

# Cultivating Montreal: A Brief History of Citizens and Institutions Integrating Urban Agriculture in the City

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## CORE IDEAS

- Montreal (and its diverse actors) is an interesting model and a valuable starting point for cities promoting urban agriculture.
- Universities integrate urban agriculture into education, and continue to play an important role in its promotion and assimilation.
- Grass-roots approaches to urban agriculture are actively transforming cities.

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**Abbreviations:** GTAU, *Le Groupe de Travail en Agriculture Urbaine* (Working Group on Urban Agriculture); MCHG, Minimum Cost Housing Group; NGO, non-governmental organization; UQAM, Univ. of Quebec in Montreal.

## ABSTRACT

Can concerted citizen action, involvement of community groups and institutions, as well as formal authorities, play important enough roles in promoting urban agriculture? The case of Montreal indicates they can. This paper investigates some of these interventions at different times and levels and explores how they made this North American city a leader in that field. Urban agriculture activities began in the early 1970s, but gained momentum after the 1973 oil crisis. The role of diverse players in transforming the city fabric ever since is discussed here by introducing and developing related projects in three parts: the first traces the history of community gardens; the second presents Montreal-based pilot projects rooted in different neighborhoods that aimed to intertwine urban agriculture, design and citizens that the authors developed and implemented; the third discusses a recent (2012) citizens' action that used a municipal bylaw to hold a public consultation on the state of urban agriculture and towards the formation of city's *Comité de travail de la collectivité montréalaise en agriculture urbaine* or Permanent Committee on Urban Agriculture.

**C**ULTIVATING A CITY can take place in a variety of formal and informal ways: from spontaneous individual actions such as guerrilla gardens to organized community projects. While urban growing activities and practices have been around for centuries, the model and the types of partnership involved are mutating and evolving and are worth investigating, especially in a context of rising awareness of health and environmentally-conscious living and of growing concern over climate change. These concerns have increased the demand to eat local, to discern the source and origin of people's sustenance and to cultivate one's own herbs, fruits and vegetables.

Besides perceived health and environmental benefits, urban agriculture can also be viewed as one of the complementary responses to economic crisis and as a way to reduce both individual and municipal budgets. Cities are increasingly looking for ways to cut expenditures related to the maintenance of parks and public spaces,

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and as municipal programs are eliminated, a new urban framework—a management and partnership paradigm involving citizens, non-governmental organizations (NGOs), institutions, formal municipal and other authorities, and citizens—is required. Urban agriculture can serve as the nexus where this new civic cooperation paradigm can be forged. This paper investigates the recent history of actors engaged in urban agriculture in general and in community gardens in particular and how they have been promoted in the city of Montreal.

## BRIEF HISTORY OF MONTREAL'S COMMUNITY GARDENS

While not new, urban agriculture has been receiving increased attention by scholars, city planners and policymakers alike, as a practice that has ample potential to yield positive social, economic, environmental and nutritional returns for cities and their citizens (Mougeot, 2005; Colasanti et al., 2012; Drake and Lawson, 2015). The survey of urban agriculture practices across a multitude of cities in North America and beyond indicates that factors like levels and quality of governance (Walker, 2015), legal-technical and bureaucratic rules and procedures (Mendes et al., 2008), cultural habits (Thibert, 2012) and land use preferences (Lovell, 2010), and even racial and social disparities (Cohen and Reynolds, 2015) matter for the success or failure (Draus et al., 2014) of related programs. The picture that emerges is one where the most crucial elements are grass root organizations' initiative, municipal support, public advocacy and citizen levels of participation (Huang and Drescher, 2015). The city of Montreal—a mid-size historic yet modern North American metropolis with a dynamic, diverse population, a vibrant interfusion of local and immigrant cultures, including a rich milieu of food customs, and a long history of urbanism, civic mindedness, research, activism and engaged local government—successfully combines all of these key factors. Together, they weave a portrait of a seminal case study of joint urban agriculture initiatives and programs (e.g., community gardens) which merits a closer look.

The tradition of cultivating productive gardens in Montreal precedes the European immigration to the New World, and since its French establishment in the seventeenth century, each successive round of immigrants has brought with them their own planting customs, seeds and plants, and blended them with the local climate and culture, creating the urban landscape that is evolving ever since. The French cultivated individual vegetable gardens in their backyards as well as institutional gardens in religious establishments, like the Hotel-Dieu and Montreal's General Hospital to supplement their diets. Later, according to authors André Pedneault and Roll Gernier, community gardens were set up by the Canadian Pacific Railway's employees starting in the 1890s with the practice lasting well until the 1930s. Educational gardens were a part of the 'Nature Study Movement' from 1890 to 1904, and the formally planned Victory Gardens were popular during the period of two World Wars and the Great Depression; the

latter served as the pre-cursor of the current community gardens movement (Pedneault and Gernier, 1996, p. 9).

The postwar era established the reign of the automobile in North America and with the growing suburbanization, farming activities on the island of Montreal decreased. Nevertheless, a number of agricultural lands on its western extremity remained. This was partially due to the presence of the experimental farm affiliated with Macdonald College (currently home to McGill University Faculty of Agricultural and Environmental Sciences and its School of Dietetics and Human Nutrition), the Morgan Arboretum, and adjoining agricultural properties belonging to some well-established families with strong ties to the land and rural lifestyle.

