



Feasibility Study for a Farmer's Market on Dalhousie Campus

ENVS/SUST 3502 – Winter 2010

Prepared by: Evan Cullimore¹, Karim Seif Elivajr¹, Brannyn Hale¹,
Kyle Knapp¹, Angela Provoe¹, Simon Greenland Smith²
(¹Department of Management, Dalhousie University)
(²Department of Environmental Science, Dalhousie University)

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Abstract

This paper is designed to gauge student and faculty interest in a Dalhousie Farmer's Market. Farmers markets are beneficial because they can help reduce food mileage, help support local economy, and provide students and faculty members with fresh locally grown produce.

Through the use of a non-probabilistic survey student and faculty interest in a Dalhousie Farmer's Market was measured. The results of the online survey were fairly conclusive as 129 people responded. This was above the desired level of 100 respondents. The survey was aimed at students and faculty who had attended another farmers market in the past. The survey was distributed using a "snowball" effect. It was sent to members the ENVS 3502 class and other Dalhousie students and faculty. These people were asked to complete the survey and send it to others who have visited the farmers markets in the past. Thus the "snowball" effect was complete and brought in a total of 129 respondents.

Limitations faced during this report included time constraints, survey distribution constraints, and respondent bias constraints. The time constraints were set out by the course outline. We had four months to complete all the necessary research. The survey was distributed online which would have prevented those without internet access from responding. The survey was also sent to a number of students in the ENVS 3502 class. The students in this class may have a bias because by enrolling in a sustainability class these students are likely to have a greater interest in farmer's markets and local produce than the average respondent.

The delimitation faced was the need to reduce the scope of research. It was initially designed to include economic feasibility as well as stakeholder interest. However, this was deemed to be too much information and the focus was set on gauging stakeholder interest. There was initially an effort to include community respondents in the survey, but this was deemed to be too difficult and the focus was only on students and faculty.

The respondents gave fairly clear results on a number of topics regarding a potential Dalhousie Farmer's Market. The largest number of respondents fell into the 18-29 age group, which represented 78% of all respondents. The respondents were somewhat divided on which day they preferred for a Dalhousie Farmer's Market. However, two days came out as the obvious favourites. Friday received 28% of the respondents vote and Sunday received 27 % of the respondents vote. The majority of respondents wanted the market in the afternoon instead of the morning. For the next section of the survey respondents were given a list and told to rate each item as "not important", "somewhat important", "important", or "very important". The results were tallied and the most important factors in the eyes of respondents were local produce, local dairy including eggs, and organic produce respectively. The survey also included some written response questions that were hard to quantify, but did help provide some insight.

Overall the response was quite positive and there is a good chance for a Dalhousie Farmer's Market to be successful. Using the research from this project in conjunction with future economic feasibility research the Dalhousie Farmer's Market can become a reality.

Introduction

Our goal for this research project was to gauge the interest and preferences of the Dalhousie community regarding a potential campus farmer's market. We accomplished this through an online survey that posed questions considering what the market should provide, what principles it should prioritize, its frequency, and other general preference research. This information, in combination with some of the data collected from last year's project on the feasibility of a campus food co-op, can provide a stepping stone towards supplying local and organic food options for students, faculty and staff.

Recognizing and mitigating the issues surrounding food consumption are of the utmost environmental importance in changing the current negative human patterns that impact our planet. The powerful establishment of our global economy has created consumer expectations that demand immediate access to foreign products in all corners of the world. The resulting 'food mileage' that it takes to transport food shipments by truck, boat, and plane contribute substantially to our ever rising CO2 emissions. The environmental implications of the carbon footprint left behind by trans-national corporations are not as stand alone issue either. Mass production strategies used to generate this food often involve pesticides and genetically modified technology, which have proven to either have negative or inconclusive health effects on the consumer.

To alleviate these problems, a spreading consumer movement has developed, emphasizing support for local and organic food producers. Campuses across North America, like Bates College in Maine, have joined these efforts and reaped incredible benefits by committing their dining services to purchasing and serving local produce (Keniry, 85). Other campuses, like Acadia University here in Nova Scotia, have begun campus farmer's markets, providing a place for university communities to collectively make an effort towards buying local. The memorandum of

understanding that was signed last year by Acadia has also provided a permanent indoor home for the farmers to sell their produce year-round in the student union building (Acadia News Reader).

To date, evidence of Dalhousie's year-round commitment to local/organic produce initiatives is minimal to non-existent. The partnership the university has maintained with Sudexo and other food suppliers on campus has provided non-organic food from corporate stocks. The potential for Dalhousie to provide a farmers market would represent a step in the right direction, in tune with the recent greening the campus movement. Interest and feasibility data from the farmers' side of the equation has been collected through last year's *Feasibility of Supplying Locally Sourced and Organic Food for a Student-Run Food co-op on Studley Campus* assessment. This project, though not focusing on the potential for a market, gauged significant interest from farmers at the Halifax Farmer's Market downtown who were excited at the prospect of supplying Dalhousie. Their data also revealed the general pricing and seasonal availability of their produce, which can be of great use in determining the overall feasibility of a campus market endeavor. Our project, however, focused on the demand side of things, and the findings from our survey provide a useful basis for what the Dalhousie community would like to see in such a market. The following report presents our methods in conducting the survey, the results gained from this research in both paragraph and graph form and a discussion summarizing the uses and limitations of our data.

Research Methods

To complete our objective in our study we utilized specific research methods. Our study primarily involved qualitative results. We employed the use of surveys with participants, representing our intended stakeholders, mainly faculty and students of Dalhousie University. Our surveys were non-probabilistic in nature. In Halifax we are lucky to have a large weekly market and

several smaller ones and our research will provide us with suggestions from students and faculty on how to make an ideal farmers market at Dalhousie University. We used this information to determine temporal and qualitative factors (when should the market occur, and what should it include).

