

UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

**UBC Food Vision and Values: Phase 2**

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**University of British Columbia**

**LFS 450**

**Themes: Food, Procurement, Wellbeing**

**April 9, 2019**

*Disclaimer: "UBC SEEDS Sustainability Program provides students with the opportunity to share the findings of their studies, as well as their opinions, conclusions and recommendations with the UBC community. The reader should bear in mind that this is a student research project/report and is not an official document of UBC. Furthermore, readers should bear in mind that these reports may not reflect the current status of activities at UBC. We urge you to contact the research persons mentioned in a report or the SEEDS Sustainability Program representative about the current status of the subject matter of a project/report".*

University of British Columbia

Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

# Internal Audit: UBC Food Services Food Vision and Values, Part II

Rachel Blundon, Olivia Light, Isabelle Philpott & Alex Ye

LFS 450

FOOD

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## EXECUTIVE SUMMARY

UBC Food Services has assembled a list of “Food Vision and Values” (FVV) (UBC Food Services, 2018) to guide the operations of their businesses in an effort to improve sustainability on campus. The list of values is comprehensive and includes a commitment to sixteen food related standards or values including popular initiatives such as Fair Trade, Ocean Wise™, and Zero Waste.

The goal of this project was to choose up to three sustainability indicators out of the sixteen total values as our focus for a baseline audit, assessing the level of progress UBCFS has made on the selected values chosen for review. The main objectives were to select an appropriate set of measures that can be successfully audited and to perform said audit of UBCFS operated establishments to analyze whether UBCFS is achieving the targets set out by these goals.

This year’s project built on the previous FVV audit with a series of interviews with stakeholders within the UBCFS sector as well as third party vendors operating on the UBC campus. The initial set of questions and list of stakeholders for these interviews were provided by the Executive Chef & Culinary Director from UBC Food Services. Our team successfully completed 13 out of the 14 proposed interviews. We completed all of our interviews in person and before reading break. This entailed conducting an average of seven interviews a week over a two week period with at least two group members attending each interview.

Concurrently to interviews, we conducted public observations of vendor locations to inform our process for selecting the appropriate food values to be audited. Once all the interviews and public observations had been completed, we compiled our findings and discussed which food values out of the sixteen should warrant an audit. Upon completion of this discussion and consensus on selection, our team performed a baseline audit for labeling & transparency, affordable & healthy options (AHO), and plant based options (PBO) within the three UBC residence dining halls to assess how well these goals are being achieved.

Some of our key audit findings include a lack of plant based proteins in breakfast entrees being offered across the three dining halls, dining hall labeling inaccuracy rates ranging from 6.5% at Open Kitchen (OK), 8.9% at Gather, and 14.3% at Feast, as well as a positive correlation between what our survey respondents considered an “affordable” meal and the price point of the majority of meals offered in the dining halls audited. A key recommendation is the need for clearly defined metrics regarding terms mentioned in FVV such as “affordable”, “healthy”, and “housemade”.

Projects like this are crucial for determining the functionality of the UN Sustainable Development Goals on the ground and at the micro level of scale. This project has the potential to spark revised courses of action and new innovative ideas for implementation, not only directly impacting the approximately 20,000 people that UBC feeds every day, but also the broader supply chains connected to UBCFS in and throughout the larger Vancouver area.

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## LIST OF ABBREVIATIONS

UBC: University of British Columbia
UBCFCS: University of British Columbia Food Services
FS: Food Services
SEEDS: Social Ecological Economic Development Studies
SHHS: Student Housing and Hospitality Services
AMS: Alma Mater Society
FVV: Food Vision and Values
PNW: Pacific Northwest
VVO: Vegan and Vegetarian Options
PBO: Plant Based Options, interchangeable with VVO
AHO: Affordable and Healthy Options
NP: Nutritional Panel
AI: Allergen information
OK: Open Kitchen

1. INTRODUCTION

1.1 RESEARCH TOPIC

The Food Vision and Values (FVV) are a set of 16 goals developed by UBC Food Services (UBCFS) in 2017 (D. Speight, B. Vigue, personal communication, January 16, 2019).

These Visions were set up as a set of aspirations to guide UBCFS towards a more economically, environmentally and socially sustainable role in the University.

The FVV is made up of 16 values listed in shorthand as follows:

Quality & Nutrition	Affordable Healthy Options (AHO) #	Food Skills & Knowledge
Labelling and Transparency (LT) #	Fair Trade	Ocean Wise
Healthy Beverage Initiative/ Free Drinking Water*	Seasonal & Local Foods	Culinary Focus
Supplier Code of Conduct	Food Safety	Support for the UBC Action Framework for a Nutritionally Sound Campus

Stars indicate components visually observed by the previous year’s audit (Foster, Ke & Wu, 2018). Hashtags indicate components visually observed by this audit.

As UBCFS currently provides the majority of food served on the Point Grey campus and aims to have a positive impact on the community, implementation of the FVV helps to:

1. Support health and wellbeing of students, staff, faculty and the neighbouring community
2. Support a sustainable, low-impact, local food system for UBC
3. Reflect UBC’s vision and position in addressing issues revolving around environmental, social and economic

sustainability (D. Speight, B. Vigue, personal communication, January 16, 2019).  
 Vegan & Vegetarian Options (Plant-Based Options, PBO) \*#  
 Zero Waste

Since last year, isolated metrics for many of the FVV such as percentage (>98%) of Oceanwise-sourced seafood (D. Speight, B. Vigue, personal communication, January 16, 2019) or already-measured numbers (> \$8M/year) on purchases of local food, have been implemented. The previous year’s audit examined plant-based offerings in Open Kitchen (OK), in Orchard Commons, and the presence and nature of free drinking water across campus. However, no integrated set of metrics is in place beyond last year’s student

audit to accurately and appropriately evaluate the further progress made by UBCFS.

This project presents an opportunity to support the further development of a tool to quantify the progress of UBCFS in terms of how well it is meeting the FVV. As a form of audit, this tool was intended to help verify whether progress towards its values are indeed occurring, and to monitor future and current opportunities for improvement.

## 1.2 RELEVANCE TO SUSTAINABILITY

Guiding the overriding sustainability aspect of the FVV is the 2020 Climate Action Plan (UBC CCP, 2017), successor to the 2010-2015 Climate Action Plan (UBC CCP, 2010); and the Food System Project (Richer, 2019). The UBC 20-Year Strategy defines sustainability in its vision as “simultaneous improvements in human and environmental wellbeing, not just reductions in damage or harm”, and aspirationally states that “By 2035, such regenerative sustainability is embedded across the University throughout teaching, learning, research, partnerships, operations and infrastructure, and the UBC community” (Robinson et al., 2014). The UBC campus feeds

approximately 20,000 people - students, residents, employees and staff - daily. To this end, each FVV supports UBC’s goals of reducing environmental and social damage, while hoping to improve those aspects for the future.

To address the social and economic aspects of sustainability, there are the Affordable Healthy Options (AHO); Nutrition, Ingredient & Allergen Labelling (Labelling) within the FVV. Supporting AHO aids economic and social goals by providing food that is affordable for increasingly food insecure (Silverthorn et al., 2016) and cash-strapped (Walsh, 2018; Singerman, 2018; OECD, 2018) university students. Through affordable foods, UBCFS is showing their priority of tackling food insecurity as laid out in the Food System Project. Labelling of allergens and the provision of nutrition information allows consumers to readily see the composition of their food, aiding food knowledge (Richer, 2019). This is increasingly important given increasing rates of obesity and food allergies (Perkin et al., 2016).

Addressing the environmental aspects of sustainability are the Vegan & Vegetarian Options (VVO) and the Seasonal & Local Foods

FVV. VVO and Seasonal Foods emphasize a focus towards primary producer and close-range food sourcing as a means to reduce the Greenhouse footprint (UBC Wellbeing, 2017) as set out by the Climate Action Plans. Animal activity accounts for the majority of agricultural land use, greenhouse emissions, water and air pollution (Poore & Nemecek, 2018), while transportation accounts for a further 11% of emissions (Carnegie Mellon University, 2008).

This project involves collaboration between UBC faculty, students and operational staff to provide an integrated approach to address the pillars of sustainability. Our success in addressing these issues can likely be adapted by the general community and other similar food service operations.

### 1.3 PROJECT CONTEXT

The Food Vision and Values project is an ongoing and complex subject relevant to UBCFS, institutional food systems in general, and the wider regional and national context for reducing the environmental impact of food systems. This project directly contributes to the ongoing mission of UBCFS to meet their aspirations for being a critical component of

health, welfare, and the wider sustainability initiatives such as the Talloires Declaration signed by UBC in 1990 (UBC Sustainability, 2010). This project is overseen by the UBC Social Ecological Economic Development Studies (SEEDS) program and its findings will contribute to the knowledge collected by this program to assist in shifting the University towards a more sustainable course of action.

Last year, a previous LFS 450 team focused their audit on the presence of vegan and vegetarian options at one of the three campus residence halls and the free availability of drinking water in operations campus-wide. The presence of VVO were assessed by observing the variety of VVO offerings, the proportion that were vegan or vegetarian, and the proportion containing a plant protein as categorized by RDN Hill (2014), and as recommended by stakeholder communications. Drinking water was assessed through observing the general campus food system for the presence of water stations, signage, ease of discovery, cleanliness of stations and receptiveness of staff to requests for tap water.

The FVV project corresponds to the goals laid out in the Regional Food System Action

Plan 2016 (Metro Vancouver, 2016), specifically 2.2, 3.1, 3.4, 4.1. Alterations in UBCFS operations could inform the City of Vancouver and British Columbia of specific strategies aiding in transitioning towards a more set of sustainable city and provincial-level food systems.

