

## The McGill Feeding McGill Program at the Macdonald Campus of McGill University

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Oliver DeVolpi (McGill University Executive Chef and Foodservice Manager) and  
Mike Bleho (Technician, Plant Sciences Horticultural Research Centre)



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### CASE STUDY HIGHLIGHTS

- \* Food grown on-site at the University is purchased by campus foodservices and served to staff and students
- \* The foodservice department spends \$45,000 on produce grown on the farm
- \* The primary purpose for the farm is to teach students about agricultural practices
- \* As a result of the partnership with the foodservice department, the scale of food production on the farm has grown considerably
- \* University grants were used to cover one-time capital costs for equipment such as high tunnels and storage bins
- \* The partnership is now self-sustaining and is no longer dependant on special funding
- \* In 2014, the meat and eggs produced on the Macdonald Farm became part of the McGill Feeds McGill project



Photos courtesy of Dave Sidaway, The Gazette

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## EXECUTIVE SUMMARY

The McGill Feeding McGill case study provides useful insights into how public institutions can support large-scale, on-site food production. There are plenty of examples of smaller-scale food production in the Broader Public Service (BPS), especially demonstration gardens and raised beds. However, there are few examples of institutions growing food at large scales, and even fewer where the food grown by the institution is purchased by the foodservice department and incorporated into meals.

This case study illustrates that organizational support, collaboration, and funding can be invaluable to establishing such partnerships. The University provided the land, staff support, and resources to grow food on-site. The principal staff members from the Plant Sciences and Foodservice departments collaborated to make McGill the first Canadian campus to grow food for their own foodservices. The University's own Sustainability Fund awarded project grants that provided the infrastructure needed to produce food on a scale large enough to make it a worthwhile partnership for the foodservice department.

These insights and examples provide roadmaps for other institutions to follow, and will hopefully address some of the questions that may arise when starting a new farm-institution partnership.



Photo courtesy of McGill University

## PROJECT OVERVIEW

A few kilometers from the Montreal Airport, McGill's Faculty of Agriculture grows food for the University's Foodservice department. The scale of food production is larger than most examples found in the institutional context, with the foodservice department spending \$45,000 each year on produce from the 25 acre, University owned farm on its Macdonald Campus.

The McGill Feeding McGill (MFM) partnership started when Oliver DeVolpi, the Foodservice Manager, and Mike Bleho, the Horticultural Technician that oversees the farm, met and realized that their separate roles should connect. DeVolpi has always said that an ethic of sustainability must be included in the food that's served at McGill. By 2009, the farm was growing food for the foodservices on campus, something no other Canadian University was doing before them.



The farm is part of the Macdonald campus in Sainte-Anne-De-Bellevue, and is used to teach students about agricultural practices. The farm is located in an urban setting on Montreal Island, just 20km from Pierre Elliot Trudeau International Airport. The Faculty of Agriculture specializes in the production of fruits and vegetables, growing over 60 different kinds of produce.

The food produced on the farm is utilized by a variety of foodservice outlets on campus, which feed over 3000 students 3 meals a day. McGill uses a mixed foodservice model, having both contract caterers on site as well as self-operated outlets. The farm produce is mostly used in the self-op sites, although the contract caterers use some on occasion.

### *History*

The story of how the project started differs depending on who you talk to. Some say the conversation started during a rec rugby match, others say the connection was made during a campus tour. Regardless of how the conversation started, DeVolpi and Bleho quickly realized that they had been missing out on a great opportunity.

At the start of the 2009 growing season, the farm was being used for teaching, including an integrated pest management technique using wasps to treat pest infestations on Nightshade plants. They were growing just enough food to support student training, and the limited amount that was being grown had previously been sold through McGill's farmers market. After DeVolpi and Bleho realized the food could be going into the foodservices, Bleho started writing a plan for the McGill Feeding McGill partnership. By the end of that growing season, Bleho was shipping food to DeVolpi in small quantities. In the second year, an agreement was reached between the farm and foodservices, which allowed them to increase their food production by 50%.



