

Urban Agriculture Policy, Planning, and Practice

A Report for the City of Hamilton, Ontario

May 2013



Edible Landscaping in Front of Hamilton City Hall
Source: City of Hamilton

This report was commissioned and submitted to the Neighbourhood Development Strategy Office in 2013 by the Urban Agriculture Working Group, representing various Departments and Neighbourhood Action Team Planning including:

Neighbourhood Development Office, City Manager's Office
Planning and Economic Development
Public Health Services
Public Works
City Housing Hamilton
Chair of McQuesten Community Planning Team
Resident of the South Sherman Planning Team

Research was completed by Sarah Corey and Melissa Routley, graduate students in the Master of Science in Planning Program in the Department of Geography and Planning at the University of Toronto. Academic supervision and guidance was provided by Professor Sarah Wakefield.

For questions or comments, please contact:

Suzanne Brown
Manager of Neighbourhood Development Strategies
City of Hamilton
905-546-2424 x4711
suzanne.brown@hamilton.ca

Sarah Wakefield
Associate Professor, Department of Geography and Programme in Planning
University of Toronto
(416) 978-3653
sarah.wakefield@utoronto.ca

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Background

In 2011, under the leadership of the City of Hamilton, the Neighbourhood Action Strategy was launched to build on the City's history of working collectively to make change. The Strategy engages residents to improve conditions for everyone in the neighbourhoods where they live, work, learn, and play. The Neighbourhood Action Strategy has an implementation time-frame of five years, culminating in 2017.



The logo for Hamilton Neighbourhood Action Planning features the word "Hamilton" in a large, grey, sans-serif font. Below it, the words "NEIGHBOURHOOD" and "ACTION PLANNING" are stacked in a smaller, red, sans-serif font.

The Neighbourhood Action Strategy was founded on the knowledge that where people live affects their health and well-being. Based on findings from research, newspaper reports, and personal experiences it is estimated that 50% of an individual's health status is affected by conditions in their day-to-day life, with a major part of this being where the individual lives in the city.¹ Factors such as proximity to a grocery store, to an industrial site, or to a park are just a few of the things that can affect the health of people living in Hamilton's neighbourhoods.

A major tenet of urban planning practice is to ensure that people have equal opportunity to enjoy healthy and vibrant lives in the neighbourhoods they live in. The City of Hamilton's Neighbourhood Development Office was established to work with residents and local leaders to make neighbourhoods better and healthier places for all of Hamilton's residents. Community consultation in Hamilton focuses on using an asset-based community development approach combined with a land-based planning process. In identifying neighbourhood assets and weaknesses the consultations led by the Neighbourhood Development Office have provided the information to develop unique plans for ten Hamilton neighbourhoods.

¹ Brown, 2012

A common challenge that came up within several of the neighbourhoods was a lack of access to fresh and healthy food. There was also an interest in urban agriculture as a way of leveraging underutilized urban spaces for food production. With this in mind, the Neighbourhood Development Strategy is investigating the potential for urban agriculture as a community development tool that could improve access to fresh nutritious food and the overall well-being of people living in Hamilton. This report will investigate how urban agriculture may fit into Hamilton's neighbourhoods, as a significant element of the plans identified and implemented by the Neighbourhood Action Strategy.

Purpose

This report is intended to assist policy and decision makers at the City of Hamilton as they investigate how urban agriculture might be better enabled by the City's programs and regulatory framework. It can also be used as an educational tool for community groups and individuals interested in knowing more about the growing field of urban agriculture practice.

This report will include a rationale for promoting urban agriculture, a comprehensive review of the many forms of urban agriculture and best practices examples within each of these forms. This report will also identify certain potential impacts related to urban agriculture practices in order to increase understanding and alleviate concerns.

Information on policy and planning supports used by municipalities that are currently fostering urban agriculture activities will be provided to aid decision makers in understanding how urban agriculture can be integrated into Hamilton's municipal structure. The City of Hamilton's Vision, planning framework, and existing goals and activities related to urban agriculture will also be highlighted.

Urban Agriculture is the practice of cultivating, processing, and distributing food and other products in and around cities; it can be accompanied by a variety of complementary activities in its pre- and post-production phases, and it serves a variety of social, environmental, economic, nutritional, and recreational needs.

The report will conclude with a series of recommendations about how to move forward with urban agriculture practice in Hamilton.

Why Promote Urban Agriculture?

Community Engagement and Inclusiveness

Urban agriculture enhances community engagement and inclusiveness in urban neighbourhoods. It offers the opportunity for people to come together to create productive urban green spaces, in forms such as community gardens, urban farms, and edible landscaping. Taking part in urban agriculture activities can help people overcome various personal or cultural barriers such as age, ethnicity, class, or gender while instilling pride in the environment around them.²

Urban agriculture activities offer inclusion opportunities for both individuals and groups, through work that builds organizational capacity in communities by strengthening relationships and cooperation among neighbours.³ With improved access to well-maintained green spaces,⁴ citizens become engaged through volunteer or paid work which often engages those that are unemployed, or those with employment opportunities available to them.⁵ Social interaction leads to the growth of social capital, strengthening the social fabric of neighbourhoods. This results in communities of engaged citizens who care for their public spaces and the well-being of others in those spaces.

² Arroyo-Rodriguez and Germain, 2012.

³ Doron, 2005; Mogk, Kwiatkowski and Weindorf, 2010.

⁴ *Ibid.*

⁵ Smit, Nasr and Ratta, 2001.

Social Enterprise and Community Economic Development

Urban agriculture provides an opportunity to build economic capital in communities by increasing economic prosperity through job creation in new local food production enterprises.⁶ Socially-minded organizations, community groups and private businesses can use urban agriculture methods to grow, process, and sell fresh and local food. One American study showed that a \$1 investment in urban food production returned \$6 in fresh produce, and that a third of all agricultural output in the United States comes from urban/metropolitan areas.⁷ Entrepreneurial urban agriculture activities are often unconventional and fill gaps in our existing food system, making healthy food available to more people through alternative channels. The production of fresh produce in an urban area feeds into the local economy, producing income for those that work in urban agriculture and also providing an important output of healthy food into the community. Urban agriculture supplies an increased demand for locally-grown food by restaurants and grocers.⁸ Urban agriculture work may also include community supported agriculture (CSA), small plot intensive (SPIN) farming, and backyard gardening. These activities can contribute to community economic development and have a track record of operating as successful micro-enterprises.⁹



Southlands' First Farm Stand in 2009
Source: Southlands Heritage Farm

⁶ Mogk, Kwiatkowski and Weindorf, 2010.

⁷ Doron, 2005.

⁸ Mogk, Kwiatkowski and Weindorf, 2010.

⁹ Baker 2000.

Hamilton Victory Gardens

location: Hamilton, Ontario

est.: 2011

size: currently 5 gardens across the city

landowner: private

farming method: raised bed gardens and orchard

who: non-profit organization

why: mission to increase food security for at-risk people in Hamilton's communities

Best Practice

Hamilton Victory Gardens is a mission-driven non-profit organization dedicated to alleviating poverty and food insecurity in Hamilton through urban agriculture. What began in an inaugural garden on Catherine Street North in the spring of 2011, has now evolved into several localized Victory Gardens on donated land across the city. Under the leadership of Bill and Judy Wilcox, Hamilton Victory Gardens has been able to transform empty city lots into spaces that grow community as well as fresh produce.

The program is entirely volunteer-driven, and 100% of the produce grown is donated to local food banks and hot meal programs. In 2012 the five gardens under cultivation were able to generate over 13,000 pounds of produce using pesticide and fertilizer-free sustainable cultivation methods. The gardens are contained within raised beds, and compost is produced from donated food scraps and garden waste to provide soil supplements for the gardens. The Victory Gardens also provide fantastic educational opportunities for volunteers and community members to gain hands-on learning experiences with gardening, composting, and healthy food skills.

Another major benefit is that urban agriculture turns underutilized spaces into productive ones by growing food and other plants on vacant property. This addresses the threat of blight in otherwise vacant and deteriorating lots and increases the number and quality of green spaces in neighbourhoods.¹⁰ Physical improvements to the environment increase the value of neighbouring properties and improve community safety. Communities that practice urban agriculture have seen an increase in housing values and in turn an ameliorated property tax base. They also report a decreased need for policing and municipal maintenance of blighted properties.¹¹

Food Insecurity

Urban agriculture improves food security in communities and can assist individuals who are living with food insecurity. Growing food in urban or peri-urban areas is a strategic way of addressing poverty and its related issues¹² by reducing hunger, improving access to fresh, healthy, wholesome foods,¹³ enhancing nutrition, and raising the quality of environmental conditions that affect health.¹⁴ Urban agriculture fosters an understanding of agriculture for urban citizens who often don't otherwise see a direct connection to where food comes from¹⁵ thus encouraging and understanding of healthy eating from



Bill Wilcox at the Mary Street Victory Garden
Source: Metro News

¹⁰ Mogk, Kwiatkowski and Weindorf, 2010.

¹¹ *Ibid.*

¹² Hanna and Oh, 2000.

¹³ Arroyo-Rodriguez and Germain, 2012.

¹⁴ Smit, Nasr and Ratta, 2001.

¹⁵ Baker, 2000.

farm to fork.



Local Apples on Sale at the Hamilton Farmers' Market
Source: Jessica Young/CBC

The City of Hamilton Public Health Services' Nutritious Food Basket report¹⁶ showed that healthy food is not financially accessible for many people living in Hamilton, especially families receiving Ontario Works, those earning minimum wage, or single person households. Urban agriculture provides fresh produce that is otherwise inaccessible to the food insecure and it increases citizens control over what they eat.¹⁷ Produce grown in the immediate neighbourhood is more affordable and fresh compared to what is available in conventional supermarkets. 'Food deserts' can also be addressed through urban agriculture by making food available in neighbourhoods where fresh foods are not easily accessible by citizens.

Health

Urban agriculture creates significant and numerous contributions to the health of communities. Access to minimally-processed nutritious food is improved as backyard gardeners prepare the food they grow for their families, community gardeners donate food to local food banks or charitable institutions, and entrepreneurial farmers distribute produce through local farmers' markets, grocery stores, and restaurants.¹⁸ Local access to nutritious food is particularly important in neighbourhoods that are currently under-served by retail establishments selling fresh produce.

Citizens directly involved in gardening experience health benefits beyond improved nutrition. Gardens provide opportunities for community members to

¹⁶ Edwards and Weldon, 2012.

¹⁷ Thibert, 2012.

¹⁸ Cohen, Reynolds and Sangvhi, 2012.

share knowledge about the relationship between nutrition and health.¹⁹ Gardening is a therapeutic activity that is also often used in rehabilitation programs for those struggling with mental illness or addiction.²⁰ Urban agriculture activities create green space, which is proven to contribute to the mental health and general well-being of urban residents.²¹ The physical activities associated with urban agriculture, such as planting, weeding, and tilling, can provide an important form of regular exercise for participants of all ages²² as well as a stress-relieving activity.²³

Ecology

Urban agriculture can be seen as a fundamental element of a city's 'green infrastructure.' Green infrastructure provides benefits such as retaining and filtering stormwater, reducing urban carbon dioxide levels, contributing to plant, animal, and insect biodiversity, and mitigating the 'urban heat island effect.'²⁴

Urban agriculture also makes efficient use of natural resources. By shortening the travel distance between producers and consumers,²⁵ consumption and dependence on non-renewable resources such as gas, electricity, and land is decreased. In turn, less waste is created from packaging, transportation, and refrigeration.²⁶ Oftentimes gardeners will use household food scraps and yard waste to build compost for their gardens, decreasing the amount of waste directed to landfills and creating a system of 'closed cycle resource use.'²⁷ Rainwater catchment systems are frequently used for garden irrigation, reducing the burden of storms



Undergraduate Students Looking at Pollinators
Source: University of Toronto

¹⁹ Thibert, 2012.

²⁰ Arroyo-Rodriguez and Germain, 2012.

²¹ Smit, Nasr and Ratta, 2001; GrowTO, 2012; Mogk, Kwiatkowski and Weindorf, 2010.

²² Hozyash, 2010; Smit, Nasr and Ratta, 2001.

²³ GrowTO, 2012; Thibert, 2012.

²⁴ GrowTO, 2012.

²⁵ Baker, 2000.