Similar plans exist across British Columbia and likely Canada, such as in Victoria (UVic CPS, 2014), Squamish (District of Squamish, 2018) and Kamloops. Within Canada, other educational institutions have implemented auditing procedures to evaluate their own progress. The University of Victoria Campus Planning conducted an evaluation of their Sustainability Action Plan, a general overview that involved, but did not exclusively focus on food, and found that some of their goals (Fair Trade, Localized Food, Onsite Nutritious Foods, and Waste Diversion) were met. Review of documents does not appear to show an ongoing monitoring or auditing program for their food system.

At the Federal level, a revision of Canada's Food Guide was released in 2019, recommending a shift towards consumption of fresh vegetables and grains, away from

processed foods and meats. Over the period of 2011-2018 a series of developments occurred towards the upcoming release of National Food Strategy, to coordinate the Canadian food system on a national level (MacAulay, 2018). Progress was evaluated in October 2018 towards the meeting of the 2016-2019 Federal Sustainable Development Strategy (FSDS) goals. Two of these goals relevant to this project were the reduction of greenhouse emissions and promotion of sustainable food practices (McKenna, 2018). Progress towards targets set for these goals, 30% reduction in carbon emissions by 2030 from 2005, sustainable use of aquatic resources, and secure food supply were considered "on-track". The goals of the FVV project such as the objective of local food sourcing, in-house preparation, zero-waste and Ocean Wise™ sourcing generally suit these high-level goals. This FVV audit project is therefore aligned with the goals of administrative, indigenous, educative, scientific and non-profit, stakeholders across Canada and across multiple levels of the national food system seeking a sustainable future.

## 1.4 PROJECT GOALS AND OBJECTIVES

The primary goal of the project was to develop a series of auditing tools that UBCFS can use to track their progress and revise their Vision should findings differ from initial expectations. The goals and objectives of this project were:

1. To review policies similar to the FVV in other post-secondary institutions or, if absent, the food-related sections of sustainability planning to identify areas of improvement
2. Build on last year's LFS 450 student group assessment of the progress made towards the FVV by UBCFS
3. Provide recommendations for improving FVV implementation progress metrics.

We have developed our own auditing spreadsheet to assist UBCFS in tracking progress towards set goals.

The dining halls (Open Kitchen, Feast and Gather) operated by UBCFS in campus residence were audited and analyzed. Based on our findings, we were able to determine areas of improvements for UBCFS to better align with their FVV.

2. RESEARCH APPROACH/  
METHODOLOGY

## 2.1 RESEARCH METHODOLOGY

Our research project used mixed methods including a review of secondary sources and data collection from interviews, audits, and surveys. The first phase comprised the collection of qualitative data from interviews with primary and secondary stakeholders. By conducting these interviews first, our research team is incorporating several principles of Community-Based Action Research (CBAR), primarily involving a large number of stakeholders affected by the implementation of the UBCFS FVV, each holding an interest and perspective unique to their position and relationship with UBCFS (e.g. managerial staff in UBCFS, stakeholders outside of UBCFS, students, and staff). Similarly, the information gathered from these interviews helped inform which FVV are robustly in use, and which represent an opportunity for further action. Together, the primary staff client and the research team decided which FVV were best to focus on, speaking to the CBAR principle of cooperation and consensus-making.

## 2.2 RESEARCH METHODS

### Secondary Data Collection Research Methods

#### Review of Secondary Sources

The team conducted a review of secondary sources to gain an understanding of what other institutions, specifically universities and colleges in North America, are currently doing in the way of improving their campus food system. Online search engines and databases such as Google Scholar and UBC's Summon were used to find relevant publications. Since the UBCFS FVV encompass so many terms and topics relevant to food system sustainability, many keywords were employed to find relevant literature.

This review determined what initiatives have been undertaken by other institutions, the context in which success or failure occurred, and the metrics or targets used to determine the success of a given initiative. This review heavily informed the audit phase of this research project, as well as provided the primary staff client with ideas for future endeavours or possible additions to the FVV.

#### Organizational Data

Over the course of our research project, several organizational documents were shared to

enhance our understanding of UBCFS FVV current initiatives and metrics for tracking. If time had permitted, some of these documents would have served as basis for a textual audit, e.g. the menu signage spreadsheets. Knowledge of these documents emerged from stakeholder interviews, and subsequently, various stakeholders shared these documents with the team.

### Primary Data Collection Research Methods

#### Stakeholder Interviews

An initial interview with our primary client informed that the best way to understand and evaluate the successes and challenges of implementing the UBC FVV was to conduct interviews with UBCFS staff occupying managerial roles. The primary staff client provided a list of suggested stakeholders to interview, and also identified the FVV each stakeholder works most closely with, or holds expertise in. Primary stakeholders were identified by the primary client as those directly involved in advocating and implementing the UBC FVV. Secondary stakeholders were identified by the primary staff client as those involved in the operations of UBCFS more generally, or those third-party stakeholders on

UBC campus that are not employed directly by UBCFS. Using a purposive sampling method, four primary and ten secondary stakeholders were selected to be interviewed. Each stakeholder holds expertise in at least one area of UBC FVV, and there is at least one stakeholder with expertise in each of the 16 FVV. Please see Appendix B for the position titles of the stakeholders interviewed.

Interview questions were developed in conjunction with the primary staff client, and sent to stakeholders for preparation prior to their scheduled interview. Response rate for the interview stage was high at 13/14 (92.9%). Each face-to-face interview lasted 30 to 60 minutes and was conducted at the location preferable to each stakeholder (n = 13). The Communication Liaison was responsible for scheduling the interviews between January 30 and February 8, 2019. After receiving verbal and written consent from the stakeholders, interviews were recorded for note taking and clarification purposes. Follow-up of interviews were not necessary.

### **Audits and Audit Matrix**

In conjunction with the needs identified from the primary staff client, the results from the review of secondary sources, and the findings of

our interview analysis, the research team recommended several UBC FVV to audit. Together with the primary staff client, the team selected the Plant-Based Options, Labelling and Transparency, and Affordable Healthy Food Options as the FVV to audit. Free Drinking Water was not chosen for audit due to the established success of this FVV, based on the 2018 audit and stakeholders input. Our team used the Audit Matrix developed by UBCFS Senior Procurement Manager, in collaboration with the previous year's LFS 450 SEEDS team, and refined the tool as necessary for our purposes. The primary staff client specifically requested to refine the Audit Matrix in such a way that there were three main categories under each FVV: *Successes*, *Metrics*, and *Recommendations*.

The specific FVV chosen dictated the most appropriate metrics to use during the audit, all of which can be seen in Appendix C. After reviewing the literature and creating the metrics, the team conducted 12 separate audits, for consistency, between March 11 and March 15, 2019 for breakfast, lunch and dinner. Focus was placed on the three residence dining halls - Feast at Totem Park, Gather at Vanier, and OK at

Orchard Commons. These facilities were selected in discussion with the primary staff client due to the large customer-base served each day, and the large scale of operations, compared to other UBCFS locations. Time and resources did not allow the team to audit other UBCFS facilities, such as retail locations. The Communication Liaison was responsible for scheduling any necessary on-site visits with stakeholders or UBCFS staff during the time of the audits.

### Surveys

The team felt it was appropriate to use surveys to solicit student opinions on the Affordable Healthy Options FVV. Convenience sampling was utilized during on-site visits at OK, Gather, and Feast to distribute the survey to students, customers, and UBCFS staff (n = 208). The survey aimed to solicit opinions or lived experiences of the participants, as it pertains to the Affordable Healthy FVV. The survey was administered as an online survey (Google Form), ultimately due to the preference of the intended audience (students), as well as convenience of data collection and analysis.

### **Deliverables**

Our team's project deliverables included:

1. **Landscape scan:** A landscape scan detailing what other institutions have done in working towards food system sustainability. This research looked for other public documentation that outlined each institutions vision and values, similar to UBC's FVV document, as well as evidence of actionable items that other institutions have had success implementing.
2. **Key Stakeholder Interviews:** Interviews occurred with 14 identified stakeholders between January 30 & February 8, 2019, and were approximately 30 - 60 minutes in length.
3. **Audit and Matrix:** Contributing to the existing Audit Matrix developed in previous years by adding new metrics to FVV that currently do not have metrics. Specifically, the team focused on the categories of *Successes*, *Metrics*, and *Recommendations* under each FVV audited.
4. **Final Report:** The team assembled a final project report that is to be published

on the UBC SEEDS Online Library. The report focuses on the findings of our research project, to add value to what has previously been audited.

Recommendations are given as to how UBCFS can increase alignment with FVV, as well as a suggested strategy to enable UBCFS to periodically update FVV categories.

5. **Stakeholder Presentation:** A final presentation delivered to project stakeholders occurred summarizing the issue at hand, and the findings of our research project on April 3, 2019.
6. **Visual Summary:** Creation of an appealing, attractive summary of our results and recommendations (e.g. e-page, infographic, research poster).

## Analysis

### Review of Secondary Sources

Secondary data was continuously compiled into a shared folder and analyzed by the team.

Analysis looked to answer how closely other institutions actions or values align with UBC FVV. When differences in values or practice surfaced, the team analyzed the scale to which

these differences occurred, and the context prompting a given practice or stated value.