Financially, the 1970s were trying times for the city. The local economy began to slow down after Expo 1967. The first energy crisis in 1968 did not last very long, so the impact of it was not too severe; however, the effects of the 1973 oil embargo were felt all around the world, especially in western industrialized countries. The new realities of oil shortages, recurring energy price fluctuations and related economic uncertainties hit hard the general and local economies of both Canada and the province of Quebec. As a result, inflation and unemployment rose, causing sustained economic hardship. But this also brought about a mentality shift in thinking about resources: it was an era of crisis and opportunity, marked by a fortuitous confluence of personalities, academics and activists seeking to "think outside the box." It was within this broader context that Montreal's fascination with urban agricultural solutions was born.

One of the first steps was the emergence of the community gardens' program. Before the formal establishment of a municipal version of such programs, in the early 1970s, a number of community gardening initiatives had bloomed in the city with varying lifespans. In 1972, Joe Carter and Peter Sijpkens, two students of the McGill Univ. Architecture program, obtained an Opportunities for Youth Program Grant for their project entitled 'Adventure Playgrounds. Sore Thumbs and Green Thumbs' and started two short-lived community gardens in the low-income neighborhood of Pointe St-Charles, located in the southwest of Montreal. They worked toward turning empty lots into productive ventures engaging the local youth, but those gardens did not last long and are now defunct (Carter and Sijpkens, 1972).

Another early initiative was the Victoria Community Garden originally launched in 1974: a Jewish Community Service Project set up on a parcel of land donated by the nearby Jewish General Hospital. Remarkably, 40 yr since its establishment, this garden continues to function, despite considerable demographic changes in the neighborhood. The area, hitherto predominantly Jewish, has seen a large influx of new immigrants of various religious backgrounds and nationalities from all over the globe. Today, the majority of gardeners are from South Asia, coming from Sri Lanka, Bangladesh, and the Philippines, and it is noteworthy that, despite their experience in

warmer climates, they have adapted well to the community gardens and to gardening more broadly in Montreal.

Also in 1974, following a strike by firefighters, a growing number of destructive fires left numerous citizens homeless. In their aftermath, affected residents of the south-central district asked the city for land to grow food, and in 1975 the community garden program was launched to cater to their needs and those of other residents (Pedneault and Gernier, 1996).

It was during this period that the city's Beautification Office (*Office d'embellissement*) was officially established and began managing a community garden program (Vandermuelen, 2007, appendix A). According to this author, the first published details on this program appeared in 1976 in *Dimanche Matin* and included the names of the gardens and the organizations maintaining them. The list compiled by Vandermuelen comprised the following gardens: *Jardins communautaires de la Petite Bourgogne* or Little Burgundy (also known as *Des Seigneurs*, which still survives), *Jardins communautaires l'Oasis*, *Jardin potager au Pard-école*, *Jardins communautaires du Projet 80*, and *Jardins communautaires au Pard Dupéré* (Vandermuelen, 2007). In bringing together different sources about the community gardens program, one realizes that a dependable and trustworthy history of community gardens in Montreal still waits to be written.

Around that same period, a number of researchers started looking at both local food production and energy savings. Among them were McGill University faculty and students affiliated with units such as the Minimum Cost Housing Group (MCHG) of the School of Architecture and the Brace Research Institute of the Faculty of Engineering. Norbert Schoenauer, then Director of the School of Architecture, was a strong advocate of putting building rooftops to good use. Following the oil crises of the 1970s, research on energy conservation developed and using greenhouses to collect and conserve heat as well as to grow food was considered an attractive alternative. For example, in a design studio course at McGill Univ. in 1973, Witold Rybczynski asked students to design and construct full-scale greenhouses using recycled and inexpensive materials (McGill Reporter, 1974).

A year later, colleagues from the MCHG and Brace, Rybczynski and Ron Alward respectively, worked collaboratively on an aspiring design and building of the rooftop garden shown in Figure 1. The third key partner of the team, Susan Alward, was engaged on the community and gardening side of the task. These pioneers aimed to demonstrate the potential of using roofs for growing food in cities, to train and involve community members in spreading these ideas, and to advance research in the area of energy conservation and reuse of materials for gardening. The project was supported via a federal government grant and was set up on the roof of University Center, a nearby neighborhood community building. Overall, the Rooftop Wasteland experiment, as it was called, demonstrated that it was possible to grow food on rooftops using small containers, but that there were also "limitations on the

