

UBC Social, Ecological Economic Development Studies (SEEDS) Student Reports

Honour Roll: Strategies for Lightening its Carbon Footprint

Jerique Arqueza

Emily Chu

Sharon Hundal

Chung Yung Man

Yuhan Sun

University of British Columbia

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LFS 450 UBCFSP REPORT

Scenario 5: Exploring Ways to Lighten AMS Food and Beverage Department's Ecological Footprint

Honour Roll:

Strategies for Lightening its Carbon Footprint

Group 23

Jerique Arqueza

Emily Chu

Sharon Hundal

Chung Yung Man

Yuhan Sun

ABSTRACT

The Honour Roll (HR) is one of several food outlets located in the basement of the University of British Columbia's (UBC) Student Union Building (SUB). It is unique in that it serves healthy and freshly made sushi and bento, using local ingredients whenever possible. Overall, HR is considered to be a sustainable foodservice establishment. However, their specific packaging requirements limit their potential in adopting more environmentally- friendly practices.

The objective of this project was to find ways to reduce the ecological footprint HR contributes to the larger impact of UBC's food system. According to primary survey results, customers highly value HR's convenient, affordable, and nutritious menu items. To reach our objective within the economic and social limitations set forth by consumer preferences and the business, we recommend HR adopt a new trend in brown-rice sushi menu options and replace their plastic packaging to clear biodegradable containers. We also recommend that HR adopt the use of a cellulose wrap which offers the added convenience of a buying an un-cut sushi roll to take on-the-go and eat without chop sticks. Additionally, we recommend HR promote these new initiatives, and their current ones, with a focus on nutrition and cost-savings to gain the interests of its consumers.

INTRODUCTION

The UBC Food System Project (UBCFSP) focuses on seeking methods to improve the UBC food system in an effort to set UBC as a more ecologically- friendly and sustainable microcosm. This project is made possible by the collaboration between Land and Food Systems 450 students and various UBC staff/student-led organizations such as the Sustainability office, LFS staff, UBC farm, UBC Food services, Alma Mater Society (AMS) Food & Beverage Department (AMSFBD) and others. By taking the initial steps into becoming a sustainable campus, the University of British Columbia can be an example for the local and global community in learning how to build a sustainable food system.

The UBCFSP is divided into scenarios addressing and aiming to improve particular issues within the UBC food system. The purpose of Scenario 5 is to “explore ways to lighten the AMS’s Food and Beverage Department’s Ecological Footprint” and to expand the “AMS Lighter Footprint Strategy” developed in 2007 to further include the UBC food system (UBCFSP, 2010). The purpose our UBC food system project is to work with Honour Roll, an AMS Food and Beverage outlet located at the basement of the UBC Student Union Building (SUB), which serves quick, affordable ethnic Japanese food to students, staff and visitors. Our plan, as a group, is to find ways to lighten Honour Roll’s ecological footprint by examining each step of its food production pathway, from soil to the table of its customers.

PROBLEM STATEMENT

The world’s consumption of resources and production of wastes currently exceed the planet’s regenerative capacity (Global Footprint Network, 2009). The rate of waste production outpaces the conversion rate of waste into resources. According to the Global Footprint Network,

this puts the planet in a state of global ecological deficit. A food system and its every level/aspect have significant effects on the global overshoot through the processes of food production and consumption and food waste management. Most significantly, effects of climate change due to greenhouse gas emissions from the aforesaid food processes can be felt through unequal food yields/distribution (McMichael et al, 2007).

According to the College Sustainability Report Card, UBC's overall grade is a B+, with excellent marks in climate change/energy, green building and food and recycling sustainability strategies. However, with at least 10 food outlets associated with the AMS alone, a lot of improvements can be made to improve strategies within each outlet to contribute to the betterment of the UBC food system as a whole.