### Stakeholder Interviews

All interview data was collected by February 8, 2019, after which the team conducted a coding analysis from February 13 to 27, 2019. To improve inter-rater reliability, each member of the team listened to four audio recordings of the 13 interviews and independently coded each following Appendix D. The team then compared findings in order to come to a consensus. The analysis aimed to unearth themes (explicitly stated by interviewees), sub-themes (implied meaning in text), and keywords associated with each FVV, from the perspective of each stakeholder. The Project Manager ensured the timely completion of this stage of analysis by checking in with each team member throughout the analysis period.

### Audits and Audit Matrix

Data analysis occurred between March 15 - 31, 2019. Analysis of the data collected during the visual audit included an analysis on the spatial distribution of the metrics (by location), in addition to the use of descriptive statistics to analyze how well UBCFS is doing as

a whole in their dining operations. On occasion, when data values were missing from visual audit data (e.g. nutrition information was missing for a specific dish), the menu signage spreadsheets were consulted to fill in the gaps in data (textual audit). As above, the Project Manager ensured the timely completion of this stage of analysis by assigning tasks based on the strengths of each team member and checking in at the midpoint of the data analysis stage (March 22, 2019).

### Surveys

Survey analysis also occurred from March 15-31, 2019. As all survey data was collected online (n = 208), analysis included manipulating and sorting data based on the response selected (in a multiple choice question), by the respondent, or by the question. In open response questions, coding was used to determine themes, sub-themes, and frequently recurring keywords.

## 3. RESULTS

### 3.1 REVIEW OF SECONDARY SOURCES

The secondary data utilized by our group largely consisted of landscape scans and literature reviews conducted to determine the best practices of North American institutions in

regards to food system sustainability. Because the deadline for the literature reviews coincided with the latter end of our project's data collection phase, the topics researched by our group members were reflective of the broad scope of information pertinent to sustainable food systems. One of our group members conducted their literature review on the topic of defining "affordable food" in the Canadian context, finding that although an official, specific definition for "affordable food" is not currently available at the federal level for Canada, there appears to be a fair amount of evidence that securing "affordable food" is interpreted as a priority for Canadians, especially in regards to the development of a national food policy for Canada. Furthermore, research conducted about Canadian welfare recipients highlights their growing inability to secure "affordable food" in all provinces. This information was significant in informing our group's decision to conduct an online survey focused on defining affordable food, with a price point, specific to the UBC Vancouver campus.

## 3.2 STAKEHOLDER INTERVIEWS

Our primary staff client provided our group with a list of fourteen stakeholders that we were advised to interview based upon their areas of expertise in connection to the UBCFS FVV. We commenced our first interview with our primary staff client on Wednesday, January 30th and completed the bulk of our remaining twelve interviews during the following week, with our last interview completed on Thursday, February 14th, meeting our goal of finishing all interviews before the start of reading break.

Our interview analysis focused on determining key words, explicit themes, and implied themes as well as any significant changes in tone or length of discussion on specific topics from the interviews. A common theme that arose from the interviewee responses was a mention of the need to define “affordable”, “healthy”, and “housemade” for the UBC campus context. The seasonal and local FVV was discussed frequently as an open opportunity to increase the processing, canning, and preservation of the UBC Farms local summer harvests in order to produce greater local options of produce during the winter months. In response

to our follow up question asking the interviewees to pick two FVV that they would like to see audited, Zero Waste and In-house Preparation were the two FVV selected the most as shown in Appendix E. Interviewees were most excited about the current UBC campus projects and campaigns surrounding the zero waste FVV, such as the UBC Zero Waste Action Plan and Sort It Out, and the free drinking water FVV which is benefited through the recently launched UBC Drinks Tap Water h2omg campaign. We found that the UBC Action Framework FVV was the least mentioned of all and may reflect a knowledge gap on the topic.

From our interview coding analysis, our team determined that seasonal and local, labeling & transparency, and affordable & healthy options were the most appropriate FVV to focus on for our audit. We held a meeting with our primary staff client and other key stakeholders on Friday, March 1st to discuss our FVV selections and as a result; we decided to take on a third FVV for our audit, plant-based options, in lieu of the seasonal and local FVV, in an effort to continue building on the data from the previous project group.

3.3 AUDIT AND AUDIT MATRIX

Upon reviewing the audit matrix created by the last project group, our team members created a table with auditing questions that were consistent with the audit matrix, in regards to plant based options, and reflective of this year’s audit setting within the three residence dining halls: Open Kitchen, Feast, and Gather.

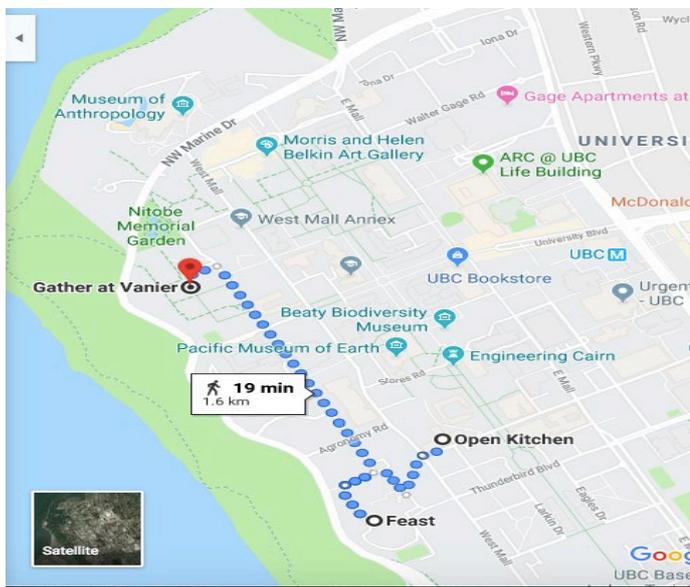
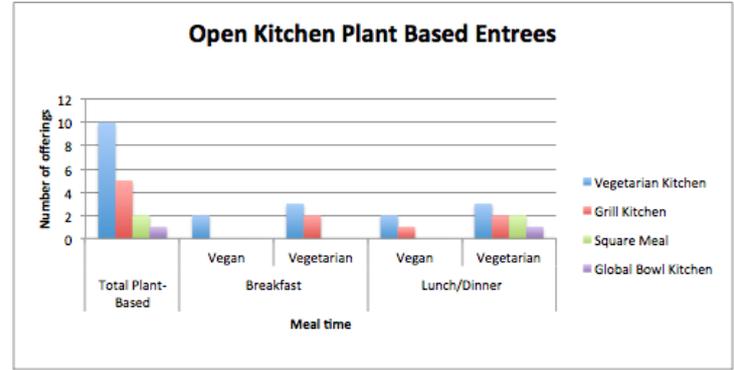


Figure 1: Map of UBC Point Grey Campus, with dining hall locations indicated with larger white circles, in the western portion of the map. Walking distance between dining halls is shown.

3.4 PLANT BASED OPTIONS

In regards to Plant Based Options, breakfast meal times at all three locations had the least amount of options when compared to the lunch and dinner meal times with Feast having no vegan options during our breakfast audits, Gather having the most plant based options overall, and OK offering close to half of the amount of plant based options overall that

Gather currently provides in total (Figures 2-5).



Figures 2-4: Charts of PBO in Dining Halls, divided by meal time and subdivided by station.

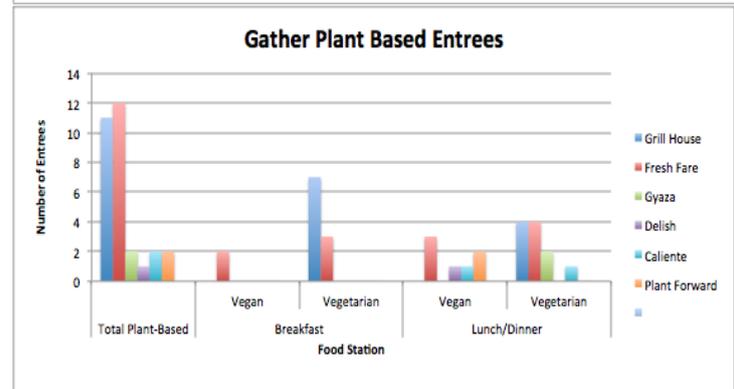
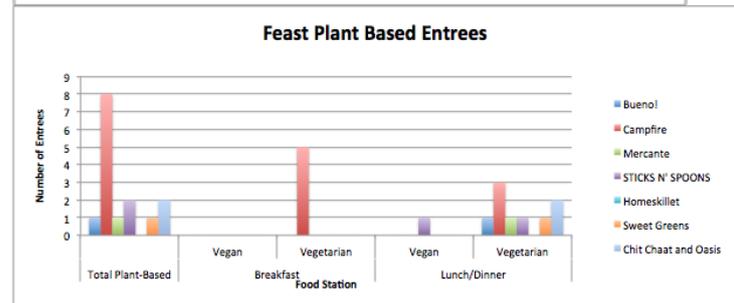
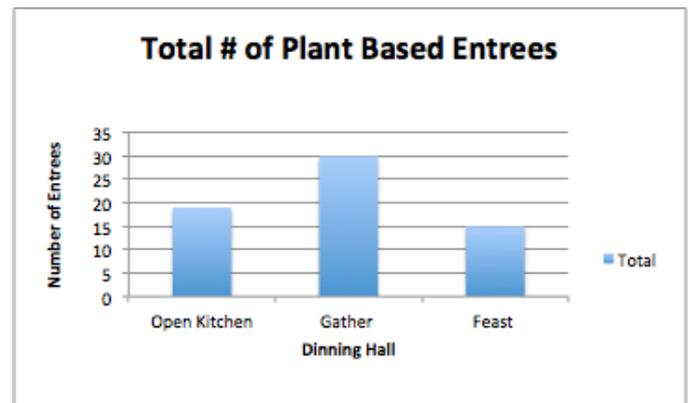


Figure 5: Total number of PBO by Dining Hall.

