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A Citizen's Guide to Growing Food in Beaconsfield

Supervised Research Project

Submitted to Prof. Lisa Bornstein

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Abstract

Urban agriculture is becoming more prominent both in practise and in urban planning literature. Citizens and planners need information on how urban agriculture can be promoted and how it fits into urban planning guidelines. Planning by-laws and zoning regulations related to urban agriculture can be contradictory, some promoting the practice, while others prevent-directly or indirectly- its emergence and spread. Citizens require information, as a result, on both the technical aspects of urban agriculture and the local regulations and requirements. There is a particular lack of information on urban agriculture in suburban communities.

The goal for this supervised research project was to create a citizens' guide for growing food in Beaconsfield. This guide serves as an introductory educational document for citizens who are interested in growing their own food but may lack practical knowledge and contains information specifically relevant to Beaconsfield.

A literature review of other growing guides and food policies was performed. In addition, key stakeholders were consulted and Beaconsfield's by-laws and zoning regulations were examined in depth.

There are several lessons that were learned:

1) There are resources in Beaconsfield to support urban agriculture.

2) There is a perception among planners and politicians that existing by-laws do not affect urban agriculture initiatives, yet there are by-laws that either regulate or expressly prohibit certain aspects of urban agriculture.

3) If the city would like to further their leadership role, fostering networking and educational opportunities would be useful initiatives. This would allow Beaconsfield to further its environmental goals. This guide could be used as an example for other suburban communities wishing to engage in urban agriculture.

Résumé

L'agriculture urbaine devient de plus en plus importante. Les citoyens et les urbanistes ont besoin d'informations sur la façon dont l'agriculture urbaine peut être promue et comment elle s'intègre dans les directives d'urbanisme. Les règlements entourant l'agriculture urbaine peuvent être contradictoires; certains la favorisent, mais d'autres l'empêchent - directement ou indirectement - son émergence et sa propagation. Donc, les citoyens ont besoin d'informations sur les aspects techniques de l'agriculture urbaine et sur les réglementations et exigences locales. Il ya un manque particulier d'information sur l'agriculture urbaine dans les banlieues.

Le but de ce projet était de créer un guide pour les citoyens qui veulent cultiver leur propre nourriture à Beaconsfield. Ce guide serve comme document d'introduction éducatif et contiendra des renseignements pertinents pour Beaconsfield.

Une revue de la littérature sur d'autres guides et politiques alimentaires a été réalisée. De plus, des principaux intervenants ont été consultés et les règlements municipaux de Beaconsfield ont été examinés en profondeur.

Il ya plusieurs leçons qui ont été apprises:

1) Il existe des ressources à Beaconsfield pour soutenir l'agriculture urbaine.

2) Il y a un impression que les règlements existants n'a pas d'incidence sur les initiatives d'agriculture urbaine, mais il existe des règlements qui limitent ou interdisent certains aspects de l'agriculture urbaine.

3) Si la ville souhaiterait poursuivre les travaux sur l'agriculture urbaine, il serait utile d'encourager les possibilités d'éducation. Cela permettrait Beaconsfield de poursuivre ses objectifs environnementaux. Ce guide pourrait servir comme exemple pour d'autres banlieue qui souhaitant s'engager dans l'agriculture urbaine.

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Introduction

Canada is an urbanized nation and continues to become more so (in 1991 77% of Canada's population was urban, in 2011 it was 81%) (Government of Canada, 2011). This urbanization means, generally, there is long distance between the producers of food and the consumers of food. This limits public knowledge about the negative impacts traditional industrial farming can have, such as overuse of pesticides and fertilizers, animal cruelty, and the creation of monocultures. But perhaps more importantly it removes people's agency, their ability to be involved in their own food system. Because of these concerns, amongst others, interest in urban agriculture is on the rise, both among policy makers and the general public (Mougeot, 2010., Smit 1996)

The Resource Centers on Urban Agriculture and Food Foundation (RUAF) defines urban agriculture as: an industry located within or on the fringe of a city, which grows, processes and distributes a diversity of food and non-food agricultural products (such as beeswax or wool). Urban agriculture largely uses local resources and distributes locally ("Urban agriculture," 2014).

Figure 1 below shows a generalized urban agriculture system, from production, to distribution and processing, to consumption and the re-use of "waste", such as grey water or compost. It also shows the different scales at which urban agriculture functions; from home gardens to urban farms, and back yard compost piles to municipal compost collection.

Figure 1: The urban agriculture system ("Urban Food Innovation Corridor", 2014)

The Benefits and Risks of Urban Agriculture

Urban agriculture has numerous potential benefits; economically, socially and environmentally. In terms of economy, engaging in urban agriculture can provide increased function to previously underutilized land (around railroads for example). Rooftop farming can also increase production on land without compromising the current land use. On a more individual level, when people grow their own food they can save money on grocery bills, or alternatively sell the produce and gain an income. This is particularly true in low-income neighbourhoods (Flachs, 2010; Mougeot, 2010; van Veenhuizen, 2006).

Urban agriculture also has many social and health benefits. Community gardens can act as areas for socializing, networking, and community engagement. This is especially beneficial to marginalized groups and the elderly. Gardening and farmer's markets also often result in people eating more healthily by increasing their access to fresh produce. This is particularly important in food deserts in inner cities, which are often in poorer neighbourhoods. The presence of urban agriculture also provides opportunities for education about a healthy diet. Having gardens at schools can be particularly effective. Gardening can also be a source of moderate exercise. However, for these benefits to reach as wide a population as possible, gardens must be designed with accessibility in mind (Caspi, Sorensen, Subramanian, & Kawachi, 2012; Flachs, 2010; Raja & Born, 2008).

Finally, urban agriculture has many environmental benefits. By growing food in the city the distance food travels to consumers is minimized and CO_2 emissions are lowered. Urban agriculture can also "close" urban nutrient and energy loops by turning waste into resources, such as using organic materials as compost and grey water for irrigation. Urban agriculture can green cities by adding vegetation to rooftops, walls, and underutilized spaces, which can help mitigate the heat island effect and reduce runoff. This can also increase urban biodiversity. This is done both directly, as urban gardeners tend to grow a wide variety of plants, particularly heirloom varieties, and indirectly, by providing habitats for animals. In particular, this can have very important implications for pollinators. Again, by bringing food production and processing closer to the consumer, educational opportunities are created that can inform the public about biodiversity concerns, growing methods etc ("Urban agriculture," 2014; van Veenhuizen, 2006).

Despite these many benefits, urban agriculture can also pose health risks. By growing food in urban areas, polluted soil, air, and water become particular concerns especially in areas near areas that are, or were, industrial land. Having animals in close proximity with people can also be problematic. Public perception of urban agriculture can also be negative due to nuisance concerns such as visual untidiness, smells and noise, especially if animals are involved.

Urban Agriculture and Urban Planning in Canada

Often, urban food planning is a reaction to initiatives undertaken by grassroots organizations. As stated by Thibert: "Urban agriculture has not appeared in North America as a result of planning, rather, it has emerged as a social and environmental movement, in spite of planning and has to operate in a policy vacuum" (Thibert, 2012). A recent study "Municipal Food Policy Entrepreneurs: A preliminary analysis of how Canadian cities and regional districts are involved in food systems change" produced by the Toronto Food Policy Council and the Vancouver Food Policy Council, concludes that Canadian municipal involvement in urban agriculture seems to be driven primarily from the ground up, that is to say, by civil society groups. This has meant that urban agriculture initiatives are very ad hoc, often reliant on one motivated person to organize them and irregular funding. By including urban agriculture in planning policies through the creation of food policy bodies and documents, such as food charters, policies, and strategy plans, etc., it becomes possible to create opportunities for discussion. This brings urban agriculture initiatives into the general public's awareness, fosters political cohesion on the subject, and in turn allows for more sustainable urban agriculture initiatives. (MacRae & Donahue, 2013).

Because of these concerns, urban agriculture is becoming a more prominent feature in urban planning in many cities. The presence of the aforementioned Food Policy Councils are an excellent example. The city of Toronto created it's Food Policy Council in 1990 (which published a Toronto Food Strategy in 2015); Vancouver's Food Policy Council was founded in 2004 (the Vancouver Food Strategy was created in 2013); Ottawa and Edmonton formed food councils in 2012, and other Canadian municipalities are following suit. On a broader scale, in 2005, the American Planning Association National Planning Conference in San Francisco held a special series of sessions on food-related planning for the first time (MacRae & Donahue, 2013; Pothukuchi & Kaufman, 2000; Raja & Born, 2008; Thibert, 2012).

