

University of British Columbia

Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

# Increasing Access to Sustainable Food on Campus

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## EXECUTIVE SUMMARY

Canadians are taking a greater interest in sustainably sourced food due to the growing connection with human and planetary health (Kramer et al., 2019). University students not only want access to healthy, affordable food options, they also care about the sustainability and social justice of their food (Farm to Cafeteria Canada, 2021). In tandem with a desire to consume sustainable food is the challenge of food security. In a 2019 survey, it was determined that 37% of University of British Columbia (UBC) Vancouver Campus' undergraduate student population was food insecure (UBC, 2020a), almost four times the provincial average of 12% recorded in 2018 (Tarasuk & Mitchell, 2020). More specifically, it has been well documented that financial access to healthy food has proven to be difficult for students on the UBC campus (Chua et. al., 2019).

As one way to address food insecurity and access to sustainable food on campus, a student-initiated referendum was passed in 2018 with an 85% majority vote in favor of a Sustainable Food Access Fund (SFAF). The purpose of the SFAF is to increase the affordability at four sustainable food outlets on campus - Agora Café, UBC Sprouts, Roots on the Roof and UBC Farm. The fund allows these initiatives to continue to provide low-cost food to students and increase sourcing from campus food producers. Currently, the AMS Finance team has identified the need to reassess the fund for the first time, including the value of the fund, its efficacy in meeting fund objectives, and opportunities to enhance and expand the fund objectives. Therefore, the purpose of this study is to enhance and expand student's access to equitable, just, and sustainable food through assessing and providing recommendations for scaling up the AMS SFAF. The objectives of this study are to: (1) Conduct an assessment of the efficacy of the fund, including a baseline of how it has been used to date, perceptions of the fund among fund constituents and recipients; (2) Conduct a review of literature that identifies promising practices of increasing affordability and accessibility of sustainable food at other institutions; (3) Propose a scaling up of the SFAF that honours initial SFAF instigators and recipients of the SFAF while targeting specific policies in the AMS Sustainability Action Plan.

Through Community Based Action Research (CBAR), the proposed research included all affected stakeholders as active participants (Nasrollahi, 2015). An inclusive environment where all stakeholders' voices matter serves as a catalyst in the research process as we worked toward a common goal of addressing food insecurity and access to sustainable food on campus. Stakeholders involved in this project include initial referendum members, SFAF initiatives, and the general UBC student population. Data collection consisted of general surveys and interviews with the above-mentioned stakeholders to better understand the awareness, use and experience with the SFAF from various perspectives. Additionally, a literature review was conducted regarding food access funds available to students in other post-secondary institutions across Canada to identify similar programs for comparison. Such evidence was used to further support the importance and need for the SFAF at UBC.

We found the SFAF to be successful in allowing the initiatives involved in the fund to purchase food from local food sources and to provide student discounts. However, there were some challenges with the SFAF including institutional memory, communication with the AMS and student awareness. Based on our findings our immediate recommendation for the AMS is to establish a SFAF committee to improve communication and collaboration between the food initiatives and the AMS. Our intermediate recommendation is to expand fund restrictions beyond food purchasing and to increase student awareness of the fund. Finally, in the long term we propose there to be an incremental fee increase up to \$5.00 over five years. In addition to our recommendations, as we were unable to review the MOU, further research on the MOU would give clarity on whether the SFAF is still meeting the needs of all stakeholders.

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## LIST OF ABBREVIATIONS

**AMS** - Alma Mater Society

**CAP** - Climate Action Plan

**CBAR** - Community Based Action Research

**CFFS** - Climate-Friendly Food Systems

**FSI** – Food Security Initiative

**MOU** - Memorandum of Understanding

**SEEDS** - Social Ecological Economic Development Studies

**SDG** - Sustainable Development Goals

**SFAF** - Sustainable Food Access Fund

**SMART** (objectives) - Specific, Measurable, Achievable, Relevant, and Time-bound

**TCPS** - Tri-Council Policy Statement

**UBC** - The University of British Columbia

**VP** - Vice President

## 1. INTRODUCTION

### 1.1 RESEARCH TOPIC

The University of British Columbia (UBC) has made notable strides in food system sustainability including increasing sustainable food purchasing practices, finding ways to address emissions related to food, and providing healthy food on campus (AMS, 2020; UBC, 2015). However, while doing these things it is important to ensure everyone still has equitable access to culturally appropriate and affordable foods that meet the needs of individuals.

The Sustainable Food Access Fund (SFAF) is an Alma Mater Society (AMS) student fee which enables funding for four food initiatives on the UBC campus to provide students access to “good food” at a reduced price. The SFAF along with other initiatives such as the AMS Food Bank and the Food Security Initiative (FSI), work to address food access on the UBC campus. Despite these initiatives, there are still shortcomings to these methods, reflected in the 37% of students' food insecurity at UBC Vancouver (UBC, 2020a). This study aims to assess the efficacy of the SFAF and how it functions, while providing feedback and recommendations on potential opportunities to improve and expand the fund.

### 1.2 RESEARCH RELEVANCE

#### 1.2.1 RELEVANCE TO THE SURROUNDING COMMUNITY

The SFAF addresses issues around food security and affordability while continuing to reflect the “real cost of good food” by way of increasing accessibility through subsidies. Research in this project can directly affect students on the UBC Vancouver campus through enhancing and expanding student’s access to equitable, just, and sustainable food by proposing recommendations to scale up the SFAF, therefore reaching more students. This is important to address as Canadian post-secondary students are susceptible to food insecurity with a recent report showing 39% of university students surveyed experience some degree of food insecurity (Maynard et al., 2018; Silverthorn, 2016). Similarly, in 2019, 37% of UBC Vancouver

undergraduate students reported to be food insecure, where international students, those with mental health challenges and other minority groups are at an increased risk of being food insecure (UBC, 2019a).

More specifically, it has been well documented that financial access to healthy food has proven to be difficult for students on the UBC campus (Chua et. al., 2019). In 2020, COVID-19 intensified the prevalence of food insecurity on UBC campus as many students lost jobs but are still faced with the same expenses (UBC, 2020a). Financial inaccessibility to healthy food can negatively impact students' academic performance in addition to creating anxiety and frustration (Maynard et al., 2018). Furthermore, support of local food systems means that the local economy is profitable throughout, there are broad benefits socially and there can be a positive or neutral impact on the environment (FAO, 2018). Therefore, researching the efficacy of the SFAF has the potential to positively impact UBC students and the community around them.

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### 1.2.2 CONTRIBUTION TO ADVANCING SOCIETAL ISSUES

Beyond UBC, this project can advance local, national, and international issues and goals. The city of Vancouver proposed a food strategy in 2013 with the goal to improve access to healthy, affordable food for all residents and to advocate for a sustainable food system (City of Vancouver, 2013). Our project aligns with their goal as we are evaluating the efficacy of a subsidy for sustainable food initiatives to provide affordable and healthy food options to UBC students. As a nation Canada recently created a food policy in 2019 based on the United Nations Sustainable Development Goals (SDG) (United Nations, n.d.). One of their action areas is to ensure Canadian communities have access to healthy food, by increasing community-based initiatives that address household food insecurity (Agriculture and Agri-food Canada, 2019). The SFAF is an example community-based initiative which works to address food insecurity by increasing access to healthy food. On an international level our project would be enacting the Okanagan Charter's goal of including health and wellbeing into all aspects of institutions by ensuring students are included as meaningful stakeholders on top of addressing food security on campuses (Okanagan Charter, 2015).

### 1.2.3 ADVANCING SUSTAINABILITY ISSUES, POLICIES AND PRACTICES ON CAMPUS

In 2016, UBC signed the internationally recognized Okanagan Charter which speaks to their goal in being a leader in sustainability and student well-being. In addition, this project works towards achieving the UBC Wellbeing Strategic Framework which includes a target to “reduce food insecurity for UBC community members by 2025” (UBC Wellbeing, 2019). The AMS Sustainability Action Plan at UBC which is based on the United Nations SDG’s has a goal under advocacy and leadership “to address the issue of food insecurity at UBC through increased funding and improved programs and services” (AMS, 2020). Promoting the access of sustainable food options on campus works toward the Climate Action Plan (CAP) 2020/2030 and UBC Climate Emergency Declaration commitment to reducing emissions related to food (UBC, 2015; UBC 2019a). Finally, the research completed in this project can provide a foundation for the new CAP 2030 by showing what is already being done to promote sustainable food systems and strategies for improvement in the future.

### 1.3 PROJECT CONTEXT

In 2018, the SFAF was created with an 85% student vote, with a goal of increasing the affordability and student access to sustainable food sources by aiding four campus food initiatives – UBC Sprouts, Agora Cafe, Roots on the Roof, and UBC Farm. The referendum enabled funding for these four initiatives to provide UBC students access to “good food” at a reduced price. The AMS VP Finance is primarily responsible for the distribution of the SFAF and has recently identified the need to reassess the fund for the first time. Some of what was proposed to be assessed included the value of the fund, its efficacy in meeting fund objectives, opportunities to enhance and expand the fund objectives, partners, and participant access, enhance fund transparency and create resiliency measures to mitigate future risks.

## 1.4 PROJECT PURPOSE, GOALS AND OBJECTIVES

### 1.4.1 RESEARCH PURPOSE

To enhance and expand student’s access to equitable, just, and sustainable food through assessing and scaling up the SFAF.

### 1.4.2 RESEARCH GOALS

1. Provide our clients with a detailed understanding of what the SFAF has accomplished up to present day, including the efficacy of the fund.
2. Propose actionable recommendations to increase effectiveness and distribution of funds to increase student access to equitable, just, and sustainable food.

### 1.4.3 RESEARCH OBJECTIVES

Our research goals are broken down into three major objectives.