In regards to plant based protein, we found that slightly less than half of the total plant based entrees offered across the three dining halls of our audit did not have plant-based protein (Figure 6). Plant based daily specials were the highest at Feast by a small margin, with

an average of five plant based daily special entrees at each of the three locations (Figure 7).

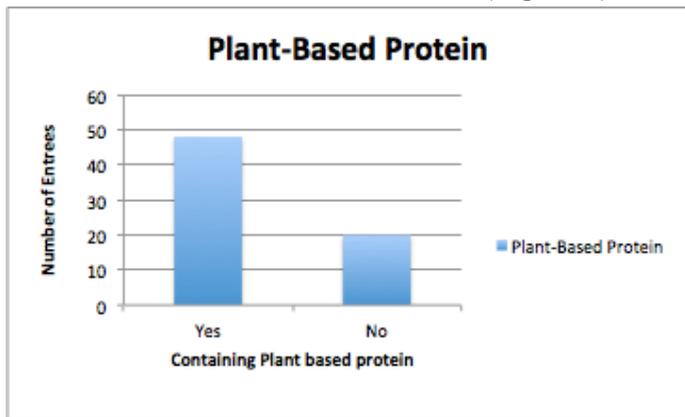


Figure 6: Absolute numbers of PBO with and without a plant-based protein.

3.5 LABELLING AND TRANSPARENCY

In terms of labeling & transparency, we looked for the presence and accuracy of posted allergen information, nutritional information in panels, and allergen or dietary icons on menu boards for each entree item. When analyzing audit data, we placed labelling data into categories:

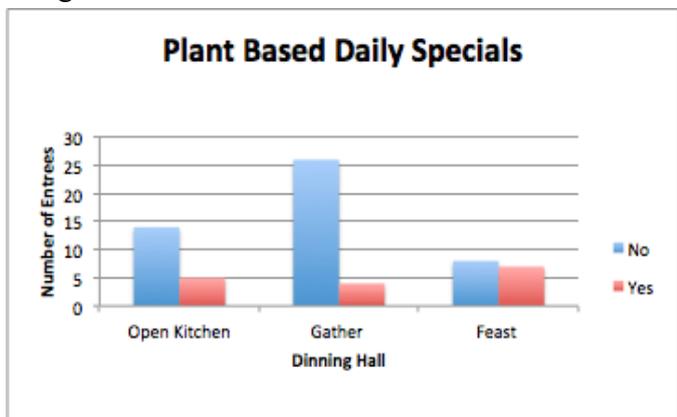


Figure 7: Absolute numbers of PB daily specials by dining hall.

- “Accuracy of Labels” - the percentage of items not ambiguously or interchangeably named, and with all applicable icons present.

- “Nutrition Facts” - the percentage of menu offerings with a corresponding nutrition panel and facts.
- “Allergens Information” - the percentage of menu offerings listing AI. Items assessed by FS as not having common allergens were excluded from the following charts due to the infrequency at which such exceptions occurred.

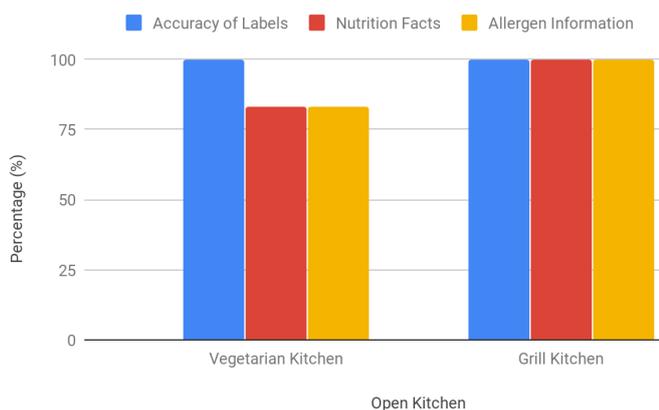
Stakeholder feedback (T. Paetsch, personal communication, April 5 2019) informed us that specials are generally not analyzed by FS for allergens or nutrition information, so therefore will be excluded from our overall labelling data analysis. Of the 28 daily specials, 8, or 28.6% lacked NP or allergy information, disproportionate to the overall NP absence rate of 11.3%. This has resulted in stations only serving specials - Chit Chaat, Homeskillet, Square Kitchen and Sticks n’ Spoons - not being included in the following graphs. Therefore, only offerings persistently present in menus were evaluated for labelling.

Open Kitchen did not have any labeling errors in terms of icons present and accurately labeled at breakfast (Figure 7). One persistent item, the Tuscan Bowl lacked allergen

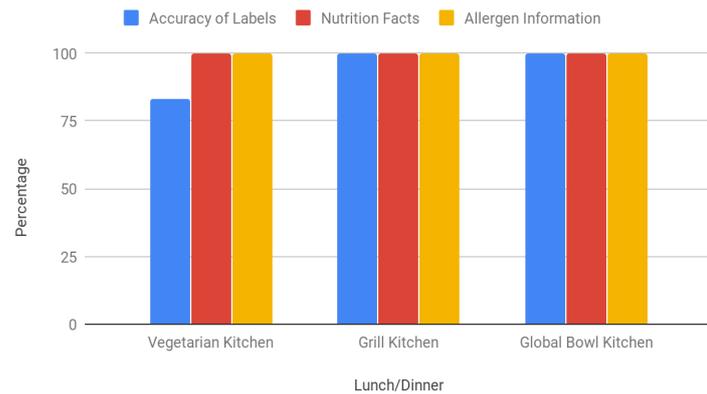
information and a panel (Figure 8), meaning that Vegetarian Kitchen had an 81% in those categories. This trend continued into lunch and dinner as there were no errors or missing allergen or nutritional facts at the Grill Kitchen and Global Bowl Kitchen stations (Figure 8). The only error was with the Sorghum Tabbouleh Bowl being marked as gluten-free when the gluten-containing pita was an ingredient, reducing the label accuracy of Vegetarian Kitchen to 83%. Open Kitchen therefore had 2 items that were labelled incorrectly in some form out of 33 unique persistent items present for a net 6.1% error rate.

Figures 8 and 9: Labelling Metrics for OK stations during breakfast (top) and lunch and dinner (bottom). Square Kitchen was not included due to it only serving specials.

Open Kitchen Breakfast Labelling Metrics



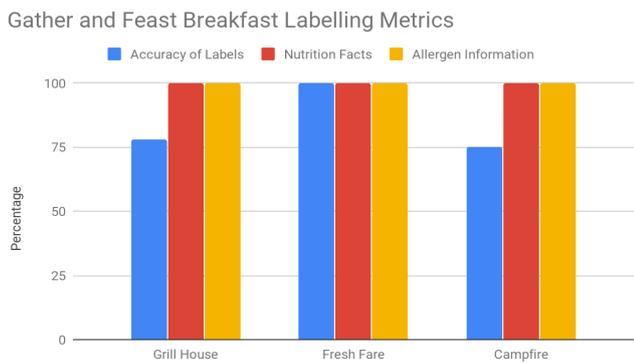
Open Kitchen Lunch and Dinner Labelling Metrics



The audit results for breakfast at Gather (Figure 9) exhibit that the Fresh Fare and Grillhouse station has a 100% accuracy rate in labeling for both nutritional facts and allergens. Grillhouse had two items lacking vegetarian icons: Varsity and Freshman Pancakes, resulting in a 78% accuracy of icons. For Feast, there was only one station, Campfire, serving entree breakfasts on both audit dates of Wednesday, March 13th and Friday, March 15th. Two items at Campfire had erroneous labelling. Buttermilk Pancakes were referred to as “Blueberry Pancakes” on the NP. Therefore, Campfire at Feast had an accuracy rate for labels at 75% and full presence of allergen and NP for breakfast.

Figure 10: Labelling metrics for stations at Gather (left and centre) and Feast (right). These dining halls were combined due to Feast only having one entree station open

for breakfast.



For Gather lunch and dinner (Figure 10), Gyaza, Fresh Fare and Caliente had no issues with labelling. The sole item at Grillhouse lacking AI was the Chicken Wings, potentially due to misreporting genuinely having no allergens as lacking AI, or due to AI genuinely being missing. The information being missing may be the case as a similar item - Chicken Strips - was fully informed. This resulted in 91.7% of Grillhouse entrees having a full NP. Plant Forward had an item - Savoy Cabbage Rolls - synonymously named Pork Cabbage Rolls in the allergen and ingredients list (bacon vs. pork) leading to confusion and a 75% labelling accuracy. The rolls also lacked a NP, bringing that statistic to 75% for Plant Forward. Delish had two items - Hawaiian Sun Smoothie and Bandit Salad - on panels that were not in the menu, leading to an 80% labelling accuracy. Two additional items - Pacific Northwest

Marinated Salad and BC Blueberry Salad - lacked panels, leading to an 80% accuracy rate for NP and allergens. Gather, therefore, had 7 items incorrectly labelled in some manner out of 56 total unique persistent offerings, a net error rate of 12.5%

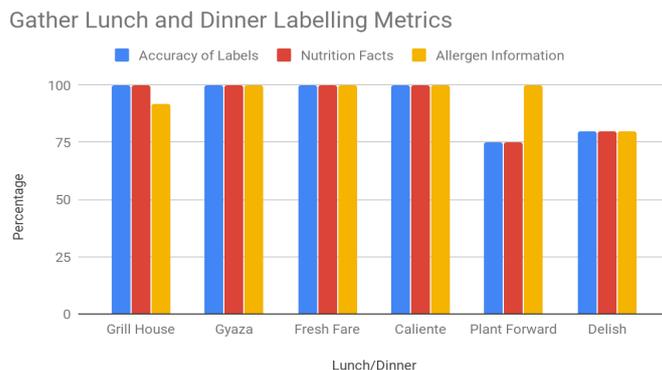


Figure 11: Labelling metrics for Gather Lunch and Dinner.