Surveying constituted the majority of our research, because it's a powerful tool for acquiring a large volume of qualitative results quickly and cheaply (Palys and Atchison, 2008: 155). For our surveys we used "snowball" sampling to gain access to a group of market-going students; whose results spoke of general interest in a proposed Dalhousie Farmer's Market. "Snowball" sampling is a process of finding desired participants and getting recommendations for other potential participants through their connections and relationships (Palys and Atchison, 2008: 126). Our first targeted respondents were the members of our class Environmental Problem Solving II. We believe this was be a good place to start the "snowball" sampling because we have easy access to many students who have shown interest in the environment by enrolling in the class. We believe that interest in the environment and interest in a local food market are correlated. A mass email was sent to all students and instructors of ENVS 3502, the email contained a link to the Opinio survey and asked them to complete the survey if they attend farmer's markets on the Halifax Peninsula. Verbal instructions were given to the class to forward the email to others that are not in the class but who may be interested in a Dalhousie Farmers' Market according to the principle of "snowball" sampling.

Each member in the group also sent out email messages and Facebook messages to acquaintances that are known market-goers. Every message sent out requested that respondents not only complete the survey, but send it to others who utilize a farmer's market. Internet based programs like email and Facebook are ideal tools for "snowball" sampling because it is extremely

easy to forward an email or Facebook message to theoretically hundreds of individuals. We chose to work with these two programs for distribution purposes because of the ease of use. We believe that the easier it is to use the more respondents we would have participating in our study and the more constructive our results would be.

Our survey was used to gauge the level of interest from stakeholders around Dalhousie University including students and faculty members. We also tried to find out what is most important to the respondents and what would make an ideal market for those participants. We focused on estimating interest from participants with regards to what should be for sale at the proposed market. It is crucial to the success of any future market that the vendors products match with market-goers purchasing interests. This benefits the market-goers but also benefits the vendors by selling more popular goods and therefore becoming more profitable. It is important to find out about interest in a future market and also habits of current market use. The goal of our survey was to have qualitative data about interest levels for the market and get recommendations for a proposed market on Dalhousie Campus. Results from our survey allowed us to make judgments on how best to make a market feasible i.e. what factors of current markets draw people to them.

Using a simple random sample would have required us to survey many hundred; possibly thousands of individuals and this is not feasible. We would also have required a sample frame i.e. a list of all possible participants, and this could prove to be difficult because our target population is every student and faculty member at Dalhousie (Almost 20 000).

We aimed for approximately 100 participants but we welcomed as many as we could get to strengthen our results. If our survey received 100 respondents we believe that there would be identifiable patterns within the results that are not just based on random events but on factual preferences that would be representative of any group of future faculty and students that may visit

the proposed farmers' market. The number of participants in itself was a good indicator of interest level. If participants feel passionate about the issue and show a large interest in a Dalhousie Farmers' Market they will be more likely to forward the survey on to others that they know. If students and faculty know many people who they could possibly send out the survey to, that means there is more interest in current markets, which we assume will translate into more future interest in a Dalhousie Farmers' Market.

We believe to make recommendations from observable patterns with any confidence we would require a minimum of 50 participants. There is no possible way to create a confidence interval or calculate a number of respondents that would create definitive significant results for our type of sampling. From our survey results we were able to analyze general interest level from current market-goers and what these market goers like best about current markets i.e. what would make the proposed market as successful as possible.

When the survey was over the data was compiled into spreadsheets and manipulated using Microsoft Excel software. Expressing the results of our survey was simple in most cases, factors that got the most preferred responses were deemed the most popular e.g. the most preferred days of the week were Friday and Sunday. In our survey we asked what factors were most important in a market and to express this data we used a weighted scale. The choices given to respondents were "Not Important", "Somewhat Unimportant", "Important" and "Very Important". These responses were weighted with scores of 1,2,3 and 4 respectively; this gave a maximum score of 516 and a minimum score of 129 if every respondent answered each factor of importance. None of our results were cross-correlated which each other to find more patterns that could be of use. If our sample size was much larger we believe this could have been valuable information especially in

marketing projects, but we believe that our sample size was not appropriate for making such inferences.

Limitations and Delimitations

Limitations

Some limitations that we encountered during our research phase of our study were expected and some were more surprising. The number of respondents will always be a limitation when it comes to non-probabilistic sampling. The more participants one can involve in their study the more confidence one can have in the results. We attempted to have 100 people respond to our survey and we surpassed that number by a fair margin (30%) but if we had gotten 500 people to answer the survey (which was not necessarily feasible) we could have much more confidence in our results. This was an obvious limitation that we expected to have.

Time is almost always a limitation and because this study was prepared for a university course of a given length we only had four months to complete all aspects of development, research, analysis and report writing. If we had more time to complete this study it is possible we could have gotten more respondents and we could have possibly avoided some of the delimitations that we applied to our study.

“Snowball” sampling is non-probabilistic in nature and allows for some control over who gets surveyed and who doesn't. Because we used Facebook and email to distribute our survey anyone who doesn't use these communication methods would not have been included in the survey. That being said, every student and faculty member at Dalhousie University is assigned an

email address so it was possible for every “stakeholder” to participate if they check their email and are interested in the topic.

The starting point for our “snowball” surveying was also a limitation, because it is impossible to know everyone there was bias in the choosing of participants to send the survey to. There is an inherent limitation to the representativeness to any “snowball” sample.