1. Conduct an assessment of the efficacy of the fund, including a baseline of how it has been used to date and perceptions of the fund among fund constituents and recipients.
2. Conduct a review of literature that identifies promising practices of increasing affordability and accessibility of sustainable food at other institutions.
3. Propose a scaling up of the SFAF that honours initial SFAF instigators and recipients of the SFAF while targeting specific policies in the AMS Sustainability Action Plan.

## 2. METHODOLOGY AND METHODS

### 2.1 RESEARCH METHODOLOGY

Our research methodology is Community Based Action Research (CBAR), which involved ensuring all stakeholders affected by the issue were engaged as active participants (Nasrollahi, 2015). Through the CBAR approach, we engaged individuals who have been traditionally “subjects” as active participants in the process. We interviewed the initial referendum members and SFAF initiatives and partners to guide our research. Furthermore, we invited SFAF users to participate in surveys. All

stakeholder voices were heard by providing an inclusive and safe-space environment. By facilitating this collaborative process, our group served as a catalyst to assist key stakeholders in the research process, and to work towards a collective vision and action. Team members also completed the Tri-Council Policy Statement (TCPS) 2 online tutorial to gain a better understanding of involving humans in ethical research.

## 2.2 RESEARCH METHODS

Our research methods included both primary and secondary data collection. Alongside analyzing secondary sources through literature review, our methods of primary research also included conducting surveys and interviews with appropriate stakeholders.

### 2.2.1 SECONDARY DATA COLLECTION RESEARCH METHODS

Our secondary data collection focused on performing a literature review on similar projects done at other campuses and institutions to determine promising practices that increase the affordability and accessibility of sustainable and ethical food. In addition, a review of relevant sources pertaining to topics of climate emergency, food security, sustainability, health, and wellbeing was conducted to expand our breadth of understanding on these topics as we analyzed and provided recommendations regarding the SFAF. The collected data was categorized in a summary chart by the institution, name of program/fund, fee, and additional unique characteristics.

In searching for similar projects done by other institutions, keywords used in different reports were important criteria in our search. Words used in relevant literature such as “food”, “food security”, “fund”, “sustainable\*”, “subsidy\*” received extra attention during our secondary data collection process when looking for similar funds at other campuses. Furthermore, as the purpose of our project was to provide suggestions to SFAF which could impact thousands of students and faculties on UBC campus, credible and academically accurate sources were prioritized. In this specific project, the secondary data collection was conducted drawing on key sources such as the Association for the Advancement of Sustainability in Higher

Education (AASHE), UBC Library, Annual Project/Fund Reports, Higher Education Websites, Policies, and Frameworks on Food Security and Sustainability.

## 2.2.2 PRIMARY DATA COLLECTION RESEARCH METHODS

### 2.2.2.1 SURVEY

Prior to survey administration, we conducted a preliminary test survey to assess the strengths and weaknesses of the survey, with the purpose of testing to see whether the appropriate questions were included based on responses. The target reach of our survey was all UBC students, as every UBC student is required to pay the SFAF fee unless they opt out. Our official survey was posted on the UBC student Facebook group *UBC Class of 2021/2022* and the AMS of UBC Instagram to help reach the general student population. UBC Sprouts also posted the survey on their Facebook page as their audience extends to a greater diversity of students compared to the other fund recipients. A copy of the survey is in Appendix A. The data was exported into Microsoft 365, and was analyzed using the Data Analysis ToolPak of Microsoft Excel Version 16.0. A one-way ANOVA and Fisher least significant difference (LSD) test was performed to determine the significance from our ranking.

### 2.2.2.2 INTERVIEWS

Interviews were chosen over the use of focus groups due to the difficulty of coordinating a time to meet for all initiatives and team members. Each interview session included a designated note-taker and an interviewer. Our group conducted semi-structured interviews with a member of each of the four initiatives. The interview questions are shown in Appendix B. Additionally, 3 of the 5 SFAF instigators were interviewed to have their intended purpose of the SFAF outlined and ensure their initial vision was respected and being carried forward. The interview questions for the SFAF instigators are shown in Appendix C. Before the beginning of each interview, we asked our interview participant to sign a consent form. In this form, the study purpose, potential risk/benefit, and confidentiality of this interview were explained in detail. Interviews were recorded as an audio file through the interviewer's mobile device and saved as an audio

file, which was later uploaded to otter.ai - a web page application that enables the instantaneous transcription of an audio file. From there, group members were each responsible for the coding of an interview to look for key themes. All audio files were deleted upon completion of this project.

## 2.3 METHODS OF ADMINISTRATION AND RECRUITMENT

Our groups' recruitment process involved contacting executives of the 4 UBC initiatives - Roots on the Roof, UBC Farm, Agora, and Sprouts. In the end, only Sprouts was able to help distribute our survey through their communication channels. Other forms of our recruitment process involved posting onto the Facebook Group of UBC Class of 2021/2022 and sharing the survey through channels of the AMS as well. Our survey was active through UBC Qualtrics starting March 24, 2021 and was active until April 09, 2021.

In addition to the 4 aforementioned SFAF funded initiatives, our group was also able to contact some of the fund's initial instigators through a team member's personal connections. As an incentive for participating in our survey, our team decided to invite survey participants into a draw for five \$25 gift cards from UBC bookstore. All survey participants were encouraged to leave their email at the end of the online survey to enter the draw. Once the survey closed, we randomly drew 5 participants as the winner of this draw, each would receive one \$25 gift card. Note that this draw was an independent part of the survey which the answer of participants would not be influenced by our incentive. We chose to administer both electronic surveys and virtual interviews over focus groups and other forms of administration. This decision was made primarily due to the current ongoing COVID pandemic and barriers to meet in person, in addition to coordinating a time for all initiatives and team members to meet.

## 3. RESULTS

### 3.1 PRIMARY RESEARCH

#### 3.1.1 SURVEY DATA

The survey distributed to UBC students had a total of 82 completed responses. Undergraduate students accounted for 75 of the responses while graduate students accounted for the other 7. A breakdown

of what faculty each respondent is from is listed in table 1. The largest group of respondents was from the Faculty of Arts, with 31 responses, followed by the Faculty of Land and Food Systems (LFS) with 24 responses.

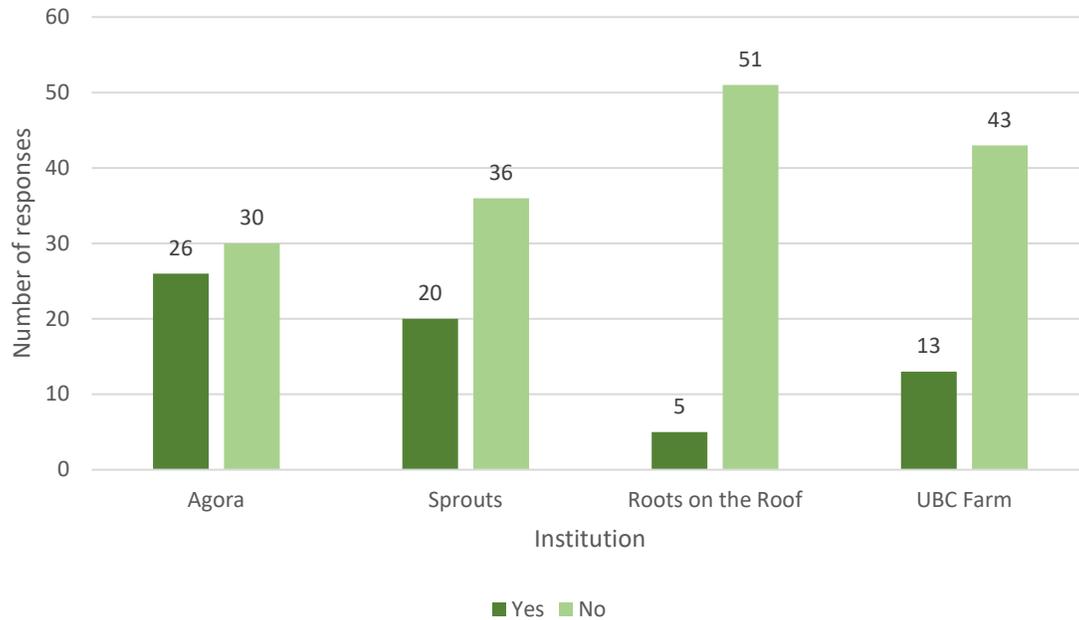
*Table 1. Breakdown of respondents by Faculty.*

<b>Faculty</b>	<b>Count</b>
Applied Science, Faculty of	4
Architecture and Landscape Architecture, School of	3
Arts, Faculty of	31
Audiology and Speech Sciences, School of	1
Business, Sauder School of	2
Education, Faculty of	1
Forestry, Faculty of	2
Kinesiology, School of	3
Land and Food Systems, Faculty of	24
Medicine, Faculty of	2
Science, Faculty of	8
Vancouver School of Economics	1
<b>Total</b>	<b>82</b>

### 3.1.1.1 POPULARITY OF THE FOUR INITIATIVES

Of the 82 respondents, 63 responded that they were at UBC Vancouver campus at least once a week prior to the campus shut down due to COVID-19 (March 13, 2020). Only these participants were asked questions 6-8 of the survey as the questions were specific to activity on campus. Breaking down the data even further, it was determined that 22% of respondents purchased food on campus every day, 35% purchased food almost every day, 32% purchased food one or twice a week, 8% purchased food less than once a week, and 3% never purchased food on campus.

