

# The Feasibility of Supplying Locally Sourced and Organic Food for a Student-Run Food co-op on Studley Campus

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## A Greening the Campus Movement Project



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## Abstract

The Greening the Campus movement is an initiative that addresses issues of sustainability within university institutions. At Dalhousie University, the Environmental Problem Solving class provides students with a research opportunity in this area. This project addresses campus sustainability by suggesting that Dalhousie's carbon footprint could be reduced by implementing a student run, local/organic food co-op on Studley campus. The purpose of this study was to determine the feasibility of providing local and organic food to such a student run food co-op. To do this, we employed several methods: i) purposive surveys distributed in the Student Union Building and Killam Library, to gauge student interest and food preferences; ii) a purposive in-person interview with a Sodexo food representative, to gain information on how many people are served daily in the SUB; iii) Non-probabilistic, purposive phone and email interviews with Nova Scotia farmers/food producers, to determine the availability and diversity of local food. The student survey results indicate that 80% of students are willing to pay \$2 or more as a levy to support the co-op, 40% would buy food at the SUB more often if it were locally sourced, over 60% would pay slightly more for sustainably sourced food, and 42% consider eating locally on campus to be important. The Sodexo interview revealed that 1800 customers are served daily in the Student Union building. The farmer interviews indicate that there is a wide variety of local produce available in quantities that satisfy demand, and that Nova Scotia food producers contacted showed a high level of support for the project. These results are significant because they suggest that the implementation of a student-run food co-op on Studley Campus is feasible from both a student interest and a food availability perspective.

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## Introduction

Like many student movements, the Campus sustainability movement comes in response to a major social or political issue of the day. In the 1960s, the civil rights movement was a reaction to mounting social, racial and gender inequities. Similarly, the environmental movement is an answer to the degradation of our natural environment (M'Gonigle *et al.*, 2006). As students at a university we are in a unique position to make a difference within the environmental movement. Like the students of the 1960s, we are mostly young, passionate, and eager to make a positive change in the world in which we will spend the majority of our adult lives. In addition to this, we are also in a unique position because universities are research institutions. As environmental science undergraduate students at Dalhousie we have the facilities and opportunity to channel this passion towards meaningful research, which can contribute to Dalhousie's environmental sustainability in the long run.

In recent years, as the negative impacts of global climate change becomes increasingly imminent, much environmental research is directed towards means by which institutions, including universities such as Dalhousie, can reduce their carbon footprint. A carbon footprint is defined as the cumulative greenhouse gasses an individual or organization emits into the atmosphere per unit time (Ecomii Green Dictionary, 2009). At Dalhousie, several past projects in the Environmental Problem Solving class have addressed this issue from a variety of angles. Last year, one study examined the energy and greenhouse gas emissions Dalhousie could save by turning

off computers at night in the Marion McCain computer lab (Bruce *et al.*, 2008). Similarly, a 2007 study (Ashworth *et al.*, 2007) examined energy consumption within Dalhousie Residences. This year, one project suggested addressing this issue through the use of carbon credits (Barach *et al.*, 2009).

While these studies provide useful insight into how Dalhousie can reduce its carbon footprint on campus, few studies acknowledge that Dalhousie's environmental impact extends beyond the physical boundaries of the institution. We feel that one area in which there is room for considerable improvement is that of food transportation. In Canada,  $\frac{1}{4}$  of our greenhouse gas emissions come from transportation, much of which comes from commercial transportation of produce (Bentley and Barker, 2005). In addition, the percentage of food consumed in Nova Scotia that is produced within the province has decreased from 15% to only 8.4 % over the past 15 years (NSFA, 2008). "Food miles" are defined as the distance food travels from the point of production to consumption, and is important to think about because the further food travels, the more greenhouse gasses are released into the atmosphere. For example, one study found that the transportation of carrots produced in California and sold in Toronto resulted in 59 times the amount of greenhouse gasses emitted than those produced locally! (Bentley and Barker, 2005). Eating locally also provides other benefits, such as increasing food security, rural employment, enforcing a sense of community, and building the local economy (NSFA, 2008).

At Dalhousie, food services are currently run by two companies; Aramark and Sodexo. While Aramark is mostly responsible for providing meals within university residences, Sodexo, a focus of this study, provides food services in the Student Union Building (SUB). Both of these companies have made efforts to source produce locally, when seasonally available. For example, in the month of November 2008, Sodexo served locally grown apples, broccoli, potatoes and eggs, amongst other items (DSU, 2008). However Sodexo is subject to a number of constraints, which hampers its ability to effectively supply Dalhousie with a majority of local food. Firstly, because it is a large corporation with legal/liability concerns, Sodexo cannot buy much local meat, as

they require food producers to buy expensive insurance that most small scale local farmers cannot afford (From personal interview with Cindy MacDonald, 2009). Secondly, by nature of being a large company, their primary goal must be to make money. This sometimes makes it less justifiable for them to pay the slightly higher prices for local food. Another factor to consider is that there is no student involvement in the process, so Sodexo's efforts do little to raise awareness or provide education to the student body about the importance or implications of buying locally produced foods.

This study examines the feasibility of either replacing or supplementing current food services with a student-run locally sourced food co-op. A student-run food co-op would have several advantages over Sodexo's current food outlets. It is likely that meat producers would not need to have expensive insurance beyond that required by other Halifax local food restaurants and grocery stores, many of which serve local meat. Furthermore, the primary goal of a student food co-op would be first and foremost to reduce the carbon footprint of the university, rather than to make money, which would allow for increased flexibility. Finally, by being student-run and implementing the "co-op" model, in which students pay a small annual levy to support the project, we would provide students with an investment in the operation, and involve them directly in the whole process, thereby increasing awareness and education about the importance and feasibility of eating locally. This project is important because it addresses campus sustainability in terms of both Dalhousie's carbon footprint and sustainability education, and it is timely because Sodexo's contract in the Student Union building will be over in 2010, which may provide the opportunity for a student run food co-op to replace their services. There have been successful student-run food outlets at other universities, such as the People's Potato at Concordia University. This project started out in 1999 in a church basement and fed 50 people a week, and today, serves over 500 customers (The People's Potato, 2009).

While other studies have focused on the technical and legal feasibility of a student-run food co-op (Briggins *et al.*, 2009), the purpose of this project was to

determine the feasibility of supplying it with locally and organically produced food. Because it is difficult to produce some foods organically in Nova Scotia's climate, our primary goal was to find locally produced foods, although where available, organic foods were given preference. Our research had 3 major components. First, we distributed 125 surveys to students in the Student Union Building, to gain information on student interest and food preferences. Next, we interviewed a Sodexo food representative and 15 Nova Scotia farmers, to get a sense of supply, demand, and local food availability. Finally, we compiled this data to produce several potential menu options to meet student preferences, based on what is locally available. Our research acts as a preliminary indication of the feasibility of implementing a student-run food co-op on Studley campus.