Delimitations

We had to drastically reduce the scope of our study to fit within the timeframe. Initially we wanted to include non-student and non-faculty members of the community around Dalhousie University who would be able to take advantage of the market on Dalhousie campus because they live in the neighbourhood. To include these community members we would have to send out surveys to get good results for this demographic. Our sampling style (snowball) didn’t fit well with this because we didn’t have the strong connections to start our sampling with this demographic which we did have amongst students and faculty.

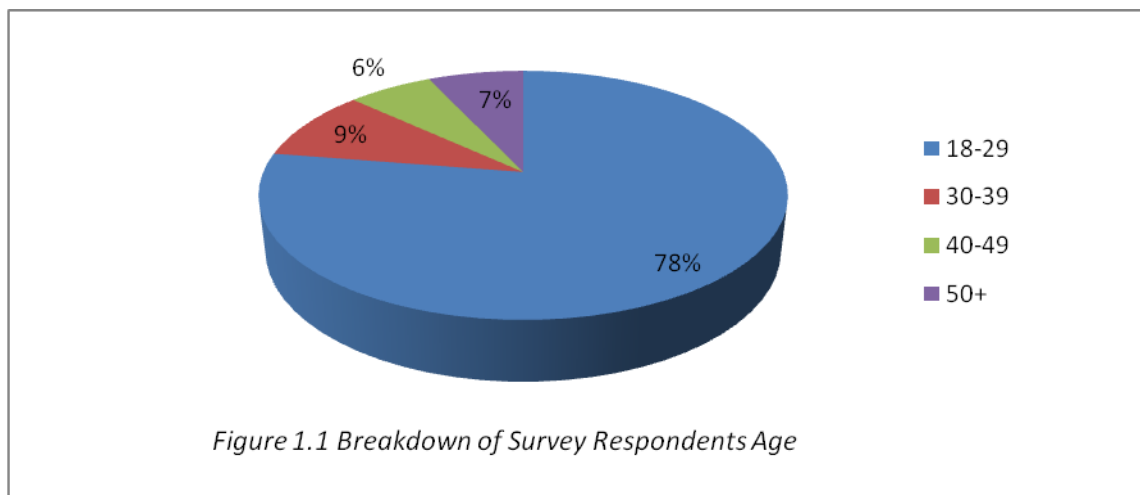
At first we wanted to study the feasibility of a farmers’ market at Dalhousie. This would have meant exploring the cost structure of farmers’ operations and the spending habits of our stakeholders. This information is valuable and would make for a good study topic for the future but we found that our efforts were better used in gathering information on what is desired in a future farmers’ market. If the market of the future is not suited to the people who will be attending it is of no use to anyone and will not be feasible. Therefore we chose not to explore any of the economics of the market and only studied preferences of current market goers.

Results

Survey Results

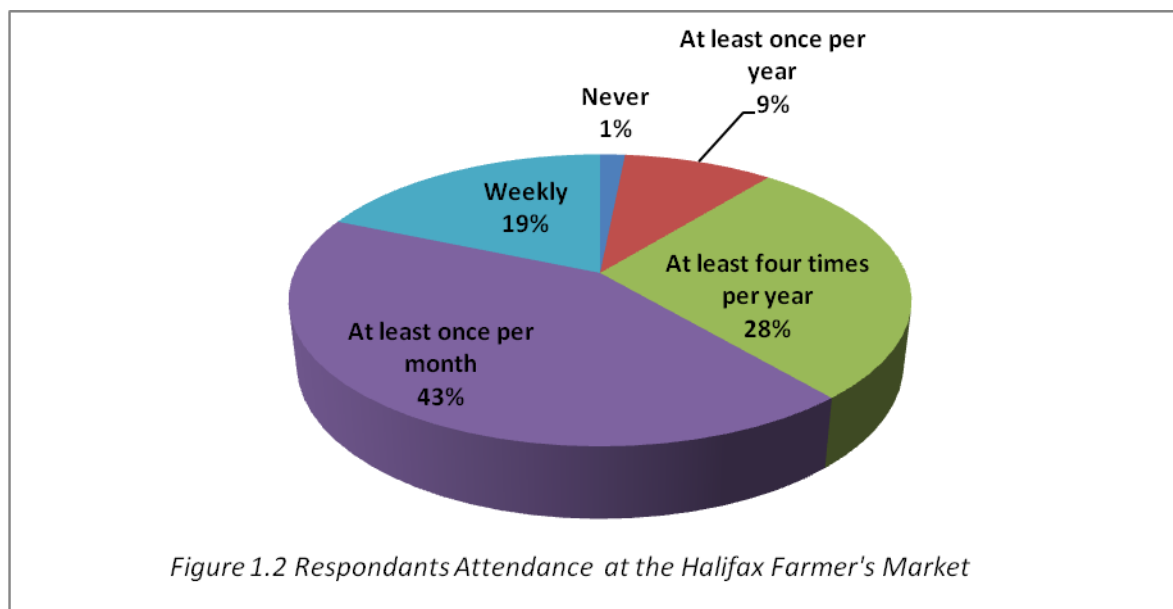
The survey was completed by 132 respondents who have an interest in a Farmers Market at Dalhousie. Of the 132 responses, 3 were eliminated due to the response in question 1 which asked “Are you currently a student, staff or faculty member at Dalhousie University?” Therefore 129 or 98% of the responses were useful to interpret the results. Please see *Appendix I* for a copy of the survey that was distributed.

The age demographic of the respondents was proportioned with the majority being aged 18-29 at 78%; and the minority in the remainder of the groups, 30-39 at 9%; 40-49 at 6%; and 50+ at 7%.



To gauge how many of the respondents attend the Halifax Farmers Market, the respondents were asked to select the most appropriate response from the categories: never, at least once per year, at

least four times per year, at least once per month and weekly. The most frequent response is once per month at 43%.