It is also worth noting that there was senior management support for the partnership. The Plant Science Department has a mission to support research, teaching, and service to society, which are all fulfilled by the MFM partnership. At the same time, students were pressuring the University to serve more local food, which led senior management to make serving more fresh food a main priority for the foodservice department. This

support from students and senior management meant that there were few political hurdles to overcome in establishing the partnership.

Total production has been increasing year after year. Starting in 2014, meat and eggs produced on the Macdonald Farm have become part of the MFM project. In their first year without support from the sustainability projects fund, total production shipped in fruits and vegetables is in excess of 25,000 kg.

## PROJECT RESOURCES

### Human Resources

McGill's Plant Science Department runs a horticultural research centre, which includes the farm that is being used by the MFM partnership. The research centre has salaried support staff—such as Bleho—who help maintain the property. They also employ six full-time students for a total of over 5,000 paid working hours each summer. Approximately 20 students work between 10-15 hours per week during the fall harvest season.

Most students in the agriculture faculty enter the program with limited farming skills. The MFM partnership enhances the student's learning by providing a full season's worth of farming experience, in addition to the plant science training they normally receive. They gain food and farming skills including crop planning, planting, crop maintenance, harvesting, and food sales. Bleho feels that the program's success has contributed to increased student interest in the department. This is an important development, given that the average age of Canadian farmers is rapidly increasing.



A variety of different stakeholders made efforts to increase student demand and support for more sustainable food on campus. The first effort to engage students in food issues started in 2009, but wasn't specifically about McGill grown food. It included a series of local food days where—for one week each month—a different local food was featured on campus. In the first months, the themes focused on local foods like chicken, apples, and pumpkin. The MGM

partnership grew to be included in these local food days. While they were first initiated through a multi-stakeholder group on campus, DeVolpi now carries on the initiative through McGill's Foodservice program.

### Infrastructure

The campus farm is well equipped to grow large volumes of fruits and vegetables. The 25-acre farm has drip irrigation, supplied by city water and recovered rainfall. The fields are almost entirely fertilized with compost, which is

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produced from the leaves collected across the campus. Pesticides are used on the farm, but there is a concerted effort to use a little as possible. Large high tunnels have been installed for growing tomatoes and other hothouse vegetables.

They prepare produce for shipment on the farm, where barrel washing stations are used to wash and cool the produce to halt ripening. It is then packed and prepared for delivery in sturdy storage bins. The bins are re-usable and help to keep operational costs down.



The Plant Science department has a few vehicles at their disposal. They have a tractor to help manage the farm, and a cube van that is shared with the animal sciences department. The van is used to distribute the produce from the farm to foodservices. While the distance between them is only 32km, it is an urban area that is difficult to travel across. The van is essential in making sure that food arrives in time and in the quantities needed for the foodservice department.

The MFM partnership is not a formalized organization. It is a partnership between two University of McGill departments. However, the two departments

do have an agreement in place that outlines what foods and approximate volumes be produced by the farm, and purchased by foodservices. This agreement allowed the farm to expand the scale of their food production, as their original production levels would not have been able to meet the needs of the foodservice department.



### **Natural resources**

The farm at the Horticulture Research Centre is 25 acres, and is the largest remaining farm on Montreal Island. Despite its size, it is not big enough to produce the yields necessary to feed 3,000 students a day at McGill, and there is little room for expansion.

As mentioned in the previous section, the farm uses collected rainfall and city water to feed their drip irrigation systems. Since the farm is owned and operated by the University, water and other utility bills are covered by McGill's operating budget. The soil is mostly fertilized with compost, but fertilizers are used when necessary.

The University has other, smaller gardens as well. The Macdonald campus has the Student Ecological Garden, which is a one and a quarter acre garden that is maintained by volunteer students. The produce from this farm is sold at the campus farmers market (above) and to local food box programs. Some produce is also sent to the Foodservice Department.