²⁶ Arroyo-Rodriguez and Germain, 2012.

²⁷ Baker, 2000; Doron, 2005.



Youth Engaged in Urban Farming Through Education
Source: Open IDEO

on municipal sewer systems.²⁸ Rooftop gardens also retain rainwater and provide an insular barrier on buildings, reducing energy consumption for heating and cooling interior spaces.²⁹ Overall, urban agriculture serves as an effective way to engage local residents in the stewardship of their neighborhood's green spaces and their urban environment more broadly.

Education and Skill-building

While urban gardening can be a recreational and relaxing activity for many community members, it can also serve as an effective and accessible educational and skill-building activity. Basic food production techniques are valuable for encouraging lifelong healthy eating habits, and they also have an educational value for teaching practical subjects such as science and math.³⁰ Community gardeners regularly draw on abilities such as community organizing, communications, and project management in order to coordinate gardening in a shared space. Since many of these ventures are seasonal in nature, they often rely on teenagers with time available over summer holidays, empowering and developing general job-readiness skills in young adults.³¹ Gardens that sell or distribute products locally encourage participants to develop skills in food preparation, sales, and business management, training workers with skills that are transferable to other occupations.³²

²⁸ Cohen, Reynolds and Sangvhi, 2012.

²⁹ Mogk, Kwiatkowski and Weindorf, 2010.

³⁰ Doron, 2005.

³¹ Cohen, Reynolds and Sangvhi, 2012.

³² Baker, 2000.

In sum, the benefits of urban agriculture are wide-ranging and can be used to address many diverse needs in a community. It is possible to improve community engagement, community economic development, food insecurity, health, ecology, and skill-building through the effective implementation of urban agriculture projects and practices. **Table 1** (next page) summarizes the benefits of urban agriculture through the lenses of productivity, resilience, conservation, and innovation which are key factors for the success of today's cities. The next section will identify different forms of urban agriculture, along with examples of best practices that are already taking place in some leading North American cities, including Hamilton.



Learning to Appreciate the Urban Tomato Plants
Source: Toronto Region Conservation Authority

Table 1: The Benefits of Urban Agriculture

BENEFITS OF URBAN AGRICULTURE	Community Engagement and Inclusiveness	Social Enterprise & Community Economic Development	Food Insecurity	Health	Ecology	Education & Skill-building
Productivity	<ul style="list-style-type: none"> ✓ creates productive and inclusive spaces ✓ engages the unemployed and underemployed ✓ promotes a culture of volunteerism 	<ul style="list-style-type: none"> ✓ contributes to job creation ✓ provides strong return on investment ✓ makes vacant property valuable 	<ul style="list-style-type: none"> ✓ addresses poverty by reducing hunger ✓ fosters an understanding of agriculture ✓ empowers those with a lack of food 	<ul style="list-style-type: none"> ✓ increases amount of green space ✓ produces healthy fresh food ✓ encourages healthy eating 	<ul style="list-style-type: none"> ✓ retains and filters stormwater ✓ lessens burden on municipal sewer system ✓ contributes to a healthy ecosystem 	<ul style="list-style-type: none"> ✓ builds community organizing skills ✓ builds knowledge of farming practices ✓ provides student volunteer opportunities
Resilience	<ul style="list-style-type: none"> ✓ strengthens community relationships ✓ builds organizational capacity ✓ people work together to overcome barriers 	<ul style="list-style-type: none"> ✓ provides income for producers ✓ removes or protects against blight ✓ an alternative use of urban public space 	<ul style="list-style-type: none"> ✓ improves food access in food deserts ✓ increases citizen control over food consumption ✓ increases preparedness for times of crisis 	<ul style="list-style-type: none"> ✓ relieves stress ✓ provides local access to fresh, healthy food ✓ improves diet 	<ul style="list-style-type: none"> ✓ encourages efficient use of resources ✓ reduces reliance on non-renewable resources ✓ increases biodiversity 	<ul style="list-style-type: none"> ✓ builds project management skills ✓ builds communication skills ✓ encourages shared knowledge in communities
Conservation	<ul style="list-style-type: none"> ✓ builds pride in the environment ✓ increases accessibility of green spaces 	<ul style="list-style-type: none"> ✓ increases the number and quality of green spaces ✓ improves housing values and property tax base ✓ 	<ul style="list-style-type: none"> ✓ reduces food spoilage and waste ✓ uses food resources efficiently ✓ 	<ul style="list-style-type: none"> ✓ encourages physical activity ✓ contributes to life-long health and well-being ✓ 	<ul style="list-style-type: none"> ✓ reduces urban carbon dioxide levels ✓ reduces waste production ✓ contributes to ecosystem diversity 	<ul style="list-style-type: none"> ✓ fosters and understanding of healthy foods ✓ builds communication skills ✓ inspires knowledge on food preparation
Innovation	<ul style="list-style-type: none"> ✓ encourages the growth of ethno-cultural crops ✓ fosters cooperation and neighbourhood stewardship ✓ engages the young and old alike 	<ul style="list-style-type: none"> ✓ provides new products to retailers and restaurateurs ✓ reduces the need for municipal maintenance and policing ✓ encourages entrepreneurialism 	<ul style="list-style-type: none"> ✓ fills food system gaps ✓ makes fresh and healthy food affordable ✓ encourages forward-thinking 	<ul style="list-style-type: none"> ✓ therapeutic use in addiction treatment programs ✓ new ways of growing traditional and heirloom plants ✓ encourages trying new foods 	<ul style="list-style-type: none"> ✓ green roofs reduce heating and cooling burden of interior spaces ✓ fosters technological advances in farming ✓ provides opportunities for experimentation 	<ul style="list-style-type: none"> ✓ engages people of all ages in learning and teaching ✓ enhances job-readiness ✓ teaching aid for math and science

Lufa Farms

location: Montreal, Quebec

est.: 2010

size: 31,000 sq. feet

landowner: private

form: hydroponic

who: commercial enterprise

why: high-tech meets heirloom to support biodiversity and profitability in entrepreneurship

Lufa Farms operates eight hydroponic greenhouses on the rooftop of a two-storey office building in Montreal. The patented greenhouse technology developed at LUFA is recognized globally as a state of the art cultivation system, as well as a significant feat of engineering (Dumont, n.d.; Aylett, 2010).

Through the creation of different temperature-controlled microclimates in the greenhouses, the farm is able to cultivate a wide variety of produce, such as peppers, cucumbers, lettuce, eggplant, kale, radishes and micro-greens. Lufa does not use any chemical or synthetic pesticides, herbicides, or fungicides. Their mandate to practice "responsible" agriculture includes an emphasis on increasing biodiversity in the food system, by cultivating heirloom varieties of produce such as tomatoes. This for-profit venture harvests produce from its greenhouses. Baskets containing a variety of produce are distributed to pickup points within a 15 km radius of the farm, are collected by community supported agricultural customers, restaurants, and caterers. Lufa's use of the art technology combined with an emphasis on increasing biodiversity through the cultivation of heirloom crops is an innovative model that may inspire other entrepreneurs.

Best Practice

Forms of Urban Agriculture & Examples of Best Practices

Common Practices in Urban Agriculture

There are a variety of factors that influence the type of farming system employed by different people in a multitude of urban settings. This decision is based on the type of space available – be it a backyard, rooftop, public right of way, former brownfield, or indoor space – as well as the resources available for the project. Many urban farming systems are labour-intensive - requiring the time, energy and long-term commitment of many people. Others are capital-intensive – requiring substantial financial investment, especially at the outset. Perhaps the most important factor determining the farming system practised by people in urban spaces is the purpose of the project – whether it be to bring a community together in a shared space, teach youth practical skills, or create a highly productive growing space as a business venture.



The Construction of Lufa's Rooftop Greenhouse
Source: Greenhouses Canada

What makes a best practice in urban agriculture is suitability to context. Different forms and scales of urban agriculture fit and function more effectively in particular urban contexts than others. Taking this into consideration, the best practices highlighted in the

Black Creek Urban Farm

location: Toronto, Ontario

est.: 2012

size: 7 acres

landowner: public

forms: horticulture; beekeeping; composting

who: non-profit organizations and a social enterprise

why: successful collaboration between public, private and non-profit sector organizations to serving a priority community

Best Practice

Everdale Organic Farm, Fresh City Farms, Afri-Can Food Basket, and FoodShare are four of the strongest leaders in Toronto's urban and peri-urban agriculture community. Each has years of experience practicing diverse horticulture techniques, educating new farmers, and advocating for urban agriculture. In 2012, these organizations joined forces to start the Black Creek Urban Farm, where they share resources, knowledge, and land. They will celebrate their first harvest in 2013. This community farm sits on seven acres of land owned by the Toronto and Region Conservation Authority (TRCA). The TRCA has proven to be an invaluable partner, making land available and supporting the development of the project. Individual donors, community groups, the United Way, and all three levels of government have contributed funding to get the project started.

Along with large spaces dedicated to row-cropping, three greenhouses and several hoopouses will be used for season extension and cultivating seedlings. A space is being set aside for mushroom cultivation, as well as a large community composting area. Honeybees will be kept in a far corner of the farm and serve as pollinators across the site. Black Creek Urban Farm will be staffed and supported by residents of the nearby Jane and Finch community, one of Toronto's priority neighbourhoods. The harvest will be shared among the community, and intergenerational learning opportunities will be available for all.

Highlighted as a best practice example in this report

sidebars of this section were selected based on their success within their context, and their relevance to the practice and to the potential of urban agriculture in Hamilton.

Horticulture


The most common space associated with urban agriculture is the garden – an area where vegetables, fruits, legumes, herbs and other food plants are cultivated. The methods of cultivation used in urban horticulture can be as diverse as the foods they produce. Many community gardeners grow food directly in the soil of their site, while others build raised beds on top of existing soil, decks, or pavement. In Canada, season extension techniques such as greenhouses, hoopouses, and cold frames allow urban gardeners to maximize the productivity of their horticultural systems. Increasingly, more advanced technologies such as hydroponics and aeroponics are emerging as horticultural techniques well-suited to urban environments. Horticulture techniques such as raised beds, greenhouses and hydroponics make urban horticulture safe and feasible even on brownfield sites.



Picking Tender Greens
Source: Everdale

Innovative urban farmers around the world are proving that horticulture is equally suited to marginal spaces in the city such as rooftops as it is to extensive rural farms. Horticultural systems can bring underused urban spaces into productive use. **Table 2** identifies the common forms of urban horticulture practice.

Horticulture

Horticulture	<i>explains the type and function of this form of urban agriculture, explains briefly what this looks like</i>	<i>identifies one of more successful example(s) that can be considered an ideal model for this type of urban agriculture (either built or conceptual design)</i>	<i>identifies concerns or implications related to this type of urban agriculture that should be addressed in government policy or regulatory documents</i>
Method or Form	Definition	Best Practice	Policy Considerations
ROW-CROPPING	A popular method of cultivating food plants directly in ground; plants are arranged in distinct rows or 'beds', often organized according to plant type. Can include intensive variations such as "SPIN Farming."	Fresh City Farms, Toronto, ON http://www.freshcityfarms.com	soil safety, water use.
RAISED BED	An elevated growing medium that allows gardeners to plant in healthy soil above the ground, typically this is an open frame (wood or other structural material) filled with soil.	City Slicker Farms, Oakland, CA http://www.cityslickerfarms.org/ Sole Food Farms, Vancouver, BC http://solefoodfarms.com	water use
HOOPHOUSE	A season-extension tool used to shelter delicate crops from the elements as well as capture the sun's heat in cold seasons. Typically constructed from plastic or metal hoops that form the ribs of the structure which is then clad in plastic sheeting or another flexible translucent material.	Toronto Green Community's Garden, Toronto, ON http://torontogreen.ca/blog/?p=579	accessory structure/temporary structure permits and regulations.
COLD FRAME	A season-extension tool used to shelter delicate crops from the elements. Typically a small rectangular structure clad in glass or rigid translucent material. A hinged door on the top surface allows for easy access to the plants inside.	Riverdale Meadow Community Garden, Toronto, ON http://www.riverdalemeadow.ca/wiki/wiki.php?n=ColdFrames.2007AndPrior	
GREENHOUSE	A building or structure with walls and roof made primarily of glass or other translucent material, in which the sun's heat is captured and temperature and humidity can be regulated for the cultivation of plants in containers.	Gotham Greens, NYC http://gothamgreens.com/ Bright Farms, NYC http://brightfarms.com	accessory structure permits and regulations, height restrictions and exceptions for rooftop greenhouses in particular, noise generated by use of fans.
HYDROPONICS	A method of growing plants without soil, using mineral nutrient solutions or water. Well-suited to brownfield sites where contaminated soil presents a barrier to in-ground cultivation. Often takes place in greenhouses or repurposed industrial buildings.	LUFA Farms, Montreal, QC https://lufa.com 	water use, noise generated by use of fans.
ROOFTOP	Cultivating food plants in a growing medium on rooftop. Growing medium can be incorporated into roofing material (ie. green roof), or in containers. Can also incorporate hoophouses, cold frames, row-cropping, greenhouses, hydroponics, etc.	Brooklyn Grange, NYC http://www.brooklyngrangefarm.com	weight of system must be within structural load limits, set-backs, fencing if open-air
PERMACULTURE	Minimal-input self-sustaining horticultural systems that are modelled after natural ecosystems and integrated with housing and landscaping design.	All Sorts Acre, Guelph, ON http://allsortsacre.ca/about-us/the-farm/ http://www.brooklyngrangefarm.com	soil safety