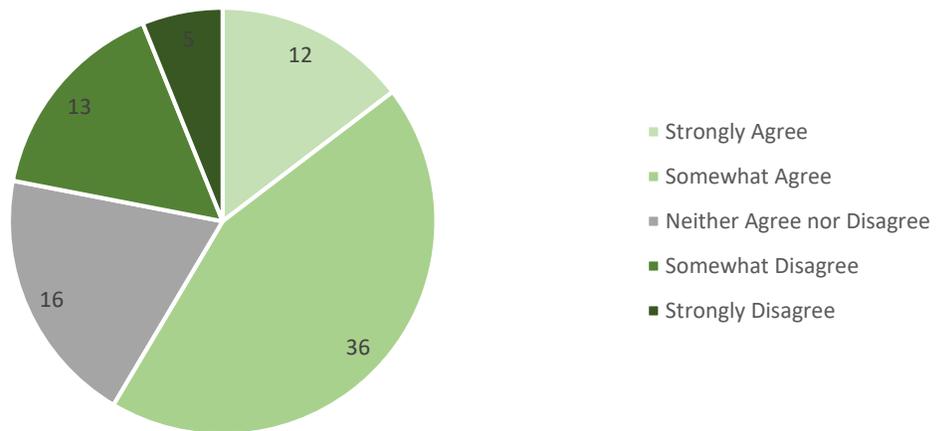
Most students responded saying that they have not purchased food from any of the four food initiatives. Even after removing responses from students that rarely purchase food on campus (less than once a week), the most common answer was still no. The results after removing these responses are in figure 1. Out of the four initiatives, Agora saw the most visits, with 26 of the 56 respondents (46%) saying they have been to Agora.



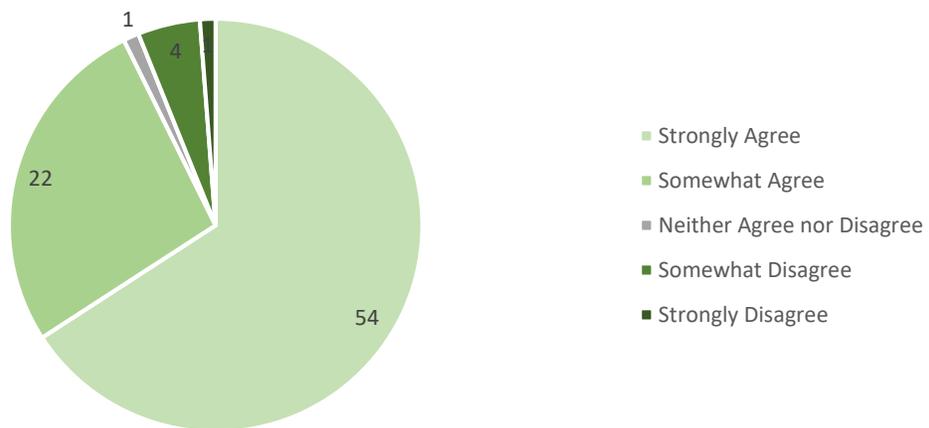
**Figure 1. Count of students who purchase food on campus once a week.**  
 An overview of students who purchase food at least once a week saying “yes” or “no” to having ever purchased food from each of the four initiatives.

### 3.1.1.2 STUDENT OPINIONS

The results of students reacting to the prompt of “I try to seek out sustainable food options when I eat” is described in Figure 2. Students responding somewhat agree and strongly agree made up 48 of the 82 responses, accounting for 59% of responses. Of the 48 students, 41 students (85%) shared additional details on how they tried to find sustainable food on campus. The full list of responses is in Appendix F. The most common answers were looking online, looking for labels and signs at the business, looking for plant-based options, and hearing from friends. Additionally, the results of students reacting to the prompt of “I believe it is important to have affordable access to sustainable food” is in figure 3. Students responding somewhat agree and strongly agree made up 76 of the 82 responses, accounting for 93% of the responses.

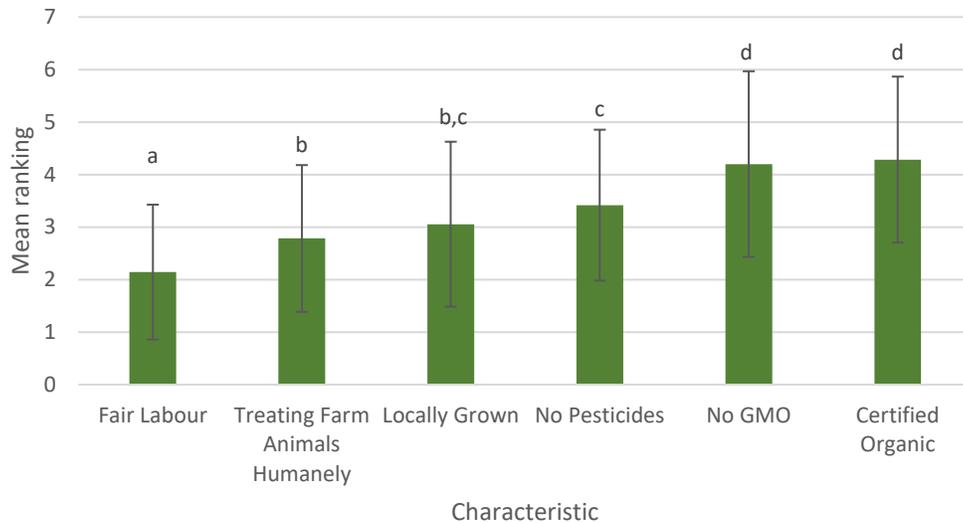


**Figure 2. Breakdown of responses to the prompt “I try to seek out sustainable food options when I eat”.**



**Figure 3. Breakdown of responses to the prompt “I believe it is important to have affordable access to sustainable food”.**

The results from the student rankings on characteristics important to them from sustainably grown food are in figure 4. The lower the ranking number, the higher the importance of the characteristic is to the respondent. Across the respondents the most important characteristic was fair labour practices with an average ranking of 2.14, and the least important was being non-genetically modified, and organic, with average rankings of 4.20 and 4.28 respectively. A breakdown on the data analysis is in Appendix D and E.



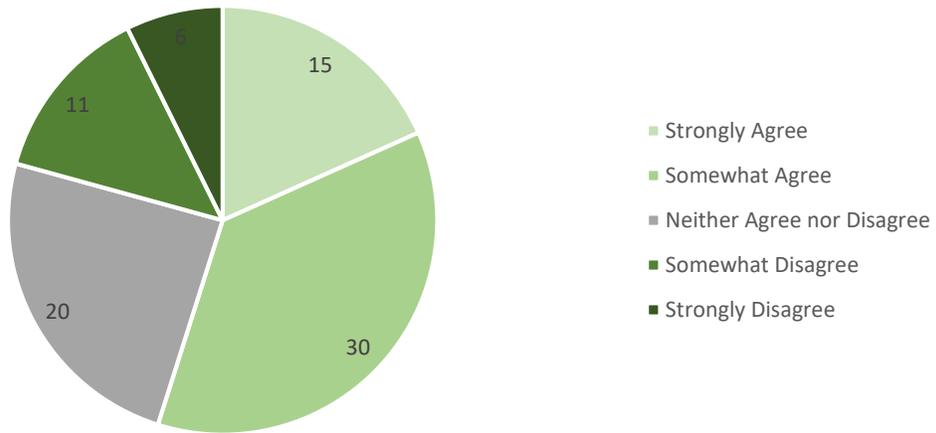
**Figure 4. Mean rankings of the six characteristics for sustainable food.** Each lower-case letter denotes a significantly ( $p < 0.05$ ) different ranking.

### 3.1.1.3 SUSTAINABLE FOOD ACCESS FUND

All survey takers were asked if they have heard about the SFAF; 66 said that they have not, and the other 16 said that they have heard about the SFAF.

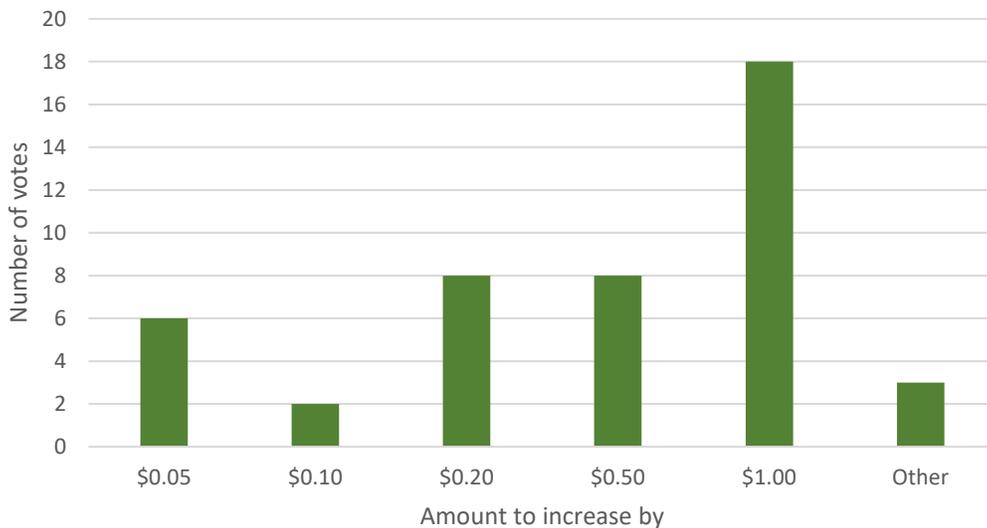
### 3.1.1.4 INCREASING FUNDING FOR THE SUSTAINABLE FOOD ACCESS FUND

The results to students reacting to the prompt of “I am open to the idea of increasing the SFAF fee to improve access to affordable sustainable food on campus” is in figure 5. Students responding somewhat agree and strongly agree made up 47 of the 82 responses.



**Figure 5. Breakdown of responses to the prompt “I am open to the idea of increasing the SFAF fee to improve access to affordable sustainable food on campus”.**

Of the students that said somewhat agree or strongly agree, their responses to “How much more would you be willing to have this fee increased by in order to support the SFAF?” is in figure 6. The most common answer (40%), with 18 of the 45 responses saying they would be willing to increase by \$1.00. The two responses that chose “Other” suggested upwards of \$5.00.



