

UBC Social Ecological Economic Development Studies (SEEDS) Student Report

Sustainability of the UBC Food System Project III Scenario 8- Perceptions of UBC

Customers regarding the price of food at UBC

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AGSC 450

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AGSCI 450

Sustainability of the UBC Food System Project III

Scenario 8- Perceptions of UBC Customers regarding the price of food at UBC

Group 3

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Abstract

UBC Food Services and the Alma Matter Society (AMS) are interested in the costs and benefits of developing a sustainable food system, and whether the public will support these changes. It is of interest to identify UBC consumer perceptions of the price of food on campus, the economic costs and benefits of pursuing more sustainable food practices at Food Services, and potential consumer support for these changes, which may manifest themselves in price changes. In preparing our recommendations, our value assumptions of weak anthropocentrism, ecocentrism, as well as a community-oriented view has guided our approach. We have chosen group 14's model as our framework and built on their existing vision. The stakeholders that will be affected by the information we provided are: consumers at UBC, retail employees of UBC food service outlets, food vendors off campus, food distributors, and both local and global farm producers. Our ecological indicator is the availability of local foods. Co-operation with food distribution companies to trace products that are in high demand on campus is necessary. Comparison to a list of BC food products that are produced in high quantity will determine if local foods are being used adequately. Our economic indicator is the affordability of nutritious food for individuals living on campus. Affordability will be measured using the Healthy Food Basket. Our social indicators consist of consumers' perceptions of current food prices at UBC, knowledge about sustainability and food practices on campus, and opportunity for participation in food practices, such as the UBC farm. The consumers' perceptions can be measured using surveys and focus groups. Our recommendations include educating the UBC community on sustainability and the food system and collaborating with UBC food distributors to gain reliable information.

Problem Definition:

The University of British Columbia (UBC) Food System, in its current form, is not sustainable. UBC food Services and the Alma Mater Society (AMS) Food and Beverage Services have recognized this and are now willing to move towards a more sustainable system. However, before that can happen, much more information is needed about the current state of the system. Since UBC Food Services and the AMS operate as businesses, they are very interested in what the costs and benefits of developing a more sustainable food system will be, and whether or not the public will support these changes.

UBC Food Services and the AMS Food Services have expressed explicitly their interest in identifying the perceptions of UBC consumers regarding the price of food at UBC, the economic costs and benefits of obtaining more sustainable food practices at food services, and potential consumer support for these changes, which may manifest themselves in price changes. We are proposing a research plan that will not only provide insight into possible costs, but also into how customers may possibly react to these changes. If there is little interest on the part of UBC customers in more sustainable practices, then the first priority of the UBC/AMS Food Services will be to increase awareness of sustainability issues.

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Value Assumptions:

Our group members all agreed that we hold community-oriented views instead of individualistic mentalities. We believe that in order for maximal sustainability to be achieved, the UBC community must be interdependent. Furthermore, our vision

emphasizes the need for UBC food system stakeholder involvement, in order for changes to be widely accepted and effective.

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Chosen Model and Rationale:

Group 14 continually emphasizes the need to explore the interactions between multiple components of the UBC food system when defining sustainability. While our group was engaging in a preliminary brainstorming session on what sustainability means to us, we recognized the importance of all three aspects of sustainability: ecology, economy, and community to be mutually beneficial. By balancing the needs of all of these areas, instead of compromising one area for maximum sustainability in another area, our system will optimize overall sustainability. Group 14 is also careful with conveying their message of optimal sustainability. For example, they reported that a

sustainable UBC would “make use of locally grown and seasonally available food” (Forbes et al. 2003). This statement indicates that all food supplied to UBC does not have to be local in order to be sustainable, implying a respect for the diverse cultural preferences on campus and the barriers of producing all of UBC’s foods locally. Group 14 also noted that change takes place over time by explaining that UBC may lie on different points along the sustainability continuum at different times (Forbes et al. 2003).

