached crisis levels in many Baltimore neighborhoods." Nine thousand residents a year were leaving the city and entire blocks of abandoned homes were being taken over by drug dealers and addicts.¹² Two non-profits, the Community Law Center (CLC) and the Citizens Planning and Housing Association (CPHA), started working with local residents to restore safety and a sense of community. The Neighborhood Design Center was brought in as a partner and their approach was called Crime Prevention through Environmental Design (CPTED), which encourages residents to reclaim public spaces that have become overrun with drug dealers and prostitutes due to poor maintenance. These plans typically included the establishment of a community garden.¹³ This is because physical improvement to a neighborhood boosts community spirit and builds support for future action, and can be the start to providing community-based alternatives to incarceration as work crews can be staffed by recovering addicts or non-violent ex-offenders.¹⁴ Nonprofits such as Parks and People are working hard to support community gardens in Baltimore presently.

As Betsi Griffith, a member of the Mayor's Coordinating Council on Criminal Justice stated, "Building community is absolutely key. You have to begin by identifying the people and the institutions

¹¹ "Multiple Benefits of Community Gardening", Gardening Matters, Last modified 2012, http://www.gardeningmatters.org/sites/default/files/Multiple%20Benefits_2012.pdf

¹² "Baltimore Comprehensive Communities Program". Office of Juvenile Justice and Delinquency Prevention, Accessed July 10, 2014, http://www.ojjdp.gov/pubs/gun_violence/profile01.html

¹³ Ibid

¹⁴ Ibid

in the local neighborhoods who have a stake in the community and really want to address the neighborhood's problems. And then you have to give them the resources that they need to be successful." She also stated that the Mayor's Coordinating Council on Criminal Justice meets this need by pulling together all key agencies.¹⁵ That is what the community garden initiative is missing— a commission to pull it together and to make it a viable solution to a wide variety of issues, which needs State attention.

Community gardens have proven to be successful crime prevention strategies in other cities, and are recognized by many police departments as an effective strategy. In Philadelphia, burglaries and thefts in one precinct decreased 90% after gardens were planted in vacant lots.¹⁶ Scientific studies have proven that crime decreases in neighborhoods as the amount of green space increases because vegetation alleviates mental fatigue, which is a factor in violent behavior. These conclusions have been demonstrated in Chicago, as buildings with a high level of vegetation had 52% fewer crimes than those with no landscaping.¹⁷

Bay Restoration

The Watershed 263 project in Baltimore is a great example of how urban stormwater runoff can be decreased with community gardens to protect the Bay. The asphalt and packed dirt of vacant lots "channels rainfall directly to storm drains," including any pollutants the water picks up along the way."¹⁸ In contrast, green spaces like community agricultural projects "filter rainwater, reducing both the volume of water and the amount of pollution flowing into the storm drains."¹⁹ Due to Watershed 263 Efforts, "water quality downstream in the Gwynn Falls and Middle Branch of the Patapsco River has improved."²⁰ Sustainable Chesapeake showcases case study gardens for how to use rooftop runoff to irrigate community gardens, protecting watersheds and improving communities at the same time.

One of the goals of the State is Transit Oriented Development, which is "a dense, mixed-use deliberately-planned development within a half-mile of transit stations that is designed to increase transit ridership".²¹ One of TOD's goals is to decrease emissions by taking commercial vehicles off the

¹⁵ Ibid

¹⁶ "Multiple Benefits of Community Gardening", Gardening Matters, Last modified 2012, http://www.gardeningmatters.org/sites/default/files/Multiple%20Benefits_2012.pdf

¹⁷ Ibid.

¹⁸ "Vibrant Communities: Reducing Urban Stormwater Pollution and Promoting Prosperity", Sustainable Chesapeake, Accessed July 13, 2014, <http://www.sustainablechesapeake.org/vibrant.html>

¹⁹ Ibid.

²⁰ Ibid.

²¹ "Transit Oriented Development." Department of Transportation. Accessed July 8, 2014. http://www.mdot.maryland.gov/Office_of_Planning_and_Capital_Programming/TOD/TOD_Homepage.html.

road and increase public transit use, which decreases the amount of emissions per capita. The success of TOD depends on incentivizing residents move to TOD-designated communities. Community agriculture, which has been shown to make communities more vibrant, would serve as that incentive.

Transit Oriented Development, when made more attractive by community agriculture, would help the state prevent future degradation.²² The absolute amount of impervious cover would decline as residents move into these areas, resulting in less runoff. Public transportation would reduce pollution runoff from commercial vehicles.

Greenhouse Gases

Thanks to the globalization of our culture and our food, food related emissions in the U.S. as a whole account for 21% of total national emissions, or 6.1 tons of CO₂ per year.²³ The average meal in the U.S. travels 4,200 miles to get to the table.²⁴ Produce sold in an average American supermarket spends 7-14 days being transported, which not only uses large amounts of fuel, but 50% of the food is lost to spoilage on average. Locally grown food reduces and even eliminates fuel use and loss due to spoilage.²⁵ Community gardens that compost reduce the amount of organic matter that ends up in landfills, which in turn reduces the amount of methane released, a powerful greenhouse gas.