**Figure 6. Breakdown of responses to the prompt “how much more would you be willing to have this fee increased by in order to support the SFAF?”.**

Of the students that said neither agree nor disagree, somewhat disagree, or strongly disagree, they were asked to elaborate on their choice. There were 23 responses with the full list of responses in Appendix G. The most common responses were believing fees were already too high, not knowing enough about the SFAF, and generally not having an opinion on the subject. It is also important to note that two written responses of students who neither agreed or disagreed mentioned they would want to change their answer to somewhat agree or strongly agree. This has been reflected in the 47 responding somewhat agree or strongly agree.

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### 3.1.2 INTERVIEW DATA

Through this project, we interviewed one representative from each of the four SFAF funded initiatives. Furthermore, our group also interviewed 3 of the 5 fund's original instigators. After having transcribed our interviews through otter.ai, each group member was responsible for the coding of an interview to assess for common key themes. To avoid discrepancies and bias between group members responsible for coding, we created a shared list of themes to code prior to data analysis. Furthermore, each interview was checked through and coded by at least two group members. Coded transcripts were all created into separate documents and were later compiled into a single Microsoft Excel document. The consolidated list of themes as seen in Table 6 of Appendix H provided our group with which themes were the most common and most important issues to focus on in our later sections of our discussion and recommendations (Table 6; Appendix H). Using this consolidated list of key themes, we were able to create a word map. Based on the frequency a theme popped up in our coded interviews - the more frequent a theme was accounted for, the larger the word would appear on the word map (Figure 7). Key themes that appear in a smaller font text on the word map would exemplify a theme of lower importance. The most five frequent themes that appeared in our list were: (1) Use of the funds, (2/3) Communication, (2/3) Awareness, (4/5) Collaboration, (4/5) Increase \$ for the SFAF - with a tie in both the 2nd and 3rd most common theme, along with the 4th and 5th:



*Figure 7. Word Cloud for Interview Data.*

Word cloud with the size of words corresponding to the frequency that it was mentioned across all interviews.

With respect to each of the five most frequent themes that appeared in our interviews, the following section provides a more detailed description of each in relation to what interviewees were referring to:

1. **Use of the Funds** – All four initiatives have yet to receive any of the funds since its initiation in 2018. Most initiatives have still been providing student discounts or purchasing from local sources with the expectation to be retroactively paid in the future. Regarding the use of the funds most initiatives stated that they would like greater clarity on how the funds can be used. Other than using the funds to purchase food from sustainable sources or by providing forms of subsidies for UBC students to purchase their food, initiatives had expressed their interest in using their received funds for purposes other than purchasing food alone. For example, initiatives had expressed their concerns regarding the old equipment present in their facilities, and as such would hope that they would be able to use their funds from the SFAF to purchase old or broken equipment.

2. **Communication** – Initiatives had expressed the need for a better communication system to be developed between themselves and with the AMS with regards to discussions surrounding the fund. Due to the high turnover rate for many positions at both the SFAF funded initiatives and the AMS, initiatives have identified the need for and development of institutional memory in place to ensure no loss of knowledge

occurs during the turnover of roles. Furthermore, initiatives articulated the need for more oversight of the fund from the AMS, and there is a need for more consistent discussions with regards to the fund.

**3. Awareness** - Initiatives agreed that there is an overall lack of awareness of the fund. They identified this can be attributed to inadequate marketing including letting customers know about the SFAF or just because of having a small presence on campus. One initiative had stated that they think their customers are aware of the student discount they provide, but they are not aware of how the student discount is funded. They expressed that they would like to see increased communication to students to raise awareness of the fund, its purpose and how the funds are currently being used.

**4. Collaboration** - Aside from the expressed need for increased communication, some initiatives have highlighted their interest in collaborating on projects with other initiatives that are also funded by the SFAF, along with potential collaborations with the AMS Food Bank and the FSI at UBC. Furthermore, one initiative had mentioned that since the COVID-19 pandemic that initiatives are either not running or are not as busy as they used to be and would be in favour of collaborating with other initiatives on any projects related to food security on campus.

**5. Fee Increase for the SFAF** - While initiatives had expressed their gratefulness in being able to receive some sort of financial support through the means of the SFAF, they have also conveyed that they do hope to see the fund increased over the next few years. Through the interviews, some initiatives have said that the current student fees for the SFAF are insufficient to meet their current objectives, and some have mentioned that the fund had not helped to decrease their prices for students at all but more so helped them to maintain the low price they provide to students. An increase to \$5.00 was the most agreed upon cost during the interviews, and initiatives had mentioned that this cost would still be quite low in comparison to some of the other fees' students are required to pay.

### 3.2 SECONDARY RESEARCH

In our secondary research we investigated similar projects done at other university campuses. We found five programs and summarized them in Table 7 located in Appendix I. Three of the five subsidy programs were located within Canada and two were from the United States. The average student fee to support a sustainable food initiative was \$7.00.

Dalhousie University in Nova Scotia has a student fee of \$4.50 per semester for full time students and \$2.25 for part time students (The Loaded Ladle, n.d.). These funds support a student run food service on campus called the Loaded Ladle. Their program aims to provide accessible, sustainable, and locally sourced free food to students. In addition to providing food to students they also offer educational programming such as workshops on growing, preparing and preserving food. Students can opt out of the fee however will no longer be able to use the services provided (The Loaded Ladle, n.d.).

In 2012, the University of Toronto went through a referendum to create the Toronto Sustainable Food Co-op which provides for an on-campus café called Harvest Noon. The fee is \$1.00/year for full time graduate students and \$0.50/year for part time graduate students, and members receive discounts on options at the café (University of Toronto, 2015). The café provided local, sustainable, and organically produced food to students on campus. There was a \$5.00 suggested donation for café items or the option to volunteer a minimum of two shifts at the café. However, this café is now closed, and the fee has been cancelled as of 2019.

Trent University in Toronto has a levy fee of \$3.36 per semester that goes toward an on campus cooperative café called Seasoned Spoon (The Seasoned Spoon, n.d.). Their mission is to serve local, organic sourced food at affordable prices to students at Trent University and the broader community. The levy funds are used to pay farmers fairly, subsidize café prices, offer educational programming, and provide student staff employment. Upon request students are also able to opt out of the fee.

The two programs found outside of Canada have a slightly different approach than those found in Canada. At the University of Maryland, the sustainability fund aims to promote social, economic, and environmental sustainability and positively impact the student experience. The fee of this program is \$12

per undergraduate student per year, and it is included in student fees (University of Maryland, n.d.). While at the University of Santa Cruz, the Student, Food, Health and Wellness Initiative promotes improved on campus food choices and institutional food service shifts to more healthy options (University of Santa Cruz, 2010). The fee is \$3.75 per semester and a portion of the fee goes towards financial aid to help cover the expense for those in need. There is an oversight committee to ensure the funds are distributed in a way that meets funding requirements. On this committee is two staff, two students and two faculty members. A yearly report is created by the community to show all funding activities and is available to the entire campus community (University of Santa Cruz, 2010).

## 4. DISCUSSION

### 4.1 PRIMARY RESEARCH

#### 4.1.1 SURVEY

Compared to the 58,462 students registered at UBC Vancouver campus in the 2020/21 school year (Mukherjee-Reed & Szeri, 2021), the 82 survey respondents only represent 0.14% of the student population. Furthermore, our 7 graduate responses only account for 0.07% of the 10,614 graduate students (Mukherjee-Reed & Szeri, 2021). Despite only capturing 0.14% of the student population, the 24 responses from LFS accounts for 1.20% of the 2,002 students in the faculty.

Due to the location of Agora Café being inside the Macmillan Building, and being known as an “integral part of the LFS Community” (Agora Café, n.d.), it was expected that the ratio of LFS students responding “yes” to having purchased from Agora to be higher than average. Accounting for 15 “yes” to purchasing from Agora, and 8, 4, and 5 “yes” for Sprouts, Roots on the Roof, and UBC Farm respectively, it was determined that LFS students not only made up a significant portion of “yes” answers to Agora but had a higher ratio for all initiatives. Therefore, it is expected that the true ratio of students purchasing from these initiatives to be even lower than the results shown in the results.

It was not surprising that most students said they have not purchased food from any of the four initiatives as they have a smaller reach to the student population compared to larger and more centralized

food outlets. Not purchasing food from the four initiatives could also be attributed to the fact that less than 20% have not heard about the SFAF. If students knew about what the SFAF is and how it benefits them, it could increase purchasing from these initiatives. The lack of awareness of the SFAF was also identified during interviews with the food initiatives.

The finding that there are 59% of students who somewhat agree or strongly disagree to trying to seek sustainable food options shows there is a desire to consume and have access to sustainable food. This finding aligns with a similar research report by Food Secure Canada assessing interest in consuming sustainably grown food (Kramer et al., 2019). When looking at the most important characteristics of sustainable food from our survey, fair labour and treating farm animal humanely were the top two choices. Similarly, in the Food Secure Canada report their survey found whether food is grown in a way that treats farm animals humanely and grown without exploiting farm workers as the top two factors when buying sustainable food (Kramer et al., 2019).

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#### 4.1.2 INTERVIEWS

Based on our findings from interviews with stakeholders funding was still an identified issue despite being funded by the SFAF. For those purchasing food from local sources they have had to change their supplier due to price and for those giving discounts they have had to reduce the discount given to students. It was unexpected to find out that none of the food initiatives had received the SFAF funding. This finding provides greater insight to their desire to have improved communication between the initiatives and the AMS. Initiatives identified that the current fund allocating process has not been clearly communicated as expected in terms of providing necessary support for participating initiatives. Improvements in fund allocation and clarity in fund usage would help to achieve full potential of SFAF. In addition to limited funding, especially during the COVID pandemic, our interviewees expressed their hope for better coordination between each initiative with the help from AMS. Some initiatives also stated their concern over the lack of visitors this year. To achieve sustainability of this project, greater awareness and participation of the UBC community is necessary.