Montreal does not currently have an official governing body dedicated to planning and policy related to urban agriculture, although it does have a very active, municipally supported community gardens program. And, in 2012, a public consultation on the state of urban agriculture in Montreal was held. This was driven by the local community, almost 30,000 of whom signed a petition asking for the consultation, and one of the recommendations was the creation of an Urban Agriculture Strategy for the Island (Office de Consultation Publique de Montreal, 2012)

Whether or not municipalities are actively engaged in planning for urban agriculture, existing municipal regulations play a large role in encouraging (or discouraging) urban agriculture. Particularly, land use and zoning by-laws can greatly facilitate or hinder the presence of urban agriculture. Because urban agriculture is still fairly new to the planning field, the by-laws and zoning regulations can sometimes be contradictory (Raja & Born, 2008; Thibert, 2012).

Even if a city does not have prohibitive regulations with regards to urban agriculture, there may be other "less obvious" issues that can negatively affect the success of municipal food planning. Several studies have aimed to identify best practices and challenges in municipal food programs. Similar themes appear in most of them. Firstly, tracking metrics of success often results in more successful programs. This is because there are many potential avenues for municipal action on urban agriculture. Narrowing down program priorities, and what exactly success means for a program, makes the program more practical and enactable. Similarly, since urban agriculture initiatives can have many different goals, organizing a food policy program to facilitate inter-departmental interactions often results in more effective programs. (Hatfield, 2012; Marshman, 2013).

Having access to consistent funding from a municipality or other source is extremely important. This allows for urban agriculture programs to plan more accurately for future endeavours, spend less time on acquiring new funding and more time enacting their initiatives. Having access to other non-monetary resources, such as having a dedicated municipal council staff member associated with the program, also improves the success of municipal food planning. The Montreal Community Garden Program is an excellent example where dedicated municipal resources have allowed the program to flourish for nearly 40 years serving over 10,000 people (Marshman, 2013; Santo, 2014).

Having municipal leadership increases the authority of a program and also helps to ensure its success. Perhaps most importantly, the needs of specific community where the planning is taking place must be taken into account. For example, if the population is elderly, easy physical access should be a priority (Hatfield, 2012; Marshman, 2013).

Project Goal and Objectives

For this research project educational material was created for the citizens of the City of Beaconsfield. There are several reasons that Beaconsfield was be used; the first and foremost being that officials at the city had expressed interest in encouraging suburban food production. There was also some citizen interest about allowing the raising of backyard chickens, and promoting edible landscaping. However, there were no existing community groups involved in actively promoting suburban agriculture within the municipality**.**

Because the goal of urban agriculture is often to foster citizen empowerment, it will be particularly useful for Beaconsfield to provide material to citizens on what specific urban agriculture resources and options are available to them. Having a guide will not only educate citizens about urban agriculture but it will also encourage citizens to become actively engaged in it.

Furthermore, Beaconsfield is a suburb. Creating a guide for agriculture in a suburban area is particularly useful since so many people in Canadian cities live in suburban areas (Pothukuchi & Kaufman, 2000) and this guide will have the potential to act as a model for other guides in suburban areas. While suburbanites are not often thought of as living in food deserts, as suburban supermarkets typically have a greater selection of food and lower prices than urban stores, they are less likely to have access to local food through a farmer's market or independent grocer. Furthermore, shopping for food is almost entirely car-dependant in suburbs, isolating those who do not have access to cars; for example seniors or those with disabilities (Walker, Keane, & Burke, 2010). In contrast, suburbs have a lot of potential for urban agriculture. One study estimated that 49-58% of suburban land has potential to support urban agriculture in Waterloo, Ontario (Port & Moos, 2014). In Vermont it has been estimated that there is 9200 ha of suburban land that could be appropriate for agriculture. If one third of this was cultivated, the city could produce all its fruit and vegetable needs (Erickson, Lovell, & Méndez, 2011).

The goal for this supervised research project was to create a guide to growing food for the citizens of the city of Beaconsfield. There were several objectives in creating this document: It would serve as an introductory educational document, and it would contain information specifically relevant to growing food in Beaconsfield

Methodology

To create this document several steps were completed. First, examples of growing guides from other Canadian cities were examined. After a preliminary literature review, an analysis of Canadian cities' food policies done by the Toronto Food Policy Council (MacRae & Donahue, 2013) and the Food Policy Council Directory put together by the John Hopkins Bloomberg School of Public Health ("Food Policy Council Directory," 2015) were used to find examples of urban agriculture guides. The "Urban Agriculture Garden Guide" from the city of Vancouver *(*Gočová*,* 2016*)* and the "Guide to Urban Farming in New York State" (Koski, 2012) were chosen as the primary examples. In part these were used because they were some of the only guidelines available. Additionally, these guides were chosen to ensure that there was at least one example from a Canadian city, since the guidelines being created are also for a Canadian city, because they were relatively recent (written within the past 5 years), and so that at least one guide was from somewhere that had a climate somewhat similar to Beaconsfield. The closest found was the guide from New York.

Both of these guides, while organized differently, shared many of the same considerations for growing food. They took into account:

1. Citizen advocacy
2. Community involvement
3. Soil quality (e.g., contamination, fertility, compost)
4. Climate considerations (e.g., winter gardening)
5. Alternative gardening methods (e.g., raised beds, container gardening, roof top farming)
6. Environmental considerations (e.g., organic, pesticide use)
7. Water Usage
8. Site Security
9. Urban Livestock

Both example guides were designed to help educate people who are interested in creating community gardens on urban public land, however the issues identified are important for anyone wishing to grow food . Based on these common concerns, sections on light, soil, water, possible supporting infrastructure, and safety and access concerns will be included in the guide. There will also be sections on animals and on plant selection, and a final section on community involvement (local events, how citizens can get involved, etc.). The environmental concerns related to each subject will be included in their relevant section.

In order to customize the Guide specifically for Beaconsfield, the physical and regulatory characteristics of Beaconsfield were examined. This helped identify challenges and opportunities in relation to the previously identified urban agriculture concerns. Beaconsfield's by-laws were obtained through the city's website. In one instance, provincial regulations were reviewed when there were no municipal by-laws found in relation to beekeeping. To review Beaconsfield's zoning and physical characteristics the primary reference material used was the the Site Planning and Architectural Integration Program (SPAIP) Beaconsfield enacted in 2015, which was available online. The City of Beaconsfield's website was also combed to see what other resources the city provided that might support urban agriculture initiatives.

Key stakeholders in Beaconsfield's City Council, the Beaconsfield Garden Club, and in the Beaconsfield Urban Planning Department were also consulted on the prospects for urban agriculture in Beaconsfield. Their inputs are summarized below and reflected in the topics included in the guidebook.

Results and Beaconsfield Context

This section concerns the specific context of Beaconsfield and contains the results of the research on bylaws, regulations and physical characteristics.

By-Laws

The main section of by-laws in Beaconsfield that have an impact on urban agriculture are those in the Zoning By-Law 720, which are primarily related to infrastructure location and sizing. There are

Figure 2: Examples of housing types in Beaconsfield: bungalow (top), cottage (bottom)

Figure 3: Examples of villa (top) and farmhouse -style (bottom) housing in Beaconsfield

regulations in this zoning by-law relating to garden sheds and personal greenhouses: residents are permitted one (maximum 16m^2) or two (maximum 20m^2 combined) garden sheds or greenhouses per property with a maximum height of 3.2m. They must be at least 2m away from a house and 0.6m away from any utility line. They are not allowed to be in the front yard (section 5.6.2).

Zoning By-Law 720 also regulates fencing height (fences cannot be higher than 2m in the backyard and 1.2m in the front yard), and materials (chicken wire, plywood or particle board; snow fencing and several other materials are prohibited) (sect 5.7).

Urban agriculture is not just concerned with growing food, it also involves the consumption of food and the different societal and cultural norms that surround eating. Encouraging community interaction over food and enabling food education is an important aspect of urban agriculture. In relation to this aspect of urban agriculture, by-Law 720 has a section that affects "community involvement". Section 6.1 requires residents to get a permit if they wish to host a community block party.

