

Customer Awareness off and Participation in Sustainability

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AGSC 450

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Customer Awareness of and Participation in Sustainability

AGSC 450
Group 18
Scenario 7

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Abstract

Assessing the current levels of customer awareness of and participation in sustainability initiatives on the UBC campus is an important component of determining UBC's progress to becoming a more sustainable campus. This is even more important considering that even the best initiatives will do nothing to improve sustainability if no one is using them. Accordingly, we have expanded on a model to assess sustainability, performed research to determine what initiatives are currently in place, both at UBC and at other universities and colleges, and developed a survey to be used next year to actually assess current awareness and participation levels in present initiatives. Among some of the current initiatives in place are programs to encourage the use of reusable containers and cutlery, composting education and systems, and recycling (including recycling cooking oil to create Bio-diesel). The survey and other information provided can also be used to assess the feasibility of creating future sustainability initiatives, including the feasibility of introducing a 'Food Week,' and a more extensive composting program.

Introduction

As the AGSC 450 class of 2004, it is our role to further the progress into the UBC Food System Project (UBCFSP), and to begin developing research strategies that will help to create a more sustainable UBC food system. To accomplish this, the various working groups have been assigned to assess different aspects of the UBC food system including the cost of locally produced foods, food mileage, a definition of food security for the UBC campus and more. However, for our food system to become more sustainable, everyone on campus must be aware of the efforts and should be making a conscious attempt to participate in the sustainability initiatives. Accordingly, it is also important to determine the current levels of awareness and participation in sustainability initiatives. Consequently, our group was given the task of assessing consumer awareness of, and participation in, sustainability.

As a part of our topic, we are responsible for four components: compiling an inventory of UBC campus-based food sustainability initiatives, working with UBC Food Services and AMS Food Services to develop and conduct market research into consumers' support for and participation in current and proposed sustainability initiatives, researching other universities' and colleges' initiatives related to sustainable food procurement, and examining current and proposed future marketing and other educational campaigns. The following will address these issues and provide a strategy for future years to conduct market research and proceed to a more sustainable future.

Underlying Value Assumptions

Although our group is comprised of members from a wide background (food, soil and animal sciences, horticulture, global resource systems, and food resource economics), as a whole, we feel that the UBC Food System can and should strive to achieve ecological, economic and social sustainability. In particular, we feel that each of these parameters is equally important. This is expected given our group's paradigm of a combination of weak anthropocentrism (social and economical sustainability) and bio-centrism (ecological sustainability) and can be explained using the definitions provided by the Center of Environmental Sustainability (2004). In particular, weak anthropocentrism suggests that, "while it is true that human beings are the source of all value in the sense that it is human beings who place value on nature, it does not follow that the values they place on nature simply serve their own interests instrumentally" and biocentrism is "placing the biotic (living) community at the center of ethical and political concern."

We feel that because our paradigm takes into consideration the well-being of both humans and the environment, and because our group is comprised of a very diverse academic background, very few limitations exist. To completely encompass all aspects of human well-being, however, all community and individual paradigms should also be considered.

Our Model for Sustainability

In order to have a clear direction to proceed, we were given a central research question: to determine the level of knowledge and awareness about current sustainability initiatives within the UBC community. In order for the UBC Food System to become more sustainable, we must increase customer awareness and participation in sustainable practices, reducing the amount of waste produced and encouraging the purchase of locally produced food. We also understand that if we hope to help create a more sustainable UBC food system, it will need to be worthwhile for each of the stakeholders involved. Specifically, any recommendations that are made at the end of the project must be both practical and economically feasible. In the end, it is our hope that we can create a plan that will work for everyone involved.

In 2003, the AGSC 450 class developed a variety of different models to measure the sustainability of the UBC Food System (2). For our purposes this year, we have chosen to further develop the model created by Group 9, largely due to the ease with which the interconnectedness between the three realms of sustainability could be visualized. This model also provides the opportunity to evaluate each of the three pillars of sustainability separately, something we felt was very important. In addition, we believe that the model allows users to visualize the strengths and weaknesses within the food system, providing the ability to determine where future efforts need to be focused and allowing users to tailor sustainability initiatives to address these specific needs.

However, there were some adjustments made to this model in order to apply it to our situation in a more useful manner. In particular, we modified the scale used for each indicator by changing the distance between the increments to represent the greater efforts required at lower levels of sustainability (see Figure 1). This greater effort relates to the need for infrastructure and so on at low sustainability

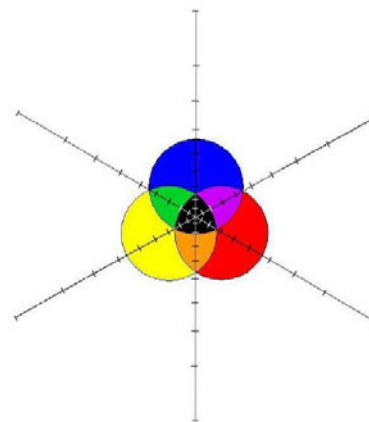


Fig. 1: Current model of sustainability

levels. For example, to begin recycling and composting programs at UBC, significant changes had to occur in waste management. The creation of a composter also requires significant infrastructure and capital. However, once the groundwork has been laid, the only thing inhibiting sustainability is our own willingness to use the available resources.