VISION STATEMENT , IDENTIFICATION OF VALUE ASSUMPTIONS, GROUP

REFLECTIONS

After reviewing the vision statement for a sustainable UBC food system, we concluded that most aspects of this ideal sustainable food system have been validated in its seven guiding principles. As food and nutrition students, we share similar sentiments and appreciate that the vision statement included a nutrition aspect. However, the overarching statement could be modified such that it includes all three aspects of sustainability: the ecological, social, and *economic* aspects, and also covers the concept of food security. Therefore, we propose this modified vision statement:

A sustainable system which protects and enhances the diversity and quality of the ecosystem and improves social and economic equity ensures that:

- 1) Food is locally grown, processed and produced.

- 2) Waste (from food preparation, packaging, food wastage) is recycled or composted locally.
- 3) Food is ethnically diverse, affordable, safe and nutritious to ensure food security for everyone.
- 4) Food providers and educators promote awareness among customers about cultivation, processing, ingredients and nutrition.
- 5) Food is accessible to everyone and brings people together, enhancing community relationships.
- 6) Food is produced by socially, ecologically and economically conscious producers.
- 7) Food providers and growers receive fair prices. (While this original statement addresses economic sustainability and equity, this aspect of food system sustainability, as mentioned before, should also be included in the overarching statement.)

Evaluation of Honour Roll according to the “Vision statement for a sustainable UBC food system”

The vision statement for a sustainable UBC food system can be used as an effective evaluation tool for HR. We believe that this vision statement essentially outlines the ideal characteristics of a food outlet/producer that can effectively contribute towards the goal of a sustainable UBC food system.

1) Food is locally grown, produced and processed.

From research done by previous LFS 450 students and from communication with AMSFBD Manager, Nancy Toogood, there have been efforts made by students and staff alike to ensure that most ingredients used by HR are locally grown, produced and processed. The AMS, as a whole, orders ingredients/supplies from the UBC Farm or outside sources (i.e. Albion Fisheries for seafood). Afterward, each individual AMS outlet orders from the AMS’ central

supply according to their specific requirements (N. Toogood. Personal Communication, 2010). Therefore, it can be safely assumed that the food procurement methods of the AMS are essentially those of HR. From reading the *Sustainable Produce Procurement Liaison Report* (2009) and from talking to Nancy Toogood, it appears that most of the AMS obtains most, if not all, of their required produce, for the outlets, from as local and ecologically-friendly source as possible. We assume that the AMS and its food outlets attempt to meet the recommendations outlined in the AMS Lighter Footprint Strategy, while also being economically sustainable and cost-effective.

2) Waste (from food preparation, packaging, food wastage) is recycled or composted locally.

From observations of the HR site, recycling and compost bins are in close proximity to the HR food line up. According to Toogood (Personal Communication, 2010), the HR staff *should* be knowledgeable in proper waste management through recycling and composting and their actions should be as such. However, we speculate that customers of HR likely do not follow the same practices. Furthermore, we learned that HR is one of the few AMS food outlets that do not use biodegradable containers, though they do supply their customers with compostable forks. Therefore, we conclude that further research needs to be done regarding waste management practises of customers and how this can be improved.

3) Food is ethnically diverse, affordable, safe and nutritious to ensure food security for everyone (addresses social equity and food security) .

The HR website claims they serve “authentic sushi”. Although the foods from HR may not be of the same standards as dine-in sushi restaurants, we deem the food quality and prices as acceptable for a university setting. They serve westernized versions of sushi such as the

California roll, but we believe that the HR gives the UBC food system an adequate taste of Japanese cuisine to contribute to ethnic diversity. From personal observations, their menu seems to be relatively nutritious as there are very few oily or highly sugared items. Also, because the AMS controls the safety and quality of the food served in its outlets and HR has high turnover in its refrigerated items, we believe that food safety is not an issue at HR.

4) Food providers and educators promote awareness among customers about cultivation, processing, ingredients and nutrition.

From research of previous LFS 450 projects, we learned that our colleagues have proposed and effectively put into action a monthly “Eco-Friendly Day” (UBCFSP, 2010). While this event promotes making lighter footprint food choices, we, as consumers ourselves, do not feel knowledgeable about the origins of the food we get from HR. We do acknowledge and applaud that HR has taken the first steps last year, in 2009, in operating according to the AMS Lighter Footprint Strategy and collaborating with LFS 450 students/staff to put together more strategies for improvement. However, we feel that HR does not inform consumers about the origin and nutritional value of the food they serve.

