

Promoting Education, Awareness, and Participation in Composting at UBC Get Caught

Composting

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**Promoting Education, Awareness, and Participation in
Composting at UBC
Get Caught Composting**

**AGSC450
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Group 2**

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ABSTRACT

The inception of an In-vessel Composting Facility on the University of British Columbia (UBC) campus has created a need to evaluate current initiatives and increase the awareness, education, and participation of composting through proposed recommendations. Since its introduction in 2004, the facility has faced many challenges including contamination and low volumes of compost bin contents. Review of literature indicated that students did not truly understand the significance of sustainability and felt that the messages put forth by the University and the corresponding actions were often inconsistent. First year students were generally found to be more open to sustainability than later years, hence we decided to target this group. In addition, this group would be educated and equipped to make an impact on the UBC campus for their remaining years and go on to impact future students. The philosophies of community-based social marketing were applied to design a campus wide Get Caught Composting campaign, which would recognize students composting and provide an incentive, thus increasing awareness and participation. This campaign would require collaboration with UBC Waste Management (UBCWM), UBC Residence Sustainability Coordinators and future AGSC 450 groups, and would ideally be launched during Imagine UBC and at the first year residences. Other recommendations include greater ownership and visibility of compost bins, more information posters, education and training. The UBC Food System Project (UBCFSP) is representative of the global food system, hence our work serves as a model which can be studied and applied globally.

INTRODUCTION

The purpose of this paper is to analyze the current degree of participation in the composting program on UBC campus and to provide recommendations on how to improve the program. The In-vessel Composting Facility at UBC was introduced to promote campus waste reduction and create a closed loop, sustainable food system (UBCWM, 2006). Since its launch in 2004, the composting unit has faced many challenges, including low compost volume, contamination, and lack of consumer awareness. Our working team has been asked to examine these problems, design educational tools, and provide recommendations to stakeholders to encourage campus participation in composting (see Appendix 1 for list of stakeholders). We have developed activities using a community-based social marketing approach, and have decided to target the first year student population. We feel that providing early exposure to sustainability initiatives will help shape the future of the UBC food system.

This paper will start with a discussion of our assigned problem definition followed by our reflections on the Vision Statement and the 7 Guiding Principles developed by the previous five years of work on the UBC Food System Project (UBCFSP) by our colleagues. We will then describe the composting system at UBC, report our findings and discuss our campaign proposal and its corresponding educational materials. To conclude, we will present our working team's central findings and positions. Our group's recommendations will be addressed specifically to stakeholders involved in the composting scenario as well as to future AGSC 450 colleagues. Finally, we will reflect on the linkages between the UBCFSP and the globalized food system.

PROBLEM DEFINITION

The In-vessel Composting Facility was created out of public concern over the long term environmental effects of solid organic waste disposal and over-consumption of resources that are associated with increasing population density. The facility composts pre- and post-consumer food scraps such as kitchen waste and meal remnants. Paper plates, cups, towels and napkins, and yard wastes like leaves and twigs are also collected for composting (UBCW, 2006).

The greatest challenge the In-vessel Composting Facility Program has faced is the contamination of the compost bins. The non-compostable items most often found in green bins include styrofoam, plastic bags, cutlery, plates, glass bottles, juice boxes, milk cartons, metal cans and mirrors (UBCW, 2006). Many of these items can damage the machine, which can lead to significant repair costs. The quality of the final compost product, which is used as fertilizer and for the prevention of soil moisture loss, can be compromised by the presence of the above items (UBCW, 2006). UBCW has also expressed concern regarding the apparent lack of awareness about the composting program on campus as demonstrated by low compost levels. UBCW states that it is willing to increase the frequency of pick up; however, the level of

organic wastes found in compost bins on campus must increase from its present low volume to be economically viable.