## Methods

Our study aimed at testing the feasibility of providing local food for a student-run food cooperative on Studley campus. In order to determine the feasibility of this idea, interviews with three groups were conducted. 1. Customers at food outlets in the Student Union Building and the Killam library atrium, 2. A Sodexo representative, 3. Local farmers and food providers. Qualitative and quantitative information was derived from these interactions. The interviews and surveys were non-probabilistic and purposive. The types of sampling were: 1. Purposive surveys, which were conducted in the SUB cafeteria and the Killam Library atrium (the survey questions can be viewed in Appendix A). 2. Purposive in-person interview with a Sodexo representative (the questions and answers are available in Appendix B). 3. Non-probabilistic, purposive phone and email interviews with Nova Scotian farmers and food providers (refer to Appendix C for interview questions and Appendix D for cover letter). A propositional menu was created after the interviews were conducted, combining the food preferences indicated by the SUB survey results and the potential food supply of farmers. Interviews and questionnaires were conducted after an ethics review submission.

The first round of sampling was conducted in the Student Union Building (SUB) by the Grill, Pizza Pizza and Tim Horton's customer seating area, as well as nearby the food outlets in the atrium of the Killam. The questionnaires consisted of seven questions, and took approximately a minute to fill out. The surveys were made short in order to minimise bias, because it can reasonably be expected that those interested in organic and local food would be more willing to fill out a survey on this topic, while those not interested in this topic would likely not participate if the survey were deemed to be too long to fill out. Thus, by leaving the survey short, we hoped that everyone who was approached would take the time to fill out the survey, thereby decreasing bias in the results. Although the targeted participants included anyone eating or sitting in the SUB food market area, it was expected that most of the participants would likely be students. We felt that this was justified as it will most likely be students who will purchase the majority of the products offered at a student-run food co-op. The qualitative questions in the questionnaires were aimed at determining the level of interest in local and organic food sources on campus, student support of a student-run food co-op on campus, the acceptability of a student levy, and food preferences. Other questions the participants were asked aimed to provide quantitative information of the feasibility. These included figures regarding the current daily food production in the SUB by Sodexo, and the number of weekly visits by customers

A purposive sampling method was used, since the interviews targeted students, staff and faculty of Dalhousie, but the particular individuals were not predetermined. In order to further minimise bias, such as targeting students, staff and faculty from certain faculties, the surveys were conducted in the SUB since members of the Dalhousie community from all Studley campus faculties frequent the building.

The SUB is the main source of food on the campus and it can be assumed that most visitors of the SUB dining area likely have an interest in food purchase on campus. Since the Killam is also a common food location, members of the Dalhousie community were approached there as well. However, we experienced a large lack of interest in participation in the surveys. Only 10 surveys were conducted in the Killam. Although

the Life Sciences Centre (LSC) also has a variety of food outlets, this building is slightly more segregated than the Killam and the SUB, and surveys were therefore not conducted there.

Customers eating at tables were asked to participate in the survey. In order to avoid bias based on a potential interviewee's appearance or approachability, all customers were asked to participate. The occupied table at the furthest end of the room was approached first, and interviews were conducted at tables systematically following the first table that was approached. This procedure had the intention of eliminating selection bias based on prejudgements. In total, 125 customers were interviewed. This number was chosen because it seemed reasonable given the time constraint.

The information gathered from questionnaires handed out in the Killam and SUB aimed to establish the level of interest in local and/or organic food, and for a student-run co-op in the SUB. It also provided an outline of food interests, which was useful for the interviews with farmers and food providers. In addition, this information was helpful in the creation of a propositional menu.

An audit of Sodexo's current food practices was conducted by a purposive, non-probabilistic interview with a specific target. Cindy MacDonald, a food services representative from Sodexo was queried for the current food demand and food trends in the SUB, and about customers' demands regarding local and/or organic food.

The third and final set of interviews consisted of telephone surveys and email correspondences with local farmers and other local food providers. Since time and financial constraints did not allow personal visits to the farmers, which would be preferable as this type of communication often results in higher response rates and clarity between the interviewee and interviewer, farmers were contacted by phone or email (Palys *et al.*, 2008). The snowball sampling technique was used to gather contact information. The farmers and food producers from the Halifax Farmer's Market website were contacted. These interviews were conducted in order to establish an overview of expected food supplies and seasonal fluctuations in supply, requirements for Dalhousie in regards to delivery or pick-up. This non-probabilistic procedure is also

purposive sampling, because the specific farmers and food producers are targeted. These interviews also incorporated the oral history interview style, in order to allow for more flexibility (Palys *et al.* 2008). The main criterion for consideration was the location of the farm or food production facility. Food producers included in the study were in the province, and preferably, implementers of organic agricultural practices. These interviews provided qualitative and, to a certain extent, quantitative information. Qualitative data from the interviews included the types of food that can be provided, seasonal availability, and delivery possibilities. Although the available supply were given as amounts, most of these figures were not concrete and gave qualitative figures rather than quantitative. Quantitative data came in the form of wholesale pricelists that some of the farmers and food producers were able to share with us.

After the interviews with the food producers were conducted, a preliminary menu was created in compliance with the supplies potentially provided by the farmers and food producers from the interviews. Recipes were taken from cookbooks. Specifically, the Ecology Action Centre's local food cookbook *Eating by the Season* was the main source, because it contains many delicious recipes with a focus on local and seasonal ingredients.

The methodology reflects the reliability and validity of the project. As demonstrated, the methods we relied on did not favour students of particular faculties (other than those faculties restricted to the Studley campus), age, political views, and dietary preference, and therefore, a sample group more inclined to sustainable food options than the average population was not targeted. The face-to-face method of the questionnaires ensured a critical approach to the research. If we were to rely on optional responses to email questionnaires, individuals interested in the topic of local and organic food would be more inclined to reply, and the resulting sample would be less representative of the whole Studley student body. The figures given by the farmers and food producers in the interviews were rough estimates, but are nevertheless valid, since they provide a good indication of the enthusiasm and willingness to supply Dalhousie with local produce, and the variety of food that can be provided. The

numbers given by the Sodexo representative were also rough estimates, but nevertheless, they suggest the scale of food production in the SUB, which is useful for calculating the supply required for operating a food outlet.

The project is repeatable because the methods are clearly outlined above and the three populations sampled – SUB customers, the Sodexo representative, and the Nova Scotia farmers – can be contacted again. Although the particular individuals surveyed in the SUB cannot be contacted, since the surveys were kept anonymous, the population group they represent (SUB food service customers) can be approached. This is also the case with the farmers, who were kept anonymous. The results should not differ depending on the interviewer, because the approach was unbiased and did not reflect the interviewer's personal biased preference of people. Although the farmer and food producers' results may differ depending on their responses, it can be assumed the methods of contact are repeatable.

## **Limitations and Delimitations**

Several limitations were present which must be taken into consideration when reviewing our project. Time was the main constraint because all group members were full time students and therefore there was a limit to the possible time that could be spent on the project. Furthermore, the project was to be conducted within a three-month period and this limited the amount of time that could be given to waiting for the responses from farmers.

Only 7% of Sodexo's average daily number of customers was sampled. Ideally, we would have liked to have a larger sample size since this would have increased the level of statistical validity. Indeed, of the 15,200 students at Dalhousie, less than 1% was sampled. However, a statistically reliable sample size would be beyond the scope of this project.