5) Food is accessible to everyone and brings people together, enhancing community relationships.

As stated above, the Honour Roll does not host/take part in any events to inform consumers about their food. However, being at the hub of the university (the SUB), HR’s food is readily available and brings people together, though not necessarily for the purpose of food-related issues. Nevertheless, there is a small common dining area directly in front of HR and could be used as a means to reach out and gather people.

6) Food is produced by socially, ecologically and economically conscious producers.

To the best of our knowledge, from conversation with Toogood, and a review of past reports, HR orders from such food producers (see #7).

7) Food providers and growers receive fair prices.

Apart from the UBC Farm, other sources of AMS food also come from companies selling local produce and seafood that helps HR meet OceanWise standards (Toogood, 2010). Though it is unclear whether producers are economically or socially conscious, their actions show consciousness towards the environment.

Project Focus

From the evaluation of Honour Roll above, our group has established a few key points to address to suggest improvement in Honour Roll in an attempt to lighten its carbon footprint:

- 1) Improve customers' knowledge on proper packaging disposal methods
- 2) Make a switch from current plastic packaging to biodegradable materials
- 3) Promote and inform customers about new nutritional additions to Honour Roll's menu.

In order to address the aforementioned points, we put together a few project ideas to research and recommend the:

- 1) Introduction of biodegradable plastic packaging from BSI Biodegradable Solutions
- 2) Introduction of brown rice into the sushi
- 3) Introduction of a "Grab-and-Go" sushi roll
- 4) Advertisement of Honour Roll's current promotions and discounts

Rationale for project focus:

- 1) After the evaluation of Honour Roll, our group decided that food packaging is the biggest problem that Honour roll faces

2) The introduction of brown rice sushi is an idea that fulfills the requirement of this scenario, in which a new menu item must be introduced. We hypothesize that brown rice has a lighter ecological footprint in terms of its production and cooking through reduced energy consumption. We do not feel that reducing the food miles of Honour Roll's rice will make much difference because last year's procurement group found a closer source for rice in California (Toogood, 2010). Our group feels that the introduction of brown rice will also increase the nutritional value of each of Honour Roll's menu items.

3) Making chopsticks has a great environmental cost and are particularly hard to dispose (Toogood, 2010). The "Grab-and-Go" roll has the potential of greatly reducing chopstick usage at Honour Roll. This portable roll can be packaged with the newly introduced biodegradable plastic and can revolutionize the way sushi is eaten.

4) We believe that advertisement and popularization of Honour Roll's promotions and discounts can help promote good waste management practises in its customers.

METHODOLOGY

The following approaches were taken to help Honour Roll and to inform our decisions when recommending strategies to decrease its ecological footprint:

Literature review

Previous LFS 450 reports along with Honour Roll's and AMS Food Services' websites were reviewed to investigate the work of past groups and the progress of Honour Roll. Secondary research of scholarly literature was conducted to determine whether there are links between nutritious foods and ecological benefits. Menu items were analyzed and placed on a spectrum of

high to low ecological footprint. It was determined that the sources of the food were already as local as possible; however, the sushi rice can be improved not through food mile reduction, but through processing methods. Particularly attention was paid to brown rice due to the perceived health benefits by suggestion of one of our group members who is also a regular customer of Honor Roll and due to the hypothesis that brown rice requires less processing energy. Our group also tasted full brown rice sushi from a local Japanese Bistro to determine whether the taste and texture of the sushi were acceptable. Additionally, in our initial brainstorming sessions to improve Honour Roll's menu, a group member suggested a hand-held to-go sushi roll, an adaptation of the Japanese onigiri. Benefits and costs associated with brown rice and white rice were compared in the findings section. Literature on biodegradable plastics was also consulted to determine the possibilities of introducing biodegradable plastics to Honour Roll.

