

# MSEG's 2012 Final Report

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to the McGill Sustainability Projects Fund

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## **Summary**

The main activities done by MSEG in 2012 are presented in table 1.

**Table 1: Summary of activities**

Task		Date (start, end)	Details
<b>Markets/ selling vegetables</b>	Ste.Anne's Farmer's Market	July- Oct.	Farmer's Market serving the town of Sainte- Anne-de-Bellevue, Saturdays 9am-2pm
	MacSteward lobby – market	July- Oct.	MSEG sale, Thursdays 11am-3pm in the Macdonald-Stewart building of Mac campus
	MacSteward lobby - baskets	July- Nov.	A weekly vegetable basket service serving 25 students and staff at Mac campus
	McGill Farmer's Market	Sept.- Oct.	Farmer's market serving McGill downtown, Thursdays 12:00-17:00
	McGill Farmer's Market - baskets	July- Oct.	Contributing one unit worth \$2.50 for 40 baskets
	Summer cafe	July- Aug.	Selling vegetables to the cafe led by the dietetics department, providing 2 meals per week for an average of 40 people.
	Ste-Anne's restaurants and other	July- Aug.	Selling unsold but still fresh vegetables to restaurants (Herb's) or Coop du Grand-Orme, punctually
	Happy belly	Sept.- Nov.	Providing leftovers to Happy belly, a mac club making free diners for students once a week.
<b>Field Operations</b>	Maintenance	May- Nov.	Routine Weeding, irrigating, cultivating, trellising, mulching, pruning, insect pest, control/monitoring, etc.
	Harvest and Planting	May- Nov.	Successional seeding, transplanting, seeding of green manures and cover crops, regular harvesting and storage of crops
	Field take-down and winter prep	Nov	Cover cropping, mulching, general clean up and storing.

<b>Education</b>	Workshops (some in collaboration with the Mac Agro Ecology Group (MAEG))		<ul style="list-style-type: none"> <li>-Harvest week (continuation of frosh week, focused on sustainable eating: one workshop per day to provide students with information on how to find local, organic and nutritious food in Ste-Anne (Sept.)</li> <li>-Canning workshop series held in conjunction with Dietetics stagiaires (Sept.)</li> <li>-Mushroom inoculation in the main field (July)</li> </ul>
	Film screenings/Guest speakers		<ul style="list-style-type: none"> <li>-Screening of “The Greenhorns” at the Co-op du Grand Orme, and at Macdonald Campus.</li> <li>-Guest speaker Jean-Martin Fortier on “Small-scale vegetable farming”</li> <li>-Guest speaker Frédéric Thériault on “Cooperatives” (with MAEG).</li> </ul>
<b>Community</b>	Events		<ul style="list-style-type: none"> <li>-Potlucks</li> <li>-Open-forum, to get ideas from students on the project.</li> <li>-Spring equinox contra dance(April) and in the fall semester</li> <li>-Active participation at the garlic festival and tomato festival of Ste-Anne's market.</li> </ul>
	Sharing with the other farms	May-Oct.	<ul style="list-style-type: none"> <li>-Community dinners with Les Jardins Carya once a week</li> <li>-Exchange of 6h of one MSEG member per week in exchange of all the great services provided by farm Carya (machinery, cold room, washing station, drying space, etc.)</li> <li>-Casual exchange of knowledge and questions between MSEG, Carya, Zephyr and Santropol.</li> </ul>
	Volunteer events	May – Oct.	<ul style="list-style-type: none"> <li>-Official volunteer days one Sunday per month.</li> <li>-Punctual volunteering in the summer.</li> <li>-Regular volunteers (e.i. One once a week during all summer, others half a day during harvest in the fall semester, etc.)</li> <li>-Regular volunteer at the market table in Ste-Anne.</li> <li>-Volunteer day during the Harvest week event.</li> </ul>