In addition, although we felt that Group 9 had the best model to use for the assessment of the present status of the UBC food system in general, the indicators proposed were not directly applicable to our specific task of assessing consumer awareness and participation in sustainability (see Table 1 in the appendix for Group 9's indicators). Accordingly, we modified the list of indicators to the following:

1. Ecological: The proportion of food wastes that are being composted and recycled at UBC.
2. Ecological-social: The use of sustainable Food System initiatives on campus by faculty, staff and students.
3. Social: Knowledge about the Food System and the concept of sustainability.
4. Social-economic: The proportion of food purchasing budget spent on locally produced and/or processed goods by campus food providers.
5. Economic: The profitability of UBC's Food Service sector.
6. Ecological-economic: The distance that unprocessed food travels, and proximity of processors of processed foods.

We also felt that it would be useful and important to create a timeline for the progression of our project because it allows us to assess, evaluate, and modify programs as needed. A more detailed description of this can be found in Table 2 in the appendix.

Current Initiatives at UBC and Other Universities

To address the specific tasks that are mentioned above, we conducted various forms of research from online searches to consulting with members of the UBC and AMS Food Services. The following contains a summary of our findings and it is our hope that future years will be able to expand on this list.

a. Inventory of UBC campus-based food sustainability initiatives

UBC Food Service, AMS Food and Beverage Service, and UBC Waste Management all play significant roles in the sustainability initiatives found at UBC. For example, UBC Waste Management provides both waste management services and waste reduction education to the campus community through the coordination of recycling and composting and through information fact sheets and compost workshops (3). UBC Food Service and AMS Food and Beverage Service are also working towards a more sustainable future through a number of creative initiatives, some of which are discussed below.

To encourage the use of reusable containers, the AMS and UBC Food Services are offering several programs including Eco-cards and Happy Hour which reward people with free coffee for using reusable mugs, as well as 15¢ discounts, Avoid Green Tax and Save \$! which provide discounts for using reusable containers, all to help promote sustainability. Bringing your own mug will not only save you money at Blue Chip Cookies, the Pendulum Restaurant, Bernoulli's Bagels and other sites on campus, but will also reduce the amount of waste that ends up in our landfills,(4).

Composting of pre- and post-consumer food waste by both the UBC and AMS Food Services has also become an important initiative, as has using reusable food storage containers. When containers aren't directly reusable, as much is recycled as possible. For example, Food Services recycle almost all cardboard, paper, metal and glass. They have even started recycling cooking oil for the production of Bio-diesel that can be used to power various campus vehicles. In addition, composting and recycling bins are provided in food service areas and at some of the residences on campus, thus making recycling and composting convenient and easy for customers (4,5).

The use of real cutlery and china is also being encouraged as part of the effort to reduce the use of disposable food containers. Strongly involved in this initiative are AMS catering, 99 Chairs and UBC Residences. However, while the use of styrofoam and plastic containers is convenient, styrofoam and plastic take a long time to decompose in landfills. Thus by instead choosing to use

real cutlery and china, customers can do their part to ensure that the UBC campus becomes more sustainable (4,5).

Finally, there is also a program in place to support local growers, including the UBC Farm. For example, the Sage Bistro purchases select produce from the UBC farm, while UBC Food Services has set up procurement standards with a preference for purchasing locally produced (5). This follows from the idea that the closer the food grows to the consumer, the fresher and more nutritious it is likely to be. Furthermore, by taking advantage of the local market, fewer fossil fuels are required to transport and distribute the food, thus reducing the dependence on an unsustainable fuel source while reducing emissions. Purchasing local food can also help the local economy by providing local job opportunities and keeping money within the community.

b. Other universities' and colleges' initiatives related to sustainable food procurement

There are also numerous initiatives related to sustainable food procurement that are currently underway in various universities and colleges across North America. These initiatives involve the purchasing of local foods and the development of and participation in campus recycling and composting programs. Some of the most promising initiatives are found in the following Universities and Colleges: Bates College, Middlebury College, University of Wisconsin, University of Vermont, University of New Hampshire, Michigan State University, Evergreen State College, and Sterling College.

Bates College, located in Maine, developed and launched their local food initiative in 1994 which evolved from initiatives to minimize waste and encourage recycling and composting. Currently, 30-40% of the food products that are purchased by Bates College are locally grown. Local farmers work closely with the Food Service Director and Chef to determine the types of crops that should be grown, the handling logistics, storage, and the amount of crops that should be delivered throughout the year. The infrastructure that is set in place allows for simple transactions and coordinated deliveries between local farmers and Bates College. The food service staff at Bates

College was so impressed with the quality of local produce that they are now examining the potential of purchasing locally produced processed foods (6).

