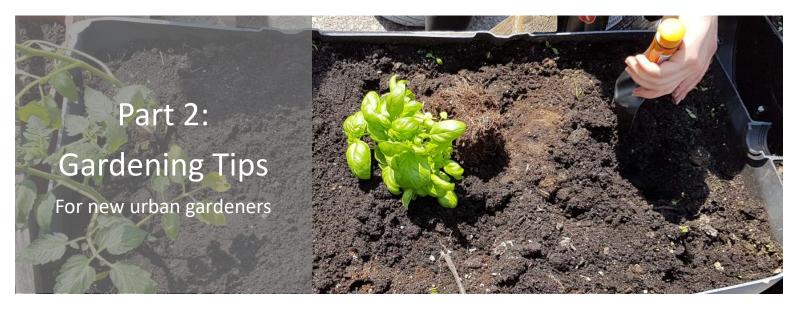


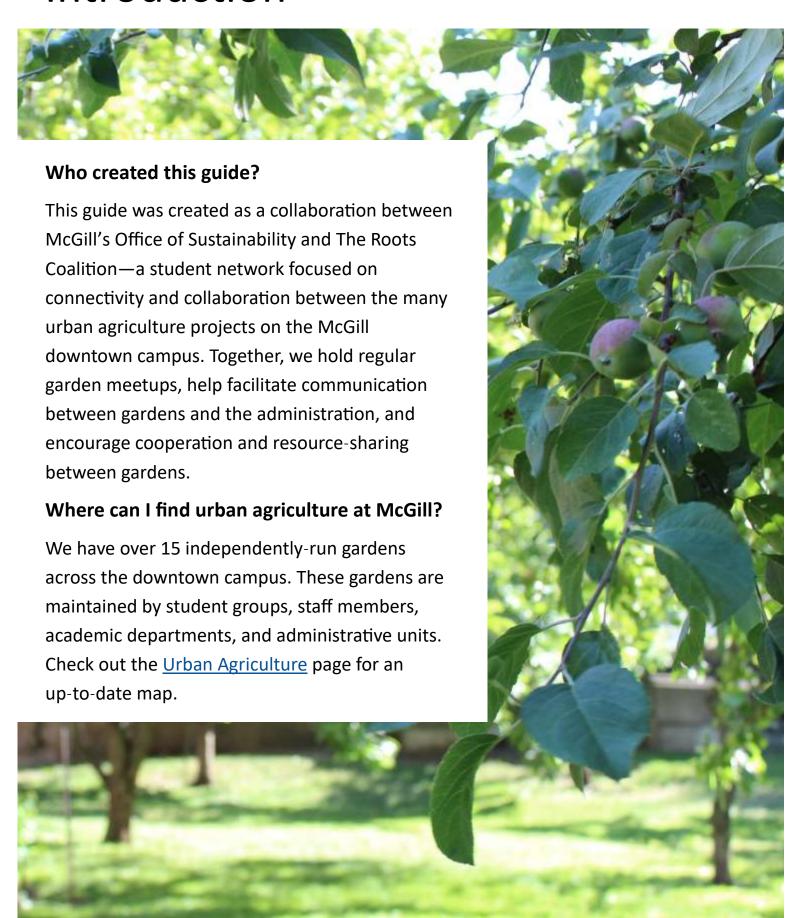
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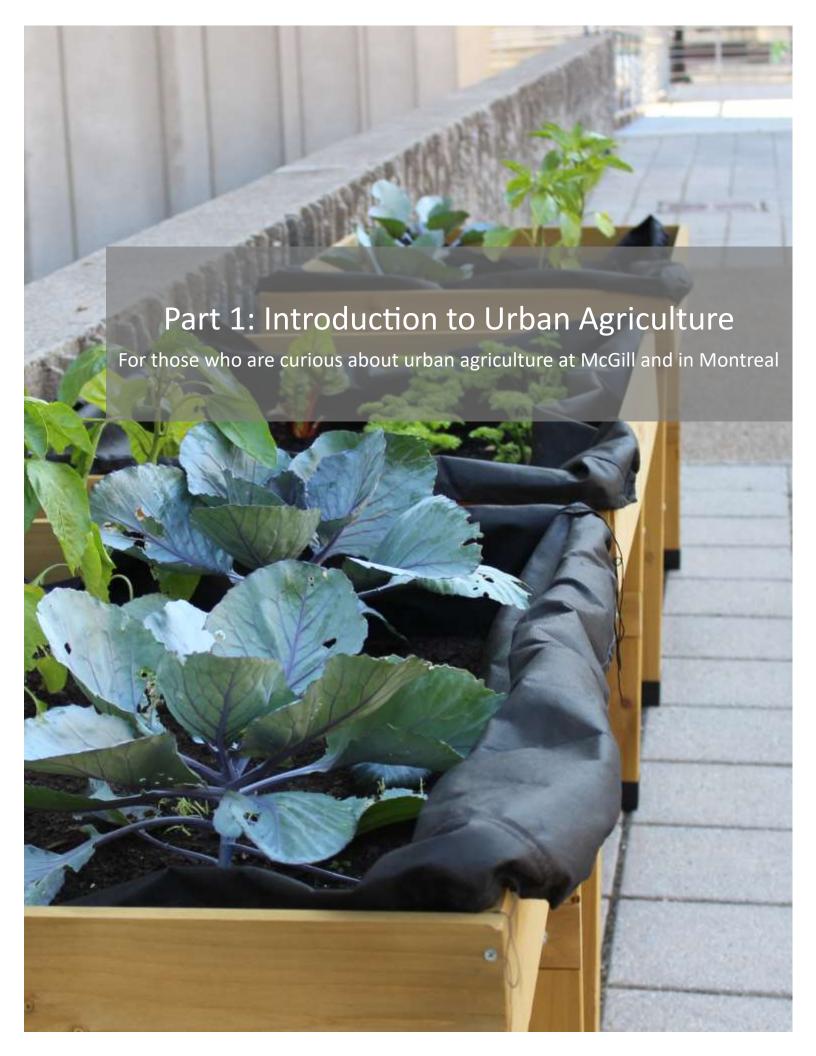