Horticulture	<i>explains the type and function of this form of urban agriculture, explains briefly what this looks like</i>	<i>identifies one of more successful example(s) that can be considered an ideal model for this type of urban agriculture (either built or conceptual design)</i>	<i>identifies concerns or implications related to this type of urban agriculture that should be addressed in government policy or regulatory documents</i>
Method or Form	Definition	Best Practice	Policy Considerations
VERTICAL	Maximizes growing space by cultivating plants in vertical growing apparatus (vertical garden) or crops planted in storeys of a building (vertical farm).	Woolly School Garden project http://www.woollyschoolgarden.org Alterrus, Vancouver, BC http://www.alterrus.ca	
UNDERGROUND	Cultivation in subterranean floors of buildings with artificial light.	Pasona O2, Tokyo http://www.treehugger.com/green-food/pasona-o2-urban-underground-farming.html	
EDIBLE LANDSCAPING	Cultivation in parks and public right of ways.	The Edible Landscape, Hamilton City Hall Urban Farming Food Chain Project, Los Angeles, CA http://www.urbanfarming.org/programs-food-chain.html	soil safety
AEROPONICS	Growing plants without soil, using air or mist to transmit nutrients.	The Farm Next Door, Edmonton, AB	
TEMPORARY INSTALLATION	A garden installed for a temporary purpose such as a public exhibit, social space, education, or experiment.	P.F.1, NYC http://www.publicfarm1.org	temporary use permits, zoning



Public Farm 1 Installation, Brooklyn, New York
Source: Public Farm 1

Hamilton Fruit Tree Project

location: Hamilton, Ontario

est.: 2005

size: over 30 trees and vines

landowner: private and public

farming method: gleaning

who: non-profit, incorporated through Environment Hamilton

why: maximizes the benefit of an untapped and often overlooked food source while connecting people in the community

Best Practice

The Hamilton Fruit Tree Project helps to connect fruit tree owners in Hamilton with volunteers who are willing to help harvest ripe fruit that would otherwise go to waste. By providing this service for trees on public and private land, "gleaning" projects prevent rotten fruit from falling on the ground, where it can cause a nuisance and attract pests and animals. More importantly, an otherwise untapped food source is created within the community. The detailed coordination of the Hamilton Fruit Tree project is successful in maximizing the benefit of ripe fruit that naturally appears throughout the city at various times in the season.

The Hamilton Fruit Tree Project distributes one-third of the picked fruit to the homeowner, one-third to the volunteers and one-third to local food banks. Funding is provided by numerous local organizations, such as Environment Hamilton, Conservers Society, Small Change Fund, the Hamilton Community Foundation and Healthy Living Hamilton. This funding supports a part-time coordinator, food skills workshops, the purchase of picking equipment and the creation of promotional materials.

Arboriculture


The benefits of the urban tree canopy are well-known. Along with mitigating carbon dioxide levels in the urban areas, trees provide shade, leisure space, and wildlife habitats. One of the less appreciated benefits of urban trees is the ability for some to produce fruit and nuts to eat. Some urban communities have well-established fruit-bearing trees and bushes in backyards and parks. Others create orchards specifically as community gardening projects. Some municipalities are even integrating fruit and nut-bearing trees into public beautification projects, recognizing that a well-maintained food-producing tree contributes to the urban



food system as well as providing aesthetic value. Gleaning projects are an important contributor to local food production by collecting fruits and nuts from existing but often under-appreciated urban sources of food, while sharing the benefits of collaboration with many volunteers



Beacon Food Forest Schematic Site Plan, Seattle, WA
Source: Beacon Food Forest

Arboriculture	<i>explains the type and function of this form of urban agriculture, explains briefly what this looks like</i>	<i>identifies one of more successful example(s) that can be considered an ideal model for this type of urban agriculture (either built or conceptual design)</i>	<i>identifies concerns or implications related to this type of urban agriculture that should be addressed in government policy or regulatory documents</i>
Method or Form	Definition	Best Practice	Policy Considerations
ORCHARD	The cultivation of fruit and/or nut bearing trees.	Chicago Rarities Orchard Project (CROP) http://www.chicagorarities.org/index.html Great Northern Way Urban Orchard, Vancouver	
GLEANING	Fruits, berries and nuts are collected from existing informally planted trees and bushes.	Hamilton Fruit Tree Project http://hamiltonfruittreeproject.blogspot.ca  Not Far From the Tree, Toronto http://www.notfarfromthetree.org/	conformity with applicable tree regulations
FOOD FOREST	Landscaping or garden that mimics a woodland ecosystem but substitutes in edible trees, shrubs, perennials and annuals. Fruit and nut trees are the upper level, while below are berry shrubs, edible perennials and annuals. Companions or beneficial plants are included to attract insects for natural pest management while some plants are soil amenders providing nitrogen and mulch.	Beacon Food Forest, Seattle http://beaconfoodforest.weebly.com	

Southlands Heritage Farm

location: Vancouver, British Columbia

est.: 2009

size: 2 acres

landowner: private

form: horticulture; animal husbandry (horses, goats, pot-bellied pigs, hens, ducks, geese, bees)

who: family-run business

why: educates and engages urban residents in animal husbandry farming practices

Best
Practice

This community farm is located in a specially-zoned floodplain and agricultural reserve in Vancouver. The Southlands neighbourhood permits and encourages horse-rearing and other limited agricultural activities. Founded in 2009, the Southlands Heritage Farm had a goal to grow and support local food systems while educating Vancouverites of all ages about farming.

Southlands Heritage Farm offers urban farming education programming in the form of workshops and summer camps for kids. The Farm is also home to a horse-riding school and a therapeutic horse-riding program. Program participants and other visitors to the farm are encouraged to get their hands dirty by helping in the market garden, milking goats, feeding pot-bellied pigs, collecting eggs from hens and ducks, and grooming horses. Goats' milk products, eggs, honey, and freshly harvested produce are all sold through a weekly farmers' market and CSA program, providing an extra revenue-stream for the farm.



A budding farmer tends to a goat at Southlands Heritage Farm
Source: Southlands Heritage Farm

BIG!Compost NYC

location: Queens, New York

est.: 2009

size: serves the Western Queens area

landowner: private

form: composting

who: non-profit

why: captures benefits of organic waste, reduces landfill, and redistributes compost to enrich depleted urban soils

Best
Practice

This community compost network strives to build community capacity for composting in Queens, New York. Through providing educational workshops in composting best practices, BIG!Compost encourages residents to recycle their food scraps for gardening purposes. They also collect food scraps from community members at weekly drop-off events. These food scraps are processed onsite in enclosed compost bins. The end-product is high-quality compost that BIG!Compost makes available for use in community garden projects and public beautification projects.

This program is one of several locally-based initiatives funded by the NYC Department of Sanitation, in lieu of offering a curbside organic waste collection service. Unlike many curbside collection services, this approach to handling food scraps not only diverts organic waste from landfills, but it also creates a valuable resource for urban agriculture efforts in the community.



Turning the Urban Compost Pile
Source: BIG NYC

Historic Rooftop Apiary

location: Toronto, Ontario

est.: 2008

size: 6 hives

landowner: private

form: beekeeping

who: commercial enterprise

why: apiary producing award-winning honey in a dense urban setting, enjoyed by tourists and locals alike



On top of the 14th storey of Toronto's Fairmont Royal York Hotel, six beehives house over 300,000 bees in the heart of downtown Toronto. The Royal York's bees play an important role in pollinating the extensive rooftop herb garden maintained by the Hotel's chefs since 1995. The bees are also suspected to forage for nectar and serve as pollinators within several kilometers of the hotel, in the parks and gardens of the Toronto Islands, the Don Valley, and other downtown green spaces.

Since their establishment in 2008, the hives have been managed on behalf of the hotel by the Toronto Beekeepers Co-op. During their most productive year the six hives produced over 800 pounds of honey. This honey is served to guests and used for cooking in the hotel's restaurant. In 2012 the Royal York's bees produced such good honey that it took home a first place prize (Amber Category) at the Royal Agricultural Winter Fair. Tours of the rooftop apiary are given by the hotel chefs in the summer months providing tourists and local residents the opportunity to learn about honey production in a dense urban setting.

Supportive Practices

A city that enables urban agriculture must support the pre-production and post-production phases of food production as well as it does the cultivation phase. Supporting activities such as training, composting, rainwater catchment, pollination, post-harvest processing and distribution are all essential elements in sustainable urban agriculture systems. These activities help community gardeners get plants in the ground and help entrepreneurial farmers get products to market.



Hives on the Roof of the Royal York Hotel, Toronto

Source: Ottawa Citizen

Table 4: Supportive Practices in Urban Agriculture

Supportive Practices		<i>explains the type and function of this form of urban agriculture, explains briefly what this looks like</i>	<i>identifies one of more successful example(s) that can be considered an ideal model for this type of urban agriculture (either built or conceptual design)</i>	<i>identifies concerns or implications related to this type of urban agriculture that should be addressed in government policy or regulatory documents</i>
Category	Method or Form	Definition	Best Practice	Policy Considerations
RESOURCE CYCLING	COMPOSTING	The process of recycling decomposed organic matter into rich soil known as compost.	BIG!Compost, NYC http://www.bignyc.org/about-bigcompost ☀️	Ontario's Waste Disposal Site regulations, potential odour, soil safety.
	RAINWATER CATCHMENT SYSTEM	A method of catching rainwater runoff from the roof of a structure. Rainwater is channeled into a rain barrel, drum, or cistern and stored for later use in irrigating crops.	Twisted Cistern, Hamilton, ON http://wp.twistedcistern.ca/newsblog/	
	VERMICOMPOSTING	A method of composting in which specialized earthworms ("red wigglers") are used to turn organic waste into high quality compost.	Cathy's Composters, Bradford, ON http://www.cathyscomposters.com ☀️ City Farmer, Vancouver, BC http://www.cityfarmer.info/2009/03/12/what-we-do-at-the-vancouver-compost-demonstration-garden/	Ontario's Waste Disposal Site regulations, potential odour, soil safety.
ANIMAL HUSBANDRY	APICULTURE	Along with producing honey, honeybees are sometimes kept by farmers in hives in order to serve as pollinators of food plants.	Rooftop Apiary, Fairmont Royal York Hotel, Toronto, ON ☀️	under existing provincial legislation, beehives must be kept a minimum of 30m from property lines, limiting the number of hives per lot,
	HEN-KEEPING	Along with producing eggs for consumption, hens are sometimes used by farmers both to assist with pest control and to produce natural fertilizer for crops. Hens are typically kept in an henhouse with room to roam.	Southlands Farms, Vancouver, BC http://www.southlandsfarms.com/index.html ☀️	animal health and care, public health, food safety, risk of predators, maximum number of small animals permitted per lot, nuisance of smell and noise.
	SMALL LIVESTOCK	Small livestock such as goats, sheep, and rabbits are used by farmers to fertilize crops and till land.	Southlands Farms, Vancouver, BC http://www.southlandsfarms.com/index.html	
AQUACULTURE	AQUAPONICS	The integration of aquaculture with hydroponics, in which the waste products from fish are used to fertilize hydroponically growing plants, which filter water for the fish, in turn.	Bendale BTI Aquaponics, Toronto, ON ☀️ The Floating Garden, Osler, SK http://floatinggardens.ca/index.php Sweet Water, Milwaukee, WI http://sweetwater-organic.com	processing fish waste byproducts safely, animal health and care, water use.