<b>Funding Applications</b>		Jan. + Sept.	<ul style="list-style-type: none"> <li>-Sustainability Projects Fund</li> <li>-Macdonald Campus Student Society (MCSS)</li> <li>-Dean of the Faculty of Agricultural and Environmental Sciences</li> </ul>
<b>Deliverables</b>	Academic linkages		<ul style="list-style-type: none"> <li>-SOIL 315 – Soil Fertility and fertilizer use. Use of MSEG field in the laboratory. Work done by the students: soil sampling, analysis and fertilization recommendations .</li> <li>-PLNT 451 – Special topic on the crop planning of MSEG. Defining a desired revenue for the project, we plan on the number of vegetables required for each market, when to plant and harvest in the field and the greenhouse, the seeds required, etc. Individual projects have been done all related in some way to MSEG (e.i. Cover crops, storage, marketing, etc.)</li> <li>-AGRI 310 – Internship in Agriculture/ environment. Three students did this internship last summer.</li> <li>-AGRI 490 – Agri-Food industry project. Two students did this course last summer (enterprise budgeting and pest management guide)</li> <li>-NUTR 200 – Contemporary Nutrition. Two MSEG members gave a lecture about sustainable farming in a class of this course.</li> <li>-NUTR 311 – Professional Practice stage 2B. Student working with the Summer cafe, using MSEG produce during the summer.</li> <li>-NUTR 614 – Graduate Professional Practice 4. Student working with the Summer cafe, using MSEG produce during the summer.</li> <li>-NUTR 510 – Professional practice Stage 4. A dietetic student organized canning workshop in association with MSEG during the fall semester.</li> </ul>
	Creation of the board of advisor		<ul style="list-style-type: none"> <li>-Contact made through the fall semester, first meeting done in February 2013. 9 members representing different stakeholders of MSEG.</li> </ul>

<b>Publicity</b>		<ul style="list-style-type: none"> <li>-Constant update of the facebook page, addition of photos.</li> <li>-Constant update of MSEG website (<a href="http://mseg.weebly.com/">http://mseg.weebly.com/</a>)</li> <li>-Featured in CKUT's Ecolibrium, about the farmer community of the west island.</li> </ul>
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**Successes, challenges and next steps**

Markets:

- *Success:* Our market table was always garnished with a variety of vegetables. We were able to have a lush table throughout the growing season and managed to have vegetables looking appealing. This brought us to considerably increase our market sales.

- *Challenges:* There was a lack of consistency in the vegetables we had to offer. We would often have a certain crop one week but not the other. This made it difficult for costumers to be assured they would find the product they truly enjoyed the previous week.

This was in part due to the fact that we had three markets to run on top of our CSA baskets. Since our baskets are a priority, as they are a promise to our partners, we often had to hold back from selling certain vegetables at the market tables.

- *Next steps:* In response to this challenge, MSEG will plan to have a better uniformity at the market stands during the season. This will be achieved by increasing the volume of each vegetable available at one time and evening it out over the season.

CSA baskets

- *Success:* We had a very successful season with our CSA. Members were very satisfied with the amount and variety given each week. Our objective was to have between 10-12 different vegetables each week and this was met. Moreover, we were able to give generous portions of each. An addition to this year's CSA was the weekly newsletter and recipe ideas provided to our partners each week. This was truly appreciated and allowed us to have a strong contact with them by exchanging ideas and allowing them to follow, through the newsletter, the evolution of the growing season.

*Challenges:* We were unable to reach our initial goal of having 40 summer baskets and 60 fall ones.

*Next steps:* Increase the number of partners by doing a better crop planning.

Field operations:

- *Success:* The field was kept clean during the summer. This was important as weed growth can truly affect the growth and yield of the crops.

There was an improvement on the organization of tasks. This however, can still be improved to increase efficiency and ultimately the learning experience, outreach and profitability of the project.