Bates College has also introduced a “scrim line” where food leftovers and plate scrapings are placed. The scrim line involves a continuous stream of water that flows down a conveyor belt, where the water removes food waste from the belt and catches it in a strainer. The food waste is then sent to a local pig farmer, while the water used in the scrim line is re-used in the scrim line. As well, pre-consumer kitchen residuals are transported to a farm that is twelve miles away for composting, which saves dining services about \$1,000 each year (7).

Middelbury College, in Vermont, purchases local organic produce from local farmers. The dining services at Middelbury College formed partnerships with local farmers and local produce distributors, enabling them to purchase more local produce for the food service outlets on campus. In 2003, Middelbury College dining service also formed a partnership with the college’s student-run Organic Garden, which sells small amounts of fresh produce to the dining service throughout the summer (8).

The University of Wisconsin was the first major public university in the United States to provide locally grown foods in the regular menu of the dorm cafeterias. This occurred in December of 2000, as a result of the University Housing Food Service’s aspiration to provide good quality and fresh foods to students. This local food initiative was also taken due to an increase in student demands for organic foods in dorm cafeterias. The Center for Integrated Agricultural Systems (CIAS) staff worked alongside food service administrators and the Chef to create a menu that outlined food system issues. These menus give a general overview of topics such as energy use, food security, sustainable agriculture, and the economic potential involved with local food systems (8).

The University of Vermont has also developed a composting system where food waste is collected daily from five campus locations and transported to a composting facility. The composting facility, Intervale Composting Project, is a non-profit business that is located about a mile away from

campus that takes food waste and composts it into soil amendments. Food service outlets have carts, labeled “Food Waste Only”, where students are encouraged to empty their leftovers and other food wastes. In addition, students who live on campus can obtain special composting bags for their dorms. These composting bags are made of Kraft paper, composed of biodegradable cellulose lining, which are completely composted along with the other food wastes. Students are in charge of bringing their composting bags that are filled with food waste to one of the five designated locations on campus (9).

Food pulpers have been installed in the dining halls at the University of New Hampshire, allowing food wastes to be pulverized into small pieces. The food pulpers produce a dry paste-like material which is easily and quickly composted because of the increase in surface area. This fast method of composting decreases the incidence of foul odors associated with composting. In addition, student volunteers from the Office of Sustainability Program collect food and organic wastes from various locations four mornings per week. The food and organic wastes are transported by truck by student volunteers to Kingman Farm, the University’s agronomy research facility, where it is composted in one of the eight compost windrows (10).

Michigan State University has also developed a composting system, supplying 32-gallon wheeled carts to food service outlet kitchens. These carts are green in color and are labeled as food waste carts to differentiate them from other recycling carts and are primarily used to collect pre-consumer food waste. The wheeled carts enable food waste to be moved easily from the kitchen to the loading dock, where waste management staff empty the contents of the cart into a truck. The pre-consumer food waste is then transported to a composting site about four miles from the campus, where it is composted and tested as a potential fertilizer or soil amendment (11).

At Evergreen State College, in Olympia, Washington, a volunteer-run composting project was developed in 1998, and involves pick up service from approximately 1000 residents. They have also constructed an on-site air composting and a continuous-flow vermi-composting system and are

involved with educational outreach programs, organizing and holding community composting workshops (12).

Finally, Sterling College, in New York, started managing their own dining service in 1995, using locally grown meats, produce, and processed foods in their kitchens. They also began purchasing, preparing, and serving foods in an environmentally sustainable manner. They are even using biodegradable, petroleum free dish and laundry soaps, and 100% recycled, unbleached paper products that can be composted. All the food waste from the kitchen is also composted (13).

c. Current and proposed future marketing and other educational campaigns

The desired outcome of our group's work is to develop an understanding of "the current and potential support for sustainability initiatives, and how these trends may translate into customer behavior and new working directions for UBC Food Services and AMS Food Services (14). In this context, examining marketing and educational campaigns about sustainability is crucial to identify how many people are currently being reached, if behavior changes are resulting from these campaigns, and what opportunities are available to increase awareness of and participation in the food system. This research can in turn inform Food Service managers in order to address environmental, economic and social concerns in a balanced manner.

Existing campaigns

In the following section, the existing marketing and educational campaigns on the UBC campus will be discussed, and the most recent information about the number of students currently being reached will be provided. In addition, some ideas and recommendations for future marketing and educational campaigns will be suggested.

To begin, the Sustainability Pledge was created in 2002 to give UBC students the opportunity to make a personal commitment to sustainability. This commitment is supported through courses, events, ideas, and career resources that make it easier to put sustainability into practice in one's personal and professional life. As of January 1, 2003, 360 students had signed the Sustainability Pledge, which reads

as “I pledge to explore and take into account the social and ecological consequences of my decisions. Furthermore, I pledge to use the knowledge I gain while at UBC to improve the sustainability of the communities in which I live, learn, and work” (15, 16).