Our group agrees that change is fluid and we cannot expect a sudden shift where all aspects of the food system will switch to being equally high in sustainability. In reality, sustainability will be achieved quicker in some areas than others and external factors will constantly shift this process of ultimately reaching a sustainable UBC food system. Our group also liked Group 14’s definition of sustainability because part of their vision relates to our specific scenario: a sustainable UBC encourages people to be aware of their connection to the system (how and where food is produced) and fosters in people an appreciation of the effort required to grow, harvest, process, and market their food (Forbes et al. 2003). Both of these messages will impact the perceptions of UBC customers regarding the price of food.

Adaptations to Group 14’s Model:

In 2003 Group 14’s problem definition involved two components: their task and their desired final outcome. They assessed their task to be the “need to explore not only the individual components, but the myriad of interactions that take place between” the different components of UBC’s food system. They then concluded with what they hoped to achieve in their final project, “a model that will enable future generations of students to

study the sustainability of the UBC Food System as a whole”. As a group we found this problem definition to be an excellent description of the whole issue. Group 14 showed that they understood the concept of working with and expanding upon the research conducted by the previous years and ensuring that their finished project was fully comprehensive and applicable to next years (our year) project goals.

Group 14 did an excellent job of connecting their indicators both physically and mentally. The selected ecological indicator by group 14 was an assessment of food miles. They put a value on the distance the food must travel, as well as the number of hands that the product goes through. They addressed that as the proportion of food from local producers increases so does the ecological sustainability of the system. This method of system assessment allows for acknowledgment of advancement and motivation for future improvements.

Education and awareness were chosen as social indicators to assess sustainability. Group 14 emphasized that personal understanding as well as personal involvement in the local food system is an important component of the food system. Our group agrees with the basic idea; however we believe that achieving sustainability cannot only require community involvement but rather provide real opportunities for those willing and improve awareness for those who have limited knowledge on the subject.

Group 14's economic indicator revolved around the affordability of nutritious foods within the community. They argue that it should be within the best interests of the local businesses to improve the health of the local community because they themselves are part of their community. Their indicator was well chosen to assess a more important area of economic sustainability, rather than the more common indicator of profitability.

Profitability is an essential component to any business working within a free market. Thus it is an indicator of economic sustainability, which is generally self-regulated by markets. One aspect that Group 14 missed was the importance of food prices reflecting the real cost of food, which is, including the environmental and social ramifications of growing, selling, and consuming that product. For example, the real cost would represent farming practices, resources required for processing, and distance to consumer.

Stakeholders:

Group 3 recognizes that there are a variety of stakeholders that are concerned with the functioning of the UBC Food System. The effects of the UBC Food system are not limited by the campus boundaries, as described by Group 14, and we feel that the same principle applies to stakeholders. On campus we must consider the different consumer groups who are purchasing the food at UBC: students, faculty, staff and visitors are all potential customers. The retail employees and the representatives of UBC and AMS Food Services are all significant stakeholders due to their inherent concern related to economic viability of the system.

Beyond UBC campus, we believe that surrounding food vendors, those located nearby but not on campus, would also have opinions on the success of the system. The sustainability of the UBC Food System would have some bearing on the success of off-campus food sources because if customers are more inclined to eat off campus, it speaks to the viability of the on campus food system. Off campus food distributors of both large and small scale are stakeholders in the food system as well. Large-scale distributors will be employed by the campus food services and smaller scale distributors such as grocery

stores and produce markets will cater to the individual consumers. Either way, providing the choice of buying food staples as opposed to the ready made food that is almost the sole option on campus, will appeal to some consumers. Groceries bear a lower expense burden and provide the freedom to prepare meals independently.

Finally, the on-farm producers are also stakeholders in the UBC food system. Both local and global producers that supply food to UBC will be concerned with any changes to the food system. Specifically, decisions to buy local could impact the livelihoods of many farmers.

Ecological Indicators

Group 14 proposed food miles as an indicator, and we have chosen to look at one aspect of Food Miles by focusing on the availability of local foods. Our vision for the UBC Food System is a shift towards maximizing the use of local food products. Before the AMS/UBC Food Services are able to make changes towards a more sustainable system, they need a better understanding of the costs and benefits of doing so, which will include evaluating whether the potential benefits of using more local foods will outweigh costs.