## Financial resources

The farm is supported through a variety of sources. Seed funding to increase the scale of food production on the farm came from a program at McGill called the Sustainable Projects Fund. This Fund was initiated by students and the University to support sustainability projects on campus, and is partially supported through student contributions (each student contributes \$0.50 to the fund).

Since the start of the program, the MFM partnership has received two grants from the Sustainability Fund, each used to purchase much-needed infrastructure and equipment. The first grant was for \$25,000 and the second grant was \$50,000. With this funding, Bleho was able to purchase equipment, such as storage bins and washing stations, and to install high tunnels. These were necessary to grow tomatoes and cucumbers at a scale suitable for foodservices. They can be grown without high tunnels, but the quality and quantity would be too low for the needs of the foodservice department. The high



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tunnels keep temperatures high in the summer, and hold frost off in the shoulder seasons, which provides the added benefit of extending the produce season. This is especially important for post-secondary foodservices, since food needs are at their lowest during the summer, and at the highest in fall, winter and spring. Finding ways to extend the growing season was essential to the MFM partnership.

There is also staff and operational support from the Plant Sciences Department. The farm does not pay water, energy, or property tax bills since this comes out of the University's operating budget. They also allow Bleho to spend a portion of his time supporting the Partnership. He estimates that MFM takes up 40% of his time, which is a substantial commitment. Outside of the MFM project, he operates the horticultural centre and runs labs for students.

Otherwise, MFM is a business relationship between Foodservices and the farm. The Foodservice department pays for all the produce they receive. While they may pay slightly more than market price in some cases, DeVolpi reaps the benefit of being able to serve produce that, in many cases, was picked fresh that morning. To avoid cost fluctuations, DeVolpi and Bleho decided to contract

prices for the produce for the entire growing season. This means that Foodservices may pay more in peak season compared to market value, but it balances out later in the season when supply falls and prices rise. It also allows the farm and the Plant Sciences Department to plan financially. Without steady and assured income, planning becomes more difficult.

From a logistical standpoint, orders are placed weekly (and sometimes daily), but invoices are processed twice a year. The reduction in paperwork is another advantage of contracting produce prices and volumes. The grant funding from the Sustainability Fund was invaluable in getting the project started. However, the farm is now focusing on becoming financially self-sufficient. This is possible because profits and revenue are made from selling the produce to DeVolpi, and Bleho is planning on expanding their sales to other outlets within the campus.

At the end of the 2013 growing season, the McGill farm was growing \$50,000 worth of food for the foodservices. Considering that much of the student and staff time to maintain the farm is covered through the Plant Sciences Department, Bleho estimates that this revenue should be sufficient to support all operational costs.



Oliver DeVolpi and Mike Bleho (Photo courtesy of McGill University)

## Community Resources

The MFM benefitted from student support during the inception of the partnership. A student led venture, called the McGill Food System Project, brought together administration, foodservice managers, and faculty to work together to figure out how to get more local and sustainable food onto campus. The McGill Food Systems Project was student-led, but a multi-stakeholder collaboration. Its work is widely recognized as the driving force behind McGill's foodservices becoming a leader in local food.

The stakeholders participating in the Food Systems Project were involved in DeVolpi's hiring, and pushed to have the University's RFP for foodservices include language around sustainability. In general, the group was very influential in raising the profile of food issues on campus. They helped create the cultural shifts that gave DeVolpi the mandate and support to push for the changes he made.

Efforts to promote the MFM partnership to the student body could be improved, but some marketing and communication does take place. The foodservice department now has videos, and branding that they put on cafeteria items to help tell their story. For example, napkins were printed to promote the fact that the cafeteria had used 65,000 kilos of produce from the McGill farm.