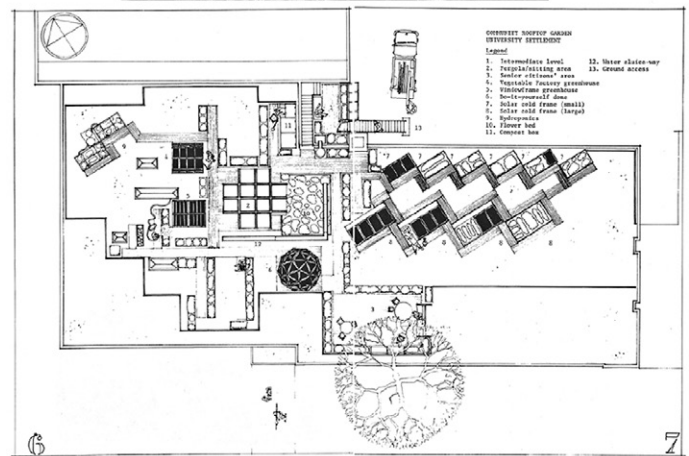
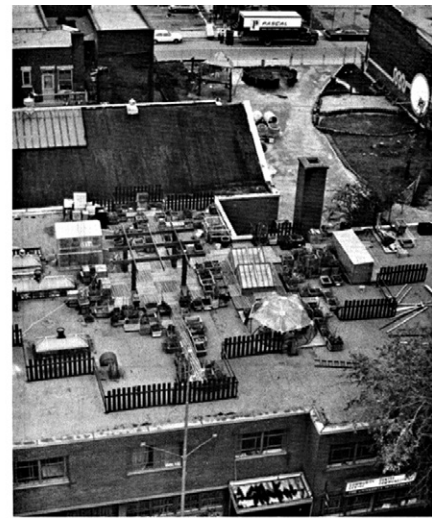


Fig. 1. Rooftop Wasteland project, 1976 (top: picture; bottom: design plan). Credit: Minimum Cost Housing Group, McGill University, 1975.

extent of the garden." The main issues identified with rooftop gardening in Montreal were related to the utilization of individual roofs or of convenient and safe access. Gaining access and security both in terms of cost and operationalization were not easy to overcome for an average gardener (Alward et al., 1976). Remarkably, these lessons remain valid to this day. Many of the issues which were addressed by these early experiments—like roof access, safety, costs, and food self-sufficiency—are being raised again and again in the context of the green roofs movement.

While bottom-up approaches have been critical in establishing community gardens in Montreal, the community gardens program would have remained rather modest were it not for Pierre Bourque, a horticultural engineer employed by the city, who in 1979 was promoted to the post of the Director of Montreal Botanical Garden. As a founder of the *Vision Montreal* political party and the mayor of Montreal from 1994 to 2001, he advanced the community garden activity effectively and permanently. Additionally, he introduced a number of green initiatives, such as the *Eco-quartier* (an environmental action program of Montreal that helps community groups interested in improving their neighborhoods) that launched





Fig. 2. Portion of the rooftop of the Décarie Expressway tunnel converted into a community garden, Montréal. Credit: V. Bhatt.

in 1995. Furthermore, Montreal's urban garden-scape, like any large North American city with a significant immigrant population, has been shaped by the food security issues of successive immigration waves; besides their traditional gardening skills, immigrants brought along with them their own fruits and vegetables to obtain food of their liking, often planting these items in their own yards and gardens. As a horticulturist and a people's politician, Bourque instinctively understood this, and his proactive administration not only formalized and consolidated the program for community gardens, but he also embarked on new and innovative ways to create spaces for them on and off land. For example, on infrastructures like the one shown in Figure 2, where a portion of the rooftop of the Décarie Expressway tunnel was converted into a community garden. In another case, also in the borough of Côte-de-Neiges, the rooftop of a large water reservoir was converted into one of the largest community gardens in the city. In some of these infrastructures, special raised beds were further elevated to give easy access to elderly gardeners, making the program inclusive and more widely accessible. Between 1974 and 1996, the program grew steadily and "since 1997, the total number of gardens has increased slowly with four new gardens added to the total in six years" (Bhatt and Kongshaug, 2005). Before 2002, around 0.2% of the budget of the *Service des sports, des loisirs et du développement social* of the municipality of Montreal was dedicated to the community gardens program (Reid, 2009, p. 93). In 2011, there were 95 community gardens on the island of Montreal with 8500 allotments (*Office de consultation publique de Montréal*, 2012, p. 2, 5).

Another landmark for urban agriculture in Montreal was in 2002 when all local municipalities were amalgamated under one administration with the motto 'One Island One City'. Before the merger, the Montreal borough community gardens program was the most extensive, robust and was well integrated with the city bureaucracy. After the merger, counter-intuitively, the administration of community gardens was fragmented and management was transferred over to each respective borough council (*Division des sports, des loisirs et du développement social et direction de la culture, des sports, des loisirs et du développement social*, 2005, p. 3). While the majority of Montreal boroughs run community gardens (17 out of 19 according to the *Office de consultation publique de Montréal*, 2012, p. 5), unfortunately, not all of them are equally motivated to maintain or advance theirs. This may be because all boroughs are different in size and budget, and development pressures are not identical, and do not have the same priorities. Some are denser than others, some lack space or land to accommodate new gardens, while others are more sub-urban so the demand for allotments is not so high, and so on. As a result, according to many horticultural animators and gardeners, the program has suffered following this unification.