As “local” can be defined in many ways, we will draw on the work of Norberg-Hodge and Gorelick who describe the “archetype product of a local food system is fresh food raised on nearby farms and sold at farmers’ markets and independent shops” (Norgberg-Hodge and Gorelick, 2002). In order to transfer this definition so it will be appropriate for the UBC food system, we will use the term [REDACTED]

[REDACTED]

■ By emphasizing the use of local products, the economy would be strengthened because monetary funds are recycled back into the local food system. As well, local food is usually fresher and therefore more nutritious (Norgberg-Hodge and Gorelick, 2002). In a 1996 study, students reported that food sold by the AMS was not fresh (Farrell Research Group Ltd, 1996). Local food use could thus yield economic benefits for the AMS.

Buying local products is often equated to paying more money. From an ecological and economic point of view, local foods are less expensive in the long run as there are fewer transportation, packaging and advertising costs (Norgberg-Hodge and Gorelick, 2002). We realize that students are very price sensitive as revealed in the 1996 study done for the AMS and UBC Food Services by the Farrell Research Group. A 2001 study prepared by the AMS Impacts Committee demonstrated the difficulty in comparing prices (Larianna, 2001).

While the use of organic as well as local products would increase sustainability of the UBC Food System, a comparison of local organic products to global non-organic products does not explain the difference in prices to UBC stakeholders. It would be in the stakeholders' best interest to focus on either local or organic, one at a time, in an attempt to establish which has the greater influence on price. We are recommending that as a starting point, the price of local foods be compared to the price of non-local foods.

There are many difficulties in gathering price and place of origin information about agricultural products. Prices shift as a result of changes in supply, growing conditions and the weather. For instance, the price of green cabbage in BC in one week in 2001 went from \$42.00/case to \$67.00/case (Brown, 2001). Furthermore, the UBC

suppliers only keep information about the place of origin and price of products for approximately two months. Because information is discarded so rapidly, it has been very difficult for previous studies to collect information over a long period of time in order to compare local and non-local prices. For UBC Food Services and AMS Food and Beverage Services to develop a more accurate picture of local prices, it would be necessary for these prices to be tracked over a longer period. We recommend that data be collected by food distributors over a one year period and stored for next year's Agricultural Sciences 450 class to evaluate. The co-operation of the distributor will also be required, so price information on locally produced foods could be provided. It would be to the distributors' benefit as well because the results of such a study could be returned to them for potential use in a marketing strategy.

In deciding what products to trace for the one year period, it would be necessary to consult with stakeholders to establish which products are in high demand. Further cross reference with the "BC Foods: A Rainbow of Choices" handout produced by the BC Ministry of Health would then be required. This handout was produced to educate people about products that are grown on large scale within BC so that shoppers may make choices that result in the purchasing of more BC goods. This way we will ensure that data generated will be relevant to the stakeholder, and that there is local production that will allow us to trace the price.

It was estimated that BC growers could produce the quantity of food needed for UBC for six months of the year with peak months being May through September (Brown, 2001). While we recognize that this time period does not coincide with peak academic terms, the summer months are UBC Catering's peak months (UBC Food Services, 2001).

As we would like to have a model that can grow and change as conditions change (for example, if there is a greater demand for local products, local production may increase leading to more available local products), we suggest an indicator that looks at the amount of local food used by the AMS and Food Services, compared to the potential amount of local food available.

Using this indicator will provide information on two levels:

- 1) Prices of local foods compared to non-local goods.
- 2) A measurement of the UBC Food System in terms of sustainability. With the increase of local foods comes an increase of ecological sustainability.