The O'Malley-Brown administration has set a statewide goal to drive down greenhouse gas emissions by 25% by 2020. Although there are numerous programs dedicated to reaching this goal, Maryland has not yet made sufficient progress, reducing GHG emissions by only 9.7% since 2006.²⁶ The Maryland Department of Environment calculated that the state's Estimated Actual Emissions for 2013 was 96,799,100 metric tons.²⁷ While this number is 20 percent lower than the projected Business As Usual Emissions, which is the amount the state would emit had it not taken any action to reduce greenhouse gas emissions, it still did not meet the goal for Projected Progress Under Enhanced Programs Emissions, which was 96,021,250 metric tons.²⁸ These programs were adopted to meet its 25 percent reduction by 2020 goal, but the state is still not on track to do so.

²² Environmental Protection Agency, Protecting Water Resources with High Density Development, by Lynn Richards, Washington DC, 2006. Pages 3-13.

²³ Adam James, "How Urban Farming Can Transform Our Cities - and Our Agricultural System," Think Progress, May 29, 2012 <http://thinkprogress.org/climate/2012/05/29/491271/how-urban-farming-can-transform-our-cities-and-our-agricultural-system/>

²⁴ Ibid

²⁵ "Multiple Benefits of Community Gardening", Gardening Matters, Last modified 2012, http://www.gardeningmatters.org/sites/default/files/Multiple%20Benefits_2012.pdf

²⁶ StateStat, "Goals," The State of Maryland, Accessed July 1, 2014, <https://data.maryland.gov/goals/greenhouse-gases>

²⁷ Ibid

²⁸ StateStat, "Goals," The State of Maryland, Accessed July 1, 2014, <https://data.maryland.gov/goals/greenhouse-gases>

Community agriculture, especially in more urban areas, can help consumers lower their food emissions, and therefore GHG emissions, by giving them the option and opportunity to eat food from local sources. By making a commitment to community agriculture at the state level, Maryland can take a significant step closer to achieving its GHG reduction goal and contribute to a cleaner and healthier statewide climate.

Energy Efficiency

In Maryland food manufacturing is the second largest consumer of energy in industrial sectors.²⁹ Urban agriculture is 3-5 times more productive per acre than large scale farming.³⁰ This is because community gardening has significantly less embedded energy use than traditional large-scale farming. Large amounts of energy are used in manufacturing, transport, and disposal of materials used to farm. Community gardens can greatly reduce energy usage by composting. Mass-produced compost may be economically efficient, but it is ultimately energy inefficient because households throw away tons of good, compostable material to the every year and instead buy compost. Setting up composting with community gardens—65.6% of gardens in New York City compost³¹—eliminates this embedded energy cost.³² Community gardens can be utilized to increase efficiency in this sector.

Other Benefits

Health and Food Security

The negative correlation between amount of schooling and obesity rates represents the need for community gardens as learning tools and as ways to get the average citizen reconnected to their food, as well as good, healthy food. The obesity rate in Maryland for those who have less than a High School degree is 35.6%, whereas for a College Graduate it is 22.3%.³³ Additionally, diabetes prevalence is on an upward trend in the State and is now affecting 10.2% of adults in Maryland.³⁴

²⁹ "Save Energy Now for Maryland Manufacturing", Maryland Energy Administration, <http://energy.maryland.gov/SEN/MarylandIndustry.html>

³⁰ "Benefits of Community Gardening" Accessed July 15, 2014, <http://www.gardendallas.org/benefits.htm>

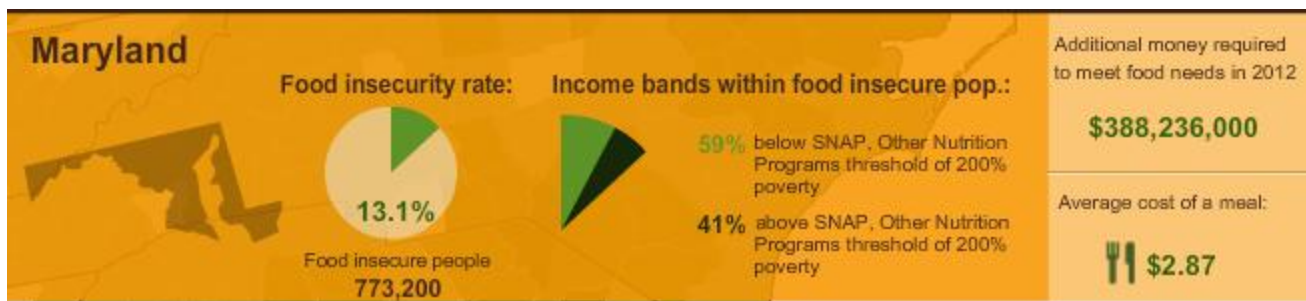
³¹ "Community Garden Survey: New York City, Results 2009/2010". M. Gittleman, L. Librizzi, E. Stone. http://www.grownyc.org/files/GrowNYC_CommunityGardenReport.pdf

³² "Energy Efficiency Community Gardens", Dr. Gareth Evans, 2 September 2012, <http://www.energysavingcommunity.co.uk/energy-efficient-community-gardens.html>

³³ "State Data: Maryland," 2014. America's Health Rankings, United Health Foundation, Accessed July 9, 2014, <http://www.americashealthrankings.org/MD>