Our group feels that the problems and the associated challenges faced by UBCWM are complex issues to address because the remedies involve personal lifestyle change and awareness of environmental responsibility. We believe that “behavior change is most effectively achieved through initiatives delivered at the community level which focus on removing barriers to an activity while simultaneously enhancing the activities benefits” (McKenzie-Mohr and Smith 1). Thus, our recommendations for the stakeholders and the educational tools we have designed are meant to deliver education at the community level to increase campus awareness and participation, decrease contamination and eventuate in high compost levels.

CONNECTION TO THE GLOBAL FOOD SYSTEM

One of the major challenges faced by the global food system is the accumulation of landfill waste. The key problems associated with landfills are that they operate on potentially valuable lands and pollute the surrounding ecosystem (Christenson and Cozzarelli, 2003). For example, toxic compounds from the landfills leach into the soil and groundwater causing contamination to these systems (Christenson and Cozzarelli, 2003). Additionally, garbage trucks transporting waste to landfills often come from municipalities far from the sites (Christenson and Cozzarelli, 2003). These long trips produce a significant amount of exhaust, further contributing to ecosystem pollution (Christenson and Cozzarelli, 2003).

UBC is facing similar problems. The composting system was created to minimize waste, promote a sustainable closed loop food system, and combat waste problems that human density tends to create. However, the system was confronted with obstacles since its inception. This scenario provided us with an opportunity to tackle these local and personal challenges, plan

community actions, and create changes toward the sustainability of the UBC Food System. We believe that the global food system would likely face similar challenges as UBC, if the national or global system were to introduce similar composting programs. Our suggested strategies here can be utilized as a model for other institutions or communities. The model can also be evaluated and refined by interest groups to suit their goals and objectives regarding the sustainability of their own food system.

VISION STATEMENT AND VALUE ASSUMPTIONS

The “Vision for the UBCFSP” is directed towards the creation of a sustainable food system that will “protect and enhance the diversity and quality of the ecosystem and to improve social equity” (Rojas, 2006). In order to achieve this goal, “7 Guiding Principles” have been collaborated upon for the past five years by former AGSC 450 colleagues and stakeholders in the project. To make our project accessible to the diverse communities at UBC and beyond, our group has chosen to focus on the 7 Guiding Principles written in plain language versus academic jargon (see Appendix 2). The 7 Guiding Principles construct a romanticized ideal of the Food System in terms of ecological, economical and social sustainability. While our group has identified the importance of this vision, we also concurred that their overall achievement might not be realistic. As a group of seven upper year students from the Faculty of Land and Food Systems in the capstone course on Land, Food and Community (AGSC 450), we realize that our biases have influenced how we have approached this scenario.

We believe that locally grown, produced and processed foods should be strived for, but due to the seasonality and climate dependence of foods as well as our accustomed liking for diverse foods and nutrient needs, an entirely localized system would be difficult to achieve. As a

group, we feel that in order to provide ethnically diverse, culturally acceptable foods, it would be necessary to import certain foods that are not available locally.

We feel that the celebration of food is what builds strong community ties. The Faculty of Land and Food Systems is a leader in this form of community building around food as demonstrated through the growing success of the Agora Café, operated by Food, Nutrition and Health students, as well as Wednesday Night BBQs hosted by the Land and Food Systems Undergraduate Society. Not only do these initiatives create social sustainability, but they are also a part of the shift away from the dependence on fast foods towards an appreciation of slow foods.

Our group is passionate about the development of a closed loop food system wherein our immediate food choices on campus impact only the land that we use. By handling the waste that the UBC campus produces, less transportation is required to and from the campus, which in turn promotes ecological sustainability. With a closed loop system, the university population is more accountable and responsible for their individual impacts to the land rather than through the reallocation of waste and its impacts on other environments.

The one addition that we would suggest towards the production of a sustainable food system is through the consideration of the food insecurity issues such as those who depend upon food banks. In fact, the number of people who visit food banks in British Columbia has increased by 16% between 2003 and 2004, and members of the UBC population are not exempt from this increase (Barbolet et al. 22). Within the Guiding Principles we would like the inclusion that people at all times should be able to obtain food in a manner that upholds human dignity.