Promote existing discount offers and assessment of current menu

According to LFS 450 report from 2009, most students were not aware of HR's current practices towards sustainability such as \$0.25 off for bringing in your own food containers when purchasing donburi bowls. A proposed poster was designed as a template for HR to consider for the promotion of their free green tea and rice bowl discount offers (see Appendix F)

Survey

100 paper surveys (see Appendix A) testing customers' preference of brown rice sushi, willingness to use biodegradable plastic containers and acceptability of a new sushi roll presented as a hand-held uncut roll consumed without cutlery were handed out during the lunch period (noon to 4 pm) in the SUB dining areas. This survey also tested the customers' knowledge

about Honour Roll's current promotions and their own waste management practices. We gathered data from 100 participants on two consecutive Fridays (March 19 and 26). All of the surveys were completed because surveys were given out directly to students. Participants were partially selected based on the food they were consuming during survey period. This was done by giving preference to students that were eating Honour Roll sushi or foods from other AMS food outlets. By selecting students that purchase food from the SUB to fill out the surveys, we would collect more relevant and accurate answers. The reason why irregular Honour Roll customers were also interviewed was to attract potential customers that don't usually dine at Honour Roll. Data collected was then analyzed qualitatively and quantitatively.

A similar online survey was posted on facebook and 40 responses were collected. The purpose of the online survey was to reach more people and include a larger sample size in our original survey. This survey allowed us to present our new ideas to students who do not usually dine at the SUB. By doing so, it increased the potential of attracting new customers should our ideas be implemented.

Due to the limitation on number of questions that can be put onto the online survey, data analysis was mainly based on the results obtained from the paper survey. Data from the online survey was used as an additional resource.

Guidance such as research direction, contact information and additional resources such as pricing lists and samples of plastic trays that Honour Roll is currently using were obtained from the Manager of the AMS Food and Beverage Department, Nancy Toogood, Tom Coleman, the AMS Food and Beverage Department Assistant Manager, and TA Sophia Baker-French through emails and in-person consultations.

FINDINGS

Biodegradable Plastics

As stated by Nancy Toogood (Personal Communication, 2010), the reason why the Honour Roll did not switch over to biodegradable plastic containers like most other AMS outlets was because BSI Biodegradable Solutions did not have all the sizes they needed. Due to different sizes and types of sushi rolls, they require about seven or eight different sizes of clear containers. The usage of clear containers is very important for Honour Roll, as part of the appeal of Japanese cuisine is its appearance (Toogood, 2010). Currently, it is not feasible to order only a single size that BSI can provide while all other sizes are ordered from companies who do not produce biodegradable plastic (Toogood, 2010). According to BSI's website though, they are able to design custom packaging. However, we did not receive a response from them regarding the possibilities of designing packaging for Honour Roll in the duration of this project.

White Rice vs. Brown Rice

The process of making white rice includes: seeding, harvesting, air drying, milling, and enriching. Milling process is usually high in energy cost since it involves additional steps such as the removal of bran layers using 2 huller machines, cooling and polishing the rice with a brush machine, removal of broken kernels using a brewer's reel, and coating of glucose to increase luster (Blachford, 2006). On the other hand, the process of making brown rice is less complex. Brown rice is non-milled or only partially milled to give a more appealing appearance, meaning that its process has the potential of stopping at the drying stage, depending on the milling degree of the rice preferred (Blachford, 2006).

Reasons for eating at Honour Roll:

Convenience	19	3	5	12	4	6	1	1	1	4	9	65	36%
Cheap	12	5	3	11	2	6	1	0	1	3	10	54	29.5%
Ethnic	7	2	0	1	0	2	0	0	2	2	5	21	11.5%
Nutritional	9	3	4	7	2	1	1	0	0	2	2	31	17%
Eco-friendly	1	0	0	2	1	0	0	0	1	0	0	5	2.7%
others	3	0	2	0	0	0	0	0	1	1	0	7	3.8%

Are you interested in trying brown rice sushi?

Yes	21	3	5	16	2	9	1	1	2	3	7	70	70%
No	4	1	1	6	3	3	0	0	3	2	7	30	30%
												100	

Do you think sushi is difficult to eat on the go?