Feast had two stations that we evaluated to not have missed any information (Figure 11), Bueno! and Sweet Greens. Sticks n’ Spoons, Chit Chaat and Homeskillet were omitted from data analysis due to those stations only serving specials. Campfire appears to have the lowest accuracy of labelling, at 71.4%. Two items from Campfire were given conflicting names between the menu and the NP. These would be the Feast Signature Burger, called Totem Signature Burger in the NP, and Quinoa Yam Burger called Vegetable Burger in the NP. Mercante had the lowest observed NP presence, at 66.7%, due to the Margherita Pizza, 1 of the 3 offerings there,

lacking a full NP. Collation of Feast breakfast and lunch from 3 incorrectly labelled items out of 22 unique persistent offerings gives a net error rate of 13.6%.

Feast Lunch and Dinner Labelling Metrics

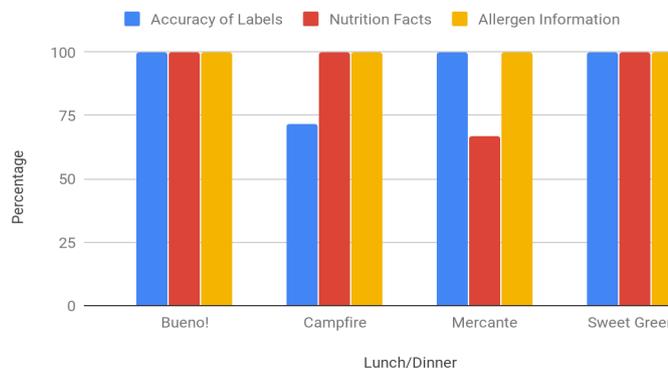


Figure 12: Labelling Metrics for Feast Lunch and Dinner.

3.5 AFFORDABLE HEALTHY OPTIONS

The results of the affordable & healthy visual audit aligned well with the survey responses in terms of price point for entrees, with meat dishes priced slightly higher. For breakfast, the most expensive entree item was \$8.99 with most entrees priced between \$5.00-8.00. For lunch, the maximum entree item price was \$14.99, with most entrees priced below \$10.00, as was also the case for dinner items.

	Minimum	Q1	Q3	Maximum
Vegan	3.29	5.99	8.29	9.99
Vegetarian	5.99	7.24	8.99	9.99
Meat-containing	6.59	8.99	10.79	12.99

Table 1: Summary of results for price distribution of dinner entrees within OK, Feast, & Gather.

	Minimum	Q1	Q3	Maximum
Vegan	5.79	5.94	6.065	6.29
Vegetarian	2.79	4.29	7.065	7.99
Meat-containing	3.99	6.765	7.99	8.99

Table 2: Summary of results for price distribution of Breakfast entrees within OK, Feast, & Gather.

	Summary of Results			
	Minimum	Q1	Q3	Maximum
Vegan	3.29	5.99	7.99	8.99
Vegetarian	5.99	6.87	9.29	12.99
Meat-containing	3.29	7.99	10.29	14.99

Table 3: Summary of results for price distribution of Lunch entrees within OK, Feast, & Gather.

3.6 SURVEY

Our survey (Appendix F) had three main questions and four questions on demographics. We had a total of 208 responses, the majority of which came from the customers at each of the dining halls during the times at which we were conducting our visual audits.

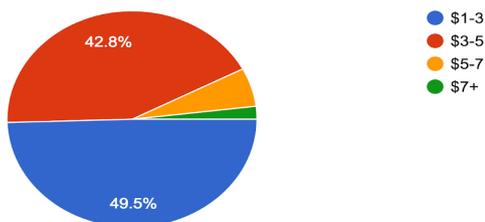
The majority, 51%, of the individuals surveyed selected the range of \$8-10 for what they considered to be an “affordable” meal, 31.3% responded with the range of \$6-8 (figure 13). When asked to choose the price range associated with what respondents considered an affordable snack, 92.3% selected \$1-5, with a slight plurality, 49.5%, who selected \$1-3 (figure 14).

4. DISCUSSION

4.1 PRIMARY DATA COLLECTION

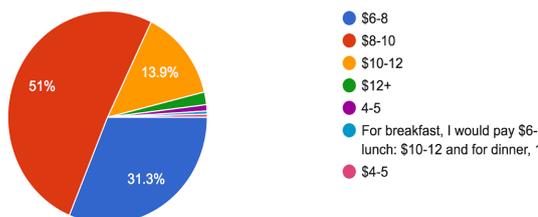
What would you consider an affordable snack? Please name a price

208 responses



What would you consider an affordable meal? Please name a price

208 responses



Figures 13 and 14: Proportion of customer responses to price questions in survey. N = 208

The final non-demographic question asked if meals should be priced according to the type and amount of protein. It was the question with the highest majority response in one category, 68.8% responding yes (figure 15).

Do you think meals could be priced accordingly based on type and amount of protein (V/V/ meat containing)?

208 responses

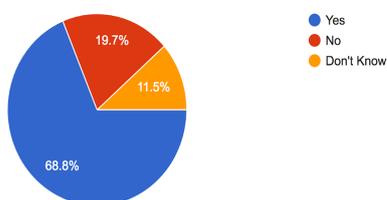


Figure 15: Proportion of responses to protein-type pricing.

Throughout the stakeholder interview process, a series of common themes were discovered. However, only a couple themes that were mentioned the most often will be discussed in this report.

Many of our stakeholders indicated a lack of a definition in what is considered

“affordable”, “healthy” or “housemade”. There is no official definition for any of these terms in the context of UBC. In general there is no literature that defined what “affordable” means in the Canadian context. Similarly it was found that the terms “healthy” and “housemade” varied depending on the individual. The lack of clearly defined metrics for these terms make them difficult, if not impossible, to measure. These terms are subjective without a baseline defined for these terms. Factors such as individual economic status or external support could alter what an individual student considers affordable. Although, it appears that UBCFCS is doing quite well on their affordable healthy and house made FVVs, the lack of baselines make it difficult to be confident in where UBCFCS currently stands

with these FVV, and limits the ability to improve and more forward with these FVVs.

Another theme that emerged often was the processing of local seasonal foods to increase the ability to offer a greater variety of foods throughout the year. As many of the stakeholders mentioned, summer is the time of the year with the greatest abundance of local food in season, and also the time of the year that there is significantly fewer students on campus. This is one of the greatest challenges for the FVV as there is a limited growing season for many fruits and vegetables in Vancouver. Processing local produce would allow UBCFS to utilize local foods throughout the busy periods of the year, by preserving these products. Although there may be challenges as this may be costly and labour intense for UBCFS, it is something that may be considered in the future.

#### 4.2 LABELLING AND TRANSPARENCY

Labeling is important as it helps inform consumers' food choices. Having the skills to read nutrition labels is a part of food literacy and a key step to maintaining good health (Cullen et al., 2015). As mentioned in Colatruglio & Slater's article for first year students in

university (2016), the main consumers of the three dining halls, this is the first time that they have to make their own decisions in regards to their nutrition.

The main forms of mislabelling observed in the dining halls were icons being incorrectly associated with certain entrees on the main menu signage and inconsistent entree names. Each of these types of mislabelling have different implications associated with them.

Firstly, there were a few cases, in which an icon was present, but the entree did not meet the requirements that the icon indicated. One main example of this is the Caesar salad at the Grill Kitchen station in the OK dining hall, which had the vegetarian icon on the main menu board, however anchovy was listed as an ingredient on the NP. Anchovy is often found in Caesar salad dressing, and is therefore not a vegetarian dressing. Another case was the Sorghum Tabbouleh Bowl at the Vegetarian Kitchen station located in OK, which had a gluten free icon, however the dish came with pita bread, and gluten is listed as an allergen on the attached NP. Misuse of icons is problematic as the icons are often used as a way for customers to quickly inform their meal choices. The gluten

free icon being misused is a problem as gluten can be a severe allergy for some people. In the dining hall environment it is not always easy to read the NP, as certain times of the day are quite crowded or subject to time pressure, therefore the icons are used to make choices that reflect the individual’s dietary restrictions. It should also be noted that each individual dining hall is responsible for creating their own in house signage. The misuse of icons can lower trust in the icons and other labels, particularly with allergens through inconsistency between labels.

Secondly, there were some instances where the name of the entree was not consistent between the main menu board and the NP. One example of this was the name of the signature burger at Campfire located in Feast dining hall. On the main menu board the burger was named Feast Signature Burger, however the burger was labeled as Totem Signature Burger on the NP. Similar occurrences were observed at other dining hall locations as well, however Feast’s Campfire had the highest level of inaccurate signage of the

three dining halls, with 3

items out of 12, 25%, being incorrectly labelled in some manner. Overall dining hall inaccuracy ranged from 6.5% in OK to 8.9% in Gather and 14.3% in Feast. Although lacking consistency, this was not particularly problematic, as it was easy to connect the dishes, as the names were relatively similar. However, it does raise doubts of whether the NP information is correct, whether the dish simply had a name change, or whether the NP is for a previously offered dish similar to the one currently offered.