DATA COLLECTION AND KEY FINDINGS

I. Secondary Sources

The installation of the In-vessel Composting Facility can be seen as an initiative in conjunction with the five-year plan that the University has outlined in their document produced by the UBC Sustainability Office (UBCSO) entitled ‘Sustainability at UBC 2005-10: Inspiration and Aspirations: The Campus Strategy and YOU’. Through this document, UBC has demonstrated that it is committed to the development of a campus that is ecologically, economically and socially sustainable (UBCSO, 2005). This can only be achieved through the participation of the entire campus population.

UBC produces an average of 1900 tonnes of compostable waste each year, which is equivalent to 70% of the total waste generated on campus (UBCWM, 2006). In response to the large waste levels that can be diverted from city landfills, Wastefree UBC was developed as an initiative by environmentally concerned departments to raise campus awareness of waste production (UBCWM, 2006). The primary goal of Wastefree UBC is focused upon providing information and education on campus composting to students, staff and faculty through workshops, displays, promotional materials and tours of the In-vessel Composter. By working with the In-vessel Composter Facility, Wastefree UBC has been successful in the diversion of compostable waste from landfills and the creation of a closed-loop system wherein the finished compost is used in campus landscaping (UBCWM, 2006).

In February of 2005, the UBCSO published five reports on their research conducted with UBC students regarding sustainability awareness and practices on campus. The barriers to composting that were determined through these reports included laziness, insufficient awareness, inability to understand personal connection and lack of incentive (UBCSO, First Year and

Graduate, 2005). The students of UBC have found that sustainability education is complex and that the overload of information has had the adverse affect of creating meaningless messages (UBCSO, Fourth Year and Graduate, 2005). Unfortunately, information coming from concerned departments of the University is often contradictory and lack cohesion (UBCSO, Graduate, 2005). In order to raise the levels of participation on campus, stickers and posters were found to be the most influential prompts in behaviour change although it is also necessary for the message to be delivered in hip manner that appeal to the commercialized world (UBCSO, May 2005 and Graduate, 2005).

In order to appeal to the student population, the philosophies behind community-based social marketing, a strategy that incorporates the philosophies of the traditional marketing world at the community level, can be most effective. Community-based social marketing demonstrates that through the removal of barriers that distract from a desired behaviour, the benefits from the activity are enhanced (McKenzie-Mohr and Smith 1). As discovered by the UBCSO student focus groups, barriers include lack of knowledge, non-supportive attitudes, absence of motivation and lack of convenience and affordability (McKenzie-Mohr and Smith 1). The most effective tools towards the creation of behaviour change are commitment, prompts, social norms, clear communication and incentives (McKenzie-Mohr and Smith 3-6). The primary goal of community-based social marketing is grounded in the formation of behaviour change rather than on the immediate creation of awareness or attitude change (McKenzie-Mohr and Smith 1). Our goal in this project is to utilize the principles of community-based social marketing in the development of a campus-wide composting campaign (to be discussed in further detail).

Beginning in the spring of 2002, former AGSC 450 colleagues recommended the development of composting initiatives, such as posters, composting workshops, and compost bin

disposal at South Campus, which our group has seen implemented through our residence housing stake-outs and primary research (Barclay et al. 7). Colleagues from Spring 2003 created a ‘sustainability continuum on waste reduction’ that aimed to have 81-100% of waste composted on site and that the methane emissions produced are collected for use as biogas (Cheng et al. 10). The research conducted by groups 12, 16 and 18 in Spring 2004 focused upon the overarching goal of a sustainable campus, but group 12 had the recommendation of using My Undergraduate Group (MUG) leaders as a method of creating awareness and participation among first-year students (AGSC 450 Groups 12 9). MUG leaders are upper year, student leaders who are assigned a small group of new and first year students during campus orientation (to be discussed in further detail). AGSC 450 colleagues from Spring 2005 reviewed composting initiatives that have been successful in Vancouver and Canada, as a whole that, UBC could use as models (Anami et al. and Au et al.).