Upon gauging attendance at the Halifax Farmer’s Market, respondents were subsequently asked to express their opinion in open text form. This required the respondent to indicate, why they choose to attend the market; the favourite aspect of the market; and what aspects they would change about the market. Since respondents were asked to indicate one or more criteria for the aforementioned survey questions, the responses were dissected and sorted into the summarized categories which were based on the most frequented comments.

The first two figures represent the respondent’s reasons for attending the Halifax Market (*Figure 1.3*) and what is the most appealing about the experience (*Figure 1.4*). The majority of respondents, at 71 responses, indicated that they attend to support local farmers. This also shared the majority with “attending to enjoy the atmosphere” of favourite aspects about the market; each had 33 responses.

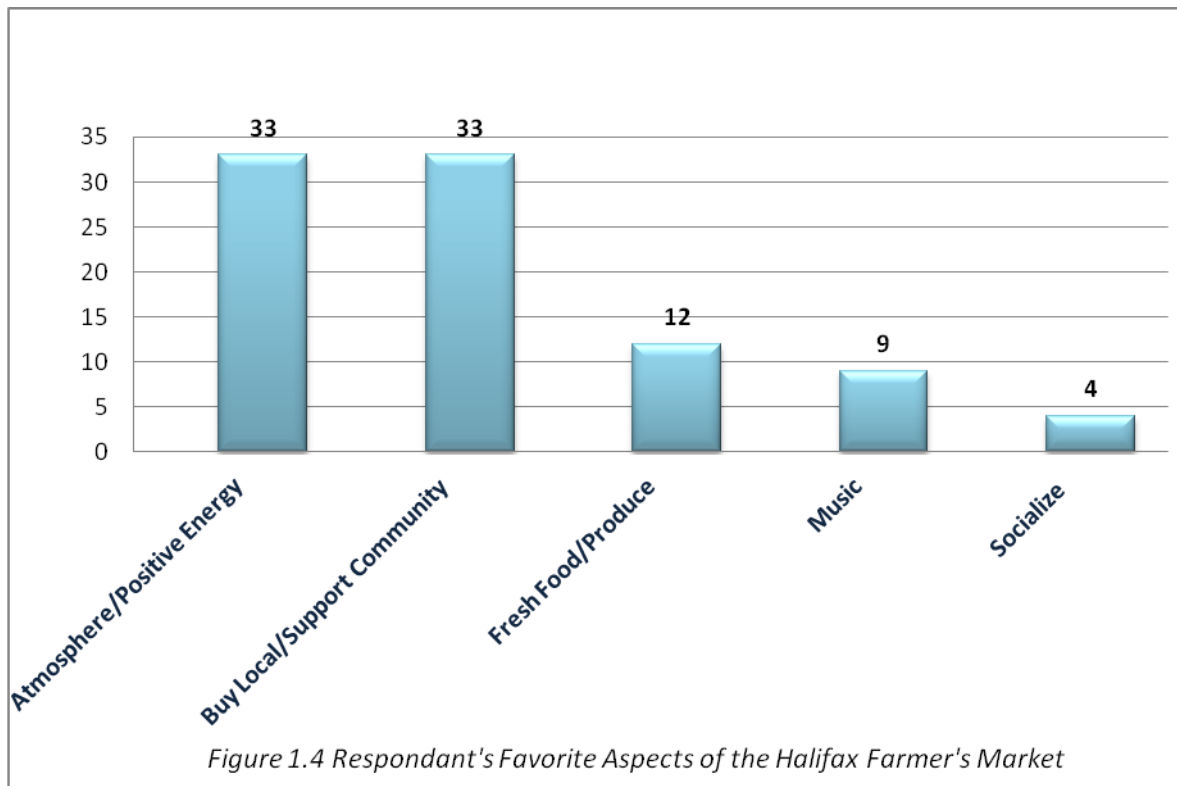
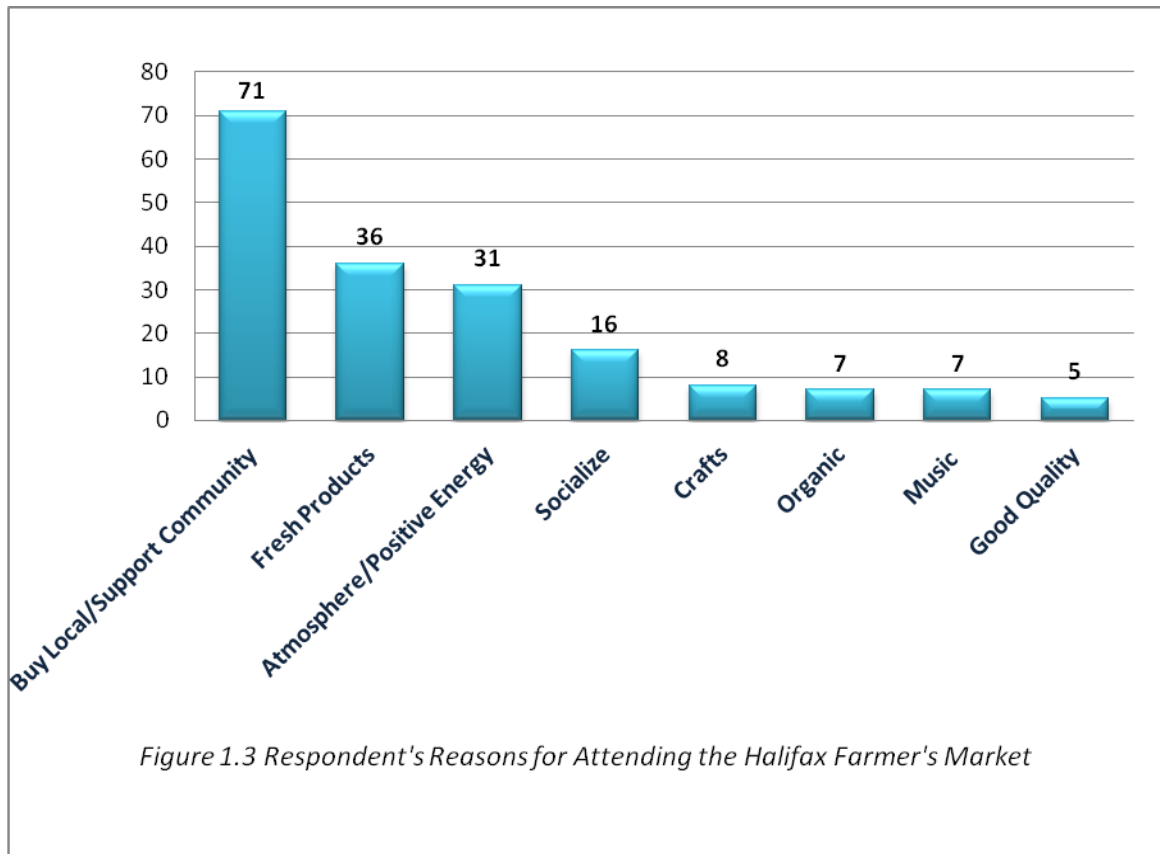
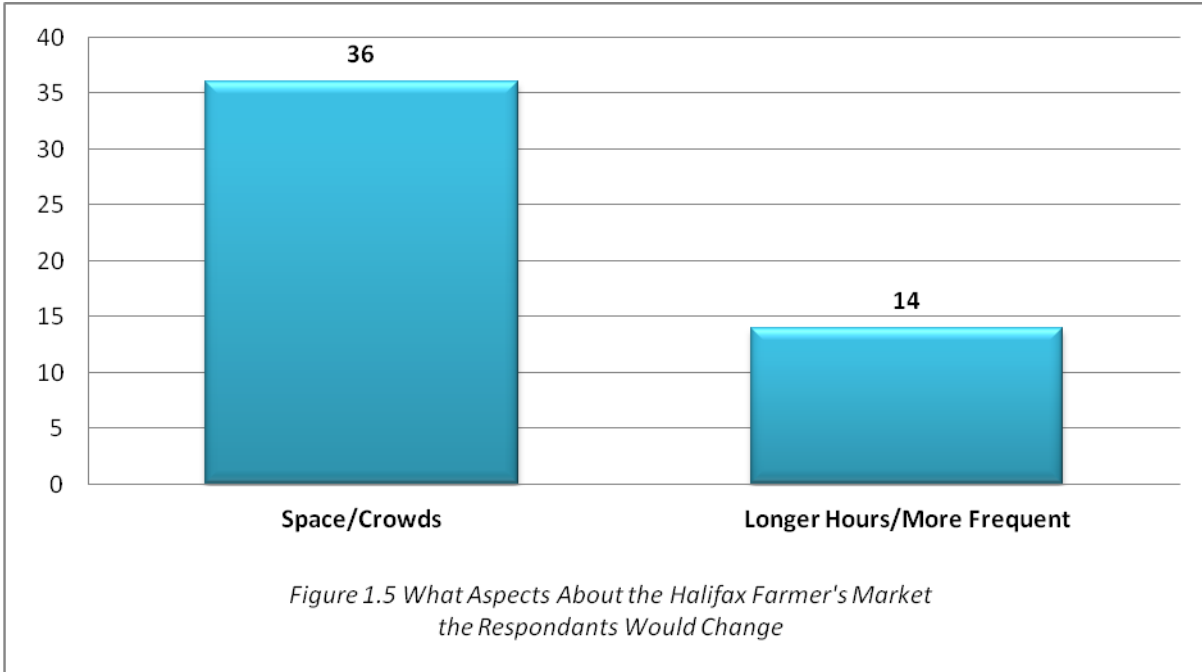