The percentage of entrees with full NP was high (Table 2), 94.4% (102/108), however there were some observations made in regards to NP. Many of the entrees that did not have NP were also specials, 53.3% of all entrees lacking panels, which is to be expected, as the dishes are temporary items. Overall, 28.6% of specials lacked NP, indicating a need to assess specials for information. This frequency of NP absence led us to omit specials from labelling data analysis

	Total Unique Entrees	Labelled Correctly	Nutrition Facts	Allergen Information
Open Kitchen	31	29/31 (93.5%)	30/31 (96.8%)	30/31 (96.8%)
Gather	56	51/56 (91.1%)	52/56 (92.9%)	53/56 (94.6%)
Feast	21	18/21 (85.7%)	20/21 (95.2%)	21/21 (100%)
All Halls	108	98/108 (90.7%)	102/108 (94.4%)	104/108 (96.3%)

The NP is a resource for customer to use in order to make a fully educated decision. NP's have the ability to enhance health and nutrition by informing the consumer about what they are eating. However, although some dishes did not have nutrition panels, almost every dish (96.3%) had the main allergens labeled somewhere, whether it was on the daily special board or elsewhere. For daily specials the signs often provided a list of potential allergens, with the warning "allergens not reviewed" in bold above this list.

As for our evaluation: OK appears to have the most thorough labelling of persistent offerings, being the best of the three halls in terms of labelling accuracy and nutrition facts, while Gather had the most items lacking NP and Feast had the largest proportion of labelling errors. The hall best at supplying AI was Feast, with no persistent offerings lacking such information, with OK and Gather following behind in that aspect. Therefore, we evaluate Open Kitchen to be the best-performing dining hall with regards to Labelling due to being above average in all metrics while the other halls have metrics below average.

Table 2: Collation of labelling data across dining halls.

#### 4.3 PLANT-BASED OPTIONS

According to the previous audit group (Foster, Ke & Wu, 2018), our primary client set the target for VVO to comprise 50% of entrée offerings at all residence dining locations by 2020. OK had 23 unique plant-based entree options (PBO), and 33 total unique entrees; therefore 67% of entree offerings were plant-based. This represents an increase in the proportion of entrees being plant-based from last year's 40%. As mentioned above, Gather and Feast were not assessed last year for VVO. Gather had 41 unique PBO and 61 total entrees, or about 67% PBO. Feast had 14 unique PBO and 34 unique entrees; 41% of entrees were plant-based (Appendix G). It would appear that OK and Gather met the 50% goal, and Feast is close to meeting it. Caveat to this assessment is that the framework we used had difficulties accounting for stations that allowed customers to construct entrees, such as the Custom Kitchen station in OK. We decided to ignore such stations due to time concerns and combinatorial

allowing potentially hundreds of customized entrees across residence.

Throughout the plant-based visual audit, it was noticed that there was quite a variance of quantity of PBO available between the three dining halls. Gather had by far the most PBO, with the majority of those options being permanent entrees. Feast on the other hand, had the smallest collection of PBO, with only one temporary vegan option offered throughout our two-lunch/dinner audits. Feast dining hall is on a 14 day cycle menu rotation, while Gather dining hall has a static menu with only one station that rotates their menu weekly (T. Paetsch, personal communication, April 5th 2019). In addition, some PBO offered in Totem were not the most nutritious of choices. Examples of these offerings were pizza, poutine, vegetable burgers and grilled cheese sandwiches. Vegan students living in Totem may have limited options, which may not meet their nutritional needs. Those who are vegan may have to travel to another dining hall (Figure 1) or food vendor on campus in order to purchase a vegan entree, which may result in the student skipping a meal due to time restraints. Also, students following a plant based diet at Feast do not have the same access to

highly nutritious plant-based meals as those who dine at Gather. Homeskillet at Feast was also the only station throughout the audit that did not have a PBO during our two audits. It should be mentioned that the self-serve or customizable meal stations were not audited.

We found that plant-based breakfast entrees relied heavily on eggs and cheese as protein sources. The PBO that were vegan contained significantly less protein (grams per dish) than those containing cheese and eggs (Appendix H). This causes a nutrition gap for vegan students or those who do not eat eggs and/or cheese, as their arguably most important meal of the day will be low in protein. The lack of plant-based protein in the morning was seen throughout all of the dining halls. Breakfast entrees were often traditional western breakfast dishes, and therefore did not cater well to vegans or those who do not eat eggs.

#### 4.4 AFFORDABLE AND HEALTHY OPTIONS

The data generated from the AHO FVV audit and survey is particularly important as it speaks to informing and addressing food insecurity on campus. Food security is defined as “when all people, at all times, have physical,

social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (FAO, 2002). Therefore, to be classified as food insecure or to experience food insecurity, one of the conditions in the above statement must not be met (FAO, 2002). As university students are a vulnerable subpopulation due to the huge expenditures related to the attainment of their degree, mostly attributed to the cost of housing and tuition, food insecurity is a particularly salient issue (Gaines et al., 2014; Reynolds et al., 2018). Meal Exchange, a charitable organization based in Toronto, conducted a national study that estimated food insecurity across Canadian post-secondary students to be near 40% (Silverthorn, 2016). At UBC, the Alma Mater Society Academic Experience Survey reported that 37% of undergraduate and 42% of graduate students expressed concern about running out of money to buy food at least once in the last 12 months (Nguyen, 2018).

A theme apparent in the literature is that there is no clear definition or monetary range for what is considered “affordable”. Meal Exchange also reported that 64% of students in Ontario

said that healthy food options on campus were not affordable to them. Furthermore, 74% of students felt either somewhat dissatisfied or very dissatisfied with the affordability of food on campus (Maynard, Lahey & Abraham, 2018). It is clear, as reflected in UBCFS AHO FVV statement, that “healthy” and “affordable” must be considered together in the context of UBC. To speak to that, the results of our survey tried to clarify what is considered an affordable meal, so that clear targets and definitions may be drawn for this FVV. UBCFS is doing fairly well on satisfying student affordability in their residence dining halls given that 50.7% of people surveyed felt that paying between 8 and 10 dollars for a meal was affordable, and the majority of meals, particularly vegan and vegetarian entrees, fell in this price bracket. However, to further affordability on campus, UBCFS should provide more entrees priced between \$6 to \$8 to speak to the 31.6% of participants who felt that meals are affordable within this range.

To note, an unexpected challenge that occurred during the survey process were Residence Advisors informing investigators that they were not allowed to conduct surveys in

Residence Dining without permission for the Residence Life Managers.

## 5. RECOMMENDATIONS

### 5.1A IMMEDIATE ACTION AND IMPLEMENTATION

#### 2019 Audit Specific Recommendations

As a result of our audit focusing on PBO, Labelling and Transparency, and AHO, we have several recommendations for immediate implementation. The following recommendation speaks to the Labelling and Transparency FVV, and are intended for the directors of UBCFS and Student Housing and Hospitality Services (SHHS).

- The recommendation for immediate implementation is to create an in-house check and request system for signage updates in order to address the issue of missing or inaccurate signage in the residence dining halls.
  - The “check” part could refer to residence dining managers or SHHS staff having weekly or monthly walkthroughs and taking note of inaccuracies or missing signage. Preferably, residence dining staff would compile a list

of inaccuracies or missing signage over day-to-day operations as entree offerings change.

- The “request” part of this solution refers to creating a system that could take on the form of a ticketing request (similar to IT services) or could take the form of a shareable website link with details on who to contact for X, Y, Z labelling issue.

#### Recommendations for other FVVs

From the interviews with relevant stakeholders, several other recommendations came about related to other FVV not focused on during the audit. We feel the following recommendations could also be readily completed or implemented by UBCFS or SHHS.

- In relation to the In-House Preparation FVV, it was suggested that creating a benchmark target for percentage of ingredients made in-house may be a starting point for future evaluations.

- Similarly, for the Culinary Focus FVV, it was suggested that defining what Pacific Northwest (PNW) cuisine means to chefs (e.g. what percentage of ingredients in an entree should be from the PNW, or what dishes are typical of the PNW) is critical to furthering this FVV. Subsequently, it would then be possible to set a benchmark target for percentage of entrees that could be PNW-focused per mealtime.
- Another way to further the Culinary Focus FVV may be to utilize social media as a way to connect with students and showcase the diversity of meal options offered by UBCFS.

#### General Recommendations

- That front-end work be done by stakeholders and instructor to determine which FVV can be feasibly audited by student investigators.

- Should follow-up audits be conducted in the Residence Halls, for the instructor and primary client to contact Residence Life Managers or to notify student investigators to do so, to obtain permission to conduct observations and surveys.

#### 5.1B MID TO LONG-TERM ACTION AND IMPLEMENTATION

#### 2019 Audit Specific Recommendations

As a result of our audit focusing on PBO, Labelling and Transparency, and AHO, we have several recommendations for mid- to long-term implementation. The following recommendations are intended for the directors of UBCFS and Student Housing and Hospitality Services (SHHS).