CENTRAL FINDINGS: STAKE-OUT

PURPOSE

From our literature review, especially the focus group reports, we found that first year students were more open to learning issues surrounding sustainability. Hence, we decided to target first year students in our study because these students would continue to be on campus for a few more years. First year students are able to impact the following years of students regarding sustainability issues which reinforces a socially sustainable cycle. In order for us to gain an understanding of the level of composting education currently being given to first year students, we contacted UBC Imagine and UBC Residence Sustainability Coordinators (REZSC), as well as conducted lunch-time stake-outs at the first year residences, Place Vanier and Totem Park.

We hoped that by gaining an understanding of current composting initiatives, we could improve and expand upon what has already been established.

DESIGN

Our stake-outs involved observations of the usage levels of the compost bins and the general behaviours of students, such as whether they composted correctly. We chose to conduct our stake-outs at the Place Vanier and Totem Park residence cafeterias because these areas have a higher concentration of first year students, and these locations already have established compost collection sites. We also randomly surveyed students to gain a better understanding of their knowledge about composting and motivations. From these questions, we hoped the students would identify barriers and provide suggestions for improvement. We conducted four stake-outs of the Place Vanier cafeteria during the week of March 9th – 14th, 2006 at the lunch hour between 11 am – 1 pm. Approximately 200 students visited the cafeteria each day for lunch and we surveyed approximately 90 of them. We also observed the situation at Totem cafeteria and noticed that the site was very similar to the Place Vanier cafeteria. The stake-out questionnaire is included in the appendix (see Appendix 3).

RESULTS

At the Place Vanier residence cafeteria, there is a compost collection site which consists of separated bins clearly colour coded for the disposal of glass bottles, pop cans, compostable waste, and non-compostable waste. Large illustrated posters that depict the items which can be placed in each bin are located above the opening. The location of this compost collection site is strategic such that when students are exiting or returning their plates to the dishwasher, they would pass by the site. From our observations and survey results, we found that most students have a general idea of what composting is. About half of the students surveyed knew about the

composting program at UBC, mainly because they knew that there was a compost collection site at the Place Vanier residence cafeteria. There were a few students who also knew about the program through friends, or from an information booth set up by UBCWM in the residence common block. Most students composted when there was an available compost bin and most of them knew what to compost by looking at posters that were available. This was clearly observed during our stake-outs as most students would use the information on the posters above the bins to determine what to place in them. There were some students who indicated that they also composted at home.

Some internal barriers to composting that students addressed were inconvenience, lack of knowledge about what to compost, lack of initiative/incentive, odour and hygiene. Line-ups sometimes formed when there were too many people and this discouraged some people from composting, but generally people were willing to spend some time at the compost bins. The main external barrier that students identified was the lack of available compost bins. Hence, most students felt that the best way to promote composting was to increase the availability of compost bins along with informative posters. Most people who used the compost bins composted properly. Common items which could have been composted but were disposed of instead include paper napkins and bones. Some items that were improperly placed in the compost bin were plastic utensils, chopsticks and milk cartons.

Although it was observed that many students were composting during our stake-outs, the REZSC stated that it was not consistent throughout the academic year. From the interview (see Appendix 7), we found that first year students were introduced to composting during the first month via posters and poster tents, but it is not a part of the residence orientation. Students were

found to compost less frequently early in the academic year, however this improved near the end of the semester.