The most recent phase in the modern history of this project (Fig. 3) began in the spring of 2008, when the city's health department performed soil tests in Montreal's community gardens and found the soil in a number of them contaminated. Due to the presence of long hydrocarbon chains and traces of heavy metal, a total of 167 plots were closed in three locations around the city (The Gazette, 2008; Beausoleil and Price, 2010). Accordingly, this closure of gardens and the uncertainty surrounding this issue has extended the waiting time to acquire a gardening plot (which can exceed two to three years) in some boroughs.

Since there is greater demand for community gardens and allotments available in the city, community groups and local organizations in partnership with different institutions are seeking ways to increase growing opportunities in diverse quarters of the urban agglomeration. Broadly speaking, these initiatives can be classified as collective gardens, as they are jointly created and tended. There are ~75 collective gardens in the city (City of Montreal, 2014), and to better understand the dynamics of these projects, types of partners who could be involved in such initiatives, and the range of gardens realized, it is important to consider them closely, as this paper will do in the following sections.

Yet, this brief review of community garden-related actors, actions, and activism could not be complete without mentioning other key individuals and their organizations that



Fig. 3. Timeline from the 1970s of key events related to urban agriculture in Montreal.

have made Montreal an inspiring case of urban agriculture. One such example is Daniel Reid, initially hired as the horticultural animator of community gardens in Montreal, who helped run and consolidate the city's program. Another is Lise Bertrand, a Montreal Public Health researcher and planner, who studied and vigorously promoted and defended access to healthy food across the city. Other individuals come from the sector of NGOs. Ismael Hautecoeur worked with *Alternatives*, a local NGO with links to and inspiration from other countries, who investigated how to green cities, helping to introduce container gardens in a variety of locations and for a number of users, from university campuses to elderly homes and private balconies/yards. Jane Rabinowicz was a long-time executive director and driving force of *Santropol Roulant*, one of the original NGOs that uses food as a vehicle to break social barriers and now also involves urban agriculture; its creative 'Meals on Wheels' programs used volunteer cyclists and pedestrians to distribute locally produced food to the mobility impaired, elderly, and those in need. Finally, from academia and apart from the trailblazers mentioned earlier, William H. Hendershot (Soil Sciences, McGill University), Christopher Bryant (Geography and Peri-Urban Agriculture, *Université de Montreal*), Eric Duchemin (Environmental Studies, *Université du Québec à Montréal* [UQAM]), and the late Jeanne Wolfe (Urban Planning, McGill) also played important roles in their respective fields towards promoting research, education, and innovative actions related to Montreal-based urban agriculture initiatives. For example, since 2009, Duchemin has created and directed an Urban Agriculture summer school at UQAM, where researchers from Quebec, France, and other francophone locations exchange ideas and practices; this has helped place Montreal on the UA international map. In addition, other groups, such as the beekeeping collective, and research groups at local universities and colleges have emerged in the last several years.

## ACTION RESEARCH PROJECTS

The second part of this article presents three action research projects developed by the authors: first, the Edible Campus on McGill University; second, the collective garden of *Nutri-Centre LaSalle*; and, third, *Paysage Solidaire*, a network of collective gardens (Fig. 4).

Action research is a sequence of theoretical issues and their practical applications through empirical interaction that, according to Sorensen and Lawson (2011), give importance to participatory approaches which value commitment and duration in a partnership between researchers and the community in question (Sorensen et al. 2011, p. 154). Based on the action research cycle paradigm described by Kemmis and McTaggart, as well as Maguire, cited and illustrated by Sorensen and Lawson (2011, p. 153), the authors' research team took a number of steps for each of the projects it was involved with. First, it formulated the questions: How can citizens turn under-utilized urban spaces into productive places through design? How to engage community members in this endeavor? Who, and what kind of partnership, could help tend these gardens? Then, the team identified sites and potential participants, and conducted site analysis and informal consultations during field research. This was done to select an appropriate location and to determine a suitable program for each project. Following this phase, the projects were implemented and finally, feedback from their initial operation was used to augment it. Eight years after the Edible Campus project was launched the process is still working and ongoing.

The Edible Campus is an action research project developed on the McGill University Downtown campus. It showcases ways to integrate food production into urban spaces while keeping them functional. The initial team consisted of two leading NGOs, *Alternatives* and *Santropol Roulant*, and researchers from the MCHG of McGill University's School of Architecture. Together, they explored ways to cultivate a paved area in a centrally located university campus and