³⁴ Ibid

Maryland is home to some of the wealthiest and most highly educated counties in the country, and yet hundreds of thousands of Marylanders struggle with food insecurity and hunger. The USDA divides the definitions for food insecurity into two categories: Low Food Security is defined as, “reduced quality, variety, or desirability of diet, little or no indication of reduced food intake.” Very Low Food Security is defined as “multiple indications of disrupted eating patterns and reduced food intake”.³⁵ In simpler terms, food insecurity in general refers to the inability to consistently access nutritious and safe food. Over 773,000 Marylanders are food insecure, or about 13.1 percent of the state’s population.³⁶ Included in that overall figure are the 19.3 percent of children in Maryland that are food insecure. Roughly, that is one in eight Marylanders that are food insecure and one in six children. Some of the counties with the most food insecure populations are Somerset, Dorchester, Prince George’s, Wicomico, Worcester and Allegany.³⁷



Source: “Hunger in Maryland,” Maryland Food Bank, Accessed July 1, 2014,

<https://www.mdfoodbank.org/hunger-in-maryland/>

Just in the area served by the Maryland Food Bank (all counties except for Montgomery and Prince George’s which are served by the Capital Area Food Bank), nearly a half million individuals identify as food insecure. Of those food insecure individuals, 38 percent do not even qualify for federal or state food assistance because their households earn more than 200 percent of the federal poverty line. This means that a four-person household earning a yearly income of \$47,000 would not be eligible for state and federal food assistance³⁸.

Community agriculture can increase community food security by providing a more stable and locally controlled source of food. According to the Community Food Security Coalition, during “a 130-day temperate growing season, a 10’x10’ meter plot can provide most of a 4-person household’s total

³⁵ “Definitions of Food Security,” United States Department of Agriculture Economic Research Service, Accessed July 9, 2014, <http://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security.aspx#.U8V6L5TnTPY>

³⁶ “Hunger in Maryland,” Maryland Food Bank, Accessed July 1, 2014, <https://www.mdfoodbank.org/hunger-in-maryland/>

³⁷ Ibid.

³⁸ Ibid.

yearly vegetable needs, including much of the household's nutritional requirements for vitamins A, C, and B complex and iron".³⁹ Therefore, urban agriculture and community gardening can help solve the directly related problems of poor nutrition and food insecurity.⁴⁰ Further, community gardening is a great source of individual exercise and contributes to community wellness. It is a healthy activity for both individuals and neighborhoods, and therefore contributes to better overall community health.⁴¹ Gardening and local food production is a good source of exercise because they require manual labor.⁴² It is a lifetime activity and is associated with satisfying labor as well as physical and mental relaxation.⁴³

Finally, community agriculture has a healthy and positive impact on youth. Many urban agriculture and gardening programs take place at local schools, and these programs have been shown to have significant positive health outcomes on young people. Not only do school-based gardening programs teach children biology and environmental science, but they also help youth become familiar with healthy foods, particularly fruits and vegetables that are often missing from children's diets and can reduce obesity-related illnesses.⁴⁴ Research shows that children are more likely to eat vegetables if they grow them themselves and prefer the taste of fruits and vegetables to other food if they grow up eating produce fresh from the garden.⁴⁵ Giving people a vested interest in their food will make them more likely to make healthier food choices.

Environmental Literacy Standards

In 2011, Maryland developed environmental literacy standards to raise environmental awareness in Maryland students.⁴⁶ There are Eight Standards that Maryland schools are encouraged to reach. Community gardens allow for schools to meet several of the standards, including:

- Standard 4 – Populations, Communities, and Ecosystems – One of the topics discussed in this standard is community and ecosystem dynamics. This topic explains how the interrelationships

³⁹ Anne C. Bellows, Katherine Brown and Jac Smit, "Health Benefits of Urban Agriculture," Community-Wealth.org, Accessed July 1, 2014, <http://community-wealth.org/content/health-benefits-urban-agriculture>

⁴⁰ Adam James, "How Urban Farming Can Transform Our Cities - and Our Agricultural System," Think Progress, May 29, 2012 <http://thinkprogress.org/climate/2012/05/29/491271/how-urban-farming-can-transform-our-cities-and-our-agricultural-system/>

⁴¹ Anne C. Bellows, et al

⁴² Ibid

⁴³ Anne C. Bellows, Katherine Brown and Jac Smit, "Health Benefits of Urban Agriculture," Community-Wealth.org, Accessed July 1, 2014, <http://community-wealth.org/content/health-benefits-urban-agriculture>

⁴⁴ Ibid.

⁴⁵ Saint Louis University, "Children Eat More Fruits and Vegetables If They Are Homegrown," Science Daily, Accessed July 24, 2014, <http://www.sciencedaily.com/releases/2007/04/070418163652.htm>

⁴⁶ Samuels, Robert. "Md. Teachers Gear up for New 'environmental Literacy' Standard." The Washington Post, July 13, 2011. July 13, 2011. Accessed August 5, 2014. http://www.washingtonpost.com/local/education/md-teachers-gear-up-for-new-environmental-literacy-standard/2011/07/11/gIQANbvCI_story.html.

and interdependencies of organisms and populations contribute to the dynamics of communities and ecosystems. Community agriculture shows this relationship in action. Another topic is genetic diversity. One of the current issues with agriculture is the reliance on monoculture. Community agriculture, when using methods such as crop rotation, can show ways how to properly grow food.