Delimitations were in place to reduce the scope of this project. The food questionnaires were restricted mainly to the SUB, because this is the chief food purchasing location on Studley campus. Although there are food purchasing

possibilities in some of the other buildings, including the LSC, the Rowe Management building, and the Computer Science building, the population in the SUB likely represents the highest diversity since it is not limited by specific faculties, other than those not present at the Studley campus.

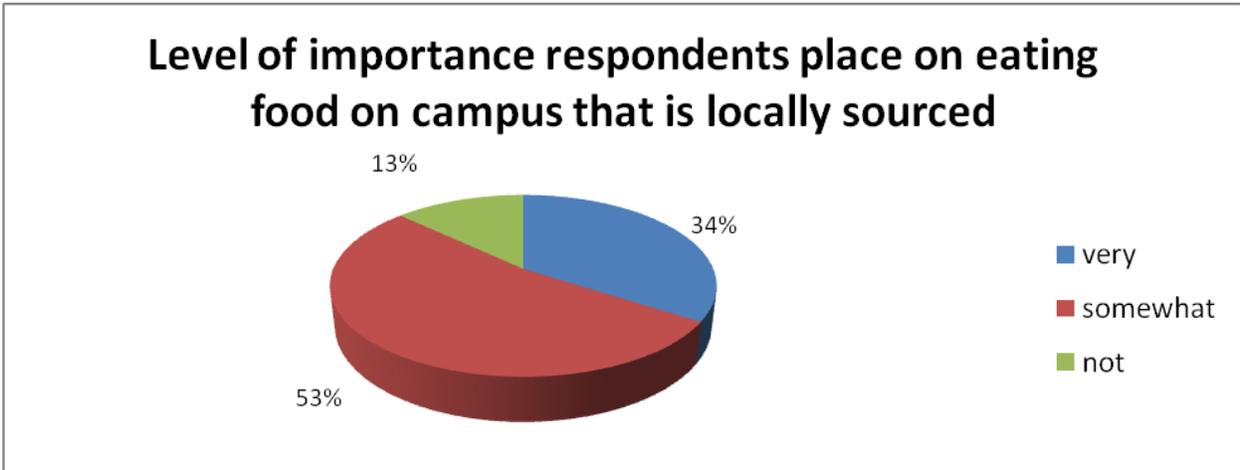
## Results

The following section presents the results of the SUB questionnaires, Sodexo interview, farmer interviews, and the proposed menu.

### Results from the SUB and Killam Library surveys

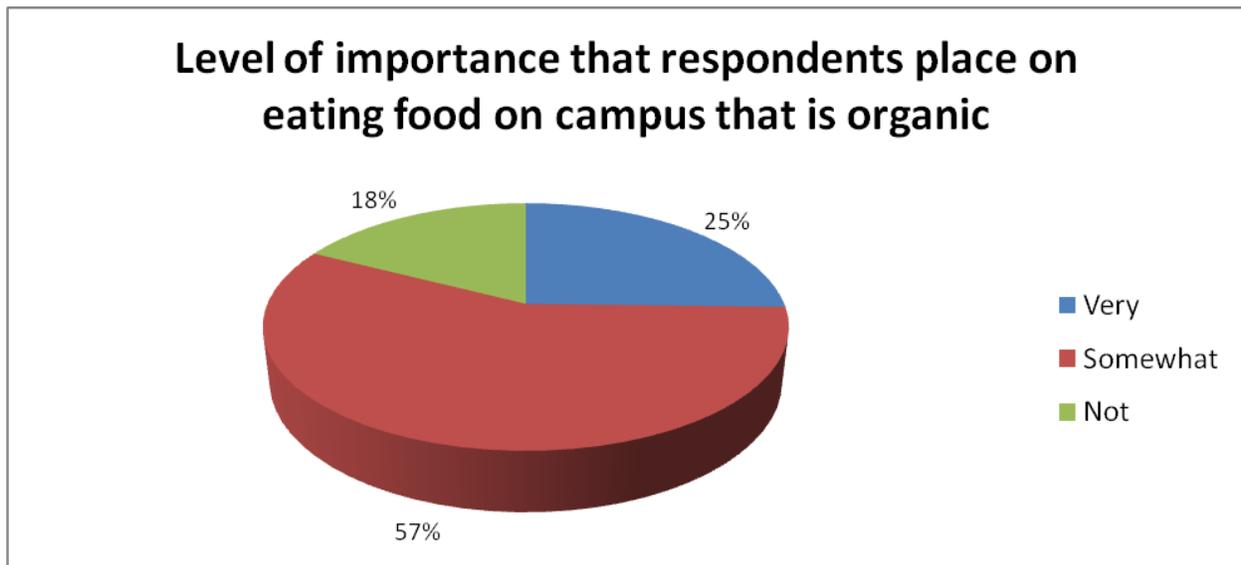
#### Question:

1) How important is it to you to eat food on campus that is locally sourced?



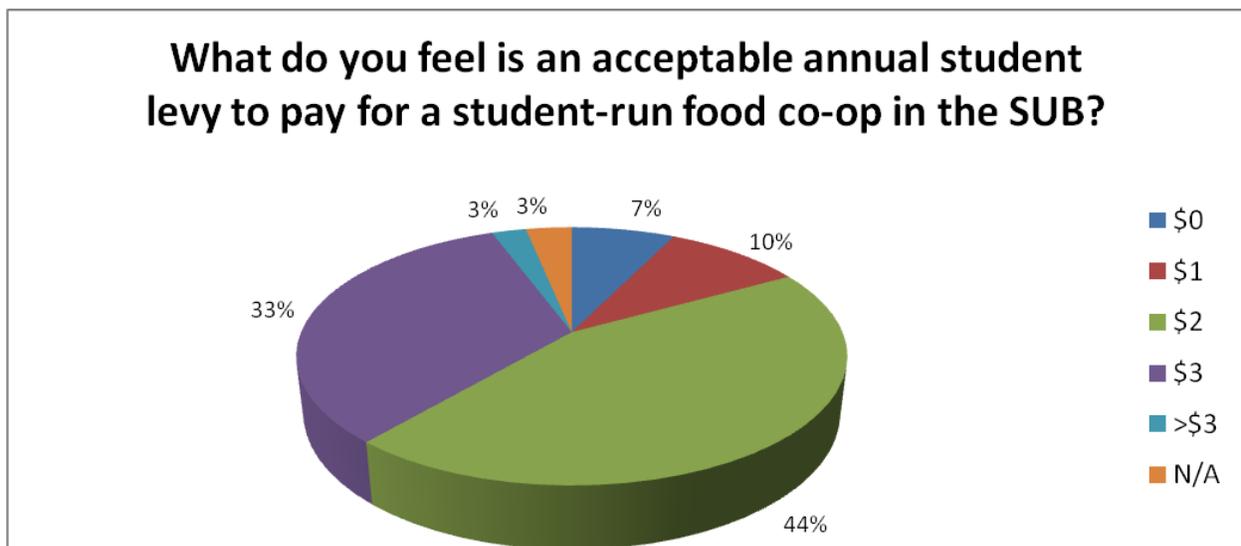
**Figure 1** – Percentage of respondents who feel that eating locally sourced food on campus is important to them.