From our interviews it was evident how much student commitment is needed for these initiatives to run. All the initiatives were very grateful for the funding as it allows them to stay afloat and continue to achieve their mission of providing sustainable food. On the other hand, when looking at the University of Toronto Harvest Noon café, despite having a fee to support their initiative without committed student volunteers they were unable to stay open. As identified in our interviews, providing paying student positions is another way to improve the sustainability of student run initiatives to ensure students still have access to sustainable affordable food.

## 4.2 SECONDARY RESEARCH

After completing our secondary research on similar projects done at other university campuses, we compared them to the UBC SFAF by identifying similarities and differences.

**Similarities:** When comparing our secondary research to the current SFAF there are many similarities. All four of the programs identified in Canada support student run initiatives that provide access to local and organic food. Education programming is also a component of the initiatives supported by a fund which aligns with the mission of all four initiatives who are recipients of the SFAF. Finally, just like the SFAF all the fund fees provided an opt out for students.

**Differences:** Although there were several similarities between the identified funds there were also many differences. At Dalhousie university if you choose to opt out of the fee you are no longer able to purchase from the café. Of the funds identified most of them supported only one café or food service. While the SFAF is a much smaller fee, it supports four initiatives as opposed to just one. At Trent university they gave the greatest description of what the fee is directly being used on. Unlike the SFAF, the fund money at Trent University is used to pay for student positions. Finally, there were also options for part time students to pay a lower fee or situations where only graduate students pay the fund fee.

### 4.3 SWOT ANALYSIS

A Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis of the SFAF was completed to assess the efficacy of the fund. The information used to form this analysis is based off of both the survey and interview data.

**Strengths:** The strengths of the SFAF include increased purchasing from local food sources. Both cafes who receive funding noted how this fund allows them to choose local and sustainable foods instead of food sourced outside of the local area. The two food producers who are recipients of the fund can now provide student discounts. Both strengths of the fund show how it is currently meeting the fund objective to increase access to local and sustainable food.

**Weaknesses:** Weaknesses identified would be inadequate institutional memory mostly due to transitions in executives at student run initiatives and the AMS. This puts strain on communication as information can be lost in transitions and become delayed. As previously mentioned, there currently is low student awareness surrounding the fund - as less than 20% of survey respondents knew about the fund, and as noted by the food initiatives. The low awareness of the fund can result in less students taking advantage of discounted sustainable food on UBC campus.

**Opportunities:** Based on our data results there are opportunities for increased connections between food initiatives. There is a strong interest by the food initiatives for more collaboration as they feel they can increase their reach to the student population and have a larger impact. Also based on our survey results just over half of survey participants are willing to see a fee increase. Similarly, the four food initiatives all believe a fee increase would greatly benefit their ability to meet student needs. Therefore, there is an opportunity to provide additional funding to further support the current four food initiatives.

**Threats:** The COVID-19 pandemic has severely impacted most of the food initiatives involved. Since March 2020, many have had to close their doors to all students due to the nature of online classes, limited access to campus and the hazard of COVID-19. Continued closure of food initiatives would therefore impede their ability to serve the student population and use the SFAF.

## 4.4 LIMITATIONS

As previously mentioned in our primary research we only received 82 survey responses. Compared to the UBC Vancouver student population, our response rate is very small and consequently may not be an accurate representation of the entire student body. Furthermore, from our survey question on the dollar amount those interested in a fee increase are willing to pay, our potential answers were capped at \$1.00. Since most respondents chose the upper limit of \$1.00, we wonder whether students would be willing to have larger fee increases. Also, our survey questions did not ask students if they self-identify as food insecure. Therefore, we do not know of those who are interested in a fee increase whether they were food insecure.

Finally, since our research took place during the unique circumstances of COVID-19 this could have limitations in our research. Three of the four food initiatives have been closed for over a year now since the beginning of the pandemic. Once students return to campus and the food initiatives can re-open our research may not be truly reflective of the ever-changing circumstances

## 5. RECOMMENDATIONS

### 5.1 RECOMMENDATIONS FOR ACTION AND IMPLEMENTATION

#### 5.1.1 - ESTABLISHMENT OF A SFAF COMMITTEE

First, we propose the AMS to establish a committee for the SFAF in September 2021. This recommendation is based upon the need for more communication, collaboration, and oversight. On this committee would be an AMS Sustainability representative and one representative from each food initiative. In addition, one student at large who can apply to be on the committee. Committee meetings could be hosted twice a year to discuss successes, challenges, and opportunities for improvement. Regular meetings with all parties involved in the fund would allow for greater institutional memory as meeting minutes can be kept ensuring all logistics and fund related details are recorded. Therefore, also streamlining communication between the food initiatives and the AMS. A committee will also be beneficial when it is time for a

referendum. This committee would report to the AMS Sustainability Committee as part of the committee structure of the AMS.

The food initiatives felt that they have great opportunity to collaborate with one another however often never get around to doing anything. The creation of an SFAF committee can allow for idea sharing between the initiatives leading to overall enhancement of the fund. For example, committee members could work together to host events that provide sustainable food to students and promote the SFAF and where to find affordable, sustainable food options on campus. Another opportunity through a committee would be to create connections for collaboration with other potential partners such as the AMS Food Bank and Food Security Initiative. Finally, we believe creating a SFAF committee would provide greater oversight to the food initiatives which is something they feel is needed.

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#### 5.1.2 - DIVERSIFICATION OF SFAF RESOURCES

Our intermediate recommendation would be to allow diversification of SFAF resources. This would redirect the application of the SFAF to cover new expenses not covered currently, specifically for diversification in operational and human resources expenses. The food initiatives have expressed limitations in their ability to provide sustainable food to students when equipment is no longer suitable, and they lack stability in volunteers. Therefore, a suggestion would be to allow the SFAF money to be used for purchasing equipment and student paying positions in addition to paying for sustainable food. When speaking with the fund instigators their original vision was to have the fund solely used for purchasing sustainable food or for providing student discounts to this food. However, they recognize that having the resources including equipment and human resources is necessary to provide access to sustainable food on campus. If put into action the MOU would need to be updated with these outlined changes.

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#### 5.1.3 - RAISING AWARENESS OF THE FUND

In addition, since the awareness of the fund was very low, we recommend that AMS create a marketing strategy for the SFAF. Increased awareness of the fund would ensure more people know where to purchase affordable and sustainable food, therefore also helping to reduce the rates of food insecurity on

the UBC campus. Based on the data acquired from the student survey, students are most receptive to signs and posters, digital marketing, hearing from friends, and seeing plant-based options. Therefore, marketing ideas could include creating announcements on the giant TV in the Nest, posting on the AMS and AMS sustainability social media, and have emphasis on promoting the food choices available at the four support initiatives. Other UBC initiatives who could contribute to the marketing and communication of the SFAF would be the UBC Food Bank, FSI and the four initiatives themselves by placing signs near their booths.

To further increase student awareness of the fund, we suggest the AMS to create a page on their website with more information regarding the SFAF. The AMS Student Resources section of their webpage would be the most appropriate place to include more information as similar topics such as the AMS Food Bank are also listed. In this write up can be details about the purpose of the fund, where the money will be used and how students will benefit from the fund. By creating a place online where students can learn more about the SFAF there will be improved fund transparency and hopefully increased use of the food initiatives who receive funds.

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#### 5.1.4 - FEE INCREASE

In the long term, we hope to see the SFAF fee increase to \$5.00 over five years. As identified in our survey, for those who are open to a fee increase, many are willing to pay \$1.00 more. And many of those against increasing fees cite not knowing enough about the SFAF. Therefore, we suggest to initially raise the fee by \$1.00 after increasing awareness towards the fund, and then increase it slowly over five years. To move forward this fee increase we propose to have on referendum with the five-year plan of fee increases. For example, starting in 2022, increase the fee to \$1.50, then in 2024 to \$3.00 and in 2026 to \$5.00. A one-time referendum will be more effective as there will be less campaigning needed by the food initiatives and students will know what to expect regarding the fee for the upcoming five years. Based on our interviews a fee increase would be well received by all the food initiatives and would respect the instigators vision to increase access to affordable sustainable food. In addition, the average fee in our secondary research was \$7.00 per year. The fee increase we are proposing over five years would still be

below the average that we found at other post-secondary universities however will still make a drastic impact on the food initiatives. Additional funding can be used to further support the current four food initiatives or to pilot new projects that increase student access to sustainable food.

## 5.2 RECOMMENDATIONS FOR FUTURE RESEARCH

Unfortunately, during our project period, we were unable to see the MOU due to it still being a work in progress. Therefore, our recommendations were based on our primary and secondary research without referring to the MOU. We believe the MOU would give greater clarity in terms about what protocols are already in place and being followed and the ones in place that might not be working. We suggest that once the MOU has been signed and abided by for two years it would be beneficial to investigate whether the agreement is still meeting the needs of all stakeholders involved. Further, when the MOU is being assessed it will also be a valuable time to see if the fund more broadly is meeting its objectives by surveying students and the food initiatives involved.

As well during our project we were unable to connect with other potential partners such as the AMS Food Bank and Food Security Initiative to discuss potential collaboration opportunities. The AMS Food Bank currently helps to meet food insecure students' needs by providing access to food. However, there are opportunities to increase their distribution of locally sourced food from UBC Farm and Roots on the Roof. The Food Security Initiative would be a great resource to connect with as they do research on food insecurity on the UBC campus and can help the four initiatives to better understand the student population.

## 6. CONCLUSION

Food insecurity in the university context is prevalent across Canada, more specifically in high rates at UBC. University students are struggling with many challenges, of which the greatest barrier is financial. Furthermore, there is increased desire to consume sustainably sourced food due to the growing connection with human and planetary health (Kramer et al., 2019). One way to address this issue at the UBC campus was the initiation of the SFAF. The SFAF is a direct approach to address issues around food security, affordability and sustainability while continuing to reflect the “real cost of good food” by way of increasing accessibility through subsidies.