Introduction





What is Urban Agriculture?

Urban agriculture is the cultivation of food in a city environment. This includes traditional horticulture, beekeeping, animal husbandry, aquaculture, urban orchards, and other means of food production.

Urban agriculture also provides city-dwellers a way to reconnect with the natural environment, engage with their community, and access fresh food.

Furthermore, it connects those living in urban environments to their food systems, which may otherwise feel distant or opaque.



Sustainability

At McGill, we take a broad view of sustainability. While protecting the environment is essential, we also need to ensure the needs of our communities are being met. As such, we consider the three pillars of sustainability — Environmental, Social, and Economic. Urban agriculture can intersect with all three pillars:



Environmental:

- Reduces food miles and food packaging
- Encourages local seasonal eating
- Regenerates soil through organic growing methods
- Improves air quality and the resilience of our cities by greening urban areas
- · Attracts important pollinators, increasing biodiversity



Social:

- Improves access to fresh produce and ingredients where resources are lacking
- Fosters community engagement and education
- Reduce the urban heat island effect, making cities more livable



Economic:

- Promotes the local economy and small businesses
- Can improve community self-sufficiency
- Provides skill building opportunities

Urban Agriculture in Montreal

Montreal has a long history of urban agriculture initiatives. Below you'll find some examples. For more, *Cultive ta Ville* has created a <u>map</u> of initiatives across Montreal.

Santropol Roulant

is a non-profit organization working to use food as a vehicle to break down social and economic isolation between generations. Their projects include an urban rooftop garden, peri-urban farm, meals-on-wheels program, weekly vegetable baskets, 5 beehives around the city, and an urban fruit harvesting collective.

Ruelles Vertes (Green Alleyways)

are run by the city of Montreal's eco-quartiers. These greens alleyways throughout the city focus on planting native species and creating communal spaces. The Ruelles Vertes rely on partnerships with citizens and volunteers to maintain the space.