From these results, it is evident that students would compost as long as they are aware of available bins and the information that indicates the correct composting procedures. Although composting education is not specifically addressed during Imagine UBC, the first year coordinator was open to this possibility for the near future if we are able to propose an action plan, as we found from our interview (see Appendix 6). Besides education, compost bins should be placed in a location which is plainly visible and convenient. For example, the location of the compost bins in the Student Union Building (SUB) are not very practical because they are not very noticeable and there are many garbage cans available before one would be able to reach a compost bin. The posters should be attractive and show as much of the commonly consumed items as possible without creating too much clutter. It is important to increase awareness of composting and its benefits because often it is impossible to provide compost bins everywhere and students need to know the reason why they should compost so that they can make a change in their behaviour and continue to compost in the future.

GET CAUGHT COMPOSTING

Our first recommendation for UBCWM and/or UBCSO is to implement a campus wide campaign that we have developed in order to promote participation in composting on campus. The “Get Caught Composting” campaign is targeted to be implemented at the beginning of each academic year. In order to directly involve first year students, the campaign will be introduced during activities associated with Imagine UBC as well as during orientation into the first and second year residences, Place Vanier and Totem Park (to be discussed in further detail). In

addition, some of the other recommendations we have developed will help to educate the targeted population how to compost correctly and reasons why it is beneficial.

The advertising for the campaign will consist of the presence of large posters in the vicinity of public compost collection sites, most notably in the SUB to have the widest accessibility to the entire student population. We have attached a draft of a poster in the appendices (see Appendix 4). Throughout the school year volunteers, ideally from Wastefree UBC, will “stake-out” these collection bins at unspecified times to catch people composting correctly. Once caught, the participant will receive a button that promotes the campaign (see Appendix 4) and will also be entered into a draw to win a larger prize (ie. iPod, Bookstore gift certificate, etc) to be awarded at the end of the academic year.

The Get Caught Composting campaign has been developed along the community based social marketing principles. This campaign provides an incentive to participate in the desirable behaviour (i.e. composting) because it awards participants with recognition. The campaign also removes barriers to composting as many of the students in past focus groups (UBCSO, 2005) have cited that the lack of recognition in an activity has created an internal barrier to participating in sustainability activities such as composting.

A small amount of funding will be required for the implementation of the campaign in order to purchase the advertising materials, such as the suggested posters and pins. A budget for posters and pins has been attached (see Appendix 5). The remainder of the campaign has been designed without the need for monetary input as volunteers are used for the educational and “catching” portions of the campaign. MUG leaders will be used to educate people about the campaign at Imagine UBC events, and residence sustainability volunteers will serve the same

purpose at residence orientations. Future AGSC students may be interested in volunteering to catch people composting through Wastefree UBC.

IMAGINE UBC

Imagine UBC is a program designed to orient new and first year students to the campus and its activities on the first day of the academic year. We believe that holding an introduction to composting during the first week campus activities, particularly during Imagine UBC, would help to address the lack of knowledge about composting on campus. Since we have chosen first year students as our target population, Imagine UBC presents an ideal opportunity to reach this group. Imagine UBC's and our objectives are in line as both focus on student orientation to the campus. Composting education can be effectively incorporated into many Imagine UBC activities including the orientation and MUG games. Introducing students to composting early in their university experience will help shape students into responsible global citizens who view composting and waste reduction as a standard practice.

Students will be given a short introduction to the concept of composting by their MUG leaders. During the orientation, the MUG leader would point out the characteristics of compost bins and help his/her group to recognize these bins. He/she should also point out the materials that can be placed in these bins and briefly explain why it is important to prevent bin contamination. An opportunity should also be provided for students to sign up to receive the electronic composting and recycling newsletter, *The Rind*, put out by UBCWM.

Knowing where organic waste drop-off sites are located is important to minimizing barriers to composting. Orientation games can be utilized to familiarize students with compost bin locations as well as to other concepts of sustainability. A scavenger hunt would be an appropriate game for this purpose. In this game, each MUG group will be required to collect

stamps on a “sustainability passport” from a variety of locations which would include the environmentally constructed C.K. Choi building, compost collection sites, a fair trade coffee location, amongst other areas. To encourage participation in this game, the game could be held in a competitive manner, or a monetary prize incentive might be used. Focus groups conducted by the Sustainability Office in past years have identified economic incentives as an effective tool to promote composting (UBCSO, 2006).