Another change that benefitted the MFM partnership was the shift in foodservice models used at McGill. They have always had both outsourced foodservices and self-operated foodservices, but in 2008 the two models were centralized into the department now known as McGill Food and Dining Services. Once this shift took place, the University hired two new full-time positions, one of which is DeVolpi's Executive Chef position. The centralization of foodservice operations was also helpful in mediating food quality and costs.

## Policy and Program Resources

There are very few policies in place at McGill to support the MFM partnership. The foodservice department tries to buy as much produce from the school farm as possible, but this practice is not supported by any formal policy.

In fact, the lack of policy has been a struggle for some of the foodservice outlets. Because of concerns about food safety, many of the foodservice companies operating on contract buy produce and other foods from their preferred vendors. In this case, the contracted foodservice companies were being asked to buy food from the on-campus farm, which has no formal food safety certification. This practice conflicts with corporate policy, and made it difficult to get the fruits and vegetables into the outlets run by contracted companies.

## Resources Needed to Sustain the Project

MFM benefits—to a large degree—from being a University partnership. The land farmed on Macdonald campus today is operated by the Horticultural Research Centre and owned by McGill. This land was donated by the Macdonald and McConnell families for the explicit purpose of supporting agriculture and education. Without that protection, the land would most likely be in development.

The farm also benefits from on-going staff support. Without the contributions of Bleho and DeVolpi, the farm would not be as productive as it is today. Both Bleho and DeVolpi had enough influence on decision making to be able to get the operations on track. They also had the wisdom to start small, show that such a partnership can be effective, and then use that success to expand year after year.

At this point, the costs of planting, growing and shipping produce is covered by the price charged for the food and the staff/student supported provided by McGill. There is no longer a need for continual funding applications. Grants applications will still be submitted, but those come from the Horticultural Research Centre and are focused on agricultural research. The two Sustainability Fund grants helped overcome some one-time capital costs, but at this point the MFM partnership is a normal part of day-to-day operations.

## CONSTRAINTS

The University setting is somewhat unique in its food requirements. Unlike a hospital or a long-term care home, campuses have a limited need for food during the summer months. For MFM, food is needed from September to April, not from May to August. Therefore, the McGill farm needs to use farming practices to meet these seasonal demands. The high tunnels and irrigation are useful in extending the growing season later into the fall. The tunnels act as



greenhouses and help maintain humidity and growing temperatures, while irrigation systems can be used to prevent damage from frost.

Before the MFM partnership was formed, the Horticultural Research Centre only grew a limited amount of produce. The main focus was on growing food for teaching and research purposes, and the extra was used for an on-campus farmer market. They had never

produced food in the quantities required by Foodservices, so that proved to be a new learning experience.

Harvesting and deliveries were somewhat of a constraint. Again, because of the scale of production needed by foodservices, much more food had to be harvested than when it was a teaching farm. They essentially created a small-scale version of a just-in-time delivery service. DeVolpi sends in an order, and a crew harvests the produce, preps it, and loads it on their delivery truck.

Despite some of the equipment on hand, the farm is still vulnerable to weather and climate conditions. In 2013, their growing season was delayed by three weeks because of a slow start to summer, which forced the farm to bring in produce from outside sources.

The farm also is not able to provide value-added foods. They are limited to providing fresh, whole produce. However, the kitchens at McGill are capable of processing fresh foods, so this is not as serious a constraint as it would be for institutions with more limited kitchens. Hospitals, for example rarely have the equipment and labour needed to wash, peel, and slice fresh produce.

## SUCCESSSES

The MFM partnership is a successful example of an institution using its land to support healthy eating and agriculture. Since it started in 2009, the farm has nearly maximized its yield from their 25 acres, although DeVolpi believes there is still a little room to grow.



The farm now grows more than 60 different fruits and vegetables, and generates \$50,000 in revenue. Considering DeVolpi's goal has always been to maximize the yields of the farm, it seems they are well on track. From his perspective, the partnership is important because it raises the profile of local agriculture on campus and it produces incredibly high quality fruits and vegetables. In his opinion, the tomatoes and watermelon are particularly delicious and unparalleled in quality. They are looking into other categories of produce to see if they can continue to expand, but will also be looking into meats and eggs as opportunities.