Through our assessment of the SFAF we were able to identify strengths, weaknesses, opportunities, and threats. In addition to proposing actionable recommendations to scale up the SFAF. Overall, the SFAF is highly valued by all four food initiatives on campus and has met its fund objectives by increasing access to sustainable food on campus which shows how a small student fee can make a huge difference. It is encouraging to see how excited each of the initiatives were to be involved in this fund and how they appreciated the work the AMS is doing to make this fund run even smoother. Unfortunately, there is little student awareness of the fund as identified in our surveys and interviews. Another challenge would be disruptions in communication due to student transitions in both the AMS and student run-initiatives. Also, COVID-19 has reduced the ability for the food initiatives to provide students access to sustainable food.

Finally, the work of this research can contribute to the growing body of knowledge around interventions to address affordable and sustainable food accessibility on university campuses. Specifically, on the UBC campus it can work toward meeting the CAP 2030 and Climate Emergency Declaration commitment to reduce emissions related to food (UBC, 2015; UBC 2019a). Also, through addressing food insecurity on the UBC campus the SFAF is aligned with the UBC Wellbeing strategic framework and the AMS Sustainability Action Plan (AMS, 2020; UBC Wellbeing, 2019).

## REFERENCES

- Agora Café. (n.d.) *About Us*. <https://blogs.ubc.ca/agora/about-us/>
- Agriculture and Agri-food Canada. (2019). *Food Policy for Canada*. Her Majesty the Queen in Right of Canada. [https://multimedia.agr.gc.ca/pack/pdf/fpc\\_20190614-en.pdf](https://multimedia.agr.gc.ca/pack/pdf/fpc_20190614-en.pdf)
- AMS. (2020). *AMS Sustainable Action Plan*. <https://www.ams.ubc.ca/wp-content/uploads/2020/05/005-21-Sustainability-Action-Plan.pdf>
- Chua, X., Janzen, V., Lai, D., Ramirez, I., Tse, S., Yam, S. (2019). Campus Food Insecurity: Unpacking Definitions of Quality, Availability and Affordability of Food at UBC Vancouver. [https://www.sustain.ubc.ca/sites/default/files/seedslibrary/FNH473\\_CampusFoodInsecurityUnpackingDefinitionsOfQualityAvailabilityAffordability\\_FinalReport.pdf](https://www.sustain.ubc.ca/sites/default/files/seedslibrary/FNH473_CampusFoodInsecurityUnpackingDefinitionsOfQualityAvailabilityAffordability_FinalReport.pdf)
- City of Vancouver. (2013). *Vancouver Food Strategy*. <https://vancouver.ca/files/cov/vancouver-food-strategy-final.PDF>
- FAO. (2018). *Sustainable Food Systems*. Food and Agriculture Organization of the United Nations. <http://www.fao.org/3/ca2079en/CA2079EN.pdf>
- Farm to Cafeteria Canada. (2021). *Farm to Campus*. <http://www.farmtocafeteriacanada.ca/our-work/farm-to-campus/>
- Kramer, D., Ferguson, R., Reynolds, J. (2019). Sustainable Consumption for All: Improving the accessibility of sustainably grown foods in Canada. *A Food Secure Canada Research Report*. <https://foodsecurecanada.org/sustainable-consumption-for-all>
- Maynard, M., Meyer, S. B., Perlman, C. M., & Kirkpatrick, S. I. (2018). Experiences of food insecurity among undergraduate students: "you can't starve yourself through school". *The Canadian Journal of Higher Education*, 48(2), 130-148.
- Mukherjee-Reed, A., & Szeri, A. (2021). *University of British Columbia Annual Enrolment Report 2020/21*. <https://pair.cms.ok.ubc.ca/wp-content/uploads/sites/145/2021/01/UBC-Annual-Enrolment-Report-2020-21.pdf>
- Nasrollahi, M. (2015). "A closer look at using stringer's action research model in improving students' learning", *International Journal of Current Research*, 7(7), 18663-18668
- Okanagan Charter. (2015). *An International Charter for Health Promoting Universities and Colleges*. Okanagan Charter. [http://www.gesundheitsfoerdernde-hochschulen.de/Inhalte/OI\\_Startseite/Okanagan-Charter\\_2015-EN.pdf](http://www.gesundheitsfoerdernde-hochschulen.de/Inhalte/OI_Startseite/Okanagan-Charter_2015-EN.pdf)
- Silverthorn, D. (2016). *Hungry for knowledge: Assessing the prevalence of student food insecurity on five Canadian campuses*. Toronto: Meal Exchange. <http://mealexchange.com>
- Tarasuk V., & Mitchell A. (2020). *Household food insecurity in Canada, 2017-18*. Toronto: Research to identify policy options to reduce food insecurity (PROOF). <https://proof.utoronto.ca/>
- The Loaded Ladle. (n.d.). *About the Loaded Ladle*. <https://loadedladle.com/about-the-loaded-ladle/>
- The Seasoned Spoon. (n.d.). *About the Seasoned Spoon*. <http://www.seasonedspoon.ca/seasoned-spoon-cafe-0>
- UBC. (2015). *Climate Action Plan 2020*. The University of British Columbia. [https://planning.ubc.ca/sites/default/files/2019-11/PLAN\\_UBC\\_ClimateActionPlan.pdf](https://planning.ubc.ca/sites/default/files/2019-11/PLAN_UBC_ClimateActionPlan.pdf)

- UBC. (2019a). *Addressing food insecurity*. The University of British Columbia.  
[https://bog3.sites.olt.ubc.ca/files/2019/09/8.3\\_2019.09\\_Address-Food-Insecurity.pdf](https://bog3.sites.olt.ubc.ca/files/2019/09/8.3_2019.09_Address-Food-Insecurity.pdf)
- UBC. (2019b, December 5). *President's Declaration on the Climate Emergency*. The University of British Columbia. <https://president.ubc.ca/homepage-feature/2019/12/05/climate-emergency-declaration/>
- UBC. (2020a). *Report to the Board of Governors: Food Insecurity Update*. The University of British Columbia. [https://bog3.sites.olt.ubc.ca/files/2020/11/5\\_2020.11\\_Food-Insecurity-Update.pdf](https://bog3.sites.olt.ubc.ca/files/2020/11/5_2020.11_Food-Insecurity-Update.pdf)
- UBC. (2020b). *Food Security Initiative*. The University of British Columbia.  
<https://wellbeing.ubc.ca/foodsecurityinitiative>
- UBC Wellbeing. (2019). *UBC wellbeing strategic framework*. The University of British Columbia.  
<https://wellbeing.ubc.ca/framework>
- United Nations. (n.d.). *Goal 2: Zero Hunger – United Nations Sustainable Development*. United Nations.  
<https://www.un.org/sustainabledevelopment/hunger/>
- University of Maryland. (n.d.). *University of Maryland - Sustainability Fund*.  
<https://sustainability.umd.edu/sustainability-fund>
- University of Santa Cruz. (2010). *Sustainable Food, Health, and Wellness Initiative*.  
<https://hub-media.aashe.org/uploads/sustainable-food-health-2010.pdf>
- University of Toronto. (2015, June 8). *Eating Sustainably and Locally at U of T – Food Services*.  
<https://ueat.utoronto.ca/eating-sustainable-and-local-at-u-of-t/>

## APPENDICES

### APPENDIX A

#### Survey Questions

Q1. Consent form

Q2. In 2018, a Sustainable Food Access Fund (SFAF) was passed by Alma Mater Society (AMS), in hopes to address issues around food security, affordability and sustainability while continuing to reflect the “real cost of good food” by way of increasing accessibility through subsidies. The SFAF supports four initiatives and sustainable food vendors on the UBC campus including Sprouts, Agora Cafe, Roots on the Roof and the UBC Farm. The AMS has recently identified the need to reassess the fund, and this survey will aim to collect information in regards to the perceptions of it. This survey will not collect any personal identifying information, and information collected will remain confidential and only accessible by the student team leading this study. **At the end of this survey, you will be redirected to enter a draw for one of five \$25 gift cards to the UBC Bookstore. Any information that you choose to enter will not be linked to your previous responses.**

Q3 Are you an undergraduate or graduate student at UBC?

- Undergraduate (1)
- Graduate (2)

Q4. What Faculty are you in?

- Applied Science, Faculty of (1)
- Architecture and Landscape Architecture, School of (2)
- Arts, Faculty of (3)
- Audiology and Speech Sciences, School of (4)
- Business, Sauder School of (5)
- Community and Regional Planning, School of (6)
- Dentistry, Faculty of (7)
- Education, Faculty of (8)
- Extended Learning (9)
- Forestry, Faculty of (10)
- Graduate and Postdoctoral Studies (11)
- Journalism, School of (12)
- Kinesiology, School of (13)
- Land and Food Systems, Faculty of (14)
- Law, Peter A. Allard School of (15)
- Library, Archival and Information Studies, School of (16)
- Medicine, Faculty of (17)
- Music, School of (18)
- Nursing, School of (19)
- Pharmaceutical Sciences, Faculty of (20)
- Population and Public Health, School of (21)
- Public Policy and Global Affairs, School of (22)
- Science, Faculty of (23)
- Social Work, School of (24)
- UBC Vantage College (25)
- Vancouver School of Economics (26)

Q5. Prior to COVID-19 (March 13, 2020), were you at UBC Vancouver campus at least once a week?

- Yes (1)
- No (2)

End of Block: Student Information

Start of Block: Purchasing Questions

Q6. Prior to COVID-19 (March 13, 2020), how often did you purchase food on campus?