To help students learn to distinguish between compostable and non-compostable waste, a relay race should be included in the MUG games where students are asked to sort a number of waste materials by category. Three categories of waste materials would be used in this game: compostable, recyclable, and non-compostable-non-recyclable waste. For sanitary reasons, it may be desirable to use plastic mimics or flashcards of waste materials. Time penalties will be issued for each waste material placed in inappropriate bins and winners will be determined by fastest time and/or highest accuracy of sorting.

RECOMMENDATIONS

UBC Waste Management

We are aware that UBCWM has reservations about increasing the number of public access compost bins because of the risk of contamination (Jackson, 2006). For this reason, we are not recommending the addition of any new bins at this time. Instead, we recommend that they collaborate with the UBCSO and Imagine UBC to implement the campaigns and activities previously described to help remove some of the internal barriers first. If lower levels of contamination are seen and higher levels of participation are evident, they may then wish to consider setting up more collection sites. However, some recommendations to improve the current collection sites may be considered. For example, making the sites more visible with

posters and using similar setups as seen in residences may be beneficial. It would also be beneficial to minimize the motion of compost bins because people frequently revisit the same locations. Thus, if the location of the bins is changed, people may not be able to find them and would resort to garbage bins.

UBC Residence Sustainability Coordinator Program

Residences are a key place in which to educate students on sustainability. Currently, students in residences do not receive any orientation surrounding sustainability concepts (Best, 2006). Our recommendations are for the REZSC's to work directly with Residence Life Managers to provide them with sustainability education so that they may incorporate it into future orientations of students.

Imagine UBC

With almost 5000 students beginning their studies at UBC each year, it would be effective if the composting programs were introduced on the first day of school. We would like to recommend for Imagine UBC to implement the Get Caught Composting and Imagine UBC activities.

AGSC 450 Colleagues

In order to build on our work and that of current and former colleagues we have developed a number of suggestions for future projects that may increase awareness of and participation in composting on campus. First, the development of tools and methods that would measure levels of composting participation and amounts of contamination will be beneficial for monitoring success. Base measurements can be taken before the implementation of any strategic plan to increase composting and again after the program is complete or underway. This data can be used to assess the effectiveness of the program in question. Some measurements to consider

are volume of output of the compost final product; percentage of compostable garbage sent to landfills which can be calculated by conducting random mini-waste audits (University of Waterloo, 2004), levels of green bin contamination, and attitude changes toward composting.

Another task that may hold value in the coming year is to assess student's receptiveness to the Get Caught Composting campaign and to the activities at Imagine UBC. Focus groups or surveys should be conducted to see what the population thinks about the strategies and whether or not their attitudes or behaviours about composting have changed after they participated in the activities. This will be an important step to see if the strategies are useful and whether or not they need to be reevaluated and revised.

Another important area of work will be to continue working towards bringing the In-vessel Composting Facility to full functional capacity. One way to do this may be to seek new populations to target and to involve in composting initiatives on campus. There are several residential neighbourhoods on or around campus that could be involved, for example, the Chancellor Blvd area, or Fairview/Acadia neighbourhood. Many of the food service establishments on campus are likely to produce large amounts of organic waste therefore, these organizations are prime candidates to involve in composting. Their participation could lead to significant decreases in campus waste.