- Standard 5 – Humans and Natural Resources – This standard will have students use concepts from a variety of sciences to analyze and interpret the effects of humans on earth's natural processes and resources. Agriculture has had profound impacts on our environment. One of the most profound impacts is the destruction of forests. Community agriculture can be taught as a way to mitigate forest destruction and preservation of natural lands.
- Standard 6 – Environment and Health – One of the main benefits of community agriculture is the positive impact it has human health. The sixth environmental literacy standard endeavors for student understanding of the effects of human environmental changes and potential. One of the topics in this standard is how human changes impact the environment and human health. Community agriculture can be used to show how initial, negative human impacts on the environment can be reversed by reducing pollution from the cities. It can also be a tool for reducing urban air pollution. One can also draw on how a lack of proper, environmental engagement can be damaging to people.
- Standard 7 – Environment and Society – This section seeks to educate the student on the intricacies of the natural world with human society. Some concepts include: individual and group aspects and the environment, economics and the environment, and political systems and the environment. Involvement with community agriculture can expose students not only to scientific and environmental issues, but economic and political advocacy issues as well. Advocating for their gardens, writing grant proposals, and learning about food production all tie agriculture and gardening into broader societal topics.
- Standard 8 – Sustainability – The eighth standard will have children understand the multiple intricacies of sustainability. With community agriculture, students would be able to understand the interconnectedness of agricultural systems. Students would learn how economics affects sustainability and how community agriculture can result in increased economic growth and increased sustainability. Social and cultural systems and their impact on sustainability would be better understood. Lastly, the action component of this standard would be learned since community agriculture teaches how individual and community engagement can help lead to sustainability.⁴⁷

⁴⁷ "Maryland Environmental Literacy Standards." Maryland State Department of Education. Accessed August 5, 2014.

Smart Growth and Economic Development

One estimate shows that for every \$1 invested in a community garden, \$6 worth of vegetables can be generated.⁴⁸ The following are four ways in which local food production is beneficial for local economic development:

1. *Local food production keeps more money in the community:* A dollar spent on local food goes straight to a local farmer or business, which they can then spend at another local facility or business.⁴⁹
2. *Community agriculture can create local jobs:* A growing demand for local food allows local food businesses and urban farmers to add more jobs to their industry.⁵⁰ Community farms and gardens by nature are community-driven projects with the primary goal of providing fresh and healthy food for residents. However, these gardens can also operate as businesses with full-time staff.
3. *Urban farms can create economic value from previous waste streams:* Some urban farms are using food waste to create new food. For example, an Oakland, CA sustainable food company called Back to the Roots sells a grow-at-home mushroom kit that uses recycled plant-based waste to grow gourmet mushrooms.⁵¹
4. *Farming promotes the development of marketable crafts and trades:* Growing food requires skills such as carpentry, irrigation, electric work, construction, and cooking. Urban farmers community gardeners who learn these skills can use them in many other job spheres in a local economy.⁵²

Strengthening community agriculture also fits perfectly within Maryland's commitment to smart growth. In keeping with Governor O'Malley's sustainability goals, smart growth development aims to foster a sense of community, better preserve natural resources and provide all Marylanders with a high

⁴⁸ Adam James, "How Urban Farming Can Transform Our Cities - and Our Agricultural System," Think Progress, May 29, 2012 <http://thinkprogress.org/climate/2012/05/29/491271/how-urban-farming-can-transform-our-cities-and-our-agricultural-system/>

⁴⁹ Rohit Kumar, "How Urban Agriculture is Revitalizing Local Economies," The Huffington Post, June 4, 2013, http://www.huffingtonpost.com/rohit-kumar/revitalizing-local-economies_b_3380472.html

⁵⁰ Ibid.

⁵¹ Ibid.

⁵² Ibid.

quality of life regardless of their community geography.⁵³ Community gardening programs not only fulfill all of these goals, but provide another outlet for smart growth development practices in Maryland.

Current Obstacles

Long Term Sustainability/Interest

Even if a community overcomes the obstacles they face in starting a garden, sustaining the garden for an extended period of time can be a challenge. Often, garden and agriculture projects have one or two “champions” in the beginning - people who contribute much of their energy and time to starting the garden.⁵⁴ Over time, the initial interest in the garden can plateau and sometimes decline. Often, garden leaders are elderly individuals, and therefore it is important to engage young people in the leadership of the garden in order to ensure the garden’s future success.⁵⁵ Due to the labor-intensive nature of maintaining a garden, it is crucial to have a sustained level of interest - otherwise the quality of the garden declines.⁵⁶ Unfortunately, if the “champion” or “champions” also lose interest, or move away from the community, the gardens have little chance of survival. Community gardens need strong leadership, and the Commission could ensure this by supporting the “champions” that already exist in Maryland.⁵⁷ State support is needed to create an effective mentorship and leadership program to facilitate the success and long-term survival of community gardens.