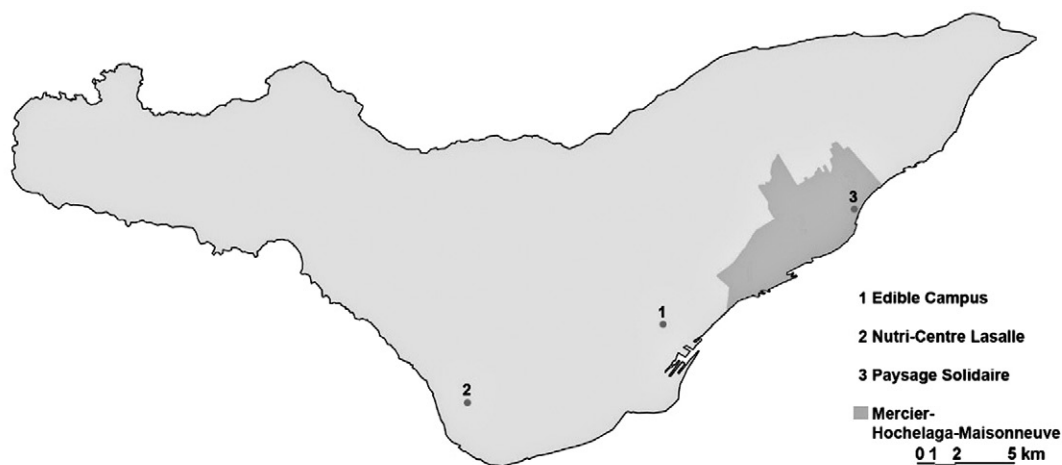


Fig. 4. Plan of the Island of Montreal showing the location of each project.



strategies to increase urban food production in under-utilized spaces (Bhatt et al., 2008).

Initially, in 2007, the garden covered an approximate area of 110 m<sup>2</sup> and used mainly containers, as shown in Figure 5. Since then, it has grown incrementally, and in 2010, it covered close to 1000 m<sup>2</sup> by way of converting rock basins into cultivated raised beds as shown in Figure 6. This initiative also involved volunteer citizens from various backgrounds in creating, cultivating, harvesting, and maintaining a productive community space. During the growing season, this garden produces over one tonne of fresh organic produce for the *Santropol Roulant's* Meals on Wheels program that supplies food to 100 Montréalers on a daily basis.

The *Nutri-Centre Lasalle* is another project on which the authors have worked. It aims to provide “Ville LaSalle a common place of education, support and consultation for groups and concerned individuals for/or affected by poverty and food security” (Lapointe, 2005). In this case, the partnership included designers and researchers from the MCHG with spatial knowledge, analytical and representation skills, as well as community leaders from the *Nutri-Centre Lasalle*, an agronomist who was in charge of scheduling and planning the season based on gardeners’ crop preferences. As specified in the mandate of this NGO, it focused on food security, hence participants were both gardeners and recipients of part of the harvest and they were selected based on needs. The harvest they brought back home was calculated based on the World Health Organization’s recommendation to supply each gardener’s family members with organic fruits and vegetables. Another portion of the harvest was used in meals for community events and cooking classes run by the NGO.

In this case, the collective garden was located in a less central and more vulnerable borough and was set in the backyard of a school. Its program included a twofold increase of cultivating area, as well as additional gardening space for



Fig. 5. Transit corner before the introduction of the project in 2007 and after. Credit: V. Bhatt (top); L. Farah (bottom).

fruit bushes and trees, and outdoor common spaces for meeting, resting, playing, cooking and composting food that was also accessible to mobility-impaired community members, shown in Figure 7. Overall, this project linked environmental and social aspects through a combination of food security;



Fig. 6. Photomontage of the 2010 expansion of the Edible Campus. Credit: K. Kagner (left); V. Bhatt (right).





Fig. 7. The Nutri-Centre Lasalle, Montréal. Credit: L. Farah (left); Nutri-Centre Lasalle (right).

multigenerational exchanges—as it promoted the mingling of children and adults—and the inclusion of special need groups, not only in terms of accessibility, but also in the use of ergonomic gardening tools.

*Paysage Solidaire* is another project initiated by the authors. This aspiring community-based endeavor was envisioned at the scale of an entire borough (Mercier-Hochelaga-Maisonneuve, located in the eastern end of the Island of Montreal and shown in light grey on the map, Fig. 4). The rationale for choosing this location was based on its vulnerability, its lack of access to fresh produce and its abundant underused spaces which could host it. In this case, the partnership consisted of *Corporation de développement de l'Est, Solidarité Mercier-Est*, the authors' research unit at MCHG and social enterprises and NGOs, like *Y'a QuelQu'un l'aut' bord du mur* and *Alternatives*. Together, these partners surveyed the borough, explored and selected sites, then designed and launched the project with the goal of revitalizing parts of the fragmented borough with the help of the community and its involvement in gardening.

Since its beginning in 2009, *Paysage Solidaire* has flourished, both figuratively and literally: a growing number of similar gardens are being developed in Mercier-Est and Mercier-Ouest as shown in Figure 8; further, the pilot project dedicates an area for the neighboring kindergarten where children engage in gardening activities. The site is also equipped with a composting facility for the community and since 2011, with support from the *International Development Research Centre*, a medicinal garden was also included.

The following charts in Figure 9 represent the partnerships for each of the case studies described above.

The above three examples provide a snapshot of work at different scales, locations, and communities in urban agriculture in Montreal. However, our team is not alone in carrying out such urban-greening projects. Other local universities, a number of schools, and old age homes, among others, have also launched projects on their own or in partnerships (*Agriculture Urbaine MTL*, 2015). The list of these projects is quite extensive a snapshot of it is available at



Fig. 8. *Paysage Solidaire*, Montréal. View of the first *paysage solidaire* garden (left), Map of the *paysage solidaire* network in 2012 (right). Credit: V. Bhatt (left); *Y'a QuelQu'un l'aut' bord du mur* (right).