Yes	13	2	2	10	1	5	0	0	3	3	8	47	47%
No	12	2	4	12	4	7	1	1	2	2	6	53	53%
												100	

Would you buy a plastic-wrapped uncut sushi roll?

Yes	11	1	2	8	1	8	0	1	2	3	10	47	47%
No	14	3	4	14	4	4	1	0	3	2	4	53	53%
												100	

Do you recycle your sushi containers?

Yes	13	1	2	7	1	4	0	0	2	1	8	39	39%
No	12	3	4	15	4	8	1	1	3	4	6	61	61%
												100	

If your sushi containers are biodegradable, would you compost them?

Yes	21	4	5	19	1	9	1	1	4	5	11	81	81%
No	4	0	1	3	4	3	0	0	1	0	3	19	19%
												100	

Have you ever brought your own container and received a discount for a donburi bowl?

Yes	0	0	1	1	0	0	0	0	0	0	0	2	2%
No	25	4	5	21	5	12	1	1	5	5	14	98	98%
												100	

Have you ever brought your own mug and received free green tea?

Yes	0	0	0	0	0	0	0	0	0	1	0	1	1%
No	25	4	6	22	5	12	1	1	5	4	14	99	99%
												100	

DISCUSSION

Biodegradable plastic containers and wraps are more expensive than conventional oil derived plastics. However, they are completely digestible by microbes in soils, therefore reducing waste accumulation overall (Mohanty *et al*, 2000). This increase in packaging price can be compensated by reduced labour cost. Cutting sushi is one person's job at Honour Roll. If un-cut sushi rolls are implemented in their menu, less handling would be required, reducing the amount of Honour Roll's budget allocated to employee labour. Also, if BSI could design a container with "snap buttons", no plastic tape would be needed, reducing labour and resource consumption in this aspect also. The survey results indicate that customers are still divided with the idea of the "Grab-and-go" roll and may be unable to conceptualize it. We feel that the above survey data are not conclusive enough to halt the suggestion of this idea to Honour Roll.

According to the paper survey results, 82.5% of students said they would compost the plastic trays if they were biodegradable. If the majority of the students would compost the containers, implementation of biodegradable plastics would make a big step towards achieving the goal of reducing waste production from Honour Roll. However, the survey data also state that currently, only 39% of the customers recycle their non-compostable containers. This raised an issue as to the actual rate of composting that will occur if these biodegradable containers are implemented if current recycling rates do not show promising numbers. It is possible that those who were surveyed chose the answer they thought was most appropriate. Also, our group member managed to ask a few customers why they do not currently recycle. They stated that recycling their containers require prior washing before disposal, whereas composting would not require them to rinse their containers.

Honour Roll has been using white rice as their sushi ingredients every since the launch of the business. Our recommendations of an alteration/addition to this practice greatly depend on our findings regarding the overall benefits of using brown rice. According to our research, the process of making brown rice takes less energy since it does not involve milling process (Blachford, 2006). Since milling requires so many other steps such as the removal of bran layers and polishing the rice, the less milling it is, the less energy would be used in this regard.

Brown rice does not require enriching process, which is the addition of synthetic vitamins back into white rice as nutrients are generally lost during the milling process (Blachford, 2006). The process of making synthetic vitamins costs lots of energy, recourses and is labor intensive (Travis and Hester, 1991). In addition, the production of synthetic vitamins produces toxic by-products (Travis and Hester, 1991). The enriching process and its pollutants exert negative impacts on the soil, air, the overall environment and also affecting transportation costs (Travis and Hester, 1991; Dean, 2007). For these reasons, we feel that brown rice is a more ecologically benefiting choice.

As stated in our findings, brown rice is rich in fiber, protein, vitamin B, niacin, and minerals such as zinc and magnesium (USDA, 2010). Also, numerous studies have shown that the consumption of brown rice can help lowering high blood pressure, weight gain, cholesterols, heart disease, Type II diabetes, and many types of cancers (Klein, 2007). From our survey data, it appears that most customers welcome the idea of brown rice sushi, but the reasons are unclear. If there should be data found regarding nutritional benefits as effective marketing tools, brown rice benefits can be further promoted to increase its popularity with the consumer population at Honour Roll and UBC.