Restrictive Zoning

A major legal barrier to establishing community agriculture is restrictive zoning. Zoning is a tool used by municipal planners to resolve discordant land-use interests within the community. The goal is to separate incompatible uses, such a wastewater treatment and school playgrounds, in order to protect public health and safety while building a diverse, developed community.⁵⁸ Agriculture has traditionally been zoned away from commercial and especially residential areas due to some

⁵³ “Smart Growth Planning Topics,” Maryland Department of Planning, Accessed July 9, 2014, <http://www.mdp.state.md.us/OurWork/smartGrowth.shtml>

⁵⁴ “Community Gardens Program,” New York State Department of Agriculture and Markets, Accessed July 18th, 2014, <http://www.agriculture.ny.gov/cg/CGHome.html>

⁵⁵ Valerie Rupp (Parks and People) in discussion with author, July 2014

⁵⁶ “Community Gardens Program,” New York State Department of Agriculture and Markets, Accessed July 18th, 2014, <http://www.agriculture.ny.gov/cg/CGHome.html>

⁵⁷ Valerie Rupp (Parks and People) in discussion with author, July 2014

⁵⁸ “Urban Agriculture: A Tool for Creating Economic Development and Healthy Communities in Prince George’s County, MD,” Prince George’s County Department of Planning, 2012, http://www.pgplanning.org/Resources/Publications/Urban_Agriculture.htm

associated characteristics such as noise, smells, and irregular hours of operation.⁵⁹ Within zoning codes for residential areas, it is typical to find language forbidding the construction of structures like hoop houses, raising animals like chickens and goats, and restrictions on the height and type of plants that can be grown in a yard.⁶⁰

Due to the diverse geography and interests in Maryland, zoning regulations differ widely from county to county. Some areas of the state, such as Baltimore City, have adapted their zoning ordinances to allow for more flexibility for agricultural activities to occur even in urban areas.⁶¹ Montgomery County, on the other hand, recently revised their zoning ordinance to limit agriculture in residential zones. The new code will go into effect on October 1, 2014 and will likely make raising food and fiber more difficult in these areas.⁶² In other counties that contain both rural and urban settings, such as Prince George's and Anne Arundel, designations differ within the county.^{63,64} For some areas of the county, the primary designation may be agricultural but in other areas that are designated as urban growth or urban development areas, residents who wish to raise animals or grow crops could face zoning barriers.^{65,66,67} Because of the wide variation in zoning codes between and within counties, it may be confusing and difficult for a resident to know where to turn in order to begin developing a personal or community garden.

Food Policy

Schools and communities are interested in edible gardening and serving local foods, but they are limited because of food policy. Schools currently can't serve the food produced from their gardens in school lunches. It can only be served as snack food when the garden is used as enrichment learning.⁶⁸ This weakens incentives for school gardens and renders them less useful than they should

⁵⁹Amanda Erickson, "The Birth of Zoning Codes, A History," The Atlantic CityLab, 19 June 2012, <http://www.citylab.com/politics/2012/06/birth-zoning-codes-history/2275/>

⁶⁰Nina Mukherji and Alfonso Morales, "Zoning for Urban Agriculture," American Planning Association, March 2010, <https://www.planning.org/zoningpractice/2010/pdf/mar.pdf>

⁶¹"Home Grown Baltimore: Grow Local, Baltimore City's Urban Agriculture Plan," Baltimore City Office of Sustainability, City of Baltimore Office of Planning, November 2013, <http://www.baltimoresustainability.org/sites/baltimoresustainability.org/files/HGB%20Grow%20Local%20Urban%20Ag%20Plan%20final.pdf>

⁶²John Zawitoski (Montgomery County, Planning) in email discussion with the authors, July 2014

⁶³Gül Guleryuz (Prince George's County, Planning) in email discussion with authors, July 2014

⁶⁴Lisa Barge (Anne Arundel County, Planning) in discussion with authors, July 2014

⁶⁵Katherine Munson (Worcester County, Planning) in discussion with authors, July 2014

⁶⁶Martin Sckolick (Talbot County) in discussion with authors, July 2014

⁶⁷Lisa Barge (Anne Arundel County, Planning) in discussion with authors, July 2014

⁶⁸Valerie Rupp (Parks and People) in discussion with authors, July 2014

be.⁶⁹ This issue exists because of procurement contracts that most schools use to buy food.⁷⁰ Some schools have already worked to integrate local food preferences into their contracts. Food distribution companies are not incentivized to alter their corporate distribution practices, but state that a majority of a company's clients expressed a strong interest in local food, a change in corporate policy could occur.⁷¹ A State push on this initiative would harness the existing, making it worthwhile for corporations to shift their policies on what is distributed to schools. This way, local food, in addition to anything produced in a school garden, could be used at lunch. As it is difficult for schools to purchase directly from local producers, or to grow enough produce to feed the entire school, changing the corporate policies of big distribution companies is an important strategy for healthier school lunches.⁷²

Policies on prepared food also limit community gardens that are big enough to be able to sell products to the public. They cannot sell anything they have prepared, such as a canned good, unless it is prepared in a commercial kitchen. Building a commercial kitchen is cost prohibitive for most gardens, leaving them unable to sell goods unless funding is given for a kitchen.⁷³

Finding Usable Land and Quality Soil

Finding space is also an issue, as residents believe that there is not enough room for both gardening and recreation at existing parks. Creating a database of vacant lots will help interested parties find unused, publicly-owned land other than parks.⁷⁴ Ensuring the soil is safe to use when a plot is discovered is also an important issue. A study of Baltimore community gardeners' knowledge of soil contamination risks unearthed that gardeners seem to have low levels of concern about potential contaminants in their soil because they assumed any issues had already been taken care of when the garden was started.⁷⁵ Baltimore officials advocated strongly for the creation of a central source of information related to soil contamination concerns. The researchers recommend that officials provide services or encourage use of tools to test soils, because toxins can be left from something as basic as previous owners dumping cleaning solution water.⁷⁶ The potential dangers do not outweigh the

⁶⁹ Ibid

⁷⁰ "Local Foods in Maryland Schools: Key Findings and "Next Steps" for Stakeholders and Policymakers", Nessa Richman, University of Maryland Department of Agricultural and Resource Economics, September 2010, https://extension.umd.edu/sites/default/files/_docs/Farm-to-School-Policy_ExecSummary_FINAL.pdf

⁷¹ Ibid.