Sustainability Coordinators (SC's) have also been introduced and act as volunteers to link the Sustainability Office with faculties and residences. The Faculty SC program was designed to implement sustainable development policy in UBC's 300 departments through providing information about environmental impacts of daily activities, and helping to identify alternative ways of doing things. The focus of the Faculty SC program is on more efficient energy use and transportation, and reduced waste generation. To help there are also toolkits available to help achieve these goals on the Sustainability Office web site (17).

The Residence SC program has been in place in the junior residences, Totem and Vanier, since September 2003. With a focus on air, food, materials, and energy, this program has the opportunity to reach more than 1300 students living in these residences. The duties of the Residence SC include conducting educational and social marketing campaigns; providing resources to create change and alternative ideas; developing networks between faculty, staff, students, and community; and applying for grants to implement projects in the residences (18).

Also strongly involved in marketing and education are UBC Waste Management Services. They provide information about composting through worm bin and backyard bin workshops, and produce a compost newsletter called “The Rind.” As an example of the potential of these strategies, 145 people at UBC took composting workshops in 2000/2001. Waste Management also offers consulting services to help develop composting systems, provide training, and monitor small-scale projects. Such projects include St. John's Composting, Green's College Composting, Acadia Community Gardens Backyard Composting, UBC Food Co-op Demonstration Garden Composting, and Gage Residence Backyard Composting. In addition, Waste Management participates in GSS Orientations, Imagine UBC Main Event Carnival, Campus Craze Information Daze, Alternative

Transportation Clean Air Day Fair, Student Resident Promotions, Waste Free “One Less Cup”, UBC Farm summer Saturday market days, and the Cecil Green Staff (3,19).

There are several educational programs that take place at UBC Farm in the Land, Food, and Community Garden, and in the Market Garden. Intergenerational Landed Learning is a project of the Department of Curriculum Studies, which “brings together children, educators, and retired local farmers to explore how participation in a farming/gardening project on an urban farm can foster environmental consciousness, respect for nature, and an understanding of food-land issues.” The pilot project in 2002-2003 included 18 seventh-grade students, their teachers, and seven community farmers (20).

Finally, the volunteers program at the Market Garden contributes to most of the work in seeding, weeding, harvesting, and marketing of produce, while at the same time providing hands-on experience for the volunteers in producing and selling food (21).

Future Propositions

Our group sees great potential for food system education to be incorporated into the Imagine UBC campaign. This campaign introduces first year students to their faculties, their fellow classmates, the layout of the campus and the resources available to them, and is run by fellow students. Given that 4200 new students and 700 volunteers partook in Imagine UBC in 2003, there is great potential to use this as an opportunity to introduce students to food system initiatives including the Natural Food Co-op, composting facilities, UBC Farm, and deals offered by UBC Food Services and AMS Food and Beverage (22).

Furthermore, based on the potential for theme weeks in the SUB to reach large numbers of students, we believe a Food Week could offer another venue to increase awareness and understanding about the Food System. Members of the food system, for example, UBC Food Services and AMS Food and Beverage Services, could set up booths to provide information about the role of each organization, and all the steps from food production to consumption and waste

management. Information about eating local and seasonal diets could also be provided, with creative recipes using seasonal foods being provided at booths for the UBC Farm, other farms, or processors in the Fraser Valley.

Another suggestion is to have UBC and AMS food outlets incorporate “food mile” menus that display details the origin of selected food products (especially produce), along with the price. Total food miles, if desired, could also be provided. The menu does not need to be fancy, but should demonstrate the range of available food, and what can be done with it. Providing some of this information in the “Inside UBC” student planner could also help demonstrate the available options and provide students with the opportunity to see what is available in advance of coming to campus. This planner also provides an opportunity to list some seasonal foods/recipes, or a schedule of available composting, growing, or processing workshops and events at the cost of approximately \$250 for coupon sized entries, to \$1500 for a page (23).

Proposed research plan and methods of data collection

The preceding sections have highlighted many of the sustainability initiatives in place at UBC in the food sector, as well as some initiatives from selected universities in the United States. However, we have still been unable to fully determine the levels of participation and awareness of consumers in sustainability initiatives here on campus. Accordingly, next year’s AGSC 450 class will need to expand on the research that we have done by determining the participation and interest in these initiatives from students, staff, and faculty at UBC; as well as which initiatives tested at other universities have been the most successful, and therefore the most promising for initiation at UBC.

In order to assess this, we propose that next year’s AGSC 450 class further research UBC initiatives by referring to published reports wherever possible, and contacting persons in charge of the initiatives when other sources of information is unavailable. To assist, we have included a list of references and links to sources to facilitate the research in the reference section. However, we acknowledge that while the reports may give an indication of what has been done, they do not

always give a good representation of what has been successful. We also do not necessarily know the goals of the groups involved in creating sustainability projects at UBC, what the barriers are to realizing their visions, and how the AGSC 450 Food System Study can help. Accordingly, we suggest that subsequent classes work more closely with the other stakeholders in the project.