Economic Indicator:

As stated by Group 14, “community economics are determined by how we manage our households, both our individual and our collective community households” therefore in order for the UBC Food System as a whole to be economically sustainable, both producers and consumers must be acting in a sustainable way. As we are aware that AMS/UBC Food Services are profitable, we can focus our attention on the consumers to address individual affordability and economic sufficiency (UBC Food Services, 2001). Our economic indicator is the affordability of nutritious food for individuals living on campus. To form a picture of the affordability of food on campus, we will begin with a look at the residences. The student population makes up the majority of the UBC Community and is most affected by food prices because of their relatively low monetary resources (Brighten et al., 2003). As well, as students in the junior residences are obliged to be on a meal plan, and therefore eat about three meals a day on campus, making them

the best group for determining overall affordability of food on campus. It is important, however, to learn more about the other groups that comprise the customers of the food establishments on campus and we recommend that in future years, research be designed to compile information about these other groups.

To assess our economic indicator we will use the Healthy Food Basket to evaluate the price of nutritious food in the UBC residences as compared to buying off campus. The healthy food basket is an effective tool to monitor food affordability because it has the capacity to identify local differences in cost and access to healthy food (Nathoo & Shoveller, 2003). This information will provide a basis in determining our social indicator that focuses on individual's perceptions of price. If students are found to have a negative perception of prices, yet we find that prices are comparable to other outlets, then Food Services can use this information to improve their image to students.

The objective of a nutritious food basket is to identify foods that reflect and address four factors: the average food purchase patterns, nutrient requirements, palatability, and economics. The nutrient needs are met by adjusting food group quantities. Palatability and consumer acceptability are addressed by using foods that are commonly purchased (DC, 2003). The costs of a healthy food basket are kept low by including sale priced items and by excluding expensive foods i.e. convenience foods, take-out and restaurant foods. Because of the exclusion of these more expensive types of foods, the cost of the nutritious food basket is generally lower than that which would be purchased by average Canadians. The foods included in the nutritious food basket are comprised of the four food groups of Canada Food Guide to Healthy Eating plus other foods which consist of fats and refined sugar products (DC, 2003).

The Ministry of Advanced Education of the Government of British Columbia has determined a monthly living allowance for a single student living away from home. A maximum of \$200 for food purchases has been allocated based on the Healthy Food Basket (Ministry of Advanced Education, 2004). (See Appendix I for foods included in the Healthy Food Basket).

Once a list of foods is decided on from the Healthy Food Basket, similar foods will be chosen from the meal options within the cafeterias. A table can be created showing differences in prices. When compiling the data it is important to keep in mind two main considerations:

- 1) Because Food Services are providing food for so many people, they are able to achieve economies of scale, meaning their costs are less than if an individual was shopping for only one person.
- 2) UBC Food Services provides an extra service to consumers in that the food is already made. As this is a time saving device, it reduces the customer's time cost, but will result in a price increase.

Social Indicators:

Our social indicators consist of consumers' perceptions of current food prices at UBC, knowledge about sustainability and food practices on campus, and opportunity for participation in food practices, such as the UBC farm. In order to measure our social indicators, we propose the use of a survey that would be administered by future Agricultural Science (Agsci) 450 students. (See Appendix II for survey). For the first year of survey use, we recommend the focus to remain with UBC first and second year residences and expand the research in the following years. However, the survey was

designed in a way that it could be used outside of the residences. If there are enough people to administer the surveys, we suggest approaching people at all different outlets and especially the Student Union Building. This survey has questions regarding current food prices, how much the consumer knows about sustainability/food production/waste management in UBC, and whether or not they would agree to a certain % increase in food pricing if more sustainable manners of food purchasing were implemented. There are also questions addressing awareness around opportunities for gaining work experience at the UBC farm and other food-related employment. Surveys should be delivered every few years to ensure that information stays current and to learn more detailed information regarding the aforementioned social indicators as change occurs. This will provide the stakeholders with a way of continually evaluating current perceptions of the food system as well as identifying areas that can possibly be pursued.