- *Challenges:* Often the weeding was done at a later stage, which required more labour. Irrigation was often irregular due to an uncoordinated schedule with the other farms.

Many overtime hours were spent coordinating and planning the field operations due to a uncompleted crop planning.

Some decisions were made based on the resources we had or tools available, but did not necessarily correspond to the most efficient or productive method.

- *Next steps:* To optimize weed management, MSEG will incorporate new tools and create a proper integrated weed management plan. This is intimately linked to the third challenge as to reach this objective, better and more appropriate tools are required.

To have a more regular irrigation schedule, ultimately improving the quality of our crops, a coordinated schedule with the other 3 farms (Santropol roulant, la ferme du Zéphyre and Carya) will be created.

The crop planning should be finished before May so that we can focus on field operations at that time.

#### Education:

- *Success:* The initiation of the farm to school project, which has now stemmed into a partnership project with MSEG, was a true success story. It began with a workshop on seeds with a second grade class, then a farm visit and resulted into a partnership between Macdonald students and the elementary school.

This past season the MSEG team initiated the Alternative frosh, revolving around educating new students on ways of accessing fair, healthy and sustainable products in Ste-Anne de Bellevue. Moreover, it was linked to harvest week, where a diversity of activities were given to enable students to be more involved in the food they consume.

*Challenges:* It was sometimes difficult to get a large number of attendees to our events.

*Next steps:* Improve our communication skills to inform students and better promote our events.

Integrate to a greater extent to a variety of courses in all departments of the Macdonald campus.

#### Link with surrounding farms:

*Success:* A better connection was made with Santropol and Carya. We shared tools, ideas, laughs and knowledge all through the summer. A great initiative was to have a weekly lunch with the Carya team, to discuss about issues, be on track with their schedule and share knowledge about different situations we were faced with.

#### Record keeping:

*Success:* Records on our operation were well done. The basis of record keeping for a enterprise budget for each vegetable has been done.

*Challenges:* The records were well done, but not from the start. A better system as been implemented during the season, so combining the records from the first half of the season with the second one was challenging.

*Next steps:* Prepare in advance (spring semester) the record sheets for the whole season and keep the same for the season. Get more details gradually, be sure that the simplest one are done before getting them more complicated.

### **Details: Labour**

In the summer of 2012, the MSEG core team consisted of four students that were full time employees (for the summer) and that had participated in the season planning, grant requests and community outreach all through the winter semester (voluntarily). The team also consisted of two part time employees that joined the operations in May. In the fall semester, the same six students worked as part-time employees while four new part-time students were hired in order to compensate for the reduced available working hours due to the start of classes. With the return of students for the fall semester, an increased amount of volunteers helped accomplish the weekly tasks.

During the season, each core member (the initial four full time employees) lead the week operations, such as the plantations, the pest control, the weeding, thinning, etc. Each week we rotated who was in the managing position in order for everyone to have the experience of organizing the weeks work and schedule, while better sharing the workload. We believe this increased the learning experience of each core member, without impairing the efficiency of the operation. We therefore suggest to continue with this “leader rotation” for future years, while improving and better defining the tasks. Obviously, the others must remain aware of what needs to be done.

The management of MSEG in the fall semester was a great challenge. The total number of hours worked during the fall were less than in the summer, as we planned to have less work to do in the field (no more weeding and planting). However, the harvests did take a lot of time and many people needed to do volunteering as well as their planned hours. This put a large amount of stress and certain members. Being full time students, it is important to limit the amount of volunteer hours and it can become extremely difficult to handle.

Next fall, we will need to rethink the work share. It might be best to hire less students, but that are capable of giving a greater amount of hours per week in order to have students more involved and hence be more efficient at the work done. Limiting transitions by increasing the hours worked by students, when applicable, and reducing the amount of employees, can alleviate many of the problems we were faced with in the fall.