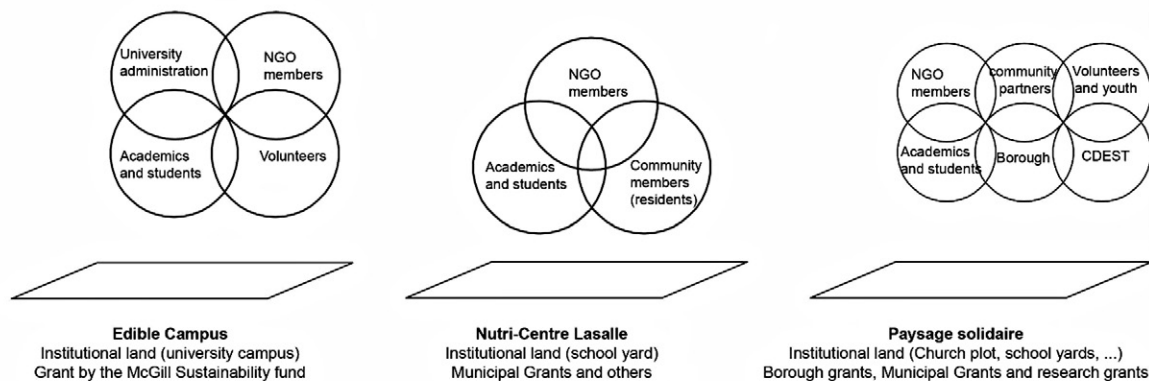


Fig. 9. Actors involved in the Edible Campus, the *Nutri-Centre Lasalle* and *Paysage Solidaire*.

<http://agriculturemontreal.com/> (verified 25 May 2016) that is further described in the following section.

The final part of this article presents a recent development that illustrates the link between urban agriculture and citizen empowerment in Montreal, and demonstrates how in a city rich in both these traditions, civic democratic action takes command to further advance them.

## BROAD BASED CITIZENS' ACTION: MONTREALERS ARE COMMITTED GARDENERS

The community gardens program that dates back to the 1970s represents one of the largest such initiative in a North American city serving 12,000 individuals per year (*Office de consultation publique de Montréal*, 2012, p. 5). Demand for these gardens is high, but communities rightly believe that there was not much action or leadership coming from the formal authorities. Indicatively, there has been no increase in the number of allotment gardens in last 5 yr. Community members, especially young and enterprising gardeners and citizens from various backgrounds (NGO members, professional volunteers seeking to take part in a community work and grow food as well as students, many of whom are affiliated with NGOs involved in a variety of urban greening initiatives) have been frustrated at this state of affair for a long time. As a result, recently, the number of collective gardens has exploded: there are around 75 such installations (*Office de consultation publique de Montréal*, 2012, p. 6) with many of them such as the Edible Campus and *Nutri-Centre LaSalle*, being set up on institutional grounds, like university campuses and schools yards.

In 2011, a number of individuals from these groups came together to reconsolidate and re-formalize the city's urban agriculture program by forcing the hand of the city administration to address its concerns. Their work is a striking example of citizens demanding formal action. This local initiative was spearheaded by the Working Group on Urban Agriculture (or *Le Groupe de Travail en Agriculture Urbaine* [GTAU]), a coalition of forty community groups, NGOs, university researchers and like-minded individuals. Particularly students from

UQAM and NGOs like *Alternatives* and *Santropol Roulant* were quite active in the GTAU. The group put to the test a little known municipal bylaw that allows citizens to initiate public consultation on any subject. This right-of-citizen initiative was included in the revised Montréal Charter of Rights and Responsibilities in 2010. It stipulates that at least 15,000 physical signatures should be collected within a period of 3 mo following the public announcement of such an initiative. Despite the time constraint, the group obtained more than 25,000 signatures by the set deadline, and during 2012, the city was obliged to organize public hearings to discuss the place and role of urban agriculture in Montreal as a result (*Office de consultation publique de Montréal*, 2012, p. 1; Lalonde, 2013). The city promised to support the creation and maintenance of the online platform on urban agriculture in Montreal (<http://agriculturemontreal.com/>, verified 25 May 2016) which lists, locates, describes and acts as a resource for urban growers. (The authors note that other important online portals with a focus on urban agriculture and food related to cities include *Farming the City*, an Amsterdam-based platform, and a Parisian website (<http://www.paris.fr>, verified 25 May 2016) which disseminates activities and programs of the City of Paris in general and also contains a section on urban agriculture where it presents the variety of horticultural projects, lists spaces associated to livestock, poultry and beekeeping, and locates them; hence raising awareness and enabling residents and visitors to engage in urban agriculture.) Consequently, *AgricultureMontreal.com* is one of the most comprehensive web sources for urban agriculture information of the city with a significant presence. Following the great success of its initiative, in May 2012 the city's mayor awarded the GTAU the 'Mayor of Montreal Democracy Award'. Since then, additional initiatives have developed, like *Montréal par la racine*, a show dedicated to urban agriculture in Montreal.