☀️ Highlighted as a best practice example in this report

Bendale BTI

location: Toronto, Ontario

est.: 2010

size: two large water tanks linked to grow beds

landowner: public

form: aquaponic

who: public school board and non-profit

why: engages students in learning about aquatic systems and culinary arts while contributing to the community food supply

In 2010 students in Bendale Business and Technical Institute's Green Industries program began constructing an ambitious aquaponic system out of recycled material. Students now manage the operation of the system, which houses 300 tilapia in two large tanks that are connected to beds that grow lettuce and watercress.

The Bendale aquaponics project was developed in partnership with FoodShare, a social enterprise located in Toronto's west end. Along with the school's half-acre of vegetable gardens, this system grows enough lettuce and watercress to sell at a community market in the summer. In the spring of 2013, the Green Industries program will partner with the school's Culinary Arts program to host the school's first "fish fry," where students will be able to enjoy the fruits of their labour.



Global News visits Bendale BTI to learn about their aquaponic system.

Source: Global News

Best Practice

Animal Husbandry

Caring for the farm animals, aquatic life, and insects that contribute to our food supply can be one of the most profound ways for urbanites to connect with the food they eat. Although the keeping of pets is commonplace in cities across North America, raising animals for agricultural purposes, such as the production of honey, dairy products, or meat, involves distinct sets of considerations. Among these considerations is the important role that poultry, livestock, and beneficial insects such as bees play in supporting sustainable agricultural practices, historically and today. By providing services such as tilling soil through grazing, creating natural fertilizer, pollinating crops, and controlling pests, animals can provide strong benefits and support for urban agriculture practices.

This frontier of urban agriculture is currently receiving new waves of support from municipal governments interested in enabling diverse forms of urban agriculture and their supportive practices. Cities such as Vancouver and Seattle are opening the door to animal husbandry practices such as hen-keeping. The successes of pioneering projects in practices such as urban aquaponics, hen-keeping, and beekeeping are proving that animal husbandry plays an important role in urban agricultural systems and can prove to be a positive urban activity.³³

Municipal Planning Framework

Ontario municipalities operate under laws enacted by the provincial government. With jurisdiction over a majority of planning concerns, the Province looks at the big picture and manages Provincial interests such as farmland preservation, protecting the environment, and encouraging transit infrastructure and pedestrian-friendly

³³ By-law 12-031 was enacted by City Council on February 8th, 2012, affirming that hen-keeping not permitted in urban areas of the City of Hamilton.

cities. That being said, a great deal of fine-grained planning work happens at the municipal level - it would be impossible for the Province to keep up with what is happening in every city.

The *Planning Act* lays the ground rules for municipalities in Ontario and describes how land uses should be controlled and regulated. Working under the *Planning Act*, municipalities must prepare Official Plans, regulate land use through zoning by-laws and regulations, and divide land through the planning of subdivisions and land severance. These plans and regulatory tools affect how urban agriculture can be integrated into a city.

The *Planning Act* requires that municipalities understand, plan for, and manage their diverse needs. Under the *Act*, the City of Hamilton must balance the needs of citizens for the use of public lands. For example, park space may be seen by some as a place for community gardens, and by others as a place for recreational sports. Because there is a limited amount of park space in the urban centre the City must balance the needs of many users. Urban agriculture will need to function in a balance with the needs of citizens in the municipality.

Planning & Policy Making for Urban Agriculture in Other Jurisdictions

There are a number of approaches Ontario municipalities can take to promote and integrate urban agriculture into their communities. The approaches vary in purpose, scope, and the method of implementation. **Table 5** summarizes five common approaches that can be used to advance the role of urban agriculture in a community. Cities may decide to start small or large scale, but oftentimes more

than one of these approaches will be undertaken concurrently. Hamilton, for instance, has a Community Garden Policy in place and has a Land Inventory and a Food Strategy that are under development. This report will show how Hamilton can integrate urban agriculture into the *Zoning By-law* in order to complement these existing approaches.

Table 5: Municipal Approaches for Promoting Urban Agriculture

		Explanation	Best Practices
Planning Act Tools	OFFICIAL PLAN	Urban agriculture is recognized as a key element of a city's future growth and development	Guelph
	ZONING	Urban agriculture activities are formally sanctioned within the zoning bylaw, legitimizing and encouraging their practice. There are three strategies for zoning for urban agriculture: (a) include as a permitted land use; (b) include as a zoning category; (c) create an urban agriculture zoning overlay	Seattle; Chicago; Detroit; San Francisco; Ottawa; Philadelphia; Toronto
Other Policy Tools	FOOD STRATEGY	A high-level plan that expresses the City's commitment to improving all elements of the urban food system, including urban agriculture. Helps guide future decision making and recommends specific courses of action.	Toronto; Edmonton; Vancouver
	LAND INVENTORY	A project undertaken by the municipality to determine City land that has the potential for urban agriculture use	Portland; Vancouver
	SUPPORTIVE POLICIES & PROGRAMS	A document that outlines the framework, actors, and operational costs of a program. An example of this is the City of Hamilton's Community Garden Policy and Community Garden Program.	Hamilton

There are many cities in North America pursuing these approaches now. Cities in the Greater Toronto and Hamilton Area are intensifying, and are beginning to appreciate the importance of food security in urban areas. The next section will identify how other North American cities have integrated urban agriculture into their zoning by-laws, followed by a look at Hamilton's current policy and planning framework supporting the integration of urban agriculture activity in the City's land uses.

Official Plan & Zoning for Urban Agriculture

Municipal zoning by-laws typically distinguish urban agriculture land uses in two ways:

Distinguishing Land Use by PURPOSE

is based on the **intention** of the land use. This is typically community use versus for profit use.

Distinguishing Land Use by SCALE

is based on the **size** of the land used for urban agriculture. This is typically less than 1 acre versus more than 1 acre. Usually community gardens are considered less than 1 acre, and urban farms are considered more than 1 acre.

One of the most powerful and practical ways that municipalities can support urban agriculture is through its inclusion in zoning by-laws. In Ontario, each municipality's zoning by-law relies on Official Plan for strategic direction, meaning that urban agriculture must first be encouraged by the Official Plan before it can be integrated into the zoning by-law.

Zoning by-laws regulate not only the uses that are permitted within each area of the city, but also the conditions under which they can be used. By defining and regulating urban agriculture land uses in zoning by-laws, municipalities legitimize the activities of current and prospective urban agriculture practitioners. Furthermore, they provide both municipal staff and citizens with clarity about what is, and is not, a permitted agricultural land use within the city.

In the United States, many municipalities have proactively amended their zoning by-laws to include urban agriculture in recent years, in response to growing local urban agriculture movements. In Canada, Ottawa is one city that has also taken this approach. A number of Canadian municipalities (such as Calgary, Oshawa, London, and Burlington) have retained Agriculture Zones and Agriculture Land Use designations that originally applied to rural areas of the jurisdiction, but now permit agricultural activities in a limited number of peripheral urban areas.

Since the practice of zoning for urban agriculture is in its infancy, it is not yet widespread in Canadian municipalities. A scan of the zoning by-laws for Victoria, Vancouver, Edmonton, Saskatoon, Regina, Winnipeg, Oshawa, Kingston, Montreal, and Halifax, revealed that few Canadian municipalities have implemented zoning categories that expressly permit agricultural activities in urban areas of the municipality. However, in the past year alone, city councils in

Toronto, Vancouver and Edmonton have all endorsed or approved food and urban agriculture strategies that advocate for the inclusion of urban agriculture in zoning codes, signaling that a shift in Canadian zoning practice for urban agriculture is underway.

Table 6 and **Table 7** outline urban agriculture zoning definitions and regulations that have been implemented in a number of North American municipalities. Municipal zoning by-laws are, by nature, very specific and unique to the city to which they apply. Nevertheless, when looking to support urban agriculture in its own zoning by-law, there is much that the City of Hamilton can learn from examples of how other municipalities have defined and regulated urban agriculture. The following tables can provide key terms, benchmarks, and regulations for the City of Hamilton to consider as it moves towards zoning for urban agriculture.

It is interesting to note that some municipalities allow activities such as greenhouses, hydroponics, and aquaponics within these designations. Others define and regulate them separately. Several of the municipalities shown in this tables also permit animal husbandry, including hen-keeping, as distinct land use designations.

Table 6: Zoning that Distinguishes Land Use by Purpose - Sales Permitted OR Sales Not Permitted

Zoning By-law Term	Definition	Regulation	Zones	Jurisdiction
“Community Garden”	“Land managed by a public or nonprofit organization, or a group of individuals, that is used to grow plants and harvest food or ornamental crops from them for donation or for use by those cultivating the land and their households. Examples include P -Patch gardens administered by the Department of Neighborhoods.”	sales not permitted	Permitted in all zones, with some limitations in Industrial zones	Seattle: Seattle Land Use Code – Title 23 of the Seattle Municipal Code
“Community Garden”	“A communal garden provided for the sole use of or consumption by the individual or individuals working the garden.”	sales not permitted	Permitted in Urban Local Commercial, Minor Institutional, Open Space and Leisure, Hydro Corridor Subzone, and most Rural Zones	Ottawa: City of Ottawa Zoning By-law 2008-250
“Community Garden”	“A neighborhood-based development with the primary purpose of providing space for members of the community to grow plants for beautification, education, recreation, community distribution or personal use.”	sales not permitted	Permitted by right in all Residential, Business, Commercial, and Downtown districts, and some Public and Open Space districts	Chicago: Chicago Zoning Ordinance
“Community Garden”	“An area managed and maintained by a group of individuals to grow and harvest food crops and non-food crops (e.g. flowers) for personal or group consumption, for donation, or for sale that is incidental in nature.”	sales not permitted	Permitted in all Commercial, most Industrial, all Residential zones	Philadelphia: The Philadelphia Code - Title 14
“Urban Farm”	“Where plants are grown for sale of the plants or their products, and in which the plants or their products are sold at the lot where they are grown or off site, or both, and in which no other items are sold. Examples may include flower and vegetable raising, orchards and vineyards.”	sales permitted	Permitted as of right as an accessory or principle use in Commercial and Industrial zones. Permitted as accessory use in Residential zones.	Seattle: Seattle Land Use Code – Title 23 of the Seattle Municipal Code
“Urban Farm”	“Growing, washing, packaging and storage of fruits, vegetables and other plant products for wholesale or retail sales.” Includes hydroponic systems, aquaponic systems, and apiaries.	sales permitted	Indoor operations, outdoor operations, and rooftop operations are distinguished, and permitted variously within most zones except Residential. Permitted as a primary or accessory use.	Chicago: Chicago Zoning Ordinance
“Market or Community-Supported Farm”	“An area managed and maintained by an individual or group of individuals to grow and harvest food crops or non-food crops (e.g. flowers) for sale or distribution that is not incidental in nature. Market farms may be principal or accessory uses and may be located on a roof or within a building.”	sales permitted	Permitted in most Commercial, most Industrial, all Residential zones.	Philadelphia: The Philadelphia Code - Title 14

Zoning By-law Term	Definition	Regulation	Zones	Jurisdiction
“Market Garden”	“Premises used for growing and harvesting vegetables, fruits, flowers, shrubs, trees or other horticultural products for the purpose of sale.”	sales permitted	Permitted in Residential Apartment Complex and Hydro Corridor zones, with conditions	Toronto: City of Toronto Draft Zoning Bylaw

Table 7: Zoning that Distinguishes Land Use by Scale - Over 1 Acre OR Under 1 Acre

Zoning By-law Term	Definition	Regulation	Zones	Jurisdiction
“Urban Garden”	“A zoning lot up to one acre of land, used to grow and harvest food or non-food crops for personal or group use. The products of an urban garden may or may not be for commercial purposes.”	less than 1 acre	Permitted in all Residential, Commercial, and Industrial zones	Detroit: City of Detroit Urban Agriculture Ordinance February 2013
“Neighbourhood Agriculture”	“A use that occupies less than 1 acre for the production of food or horticultural crops to be harvested, sold, or donated and comply with the controls and standards herein. The use includes, but is not limited to, home, kitchen, and roof gardens. Farms that qualify as Neighborhood Agricultural use may include, but are not limited to, community gardens, community-supported agriculture, market gardens, and private farms.”	less than 1 acre	Permitted in all zoning districts	San Francisco: San Francisco Planning Code
“Urban Farm”	“A zoning lot, as defined in this article, over one acre, used to grow and harvest food crops and/or non-food crops for personal or group use. An orchard or tree farm that is a principal use is considered an urban farm. An urban farm may be divided into plots for cultivation by one or more individuals and/or groups or may be cultivated by individuals and/or groups collectively. The products of an urban farm may or may not be for commercial purposes.”	greater than 1 acre	Permitted in all Residential, Commercial, and Industrial zones	Detroit: City of Detroit Urban Agriculture Ordinance February 2013
“Large Scale Urban Agriculture”	“The use of land for the production of food or horticultural crops to be harvested, sold, or donated that occur: (1) on a plot of land 1 acre or larger or (2) on smaller parcels that cannot meet the physical and operational standards for Neighborhood Agriculture.”	greater than 1 acre	Permitted as of right in Commercial, Industrial, Production, Distribution, and Repair zones. Permitted as a conditional use in all other zones.	San Francisco: San Francisco Planning Code

Other By-laws Related to Urban Agriculture

Many by-laws may be affected by allowing agriculture as a permitted use within urban areas of Hamilton. The following section highlights the issues that should be considered and planned for as the City moves towards the enhancement of urban agriculture activities. **Tables 8** through **13** were developed through the examination of existing City of Hamilton By-laws, and research into urban agriculture practices.