Lufa Farms

is a local company operating a commercial hydroponic rooftop greenhouse. On top of their production, Lufa partners with local vendors to provide a weekly local subscription basket to their community of "Lufavores".

Concordia Greenhouse

is located on the roof of Concordia's Hall building, and serves as a space for experiential learning through workshops, projects, and events that promote urban agriculture, social justice, and community building.

Dawson College Gardens

are rooftop vegetable and pollinator gardens, harvested by staff and students. The gardens have been incorporated into coursework at the college, providing hands on educational opportunities to students.



History

Urban agriculture initiatives on campus have quickly multiplied in the last decade. Before that, gardens were largely decorative, and maintained by the McGill Grounds Team. Below you'll find some major milestones in the creation of urban agriculture projects on campus.

(1960's) Robertson Herb & Scent Garden

The first cultivated crop garden was started by then principal's wife, Roslyn Robertson, who planted a luscious herb garden in front of the McIntyre Medical building. Every year, the gardeners would dry their herbs and flowers to sell at their annual market. The garden was eventually moved to its current location, near the Davis House, and is now maintained by the Faculty of Education.





(2007) Edible Campus

Arguably the most visible garden on the downtown campus, the Edible Campus resulted from a collaboration between McGill's School of Architecture and local non-profit Santropol Roulant. In 2016, Santropol transferred the space's 275 containers and 2 garden beds over to the McGill community. The groups that stepped in to manage the space include Midnight Kitchen, the Staff Gardens, Redpath Museum, Department of Chemistry, and the Office for Students with Disabilities.

(2009) Creation of the Sustainability Projects Fund (SPF)

In 2009, McGill students voted to create the SPF, a fund to support broad, tangible sustainability projects on campus. Over 10 campus gardens have applied for SPF funding at McGill, including Campus Crops, the Thomson House Gardens, and the SSMU Courtyard Garden.



Fun Fact!

McGill has a secret fruit orchard, located behind the Hosmer House. The orchard has been maintained by Grounds since 2004, and grows apples, plums, pears, and grapes. It's the perfect spot for a mid-day summery snack between June and September!



Pre-Season (February—April)

"We know we cannot plant seeds with closed fists. To sow, we must open our hands."

-Adolfo Perez Esquivel

Beginner's Guide to Seedlings

To begin the gardening season earlier, start your seeds indoors before transplanting them outside. This is particularly important for fruiting crops that need more time to grow.

Getting Started

- 1. Moisten soil, place 3-4 seeds in each small pot, cover with a few millimeters of soil. Place in front of a sunny window.
- 2. Mist twice per day. Cover with a clear plastic box to keep in humidity.
- Once the seeds have sprouted, remove weaker seedlings so only one is left per pot.
- 4. You may want to <u>harden</u> off your seedlings before transplanting them, by gradually leaving them outside so they get used to wind and direct sunlight.



Container Gardening 101

Container gardens are commonly used in urban areas, due to their size and versatility, and the often poor quality of urban soil. Consider the following when starting a container garden:

Size Constraints

- If your container is shallow, avoid plants with deep root systems (ex: Carrots)
- Dwarf crops (ex: cherry tomatoes) and trailing plants are ideal for small spaces
- Pair crops with similar growth needs together (light, water, soil)



Dealing with Pests

Choose small plants that grow quickly and produce multiple harvests per season, such as radishes. Otherwise, a squirrel may steal that one zucchini you've been growing all summer!

Pre-Season (February—April)

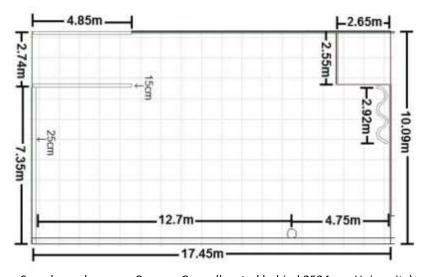
Garden Planning

Before planting, you will want to create a garden plan. This is particularly important for garden beds that cannot be moved or may need to be rotated. Creating a garden plan before planting will ensure your crops are placed appropriately.