Figure 1.5 below, is a summary of the aspects respondent's would change about the Halifax Farmer's Market. The two significant common responses were that the market does not have enough space, with 36 comments, and demand for extended operations in both days and hours, with 14 comments.



The second half of the survey was specific to a Dalhousie Farmer's market. The initial question asked the respondents to indicate how likely they would attend the market by using a rating scale of not likely, somewhat unlikely, somewhat likely, and very likely. The favourable response was very likely with 65%, followed by somewhat likely at 28%; somewhat unlikely at 5%; and not likely at 2%.

Figure 1.6 below, is a measure of the responses to what day of the week is of preference. Friday and Sunday reached the majority, each yielding 28% and 27% respectively, followed by Monday at 15%; Saturday at 12%; Wednesday at 7%; Thursday at 6%; and Tuesday at 5%.

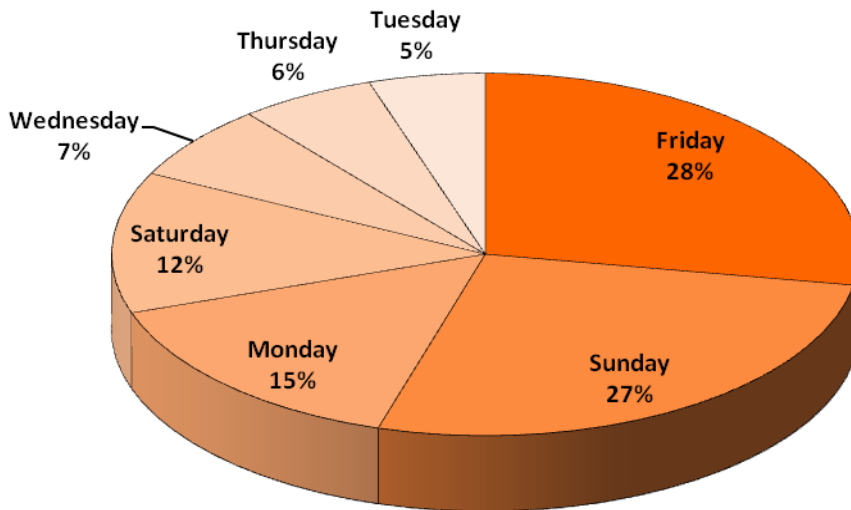


Figure 1.6 Respondents Preferred day for Farmer's Market on Dalhousie Campus

In relation to the day of the week desired for a market on campus, the respondents were also asked what time of day they would prefer to attend. Afternoon was majority at just over half at 57%.