Although brown rice has many advantages over white rice, we noticed one disadvantage. According to our research, brown rice does need longer cooking time and may consume more energy during cooking (Roy *et al.*, 2008). It has been shown that brown rice requires about 45-60 minutes to cook, whereas white rice only requires 15-20 minutes to cook (Vegas, 2008). However, proper soaking and pre-cooking methods may reduce cooking time. We believe that the energy saving during brown rice processing and the elimination of the use of synthetic vitamins are so much greater that, these benefits would compensate for the downside of longer cooking time for brown rice. We also believe that the benefit from a 25% more yield in cooked brown rice compared to white with the same initial dry amount contributes to the advantage of brown rice (Roy *et al.*, 2008; RecipeZaar, 2010).

We believe that the AMS should not have a problem in ordering brown rice for Honour Roll because they currently order brown rice for other outlets (Toogood, 2010). Nancy Toogood also mentioned that any additional costs from the brown rice will be offset by the decreased labour requirements of Honour Roll, should the “Grab-and-go” rolls be implemented. We also believe that the costs of brown rice can be further offset by decreasing the purchase of the white rice currently being used.

Finally, from the survey results, we re-affirmed our assumptions that Honour Roll’s current promotions are not well-known by the customers. We feel that the need for re-advertisement of these promotions also require more incentives for the customers to feel excited about these offers and partake in them.

CHALLENGES AND BARRIERS

During the process of working on our project, communication problem had been one of the greatest barriers for our group. There had been times when we had difficulty in contacting the Honour Roll owner since we were always suggested to go through Nancy, the AMS manager first. However, due to Nancy's unavailability, there were several occasions when we were unable to reach her. In addition, the process of contacting community partner after brainstorming ideas rather than asking for the needs of the community partner made for a lot of time spent on trial and error. As a result, remaining time to work on and further implement the project was short. Also, we felt the challenge of connecting our ideas since the project is quite new and we did not have much of a reference for guidance.

CONCLUSIONS

This project addresses the need to lighten the ecological footprint of Honour Roll and UBC as a whole by researching and suggesting the implementation of:

- 1) Biodegradable packaging for Honour roll
- 2) Brown rice sushi into Honour Roll's menu
- 3) A "Grab-and-go" sushi roll wrapped in biodegradable cellulose bags
- 4) Advertisement of current Honour Roll promotions and discounts

Our research findings and survey show the general favourability of the above suggestions in reducing Honour Roll's carbon footprint by reducing waste production, improving waste management practises and reducing the overall energy consumption of Honour Roll in obtaining its ingredients.

RECOMMENDATIONS

Based on the findings of our research we offer the following recommendations to be considered by all stakeholders for the purpose of reducing the carbon foot print of HR and to potentially enhance the customer experience and resulting economic sustainability of HR as part of UBC's Food System:

For UBC Food Services, AMS Food and Beverage Department, UBC Waste Management,

Honour Roll Staff and related Stakeholders:

1) Replace current plastic containers with biodegradable containers and encourage proper disposal practises.

- Engage in further contact with BSI to negotiate pricing and order information for a various sized containers with push close functions to reduce tape use and labour
- Promote proper disposal of containers by sealing the containers with labeled tape that reads "compostable", or "compost me" instead of clear scotch tape that is currently used.
- In the long-term, custom sushi roll-sized reusable containers could be designed and sold through Honour Roll.

2) Implement novel idea of "Grab-and-go" sushi

- Engage in further contact with BSI to negotiate pricing and order information for cellulose bags that are appropriately designed and sized for this purpose
- Seek advertising ideas or implementation strategies from local restaurants that have successfully included these into their menu (See Appendix C)
- Test product with teriyaki roll or others that do not require soy sauce. Additionally, ginger and wasabi could be included at one end of the wrap, or not at all, and given by request instead, as these are often wasted

- Create signage to advertise convenience and eco-friendliness of wrapped rolls to encourage sales and proper disposal methods (eg. coloured bins), respectively

3) Offer full brown rice for all menu items, including rolls and rice bowls. Consider a brown-white rice mix or partially milled rice, if concerned with reducing the energy needed to prepare brown rice, and to respond to variations in consumer preferences.