The most significant outcome of the public consultation on the status of urban agriculture in Montreal was the establishment of a Permanent Committee on Urban Agriculture (*Comité de travail de la collectivité montréalaise en agriculture*



*urbaine*) by the city that advises the city and tries to address community concerns related to urban agriculture.

## DISCUSSION AND CONCLUSIONS

What conclusions can one derive about the present and future of urban agriculture, and what are the broader implications from its growing importance in the lives of cities and citizens like those of Montreal and beyond?

Although it possesses a rich, centuries-long tradition of involvement in this field, Montreal cannot be considered a singular case, given that other cities including New York (Cohen and Reynolds, 2014), Detroit (Colasanti et al., 2012), Vancouver (Walker, 2015), Paris (Pourias et al., 2015), Rosario, Argentina (Dubbeling et al., 2009) and Havana (Viljoen and Bohn, 2012; Clouse, 2014) have also turned their attention to urban agriculture. However, by way of its (i) diverse demographics (including a large university population), (ii) combined French heritage (one of the most important Francophone cities in the world) and multicultural character (a bilingual, increasingly immigrant-oriented city), (iii) robust food culture, as well as by (iv) its breadth and diversity of programs and approaches and especially (v) the deepening interaction between highly involved, energetic participants in such activities (including pioneers, NGOs and other civil society members, academics, municipal authorities, public health officials, activists, other agents and the broader public), Montreal emerged as a unique habitat for urban agriculture initiatives, and has become a leader in North America, with an estimated 42% of its residents actively involved in them (*Bureau d'Intervieweurs Professionnels*, 2013).

As a result, the recent history of its program and selected examples surveyed in this paper serve as a good source of information for other cities and community groups interested in further promoting urban agriculture. For instance, the city's well developed and standardized community gardens program, was also recognized as one of the leading ones by the North American Community Gardening Association and we had showcased it at the World Urban Forum 3 held in Vancouver in 2006. As every city has its own, distinct character, issues, resources and especially social actors, this paper does not advocate the simple duplication of Montreal's initiatives and programs. Nonetheless, it argues that as a case study, the city and the interaction between its institutions, involved actors and participating citizens could certainly serve as a good model and a starting point for others.

Today, a number of urban agriculture activities are part of the overall urban greening efforts. As presented in *Potluck. Urban Agriculture in Canada* (Bailey et al., 2007), urban growing is no more limited to community gardens; as the movement grows, the demand for seeds, seedlings and plants of different communities and constituencies is on the rise. In a sense, the richness of the Montreal's urban gardening reflects its great multicultural diversity.

At the same time, wide spread containerized growing has exploded in the last decades. This activity has been picking up steam as a result of the demonstration project described earlier in the paper, and other similar ones. To aid in this process NGOs like *Alternative* and *Santropol Roulant* have been promoting different initiatives. Noteworthy among them are: Selling of readymade semi-hydroponic containers to budding gardeners, short-term hands-on courses on container gardening for all and summer camps for youngsters not only to teach them about organic gardening but also to prepare the new generation of gardeners.

Despite its northern location and hemi-boreal climate, the intensity and the range of gardening which goes on in Montreal from spring to fall is as exemplary as its original innovative tradition of urban agriculture. A wide range of democratic urban growing goes on in the city. Examples include gardens on institutional premises such as McGill, *Université de Montréal*, Concordia, and UQAM, Montreal's four local universities.

Yet, another widespread transformation of the city we are witnessing is in the creation of rooftop gardens, like the roofs of the Montreal Convention Centre and of hotels. Most exciting among them are those set up by chefs of celebrated restaurants in the city and a commercial rooftop greenhouse operation called Lufa Farm. There is also a growing network of beekeeping enthusiasts, and other initiatives, like the fresh produce markets in food-deserts of Montreal launched with the help of *La Conférence régionale des élus (CRÉ) de Montréal*; a number of local producers and local community organizations have also risen to the challenge and are participating in this endeavor. This activity has become a staple of the city, and the hope is that, despite the inevitable ups and downs, it will continue to grow, and to yield not only local produce, but also stronger communal bonds and a healthier, liveable, and civic-minded urban space.

The rich past, exciting present and ambitious possible future(s) of urban agriculture in Montreal invite the consideration of its broader, evolving implications beyond its municipal borders, for cities and citizens elsewhere, on a number of fronts:

First, while each urban gardener's work may seem relatively modest, in comparison to the scale of the city, the sum of all such activities is more substantial. According to the newly founded website *Agriculture urbaine MTL* (2015), the area covered by urban agriculture activities in Montreal amounted to ~128.32 ha in early 2015. Urban agriculture is also fast being considered a component of sustainable cities. In terms of planning, the Metropolitan Land Use and Development Plan for Greater Montreal aims to "increase by 6% the surface of its cultivated land at the metropolitan scale" (*Communauté métropolitaine de Montréal*, 2012, p. 10, 112). Further, the Montréal Development Plan specifically refers to urban agriculture and supports it (*Projet de Plan de développement de Montréal*, 2013, p. 14, 19, and 44). The Montreal Master plan also aims to protect agricultural land. As also mentioned

above, food security has become more important. This has been the case both during economic slowdowns (to which current examples of urban gardens in empty lots of downtown Detroit attest), and because of immigrants preferring their own type of food and produce, and due to growing concerns about questions surrounding food security, quality and source of food and related health issues. It is evident from the long waiting lists of people seeking to participate in community gardens in Montreal that both needs are catered to.