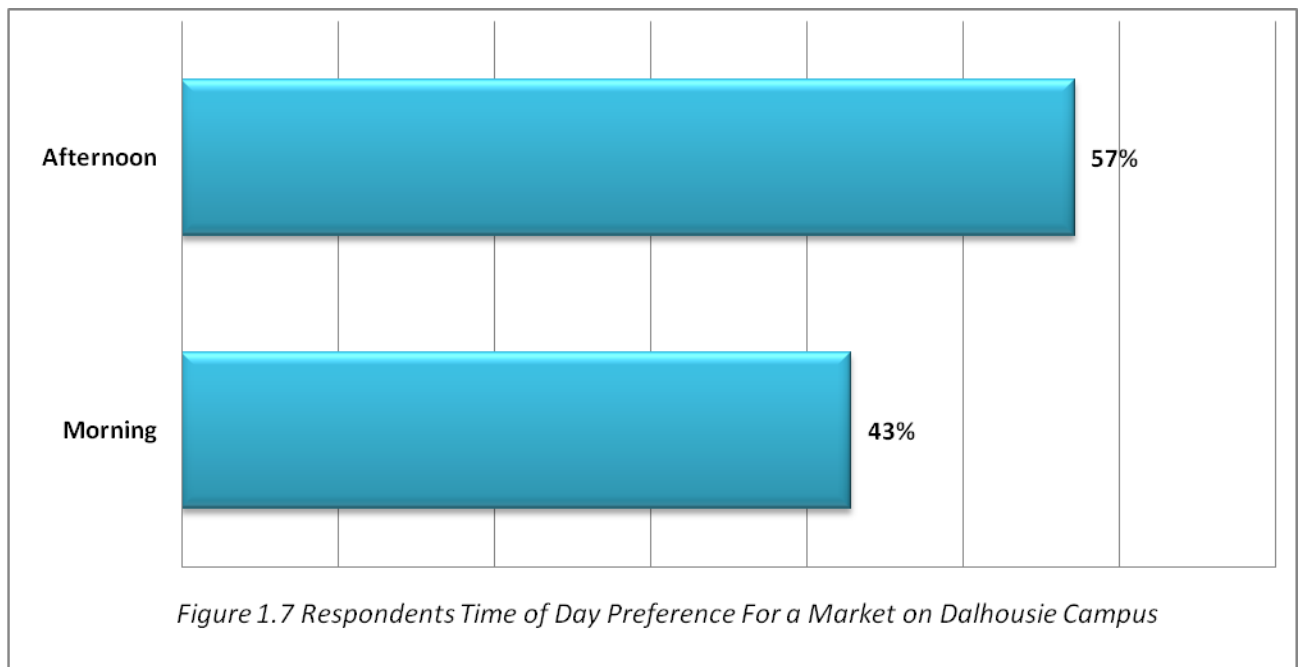
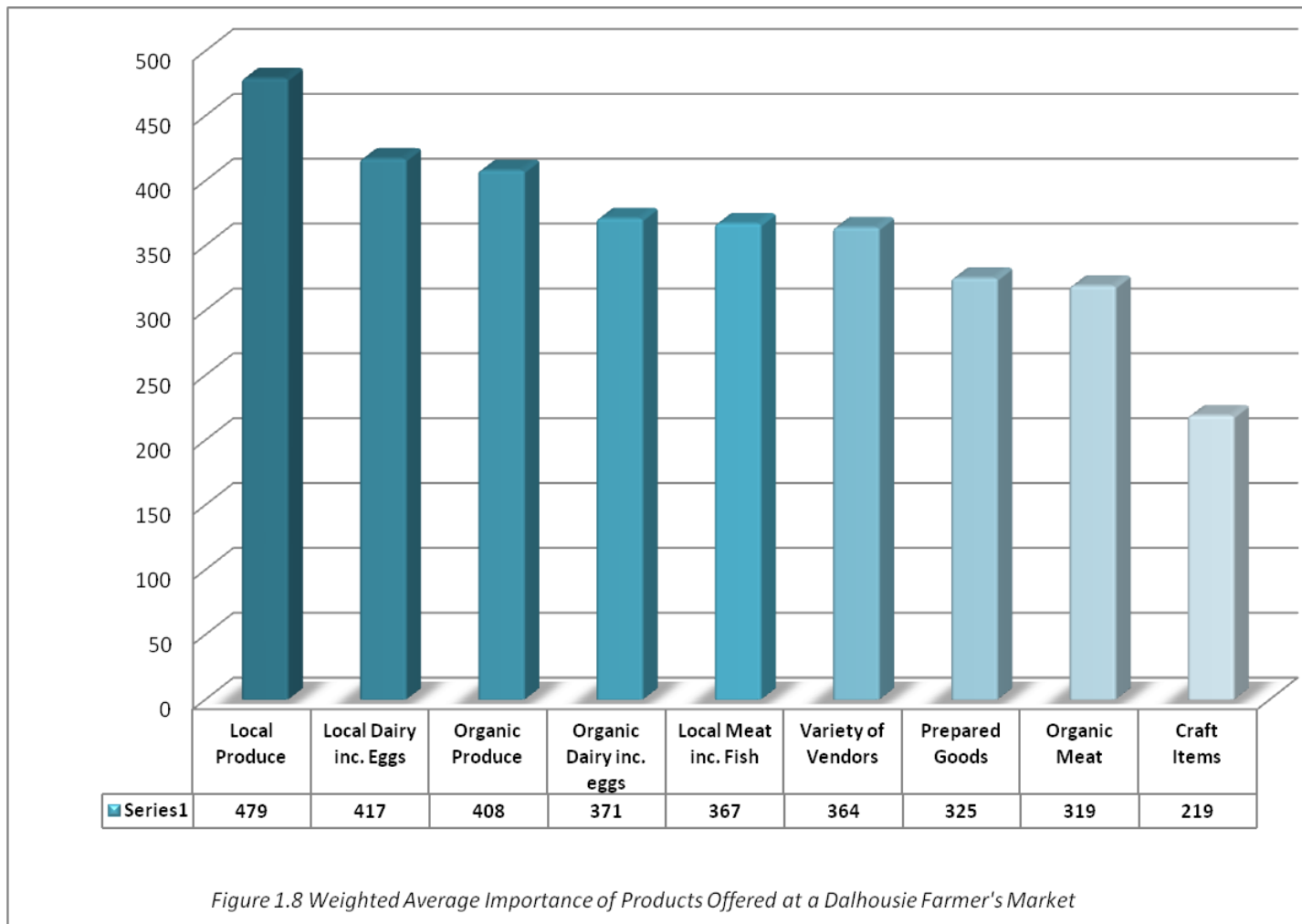
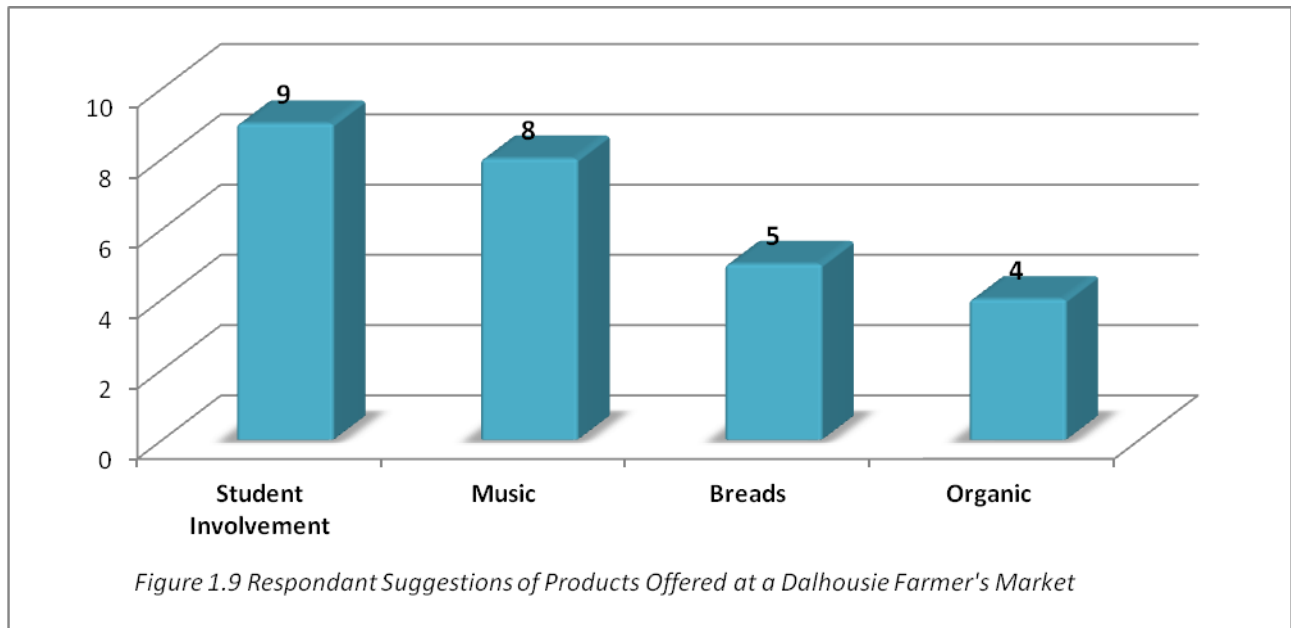