2) How important is it to you to eat food on campus that is organic?



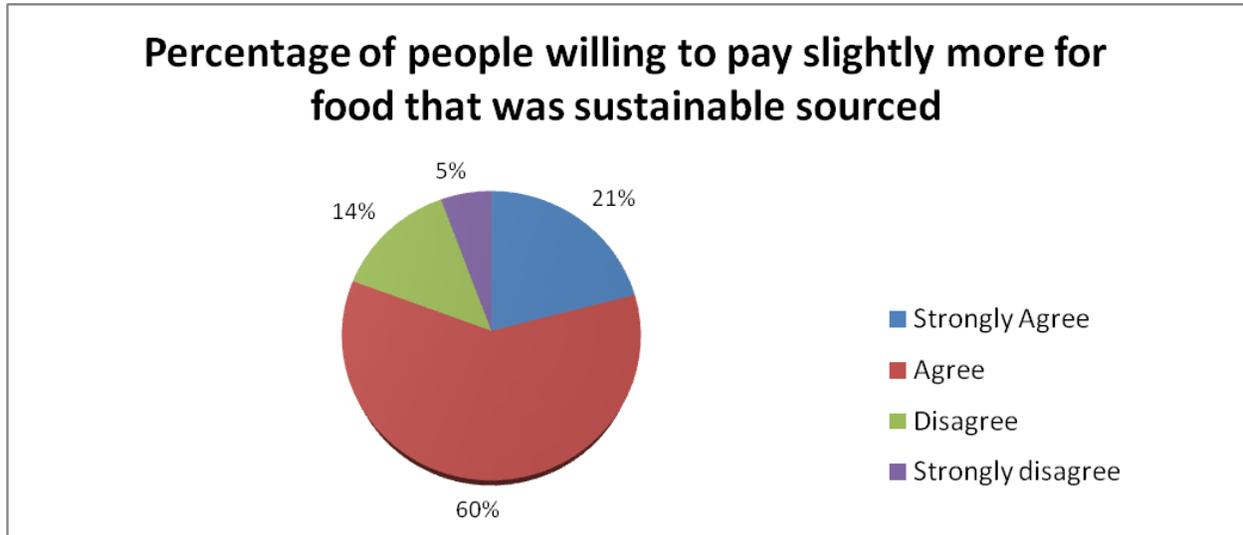
**Figure 2** – Percentage of respondents who feel that eating organic food on campus is important to them.

3) Of the following options, which do you feel is an acceptable annual student levy to pay for a student-run food co-op in the SUB?



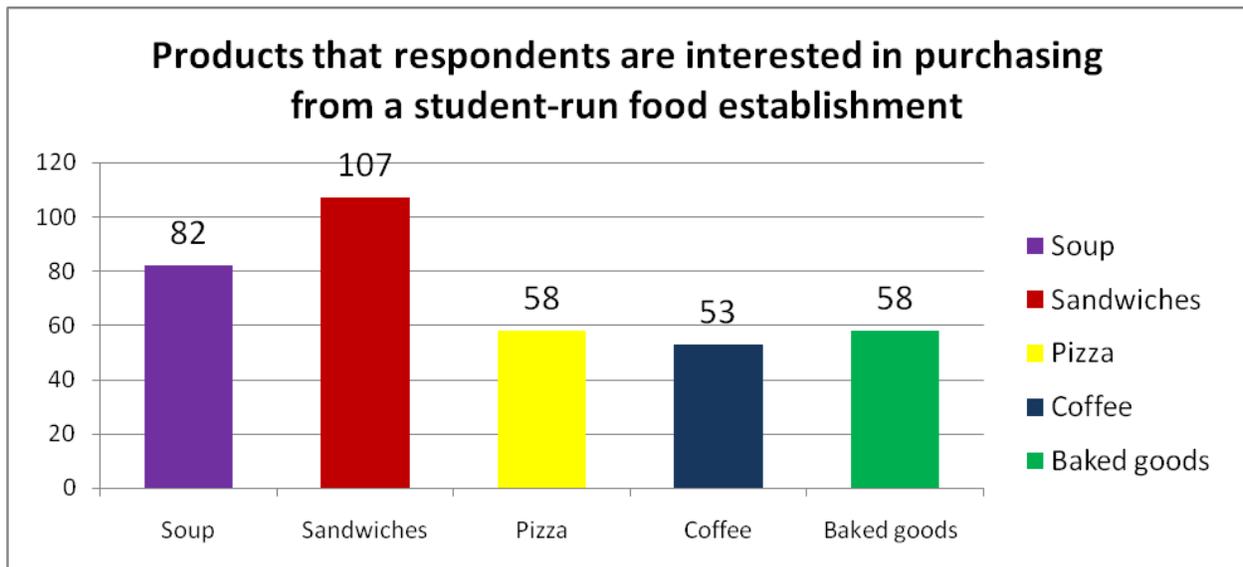
**Figure 3** – Annual student levy amount that respondents feel is acceptable to pay for a student-run food co-op in the SUB.

4) I would be willing to pay slightly more for food that was sustainably sourced.  
(Sustainable = local and/or organic)



**Figure 4** – Percentage of people willing to pay slightly more than they currently do for food that is from local sources.

5) Of the following, rank the top 3 items that you would be most interested in buying from a student-run food establishment in the SUB.



**Figure 5** – Number of respondents who would be interested in purchasing these items for a student-run food establishment in the SUB.

6) How would you feel if the food outlet in the SUB changed its menu according to the seasons to reflect what is fresh and local?