⁷² Ibid.

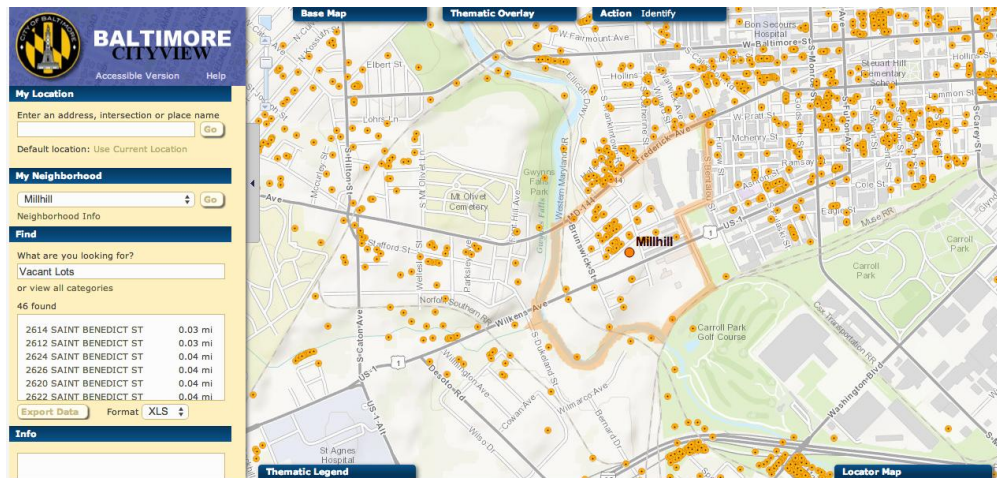
⁷³ Interview with Valerie Rupp, Parks and People, 7/21/14

⁷⁴ "Roosevelt Park City Farm: A Baltimore Community Garden", Allie Hu & Molly McCullagh, Center for a Livable Future, July 12, 2010, <http://www.livablefutureblog.com/2010/07/roosevelt-park-city-farm-a-baltimore-community-garden>

⁷⁵ Tara Garnett, "It's Not Easy Being Green: Assessing the Challenges of Urban Community Gardening," Plos Blogs, February 13, 2014, <http://blogs.plos.org/everyone/2014/02/13/easy-green-assessing-challenges-urban-community-gardening/>

⁷⁶ Ibid.

tremendous environmental and health benefits local gardening brings, but this booming trend requires government action to support and protect its citizens.



Map of vacant lots in Baltimore City (orange dots) created by CityView. Source: Baltimore CityView MOIT/EGIS, Accessed July 10th, 2014, <http://www.cityview.baltimorecity.gov>

Lack of Centralized Information

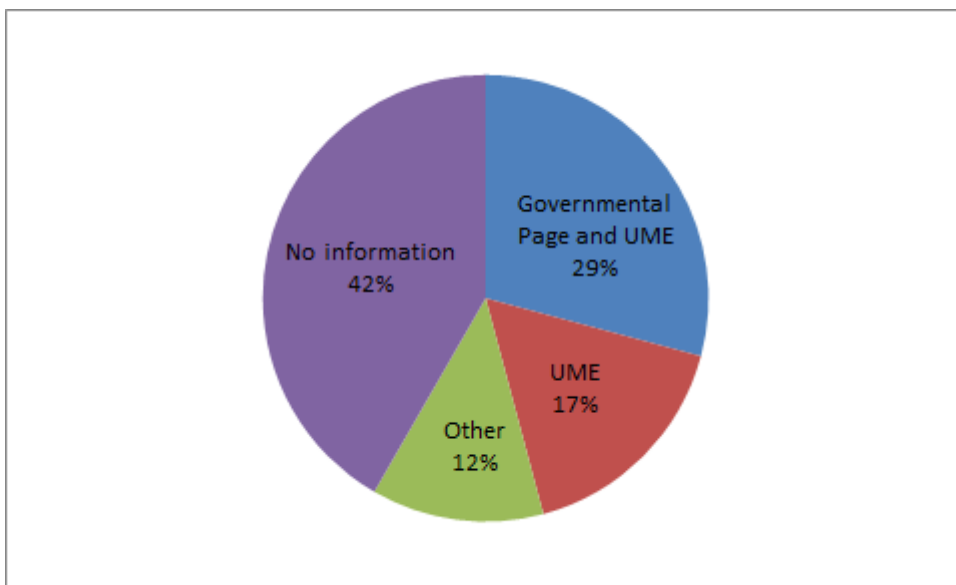
In Maryland, developing urban agriculture and community gardens faces several obstacles, such as establishing good management practices, getting necessary permits and ensuring good soil and water quality. Due to Maryland's rich agricultural tradition and commitment to community building, any of the solutions to these problems already exist in State agricultural and environmental programs. Unfortunately, these tools may be hidden in agency or organizational websites, and interested community members may not know they exist. For example, University of Maryland Extension has an "Eat it, Grow it" Gardening Program, a well-developed program that provides educational information, "how-to's" for starting a garden, and links to community gardens broken down by county.⁷⁷ It is a helpful resource for someone interested in joining a community garden. However, since the program is part of the University of Maryland Extension website, community members with little or no agricultural background may not know to start with or search for the Extension office.