Figure 1.7 Respondents Time of Day Preference For a Market on Dalhousie Campus

The last part of the survey asked respondents what types of products they would like to see at a Dalhousie campus market by using both a rating scale and open ended question. Figure 1.8 is a summary of the weighted average importance for the items (listed in the x axis of the chart) which were rated by measure of, not important; somewhat important; important; and very important.

Weighted level of importance was calculated by. Figure 1.9 is a summary of the most frequented suggestions which included student involvement (9 respondents); music (8 respondents); breads (5 respondents); and organic (4 respondents).





Discussion

In order to measure or gauge the interests and preferences of the Dalhousie community regarding a potential campus farmer's market it was imperative to conduct a survey that would express the opinions of the students of Dalhousie University. The opinions of the students matter because they are the ones who can shed light on the potential demand for a Dalhousie Farmer's Market.

Of the 129 participants involved in the survey, it is important to note that 43% of them responded to attending the Halifax Farmer's Market at least once a month. 28% of those surveyed attend the market at least four times a year and 19% attend the market on a weekly basis. With only 1% who don't attend the market; results show that there is significant interest. It would have been ideal if more than 19% attended the market on a weekly basis but there is still some optimism to take from this finding. A farmer's market on campus would give the students a higher incentive to attend. We did not ask why students didn't attend the market; but due to findings of significant interest in the

market, it would be safe to assume that having the market several blocks away from campus with no means of transportation, it would be difficult for students to shop at the market.