There are three other by-laws that have implications for urban agriculture. By-law 070 affects the watering of gardens. This by-law states that manual watering of a vegetable plot is permitted at all times. However, watering using oscillating sprinklers or soaker hoses is only permitted between 9pm – 12am, and only on certain days. Residents in dwellings with an even-number address may water on dates with an even number, and residents in dwellings with an odd-number address may water on dates with an odd number. Watering with automatic systems is only permitted from 3am to 6am on Sundays, Tuesdays and Thursdays.

The by-laws that have the most restrictive implications for urban agriculture in Beaconsfield are By-law 04-041 and By-Law 033. By-law 04-041 states that in the City of Beaconsfield pesticides are prohibited in the use of controlling vegetation, which means that gardeners must weed manually. Additionally, By-Law 033 expressly prohibits the keeping of chickens or any other domestic fowl within the city of Beaconsfield.

Since both the New York and Vancouver guides discussed the topic of beekeeping, and the City

of Beaconsfield does not have a by-law related to beekeeping, provincial regulations were examined. The province of Quebec does regulate beekeeping under the Quebec Bee Act. Hives must be at least 15m away from the nearest public road or dwelling unless they are surrounded by a fence without openings, at least 2.5m high and extending at least 4.5m beyond each end of the apiary. The second part of this regulation conflicts with Beaconsfield's current fencing by-laws so in Beaconsfield the only possible option is to have hives in yards large enough where they can be 15m away from the nearest public road or dwelling

Physical Characteristics & Zoning

As described in the SPAIP Beaconsfield (2015), the city has the following physical characteristics:

Beaconsfield is overwhelmingly residential. It is characterized by single-family houses, which are primarily bungalows or “cottage” style. The majority were built in the 1950's and 1960's. Most lots in Beaconsfield are quite large, being somewhere between 850 and 1000 square meters. These lots are well-wooded with mature trees and typically have suburban landscaping with attached garages, paved driveways, ditches and no sidewalks (see image 2 below).

The main exception to this style of housing occurs on the south side of Beaconsfield along the lake shore. The houses here are larger and older, with some being built as early as 1770, the oldest house in Beaconsfield at 13 Thompson Point, with lots between 3000 and 6000 square meters. These houses tend to be converted farmhouses or are large villas which were used as summer residences when the area was a popular resort at the end of the 19th century (see image 3 above).

There are several other types of zones in Beaconsfield including a protected green space and some commercial areas. The protected space is called Angell Woods. It is 80 hectares of forest and wetland located at the northwest side of Beaconsfield and is part of the eco-territory of Rivière à l'Orme. It is protected because of the importance of wetlands to the local water system, but also because it contains several rare plant species (including the hackberry, the black maple, and the American bladdernut) and the endangered brown snake.

There are also two commercial zones which are the Beaurepaire Village and the Centre

Commercial de Beaconsfield. Beaurepaire Village is named after a farm that used to be present in that area and extends two blocks along Beaconsfield Blvd from St-Andrews to Woodland. The commercial area began with a general store built in 1929 (now a bakery and restaurant). The area has gradually been expanded with a pharmacy added in 1954 (now an art gallery), a mini shopping mall added in 1982 (now containing three decor stores, a pet store and a yarn shop), and a Jean Coutu built in 1985. In 2003 the village underwent major landscaping updating parking, walkways and sidewalks to improve handicap access, also adding gardens, trees, lampposts, and benches (see image 4 below). For a full map of Beaconsfield, please see image 5 on the following page.

Figure 4: View of Beaurepaire Village looking west along Beaconsfield Blvd

Because of the suburban, residential nature of most of Beaconsfield, it was determined that the guide would focus primarily on urban agriculture initiatives that citizens can take on their own properties. As mentioned previously, this guide will be oriented towards people who are interested in growing their own food but lack practical knowledge or are concerned about existing regulations.