### **Details: Pest and disease management**

It is an agricultural fact; 2012 was a dry year with severe drought episodes all over North America. This often translates into a year strongly pressured by insect pests, but less fungal and viral diseases. For instance, the striped cucumber beetle was very aggressive, damaging our cucurbit crops. The use of row covers allowed us to control the infestation and reach adequate yields nonetheless.

Brassicaceae were affected by mainly two insects: the cabbage worm and the flea beetle. Again, rowcovers were used, but sometime too late, which decreased significantly the quality of some brassica greens. The cabbage worm was controlled with the bioinsecticide Bt-k. It could have been applied earlier, reducing the damage. Better scouting should be done next year to control the pest before it reaches the point of affecting yields. Moreover, we learned that an efficient technique to improve our brassicaceae yields is to dilute Bt-k and boron in the same sprayer and foliar spray this mixture (Brassicaceae are known to be often Boron deficient). This should also be implemented next season.

It is noted that insect rowcovers should be put over pest-sensitive crops as soon as they have been planted (especially for brassicaceae and cucurbits). Once the flowers are out, the row covers must be removed to allow proper pollination.

## Links with the faculty

This year, the links with the faculty increased significantly. Indeed, MSEG has a lot of potential for linking with the many departments of Macdonald Campus and we really saw the beginning of its development this year.

First of all, the links with **dietetics** department has improved tremendously. Four courses this year were linked with MSEG. One link was made through the Summer cafe, lead by Judy Campbell, teacher in dietetics, helped by dietetic interns, using food to make meals biweekly for staff and students from the campus. As MSEG produces vegetables, it is logical that any dietetic activity that involves cooking produce should be able to get vegetables from MSEG and this is an example that seems to work well. We will continue our link with the student cafe by trying to integrate their planned recipe for their season in our crop planning, so that we have all the vegetables they need on time

For the next years, a further step would be for a student to develop a menu appropriated with the seasonality of vegetables, so that MSEG can give all the vegetables that would be required by the student café.

MSEG obviously wants to encourage the consumption of local vegetables, even in the winter season. This is why we made a few canning workshops, organized by a dietetics students as one of her credited project, where our vegetables were used. These workshops have been done for few years now and will continue in the future as a tradition.

MSEG is also aware of the potential links to be made with the Out of the Garden Project (OGP), which will run a student cafe in the 2013 fall semester. We have been told that our vegetables would be bought at first when available for all the recipes they will be doing. We hope that with the experience of next fall semester, we'll be able to integrate the vegetables required by the cafe in our crop planning in the next year. Our objective would be to provide them with the vegetables they require to run the café, in the same way as the summer café. Depending how well the OGP cafe develops, dietetics students could integrate internships or special projects linked both with the student cafe and MSEG.

**In agriculture, plant science and natural resource sciences**, many links can obviously be made. Our agricultural practices, fertilization and soil improvement plan, and their impact on the vegetable growth can be studied and integrated in many courses, projects and researches. This year, the course soil fertility and fertilization, thought by Dr. Whalen, used MSEG fields in their laboratory, where they took and analyzed soil samples to gives fertilization recommendation as a project for the course.

The course St-Lawrence ecosystem wanted to used MSEG as their agro-ecosystem example in their field visits, but, unfortunately, due to their late availability (not much was remaining in the field), it did not happened. However, the professor already got contacted for next year and he will plan this visit earlier in the semester so that they can benefit from a more “active” field.

Finally, many internships have been done with MSEG in the main growing season with the agriculture department.

In **bioresource engineering**, one project has been done with MSEG, but more could be done. Indeed, all the infrastructure, tools and equipment part of the project could be designed and constructed by bioresource engineer students, who would see a real use for their work. MSEG will push this link further in 2013. Through their mandatory design project (required for graduation), bioresource students can develop innovative tools to improve MSEG's practices, while stimulating creative learning.