James Street North in Hamilton
Photo Source: momstown Hamilton

Table 8: Soil & Water Considerations Related to By-laws

Soil & Water	Concerns Related to existing City of Hamilton Regulations Dealing with Urban Agriculture
Compost	Urban agriculture zones may produce more yard waste than other areas. If not being composted on site, there may be a need for additional pickups or designated areas for composting organic waste.
<i>on-site</i>	Due to the limited size of most urban agriculture sites, they are often unable to rely solely on nitrogen-rich organic material available on-site in order to meet their composting needs, and thus may require supplementation with organic material.
<i>sourcing</i>	Urban agriculture sites would not be permitted to accept donated organic materials for composting without a Ministry of the Environment Waste Disposal Site Permit which is a costly process. Rooftop composting presents the physical challenge of hauling compost and materials up to rooftop level (Nasr, MacRae, Kuhns, 2010).
	The City of Hamilton already has a green bin collection program for food scraps and yard waste, presenting an opportunity to make compost available for use in urban agriculture operations.
	Another solution to sourcing compost could be for a co-operative organization to handle bulk purchase and distribution of compost inputs (Nasr, MacRae, Kuhns, 2010).
Pesticides	Pesticide use is not permitted in Hamilton under the Ministry of the Environment’s Cosmetic Pesticide Ban (2009) which replaces the previous municipal Pesticide By-law. Urban agriculture practices typically operate using organic methods, by choice. However, some farming practices that do use pesticides may not be covered by the cosmetic pesticide ban.
<i>permitted uses</i>	Pesticide use is permitted to control for specific purposes. Weed control and infestations are listed as permitted uses. The use of pesticides for agriculture is permitted in current rural agricultural zones. If pesticides are permitted in urban areas for agriculture, the type and frequency of application should be regulated.
<i>application</i>	The availability of good quality soil is often a challenge in urban areas. The Ministry of the Environment Cosmetic Pesticide Ban limits materials that can be applied to soil for enrichment or pest control. Organic alternatives to fertilize soil or ward off pests are often difficult to obtain, particularly in urban areas.

Soil & Water	Concerns Related to existing City of Hamilton Regulations Dealing with Urban Agriculture
Sewers & Drains	<p>Current by-laws regulate the installation, connection and use of sewers, as well as the discharge of matter into sanitary, combined, and storm sewer systems in the City of Hamilton.</p> <p>Within the Sewer Use By-law, four types of agreements are available to industrial, institutional and commercial facilities to bring their sewage discharge into compliance. Urban agriculture sites would fall into these categories and would be required to comply with applicable agreements.</p>
<i>design</i>	<p>Garden and cropping systems are best designed to have a reduced demand for water; this could include mulch, soils that hold moisture well, growing plants or crops that are drought-resistant, and also incorporating shade-loving plants (Nasr, MacRae, Kuhns, 2010).</p>
<i>metering</i>	<p>Some urban agriculture operations may require a hookup to the City's water supply. In these instances it will be crucial to know if the farm operation will have a drip irrigation system; if it does, this system will need to be metered. Metering a site with full irrigation coverage (preferred by farmers) could incur significant costs so it will be imperative to determine who will pay for the costs of metering (Nasr, MacRae, Kuhns, 2010).</p>
<i>on-site collection</i>	<p>Not all water used in urban agriculture needs to come from the City's treated water supply. It is common practice to collect water using rain barrels, and this is a simple and affordable method that anyone can practice. Cisterns and greywater recycling arrangements are less common, but are a viable option for alternative irrigation systems.</p>
<i>manure</i>	<p>Using manure is an effective way of fertilizing gardens to improve the nutrient base, however it can pose some significant food safety concerns. Composted manure should be used to reduce food safety risks and it should be covered from the elements to prevent runoff into sewers, ponds, or onto neighbouring properties.</p>
<i>hazardous waste</i>	<p>Discharge from certain urban agriculture activities needs to be managed properly and would be required to comply with the Environmental Protection Act. An example of this waste would be solid waste by-product generated in aquaculture systems.</p>

Table 9: Structure & Site Considerations Related to By-laws

Structures & Sites	Concerns Related to existing City of Hamilton Regulations Dealing with Urban Agriculture
Building Permits	Permit fees are calculated using a service index (SI) multiplier, by building type. Some buildings related to urban agriculture activities are listed, such as greenhouses, farm buildings, accessory structures, sheds, and cold cellars.
<i>accessory buildings</i>	Some buildings (based on size) related to urban agriculture may not be listed on the fee schedule for building permits and thus could be considered accessory buildings. A hoophouse or farm stand could be examples of accessory structures that may not be categorized in the current Building Permit By-law
<i>temporary buildings</i>	Temporary buildings require a building permit in the City of Hamilton, thus a farm stand or hoophouse that is only up for one season of the year would still be required to obtain a building permit.
Fences	Urban agriculture may require the use of fences. The current Fence By-law allows for a 3 metre fence in industrial zones, or on farms. Other uses of fences must be 2 metres or lower. Rooftop fences or guards may be required for urban agriculture operations on roofs.
<i>metal</i>	There are limitations to where sheet metal fences may be used. Currently they are not permitted in residential zones, or in the Niagara Escarpment Development Control Area.
<i>barbed wire</i>	The current Fence By-law allows the use of barbed-wire fences on farms for keeping livestock, or the protection of livestock or crops from animals. Barbed wire is also permitted at the top of fences that are at least 2 metres high.
<i>electric</i>	Currently permitted to control livestock or to protect crops or livestock from animals. Must meet Canadian Standards Association standards.
<i>on city property</i>	People cannot build or maintain fences on City property without permission of the City.
Site Alteration	The current by-law prohibits and regulates the alteration of property grades, the placing or dumping of fill, and the removal of topsoil.
<i>topsoil</i>	The removal of topsoil as an incidental part of greenhouse operations, nurseries or horticultural products is an exception to the Site Alteration By-law, however it may not be removed for commercial sale.

Structures & Sites	Concerns Related to existing City of Hamilton Regulations Dealing with Urban Agriculture
<i>grading</i>	Urban farm or garden sites must be sensitive to not disturb areas that have ditches, swales, or culverts which may affect the flow of water within the city's topography.
Property Standards	The Property Standards By-law contains a large number of subject areas, and some standards will be implicated in urban agriculture practices, including composting, pest control, sewage and drainage, walks and pathways, and ventilation.
<i>composting</i>	Urban agriculture operations which use on-site composting must conform to and meet existing property standards. Compost piles should be maintained so as to not produce the incidence of overwhelming odours or pests.
<i>drainage</i>	Sites where urban agriculture takes place will need to be carefully considered and build appropriate water-management infrastructure to ensure site drainage is contained and does not spill out onto neighbouring properties or into municipal drains. Special consideration will be needed for rooftop agriculture.
<i>walks and pathways</i>	Urban agriculture production should not encroach on public walks and pathways, or obstruct existing informal routes that are frequently used by pedestrians.
Signs	<p>The current Signs By-law regulates the location, size, number, construction, alteration, repair, and maintenance of all outdoor signs within the city. Certain urban agriculture practices may use signs to educate, inform, or advertise.</p> <p>Signs related to agriculture are currently permitted in rural agricultural zones. Since there is no current agricultural zoning in Hamilton's urban area, some exceptions may be required for this by-law to incorporate agricultural signage in the city.</p>

Table 10: Animal Considerations Related to By-laws

Animals	Concerns Related to existing City of Hamilton Regulations Dealing with Urban Agriculture
Farm Animals	Currently farm animals such as chickens, pigs, and cattle are not permitted in the City of Hamilton urban area (see page 25).
<i>livestock</i>	If in the future animal husbandry is included as a permitted use in Hamilton then the existing Animals By-law may require amendment.
<i>fish</i>	The Environmental Protection Act and the Ontario Water Resources Act provide legislation which controls the discharge of specific waste materials from fish farms. Particular attention is given to the timing, method and location of sewage sludge application. Disposal of sewage outside a fish farm's immediate property requires an additional Certificate of Approval for Organic Waste Management System and Site.
<i>bees</i>	In Ontario, beekeeping is regulated by the Ontario Ministry of Farms, Agriculture, and Rural Affairs (OMAFRA). Currently OMAFRA maintains urban and rural beekeeping under the same set of regulations. The Ontario Bees Act (1990) requires that all hives are kept more than 30 metres from the property line of the lot on which they are kept. This regulation is challenging in urban areas and a revision to the regulation is currently being studied.

Table 11: Nuisance Considerations Related to By-laws

Nuisance	Concerns Related to existing City of Hamilton Regulations Dealing with Urban Agriculture
Noise	The Noise By-law prohibits unreasonable audible noise, or noise that is likely to disturb inhabitants of the city. Most urban agriculture practices do not produce noises that would be considered public nuisances, however depending on form or scale, noise should be a consideration. Some examples of noise from farming practices would be tilling soil, noise from farm animals, or the noise of site construction or loading.
<i>animal</i>	Currently farm animal noise is permitted if they are on a farm in a rural agricultural zone. Normal farm practice noise is also permitted. Since the City of Hamilton is not pursuing animal husbandry as an urban farming practice at this time, there is no concern about farm animal noises. If animal husbandry is practiced in future, some consideration may be required for animal noise in urban settings.
<i>regular</i>	Most regular noise produced in urban agriculture practices would be permitted, if it occurs between 7a.m and 10p.m. of one day. If urban farming practices require extension into early hours of the morning changes to the Nuisance By-law may be required.

Table 12: Trees & Park Considerations Related to By-laws

Trees & Parks	Concerns Related to existing City of Hamilton Regulations Dealing with Urban Agriculture
Affecting Trees	Trees are protected against injury and destruction by existing by-laws in Hamilton. There are separate by-laws for trees on public property, private property, and in woodland conservation areas. Certain activities related to urban agriculture need to take into account the presence of trees.
<i>soil area</i>	The soil area within the dripline of trees cannot be altered, disturbed or encumbered by material (such as sand, gravel, or bricks) that would prevent the flow of oxygen to the tree's roots.
<i>alteration</i>	Trees cannot be altered in any way, including the affixing of signs and the attachment of fences or rope to the trunk of the tree or to bracing poles and wires.
<i>planting</i>	There are several prohibited species of trees that cannot be planted within the city. No tree can be planted on public property without the City's permission.
<i>removal</i>	Trees can be removed at the discretion of the Director of Operations and Maintenance if it is considered necessary to the public interest.
Affecting Parks	Activities in parks are regulated by the Parks By-law and may affect certain aspects of urban agriculture activity in parks.
<i>tents and structures</i>	No temporary or permanent structures can be erected in a park without a permit.
<i>encroachment</i>	Without a permit, encroachment onto parks is not permitted, including the construction, installation, or maintenance of fences or structures, no dumping or storage of materials, and no planting or cultivating, grooming, or landscaping.
<i>picnics and gatherings</i>	Organized gatherings or picnics of more than 20 people must have a permit. Gatherings taking place with a permit cannot be disturbed by other park users.