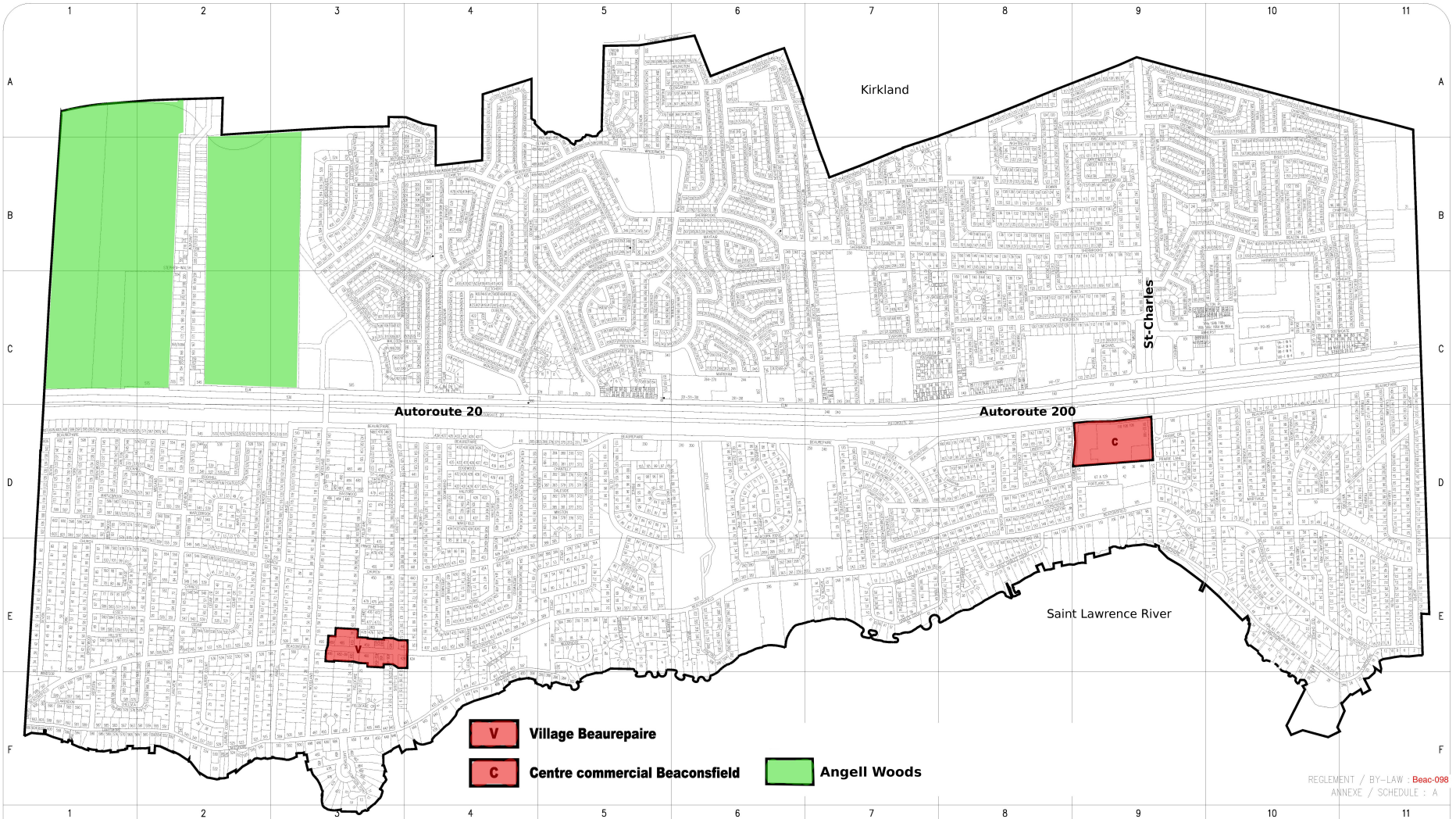

Figure 5: Map of Beaconsfield

INDEX DES RUES
STREET INDEX

A		Birch Crescent	C4	Chestnut Street	C8	Epping Road	B10	H		Kipling Avenue	B10	Mayfair Drive	B6	Prairie Lane	D9	Shore Road	E6	White Pine Drive	D6, D8
Acadia Drive	B6, D6	Biscayne Avenue	B8, B9	Chiltern Avenue	D4	Essex Road	E1	Halford Road	D4, E4	Kirkwood Avenue	D10, E10	Meadowbrook Avenue	D5	Preston Drive	B5, C5, B6, C6	Sidney-Cunningham	C3	Wildtree Drive	D6, D5
Acorn Ridge	D6	Bishop Street	C4	Church Street	E1, C2, E3, E4, E5	Evergreen Crescent	D9	Hampshire Crescent	D8			Michael Street	D3	Prince Street	B5	Southgate	C10, C11	Willowbrook Avenue	D10, D11
Acres Road	C8, C9	Bisley Street	B10	Circle Road	E5	Evergreen Drive	C7, C8, C9	Hampshire Road	D7, D8	L		Mississauters, Avenue Des	B3	Prince Arthur Street	C3	Spruce Crescent	C7, D3	Windermere Road	C4, C5, B5, B6
Alice-Carrière	C3, B3, C4	Brais Avenue	D5	City Lane	D6, E6			Hansen Avenue	E11	Lakeshore Road	F1–F5, E9–E11	Midland Avenue	E2	R		Stephen-Walsh	B2	Windsor Place	F1
Allancroft Crescent	B7	Brentwood Road	D1, E1	Clydendon Crescent	F1	F		Harrow Place	E5, E6	Lakeview Boulevard	B2, C2, D2, E2, F2	Milton Road	A3, B8	Raspberry Crescent	C7, C8	Stonehenge Drive	D7, D8, E7	Winston Place	D5
Allancroft Road	B8, C8	Breton Woods	E4, F4	Claude Street	D10, E11	Fairlawn Crescent	C11, D11	Harwood Gate	B10, C10	Larch Street	C9	Montrose Drive	A5, B4, B5, C4	Red Cedar Crescent	D6	Sumac Street	C8	Wood Crescent	B7
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Ashley Road	B10	Cadillac Street	B9	Doleside Place	D5	Florida Drive	B8, B9			Loxley Avenue	B5	O		Ruskin Drive	B8, C9	Thackeray Road	A9		
Ashton Place	E7	Carlton Road	D1	Devon Road	D1, E1	Forest Road	B7	J		Lynwood Drive	D10	Oakdale Crescent	C6	Rutland Road	C9	Thompson Point	F3		
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		Castle Road	A8, B8, C8	Dublin Road	C4			James-Shaw	B3	M		Old Church Avenue	E10	S				Y	
B		Cedar Crescent	E2			G		Jasper Road	C11, D11, E11	Madsen Avenue	D2, E2, F2	Olympic Drive	B4, B5			V		York Road	D1, E1
Balmoral Avenue	A5, A6	Cedar Street	E2	E		Gables Court	E7, E8	Jean-Charlebois	C5	Malcolm-Bearlon	C3, D4			St-Andrew Avenue	D4, E4	Valois Avenue	F1		
Basswood Avenue	D3	Celtic Drive	D5, E5	East Gables Court	D8	Garrison Lane	E5	John-Henry-Menzies	C3	Manresa Court	E8	P		St-Charles Blvd.	A8, B8, C8, D8	Veronniques, Avenue Des	B3		
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Beaconsfield Court	D7, E7	Charlemagne Drive	D10	Elgin Crescent	C10	Glengarry Avenue	A6			Margaret-Ann Avenue	E10	Pine Avenue	E11	St-Louis Avenue	D3, E3, F3	Wakefield Road	D4		
Beaurepaire Drive	D1–10, C11	Charnwood Road	D4, E4	Elliot Crescent	A9	Greenwood Drive	E4	K		Marlaine Avenue	B5	Pine Street	E3	Shamrock Road	B6	Walpole Avenue	B4, D4		
Berkshire Avenue	A5, A6, B5	Chartwell Crescent	A10, A11, B10, B11	Elizabeth Drive	B3, B4			Kensington Avenue	C5	Markham Place	C6	Pinetree Crescent	E6	Shannon Park	C5	Walford Street	D11		
Bermuda Drive	B8	Chelsea Crescent	E1, E2, F1, F2	Elm Avenue	C2–11, D6, D7			Kenton Avenue	B9, B10	Markham Road	C6	Portland Place	D9	Sherbrooke Street	B5, B6, B7, B8, B9	Westcroft Road	A6, B6, B7, B8		
Berwick Drive	A9, A10	Chester Road	D1, D2	Elmira Street	B7			Kenwood Road	D9	Maryvale Street	D10	Prairie Drive	D9	Sherwood Road	B4, B5, C5	Westhill Avenue	A4, B4		
Bexhill Drive	B10																		

BEACONSFIELD

CARTE DES ZONES COMMERCIALES SPECIFIQUES
SPECIFIC COMMERCIAL ZONES MAP

ÉCHELLE : 1:7500 | DATE : AOÛT 2013

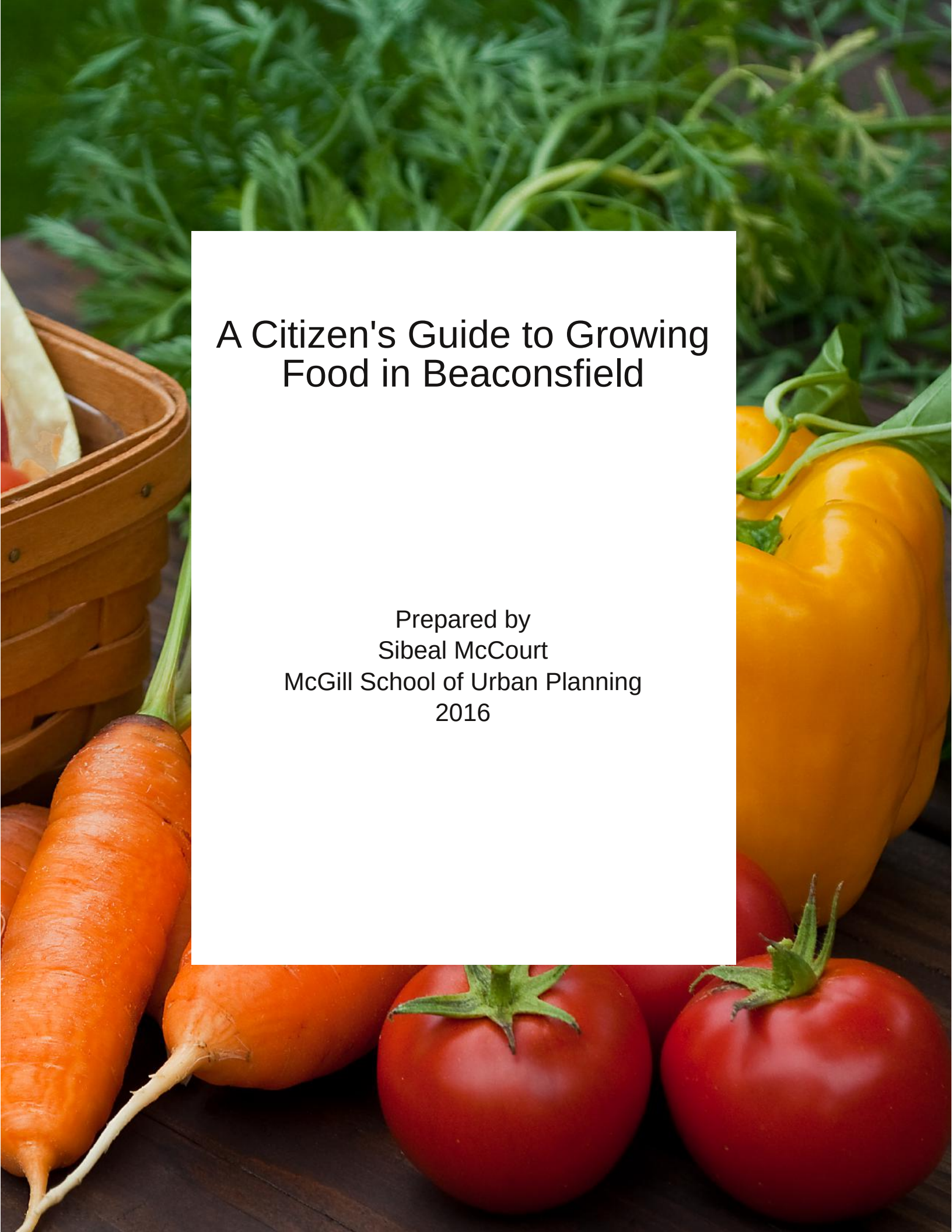
RÉVISION : – | PLAN NO. 001

Municipal Concerns and Resources

The key stake holders from the City Council, Planning Department and the Beaconsfield Garden Club identified several issues of concern in relation to urban agriculture in Beaconsfield. Promoting the practise of composting was considered to be important. It was also suggested that the guide contain information about garden pests and how to discourage them in responsible and environmentally friendly ways. Because of these concerns the Guide contains a section on composting and a section on ecological pest management. These sections highlight the services that the City of Beaconsfield provides in relation to these concerns, such as the comprehensive composting guide online.