To further attempt to assess customer interest and awareness of sustainability initiatives, our group, in consultation with UBC Food Services and AMS Food and Beverage Services, has also created a survey designed for distribution by e-mail (through the UBC system) or online (the survey is available at the end of the appendix). The survey is intended to take approximately five to ten minutes to complete, and may offer the incentive of being entered in a draw for several small prizes furnished by the food service groups in return for its completion. Andrew Parr and Nancy Toogood, the representatives for UBC and AMS Food Services, respectively, were consulted on the content of the survey and the potential prizes, and are willing to partake in this venture, especially if the resulting information will help them direct future efforts. In order to have time to distribute the survey and analyze the results, next year's AGSC 450 class should distribute the survey at the beginning of the term. This should also provide enough time to prepare a small report for Food Services. The survey results can be used to establish information about the demographics of the people using composting workshops at UBC, bringing their own mug, or participating in other sustainability initiatives. From this, it can also be determined which programs are appealing to whom, and where there is room to grow and develop other programs to target those not reached by the current initiatives.

There is also a potential to develop new practices and initiatives for use at UBC from what has been determined to be successful or not successful at other universities, however, the data obtained this year did not provide this information. As a result, another research objective for next year's class should be to attempt to make contacts at the other universities, and discover the successes and failures that may have arisen as the projects matured and evolved. By forming personal connections

with the other universities, we may also create a two-way flow of knowledge about food system sustainability on campuses.

Given the above recommendations, we also propose the following timeline for achieving all of the goals of the UBCFSP:

Current year, Year 3:

- Propose research tools (e.g. survey) for measuring customer awareness and participation in sustainability initiative on campus
- Compile a list of current initiatives already in place at UBC
- Create a list of the most promising initiatives from other universities in North America that could be adopted at UBC
- Determine what current marketing and educational strategies are in place on campus

Year 4:

- Use survey to assess customer awareness and participation in sustainability initiatives on campus and analyze results
- Follow up on initiatives from other universities (by contacting the people heading up these initiatives) to discover which have been most successful (socially, ecologically, and economically)
- Refine the list of initiatives that could be adopted at UBC
 - Determine the cost of implementing such initiatives
 - Determine the support for the new initiatives by the other sustainable organizations/UBC
- Further assess the additional marketing and educational strategies that are in place on campus

Year 5:

- Using results from the customer awareness survey and the refined list of initiatives compiled in Year 4, create an action plan for enhancing the sustainability of the Food System at UBC

- Give some suggestions for further initiatives that could be taken in future years if the proposed initiatives are successful (e.g. purchasing more organic foods, helping create community programs based on the success of the UBC community initiatives)
- Design possible educational strategies

Conclusion

Although we have detailed an extensive list of the current sustainability initiatives and strategies in place both on campus and at other universities, it is evident that the work is still far from over. In order to assess the success of current initiatives and the potential for other initiatives, further research will need to be done. Accordingly, it is hoped that the strategies suggested above will allow future classes involved in the UBCFSP to not only assess the current participation and awareness in sustainability initiatives, but to also develop a feasible set of recommendations that can be passed on to the appropriate stakeholders. It is only by using all the available resources that a strong set of goals and initiatives can be created, but by doing so, it is our hope that more people will become involved in making our food system a more sustainable food system. We also hope that the model described earlier will provide a way to assess our progress and demonstrate continued improvement.

In conclusion, it is important to remember that we, as members of a higher institute of education, realize the impact we have on our planet and communities, and strive to create a better society and environment for not just ourselves, but for society as a whole (24). Accordingly, we must all seek to lead more sustainable lives, and recognize that it is not only important to be aware of the options available, but we must also be active participants in the move to become more sustainable. It is only by exerting this effort that we can set valuable examples for the rest of humanity.