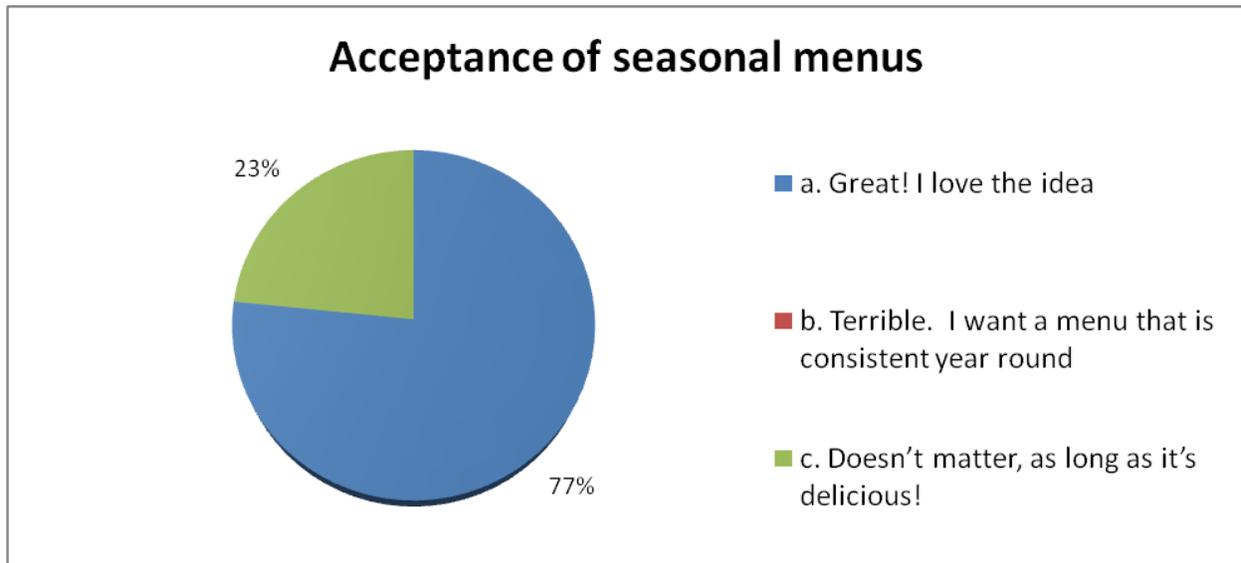


Figure 6 – Percentage of respondents that either love the idea of a seasonal food menu or are indifferent as long as the food tastes delicious.

7) How often do you buy food in the SUB?

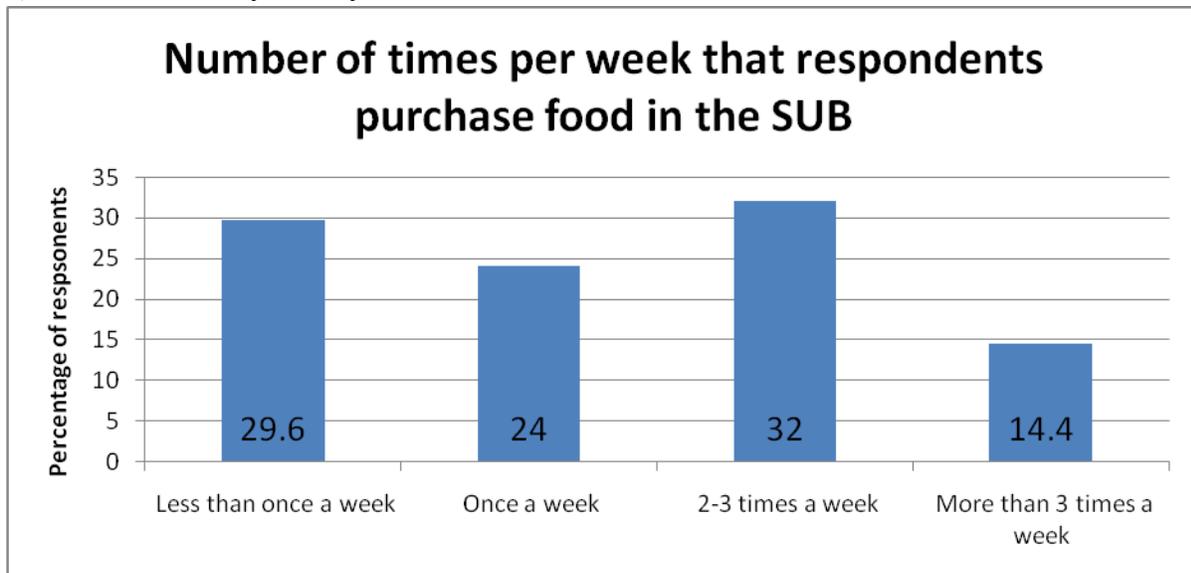
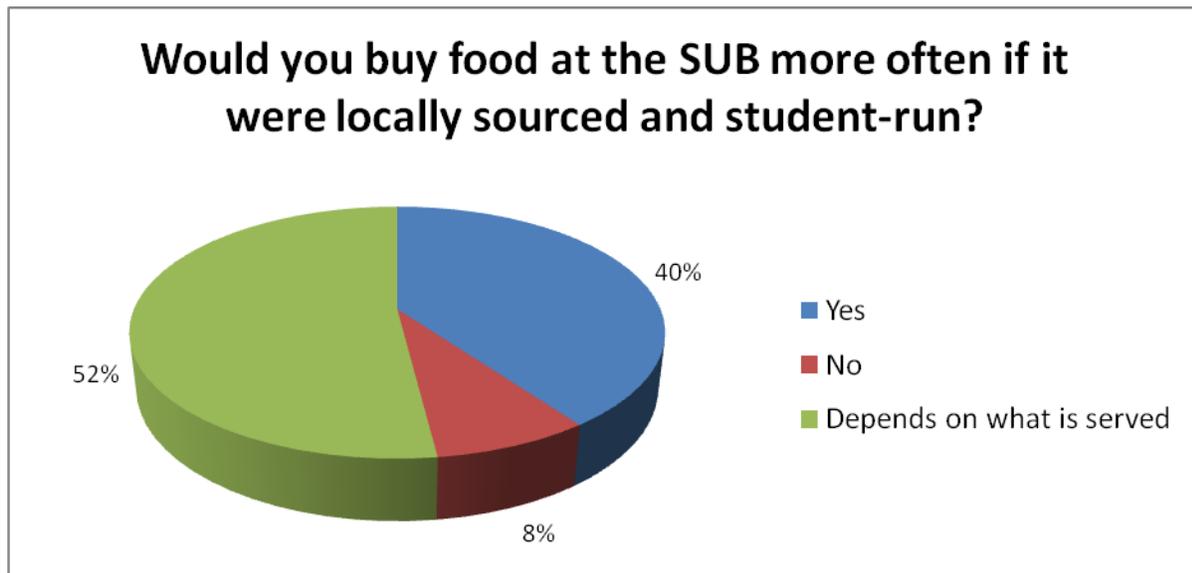


Figure 7 – Number of times per week that respondents purchase food in the SUB.

8) Would you buy food at the SUB more often if it were locally sourced and student-run?



**Figure 8** – Percentage of respondents who would buy more food at the SUB if the food was locally sourced and sold at a student-run food outlet.

The surveys conducted in the Student Union Building and Killam Library aimed at determining the respondents' level of support and interest in a student-run food co-op. The results from **Figure 1** show that 53% of the respondents think that eating locally sourced food on campus is important to them, while 34% find this is very important to them. Only 13% of respondents think that eating locally sourced food on campus is not important to them. As **Figure 2** illustrates, 82% of respondents think that eating organic food on campus is important to them, of which 25% think this is very important, while 18% do not find it important (Figure 2). The results from **Figure 3** indicate that 80% of the respondents who took the survey feel that \$2 or more is an acceptable student levy to pay for a student-run food co-op, while 7% believe that there should be no student levy for a student-run food co-op. In **Figure 4** we see that 81% of those surveyed would be willing to pay slightly more for food that was sustainably sourced, while 19% would not be willing to pay slightly more for sustainably sourced food. **Figure 5** is a breakdown of what types of food respondents would be most interested in purchasing from a student-run food establishment. The results show that

107 would be interested in purchasing sandwiches, 82 people are interested in soup, 58 people are interested in baked goods as well as pizza and 53 people are interested in coffee. The level of interest in a seasonal menu is reflected in **Figure 6**, which shows that the majority, at 77%, thought that a menu that changed according to the seasons was a great idea, while 23% said it did not matter as long as the food was delicious. Nobody replied that it was a bad idea. **Figure 7** indicates that most of the respondents purchase food in the SUB about 2-3 times per week. About 30% purchase food in the SUB less than once a week and 24% purchase food in the SUB once a week. Only 14% replied that they purchase food in the SUB more than 3 times per week. **Figure 8** points to the fact that 52% of the respondents to our survey might buy food more often if it were locally sourced and came from a student-run food co-op, depending on what is served. 40% said they would buy food more often from the SUB if it were locally sourced and from a student-run establishment.