Table 13: Business Licensing Considerations Related to By-laws

Licensing (Business)	Concerns Related to existing City of Hamilton Regulations Dealing with Urban Agriculture
Businesses	Most businesses in Hamilton are required to have a license in order to legally operate.
<i>zoning verification</i>	Business licences will only be issued to businesses that are operating in a zone where commercial activity is permitted, and where the lot size, parking, etc. are confirmed to meet the regulations of the permitted use in that zone.
<i>business categories</i>	Currently, commercially-oriented urban agriculture practices, such as farm stands and market gardens, are not classified as business types eligible for business licenses. Further consideration of their classification may be required.
<i>markets</i>	Farm gate stands, market gardens, and farmers' markets may need to be considered in terms of licensing and policy, and potentially be exempt or considered not-for-profit operations.

Issues Related to Urban Agriculture

The City of Hamilton is fortunate to be supported by the highly productive rural area that surrounds it. Urban agriculture activities are distinct yet complimentary to the existing rural farming industry in the region. This section identifies impacts of urban agriculture activity - specifically those related to the scale of operation, soil safety, and food handling - that should be considered before urban agriculture projects are approved or undertaken.

Scale

Many of the potential concerns about agricultural activities in the city relate to scale. While few people are concerned with neighbours growing a few tomato plants in their backyard, the prospect of neighbours operating a large scale commercial tomato farm on their property can lead to worries about potential nuisances and impacts on surrounding land uses. Likewise, large scale agricultural operations can have greater impacts on municipal systems such as water provision, wastewater management, and solid waste management.

Many of the potentially negative impacts of large-scale conventional agriculture are effectively precluded in Hamilton by existing by-laws and regulations (see **Tables 8 to 13**). Furthermore, large scale agricultural operations are unlikely to locate in cities due to a lack of contiguous plots of land that are suitable for conventional agriculture and available at prices comparable to rural land. Hamilton is fortunate to be surrounded by a large and thriving rural and peri-urban agriculture industry that is largely comprised of large-scale, extensive agricultural operations. Urban agriculture in Hamilton is complementary to the region's rural agriculture industry, operating at smaller scales but with higher intensities. Intensive urban agriculture practices make the most out of limited



A Hamilton Farmer Harvesting his Pumpkin Patch
Source: Cathie Coward/The Hamilton Spectator

Soil Assessment Guide

for New City Allotment and Community Gardens

Many of the potentially excellent sites for urban agriculture in Hamilton have soil that may be contaminated by previous activities on or next to these sites. In response to a growing urban agriculture movement and increasing interest in gardening on lands that are vacant, abandoned, or were previously used for purposes other than food production, the City of Toronto developed a tool to help urban gardeners take health-protective approaches to gardening.

Toronto Public Health, in collaboration with Parks, Forestry and Recreation and the Toronto Environment Office, developed an urban gardening soil assessment guide to assist City staff in the assessment of potential sites for community and allotment gardens. The guide serves as a decision-support tool to assess the level of risk posed by the soil of an individual site, and to determine appropriate exposure reduction actions to take based on the conditions of the site. A user-friendly version of this guide is currently being developed for use by a broader audience. By providing a supportive resource like this, municipalities help urban gardeners to avoid risks and maximize the health benefits of growing their own food.



Source: Halton Region

amounts of land and water. Vertical gardens, hydroponic systems, and permaculture are good examples of intensive urban agriculture practices that often occur at relatively small scales in cities.

Zoning by-laws can be a good tool for further ensuring that urban agriculture takes place at a scale and intensity that is appropriate to an urban context. Some cities have created land use designations for two scales of urban agriculture, often distinguished as “community gardens” and “urban farms” (see **Tables 6 and 7**). More intensive agriculture activities such as hydroponic and aquaponic facilities are sometimes permitted only within the urban farm designation, and urban farms are typically permitted in industrial, commercial and institutional areas of the city, but excluded from sensitive zones such as residential communities. In this way, both large and small scale urban agricultural activities are enabled, but advanced consideration in the zoning by-law ensures that these activities occur in areas where they will be most compatible with surrounding land uses.

Soil Safety

Not all urban agricultural systems rely on soil as a growing medium. However, for those that do, building and maintaining fertile soil is the backbone of their operation. The health and safety of urban soil used to grow produce is a concern for those who grow, consume, and regulate food produced in cities. Many of the perceived risks of urban agriculture are effectively precluded by existing environmental protection and public health regulatory frameworks. Concerns about the safety of soil and soil amendments are most often based on either the direct health risks of consuming produce grown in contaminated soil or the indirect health risks resulting from exposure to an urban environment that is polluted with agricultural inputs. Pollution concerns about horticultural practices in North America generally relate to the use of chemical pesticides and fertilizers.

In Ontario, the application of pesticides has been greatly limited since the Cosmetic Pesticide Ban was issued as an amendment to the Ontario Pesticides Act in 2009.³⁴ Urban farmers can still technically apply to OMAFRA for a license to apply pesticides, however, they are required to be a registered Farm Business in order to do so. Many contemporary urban farmers adhere to ‘organic’ or ‘natural’ farming practices, which discourage the use of chemical pesticides and fertilizers.

Food Handling

Food handling should be managed at each stage of food production, from ensuring seeds are sown in safe soil to safely preparing vegetables for sale after harvest. Urban gardeners and farmers should be educated about how to reduce the risks of food-borne illness. With the implementation of common sense and straightforward safe food handling practice people can enjoy the harvest without worry of becoming sick. Safe food handling from farm to fork can be achieved through informational handouts, public workshops, and food handling certification.

As mentioned earlier, soil safety is a concern for urban gardeners. Tending to the soil and making sure it is a fertile growing medium is important and it is critical for people doing urban agriculture work to understand the risks associated with soil. The storing and application of manure, the tracking of soil from one urban farm to another, or the contamination of soil with foreign materials all have associated risks.

When food is ready for harvest, care must be taken for the safe handling of fruits and vegetables. All harvesters should wash hands before harvesting, and any time



Chef Chris Scott at the Hamilton Farmers' Market
Source: Out Standing In Their Fields

³⁴ Ontario Ministry of the Environment , 2012.

they eat, drink, smoke, or use the restroom. Having separate gloves and aprons for each stage of harvesting, processing, and packaging can also reduce the potential for contamination. Using a potable water supply, any dirt or dust should be washed from fresh produce before it is packed, and packing should take place in a covered area, free from birds, rodents and other animals. Anyone who is sick should not be harvesting or packing food.

Selling prepared foods at market or in food vending situations such as food trucks or stands is becoming very popular. Selling food to the public is considered either a low, medium or high risk under Ontario Public Health Standards and Hamilton's Food Premises Inspection Program Policy Standards. People or food establishments selling food to the public are required to notify the local health unit and a risk assessment will be conducted by a Public Health Inspector to determine if the food preparation process is a low, medium or high risk. In the City of Hamilton, if the food preparation process is a medium or high risk the operator is required to complete a Food Handler Certification training and exam. At minimum, one staff person who has completed this certification must be working in a supervisory role during all shifts. This requirement ensures that food is being handled in a way that reduces the risk and spread of foodborne illness.

Hamilton Public Health Services is responsible for monitoring food safety at farmers' markets. The Association of Public Health Inspectors of Ontario (ASPHIO) has guidelines for recognized commercial urban farmers to sell at farmers' markets; however home gardeners would not be permitted to sell at farmers' markets. Farmers' markets are required to have at least 51% farmers selling at the market in order to be exempt from the requirements of the Food Premises Regulation; however, they are not exempt from the provisions laid out in the *Health Protection and Promotion Act*. Markets with less than 51% farmers

are required to comply with requirements under the Food Premises Regulation and the *Health Protection and Promotion Act*.

Urban Agriculture Business & Distribution

Business and Funding Models

Urban agriculture is an activity that encompasses a wide range of forms and suits a variety of purposes. Many people grow food in residential or community allotment gardens for eating with family and friends, while others grow food to donate to local community organizations. Some urban agriculture initiatives find ways to sell the food they grow to fellow city-dwellers hungry for locally-grown food. Regardless of how products are distributed, all urban agriculture projects need to develop ways of sustaining their activities and paying for initial and ongoing costs.

The costs of establishing an urban agriculture project can vary greatly depending on the farming system used and the scale of the operation. The initial installation of a system can be quite labour and capital intensive, after which regular investments are required for ongoing inputs, such as seeds, compost, and equipment. Many urban farmers work to minimize their reliance on external inputs, by saving seeds from year to year and producing their own compost.



Dean Hale of Growing Green Hamilton, uses the concept of square-foot gardening in a raised bed.
Source: Kaleigh Rogers/CBC

Community groups that grow food to share or donate to others can be eligible for a variety of grants offered through government programs or funding agencies. They can also seek donations from members of their community, organize fundraising

campaigns, or charge membership fees.³⁵ Social enterprises or small businesses generate revenue by selling urban agriculture products through wholesale and retail channels, such as farmers' markets, farmgate sales, community supported agriculture (CSA) schemes, food box delivery programs, local grocery stores, or restaurants (see **Table 14**). It is important to note that unlike rural agriculture, many urban gardens and farms are restricted from selling products on-site due to land use regulations in certain zoning categories. For this reason, opportunities to sell urban agriculture products off-site are particularly important for urban farming businesses.

Selling Goods to the Public

The retail sale of any good or service is only permitted in commercial areas of the city. Some exceptions are made for home-based businesses in residential areas, so long as they do not interfere with the residential community in terms of signage, parking, or noise.

Zoning and licensing are tools that can regulate where and when the sale of urban agriculture products take place. Selling at farmers' markets, farmgate stands, market gardens, and to food hubs are all viable ways for urban gardeners and farmers to make a profit through urban agriculture. Retail sale of urban agriculture products should be integrated into zoning and business licencing categories.



Fresh City Farms Greenhouse, Downsview Park, Toronto, ON
Source: Fresh City Farms

³⁵ The Hamilton Community Garden Network has developed a very useful guide to fundraising for community gardens: http://hcgcn.ca/wp-content/uploads/FundraisingGardensGuide_Draft_120202_KD.pdf

Table 14: Examples of Distribution Channels for Urban Agriculture

Distribution	Description	Policy Considerations
Consumed by Farmers	farmers cultivate food for personal consumption or collectively split the harvest	
Community Supported Agriculture (CSA)	individuals or families can buy a share in the farm prior to the season starting; shares are picked up or delivered weekly or bi-weekly during the harvest season	business license, food safety/handling
Farmers' Market	farmers sell food they have grown in a formal or informal marketplace	business license, food safety/handling parking, zoning
Wholesale	products are sold to local retailers and restaurants	business license, food safety/handling
On-site Sales (Farm Stand)	a temporary or permanent structure is used to sell products to the general public	business license, parking, zoning
Donation	all or a portion of produce harvested is donated to local community groups, charities, etc.	charitable tax receipts, food safety/handling
Food Box Delivery	similar to a CSA, but customers pay upon delivery and have more flexibility in produce choice. Produce is delivered directly to customers or to neighbourhood pick-up points on a weekly or bi-weekly basis	business license, food safety/handling
Micro-Enterprise	one example would be a farmer selling and distributing vegetables by email	business license, food safety/handling



Ontario College of Art and Design University FoodShare
Source: OCADU Connect

Hamilton's Current Policies & Planning Supports for Urban Agriculture

Vision 2020

Urban agriculture practices are in line with the City of Hamilton's Vision 2020 and will contribute to achieving a number of the goals set forth in that vision. Specifically, urban agriculture has a role to play in achieving seven Vision 2020 goals identified in the box to the left.

Each one of these goals can be met in part by urban agriculture activities, and that in itself is a good reason to pursue diverse forms of urban agriculture. A vision for a city with reduced pollution, as a desirable living place with healthy soil and water, with land for growing food that contributes to the economy and improves agricultural understanding through the production of healthy and sustainable food is most definitely achievable in Hamilton.