In general, the stakeholders were supportive of having people growing food in their yards, considering the practise to be more environmentally friendly than typical suburban lawns. However, in spite of this support, there is an acknowledged lack of actual urban agriculture being practised in Beaconsfield, which was deemed due to a lack of sensitization to urban agriculture issues. Furthermore, there seemed to be a lack of awareness around non-food specific by-laws that affect urban agriculture with stakeholders stating that there is nothing in Beaconsfield's by-laws that regulate growing food in the municipality. As the review of by-laws performed above shows, there are several by-laws which affect urban agriculture in Beaconsfield. Because of this, these specific by-laws are highlighted in the Guide in order to draw attention to them.

The Guide also highlights programs the city currently provides that have the potential to encourage urban agriculture. The city subsidizes both compost bins and rain water barrels for Beaconsfield residents, and also organizes a “Green Patrol” and “Blue Patrol”. Both patrols are made up of summer student hires that bike around the city and run kiosks at public events to provide information about composting (the Green patrol) and sustainable water usage (the Blue Patrol), both of which are related to growing food.



A Citizen's Guide to Growing Food in Beaconsfield

Prepared by
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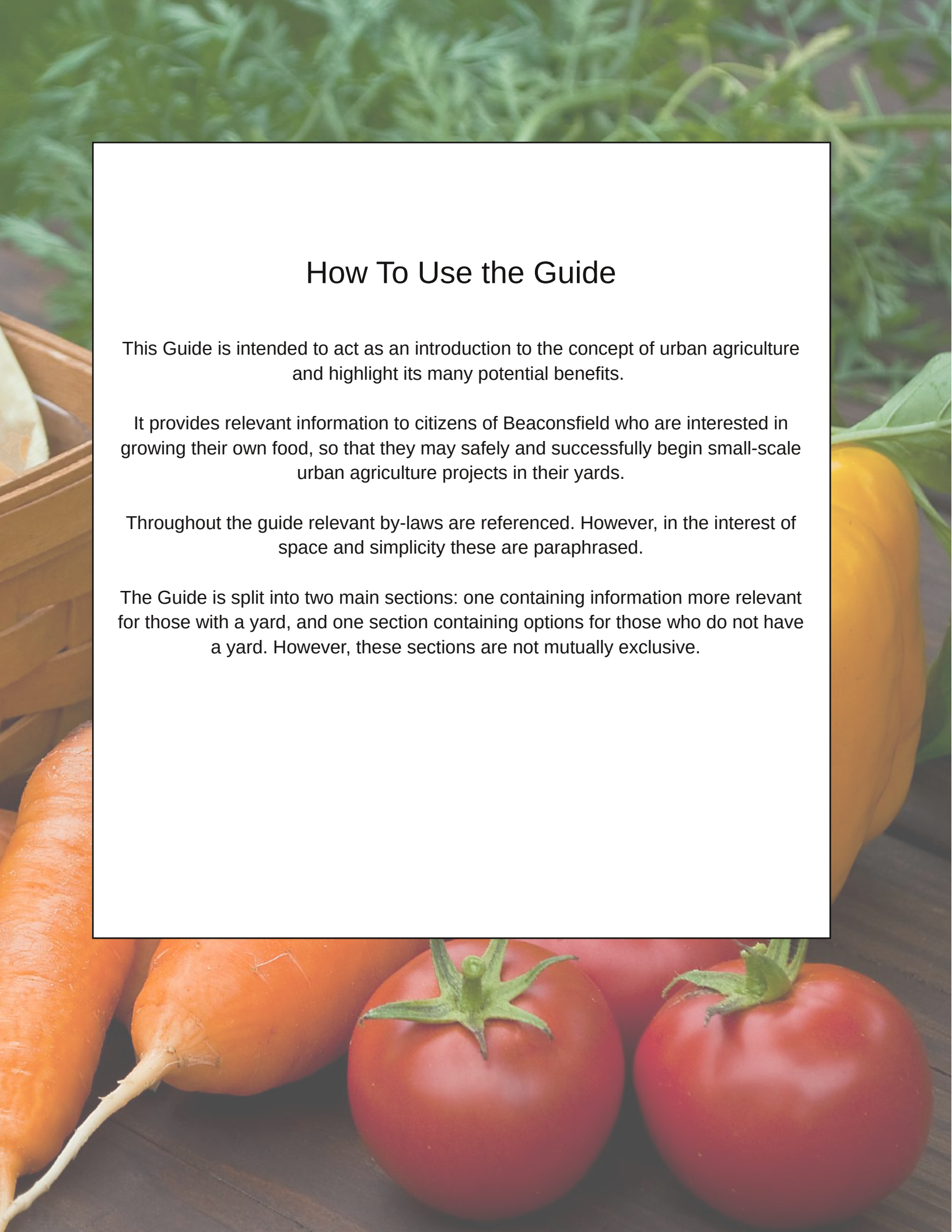
McGill School of Urban Planning
2016

Acknowledgments

I would like to thank Prof. Lisa Bornstein for her supervision and help in writting this guide.



How To Use the Guide

This Guide is intended to act as an introduction to the concept of urban agriculture and highlight its many potential benefits.

It provides relevant information to citizens of Beaconsfield who are interested in growing their own food, so that they may safely and successfully begin small-scale urban agriculture projects in their yards.

Throughout the guide relevant by-laws are referenced. However, in the interest of space and simplicity these are paraphrased.

The Guide is split into two main sections: one containing information more relevant for those with a yard, and one section containing options for those who do not have a yard. However, these sections are not mutually exclusive.

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Community Involvement	16
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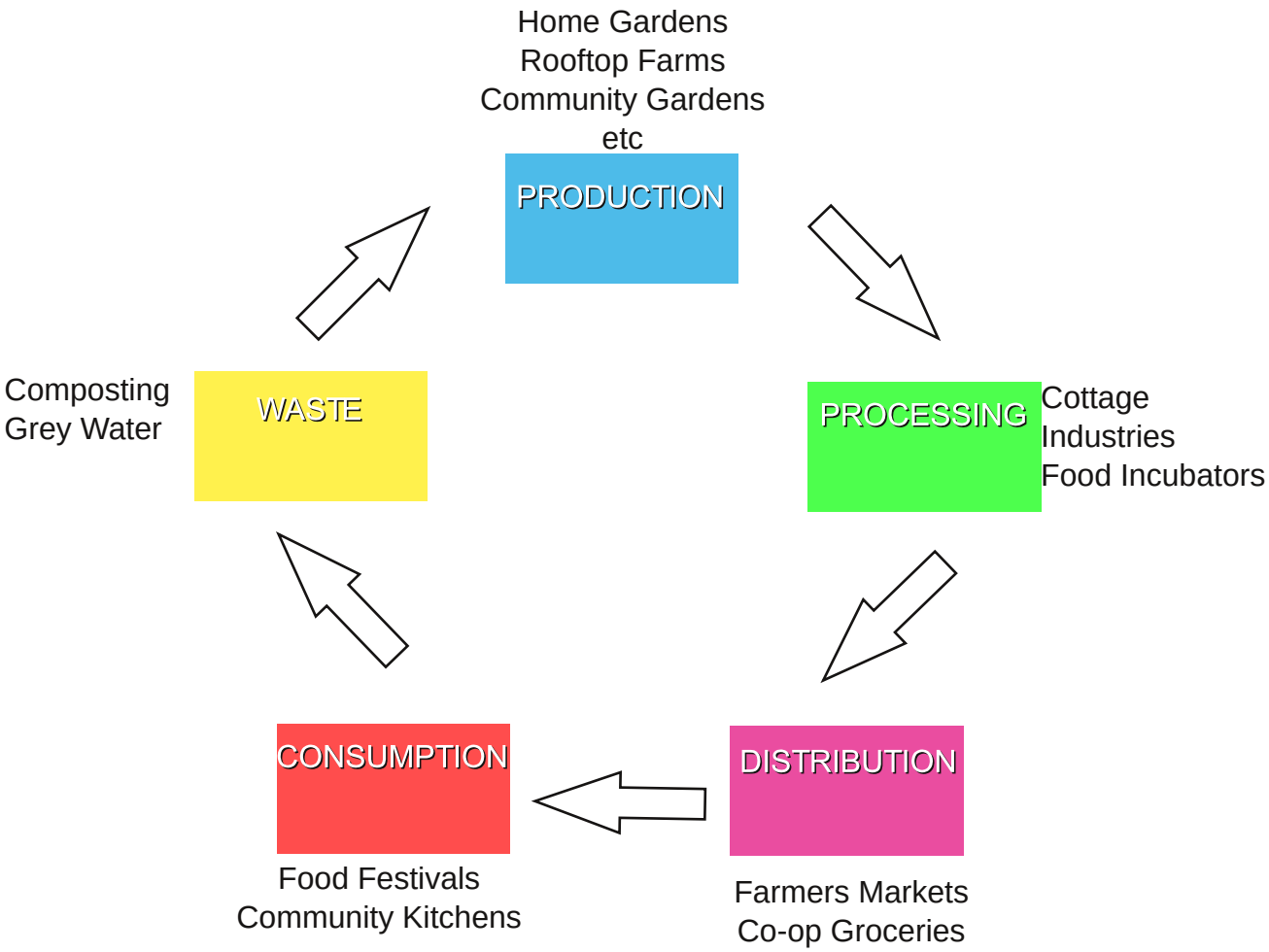
What is Urban Agriculture?