## Results from the interview with the Sodexo Food Services representative

**Table 1** - Summary of the results from the interview with Sodexo Food Services representative Cindy MacDonald.

Sodexo food services	Per day (approximately)
<b>Total number of customers served</b>	1800
<b>Coffees sold</b>	800
<b>Tim Horton's bagels sold</b>	700
<b>Pizza slices sold</b>	250
<b>Buns for sandwiches</b>	50-80
<b>Whole pizzas sold</b>	40
<b>Salads sold</b>	30

The results from the face-to-face interview with the Sodexo Food Services representative Cindy MacDonald are summarized in **Table 1**. Results were used to determine the volume of food needed per day and the approximate number of

customers served per day. When all the food services that are owned and operated by Sodexo in the SUB are combined, the total number of customers they serve daily is approximately 1800. Sodexo sells approximately 800 coffees and 700 bagels daily through its Tim Horton's franchise. Daily, the Pizza Pizza operation sells about 250 slices of pizza, which is equal to about 40 whole pizzas. Sodexo Food Services sell approximately 50-80 buns for sandwiches and about 40 salads daily. Sodexo tries to source locally as much as possible, but this depends greatly on the season. It was mentioned that in particular, there is a lack of availability in the winter. Meat is not sourced locally, due to company policy. Sodexo can only purchase meat from producers with certain insurance, which many of the local farmers cannot afford. Therefore, Sodexo purchases meat from larger companies.

## Results from the interviews with farmers and local food producers

**Table 2** – Summary of food types, seasonal availability, and cost<sup>1</sup> (Please note that Table 2 continues on the next page).

Business	Food Type	Season Available	Cost
1	Ground Beef	Year round	Wholesale
1	Stewing Meat	Year round	Wholesale
1	Stir-fry Strips	Year round	Wholesale
1	Fajita Strips	Year round	Wholesale
1	Beef Burgers	Year round	Wholesale
1	Grilling Steaks	Year round	Wholesale
1	Marinating Steak	Year round	Wholesale
1	Oven Roasts	Year round	Wholesale
1	Pot Roasts	Year round	Wholesale
1	Ribs	Year round	Wholesale
1	Front Quarter	Year round	\$2.00/lb
1	Hind Quarter	Year round	\$2.95/lb
1	Side of Beef	Year round	\$2.30/lb
2	Bread	Year round	Wholesale
2	Baguettes	Year round	Wholesale
2	Bagels	Year round	Wholesale
2	Muffins	Year round	Wholesale
2	Croissants	Year round	Wholesale
2	Fruit tarts	Year round	Wholesale
2	Pastries	Year round	Wholesale
2	Rolls	Year round	Wholesale
3	Bread	Year round	\$3.00/loaf
3	English Muffins	Year round	\$3.00/package of 6
3	Cinnamon Rolls	Year round	\$1.85 each
4	Bread	Year round	\$1.85/loaf
4	Baguette	Year round	\$1.25 each
4	Croissant	Year round	\$1.00 each
4	Chocolate Croissant	Year round	\$1.45 each
4	Pastries	Year round	Wholesale
5	Vegetable Soup	Year round	\$5.00/500ml
5	Beef/barley Soup	Year round	\$5.00/500ml
5	Chicken Noodle Soup	Year round	\$5.00/500ml

<sup>1</sup> If the cost was provided, it is listed in Canadian dollars; otherwise it is listed as wholesale which indicates that the food producer would supply a wholesale price sheet upon request. Producers are listed as a single business number to protect their identity.

Business	Food Type	Season Available	Cost
5	Vegan Soups	Year round	\$5.00/500ml
5	Exotic Soups	Year round	\$5.00/500ml
6	Vegetables, Fruit and Herbs	July-October	Wholesale
6	Eggs	Year round	Wholesale
6	Flowers	Year round	Wholesale
7	Apples, assorted	Fall/winter	\$15.00-20.00/40lb
7	Honey Crisp apples	Fall/winter	\$55.00/40lb
7	Apple Cider	Year round	\$5.50/4L
8	Blueberries	Year round	\$20.00/5lb box
8	Strawberries	Year round	\$3.25/quart
8	Maple Syrup	Year round	\$58.0/4L
8	Chanterelles	Year round	\$7.50/lb
9	Cranberries	In season	Wholesale
9	Cranberry Juice	Year round	Wholesale
9	Dried Cranberries	Year round	Wholesale
9	Cranberry Jam	Year round	Wholesale
9	Cranberry and Blueberry Juice	Year round	Wholesale
9	Chutneys	Year round	Wholesale
9	Cranberry Jams	Year round	Wholesale
9	Cranberry Maple Syrup	Year round	Wholesale
9	Baked Goods	Year round	Wholesale
10	Ice Cream	Year round	\$2.00-4.00/serving
10	Ice Cream Sandwich	Year round	\$2.00/each
11	Liquid Honey	Year round	\$75.00/30lb
11	Creamed Honey	Year round	\$40.00/7kg
11	Comb Honey	In season	\$3.75/325g
12	Bread	Year round	Wholesale
13	Lean Ground Beef	Year round	\$5.25/lb
13	Boneless Stew Meat	Year round	\$5.25/lb
13	Roasts	Year round	\$7.25/lb
13	Whole Chicken	Year round	\$4.00/lb
13	Whole Quartered Chicken	Year round	\$4.75/lb
13	Leg Quarters	Year round	\$4.50/lb
13	Breast Quarters	Year round	\$8.00/lb
13	White Button Mushrooms	Year round	\$20.00/5lb
13	Portobello Mushrooms	Year round	\$27.50/5lb
13	Cremini Mushrooms	Year round	\$20.00/5lb
14	Goat cheese, assorted	Year round	Wholesale

The results from the interviews with local farmers and food producers are outlined above in **Table 2**. In order to distinguish between suppliers without giving away their identity, they have been assigned a Business number (see **Table 2**). For example, *Business number 1* is able to supply a variety of meat products that include: ground beef, stewing meat, stir-fry strips, fajita strips, beef burgers, grilling steak, marinating steaks, oven roasts, pot roasts, ribs, front quarters, hind quarters and sides of beef. At the time of the interview, *Business number 1* was only able to supply us with wholesale costs for the quarters and sides of beef. Most people who were interviewed said that they had year round supplies of the products they sold. If a product was unavailable year round, then it was listed as either *In Season* or the months that it was available were recorded. Many of the farmers were flexible in providing both organic and non-organic produce.