Planning Supports

The *Urban Hamilton Official Plan* was approved by the Ministry of Municipal Affairs and Housing on December 24, 2008 and is currently before the Ontario Municipal Board under appeal. Currently the City of Hamilton's *Comprehensive Zoning By-law 05-200* is being implemented in stages. This zoning by-law consolidates the former zoning by-laws of Ancaster, Dundas, Flamborough, Glanbrook, Hamilton and Stoney Creek.

The zoning by-laws of each city provide a complex outline of how lands are planned to be used in all areas of the city. Within each zone there is a list of

Vision 2020 Goals Related to Urban Agriculture

To increase the number of businesses and organizations that are non-polluting and those that actually produce quality of life products and services that control, reduce and prevent pollution.

To promote The City of Hamilton's environment as a desirable place to live and work.

To ensure The City of Hamilton has healthy soil and water from which to produce food for our community.

To ensure sufficient land is available to grow food for future generations.

To make agriculture a viable economic activity in The City of Hamilton.

To improve understanding of agriculture concerns by urban dwellers, new comers to rural areas and local governments.

To ensure The City of Hamilton is a community of people educated with regards to agriculture and healthy, sustainable food production and consumption patterns.

permitted and accessory uses. Zoning provides great detail on the type of activity that takes place on the land, but it does not look at the ownership or operation of a site. Although zoning is complex, it does change from time to time to accommodate new land uses. Incorporating urban agriculture into Hamilton's city fabric may require some changes to the *Zoning By-law*, such as including it as a permitted use in some zones and creating appropriate regulations. It is important to remember that land use impacts and scale are very important considerations when making changes to the *Zoning By-law*, since the effects of the change can be widespread in neighbourhoods, and the city at large.

Community Food Security Stakeholder Committee (CFSSC) & Food Charter

The Community Food Security Stakeholder Committee (CFSSC) was formed in 2008 as an advisory sub-committee of the Board of Health. CFSSC members represent the agriculture community, local environmental groups, social service advocates and providers, academia and researchers, the food industry, labour organizations, and those directly experiencing food insecurity. The CFSSC's mandate is to move Hamilton towards food security through a number of means, including supporting food policy development. In September 2012, the Community Food Security Stakeholder Committee proposed to the Board of Health a draft Food Charter to serve as a vision for a Hamilton Food Strategy. The Food Charter envisions a healthy, sustainable and just food system. It seeks to guide municipal policies and community action and is based on a set of strategic principles, including facilitating the development of urban agriculture.

Food Strategy

Currently, the City is working to develop the terms of reference for a comprehensive Food Strategy. The Food Strategy will be a formally adopted plan

that will help the City focus on specific goals and actions to improve the food system. It will help to establish strong partnerships and coordination across City departments in order to support actions impacting all elements of the food system. The goal of the Food Strategy is a city with a sustainable food system where all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

Community Garden Policy & Land Inventory

“Community Garden” means a plot of City land which is used by a Garden Collective to produce food, native and ornamental plants edible berries and food perennials.³⁶



Bartonville Neighbourhood Display at Seedy Saturday 2012
Source: Hamilton Community Garden Network

A major step to achieving Hamilton’s Vision 2020 goals has been taken with the adoption of the City of Hamilton Community Garden Policy (2010). The policy speaks to the national trend in urban agriculture and an increased demand for community gardening in urban communities. One of the major factors in developing a formal policy was the ongoing operational costs of Hamilton’s existing community gardens paired with the increased demand for more of them.

The City set the goal of transitioning the existing City-managed allotment-style community gardens to a model that licenses plots to Garden Collectives. They also set a goal of establishing five new community gardens per year. Potential community garden sites have been identified with input from community members and a community garden directory exists listing current community gardens and their contacts.

³⁶ City of Hamilton Community Garden Policy, 2010.

With a Community Garden Policy in place Hamilton is moving in a direction that embraces the potential of urban agriculture to improve the economic, social and physical well-being of residents. Increasing the number of garden plots will increase urban agriculture activities and in turn create more benefits from common, emerging, and supportive practices in urban agriculture.

In support of the Community Garden Policy, Public Works is developing a list of publically-owned parks and vacant land that could be appropriate for community gardens. This inventory can be used as needed for the site-specific identification of properties, and will be a useful administrative resource for the Community Garden Program moving forward.

Next Steps in Hamilton

The next steps for integrating urban agriculture into Hamilton's city fabric will be to communicate and coordinate across City departments to forge a common understanding of the role urban agriculture will play in the city.

With interdepartmental support, the *Urban Hamilton Official Plan* should be amended so that urban agriculture is included as part of Hamilton's long-term plan for development. Once its place in the Official Plan is secure, the final step in formalizing Hamilton's support for urban agriculture is to update its *Zoning By-law* to fully integrate urban agriculture into the city's regulatory framework.

The simultaneous implementation of actions to support urban agriculture in Hamilton is beneficial because it facilitates dialogue among City departments. Even though each approach is separate, they work together towards a common goal.

Recommendations

This report provided an environmental scan of existing practices in urban agriculture, a rationale for supporting urban agriculture at the municipal level, and an overview of the tools available for enabling its practice in Hamilton. This report also identified successful examples of urban agriculture practice in action, and it recognized areas of concern that can be managed through policy, regulation, and education.

Based on Hamilton's current interest in enabling urban agriculture activity, this report makes the following recommendations:

VISION

1. Support the ongoing development of a Food Strategy for the City of Hamilton with the guidance and leadership of Hamilton Public Health Services and the Community Food Security Stakeholder Committee. There should be a coordinated approach to food system planning within the City.

PLANNING

2. Add language to the Official Plan that expresses Hamilton's long-term commitment to supporting the urban agriculture activities of its citizenry. This action should be undertaken in concert with Zoning By-law changes that will consider and account for the impacts of implementation.

3. Support and further investigate urban agriculture by including it within the Zoning By-law. This should be done in a way that addresses the potential

concerns outlined in this report, such as scale, environmental impacts, public health, and nuisance. Hamilton can look to the examples of other North American municipalities that have implemented zoning regulations for urban agriculture.

OPERATIONAL

4. Support and enhance the ongoing operations of the existing Community Garden Program. This will allow the City-run program to continue providing access to suitable land, compost and services to community gardens on public land. This will provide the opportunity for Public Works to support urban agriculture projects beyond those within the Community Garden Program, such as entrepreneurial projects or community gardens on private or institutional land. Expanding the capacity of Public Works to support urban agriculture activities can include the provision of infrastructure such as water and fencing

5. Provide dedicated funding to create a position that can coordinate support for existing and future urban agriculture initiatives.

This position, which could be referred to as the ‘Urban Agriculture Coordinator,’ could facilitate and coordinate various urban agriculture initiatives in the city, and could help to organize and leverage ongoing community engagement around urban agriculture and community food systems. Given the cross-departmental nature of both the benefits of urban agriculture and their regulatory requirements, the Urban Agriculture Coordinator’s responsibilities could include: *regular cross-departmental communication* for Departments that are affected by urban agriculture activities, *grant writing and fundraising* for urban agriculture initiatives, *creating and nurturing partnerships* in the community, *developing fact sheets and neighbourhood resources*, and *coordinating community action* to build the capacity of people in the Neighbourhood Action Plan communities. This work will break down bureaucratic barriers and facilitate the initiation of urban agriculture projects in the city.

6. Participate in a study on soil health and safety then develop a practical document specific to Hamilton and available to the public. This guide could reference technical information from existing resources such as Toronto Public Health's *Soil Assessment Guide*. The Community Garden Program also has existing processes that are used to identify soil safety. Based on these resources and available results related to Hamilton's soil profile, an accessible resource should be created to assist gardeners- to safely garden in urban settings. (It could include sampling and testing soil, how to interpret soil tests, when do you need to be concerned, and techniques for mitigating risk such as raised beds and bringing in clean soil.)

Works Cited

- Arroyo-Rodriguez, A. (2012). Zoning model for urban agriculture and composting. *Biocycle*, 53(7), 24.
- Aylett, A. (November 3, 2010). "World's First Commercial Rooftop Garden," *Renew Canada Blog*. Retrieved from <http://renewcanada.net/2010/worlds-first-commercial-rooftop-garden/>
- Baker, L. (2000). Warehouse rooftop supports urban agriculture. In *Business*, 22(2), 16.
- Brown, Suzanne. (2012) Hamilton Neighbourhood Action Planning. City of Hamilton. Retrieved from: http://www.hamilton.ca/NR/rdonlyres/95B062BC-C4CA-496C-A6D3-BCFE8AD6999C/0/NAP_Brochure_Web.pdf
- City of Hamilton - Community Gardens. City of Hamilton - Official website of the City of Hamilton. Retrieved February 5, 2013, from <http://www.hamilton.ca/CityDepartments/PublicWorks/Parks/Horticulture/CommunityGardens.htm>
- City of Hamilton. Neighbourhood Action Planning

- City of Hamilton - Neighbourhood Development Strategy. City of Hamilton - Official website of the City of Hamilton. Retrieved January 28, 2013, from <http://www.hamilton.ca/ProjectsInitiatives/NeighbourhoodDevelopment/>
- City of Hamilton - VISION 2020. City of Hamilton - Official website of the City of Hamilton. Retrieved February 4, 2013, from <http://www.hamilton.ca/ProjectsInitiatives/V2020/>
- Cohen, N., Reynolds, K., & Sangvhi, R. (2012). Five Borough Farm: Seeding the Future of Urban Agriculture in New York City. New York, NY: Design Trust for Public Space.
- Doron, G. (2005). Urban agriculture: Small, medium, large. *Architectural Design*, 75(3), 52-59.
- Dumont, A. (n.d.) "Birds-eye Farming," Greenhouse Canada. Retrieved from <http://www.greenhousecanada.com/content/view/2976/38/>
- Edwards, V. and Weldon, D. (2012) Nutritious Food Basket Report (BOH12025) (City Wide). City of Hamilton Public Health Services. Web: <http://goo.gl/GX6S0> accessed January 18, 2013.
- GrowTO. (2012). GrowTO: An Urban Agriculture Action Plan for Toronto. Retrieved from http://tfpc.to/wordpress/wp-content/uploads/2012/08/GrowTO_ActionPlan_lowresFINAL.pdf
- Hamilton Community Garden Network | Grow with Your Community. Hamilton Community Garden Network | Grow with Your Community. Retrieved February 13, 2013, from <http://hcgnc.ca/>
- Hanna, A., & Oh, P. (2000). Rethinking urban poverty: A look at community gardens. *Bulletin of Science, Technology & Society*, 20(3), 207-216.
- Hozyash, K. (2010). Making Urban Farming Legal. *City Farmer News*. Retrieved from <http://www.cityfarmer.info/2010/04/29/making-urban-farming-legal/>
- Iowa State University, University Extension. (2011) On-Farm Safety: Food Handling Guide. Retrieved from: <https://store.extension.iastate.edu/ItemDetail.aspx?ProductID=6540>

- Local Food Hub. (2012) On Farm Food Safety Recommendations. Retrieved from: http://localfoodhub.org/wp-content/uploads/2012/10/LFH_OFFS_recommendations.pdf
- Mogk, J. E., Kwiatkowski, S., & Weindorf, M. J. (2010). Promoting urban agriculture as an alternative land use for vacant properties in the city of detroit: Benefits, problems and proposals for a regulatory framework for successful land use integration. *Wayne Law Review*, 56(4), 1521.
- Nasr, J., MacRae, R., & Kuhns, J. (2010) Scaling Up Urban Agriculture in Toronto: Building the Infrastructure. Metcalf Food Solutions. Retrieved from: <http://metcalffoundation.com/publications-resources/view/scaling-up-urban-agriculture-in-toronto-building-the-infrastructure/>
- Ontario Ministry of the Environment (MOE). (2010). Pesticides Act. Retrieved from http://www.ene.gov.on.ca/environment/en/legislation/pesticides_act/index.htm
- Smit, J., Nasr, J., & Ratta, A. (2001) Urban Agriculture: Food, Jobs and Sustainable Cities, Chapter 7: Benefits of Urban Agriculture. The Urban Agriculture Network, Inc.
- Thibert, J. (2012). Making local planning work for urban agriculture in the north american context: A view from the ground. *Journal of Planning Education and Research*, 32(3), 349-357.