Urban agriculture is the whole process of food production in cities, from growing it to consuming it.

Urban agriculture works as a cycle. It starts with growing plants or raising animals. This production happens at many scales, from backyard vegetable plots to industrial greenhouses. After growing, food is processed. This can include preserving food, creating higher-value products, or even simply cleaning and washing vegetables. After processing, food is distributed. Homegrown food typically does not have far to go, travelling from backyard to dinner table. However, produce may also be distributed commercially through farmers markets or co-ops. Next, food is consumed. Eating local, fresh produce is generally most people's favorite part of urban agriculture. Ideally "waste" is then returned into the system to close the loop.

Below is a chart of the urban agriculture system, with some examples of what happens at each step.



Benefits of Urb

There are many benefits to urban ag
environment, to enhancing community l
Below are just some of the many adv

Bee on a chive flower

Environment

Increases Biodiversity
Increases Water Retention
Reduces Heat Island Effect
Reduces and Reuses Waste
Reduces "Food Miles"

Composting bin

Econ

Increases value of
Saves money
Creates jobs and
additiona

Lufa Hydropinc Rooftop Farm in Montreal

ban Agriculture

griculture; from improving the natural
health, to creating a stronger ecomony.
vantages urban agricultre can offer.

Health & Social

Creates areas for socializing and community engagement
Increases access to fresh produce
Creates opportunities for education
Encourages exercise

nomy

underutilized land
on grocery bills
l opportunities for
l income

Harvest Festival at a Vancouver Community Garden

Preparing a Community Garden in Montreal

St Anne de Bellevue Farmer's Market

General Considerations

No matter where you are growing food, whether it be indoors, outdoors, in a garden bed or in containers, there are several things that need to be considered.

Light

Most edible plants require at least 7 hours of sunlight each day in order to be productive. While some leafy vegetables and herbs can manage with as little as 4 hours of light a day, you need to make sure that whatever you decide to plant will get as much sunlight as it needs.

Soil

The dirt that you grow your food in is also extrememly important. It needs to be full of nutrients and free of contaminants in order for you to grow safe, healthy food.

Water

While the Island of Montreal does get a lot of rain over a growing season, generally your plants will need a extra watering to be their most productive. It is important to use clean water and to do your watering in an environmentally friendly way so that as little is wasted as possible.

Supporting Infrastructure

Keeping a garden requires space not just for your vegetables, but also for the items that will help you tend to it. This can include tools, a potting area, small greenhouse, compost bin etc.

Safety and Access

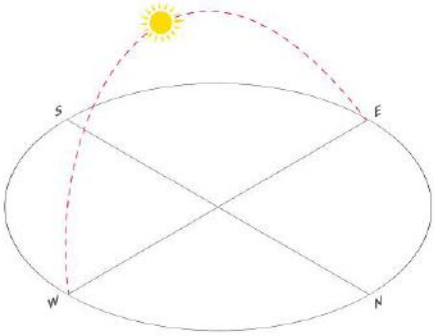
It is very important that you consider how you will be moving to, and through, your garden. While you want to be able to move freely through your garden, there are some critters you will want to keep out. This guide will outline how to keep gardening safe and fun.

For Those With a Yard

This section of the guide is intended for those who have access to yard space. You will find useful ideas for small spaces in the next section.

Light

You will want to place your garden somewhere that has access to as much light as possible throughout the day. In the Northern Hemisphere, this generally means somewhere south facing. You should also note that the angle of the sun changes greatly over the year. If you are planning your garden in winter, be aware that an area that gets full sun right now may not later in the year.



The McGill Edible Campus garden is strategically placed between buildings to get enough sunlight

You will want to take note of buildings in the surrounding area. They may shade your garden at some points during the day. It is important to look at your potential plot in the morning, during the day and in the afternoon.

It is also important to take into consideration trees in your yard. Again, an area that looks sunny in the fall and winter might be shaded by deciduous trees in the summer.

Soil

When starting a new garden it is often a good idea to add new soil where you will be planting. This will ensure that your fruits and vegetables get all the nutrients they need to be healthy. If you have any concerns about the quality of soil in your yard (maybe it was levelled using backfill, or maybe your lot was used for something else before there was a house on it) you might want to consider using raised beds for your gardening.

There are several benefits to using raised beds for gardening. First, you know that you will be growing in good soil. Secondly, raised beds can make reaching your plants easier and take off some of the physical strain of gardening since you do not need to bend over as much or kneel down next to them. The height of your raised bed depends upon you and what you find most comfortable, but they should be at least 50cm (18") deep in order to provide enough room for your plant roots. The material you use for raised beds can vary, but you want to make sure nothing will leach into your soil. Untreated lumber, stones and clay bricks are all good options.

In order to maintain a healthy, happy garden for many years you will have to eventually add some fertilizer to your soil, no matter how good quality it is to begin with. Creating a composting pile in your yard or using a compoting bin will not only create excellent fertilizer, but will also put to good use what would otherwise be waste (kitchen scraps, lawn clippings etc).

The City of Beaconsfield has an excellent guide on composting that can be found at: http://www.beaconsfield.ca/images/stories/environmental-fields/compsting_guide_en.pdf

The City also provides subsidized compost bins that can be found at HUB hardware in Beaurepaire Village

Water

On the island of Montreal, gardening accounts for 30% of potable water use in the summer. This can be cut down greatly by using soaker hoses or drip irrigation (which water your plants directly at the roots where they most need it) instead of using sprinklers to water your garden.

To encourage efficient water use the City of Beaconsfield has a by-law on potable water use:

By-law BEAC 070:
Manual watering of a vegetable plot is permitted at all times. However, this guide reccommends watering in the morning and early evening to avoid scorching your plants, limit excess evaporation, and avoid encouraging slugs and snails.

Watering using oscillating sprinklers or soaker hose is permitted between 9 pm to 12am only on the following days:
a) if you live in a dwelling with an even address, on days when the date is an even number
b) if you live in a dwelling with an odd address on days when the date is an odd number

For automatic watering systems, watering is permitted from 3 am to 6 am on Sundays, Tuesdays and Thursdays only.

Alternatively, to avoid using potable water altogether, you can supplement your garden's water needs by using rain barrels. Rain barrels collect water from your rooftop that would otherwise become runoff. If you do use rainwater barrels make sure they are on high ground or propped up a few bricks so that water will flow easily down the hose you attach to it.