LINKAGES BETWEEN UBCFSP AND GLOBALIZED FOOD SYSTEM

The non-fiction work *Food Wars: The Global Battle for Mouths, Minds and Markets* by Tim Lang and Michael Heasman determined that the global food system is reaching a critical stage of food crisis and that it is becoming increasingly unsustainable. In response to this situation, the UBCFSP was developed. In order to understand the role of the UBCFSP in relation to the global food system, there must be a more elaborate understanding of the current

situation and problems underlying the global food system. All of the components involved in the UBCFSP represent the UBC food system as a microcosm of the global food system and the problems it faces. As a representation of the global food system, the UBCFSP investigates problems similar to current global issues by using the UBC food system as a testing ground (Rojas, Richer and Wagner 3). Through the assessment of the UBC Food System's ecological, social and economic sustainability, barriers relevant to the global food system can be determined and analyzed. The evaluation at this smaller, more contained level helps to create and test plans and strategies that can be applied to the global context (Rojas, Richer and Wagner 3).

These issues stemmed from the adaptation of increased intensification of agricultural lands in response to food shortage problems (Lang and Heasman 50). This solution successfully increased food production at a global scale; however, it veered away from the concept of local food production (Lang and Heasman 18-20). Now this is the concept that the UBCFSP strives to re-establish in the UBC food system. However, the concentrated mass production of food eventually gave rise to new sustainability problems and issues within the global food system (Lang and Heasman 18-20). According to Lang and Heasman, health, environment, diet and disease are the areas where current problems exist. Solutions to problems such as over consumption, under consumption, obesity, diabetes and depletion of natural resources must be developed and carried out in order to solve these barriers to sustainability (Lang and Heasman 18-20).

The development of plans and strategies for the UBCFSP is derived from the collective pooling of knowledge, experiences and ideas from students, teaching staff, the general public and stakeholders within the UBC community. This aspect of the UBCFSP is vital as it educates people, improves understanding of the food system, creates a shared vision among the people

involved and provides an opportunity for sharing of ideas and suggestions on how to improve the UBC food system (Rojas, Richer and Wagner 8-9). Looking at this from a global setting, this strategy of advancement contains diverse knowledge from people of different backgrounds, it generates awareness and it solves real life problems in a Community-Based Action Research fashion (Rojas, Richer and Wagner 9).

As solutions accumulate, a sustainable model for the UBC Food System will be developed; and these solutions in turn can hopefully be applied back to the global food system. This model will exhibit social, ecological and economic sustainability that can be used to address the problems that arise due to the increase of human density and other sustainability related issues (Rojas, Richer and Wagner 3). Through this model, the concept of a sustainable “University Town” as envisioned by Rojas, Richer and Wagner can be achieved and a true sustainable global food system can be proven. Combined together, this concept and model of the food system can guide global transition towards sustainability by providing the necessary steps and benchmarks (Rojas, Richer and Wagner 5).

Composting proves to be a vital component of both the UBC and the global food system. It completes the cycle in a closed system and enhances the system’s self-sufficiency and sustainability. As part of the UBCFSP, the composting project functions in similar ways by assessing sustainability, identifying barriers, creating visions and developing shared models that could be applied back to the global food system (Rojas, Richer and Wagner 12).

Maintaining its focus with the bigger picture, the end result of the composting scenario will ultimately divert organic waste away from landfills and redirect it back into the soil for the production of local produce (Rojas, Richer and Wagner 3). As a result, reduction of exhaust fumes, replenishment of nutrients in soil and a decrease in the production of greenhouse gases

will contribute to addressing global environmental problems such as pollution, loss of top soil and climate changes (Lang and Heasman 214-237).

CONCLUSION

We believe that education and awareness is paramount to the success of the composting program on campus. We feel that the greatest impact will be felt if this education focuses on first year students because they shape the direction that campus sustainability will take in the future. In order to create any behavior change, both internal and external barriers need to be addressed. We believe that the activities we have developed will go a long way in removing these internal barriers and in creating excitement around composting and other sustainable behaviors.