When asked to point out the main reason students attend the Halifax Farmer's market, 71 respondents answered that buying local was their main incentive. This finding reiterates the student's strong feelings of the importance in supporting the local community. 36 students indicated that the fresh products was the main reason for attending the market; while 31 students enjoyed the positive energy and atmosphere the market provides. These findings support the argument that providing Dalhousie University with their own Farmer's market would be feasible and potentially successful. A market at the university would continue to satisfy their need for buying local and fresh products but would also create an even more enjoyable atmosphere for the students to enjoy together as a unified Dalhousie community.

The students were asked to respond to suggestions they would be interested in having at the Dalhousie Farmer's market. Most students expressed their interest in providing some sort of student involvement or live music. This would be a characteristic of the market that would make it unique to other farmer's market around the city. It would likely draw more students and other consumers around the city. Student involvement would likely allow students to use their creative abilities to make the market an even more attractive event to attend.

The students voiced their opinion that having the market on a Friday or Sunday afternoon is their preference. 28% of the respondents indicated Friday as being their top preference; while 27% responded that Sunday would be the most ideal day of the week to host the market. This is good news because the Halifax Farmer's Market is on a Saturday; therefore that would make the idea of Dalhousie University hosting their own market that much more difficult. Friday afternoons is the

time of the week with the least amount of classes for the students and would likely allow for a high attendance rate.

There are some limitations worth pointing out such as the fact that more of the respondents were students of the class. These students likely have increased awareness to the importance of sustainability such as supporting the local community by purchasing local products. Their views likely do not express the views of the rest of the Dalhousie community. There is however, optimism that enough students would share their knowledge and express similar views because students of this course are from several different Bachelors and majors.

The students were also asked about what aspects of the market they liked the least. Most of the respondents (36) expressed that the market was too crowded for their liking. Although the Halifax Farmer's market will likely draw more people because it is a more established event, we can not underestimate the potential for large crowds at a campus market; given the number of students. However, the area we plan to use for the market is larger than the space used at the Halifax farmer's market and this could help alleviate the displeasure of highly congested crowds.

Conclusion

Currently global warming is a growing international concern as the level of CO₂ emissions are at an alarming rate and continuously increasing. The echo boom generation aged 18-39 will experience the drastic effects of climate change, this was our target demographic and 87% of survey respondents were in this age category. The use of local produce can be directly attributed to lowering CO₂ emissions through the reduction of transporting foods over long distances. The concept of a Farmer's Market is far from being new, but the benefits are slowly becoming

recognized and experienced by implementing food markets in campuses across North America like Bates College in Maine, Acadia University here in Nova Scotia, and of course the city of Halifax.

Our survey was used to gather primary data on how responsive the Dalhousie Community is to the idea of an on campus farmers market that offers locally grown foods as well as arts and crafts. The survey indicated not just their level of interest, but what areas they place the largest emphasis on or more specifically their most desired goods and services and days of operation.

There were of course limitations to the survey including time constraints as our initial report wanted to determine the feasibility of a campus Farmers Market and the timeframe given of four months not prove sufficient. So our efforts were better used in gathering information on what is desired in a future farmers' market. Another constraint was the similarly aligned interests of respondents as the majority of them were environmental students which skewed the results in favour of the market. However, the respondents did total 129, which provided quite accurate data or rather results for analysis.

Based on our in depth survey analysis, it is clearly evident that the response to a Dalhousie Farmers Market on campus was overwhelmingly positive and it is a highly viable initiative.

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Appendix 1 – *Survey for Dalhousie Community*

Dalhousie Farmer's Market Survey

Please take a few minutes to complete our survey to assess feasibility for a farmers market on Dalhousie Campus. We are conducting the study for our Sustainability/Environmental Science class and also to assist in a sustainable campus by bringing local food to our community.

1. **1. Are you currently a student, staff or faculty member at Dalhousie University?**

- Yes
- No

2. **How old will you be on December 31st 2010?**

- Less than 18
- 18-29
- 30-39
- 40-49
- 50+

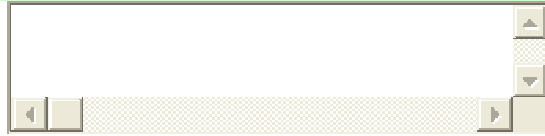
3. **Approximately how often do you attend a farmer's market on the Halifax peninsula (choose the one that reflects your attendance the most)?**

- Weekly
- At least once per month
- At least four times per year
- At least once per year
- Never

4. **Briefly describe two or three reason why you visit the market.**

5. **What do you like most about attending the farmer's market.**

6. What, if any, changes would you make to the market to make your visits more enjoyable?



7. If a weekly market was developed on Dalhousie campus, how likely would you be to attend?

- Very Likely
- Somewhat Likely
- Somewhat Unlikely
- Not Likely

8. Which day would you most prefer to attend the Dalhousie farmer's market?

- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday
- Sunday

9. Would you be more likely to attend the Dalhousie market in the morning or afternoon?

- Morning
- Afternoon

10. How important are each of the following aspects in attracting you to attend a Farmer's Market on Dalhousie Campus:

	Not Important	Somewhat Important	Important	Very Important
A large variety of vendors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of craft vendors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of local produce	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Availability of organic produce	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of local meat (including fish)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of organic meat (including fish)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of local dairy products (including eggs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of organic dairy products (including eggs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of prepared goods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. **Are there any other products, offerings or services you would like to see at a Dalhousie Farmer's Market?**

12. ***I understand the information provided in this survey will be kept confidential and will be used solely for the purpose of this ENVS 3502 (Environmental Problem Solving II) research project.***

Yes

No