This leads to a second point, there are new models of urban agriculture: educational, civic-minded organizations, like universities, are playing an increasingly important role not only in creating new places for growing but also in inspiring citizens and having them adopt new trends. As we have discussed here, in the Montreal cases presented (Rooftop wasteland, Making the Edible Campus, *Nutri-Centre* Lasalle and *Paysage Solidaire*), academic institutions have been pivotal in raising awareness, implementing innovative partnerships, and demonstrating other potentials related to agriculture in urban environments. Nonetheless, if one judges by the rising interest in urban agriculture this is not nearly enough. For example, urban agriculture summer courses are oversubscribed at UQAM. However, there is still limited involvement in this area of interdisciplinary research, and only a select group and researchers are involved as of yet in these programs.

Perhaps by way of their bureaucratic organization and their adherence to general and decontextualized directives and guidelines provided by international bodies, like the United Nations (Reyburn and Sénécal, 2004, p. 19), when cities are engaged they usually adopt a top-down approach to urban agriculture, and are slower to react to this growing demand and the particular needs of specific cities with distinctive conditions. As illustrated by the case of the petition to the city of Montreal presented in this paper, such modes of response have triggered a grass-roots type of urban agriculture growth; this municipal inertia has to change, and there is preliminary evidence (e.g., the city's new tone in this post-petition climate) that a broader shift may be under way, especially with the aid of NGOs and other civic-minded organizations. (Another example is the *Comité de travail de la collectivité montréalaise en agriculture urbaine*, which is considering the creation of an urban agriculture hub in Montreal's Park Angrignon, a relatively large municipal facility with a direct subway line connection. Large transit-oriented development housing estates have already been built around it, and the proposed Hub is currently [2015] in the design stage with an estimated multi-million dollar budget.) In Montreal, the *Comité de travail de la collectivité montréalaise en agriculture urbaine* now aims to advise the city on priority areas and best practices related to Urban Agriculture and to pool and share knowledge about current initiatives. The committee was established in 2013 and comprised of members from the city's administration, NGOs, the city's Public Health, universities, and local producers. Thereby, it provided an exciting new platform for

bridging the gap between the varieties of public and private actors, and, in the process, enriching the civic participation experience. Other cities across North America and beyond are also implementing new municipality–NGO synergies related to the social dimensions of food systems. The collaborative reinstatement in New York City of vulnerable populations' access to farmers' markets through the federal Supplemental Nutrition Assistance Programs (Cohen and Ilieva, 2015, p. 2–3) is a case in point.

Finally, there is a third, broader point to be made regarding the growing role of agriculture, the emergence of multiple actors, and this 'new' resource for the territory. It is not an exaggeration to state that we find ourselves amidst an interesting transition, from rural farmers to urban gardeners, and from the primary sector of the economy (agriculture) to a parallel (additional) activity integrated into an urban dweller's off-work schedule.

This activity combines recreation, physical activity, and a greater awareness on the type and origin of what we grow and consume that can contribute to reducing subsistence costs and increase our level of self-sufficiency. A particularly interesting aspect of the changing face of urban agriculture is the variety of new urban gardeners and their partners.

With respect to the former, while some do work individually (on the property they own or lease), typically in their backyards, others also grow crops in a defined location, beyond their residence (usually in community gardens); yet, others join together for a good cause, or, to acquire surpluses for their own families (indicatively the case of collective gardens). In the latter, the gardeners do not necessarily possess gardening skills, so there is a growing need to initiate and train them, to transfer these skills through workshops and experiential learning (*learning by doing*). At the same time, the urban agriculture movement in Montreal could not have grown without the latter: it has received strong support from the corporate sector, philanthropic foundations as well as individuals, and this is an important fact that has been often overlooked. For example, most of the NGOs involved in running live projects such as *Nutri-Centre LaSalle* are beneficiaries of the annual Centraide drive that supports more than 350 agencies helping individuals and families to overcome poverty and exclusion. Neighborhood businesses, such as Desjardin Bank Branches, and even oil companies, have generously given to projects like *Paysage Solidaire*; finally, *Santé Publique*, has sponsored a number of urban greening initiative and research projects or performed their own studies.

These evolving facets of collective gardening suggest that, despite a previous skepticism about the sociability function of another type of urban agriculture–community gardens (see Bouvier-Daclon and Sénécal, 2001), such participatory activities can and do enhance social interaction. Ultimately, it is important to note that urban dwellers hitherto accustomed to the concrete jungle of the skyscraper, the CO<sub>2</sub>-emitting exhaust of the ubiquitous automobile and the overwhelming



uniformity and banality of supermarket chains, can and are able to reconnect to the land, and through it, to each other. In a sense, as the case study of Montreal demonstrates, urban agriculture's greatest contribution is the transition from the paved to the cultivated plot that can ultimately (re)humanize urban living and recreate communities of engaged, healthier, active citizens.

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