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APPENDIX 1: STAKEHOLDERS

- UBC Waste Management
- Wastefree UBC
- Campus Sustainability Office
- Imagine UBC
- Residence Sustainability Coordinator Program

APPENDIX 2: VISION STATEMENT AND 7 GUIDING PRINCIPLES (PLAIN LANGUAGE)

The overarching goal of a sustainable food system is to protect and enhance the diversity and quality of the ecosystem and to improve social equity, whereby:

1. Food is locally grown, produced and processed.
2. Waste must be recycled or composted locally
3. Food is ethnically diverse, affordable, safe and nutritious
4. Providers and educators promote awareness among consumers about cultivation, processing, ingredients and nutrition
5. Food brings people together and enhances community
6. Is produced by socially, ecologically conscious producers
7. Providers pay and receive fair prices

APPENDIX 3: STAKE-OUT QUESTIONNAIRE

Location: Place Vanier/ Totem Park

Do Students Know:

What Composting Is	About Composting Programs	How/what to Compost

Compost Barriers:

Internal	External
Reasons	Reasons

(Rank?) 3 Suggestions for Improvement

Poster	Introduction During Imagine	More Green Bins

Checklist:

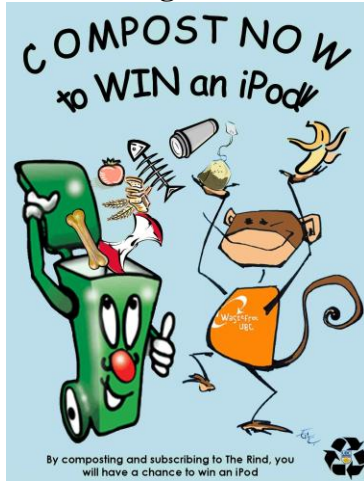
People Eating in the Café	People who are putting in garbage what they can compost	People Composting Properly	People Composting Improperly

APPENDIX 4: PROJECT BUDGET

POSTERS - Staples Business Depot				
		500	1000	3000
SIZE	11' x 17'	\$1.09/poster	\$0.88/poster	\$0.58/poster
	Half of 11' x 17'	\$0.88/poster	\$0.49/poster	\$0.29/poster
	Larger than 11' x 17'	\$5.99/square foot		
STICKERS – Staples Business Depot				
SIZE	1.75' x 0.5'	\$6.99/sheet (80 per sheet)	\$1.99 each additional sheet	
	2.5' x 1'	\$6.99/sheet (30 per sheet)	\$1.99 each additional sheet	
BUTTONS – Six Cent Press (www.sixcentpress.com)				
SIZE	2.25'	Quantity		Price
		200		\$130
		500		\$295
		1000		\$520

APPENDIX 5: CAMPAIGN ADVERTISING MATERIALS

Poster Design



Button Designs



APPENDIX 6: QUESTIONS FOR IMAGINE UBC COORDINATOR

- 1) About how many first year students do we have each year at UBC? Roughly how many people attend Imagine (breakdown of first years, volunteers, etc)?
- 2) What is currently done at Imagine to introduce First Years to composting, if any?
- 3) Is it possible to incorporate composting with the Imagine orientation for first years? How would we go about that?

OR

- 4) Is it possible to increase the level of compost education at Imagine? How would we go about that?
- 5) What are some barriers to incorporating composting with the Imagine orientation?
- 6) Our suggestions for incorporating composting in Imagine would be to provide stickers, education pamphlets, etc in the Frosh Kit; MUG games (i.e. scavenger hunt to find compost bins, or other composting related material)... any other suggestions? What would we need to do to make this possible?
- 7) Does UBC-Okanagan have an event like Imagine? What is currently being done to introduce first years to composting there?

APPENDIX 7: QUESTIONS FOR RESIDENCE SUSTAINABILITY COORDINATOR

- 1) What is the Residence Sustainability Program?
- 2) What sort of activities or programs have you tried to support composting participation in Res?
- 3) What kinds of strategies do you think have been most effective?
- 4) What do you think are the barriers to composting on campus?
- 5) What kinds of things would you suggest to improve participation among residence students?