Start by measuring the dimensions of your space, including notable features such as foliage, pathways, and buildings. You should also decide which crops you have room for. One way to do this is the <u>Square Foot Gardening</u> technique. Some other factors to take into account include:

Crop Rotation

It is important to <u>rotate your crops</u> from year to year to prevent nutrient depletion and deter pests. For example, some crops deplete nitrogen levels in the soil, so you will want to plant nitrogen fixing plants in those locations the following year. You may also want to consider perennial crops such as rhubarb and raspberries, which survive through the winter and do not need to be rotated every year.



Sample garden map: Campus Crops (located behind 3534 rue University)

Light Availability

Take note of where your garden gets good light. In areas without full sun exposure, choose shade tolerant plants such as:

- Salad greens
- Baby greens
- Peas/beans
- Cilantro, dill, parsley
- Beets and carrots
- Blackberries and raspberries

Companion Planting

Some crops mutually benefit each other. For example, one crop may provide support for the other to climb on, help deter pests, or have a complimentary root systems. Some gardeners also claim that certain combinations of crops can improve flavour (the most famous example being planting tomatoes next to basil). Click here for more information on good pairings.

Mid-Season (May—October)

"Farming looks mighty easy when your plow is a pencil and you're a thousand miles from the corn field"

-Dwight D. Eisenhower

Sustainable Gardening

- Water in the morning or evening to conserve water, or use self-watering containers (limit evaporation of water)
- Avoid chemical fertilizer/pesticides
- Plant local and pollinator-friendly crops to encourage biodiversity
- Re-use pots, tools, and other materials from year to year
- Limit your use of unsustainablyproduced soils such as peat moss and coconut fibers

Pruning

Removing excess shoots helps focus the plant's energy on growing the more important (and delicious) parts:

- Remove flowers from herbs
- Remove fruitless branches (also called suckers) from tomatoes, cucumbers, and other fruiting plants

Avoiding Pests and Diseases



Many gardeners find the most frustrating part of gardening to be dealing with pesky pests.
Unfortunately, this is an inevitable aspect of planting crops, but McGill's horticulturalist, Eric Champagne, has this advice:

- When possible, choose disease resistant species (which will be listed in the seed description)
- Well cared for plants are more resistant to diseases, so make sure you're watering the right amount (not too little, not too much)
- During an aphid infestation, hose your plants down thoroughly for a quick fix
- Squirrels and larger pests need a physical barrier to be kept away (e.g. netting, chicken wire, etc.).
- Some flowers can deter certain pests (such as marigolds, nasturtiums, and many flowering herbs)



End of Season (October—November)

"In seed time learn, in harvest teach, in winter enjoy"

-William Blake

Closing the Garden

- Harvest final crops before first frost
- Remove any dead crops
- Add mulch or hay to improve and protect your soil during the winter
- Prune perennials
- Plant winter bulbs such as garlic



Saving Seeds

You can collect the seeds from your healthiest plants and plant them again next season. In general, seed saving consists of harvesting seeds, then labelling, dating and storing them in a cool dry place, to avoid mold. However, the way seeds need to be collected varies from species to species. In general:

- Fleshy veggies (such as tomato, squash, melon, cucumber) should be left to fully ripen on the plant. Scoop out the seeds, rinse if necessary, and spread out to dry in a well ventilated place
- Beans and peas can be left on the plant and harvested when fully dried out
- Peppers should be left to wrinkle and dry on the plant before collecting seeds
- For most other veggies, collect seeds when the fruit is fully formed but still hard or meaty.

If unsure about a particular species, you can verify methods through online sites and forums.

Records

It is important to keep records of your season's activities to refer back to next season:

- Keep a record of what you planted, where, and which crops grew well or poorly
- Take an inventory of your tools and any seeds you have saved
- Finalize finance records to ensure you have enough funds for next season
- Make sure the above information is stored somewhere that is accessible to future gardeners



Resources

There are a number of resources available at McGill, throughout Montreal, and online. Below, you'll find a non-exhaustive list of some helpful resources to get you gardening.