- Everyday (1)
- Almost everyday (2)
- Once or twice a week (3)
- Less than once a week (4)
- Never (5)

Q7. Prior to COVID-19 (March 13, 2020), did you ever purchase food at any of the following establishments:

	Yes (1)	No (2)
Agora (1)	<input type="radio"/>	<input type="radio"/>
Sprouts (2)	<input type="radio"/>	<input type="radio"/>
Roots on the Roof (3)	<input type="radio"/>	<input type="radio"/>
UBC Farm (4)	<input type="radio"/>	<input type="radio"/>

Q8. Do you think the food provided at these locations was affordable? (Prior to COVID-19)

	Yes (1)	No (2)	Not Applicable (3)
Agora (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sprouts (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Roots on the Roof (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
UBC Farm (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Purchasing Questions

Start of Block: Heard about SFAF

Q9. Have you heard about the Sustainable Food Access Fund (SFAF) before?

- Yes (1)
- No (2)

Q10. Additional Comments

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End of Block: Heard about SFAF

Start of Block: \$0.39 Awareness

Q11. Are you aware that by default, \$0.39 from your student fees is helping to fund this initiative with the goal to enhance and expand student's access to equitable, just, and sustainable food?

- Yes (1)
- No (2)

Q12. Additional Comments

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End of Block: \$0.39 awareness

Start of Block: Prompts

Q13. The following few questions will contain a prompt regarding sustainable food. Please rank each statement from Strongly Disagree to Strongly Agree according to how you feel about them. Note: We define sustainable food as food that is able to uphold the integrity and health of our ecosystems, while being produced in a socially responsible manner.

Q14. I try to seek out sustainable food options when I eat

- Strongly disagree (1)
- Somewhat disagree (2)
- Neither agree nor disagree (3)
- Somewhat agree (4)
- Strongly agree (5)

Q15. I believe it is important to have affordable access to sustainable food

- Strongly disagree (1)
- Somewhat disagree (2)
- Neither agree nor disagree (3)
- Somewhat agree (4)
- Strongly agree (5)

Q16. I am open to the idea of increasing the SFAF fee to improve access to affordable sustainable food on campus (Disclaimer: We are simply acquiring student feedback on the perception of the SFAF and this is **not** a vote on increasing student fees)

- Strongly Disagree (1)
- Somewhat disagree (2)
- Neither agree nor disagree (3)
- Somewhat agree (4)
- Strongly agree (5)

End of Block: Prompts

Start of Block: Sustainable Food (Agree)

Q17. You previously answered somewhat agree, or strongly agree to the prompt "I try to seek out sustainable food options when I eat". When looking for sustainable food on campus, what resources do you use to help make your decision?

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End of Block: Sustainable Food (Agree)

Start of Block: Fee Increase (Agree)

Q18. You previously answered that you somewhat agree, or strongly agree with increasing the SFAF fee. How much more would you be willing to have this fee increased by in order to support the SFAF? (Disclaimer: We are simply acquiring student feedback on the perception of the SFAF and this is not a vote on increasing student fees)

- \$0.05 (1)
- \$0.10 (2)
- \$0.20 (3)

- o \$0.50 (4)
- o \$1.00 (5)
- o Other (6) \_\_\_\_\_

End of Block: Fee Increase (Agree)

Start of Block: Fee Increase (Disagree)

Q19. You previously answered that you neither agree nor disagree, somewhat disagree, or strongly disagree with increasing the SFAF fee.

If you are willing, please elaborate on your reason for this choice.

End of Block: Fee Increase (Disagree)

Start of Block: Ranking

Q20. Please rank the following characteristics of sustainability grown food based on how important they are to you. If there are any that are not important to you, please rank them below the "Not important" option.

- \_\_\_\_\_ Treating farm animals humanely (1)
- \_\_\_\_\_ Using fair labour practices for farm workers (2)
- \_\_\_\_\_ Growing food without pesticides (3)
- \_\_\_\_\_ Locally grown food (4)
- \_\_\_\_\_ Growing food without the use of genetically-modified organisms (GMO) (5)
- \_\_\_\_\_ Food being certified organic (6)
- \_\_\_\_\_ Not important (7)

Q21. In what ways do you expect the current SFAF to be utilized at the four initiatives? (Select all that apply). Reminder that the four initiatives are Agora, Roots on the Roof, Sprouts, and UBC Farm.

- Providing subsidy towards sustainable food options for students (1)
- Purchasing of equipment to use (3)
- Providing educational seminars on food security and sustainability (4)
- Purchasing supplies and ingredients from local businesses (5)
- Expanding the reach on campus (ex. extended hours, additional locations, marketing) (7)
- Other (6) \_\_\_\_\_

Q22. If there was additional funding for a new sustainable food initiative, what would you like to see the money being utilized for? (Select all that apply)

- Provide subsidy for sustainable AMS food options (1)
- More choose-what-you-pay cafés such as FOOOOD (3)
- Aid in the startup of student run sustainable food outlets (5)
- Provide educational seminars on food security and sustainability (6)
- Purchase of equipment at existing food vendors (7)
- Increase opportunities for local food vendors to sell their products (8)
- Subsidize the expenses required for a food vendor to switch to more sustainable practices (10)
- Other (9) \_\_\_\_\_

Q23. Do you have any additional comments, questions or feedback you would like to share?

\_\_\_\_\_

## APPENDIX B

### **Interview Questions (for the SFAF funded initiatives)**

1. Were you involved in the beginning when the fund was created?
2. How are you planning on using the SFAF in your food initiative?
3. How has your experience been being involved in the SFAF?
4. How has/will the fund impacted your food initiative?
5. Do you feel the current student fee for the SFAF is sufficient to meet the current objectives?
6. How can the SFAF better support your food initiative?
7. Do you think the current method of distribution of the SFAF is fair? What sort of changes if any, would you like to see?
8. How do you envision your ideal form of the SFAF?
9. How has COVID-19 impacted the use of your funds?
10. Do you think your customers are aware of the SFAF?
11. Do you have any recommendations on how the SFAF can scale up the fund to increase access to sustainable food?
12. Given the diversity in geography, food assets, etc. of the current UBC student population do you have any recommendations for AMS to support student access to sustainable food?
13. Do you think the fund will provide more financial support to those students being affected by COVID-19?
14. AMS has recently received \$1.5 million for addressing sustainability issues on campus. If you were to receive a portion of these funds, what ideas do you have to increase access to sustainable food for UBC students at your initiative?
  - a. How much in addition to the funds from SFAF would your programs need to support this initiative?

**Interview Questions (for the SFAF instigators)**

1. How did the idea of the SFAF come to be?
2. What was your involvement when the fund was created?
3. What was the main goal of the SFAF?
4. How were the initiatives selected? What made them special?
5. Were you able to experience the effects of the SFAF?
6. What was your understanding of how/when the initiatives would receive the funds?
7. Were you involved in designing the MOU?
8. Do you feel the current student fee for the SFAF is sufficient to meet the current objectives?
9. In light of the current COVID-19 pandemic do you have any recommendations on how the SFAF can be best utilized to support UBC students?
10. Do you have any recommendations on how the SFAF can scale up the fund to increase access to sustainable food?
11. Given the diversity in geography, food assets, etc. of the current UBC student population do you have any recommendations for AMS to support student access to sustainable food?

## APPENDIX D

**Table 2.** Table showing the results of an ANOVA test conducted on our survey data.

Anova: Single Factor						
SUMMARY						
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>		
Treating farm animals humanely	74	206	2.783784	1.95261		
fair labour practices	77	165	2.142857	1.650376		
Growing food without pesticides	67	229	3.41791	2.065129		
Locally grown food	73	223	3.054795	2.469178		
No-GMO	55	231	4.2	3.125926		
Certified Organic	56	240	4.285714	2.498701		
ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>Fcrit</i>
Between Groups	224.4593	5	44.89186	20.0131	8.36E-18	2.236779
Within Groups	888.277	396	2.243124			
Total	1112.736	401				

APPENDIX E

*Table 3. Table showing the results of a Fisher LSD test conducted on our survey data.*

Fisher LSD test					
tcrit	1.965973	1,2	0.640927		1 b
LSD1,2	0.479326	1,3	-0.63413		2 a
LSD1,3	0.496547	1,4	-0.27101		3 c
LSD1,4	0.485719	1,5	-1.41622		4 b,c
LSD1,5	0.524206	1,6	-1.50193		5 d
LSD1,6	0.521514	2,3	-1.27505		6 d
LSD2,3	0.491929	2,4	-0.91194		
LSD2,4	0.480998	2,5	-2.05714		
LSD2,5	0.519834	2,6	-2.14286		
LSD2,6	0.517119	3,4	0.363116		
LSD3,4	0.49816	3,5	-0.78209		
LSD3,5	0.535754	3,6	-0.8678		
LSD3,6	0.53312	4,5	-1.14521		
LSD4,5	0.525734	4,6	-1.23092		
LSD4,6	0.52305	5,6	-0.08571		
LSD5,6	0.558972				

APPENDIX F

*Table 4. All answers to the prompt “When looking for sustainable food on campus, what resources do you use to help make your decision?”. Order of answers has been randomized. Blank responses have been removed*

I ask friends
I look at signs and labels that say things like "ocean wise" or "local" or "BC grown" for example when shopping at the Nest's Grocery Checkout.
Dietary options, variety, cost
I discuss with friends, figure out what’s local/vegetarian
Online research, word of mouth
Looking at ingredients
Instagram
Sprouts, Seedlings
Whether the food is local or imported
The ingredients, the labels on it, the company background information
Internet or labels, I really like it when food options are clearly labelled with whether or not they’re sustainable options to make it easier for me to make a decision
Suggestions from friends
Google
Organic label
Money, accessibility, location, taste
Ubc food services
Foods with smaller carbon footprints, more plant vased
Plant based options, avoiding companies who I’m aware of having unsustainable practices (ie Nestle)
Cost, ratings online, what kind of food it is
signage at the location of purchase
Agora :) understanding sustainable food from my LFS classes
UBC website
I look at the information given by Ubc
Organic, local foods
Looking at where the food comes from whether it’s local or not
I hear recommendations from my friends in regards to the reputation of the food establishments and try to eat at places that advertise as sustainable or supporting local businesses
looks
google searches, going to sprouts/agora, choosing vegetarian or plant based options, looking at where food is sourced when info is available
Just Google and any campus resources that talk about sustainability
Plant-based options when possible; supporting student-run initiatives
Location, I commute and don’t have much time to actively seek the sources

The internet, peers
Reputation, menu options
Look for labels/package that indicate the food being local and/or ethically made. Look for products with sustainable packaging. Support local business that provides reasonably priced products
Look for vegan options!
Plant based
Instagram posts and easy to access menu information.
Lfs knowledge
Look at the menu for the types of food being offered
Food places that claim to source local produce
Being given the option of vegetarian and vegan options helps me make my choices.