Literature Cited

1. Center for Environmental Sustainability. Glossary. Accessed March 22, 2004. <http://www.ecomuseum.ithaca.ny.us/>.
2. Bouris, K. 2003. 2003 UBC Food System Collaborative Project: Summary of findings. UBC Campus Sustainability Office.
3. Department of Plant Operations. 2003. Building a Sustainable Community: UBC Waste Management 2002-2003 Annual Report. University of British Columbia. Accessed March 23, 2004. <http://pdf.lbs.ubc.ca/recycle/annualreport2003.pdf>.
4. AMS Food and Beverage Services. List of sustainability initiatives. Class handout. March 3, 2004.
5. UBC Food Services. Sustainability initiatives. Class handout. March 3, 2004.
6. Johnson, D.B. & Stevenson, G.W. 1998. Something to Cheer About: National Trends and Prospects for Sustainable Agriculture Products in Food Service Operations in Colleges and Universities. Accessed March 17, 2004. <http://www.wisc.edu/cias/pubs/Johnson.PDF>.
7. Bates College. 2001. Bates Dining Honored with National Recognition. Accessed March 17, 2004. http://abacus.bates.edu/admin/offices/dining/about_us/environmental_initiatives.html.
8. New Rules Project. 2004. University Support of Locally Grown Food. Accessed March 17, 2004. <http://www.newrules.org/agri/collegefood.html>.
9. University of Vermont. 2003. Composting Food Scraps. Accessed March 17, 2004. http://www.uvm.edu/~uvmppd/Services/Recycling_and_Solid_Waste/?Page=Composting/Composting.html.
10. University of New Hampshire Office of Sustainability Programs. 2003. Closing the Food Cycle in the UNH/Durham Community. Accessed March 17, 2004. <http://www.sustainableunh.unh.edu/fas/compost/unh/index.html>.
11. University of Michigan Plant Operations. 2002. Food Waste Compost Program. Accessed March 17, 2004. http://www.recycle.umich.edu/grounds/recycle/food_composting.html.
12. Gilbert, T. & Klug, J. 1999. Evergreen State College Composting Program. Accessed March 17, 2004. <http://www.nwf.org/campusEcology/files/evergreen.pdf>.
13. Sterling Dining Services. 1999. Sterling College Dining Service. Accessed March 17, 2004. <http://www.nwf.org/campusEcology/files/sterling.pdf>.
14. Rojas, A. and Wagner, J. 2004. The sustainability of the UBC Food System Collaborative Project III. AGSC 450. Land, Food and Community III.
15. Campus Sustainability Office. 2003. Sustainable U. University of British Columbia. Accessed March 23, 2004. http://www.sustain.ubc.ca/sustainable_u/home.htm.

16. Del Vicchio, D. 2002. Pledging to make a difference. The Point. Accessed March 23, 2004. <http://www.legacygames.ubc.ca/thepoint/pdfs/130803.pdf>.
17. Campus Sustainability Office. 2003. Sustainability Coordinator Program. University of British Columbia. Accessed March 11, 2004. http://www.sustain.ubc.ca/sc_prog.html.
18. Campus Sustainability Office. 2003. Residence Sustainability Coordinator Program. University of British Columbia. Accessed March 11, 2004: <http://www.sustain.ubc.ca/rezsc.htm>.
19. UBC Waste Management Program. Compost Project. University of British Columbia. Accessed March 6, 2003, from <http://www.recycle.ubc.ca/compost.html>.
20. Department of Curriculum Studies. Cultivating environmental stewardship in young people: an intergenerational landed-learning project at UBC Farm. Accessed March 23, 2004. <http://www.curricstudies.educ.ubc.ca/projects/landedlearning.html>.
21. UBC Farm. Who & What We Are. Accessed March 12, 2003. <http://www.agsci.ubc.ca/ubcfarm/who.htm>.
22. Imagine UBC. 2004. What is Imagine UBC? University of British Columbia. Accessed March 11, 2004. <http://students.ubc.ca/imagine/whatis.cfm>.
23. AMS. 2004. Display Ads. University of British Columbia. Accessed March 11, 2004. http://www.ams.ubc.ca/survival_guide/inside_ubc/display_ads.html.
24. Orr, D. 1991. What is education for? Trumpeter 8:3 Summer, pages 99-102. Victoria.

Appendix:

Table 1: UBCFSP II Group 9's indicators (from 2003 reports)

| | Indicator |
|---------------------|--|
| Ecological | The proportion of food wastes that are being composted and recycled at UBC |
| Ecological-Social | The amount of knowledge UBC community members have of their food system and their concept of sustainability |
| Social | UBC community members' perceived availability and acceptability of foods on campus |
| Social-Ecological | The price of food on campus in comparison to off campus food prices and their acceptability by people in the UBC community |
| Economic | The profitability of the UBC Food Services |
| Economic-Ecological | The distance food travels and the locations where it is grown, processed, and prepared |

Table 2: Indicators used to assess consumer awareness and participation in sustainability and some potential measures of scale.