Food security, an important component of the sustainability of the food system, is influenced by the affordability of food and the accessibility of nutritional, healthy food (Cheng et al., 2003). Often, if food is purchased from other countries, traveling many food miles, costs are minimized, especially if the food is purchased in large amounts (Lobstein, date unknown). However, upon further research on our ecological indicators, certain foods may not be more expensive if grown locally. This survey will determine if people are willing to accept price fluctuations if food is produced in a more sustainable fashion.

The survey will also aid in the understanding of consumer's knowledge about where our food comes from and the complex process that occurs from farm to plate. Sustainability knowledge will also be of importance because if people are unaware the

environmental repercussions of food choices, then ignorance will shape customer behavior. If the survey does show that sustainability knowledge is lacking, recommendations for more education will follow. A sustainability course could become a mandatory component of all faculties at UBC. Many social scientists believe that preferences and motivations are subject to social forces (O'Hara and Stagl, 2002).

Finally, gauging the opportunity to participate on the UBC farm is valuable because it has been shown that connecting to one's food supply increases concern for the environment, support for local farms, and eating of seasonal vegetables (O'Hara and Stagl, 2002). The data collected will show if there needs to be increased awareness around the UBC farm and increased advertising of the potential volunteer positions. Community supported agriculture (CSA) groups could evolve if there is enough interest amongst the UBC population. CSA is based on the mutual commitment between a farm and a community of supporters and membership has been shown to enhance social enthusiasm (O'Hara and Stagl, 2002).

For the specific task of evaluating perceptions of UBC customers regarding the price of food at UBC, Group 3 feels that a survey is the best way to ascertain a realistic viewpoint of the UBC population surrounding this issue. Without direct interaction with people, "perceptions" cannot be discovered. Within the residences, we also recommend the use of focus groups. Focus groups will allow students to elaborate more on their feelings about the food system and will be given more opportunity to be active participants in their food system.

Recommendations and Timeline:

Data that compares the prices of local foods to non-local foods should be collected by food distribution organizations over a one year period starting in April 2004 and stored for next year's Agricultural Sciences 450 class to evaluate in March 2005. The following year's 450 class can do a similar study looking at the prices of organic foods to non-organic foods to better understand the costs associated with a more sustainable food. The Healthy Food Basket comparison can begin in residences for the first 2 years and after can also be applied to other members of the UBC community that live on campus. Because of the time and man-power required to distribute and collect surveys, we recommend that next year's Agsci 450 class focus on the students living in first and second year residence as their population target. In future years, research can be designed to compile information about the other community members on campus. Surveys should be delivered every few years to ensure that information stays current, to learn more about student perception, and to keep a record of how these perceptions may change over time.

Recommendations:

- Have an agreement with the UBC Distributors to have preference for local foods when readily available as a starting point (if data is favorable for local foods).
- Share the results of the Food Basket comparison to make students more aware of their place in the food system and to increase understanding of the costs involved with Food Services on campus
- Support community-oriented projects such as the student run Agora, the Food Co-Op, and the UBC Farm.
- Advertise the opportunities available for students to participate in sustainability measures, for example the composting program and the UBC Farm
- Make a sustainability course a mandatory component of all faculties at UBC

Appendix I

Items included in the Healthy Food Basket

Milk and Dairy

2% milk, fruit-flavoured yogurt, medium cheddar cheese, processed cheddar cheese slices, partly skim mozzarella cheese, vanilla ice cream;

Meat and alternatives

round steak, stewing beef, regular ground beef, pork loin chops, chicken legs (no back), sliced cooked ham, frozen fish fillets (cod, haddock, sole, Boston blue fish or Alaskan pollock depending on availability), canned pink salmon, canned flaked light water packed tuna, large eggs—one dozen, canned baked beans in tomato sauce, dried navy beans, white pea beans, peanut butter;

Grains

white bread, whole wheat bread, hot dog/ hamburger buns, all-purpose flour, whole wheat flour, dry macaroni or spaghetti, long grain white rice, macaroni and cheese dinner, regular cooking oatmeal, salted soda crackers, social tea cookies, Corn Flakes® and Shreddies® cereal;

Fruit and Vegetables

oranges, canned unsweetened apple juice, frozen orange juice concentrate, tomatoes, canned whole tomatoes, tomato juice, potatoes, frozen French fried potatoes, pears, green grapes, canned fruit cocktail, bananas, Macintosh apples, Sultana raisins, iceberg (head) lettuce, romaine lettuce, frozen mixed vegetables, canned corn, canned peas, broccoli, cabbage, carrots, celery, field cucumber, onions, green pepper, rutabagas;

Other Foods

Margarine, butter, canola oil, mayonnaise-type salad dressing, white sugar, strawberry jam.