Materials

Purchase Seeds Online

The following websites sell local, organic, and sometimes heirloom seed varieties:

- Fermes Tournesol
- Solana Seeds
- Jardins de l'Écoumène

Seed Libraries

Seed libraries provide seeds for free, to encourage their communities to garden. Examples include:

- Santropol Roulant
- Macdonald Campus Seed Library

Seedling Sales

- Concordia Greenhouse seedling sale
- <u>Urban Seedling</u> (Verdun)
- <u>Botanical Garden</u> (hint: search for "seed")
- Co-op la Maison Verte (NDG)
- The <u>Mac Farm</u> has seasonal seedling sales

Tool Rentals

Peter McGill Eco-Quartier

Information

Local Gardening Guides

- The <u>Campus Crops blog</u>, run by McGill students (from 2008-2014) discusses tips and how to run a garden on campus
- Montreal Green Pages features helpful local gardening tips
- Concordia Greenhouse guide to selfwatering planters

Other Useful Materials

- The <u>Farmers Almanac</u> is a useful tool that provides suggested planting dates based on your location
- Map of Montreal urban agriculture initiatives (FR)
- The <u>JustFood Garden Guide</u> is a detailed guide created by the Community Gardening Network of Ottawa
- The <u>MacDonald Campus library</u> is a rich repository of information on agriculture both urban and rural. You can request to transfer books, if you're located downtown, through the library website.



Regulations

These regulations have been developed to clarify both the services McGill provides to gardens, and the expectations for on-campus gardens. While we hope to be able to support all gardens, consistent failure to cooperate with regulations may result in loss of services, and eventual loss of gardening permissions.

Pre-Season

- 1. A meet and greet will be scheduled in March to go over the rules, expectations, and services offered for the season.
 - If you are unable to send a representative, please inform the meeting organizer beforehand, so that they can send you a summary.
 - Until you have received the meeting information, you will not be able to receive any services from grounds (soil orders, waste pickup, etc.)
- 2. For gardens located in the Burnside Terrace area, a separate meeting will be planned to draw a space usage map. Refrain from planting anything that cannot be easily moved before this meeting takes place.
- 3. Space disputes that cannot be easily solved should go through the Urban Agriculture Working Group (UAWG) for resolution.
- 4. Permanent installations (infrastructure that cannot be easily moved) need to be approved by the UAWG. This may be a lengthy process so allow at least 6 months for major projects.

Mid-Season

- 4. Ensure that the space around your garden is free of debris when not in use.
- 5. Requests for soil, services, or any other concerns should be sent to the designated representative, who will be introduced at the pre-season meeting.

Fnd of Season

6. All gardens should be fully closed by October 31st. Please reach out to the UAWG representative if you require assistance with your takedown.

Outreach

Partnerships

When planning outreach, consider partnering with other groups with similar mandates, to diversify your audience. E.g.:

- ECOLE
- McGill Permaculture Club
- McGill Farmers' Market
- Herbivore Society for Peace and Justice
- SSMU Environment Committee
- Other on-campus gardens

Funding. Apply early and check deadlines!

On-Campus Funding

- Sustainability Projects Fund
- SSMU Environment Fund
- Alumni Relations Fund
- Seeds of Change
- Mary H Brown Fund
- Some faculty-specific funding may be available

External Funding

- TD Friends of Environment
- Fondation Monique-Fitz-Back



Tabling Tips

Tabling at events such as Activities Night can be difficult—you have a very short amount of time to convince someone that your club is worthwhile. Consider the following when making your pitch:

- Present a concrete idea of what kind of help you need, and the skill-set you are looking for
- Outline potential leadership opportunities
- Follow up with interested volunteers quickly
- Many students are looking for professional development. Discuss the kinds of marketable skills they can learn through participating in your garden.



Thank you for making McGill green, lively, and delicious.

For more information, email sustainability@mcgill.ca

To stay up to date on sustainability news at McGill, sign up for our <u>newsletter</u>.

Thank you to our internal partners, Buildings & Grounds, Campus Planning & Development Office, Design Services, and the numerous students, staff and faculty that make urban agriculture possible at McGill.