## Preliminary menu

The following menu incorporates all the items that the farmers and food producers are able to provide.

### Breakfast

- Apple-berry smoothies
- Egg English Muffin breakfast sandwiches
- Toast (with honey or jam)
- Eggs and toast

### Lunch and Dinner

- Beef burgers
- Vegetarian Portobello burgers with goat cheese
- Soups (beef, chicken, noodle, vegetarian (squash, )
- Chicken-Veggie sandwich with chicken breast, seasonal vegetables and cheese
- Veggie sandwich with seasonal vegetables and cheese
- Fajitas

- Tacos
- Potato beef stew
- Potato vegetable stew

#### Dessert

- Cranberry apple crisp
- Ice cream smoothies
- Ice cream

## Discussion

Our project examined the feasibility of supplying a student-run food co-op on Studley Campus with food that has been produced organically, i.e. without the input of petro-chemical fertilisers and pesticides, and locally, i.e. within the province of Nova Scotia. The purpose of this study was to determine two things: first, if a student-run food co-op were established on Studley Campus, what kind of support it would receive from the students and staff; and secondly, if there is sufficient support from the farming community of Nova Scotia, and enough locally produced food to supply a food service that aims to feed the students and staff who purchase food on Studley campus. This project falls in line with the bigger picture goals set forth by the Greening the Campus Movement. Specifically, we propose that a student-run food co-op on Studley Campus that sells locally and organically produced food will help reduce the carbon footprint of Dalhousie by reducing food related carbon dioxide emissions in two ways: first, local food requires less transportation which means less carbon dioxide emissions; and secondly, organically produced food, by definition, does not depend on petro-chemical fertilisers that emit carbon dioxide in their production.

Through our survey questionnaires of people in the SUB and the Killam, we found that there is a high level of support towards eating locally and organically produced food on Studley Campus. Specifically, 82% think that eating organic food on campus is important to them, while 87% replied that eating food on campus that was

locally sourced was important to them. We also found that a student levy that would help pay for a student-run food co-op of \$2.00 or more received the support from 80% of the students who were surveyed. This is very encouraging as it is likely that a student-run food co-op would need financial support from all students and the proposed food co-op would receive a greater degree of interest and support from the student community if they would have a vested interest in it. We found that student support towards a menu that changes seasonally to better reflect the availability of certain foods depends greatly on what types of food are offered. To this end we would suggest more research to better understand what types of seasonal food items people on Studley Campus would be willing to buy.

During our face-to-face interview with Sodexo Food Services representative Cindy MacDonald, we found out that the food services that Sodexo operates in the SUB work together to serve approximately 1800 customers per day. Of this amount, nearly 800 customers purchase coffee, so it can be assumed that Sodexo is responsible for feeding roughly 1000 people per day. These numbers helped ascertain how many people usually buy food at the SUB per day so that it could better be understood how many people a student-run food co-op might serve daily. Although we do not plan for the food co-op to take all of Sodexo's customers, it was important to get a ballpark figure as to how many people are eating in the SUB per day. In effect, the proposed food co-op will likely compliment the food services that are provided by Sodexo. For example, it is expected that a student-run food co-op will be more flexible in the menu options it provides and therefore there could be greater room for more vegetarian, vegan and other dietary options. As well, due to insurance liabilities, Sodexo cannot purchase local meat, which is a dilemma the student run food co-op could possibly circumvent.

The phone and email interviews we conducted with farmers and food producers brought us much encouragement as nearly everyone we contacted was very supportive and excited about this project. Many of the people we spoke with are passionate supporters of the local food movement and although some rely on money from exports,

most expressed their desires and interest in keeping the money within the province. Nearly all the people contacted said that they could deliver, while the rest said they could supply us with their products as long as we picked up the orders from them at the Halifax Farmers' Market on Saturdays. Overall, it was found that the farmers and food producers located within Nova Scotia could offer a wide variety of products that could combined to fill a complete menu. Therefore, it can be concluded that there is likely enough supply to meet the demand.

In light of several previous studies, these findings are particularly significant. As pointed out by Bentley and Barker (2005), food that travels a relatively short distance between the point of production and the point of consumption is responsible for significantly less greenhouse gasses being emitted into the atmosphere. When food is organically produced, even more greenhouse gasses are saved from entering our environment. Consequently, by increasing the level of local and organic food served on campus, we can significantly reduce Dalhousie's carbon footprint. Our results also confirm that Nova Scotian food producers show concern about keeping money within the province. This falls in line with the additional benefits to eating locally, such as building the local economy, supporting the local community, and increasing rural employment, brought to light by the Nova Scotia Federation of agriculture (NSFA, 2008).

From a more technical perspective, these findings are also significant in light of other Dalhousie Greening the Campus projects. Concurrent to our research, another project examined the feasibility of a student run local/organic food co-op in terms of legal and technical constraints (Briggins *et al.*, 2009). They found that several other universities across North America have successfully implemented student run local food co-ops, similar to what we suggest. One such example is "The People's Potato" at Montreal's Concordia University. This project has been successfully serving local and organic food on campus since 1999. These results supplement our findings that a student run food co-op is feasible from a student interest and sourcing perspective, by providing additional evidence that it should be technically feasible as well. The results

from Briggins *et al.* also indicate that it may be easier to secure funding for this project if we focus on providing food to a group which is not represented by current food services (vegan, diabetic, glucose free diets, etc.). This underlines the importance of developing a strong and well planned out menu, as already indicated by our student survey results.

This project has implications for theory and practice at Dalhousie University. From a student support perspective and a local source perspective, the project is feasible, as determined from the questionnaires and interviews. Students would be willing to contribute to the food co-op financially through the levy and through purchases, and farmers and food producers are willing to supply a variety of products at wholesale prices, year round. Although further research is needed before the proposed project is implemented, the findings from this feasibility study are favourable. The overall results and conclusions did not contradict the hypothesis, however, there are some findings that must be kept in mind. It was assumed at the onset of the project that Sodexo was not sourcing locally. However, this was contradicted by the information gathered in the interview with the Sodexo representative, because Sodexo strives for local purchases. Furthermore, student support is not unconditional, but is reliant on the appeal of the food options on the menu. It is therefore essential to ensure an attractive and interesting menu is kept year round, while not compromising the goals of sourcing locally and organically. Unfortunately, designing an appealing menu for the winter term may be challenging because there are fewer choices during the winter term since it occurs during the off-season for most local produce. Still, with a team of creative menu planners it should be possible to design a full menu with the many products that are available year-round.

## **Conclusion and Recommendations**

Based on the findings from the interviews and questionnaires, we conclude that supplying a student-run food co-op with locally sourced and organically produced food

would indeed be feasible. A strong level of interest was revealed from both the Studley campus community and the farming/food producer community of Nova Scotia. Our research team is hopeful that this study will work in combination with another recent study that looked at the technical and legal aspects of establishing a student-run food co-op on Studley Campus to make this project a reality in the near future.