| | |
|-------------------|--|
| Ecological | |
| Indicator | Proportion of food wastes that are being composted and recycled at UBC |
| 1 | No composting or recycling |
| 2 | 1990- First steps with recycling program at UBC, 13% of waste is recycled |
| 3 | 2000- Compost project started, small-scale bins at SUB and windrow and farm initiated |
| 5 | 2003- 46% of waste is recycled or composted, UBC Food Services launches plan to eliminate use of Styrofoam in Residence cafeterias |
| 8 | September 2004- New in-vessel composter comes on line, 80% of total waste at UBC will be recycled or composted |
| 10 | 100% of the waste generated at UBC can be composted or recycled |
| Ecological-Social | |
| Indicator | Use of sustainable Food System initiatives on campus by faculty, staff and students |
| 1 | Nobody knows about composting or recycling waste on campus |
| 2 | A few dedicated people begin taking steps to creating a sustainable Food System at UBC by recycling, composting and asking for Fair Trade |
| 4 | 2003- AMS Food and Beverage outlets serve exclusively Fair Trade beverages, UBC Food Services purchases food from UBC Farm |
| 7 | Permanent Faculty and Staff, and returning students are aware of composting and recycling, and bring their own food containers |
| 9 | All members and visitors to UBC are aware of, or will notice after only a brief stay, the initiatives UBC takes to compost, recycle, and buy local foods |
| 10 | People will remember sustainable Food System practices at home, work and school even outside of UBC |
| Social | |
| Indicator | Knowledge about the Food System and the concept of sustainability |
| 1 | No initiatives taken toward sustainable food procurement, no composting workshops, educational campaigns, etc. |
| 2 | 1998- Created SEEDS |

| | |
|----------------------------|--|
| 5 | 2000- Began Composting Project, bringing the Food System into sustainability discussion at UBC. |
| 6 | 2002- AGSC 450 begins collaborative Food System Study |
| 7 | UBC Food Services 'buy local' efforts are widely known by students |
| 9 | 2006- Finish Food System Study, partners at UBC will be able to take on new initiatives and educational campaigns for Food System sustainability |
| 10 | Everybody knows and loves their Food System at UBC! |
| Socio-economic | |
| Indicator | Proportion of food purchasing budget spent on locally produced and/or processed goods by campus food providers |
| 1 | The entire UBC food purchasing budget is spent on out of province products |
| 2 | Some of the UBC food purchasing budget is spent on in-province products, particularly within summer months |
| 5 | A proportion of the UBC food purchasing budget is spent on produce from the UBC Farm, a significant proportion is spent on in-province produce and processed products |
| 7 | A large proportion of the UBC food purchasing budget is spent on local produce (UBC and Lower Mainland) and processed goods (Lower Mainland and BC) |
| 10 | All of the UBC food purchasing budget is spent on local produce (UBC and Lower Mainland) and processed goods (Lower Mainland and BC) |
| Economic | |
| Indicator | Profitability of UBC's Food Service sector |
| 1 | None of UBC's food outlets are able to generate enough revenue to avoid reliance on external subsidies |
| 3 | Approximately 25% of UBC's food outlets are able to generate enough revenue to invest in sustainable sourcing and employment |
| 7 | Approximately 75% of UBC's food outlets are able to generate revenue to invest in sustainable sourcing, capital investment, and employment practices |
| 10 | All food service outlets at UBC are able to generate enough revenue to invest in sustainable supply sourcing, capital investment, and employment practices |
| Ecological-Economic | |
| Indicator | Distance that unprocessed food travels, and proximity of processors of processed foods |
| 1 | No foods are grown, processed or prepared within the boundaries of the UBC Campus and/or all foods are obtained a far distance away (mostly nationally and/or internationally) |
| 3 | Most food is not grown, processed, or prepared within the boundaries of the UBC Campus and/or most foods are obtained a far distance away (either mostly provincially, nationally and/or internationally). |
| 5 | 2003- Some food is purchased from UBC Farm, effort is made to source locally |
| 7 | Most foods are grown, processed or prepared within the boundaries of the UBC Campus and/or within a close proximity to the UBC Campus (either mostly regionally and/or provincially). |
| 10 | All foods are grown, processed or prepared within the boundaries of the UBC Campus and/or within a close proximity to the UBC Campus (all are produced regionally, within the Lower Mainland). |

Sustainability Survey

(completion time: approximately 5 - 10 minutes)

General Background

1. Gender (check one): _M _F _ I choose not to specify

2. My status at UBC (check primary role):
 _Undergraduate
 _Graduate
 _Faculty
 _Staff
 _Other

3. Length of enrollment/employment at UBC:
 _Less than 1 year
 _1-4 years
 _Greater than 5 years
 _Greater than 10 years

4. Are you currently living in Student Residence? (If 'no' proceed to Section A question 3)
Y N

5. If so, which Residence?
 _Place Vanier
 _Totem Park
 _Ritsumeiken
 _Gage Towers/Apartments
 _Fairview
 _Thunderbird

Section A Recycling

1. Are you aware of recycling programs in your residence? Y N

2. Do you participate in these recycling programs? Y N

3. If you do not live in residence at UBC, do you recycle at home? Y N

- 4 How knowledgeable do you consider yourself to be regarding which items are recyclable, and which are not? (e.g. what type of plastics, paper products, and metal materials)

 _Not at all _Somewhat _Moderately _Mostly _Very

5. How do you inform yourself about which items you are able to recycle in your area? (check all that apply)
 _I don't

- I read the instructions on the large recycling bins
- I've received pamphlets from my residence advisors
- I've seen commercials on TV
- Other* _____