- Plant-Based Options
  - Increase the quantity of VVO at Feast, as this residence dining hall consistently had the lowest number of PBO entrees.
  - Similarly, we feel it would be worthwhile to increase the number of vegan breakfast

- options offered. Concomitantly, in vegetarian breakfast items, reducing the reliance on eggs or dairy (cheese) as a source of protein and offering items that incorporate plant-based proteins, such as more seeds, nuts, legumes or tofu.
  - Along the same lines, updating the PBO FVV to incorporate an element of benefits to human health, as well as health of the planet. In execution, this may look like diversifying the types of plant-based proteins offered, increasing the ratio of protein to starch in PBO, and offering more seasonal options.
- Labelling and Transparency
  - In several interviews, it was recommended to expand the distribution of nutrition labelling cards beyond residence dining, to also include retail locations (e.g. Harvest Market, Grab-and-Go items).
- Adding the story-telling element of specific ingredients or dishes, the procurement process of the ingredient (e.g. sourcing from UBC Farm), its seasonal or regional importance, etc, may be another way to engage students with their food and further this FVV.
- Time and resources permitting, successfully getting the residence dining menus online (i.e. Mealviewer software) would be another way to engage students where they are (online), and further this FVV.
- Affordable Healthy Options
  - From this research project, we understand that all entree dishes are examined by the nutrition unit of SHHS. However, several times in interviews the ratio of plant protein to starch is somewhat of an issue compared to meat-containing dishes. For other reasons as well (i.e. the healthfulness of certain meat-

containing entrees), we recommend that the nutritional profile of all entree dishes are considered when considering if they are “healthy” as well as “affordable”.

### Recommendations for other FVVs

Other recommendations generated as a result of our interviews with relevant stakeholders, in terms of other FVVs not evaluated in this years audit, or recommendations more generally include the following. Again, these recommendations are targeted to management and staff of UBCFS and SHHS.

- Healthy Beverage Initiative/ Free

#### Drinking Water FVV:

- To implement fountain drink machines that require the use of a reusable bottle. Similarly, to have more HBI vending at more locations (residence dining and retail).
- To provide information on how our tap water is clean and safe to drink, particularly for

international students new to Canada. This may help address the purchase of bottled water, therefore reducing the associated waste created by these non-reusable bottles.

- Expansion of spa water, and other in house procurements of ice teas and lightly sweetened beverages, specifically into catering and other retail locations on campus.

- Seasonal/ Local FVV:

- Use more local ingredients in entree offerings.
- Increase ability of UBCFS to utilize local products out of season, by making stock, using all parts of the vegetables. This may also involve working with local processors to dry herbs, freeze berries, can local tomatoes, etc at the peak of freshness (late summer, when majority of student body is away from campus).

- Supplier Code of Conduct FVV:

- Choosing to purchase B-grade produce, as a means to transform

the supply chain and reduce food waste regionally.

- Continue to encourage retail locations to push the envelope when it comes to packaging, waste generation, and other sustainability issues due to purchasing power of UBC campus.
- When considering new franchise partnerships on campus, look at franchise partners' best practices and supplier code of conduct and make that a criteria for choosing to partner with certain franchises.
- Zero Waste FVV:
  - Create a food recovery program for leftover food.
  - Implementing in house or "back of house" composting at each residence dining or retail location to decrease compost and waste contamination.
  - Scholars Catering could limit the amount of waste and excess supplies they provide for on-
- campus events, such as coffee cups, cutlery, tongs, etc.
- Professional Development FVV:
  - Creating a chef training program for UBC culinary students to enrol in.
- In-House Preparation FVV:
  - Purposefully choosing to purchase less frozen food. Setting a target for this may be helpful in achieving this goal.
  - Move towards producing bread and bakery products in-house, as currently bread and bakery products account for the largest proportion of goods purchased out-of-house.
- Ocean Wise and Fair Trade FVV:
  - Revisiting exclusionary criteria of the Ocean Wise™ and Fair Trade program that may be hindering local businesses and suppliers that are equally ethical and sustainable, but not certified under these program designations due to financial constraints

associated with the certification process.

- Creating a new FVV focusing on the importance of education and knowledge exchange between UBCFS and the UBC campus, specifically as it furthers the other 16 FVVs.
  - To further the Zero Waste FVV: UBCFS could better educate students on proper composting for front-of-house composting at the residence dining hall facilities. Such an initiative also has a carry-over effect, as most first-year students pass through first-year residence, and learning how to properly sort waste and compost early in their UBC career can benefit the community for years to come.
  - To further the In-House Preparation FVV: Senior management can increase support for this FVV by creating a designated facility for in-house production. This would align with

UBC’s reputation as a “living laboratory”.

- Generally:
  - Designing a residence dining station where the customer can choose the type of protein as well as the amount of protein per serving (e.g. ¼ of entree is protein, ½ of entree is protein, etc.), and fill the rest of the serving with vegetables. The ratio of protein: vegetables on the entree corresponds to different entree prices.
    - This could potentially speak to Affordable Healthy Food Options.
  - Recommendation to have an annual or semi-annual half-day conference and invite all relevant stakeholders related to UBCFS and SHHS so that everyone can learn and connect about what each unit of the UBCFS family is working on to further the FVV goals.

## 5.2 FUTURE RESEARCH

As a result of this research project, the team has several recommendations for areas of future research. The team recognizes value in generating continuous datasets, that is collecting data over several years on the same factors, and so we recommend that future audits continue to evaluate the progress of the PBO and Labelling & Transparency FVV, as well as further develop the metrics of the AHO FVV. In addition, to streamline future audits or research projects, it may be beneficial for the primary clients to narrow the list of FVV for students to explore during the interview phase from 16 to 6-8. By reducing some of the FVV to explore, more time may be allocated to conducting the audits, as well as auditing more FVV.

Speaking to areas of future research on the FVV audited this year, as referenced several times in this report, we recommend developing definitions for the terms “healthy” and “affordable” as appropriate for the context of the campus food system. Additionally, for the Labelling and Transparency FVV, it was recommended that future research projects evaluate the impact that the signage and icons

are having. For example, looking at how the storytelling signage linked to the “We Dig Real Foods” campaign is viewed by students.

Another area of future research that was not selected for audit this year was the FVV on Culinary Focus. This FVV is described on the official Food Vision and Values (2017) publication as “Our culinary focus utilizes local and seasonal Pacific Northwest cuisine, while simultaneously striving to offer globally inspired and culturally appropriate menu choices”. It was suggested in one of the interviews that delving into the cultural and racial background of the student population, particularly of first years whom live in residence, and any demographic trends of incoming students year to year, may be beneficial to tailoring the menu offerings of UBCFS at residence dining locations. Future SEEDS projects could look into demographics of this population and conduct surveys that could specify what cultural dishes or cuisines are missing in UBCFS menu offerings. From the list of cultural entrees suggested, research could be conducted to uncover the most cost-effective dishes to implement. Lastly, another area of future research in regards to the FVV of Zero Waste includes UBCFS auditing their own

operation on a sample basis by looking at a balance of waste, recycling, and food scraps within residence halls and retail outlets.

## 6. CONCLUSION

This project has allowed for the creation of a quantitative auditing tool to help UBCFS measure the extent to which their Vision and Values are being followed. Based on the Vision and Values, audits were conducted on the PBO, AHO, and labelling values.

In terms of labelling, Open Kitchen was the best-performing hall with regard to labelling persistent menu offerings, being above average in all three categories of labelling accuracy, NP, and Allergen Information. Gather was middle performing, with all offerings having corresponding AI, being above average in NP, but having the lowest rate of labelling accuracy. Feast was the lowest performing of the three dining halls, lagging below average in NP and AI.

Open Kitchen and Gather both had circa 67% of entrees as plant-based; Feast had circa 41% of entrees that were plant-based. Feast would only need to add 6 more plant-based

entrees or strip the meat from 3 entrees on order to meet the client-set goal of 50% PBO at all dining halls.

The large majority of all entrees, across all three dining halls and all three meal periods, were priced between 6 to 11 dollars. This price range is consistent with our AHO survey results that showed that more than 80% of the respondents consider this price range affordable.

Multiple recommendations for the implementation of action items and future research were suggested to aid UBCFS in adhering to its Food Vision and Values. With that being said, UBCFS and their surrounding stakeholders have conveyed a sincere and vested interest throughout this project to improve what is already an impressively sound and well functioning food system. As students, we consistently felt heard and respected by all of our clients and stakeholders. UBCFS has proven a strong commitment to their overall vision, valuing people over profits, and consistently seeking out contributions for collaborative improvement. We are confident that UBCFS will continue to serve as a leading example for institutions both nationally and abroad.

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APPENDICES

Appendix A: Scanned list of Food Visions and Values components with descriptions

Food Vision & Values

SHHS | FOOD SERVICES | 2017

**VISION**

We nourish and support the students, faculty, staff, and visitors of UBC by providing a diverse selection of fresh, delicious, and memorable food experiences in a socially and ecologically conscious manner. We do this by creating marketplaces and environments where wholesome, healthful food is a priority because our guests, our food, and our wellbeing matter.

**Our decisions are guided by the following values:**

- » We purchase high-quality, nutritious, sustainable foods and prioritize fresh, minimally processed ingredients.
- » We are committed to offering and actively promoting an abundance of affordable healthy choices for all meals, in recognition of the contribution eating well makes to academic and professional success.
- » We share food and nutrition knowledge and skills to improve the health and wellbeing of our community.
- » We encourage reduced meat consumption by making vegan and vegetarian options readily available, abundant, and affordable, to reduce our impact on our air, land, water, and climate.
- » Our commitment to transparency, including labelling with nutrition information, ingredients, and allergens, means our customers can make informed decisions about what they are eating.
- » We are proud to be a designated Fair Trade campus. We strive to offer more Fair Trade and ethically sourced products every year. Humanely raised animals and animal products are purchased when feasible.
- » We are proud to be an Ocean Wise™ partner and prioritize purchasing sustainable seafood.
- » We are a Zero Waste partner at UBC and strive to compost all food scraps, use recyclable or compostable single-use containers, and offer discount container programs.
- » We provide free drinking water at all of our food service locations as a sustainable and economic alternative to bottled beverage purchases and to encourage reduced consumption of sugar sweetened beverages.
- » We purchase seasonal foods from local food producers, as close to UBC as possible, to reduce our environmental impact, provide fresh ingredients, and to strengthen British Columbia's and Canada's economies.
- » Our culinary focus utilizes local and seasonal Pacific Northwest cuisine, while simultaneously striving to offer globally inspired and culturally appropriate menu choices.
- » We strive to prepare as many menu items as possible in-house, based on our menu engineering guidelines developed with our registered dietitian.
- » Our Supplier Code of Conduct sets performance expectations and strongly encourages our suppliers to support our Food Vision & Values.
- » We support our team with ongoing professional development to drive culinary excellence and meet or exceed our customer's expectations.
- » Our rigorous food safety plan consists of procedures, training, and auditing that ensures a safe environment our guests can trust.
- » We strongly support the UBC Action Framework for a Nutritionally Sound Campus, one of the UBC Wellbeing priority areas, by helping to lead the Food and Nutrition Working Group and working towards achieving its goals.