We believe there is great potential in opening up a space on campus that provides Dalhousie students, staff and faculty with an alternative to the corporate food outlets. We are greatly encouraged by the successes enjoyed by food co-ops operating out of other universities such as The People's Potato at Concordia University in Montreal. From such a project springs great benefits not only to the students and the university, but also to farmers and organic food producers of Nova Scotia. A food co-op that provides people with healthy, local and organic food will also be beneficial beyond the local scale, because emissions associated with food transportation are reduced.

Although it is tempting to think on the grand scale, we must keep in mind that most projects start out small, of which a student-run food co-op should be no exception. Not only will this allow greater flexibility, but it will also allow for any kinks to be worked out before too much time and money has been invested. Once the food co-op is running smoothly, the operators can start expanding. Before a student-run food co-op can be initiated, further research is required.

First and foremost, a statistically sound survey must be conducted of Dalhousie students to determine more precisely the percentage of students in favour of an annual food co-op levy, and also the levy amount that is deemed acceptable by students. It is pertinent that a thorough financial survey is conducted to determine the cost of establishing and running the co-op. It is necessary to establish a sound meal plan, in order to identify the exact amounts of products required. Farmers would then be able to present more accurate costs. Funding from government and various special interest groups can be attained if the menu contained options for people with special dietary needs such as gluten-free diets, low sugar or sugar-free diets, and vegan/vegetarian

diets. To this end, we recommend further research into possible sources and requirements for this funding.

If the food is established as an alternative source for healthy food and special diets, it is possible that people outside of the Dalhousie community would be interested in the services provided. Therefore, we foresee additional research into how co-ops operate, especially student-run food co-ops and how they could work to allow outsiders to become members and participate in the operation.

More research is needed to determine the level of interest of local and organic food options available to students on the other campuses at Dalhousie University. The other campuses were purposively left out of this study because we were concentrating on Studley Campus.

Another possible way of integrating the community further, is to source the food co-op with vegetables and fruit grown on campus. Studley Campus has much green space and it is possible that some, if not all, could be converted into productive vegetable gardens for the co-op. These gardens could also be used as an educational tool to show people the basics of vegetable growing. Research is needed to determine where gardens could be located and how much they would produce.

A further associated project to consider is the possibility of creating a local food market on campus that would serve to provide students, staff and faculty with items that would normally be found at the Saturday morning Halifax Farmer's Market. Although this market is fairly central in Halifax geographically speaking, potential shoppers are limited to purchasing items only on Saturdays. It is possible that some students work on Saturdays and therefore not able to shop as locally as they would like. A farmer's market on Studley Campus might fulfill these needs, while at the same time it could create a greater market for Nova Scotia's farmers, and be used as a tool to promote the benefits of local food.

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## Appendices

### Appendix A - Student Union Building Questionnaire

- 1. How important is it to you to eat food on campus that is locally sourced? (Circle one).**  
Very                      Somewhat                      Not
- 2. How important is it to you to eat food on campus that is organic? (Circle one).**  
Very                      Somewhat                      Not
- 3. Of the following options, which do you feel is an acceptable annual student levy to pay for a student run food co-op in the SUB? (Circle one).**  
\$0                      \$1                      \$2                      \$3                      \$ Other: \_\_\_\_\_
- 4. Circle the response which best represents your feelings about the following statement. I would be willing to pay slightly more for food that was sustainably sourced. (sustainable=local and/or organic)**  
Strongly Agree                      Agree                      Disagree                      Strongly Disagree
- 5. Of the following, rank the top 3 items that you would be most interested in buying from a student run food establishment in the SUB. (1 to 3 = First to third choice).**  
\_\_\_\_ Soup  
\_\_\_\_ Sandwiches  
\_\_\_\_ Pizza  
\_\_\_\_ Coffee  
\_\_\_\_ Baked goods  
\_\_\_\_ Other (please specify) \_\_\_\_\_
- 6. How would you feel if the food outlet in the SUB changed its menu according to the seasons to reflect what is fresh and local? (Circle 1)**
  - Great! I love the idea
  - Terrible. I want a menu that is consistent year round
  - Doesn't matter, as long as it's delicious!
- 7. How often do you buy food in the SUB? (Circle 1)**
  - Less than once a week
  - Once a week
  - 2-3 times a week
  - more than 3 times a week
- 8. Would you buy food at the SUB more often if it were locally sourced and student run? (Circle 1).**  
Yes    No    Depends on what is served

## Appendix B - Sodexo Interview Questions and answers

- 1. Approximately how many customers do you serve in a day?**  
18 hundred
- 2. What is the most common product that you sell?**  
Coffee, Tim Hortons bagel, pizza.
- 3. How much of this product do you sell in a day?**  
700 bagels a day, 250 pizza slices of pizza, at least 800 coffees
- 4. We are trying to get an idea of how much food is required in a given week. For example, I understand that you serve sandwiches here. How many loafs of bread do you go through in one week?**  
Sandwiches are on buns- Grilled sandwiches: 50-80 a day
- 5. How many pizzas?**  
40 whole pizzas
- 6. How many salads are sold a day?**  
30 Salads a day
- 7. What percentage of the food that you currently sell is locally sourced?**  
As much as possible, depending on availability in the season. During the winter: root veggies, potatoes eggs etc., but not a lot because of lack of availability. In addition to this, they cannot source meat locally, because of legal issues- because they are a big company that serves so many customers they can only buy meat from farmers which have insurance, should a customer get food poisoning. Most small farmers cannot afford this insurance, so Sodexo can only buy from larger companies. Next year they hope to replace Starbucks with Just Us.
- 8. Have you been approached by customers who are interested in seeing more locally sourced foods? (Locally sourced= Maritimes)**  
People do approach them to talk about this fairly regularly, and they explain what they just explained to me (see above)

## Appendix C - Farmer and Food Producers interview questions

1. Would you be interested in providing food to a student run food establishment on Dalhousie campus?
2. What sort of produce does your farm/bakery/business grow/raise/catch/make? (meat, vegetables, bread. fish, etc.)
3. How much of your product would you be able to provide for a given week/month?

4. During what time of year could you supply produce (and how does supply vary throughout the year)?
5. Would you be able to deliver? If so, when?
6. How much would you charge for your product? (eg. for \_\_\_ amount of food product each month)
7. Do you know of any other farmers/food producers who might be interested in this?

## Appendix D - Farmer and Food Producers cover letter

Good afternoon,

My name is \_\_\_\_\_ and I am a student in the Environmental Science program in the Faculty of Science at Dalhousie University. I am part of a group of students researching the feasibility of introducing a locally sourced student run food co-op on campus, as part of a class project aimed at addressing environmental issues on campus. As part of our research, we are we are contacting farmers, such as yourself, to determine who would be interested in potentially supplying a student run campus food outlet, and to assess the quantity and type of produce available.

I would like to invite you to participate in a brief, 2 minute interview, either now, or at another time which is convenient for you. By answering our questions, you are by no means committing to anything, our goal is more to determine where there is an interest amongst food producers in Nova Scotia. Your participation in this study would be a valuable element of our research, as it would help us to determine the feasibility of supplying a campus food outlet with produce that is locally sourced.

Are you available to answer these few questions?