- Train Honour Roll employees on proper brown-rice preparation, or brown to white rice ratio/ amount of partially milled rice to develop appropriate recipe. Consider contacting local Japanese Bistros for recipe tips (please see Appendix C for contact info).
- To gauge interest, prepare brown rice California rolls and yam rolls. Our rationale for these two as testers is that California rolls are popular among most patrons and yam rolls tend to be preferred by more health-conscious or vegetarian individuals, so both groups could offer valuable feedback on taste.
- A request for video coverage through Project SEEN, a campus-wide video project led by UBC Peer Programs members, is recommended to get the word out in a larger capacity. Additionally, the UBC Wellness Centre is concerned with nutrition and health promotion on campus and has various venues to promote the new product. Please see Appendix D for contact information.

4) Develop and implement a stamp card reward system to encourage patrons to *consistently* bring their own reusable containers for sushi rolls and other menu items after x # of visits. For example, 10 stamps could be redeemed for a free sushi roll or \$2.50 off of donburi bowls.

- To effectively implement this program and existing ones, an advertising campaign using posters is recommended. Please see Appendix G for example posters. Additionally, the

cashier could offer a pre-stamped card (see Appendix E) to each customer for a period of time (eg. 1-2 months) to get things started.

- A nutrition-focused advertising campaign is recommended to promote the free green tea with your own mug program and the new brown rice sushi product

For future LFS 450 colleagues:

- 1) Assess if necessary, and if so, how to reduce ecological impact of Honour Roll waste management from the production and processing end
- 2) Further research evidence for nutrition or as an effective marketing tool to promote eco-friendly behavior. Consider developing nutrition facts labels or a poster for HR's menu items
- 3) Research the feasibility and benefits of incorporating more vegan options such as soy fake meat or tofu spread to reduce reliance on meat and seafood products
- 4) Assist AMS Food Service and Honour Roll with designing, implementing and evaluating a promotional campaign for existing and emerging eco-friendly discounts and initiatives offered by Honour Roll
- 5) Start communication with TA, and directly with AMS Food Services and/or Honour Roll staff quickly to help generate a greater number of workable ideas and to help focus your project objectives early on
- 6) Try to thoroughly research multiple project ideas to prepare for submission of the project progress report, so that more time can be spent on implementing your project ideas.
- 7) If things are getting off to a slow start, try implementing a few recommendations from past groups while preparing and planning your current project focus

We thank all UBC Food System Stakeholders for their assistance in achieving our project goals and considering the proposed action items above. Special thanks to the LFS 450 teaching team for your guidance throughout the project and past LFS groups for their recommendations.

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APPENDIX

A. Survey administered at the SUB

LFS 450 HONOUR ROLL SURVEY

Please circle or fill in the blanks where appropriate.

I am a/an: **undergrad** **grad student** **prof./staff** **visitor** **other** _____

Faculty _____ **Dept.** _____

I am a: **commuter student** **resident student**

How often do you eat at Honour Roll?
(**1 2 3 4 5 6 7**) **times per week**

Reasons for eating at Honour Roll: (check all that apply)

Convenience **Cheap Price** **Ethnic Menu Items** **Nutritional value (Healthier Choices available)**

Ingredients used are local/eco-friendly **Other** _____

Are you interested in trying brown rice sushi? **Y N**

Would you agree that sushi is difficult to eat on-the-go? **Y N**

Would you buy a plastic wrapped un-cut sushi roll (see picture below), similar to snack wraps? **Y N**



Do you ever use your own chopsticks or cutlery when eating at Honour Roll? **Y N**

Do you recycle your used sushi containers? **Y N**

If your food container/wrap is biodegradable, would you compost it? **Y N**

Have you ever brought your own container to Honour Roll for Donburi/ bento boxes and received a \$0.25 discount for doing so (**Y N**)

Have you ever brought your own mug to Honour Roll (**Y N**) and received free green tea for doing so (**Y N**)

Please list any new menu ideas or suggestions for Honour Roll.