**Training**

We support our culinary team with ongoing professional development to drive culinary excellence and to optimize guest experience. Our training programs include food safety training, allergen training, plant based protein menu development training, and sustainability workshops to help educate and engage our culinarians.



**Appendix B:** Positions within UBCFS and SEEDS interviewed for this project.

Executive Chef & Culinary Director, UBC Food Services	Manager, SEEDS Sustainability Program	Executive Sous Chef, UBC Food Services
Executive Chef, Residence Dining, UBC Food Services	Associate Director, Retail UBC Food Services	Purchasing Manager, Student Housing and Hospitality Services
Manager, Nutrition & Wellbeing Student Housing and Hospitality Services	Communications and Marketing Specialist, Student Housing and Hospitality Services	Executive Chef of Catering, Restaurants & Retail Operations, Student Housing & Hospitality Services
Food and Nutrition Coordinator Student Housing and Hospitality Services	Associate Director, Residence Dining, Student Housing and Hospitality Services	Associate Director of Catering, Restaurants, Mobile Food & Concessions, Student Housing and Hospitality Services
Director of Food Services, Student Housing and Hospitality Services	Senior Planning and Sustainability Engineer	

**Appendix C:** A view-only link to our raw and semi-processed data.

<https://docs.google.com/spreadsheets/d/1nyd9IVG-KqfNQsfoFIR215IHZzeCzulffxTLr94xZ-/edit?usp=sharing>

**Appendix D:** Interview questions and Interview Coding Analysis Guide

To the best of your knowledge .....

- 1) Which FVV do you work with the most in your role?
- 2) What **is** UBC Food Services currently doing to support the \_\_\_\_\_ food value?
- 3) What else **could** UBC Food Services begin to do to better support the \_\_\_\_\_ food value?
- 4) Is the \_\_\_\_\_ food value currently being measured?

If yes: how, where is it being tracked, can this information be shared to include it in the spreadsheet?

If no: could it be measured and if so how would you recommend that information be tracked?

[Repeat 1-4 for each FVV the interviewee can authoritatively speak about]

5) If you were in our shoes conducting an audit, which two FVV would you like to see measured, or believe are the most important to be measured?

6) Is there any other values / principles that UBC Food Services should consider to adding to their Food Vision & Values commitments?

7) Is there anything else you would like to add relating to UBC Food Services' Food Vision & Values?

8) The primary client wishes to include "indigeneity" - incorporating Indigenous Food Culture - as either a discrete Food Vision & Value or disperse it throughout the FVV document. What is your take on this aim and how could it be implemented with your responsibilities?

### Interview Coding Analysis Guide

Please answer the following questions independently after listening to the audio recording of each stakeholder interview.

1. Which FVV were discussed? Which FVV, or initiatives associated with a FVV, were most passionately spoken of? Please consider length of discussion and tone.
2. Did any keywords emerge from the interview? If yes, please list them.
3. Please provide a brief, 3-4 sentence summary of the stakeholder interview.

**Appendix E/Table 3:** Interview Follow-up Question Tally

	1. Which Food Vision and Value (FVV) would you say you work with the most in your role?	2. If you were conducting an audit, which two FVV would you like to see measured, or believe are the most important to be measured? The FVV you choose do not have to be the ones you work with directly.
Quality & Nutrition	2	2
Affordable Healthy Options	1	2
Food Knowledge & Skills	2	2
Reduced Meat / Vegetarian & Vegan Offerings	1	2
Labelling & Transparency	4	2
Fair Trade & Ethical Treatment of Animals	1	0
Ocean Wise	0	0
Zero Waste	2	3
Free Drinking Water / HBI	0	1
Seasonal / Local Food	0	1
Culinary Focus	1	0
In-House	1	3

Preparation / Menu Guidelines		
Supplier Code of Conduct	0	0
Professional Development	0	0
Food Safety	0	1
Action Framework	1	0

**Appendix F:** List of questions in Survey.

What would you consider an affordable meal? Please name a price. \*

- \$6-8
- \$8-10
- \$10-12
- \$12+
- Other:

What would you consider an affordable snack? Please name a price. \*

- \$1-3
- \$3-5
- \$5-7
- \$7+
- Other:

Do you think meals could be priced accordingly based on type and amount of protein (V/V/ meat containing)?

- Yes
- No
- Don't Know

Age?

- 16-18
- 19-21
- 22-24
- 25+

Sex?

- Female
- Male
- Non-binary
- Prefer not to say

Living location?

- In- residence

Off campus

Year in school?

Freshman

Sophomore

Junior

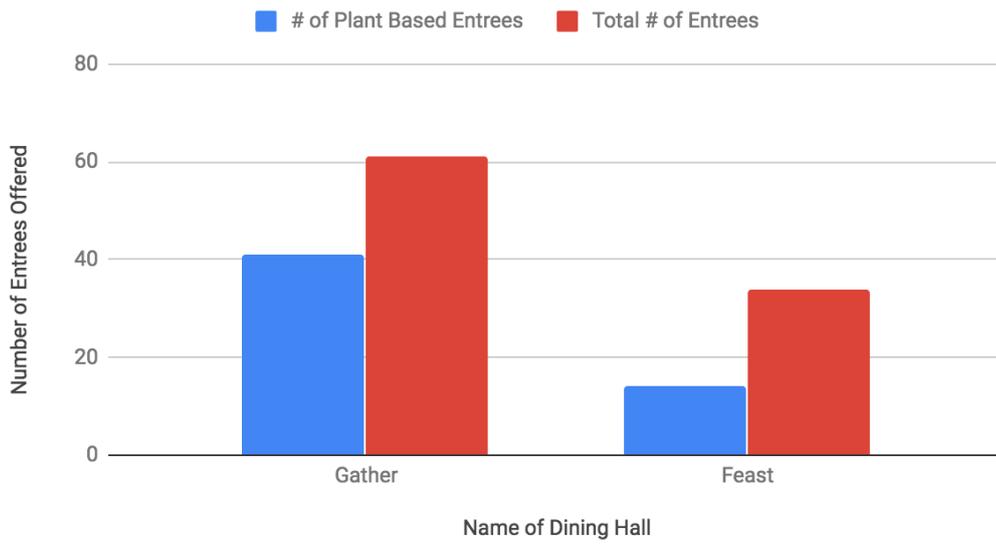
Senior

Grad Student

Other:

**Appendix G:**

**Number of Entrees at Gather and Feast**



**Appendix H:**

Table 4: Protein Quantity in the Breakfast Plant-Based Options

Dining Hall	Entree	Vegan or Vegetarian	Grams of Protein	Eggs or Cheese?
Feast	Breakfast Samosa	Vegetarian	13	Eggs
Feast	Blueberry Pancakes	Vegetarian	No information	Eggs
Feast	Mexi Egg Sandwich	Vegetarian	14	Eggs
Open Kitchen	Sweet Potato & Black Bean breakfast Bowl	Vegetarian	13.4	Eggs
Open Kitchen	French Toast	Vegetarian	31	Eggs
Open Kitchen	Tuscan Breakfast Bowl	Vegetarian	20	Eggs
Open Kitchen	Chia Bowl	Vegan	14	No
Open Kitchen	Tropical Overnight Oats	Vegan	12	No
Open Kitchen	Open Kitchen Breakfast	Vegetarian	22	Eggs
Open Kitchen	Mango Pineapple Pancakes	Vegetarian	20	Eggs
Gather	Baja Breakfast Bowl	Vegetarian	22	Eggs
Gather	Five Alarm	Vegetarian	24	Eggs
Gather	Smashed Avocado Toast	Vegan	9	No
Gather	Avocado Eggs	Vegetarian	5	Eggs
Gather	Overnight Oats	Vegan	17	No
Gather	Gather Signature Breakfast	Vegetarian	27	Eggs
Gather	Professor Breakfast Bowl	Vegetarian	No info	Eggs
Gather	Egg'sadilla	Vegetarian	22	Eggs & Cheese
Gather	Eggs Benny w/ english muffin	Vegetarian	17	Eggs
Gather	Eggs Benny w/ hash browns	Vegetarian	11	Eggs
Gather	Varsity Pancakes	Vegetarian	12	Eggs

**Appendix I:** A view only link of our raw data responses for the Affordable & Healthy Survey Results [https://docs.google.com/spreadsheets/d/1co4En7c1ZE4WNCg8wT2qO48fQ5z0x\\_0V7AisSg0lJko/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1co4En7c1ZE4WNCg8wT2qO48fQ5z0x_0V7AisSg0lJko/edit?usp=sharing)

**Appendix J** Example of full Nutrition Panels