An analysis was completed of how accessible information is online for the average citizen by looking on all of the county's websites, the State of Maryland's website, and searching for community garden information on the University of Maryland Extension websites and other third party websites.

⁷⁷ "Grow it, Eat It", University of Maryland Extension, Accessed July 5, 2014, <http://extension.umd.edu/growit>

When one searches for “Maryland community gardens”, counties’ web pages pop up, but nothing comes up on the state website coordinating all of this information or talking about the merits of community gardening. There is no information accessible to the average citizen on the internet coordinating information about community gardens for all of Maryland.

After searching for information on the county level, we discovered 42% of Counties have no information on community gardens. Of ones that did, 29% had information on a governmental page and the University of Maryland Extension site for community gardens, 17% only were referenced on the UME page, and 12% had information on another third-party website (non-profits or news source).



Percent of counties with information on community gardens, broken down by the type of the resource.

“Information” was determined to mean resources on how to develop a successful community garden, where to develop or rent plots, or contact information. This information must be about a garden that produces food resources for the community. Proposals for unfulfilled grants or plans and community non-food resource gardens were not included as “information.” “UME” stands for University of Maryland Extension and “other” means a third-party website including non-profits and news sources.

Methodology: A review of Maryland.gov website was completed including visiting relevant State agencies’ pages, as well as a search of the entire website. Each county government’s page was searched and their relevant agencies, such as Parks and Recreation, were reviewed. The University of Maryland Extension page was also visited. In a search engine, “community gardens [insert name of county here]” was searched for each county to find any other information not on governmental pages.

One example of a solution to this problem is evidenced by The New York State Department of Agriculture and Markets' Community Gardens Program. During its one year of operation, the program mapped all available vacant lots and compiled many relevant resources and contacts related to community gardens on their website.⁷⁸ The webpage for the program includes resources such as extensive contact information lists, soil testing information, a small grant program, and how to join or start a community garden or school garden. There is also information listed on the funding available through three different State departments.⁷⁹ This webpage inspired the idea of one of the functions of our proposed Commission, to gather existing Maryland resources and create a web page, which is described in more detail below.

Current Maryland Initiatives

In April 2014, the Maryland General Assembly passed a tax credit that authorized Maryland counties and the City of Baltimore to implement a property tax credit for urban areas used for agricultural purposes.⁸⁰ This incentive went into effect on July 1, 2014 but it will be up to the districts whether or not they want to offer implement this new credit.⁸¹

Organizations and planning documents for Maryland are already devoted to this issue and are great resources to furthering community gardens. We would like to highlight a few of these, including UME's Master Gardener's program, the Baltimore City Planning Commission's sustainability plan, Power in Dirt, CityView, and the Parks and People Foundation.

The Master Gardener program at the University of Maryland Extension (UME) was started in 1978 and has a strong presence across Maryland. It aims to educate residents about safe, effective and sustainable horticultural practices by training volunteers to be horticultural educators for UME. Participants receive 40-50 hours of training and then work in their communities teaching about sustainable community gardening, youth gardening, and composting. UME has a focus on urban farming specifically, and offers resources and trainings on entrepreneurial agriculture in Baltimore City neighborhoods.⁸²

⁷⁸ "Community Gardens Program," New York State Department of Agriculture and Markets, Accessed July 18th, 2014, <http://www.agriculture.ny.gov/cg/CGHome.html>

⁷⁹ Ibid.

⁸⁰ Megan Wakefield, "Maryland State Legislature Passes New Urban Agriculture Tax Credit", Accessed June 20, 2014, <http://communitylaw.org/urbanagriculturelaw/propertytaxcredit>

⁸¹ Ibid.

⁸² "Home Grown Baltimore: Grow Local, Baltimore City's Urban Agriculture Plan," Baltimore City Office of Sustainability, City of Baltimore Office of Planning, November 2013, <http://www.baltimoresustainability.org/sites/baltimoresustainability.org/files/HGB%20Grow%20Local%20Urban%20Ag%20Plan%20final.pdf>

In November 2013, the Baltimore City Planning Commission adopted a new sustainability plan to develop a greener, healthier city. *Homegrown Baltimore* is an initiative designed to “increase the production, distribution, sales, and consumption of locally grown food within Baltimore”.⁸³ The plan stresses equitable food access, support for gardens and farms, and environmental sustainability. The report addresses the main obstacles to growing local food in the city:

- Difficulty of procuring and keeping land
- Access to water sources
- Soil quality and monitoring
- Finding capital investments
- Lack of agency support⁸⁴

The report provides recommendations for these problems and some steps for implementation. The report included new zoning code language, which was also adopted by the city in late 2013.⁸⁵ These plans, which include steps for linking farmers to producers and promoting local food on the markets, provide the first steps in developing widespread urban agriculture in Baltimore City, and provided a focus for the major obstacles in Maryland to this proposal.