6. How much of the recyclable material you use at home do you recycle?

- _0% _25% _50% _75% _100%

7. Are you aware of UBC campus-wide recycling initiatives? (bins in buildings, the three-part garbage and recycling bins outside buildings)

- Y N

8. Do you recycle outside of your home while on campus? Y N

9. How much of the recyclable material you use at UBC do you recycle?

- _0% _25% _50% _75% _100%

10. If you do not recycle 100% of the recyclable material you use on campus, why? (check all that apply)

- I was not aware there were recycling bins on campus
- I cannot readily find the appropriate bins
- I just don't want to bother
- Other* _____

11. How satisfied are you with the recycling effort on the behalf of UBC?

- Completely dissatisfied
- Somewhat dissatisfied
- Neutral
- Satisfied
- Very satisfied

COMMENTS

Section B Composting

*If you live in UBC Residence, proceed with question 1, if you live off-campus, proceed to question 3

1. Are you aware of composting programs in your residence? Y N

2. Do you participate in these composting programs? Y N

3. If you do not live in residence at UBC, do you compost at home? Y N

4 How knowledgeable do you consider yourself to be regarding which items are compostable, and which are not? (e.g. cooked or uncooked foods, meats, spoiled food, plant materials, etc.)

_Not at all _Somewhat _Moderately _Mostly _Very

5. How do you inform yourself about which items you are able to compost? (Check all that apply)

_I don't
_I read the instructions that came with my home bin
_I've received pamphlets from my residence advisors
_I've seen commercials on TV
Other _____

6. If you do compost, how much of the compostable material you use at home do you compost?

_0% _25% _50% _75% _100%

7. Are you aware of any composting programs at UBC? (Outside of Macmillan, near the Pendulum, etc)

_Y _N

8. Do you compost outside of your home while on campus? Y N

9. How often would you use composting facilities on campus if they were made available, for example, as a fourth compartment in the 3-compartment garbage and recycling bins, or as bins in Pacific Spirit Place and other campus eating areas?

_Never _Seldom _Occasionally _Often _Always

COMMENTS

Section C Food Issues

1. Which of these terms regarding food origin are you familiar with (check all that apply):

_Fair Trade
_Organic
_Certified Organic
_Environmentally-friendly/ Eco-friendly

2. How often do you purchase food items with any or all of the above labels outside of UBC?

_Never _Sometimes _Occasionally _Often _Always

3. Do you purchase Fair Trade beverages at UBC (coffee, tea, hot chocolate, etc.)

Y N

4. When you purchase coffee, tea, etc., at UBC how often do you purchase Fair Trade?

_Never _Sometimes _Occasionally _Often _Always

5. If you do not always purchase Fair Trade, why not? (Check all that apply)

_Fair Trade items are too expensive

_I do not like the variety/blend that is offered as Fair Trade

_Fair Trade is not always available

_I do not make an effort to purchase Fair Trade

Other _____

Questions 6 through 8 pertain to purchases made at grocery stores, not necessarily on campus.

6. How often do you buy local (Lower Mainland or BC) produce or processed goods when you buy groceries?

_Never _Sometimes _Occasionally _Often _Always

7. If your answer to question 5 was not 'always', what are your reasons for not buying local produce or processed goods? (Check all that apply)

_I do not base my purchasing decisions on the source of the food

_Local products are not readily available

_Local products are not obviously labeled

_Local products are too expensive

_The foods I like are not grown or processed locally

8. If the same product, for example, red apples, were available for the same price from both a local and an imported source at the grocery store, would you purposefully choose local?

Y N

9. Are you aware of the UBC Farm Market? Y N

10. Have you ever attended the UBC Farm Market? Y N

11. Are you aware of the Natural Food Coop at UBC? Y N

12. Have you ever purchased from the Natural Food Coop at UBC? Y N

13. How interested would you be in attending a Food Week in the SUB, where local, Fair Trade, and/or organic foods would be showcased in AMS and UBC Food Service establishments?

_Not interested

_Somewhat interested

_Neutral

_Interested

_Very interested

14. When you purchase food from establishments on campus, how often do you get the food to go?

Never Sometimes Often Very often Always

15. If you get your food to go, how do you take it? (Check the two most frequent modes)

- In my own reusable container
- In a paper bag or other recyclable container
- In a Styrofoam container
- In a reusable Tupperware container I bought from a Food Service outlet on campus

16. Check the three factors that you consider most important when making your food choices at UBC (in no particular order):

- Nutrition
- Taste
- Affordability
- Convenience (fast food)
- Location (close to classes/work)
- Able to carry to class/work
- Other* _____

17. Are there any initiatives you would specifically like the AMS/ UBC Food Services to implement regarding recycling, composting, using reusable containers and/or sourcing their products?

18. What incentives would you require in order to take further advantage of the sustainability initiatives AMS and UBC Food services already offer? (e.g. greater discounts, etc.)

GENERAL COMMENTS

Thank you for participating in our survey!