The City of Beaconsfield provides subsidized rain barrels to Beaconsfield residents. They can be paid for at the City Hall reception desk and picked up at the bulk material centre behind Public Works. You can have up to four on your property.

Supporting Infrastructure

Besides a compost bin and rain barrel, there are several other items that you may want to consider planning for in your garden.

Having a garden means needing at least several tools like a wheelbarrow, shovel, hose etc. Having a sheltered area to store these tools safely (especially over the winter) is important. This means planning for space in your garage or for having a toolshed. It can also be useful to have a potting bench to work at so that you can easily move plants to and from different containers. This bench should be placed somewhere shaded so you can work out of the sun. Some good places are inside a garage, or at the side of a toolshed.

Zoning By-Law 720 (section 5.6.2):
Beaconsfield residents are permitted one (maximimum 16m^2) or two (maximum 20m^2 combined) garden sheds per property with a maximum height of 3.2 m. They must be at least 2m away from your house and 0.6m away from any utility line. They are not allowed to be in the front yard.

Another bit of infrastructure you may want to consider is a small domestic greenhouse. These are particularly useful in Montreal since we have a short growing season: the frost-free period is between the beginning of May to the beginning of October. Having a greenhouse allows you to extend the growing season by protecting your plants and keeping them warm. A greenhouse also lets you grow more tropical plants that find our climate a bit cool (hot peppers for example).

Zoning By-Law 720 (section 5.6.2):
You are also allowed one domestic greenhouse per property a maximum size of 16m2 and 3.2m high. They must also be at least 0.6m away from any utility line.

Safety & Access

Growing food can be a very rewarding endeavour. In order to make sure that it is the most pleasurable experience possible it is important to design your garden space so that it is accesible and safe.

Raised beds were mentioned in the previous section on soil. They are a good idea for anyone with limited mobility (or for anyone who doesn't want to bend over much).

You may also want fencing and gating around some or all of you garden in order to help keep out the local wildlife, or for decorative purposes. The Beaconsfield fencing by-law is:

Zoning By-law 720 (section 5.7):
Fences cannot be higher than 2m in the backyard and 1.2m in the front yard. The following materials are prohibited: Chicken wire, Plywood or particle board; Snow fencing; Barbed wire; Chain link fences without a vinyl coating ; Chain link fences coated with vinyl located in a place other than along the rear and side property lines for a residential use.

Making sure you have wide pathways in and around your garden is also important. If you want to be able to get a wheelbarrow through a path easily, it needs to be at least 91cm (3') wide.

You also need to consider what will happen to your garden beds in the winter. Are they somewhere that will get snow dumped on them from snow clearing? Having a large amount of snow piled on top of earth can compact the soil underneath, or crush perennial plants.

For Those Without a Yard

There are many options available to the avid gardener, whether or not you have access to a yard. The following section decribes some options for those of us with a little less open space.

Light

As long as you get at least 4 hours of direct sunlight you can grow food. South-facing windows and balconies can provide great areas to grow some herbs and leafy greens.

Using vertical space (walls, trellises etc) will maximize your growing area. Again, south-facing walls are ideal. You can grow lettuce or strawberries in planter boxes, or put up trellises for plants that normally require a lot of space (like squashes or cucumbers).

Rooftops can also be a great place to grow food. Generally, they get sun all day. While creating an eco-roof on your home is definitely an involved process, it has many benefits. By having vegetation on the roof you limit water runoff. You can aslo save on heating and cooling bills because of the increased insulation that the soil and plants provide.

Greenpoint Restaurant in New York

By-law 720 (sect 5.5.5). In Beaconsfield single family homes must have a sloped roof unless they have an eco-roof. An eco-roof must be covered with one of the following materials: vegetation, including, minimally, a watertight layer, a growing medium and a layer of vegetation; white material, or a combination of the two.

Soil

Growing in containers is a great option for people with limited space. Containers are movable, and you can put them in places you otherwise would not be able to grow food (on cement driveways during the summer for example).

You can use regular dirt for growing in containers, but often it is better to use a potting mix. Potting mix allows for better drainage, and it is lighter than regular soil, which makes moving the containers safer and easier. You can buy potting mix commercially at any garden centre or mix equal parts coconut coir (a more sustainable alternative to peat moss), sand and compost.

Growing in containers requires that you add nutrients to the soil fairly often, since your plants will be growing in limited space. Commercial fertilizers, compost or worm castings from vermicomposting (see next page) are all good options

Alternatively, you can go soil-less. Hydroponic systems grow food in water full of nutrients. There are several commercially available small hydroponic systems that can be placed almost anywhere. While these do require access to electricity to run, they have the added benefit of often having grow-lights. This means that even if you do not have an area with a lot of sunlight you can still grow vegetables.

Water

Keeping plants well-watered is important, especially if they are growing in containers, which can dry out quickly. However, you do not want to create an environment that is constantly damp since this can foster mold and other problems (especially indoors). One option is to use a timed waterer or one that slowly releases water. Plant waterers can be bought commercially, or you can make one yourself using an old wine bottle with a twist off cap. Simply poke a few holes in the cap, fill the bottle with water, recap it and stick it in the dirt upside down. The water will slowly drain out and keep the plant watered for an extended period of time.

Supporting Infrastructure

Vermicomposting is a great way to have access to quality compost if you do not have room for a compost bin outside. Vermicomposting uses worms to help break down food scraps in a small conatiner. Usually the worms do their work on a bed of shredded newspaper, which absorbs any liquid and smells. The worms work quickly and with little fuss, and produce very nutrient rich fertilizer from waste for free! An ideal place for a vermicomposter is under a kitchen sink, where food scraps can easily be added in.

The McGill Gorilla Composting Program has an excellent guide on vermicomposting which can be found at : http://gorilla.mcgill.ca/media/vermicomposting.pdf

Safety & Access

When gardening in small spaces, especially indoors, it is important to store all your materials properly so that you don't encourage mold or attract any pests. Ensuring that bags of soil and fertilizer are securely sealed and that all equipment is clean and dry before being put away should do the trick!

If you are growing on balconies or rooftops it is important to make sure that there are safety railings to prevent any falls. You will also want to ensure that there is appropriate gating to limit access to the gardening area.

A Note on Animals


A rabbit in the author's backyard

When you grow food in your yard, you run the risk of attracting unwanted wildlife. However, this can be managed by taking some basic precautions. First and foremost, it is important that you maintain your garden. Harvest produce as soon as it is ready so it does not have time to attract pests. Making sure that your compost is in a lidded conatiner also helps to deter unwanted visitors. Finally, you may wish to put netting over certain particularily attractive plants to prevent rabbits and birds from getting to them.

However, there are animals that you may, in fact, want in your yard.

Bees

The City of Beaconsfield currently doesn't have explicit legislation on beekeeping. However, the province of Quebec does (see below). Beekeeping offers the chance to harvest honey, wax, and support pollinators. Like caring for any animal, you need to make sure that they are kept healthy and happy and that they do not bother the neighbours.

If you are interested in beekeeping this guide recommends contacting the McGill Apicultural Society who offer workshops at the Macdonald Campus in St-Anne-de-Bellevue.


After a test program in 2014, the CIty of Edmonton legalized urban bees

Quebec Bee Act: Every beekeeper who owns Apis mellifera beehives must register with the Minister of Agriculture, Fisheries and Food. Hives must be at least 15 m away from the nearest public road or dwelling. It is forbidden to import into, or sell within Québec, any bees without a certificate stating that they are free of disease.

Chickens

Currently the City of Beaconsfield does not allow chickens, or any other domestic fowl, to be kept on private property in the city. (By-Law 033 section 7.1)

What to Plant?

There are many types of plants that a gardener can choose from. Including a wide variety will make your garden more resilient to pests and disease and also more productive. If you are looking for some expert advice the best option is always your local garden center. However, here are some things that you may want to consider:

Using Heirloom & Native Plants

By using plants that are native to the Montreal area you are already using something that you know is adapted to our growing zone. Similarily, heirloom plants are those whose seeds have been handed down for generations in a particular region or area, and are selected by gardeners for a special trait (taste, hardiness etc). If you can get your hands on some native heirloom plants or seeds not only will you be getting extra-tasty produce that has been selected for our growing area, you are also helping to preserve local biodiversity.

some examples of local edibles are:

Savignac tomato: Pink, tasty and adapted to colder weather

Tante Alice Cucumber: adapted to cold climate and disease tolerant.