Appendix II

Designing the Research Tools:

Surveys and Questionnaires

Surveys and Questionnaires can be used as important tools for gaining research information on certain topics that relate directly to social issues in which vocalization from the general public will be of some research value. Upon taking a closer look at the information section on the UBC Library Webpage one can peruse a variety of different sources outlining proper survey techniques and the theory behind using surveys in general. Many useful insights can be obtained from this information.

When distributing surveys, it is important to inform respondents about why a survey is happening and what one hopes to obtain from the results. In general one should not expect too much from people. When designing a survey it is important to outline the many aspects of an effective survey. One must determine the objective, action orientation, the order of questions, and the length of the survey and the type of questions. The survey should be no longer than 18 minutes. Short surveys are important for two main reasons: because people become impatient and because of respondent fatigue. The altered state of mind resulting from a long survey experience may change a respondent's interest level in the survey and replies to questions may suffer for it. The research itself has to be timely in order to get accurate perceptions on specific topics. It is important to select sample groups that well represent the population that will be studied. In addition to this concept it is important to match the wording of questions to the concepts being measured and the populations being studied.

In any survey or questionnaire the best questions are open-ended questions. These types of questions give the respondent the freedom to reply as they wish and are thus able to address any issue that concerns them. A good way to pose questions is to allow the respondent to rate issues of concern on a number scale and then place an open-ended question immediately after the rating section. One might find that respondents rate several options as “low” but responses to open ended questions could be commonly dominated by strong opinions on only one of the options. This would give a good idea of the point of strongest concern.

Focus groups:

As part of our community assessment plan we decided that along with a survey of the local community members’ understanding of the food system and food pricing, we also recommend conducting focus groups, which represent specific areas of the permanent community. With these focus groups we hope to assess the permanent UBC community members’ understanding of the food system and pricing as well as their acceptance of the pricing. We also hoped to make an indirect assessment of the local food quality and health of the community, as it pertains to health.

Appendix III

Agsci 450

Perceptions of Price Survey

*OE: Open ended Question

1. Do you live in residence

1a. If yes, which one?

2. How often do you eat on campus? (OE)

3. Approximately how much money do you spend on food/week (OE)?

4. If you had a choice between purchasing a meal plan and not purchasing one, would you still purchase one?

Yes No Why? _____

5. Would you describe UBC food as:

High Quality Medium Quality Low Quality

6. Do you find the food at UBC to be expensive in relation to its quality?

Yes No Why? _____

7. Would you pay more for “brand name” food products (Subway, Bread Garden etc.)

Yes No Why? _____

8. If an outlet was situated at a more convenient location would you pay more for food there?

Yes No Why? _____

9. Would you support a discount for bringing your own utensils and containers?

Yes No Why? _____

10. Would you support more locally produced food if it were the same price as food brought in from elsewhere?

Yes No Why? _____

11. Would you pay MORE for locally produced food because it uses less fossil fuel (for transport), requires less packaging and supports the local economy

Yes No Why? _____

12. If a local food was the same price as another exported food, would you purchase the local food over the exported? (given that both food items were hypothetically of the same size, same quality, same freshness)

Yes No Why? _____

13. Would you be willing to pay more for food that is purchased in a more sustainable manner?

Yes No Why? _____

14. Define sustainability _____

15. Name a sustainability initiative of UBC Food Services or AMS Food and Beverage Services _____

16. Are you aware of the UBC Farm? Have you ever been there?

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Evaluation

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