Image Sources

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By-Laws Referenced

City of Hamilton By-laws:

Animals [By-law No. 12-031](#)
Building Permits [By-law No. 08-161](#)
Fences [By-law No. 10-142](#)
Fortification [By-law No. 10-122](#)
Licensing (Business) [By-law No. 07-170](#)
Noise [By-law No. 11-285](#)
Parks [By-law No. 01-219](#)
Pesticides [By-law No. 07-282](#)
Property Standards [By-law No. 10-221](#) | [By-law No. 10-118](#) (Yard By-law)
Public Nuisances [By-law No. 09-110](#)
Sewers and Drains [By-law No. 06-026](#) | [By-law No. 04-150](#)
Signs [By-law No. 10-197](#)
Site Alteration [By-law No. 03-126](#)
Trees - Public Property [By-law No. 06-151](#)
Waterworks [Regional By-law No. R84-026](#)
Zoning [Zoning By-Law 05-200](#)

By-laws from Other Jurisdictions:

City of San Francisco [Planning Code](#).
City of Detroit [Urban Agriculture Ordinance](#)
City of Seattle [Municipal Code](#), Title 23: Land Use Code
City of Chicago Municipal Code, Chicago [Zoning Ordinance](#)
City of Ottawa [Zoning By-law 2008-250](#)
City of Philadelphia, [The Philadelphia Code](#), Title 14: Zoning and Planning
City of Toronto [Draft Zoning By-law](#)

Appendices

Appendix I: Zoning that Distinguishes Land Use by Purpose - Sales Permitted or Not Permitted

Zoning Term	Definition	Zones	Jurisdiction	Regulations
sales NOT permitted				
“Community Garden”	“Land managed by a public or nonprofit organization, or a group of individuals, that is used to grow plants and harvest food or ornamental crops from them for donation or for use by those cultivating the land and their households. Examples include P -Pa administered by the Department of Neighborhoods.”	Permitted in all zones, with some limitations in Industrial zones	Seattle: Seattle Land Use Code – Title 23 of the Seattle Municipal Code	In all zones, the total gross floor area of all structures for community garden use may not exceed 1,000 square feet on any lot, and limited to 12ft height (incl. pitched roof) and subject to the development standards of the zone as they apply to accessory structures
“Community Garden”	“A communal garden provided for the sole use of or consumption by the individual or individuals working the garden”	Permitted in Local Commercial, Minor Institutional, Open Space and Leisure, Hydro Corridor Subzone, and most Rural Zones	Ottawa: City of Ottawa Zoning By-law 2008-250	<ul style="list-style-type: none"> - it is not a commercial operation - the produce grown is for personal use and consumption of the individual working in the community garden - no vehicle, equipment, building or structure of any sort, including an arbour or any other such supporting structure, is permitted within 1.5 metres of a public street - no parking requirements - except vehicular gardening equipment or a passenger vehicle (incl. passenger vehicle) used in conjunction with a CG must be parked on the same lot as the CG
“Community Garden”	“A neighborhood-based development with the primary purpose of providing space for members of the community to grow plants for beautification, education, recreation, community distribution or personal use.”	Permitted by right in all Residential, Business, Commercial, and Downtown districts, and some Public and Open Dpace districts	Chicago: Chicago Zoning Ordinance	<ul style="list-style-type: none"> - Sites managed by public or civic entities, nonprofit organizations or other community-based organizations that are responsible for maintenance and operations. Processing and storage of plants or plant products are prohibited on site. Gardening tools and supplies may be stored within an accessory building. - Shall not be larger than 25,000 square feet, except in POS districts. There is no size limit for community gardens in the POS1 and POS2 districts. - No accessory buildings may occupy more than 60% of the area of a required rear yard setback, except: that accessory community garden buildings such as sheds, greenhouses, hoophouses or farm stands may have an area of up to 575 square feet. - Hoophouses or other fabric based shelters, which are not required to obtain a building permit shall not be considered accessory buildings. Hoophouses or other fabric based shelters shall be securely attached to the ground and designed and constructed to comply with appropriate standards in Title 13 of the Municipal Code of Chicago.

Zoning Term	Definition	Zones	Jurisdiction	Regulations
“Community Garden”	“An area managed and maintained by a group of individuals to grow and harvest food crops and non-food crops (e.g. flowers) for personal or group consumption, for donation, or for sale that is incidental in nature.”	Permitted in all Commercial, Residential and most Industrial zones	Philadelphia: The Philadelphia Code - Title 14	<ul style="list-style-type: none"> - May be divided into separate garden plots or orchard areas for cultivation by one or more individuals or may be farmed collectively by members of the group. - May include common areas (e.g. hand tool sheds) maintained and used by the group. Community gardens may be the principal or accessory uses and may be located on the roof or within a building. - Sales are permitted on the same lot as the urban agriculture use or in location where retail sales are an allowed use - The site must be designed and maintained so that water and fertilizer will not drain onto adjacent property - Refuse is rodent-proof at setback - Tools and equipment enclosed and setback - No outdoor work activity that involves power equipment or generators may occur between sunset and sunrise
sales permitted				
“Urban Farm”	“Where plants are grown for sale of the plants or their products, and in which the plants or their products are sold at the lot where they are grown or off site, or both, and in which no other items are sold. Examples may include flower and vegetable raising, orchards and vineyards.”	Permitted as of right as an accessory or principle use in Commercial and Industrial zones. Permitted as accessory use in Residential zones.	Seattle: Seattle Land Use Code – Title 23 of the Seattle Municipal Code	<ul style="list-style-type: none"> - Size limited or requires permit in certain zones - In Residential: only mechanical equipment designed for household use, retail hours limited 7am-7pm, 7 days/week, commercial deliveries and pick-ups limited to one/day, no more than 2 motor vehicles each with a gross weight of 10000 pounds or less may be used for farm operations, must be located on same lot (or within 800ft) of/as principle use, one sign <64in2; on a lot with no principle structure, total gfa of all urban farm structure cannot exceed 1000ft2 or 12 feet in height. - Odors and fumes: none shall be allowed to escape from urban farms into the air in such amounts as to be detrimental to the health of any individuals or the public; or noticeable, discomforting, or disagreeable so as to offend the sensibilities of a reasonable individual standing at a distance of 200ft from the urban farm” - Accessory Urban Farms must comply with same development standards as all accessory uses, but are not required to be on same lot as principle use
“Urban Farm”	“Growing, washing, packaging and storage of fruits, vegetables and other plant products for wholesale or retail sales.” Includes hydroponic systems, aquaponic systems, and apiaries	Indoor operations, outdoor operations, and rooftop operations are distinguished, and permitted variously within most zones except residential. Permitted as a primary or accessory use	Chicago: Chicago Zoning Ordinance	<ul style="list-style-type: none"> - Exempt from the landscaping and screening requirements of vehicular use areas of Parkway - vegetation that is complementary to allowed activities and that is acceptable to the Department of Housing and Economic Development - shall be allowed in lieu of the Parkway Tree requirements of Fencing and screening that is complementary to allowed activities and that is acceptable to the Department of Housing and Economic Development - Composting is limited to the materials generated on site only, and must comply with the standards the Municipal Code. - Incidental sales of such compost material is expressly allowed as an accessory use to the principal use of an Urban Farm.

Zoning Term	Definition	Zones	Jurisdiction	Regulations
"Market or Community-Supported Farm"	"An area managed and maintained by an individual or group of individuals to grow and harvest food crops or non-food crops (e.g. flowers) for sale or distribution that is not incidental in nature. Market farms may be principal or accessory uses and may be located on a roof or within a building."	Permitted in most Commercial, most Industrial, and all Residential zones.	Philadelphia: The Philadelphia Code - Title 14	same regulations as Community Garden (above) in addition: - fence or vegetative screen required when adjacent to residential zones
"Market Garden"	"Premises used for growing and harvesting vegetables, fruits, flowers, shrubs, trees or other horticultural products for the purpose of sale."	Permitted in Residential Apartment Complex zone and Hydro Corridor zones, with conditions	Toronto: City of Toronto Draft Zoning Bylaw	in RAC zone may not used for the growing and harvesting of shrubs or trees for the purpose of sale.

Appendix II: Zoning that Distinguishes Land Use by Scale - Over 1 Acre or Under 1 Acre

Zoning Term	Definition	Zones	Jurisdiction	Regulations
< 1 acre				
“Urban Garden”	“A zoning lot up to one acre of land, used to grow and harvest food or non-food crops for personal or group use. The products of an urban garden may or may not be for commercial purposes”	Permitted in all Residential, Commercial, and Industrial zones	Detroit: City of Detroit Urban Agriculture Ordinance February 2013	<ul style="list-style-type: none"> - Prohibited: Farm animals, prohibited tree species, Oats, wheat, and rye, (in order to prevent rodents) except when used as a winter cover crop and not grown to full maturity. - Farm Stand allowed as an accessory use. - setbacks required for crops and tree farms. - must provide notice to neighbouring properties at least 30 days before agricultural activity begins. - property maintenance and drainage requirements. - nuisance - agricultural uses shall not be detrimental to the physical environment or to public health and general welfare by reason of excessive production of noise, smoke, fumes, vibrations, or odors. All operating equipment, such as fans, shall be located or buffered so as to prevent unreasonably high noise levels at any point on the property boundary. - farm equipment stored in enclosed structure. - permitted accessory structures: Greenhouses, Farm stands Hoophouses or high tunnels, and similar structures used to extend the growing season, Signs, Benches, bike racks, raised/accessible planting beds, compost bins, picnic tables, garden art, rainwater catchment system; Tool sheds and shade pavilions, Garages, Aquaculture, Aquaponics, Hydroponics, Barns and/or other buildings for storage, Structures for cold storage and processing
“Neighbourhood Agriculture”	“A use that occupies less than 1 acre for the production of food or horticultural crops to be harvested, sold, or donated and comply with the controls and standards herein. The use includes, but is not limited to, home, kitchen, and roof gardens. Farms that qualify as Neighborhood Agricultural use may include, but are not limited to, community gardens, community-supported agriculture, market gardens, and private farms.”	Permitted as a principal or accessory use in all zoning districts.	San Francisco: San Francisco Planning Code	<ul style="list-style-type: none"> - Limited sales and donation of fresh food and/or horticultural products grown on site may occur on site, whether vacant or improved, but such sales may not occur within a dwelling unit. - Food and/or horticultural products grown that are used for personal consumption are not regulated. - Compost areas must be setback at least 3 feet from dwelling units and decks; - If the farmed area is enclosed by fencing, the fencing must be: (A) wood fencing, (B) ornamental fencing as defined by Planning Code Section 102.32 or (C) chain-link or woven wire fencing if over half of the fence area that borders a public right-of-way will be covered by plant material or other vegetative screening within three (3) years of the fence installation; - Use of mechanized farm equipment is generally prohibited in residential districts; provided, however, that during the initial preparation of the land heavy equipment may be used to prepare the land for agriculture use. Landscaping equipment designed for household use shall be permitted; - Farm equipment shall be enclosed or otherwise screened from sight; - Sale of food and/or horticultural products from the use may occur between the hours of 6 a.m. and 8 p.m.; - In all districts, sales, pick-ups, and donations of fresh food and horticultural products grown on-site are permitted. In every district except "Residential Districts," value-added products, where the primary ingredients are grown and produced on-site, are permitted - Additionally, the Public Utilities Commission requires new gardens greater than 1,000 square feet to comply with existing water-efficiency regulations and submit information to the PUC regarding intended water use

Zoning Term	Definition	Zones	Jurisdiction	Regulations
> 1 acre				
“Urban Farm”	“A zoning lot, as defined in this article, over one acre, used to grow and harvest food crops and/or non-food crops for personal or group use. An orchard or tree farm that is a principal use is considered an urban farm. An urban farm may be divided into plots for cultivation by one or more individuals and/or groups or may be cultivated by individuals and/or groups collectively. The products of an urban farm may or may not be for commercial purposes.”	Permitted in all Residential, Commercial, and Industrial zones	Detroit: City of Detroit Urban Agriculture Ordinance February 2013	same regulations as Urban Garden
“Large Scale Urban Agriculture”	“The use of land for the production of food or horticultural crops to be harvested, sold, or donated that occur: (1) on a plot of land 1 acre or larger or (2) on smaller parcels that cannot meet the physical and operational standards for Neighborhood Agriculture.”	Permitted as of right in Commercial, Industrial, Production, Distribution, and Repair zones. Permitted as a conditional use in all other zones.	San Francisco: San Francisco Planning Code	same regulations as Neighbourhood Agriculture