The following three initiatives and organizations’ scope is only Baltimore City. These programs would bring more benefits to Maryland if they were added into a central website. It would be easier for residents to discover the programs, and it would enable Baltimore City to more easily share its successes around urban agriculture with counties in Maryland. Power in Dirt is the Baltimore Mayor’s initiative and is the first comprehensive plan to reduce barriers that prevent the revitalization of vacant lots. The program helps residents easily locate a city-owned vacant lot to adopt and have streamlined the process of applying to adopt a lot, and tell residents what activities are permitted on the lot, and how they can access water.⁸⁶ CityView is run by a non-profit that gives citizens information ranging from when their recycling gets picked up, to how many vacant lots there are in a neighborhood. It is a “gem online” and could be used as a model for the rest of Maryland in mapping vacant lots, and other useful information for community development.

The Parks & People Foundation has worked to improve the quality of life in Baltimore since 1984.⁸⁷ They work to restore neighborhoods and natural resources and focus on the enrichment of

⁸³ Ibid.

⁸⁴ Ibid.

⁸⁵ Ibid.

⁸⁶ “We’re here to help you adopt a vacant lot, start a revitalization project, and connect you with services and resources,” Power in Dirt, accessed July 25, 2014, <http://www.powerindirt.com/how.html>

⁸⁷ “About Parks and People”, Parks and People, accessed July 25, 2014, <http://www.parksandpeople.org/about/>

youth through their two main focuses: “Green Parks, Clean Streams & Green Communities” and “Motivating Youth Programs.”⁸⁸ Their mission is to support a wide range of recreational and educational opportunities by promoting a healthy natural environment for Baltimore. They offer resources about greening for watershed health, grants for greening, community greening, and greening on public lots. As a Foundation awarded the Seal of Excellence by the Maryland Association of Nonprofit organizations, Parks and People is a well-established resource that can help support the goals of the Commission.⁸⁹

Our Solution

With greater state support for community gardens, these initiatives as well as others could flourish and benefit communities across the state for years to come. Therefore, we propose the creation of the Governor’s Commission for Community Gardening (GCCG) that will institutionalize these current scattered efforts in Maryland. This interdisciplinary commission could be comprised of members from the Department of Planning, Department of Agriculture, Department of Business and Economic Development, University of Maryland Extension, as well as relevant county officials, organizations and businesses with local agricultural knowledge.

The Commission will act as an advocate and a support system for new and existing community agricultural ventures in Maryland. To do this, there are several goals we propose that the Commission work to accomplish:

- Design and publish a webpage that will be a central information source for community agricultural projects. This webpage will include maps of vacant lots across the state, maps of existing community gardens in the state, contact information and zoning and permitting information, as well as links to current community gardening organizations in the state. The goal of the webpage is to allow for freer sharing of information that is currently scattered amongst State, County, and non-profit levels.
- Establish a small grants program to supply funding to community gardens for infrastructure, soil testing and other costs.

⁸⁸ Ibid.

⁸⁹ Ibid.

- Establish a statewide community garden “contest” as part of a public relations campaign that will utilize social media to highlight successful community gardens in Maryland and bring national attention to the state as a leader in community agriculture.
- Provide direct technical assistance to community gardens that are facing regulatory or legal roadblocks.
- Work with Maryland schools to explore new options for serving school or community-grown produce at lunchtime
- Develop mentorship and training programs to encourage the long-term sustainability and output of community gardens.

Together, these initiatives will not only increase governmental support for community gardeners in Maryland, but also advertise to the nation that Maryland is community garden friendly. The activities of the Commission in conjunction with the work of community gardeners will make Maryland a leader in community agriculture.

Conclusion

The community garden movement has taken off around the country, and Maryland is no exception. Entities such as University of Maryland Extension, the Parks and People Foundation, and county community gardens have already recognized the benefits and importance of community agricultural projects. All across the state, farmers’ markets and other local food sources are blossoming as residents begin to take a more active interest in getting their food from local sources.

Even with all of the successes, stakeholders across the state have noted obstacles to community agriculture. Finding committed and knowledgeable leaders, and engaging youth to maintain gardens long-term are major obstacles, as are restrictive zoning, difficulty in locating public vacant lots and lack of soil safety testing. Additionally, online resources coordinating this information are scattered, incomplete and difficult to find. Further, current policies reduce incentives for schools to develop their own gardens because they can’t serve the produce at lunch.

The Governor’s Commission for Community Gardening will support existing community agricultural projects as well as encourage the creation of new ones. Accomplishing the goals of the

Commission will bring a variety of benefits to Maryland, such as improved public health, stormwater management and decreased food insecurity and hunger. It will also directly contribute to meeting four of Governor O'Malley's Strategic Goals in the areas of crime prevention, energy efficiency, bay restoration and greenhouse gas emission reduction. All of the GCCG's activities will help make Maryland a national leader in the community agricultural movement.

Community gardening is a comprehensive and promising opportunity. State support is needed in conjunction with nonprofit work to allow community agriculture to flourish and make Maryland a greener and healthier state.