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For Bleho, the farm ties into the schools mission and mandate and supports student interest and learning in agriculture. His farm allows several students to experience growing and selling food each year, a rare opportunity for Canadian youth. He also feels that MFM and other small demonstration gardens are effective ways to change internal campus culture. For staff and students, they benefit from the improved food quality while the school benefits from improved learning outcomes and attention from media and academia.

A big reason this partnership was successful is that the campus has a mixed foodservice model. Theoretically, a similar partnership could have happened in a setting where the foodservices is all outsourced, but in practice it would have been difficult. Most large foodservice companies have strict food safety guidelines to follow, and lists of preferred vendors to buy produce from. The process of changing these rules or making accommodations is a slow one. However, it should be noted that some of the contracted foodservice outlets at McGill do serve food from the farm, but only in limited quantities.

### **CHALLENGES OVERCOME**

The biggest challenges that the MFM partnership had to overcome were all operational growing pains. When MFM first started, the farm was not producing much food and the staff did not have experience growing produce at the volume needed by foodservices.

Miscommunications and miscalculations were a problem at the outset. One example DeVolpi remembers was when he ordered garlic greens and was billed \$1,000 for them. That was clearly too much, but getting it sorted out took time. They lacked the systems needed to properly communicate between departments. They eventually found a rhythm and these issues are now less of a problem.

At the beginning of every week, the farm tells the foodservice department what is ready for harvest so they can plan menus and specials around what is in season. Ordering goes the other way as well, with the foodservice department telling the farm what they need. The farm will fill the order if it can. If they can only fill part of the order, the chefs will take what is available and fill the rest of the order using a produce company.

Infrastructure was another challenge. Until they received funding from the Sustainability Fund, they did not have the basic equipment needed to grow food during the fall seasons, and as a result, the quantities being produced were too

low. However, once the delivery truck, green houses, packing bins, and other equipment were purchased these issues were mostly resolved.

The partnership also created issues for the foodservice staff. It added a step to the normal procurement process, and the state of the produce made the task of prepping more difficult. Leeks, for example, required significant cleaning and the sweet potatoes were irregularly shaped making them difficult to peel. While these were hardly insurmountable challenges, DeVolpi had to make sure that all of the unionized staff were supportive. Without their buy-in, the project would fall apart. In DeVolpi's estimates, it took some of the foodservice staff at McGill nearly two seasons to learn this as the new norm. It took another year for the contracted foodservice chefs to do the same.

## **RELEVANCE TO OTHER PROJECTS**

The volume of food being grown through the MFM partnership is unique. Few other Canadian Universities have the amount of urban land being reserved for agriculture that McGill does. However, other campuses can follow MFM's lead on a smaller scale. In fact, many Ontario Universities are already growing foods on campus. Compass group, one of the most prominent foodservice contract caterers in Canada, recently adopted a policy to permit the use of food grown on campus or in community gardens.

Conversation around this policy originated from McGill students supported by the non-profit organization MealExchange, which empowers students to take an active role in creating just and sustainable food systems. The policy is being put to the test at St. Paul's College at the University of Waterloo and Ryerson University in Toronto. Both these Ontario Universities are growing food on-site for use by the foodservice department, and demonstrate that the MFM partnership is a transferable example. In fact, there are already plans to implement the policy at 6 other campuses across the country.

### Online Resources

Feeding McGill: [https://www.youtube.com/watch?v=6FYa1L\\_MmnM](https://www.youtube.com/watch?v=6FYa1L_MmnM)

Feeding McGill: Food and Dining Services:

<http://www.mcgill.ca/foodservices/sustainability/feeding-mcgill>

plantus\_planta: <http://www.panoramio.com/user/1269008>