Raspberries are native to North America.

Pollinator-Attractors

To help attract beneficial pollinators to your garden you may want to consider planting flowers that are appealing to them. Again, native plants are the most attractive to our native pollinators, so it is best to try and use native species of plants in your garden. Adding a wide variety also helps, since different pollinators are attracted to different plants. Planting pollinator-attractors can also help boost the population of declining species, like Monarch butterflies and native bees. These flowers also add a nice touch of colour and an enticing smell to your garden.

Some examples of native plants that attract pollinators are:

meadowsweet

beebalm

coneflower

Growing food does not need to be limited to "regular" garden beds and container gardens. Edible landscaping is a great option for a more natural looking yard that still produces food. If you are considering landscaping your yard, ask your contractor if they will incorporate perennial herbs or berry bushes!

This garden included Dinosaur Kale in its landscaping.

Maintaining a vegetable plot and keeping it free of weeds and pests can be daunting, however, it is imporant to do so in an evironmentally friendly manner.

By-Law 04-041: Concerning Pesticide Use
In the City of Beaconsfield the use of pesticides are prohibited in the use of controlling vegetation (weeds).

If you have questions or concerns about pest control, Public Works Inspectors would be pleased to advise you on the types and uses of ecological products as well as local sources of supply.

For additional reading, some good resources on Canadian vegetable gardening include:

Guide to Canadian Vegetable Gardening by Douglas Green
All New Square Foot Gardening by Mel Bartholomew

Community Involvement

While this guide, so far, has focused on gardening on private property, growing food is a great way to connect with your local community. One of the best resources for any aspiring gardener is talking to someone who is also growing food. And there is nothing quite like celebrating and eating your harvest with friends. Consider organizing a "Harvest Party" for your neighbourhood!

Remember if you want to host a block party you need to get a permit from the City of Beaconsfield (By-Law 720 section 6.1)

Keep an eye open for local Seed Swap / Seedy Saturdays/ Fete des Semences, or consider organizing one yourself! The Montreal Botanical Garden hosts a seedy weekend every year. These events are a great way to get heirloom and local varieties of plants. They're also a great place to ask for advice.

NDG Food Depot's annual Seedy Weekend event, held at the Botanical Garden.

PLANT A ROW
GROW A ROW
UN RANG POUR
CEUX QUI ONT FAIM

Getting involved in growing your own food is also a great way to give back to your community. If you have extra seeds or seedlings, you may also want to consider donating them to a local school. You may also wish to consider donating some of your produce to a local shelter or food bank.

A great example of a community-oriented project is Plant a Row Grow a Row. It began in Winnepeg in 1986 and it encourages gardeners to plant one more row than they need for themselves and to donate the produce from it to local food banks.

The Beaconsfield Garden Club meets on the second Wednesday of each month from September to May. You can check out their website at http://beaconsfieldgardenclub.ca/

Contacting the City

Another important way of being involved in the community is making sure your voice is heard!

All Beaconsfield City Council meetings are public with a question period at the beginning. Meeting notes are available at http://www.beaconsfield.ca/en/your-council/council-meetings.html

You can also write to your local councillor. Below are some tips for writting a letter from the Toronto Youth Food Policy Council.

Include your contact information. This indicates to your City Councillor that you are a constituent in their ward.

Be concise. The letter should be no longer than one page.

Be clear. Start with a brief introduction outlining your concerns (e.g. is it about a specific by-law or committee?). Keep to the same topic and emphasize two or three major points.

Be personal. Describe your interest in the issue and any experience you have regarding it. Does the issue have a direct impact on you, your family, or your community? In other words, why do you care about this issue?

Be assertive. Ask for clarification on your City Councillor's position. Give the rationale for your request (are other cities taking action on the issue? Have they had success?). Request that the City Councillor respond to your letter.

Be professional. Communication should be respectful, even if you disagree with the current state of things. Thank them for any positive action they have taken in the past on your issue.

Follow up. Write back to your City Councillor thanking them for their response, and any actions they may take.

List of Support and Resources

Composting
The City of Beaconsfield's Guide on Composting:
http://www.beaconsfield.ca/images/stories/environmental-fields/compsting_guide_en.pdf

Subsidized compost bins can be found at HUB hardware in Beaurepaire Village.

Water
Subsidized rain barrels can be paid for at the City Hall reception desk and picked up at the bulk material centre behind Public Works.

Community
The Green Patrol & the Blue Patrol: Their goals are to inform and sensitize citizens about better environmental practices and habits including ecological gardening. They can be found at most summer city events.

The Beaconsfield Gardening Club: http://beaconsfieldgardenclub.ca/

Analysis & Conclusions

In the review of guides there was a decided bias towards non-suburban and communal activities. While encouraging agriculture in urban areas as a communal activity is to be lauded, there is a paucity of guidance for those living in suburbs who wish to engage in urban agriculture. In Canada this is particularly relevant since a large part of the population lives in suburbs.

Furthermore, while much of the literature discusses creating guidelines that are specifically tailored to the area/city/community that they are relevant to, none of the guides reviewed discussed by-laws in any detail.

This guide can hopefully act as an example for other communities wishing to become more involved in urban agriculture, both by showcasing initiatives appropriate to suburban areas, and by specifically highlighting the types of by-laws that may have an effect on suburban agriculture. Hopefully this guide demonstrates that urban agriculture can remain a community-oriented activity even when focused on initiatives on private land.

There are several lessons that may be learned specifically relating to the city of Beaconsfield.

1) There exist some very good resources in Beaconsfield to support urban agriculture: for example the composting guide, Green Patrol, and subsidies for rain barrels.
2) There is a perception that the existing by-laws do not/would not affect urban agriculture initiatives. However, there are several by-laws that have implications for urban agriculture in Beaconsfield.
3) If the city would like to further their leadership role, fostering networking and educational opportunities could prove to be useful initiatives.

The main constraining factor for urban agriculture in Beaconsfield appears to be a lack of awareness about the potential benefits of urban agriculture and how to engage in the topic. Key stakeholders and citizens engaged in casual conversation all seem to like the idea of growing food locally, but do not know how to begin. Therefore initiatives that would prove particularly effective would focus on educational outreach. The Guide provided above could be a good start and would provide supporting documentation. Improving contact points for existing city resources would also

useful. While both the blue and green patrols are mentioned on the City of Beaconsfield's website, there is no contact information enabling someone to reach them outside of public events. Creating a “Seedy Saturday” event at Beaconsfield's library could also be a low-cost way to promote both community engagement and to educate citizens about urban agriculture. The city has already done fantastic work with educating their citizens about composting, reducing green waste and harvesting rainwater. All of these existing initiatives would tie in nicely with urban agriculture outreach.

Another project that may be of interest for the City of Beaconsfield is creating a “gleaning” program. Gleaning is the act of going around and picking produce that would otherwise go to waste, primarily from trees. There is already such a project going on in the city of Montreal that could serve as a good example. It is run by Santropol Roulant called “Fruits Defendus” which helps to facilitate the harvesting and distribution of fruit among tree owners, harvesting volunteers, and several local food security organizations. This type of project could be particularly beneficial in Beaconsfield because the city has such a large number of trees, including many crab apples.

The municipality could also engage with urban agriculture at a higher policy level. The creation of a Food Charter or Food Policy for the city of Beaconsfield would not only encourage discussion on the subject of urban agriculture among citizens, but would also set Beaconsfield up as an example for other municipalities. A review of existing by-laws may also be useful. Creating guidelines for beekeeping, perhaps by using the Quebec Beekeeping Act as a reference, is particularly important since Beaconsfield currently does not have regulations surrounding this issue.

By actively encouraging urban agriculture, and all of its environmental benefits, Beaconsfield can further the environmental goals laid out in Beaconsfield's Plan for Sustainable Development and the Montréal Community Sustainable Development Plan; including improving protection of biodiversity, natural environments and green spaces.

At a regional level, Beaconsfield has the potential to lead the way in rethinking the suburb which are traditionally regarded as not environmentally friendly. By engaging in urban agriculture, suburbs can reduce their environmental footprint through encouraging local food production, increasing biodiversity, strengthening communities and educating and empowering citizens.

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