APPENDIX G

*Table 5. All answers to the prompt “please elaborate on your reason for this choice.”. Order of answers has been randomized. Blank responses have been removed.*

Now that you're asking me to elaborate I think iv'e changed my mind. I'd be willing to increase it as long as it stayed under \$2.50. I'd rather pay for people to have access to sustainable food than for the varsity student's uniforms.
lots of fees already
International fee is already too high to be increased
I dont eat there
Would rather not pay more fees
One hand I don't want to pay more. Other hand sustainable food is a good thing to have
I do believe ubc should first provide more financially accessible food.
Although I do not actively seek out sustainable food products I do think that we need to expand is availabilities on campus. However I am agnostic to increasing funding this program from payments made by students who already pay and enoromous amount of money on tuition fee alone.
Wonder why we are paying for better access when it doesn't seem like it's making a difference, don't know if paying more will change this
I already pay an insane amount so why can't we take a dollar from UBC rec for each student and invest it here ?
I have no idea what the SFAF fee is but willing to learn and change my opinion later but for now I don't know
Haven't seen much effect
I believe students should be able to opt out
I don't think it's a good idea to increase any student fees right now.
It's fine. Doesn't seem like a big amount
No preference
Even if you increase or decrease the fee, if people arent willing to look for sus food then i think it wont matter?
I didn't know about it so I don't really have an opinion
Fees are high already, there a places to find funding besides charging students more.
I am still unsure on it's purpose or current progress
I think it is great to have sustainable and affordable food however, with so many good causes raising tuition it's hard to say I am more supportive of one than the other.

I don't know too much about the SFAF fee, and it's definitely possible that I would give a different response should I know more about it. However, I don't think that access to sustainable food is particularly important when there are many vulnerable people within Vancouver, and on our campus, who struggle with access to any food and/or any healthy food in particular. I believe that funds should be allocated to addressing food security and nutritional needs, as that is more important than addressing whether or not the food we eat is sustainable. It doesn't matter where the food comes from if people don't have any food at all.

My bad, I definitely meant to say I strongly AGREE with increasing the SFAF fee. Solely from the explanation of the SFAF fee in this survey, I'd be more than willing to pay more than \$.39 for something that might help students at UBC accessing sustainable and affordable food

APPENDIX H

**Table 6. Frequency of theme appearance in interviews.** Table showing the number of times a theme was accounted and coded for in our interviews with the SFAF funded initiatives. This table would be later used to create a word map.

Theme keywords	Agora	RoTR	Sprouts	UBC Farm	TOTAL
Advice	0	3	0	0	3
Awareness	4	4	5	3	16
Challenges	1	4	2	4	11
Clarity on the SFAF	4	0	0	0	4
Collaboration	8	2	1	1	12
Committee	0	0	5	0	5
Communication	8	4	2	2	16
Connections	3	0	1	0	4
Creation of student discounts	0	0	0	1	1
Experience with the SFAF	2	5	0	2	9
Increase \$ for the SFAF	4	0	5	3	12
Local source purchases	1	0	0	0	1
Food bank resources	0	0	0	2	2
Institutional memory	0	0	0	1	1
Market coupons	0	0	0	2	2
More oversight	4	0	0	0	4
Opportunities	0	0	1	0	1
Paying positions at initiatives	6	0	0	0	6
Recommendation	1	0	0	0	1
Strengths	0	0	1	0	1
Student bulk purchasing	0	0	0	1	1
Transparency	0	3	0	0	3
Use of the funds	1	19	2	1	23
<b>TOTAL</b>	47	44	25	23	-

APPENDIX I

**Table 7. Table showing our group’s literature review results.** Table showing our group’s secondary results through a literature review for our project - that enabled our group to identify promising practices at other universities that had similar funds or policies in place that aimed to increase the affordability and accessibility of sustainably and ethically produced food.

University	Name of program/fund	Fee	Additional Info
<p><b>Dalhousie University &amp; University of King’s College</b></p>	<p><b><u>Loaded Ladle:</u></b>                      - provides accessible, sustainable, locally-sourced <b>free</b> food on the campus of Dalhousie University                       - <a href="#">Serves 150+ meals 4 days/week in the student union building</a></p>	<p><a href="#">\$4.50/semester</a>                      (\$9.00/year)</p>	<p>You can opt out of the student fee but will no longer be able to use the services</p> <ul style="list-style-type: none"> <li>• <a href="#">Constitution of the Loaded ladle</a></li> </ul>
<p><b>University of Toronto</b></p>	<p><b><u>Toronto Sustainable Food Co-op:</u></b>                      - Provides for an on campus cafe that provides local, sustainable and organically produced food to students while also working to support food security and accessibility                      - Started in 2012 <b>cancelled as of 2019</b></p> <p><b><u>Harvest Noon Café:</u></b>                      - <b>Now closed...</b>most likely due to the initial founders being graduated and the cafe did not have enough up take to continue running.</p>	<p>Levy is \$1.00/year for full time graduate students and \$0.50/year for part time grad students</p> <p>\$5 suggested donation, or volunteering a minimum of two shifts at the cafe</p>	<p>Members receive discounts on options at the cafe</p>
<p><b>Trent University</b></p>	<p><b><u>The Seasoned Spoon:</u></b>                      - The Seasoned Spoon is a non-profit, vegetarian, cooperative café located in Champlain College at Trent University. The café is committed to serving <b>locally</b>, and whenever possible, <b>organically sourced food at affordable prices</b>. Our food sourcing principles prioritize the cultivation of meaningful relationships with local</p>	<p><a href="#">Winter 2021</a> - \$3.36  <a href="#">Fall 2020</a> - \$3.37  <a href="#">Winter 2020</a> - \$3.30  <a href="#">Fall 2019</a> - \$3.30  <a href="#">2018/19</a> - \$6.45</p>	<p><a href="#">Levy is refundable upon request</a></p> <p><a href="#">Levy money allows us to:</a></p> <ul style="list-style-type: none"> <li>- Pay hardworking farmers fairly,</li> <li>- Subsidize café prices of locally grown and organic food,</li> <li>- Offer a variety of weekly workshops, community meals, for-credit research projects and other educational opportunities</li> <li>- Provide meaningful employment to a number of student staff</li> </ul>

	<p>producers and supports a sustainable regional agricultural system. We are proud of our strong community linkages with local producers, businesses and community organizations.</p>		<p>- Embark on special projects, such as our sustainably-built root cellar</p>
<p><b>University of Santa Cruz</b></p>	<p><b><u>Student Food, Health and Wellness Initiative</u></b> :</p> <p>- This fee will promote greater student health and wellness through programming on food choices; <b>shifts in institutional food service practices for more healthy and fresh options</b> in campus eateries; support for student-centered experiential learning programs, classes and events on the UCSC farm and in college gardens; quarterly and annual educational publications; and provide funding for staff to oversee and expand current and future programs.</p>	<p>\$ 3.75/ quarter, per undergraduate</p>	<p>- This fee includes a <b>33% Return-to-Aid</b> component, in which 33% of all fees collected will automatically go to <b>financial aid</b> to help those undergraduate students who are on financial aid, <b>cover the expense of the fee.</b></p> <p>- <b>Quarterly</b> call for <b>funding requests</b> from students and registered student organizations for research and program activities. The funding will be governed by CASFS with an <b>oversight committee</b> comprised of two staff, two students and two faculty members. The committee will review programs and proposals to ensure they <b>meet funding requirements</b>. A yearly report will be submitted each March by the committee to review all funded activities. The yearly report will be available for review by the campus community.</p>
<p><b>University of Maryland</b></p>	<p><b><u>UMD Sustainability Fund:</u></b></p> <p>- The University Sustainability Fund is supported by the Student Sustainability Fee and provides funding for projects that promote social, economic and environmental sustainability and positively impact the student experience at the University of Maryland. The Fund is</p>	<p>\$ 12/ school year per undergraduate</p>	<p>- Educating the campus community about sustainability</p> <p>- Developing sustainability programming that affects student education and campus operations</p> <p>- Fostering collaboration between units of the university and external resources</p> <p>- Consulting with campus departments (administrative and academic) to find ways of reducing</p>

	<p>administered through a student-majority subcommittee of the University Sustainability Council. UMD Dining Services has partnered with a number of student groups to receive funding for projects on campus including the UMD Community Rooftop Garden. UMD Dining Services could continue this tradition, and utilize the UMD Sustainability Fund to offset costs associated with specific initiatives in the new sustainable food program.</p>		<p>environmental impacts and promoting sustainability</p> <ul style="list-style-type: none"> <li>- Coordinating efforts to meet the goals of the Carbon Commitment and Climate Action Plan</li> <li>- Measuring and reporting on-campus sustainability efforts</li> <li>- Providing outreach to individuals and organizations both internal and external to the university</li> <li>- Supporting the University Sustainability Council</li> </ul>
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