Thank you

B. Nutritional facts table comparing different types of rice

	Brown Long grain	White Long grain Parboiled, Unenriched	White Long grain Unenriched	White Long grain Parboiled, Enriched	White Long grain Enriched, with salt	White Long grain, Instant, Enriched
Water	142.526	126.858	108.135	126.858	108.135	126.126
Energy (kcal)	216.450	199.500	205.400	199.500	205.400	161.700
Protein (g)	5.031	4.008	4.250	4.008	4.250	3.399
Total lipid (fat) (g)	1.755	0.472	0.442	0.472	0.442	0.264
Ash (g)	0.897	0.385	0.648	0.385	0.648	0.116
Carbohydrate, by difference (g)	44.772	43.278	44.509	43.278	44.509	35.095
Fiber, total dietary (g)	3.510	0.700	0.632	0.700	0.632	0.990
Minerals	brown	parboiled	white	pboiled enr.	white enr.	instant enr.
Calcium, Ca (mg)	19.500	33.250	15.800	33.250	15.800	13.200
Iron, Fe (mg)	0.819	0.350	0.316	1.977	1.896	1.040
Magnesium, Mg (mg)	83.850	21.000	18.960	21.000	18.960	8.250
Phosphorus, P (mg)	161.850	73.500	67.940	73.500	67.940	23.100
Potassium, K (mg)	83.850	64.750	55.300	64.750	55.300	6.600
Sodium, Na (mg)	9.750	5.250	1.580	5.250	[*]603.560	4.950
Zinc, Zn (mg)	1.228	0.542	0.774	0.542	0.774	0.396
Copper, Cu (mg)	0.195	0.164	0.109	0.164	0.109	0.107
Manganese, Mn (mg)	1.765	0.455	0.746	0.455	0.746	0.388
Selenium, Se (mcg)	19.110	14.350	11.850	14.350	11.850	6.930

* note that this value is for rice cooked with salt; all others are for rice cooked without salt.

C. Local Japanese Bistros serving brown rice sushi or “to-go” sushi rolls

Mandala IKI Asian Bistro
2394 W 4th Ave, Vancouver, B.C. V6K 1P1
Tel / Fax: (604) 734-3715
www.brownricesushi.com

IKI Japanese Restaurant
2756 Broadway W, Vancouver
Tel: (604) 731-4771
www.brownricesushi.com

Michi Japanese Restaurant
1513 West Broadway St
Vancouver, BC
604.736.4244
www.michi-sushi.com

D. Health Promotion on campus:

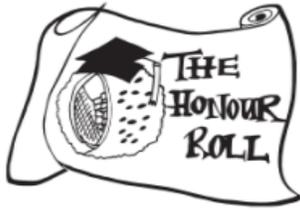
Contact Sharon Hundal, UBC Wellness Centre Project Assistant, Nutrition Team Leader and Peer Programs Member for more information: shwinper@students.ubc.ca

E. Example stamp card

Receive a discount by using a reusable container to Honour Roll. See back for details.				
1 (stamped) 	2	3	4	5
6	7	8	9	10 Discount! See cashier

F. Sample posters advertising Honour Roll's promotions

Global warming and Climate change affect **YOU!**



JOIN us
in reducing our
Carbon Footprint
STOP USING DISPOSABLES!

Receive **FREE** green tea when you **BRING YOUR OWN MUG!**



THE HONOUR ROLL PRESENTS...



Deals we've always had but you never knew about!

FREE

GREEN TEA WHEN YOU BRING YOUR OWN MUG



DISCOUNT

\$0.25 DISCOUNT ON **DONBURI BOWLS & BENTO BOXES** WHEN YOU BRING A REUSABLE CONTAINER

G. Sample posters advertising brown rice sushi and “Grab-and-go” rolls



NEW!

Eco-tritious Brown Rice
Sushi
A better way to eat
healthy



In a hurry?
Try this sushi roll
Just grab, eat
and go