## **Finances**

Table 2: MSEG 2012 funding summarized

<b>Source</b>	<b>Amount received (\$)</b>
MSEG 2011 balance	13559
Sustainable projects fund (SPF)	21539.07
Macdonald Campus Students' Society (MCSS) and AESUS (spring and fall)	517.92
Dean's office	3000
<b>Total</b>	<b>38615.99</b>

Table 3: MSEG 2012 Revenues

<b>Source</b>	<b>Amount (\$)</b>
Baskets	7600
Market	15355
Summer café	200
McGill's baskets	1600
<b>Total</b>	<b>24755</b>

We had two markets (Ste-Anne-de-Bellevue and at the MacStewart lobby) at the beginning of the season, which started in the end of June. At the fall semester, we were present at the McGill market downtown, which replaced the Ste-Anne's market. We sold baskets share both in the summer and fall. We had 20 shares in the summer and 25 in fall. We also contributed to the McGill farmer's market CSA basket in which we were giving 40 vegetable unit worth \$2.5 every week. Moreover, we had a partnership with the summer café, a project where dietetics students were cooking meals for staff and students twice a week. They bought our produce all summer long.

The price of our vegetables, when sold at the McGill farmer's market and at the MacStewart lobby, were lower than Ste-Anne-de-Bellevue. As we were subsidized from McGill, we decided to give a discount for people being part of McGill, of between 15 and 20%. Considering that, our revenues could have been higher if we decided to not apply those discounts. We suggest for further years to not apply this discount anymore. Indeed, as we are looking for financial self-sufficiency and that we will gradually rely less on subsidies, we think it is a better idea to keep the same price for all our markets, which will make it also easier for the people working at the market, and to keep records.

We provided also some produces to the Coop du Grand Orme in Ste-Anne-de-Bellevue and at Herb's cafe, but those sales were small.

Table 4: MSEG 2012 expenses

<b>Expenses</b>	<b>Cost (\$)</b>
Seeds	1386
Irrigation, tools, supplies..etc	3609
Transportation (gas only)	2070
Truck expenses (other than gas)	297
Market Supplies (market tent rental)	675
Usable ressources (soil, fertilizer, etc.)	630
Summer salaries	25600
Fall salaries	8018
Stipends	5460
Plastic bags and elastics	148
Workshop materials and guest speakers	239
Mushroom project cost	160
Total:	48292

Most of the expenses were similar to our expectations except the gas use, the irrigation, tools and supplies and the usable resources, which were higher than expected. As a first agricultural season for many of us, it was difficult to estimate all the different operational costs. However, many of those (such as row covers, insect nets, tools) last for a long time and are an investment for next years. We also took notes so that the budget will be estimated more accurately for next years. Indeed, our expenses were properly recorded and we know better what are our operational expenses. It is worth mentioning that the McGill farm gave us one of their old pick up, which helps a lot in transporting materials and harvests between the mainfield, the horticultural center and the markets.

Balance: (funding + revenues – expenses) = \$ 15079

This amount will serve as a buffer for next year's early expenses such as salaries, seeds and tools.

This year financial situation was good, even if some expenses were not expected. Indeed, we finished the season with more than 15000, which permitted us to give a decent stipend to the two interns that worked with us full time during the summer.

A challenge with this year's finance what to keep good records. Indeed, the field work had a priority on many other administrative tasks. On a general note, the records were good, but could have been better. It is a good challenge to aim for the perfect compromise between pertinent records detailed well enough and the time it takes to write and analyze them. To help, having an internship from someone in agricultural economics every year would be ideal. Indeed, this person priority would be the finances, which would permit the best and most up to date records of the finances, while the core-group can focus on managing the fields operations. Moreover, this intern, studying in economics, would have a better knowledge of how doing proper records, contrary to the MSEG core-group members, which will not necessarily be studying this expertise every year.

### Upcoming

Many improvements are planned for 2013. Most of them were mentioned in this report, for more details, refer to MSEG's 2013 SPF application. If you have any question, please contact us. Thank you!