

UBCFSP Scenario 4: Creating a UBC Farm to Campus Food Provider Program

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Provider Program**

Group 25

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ABSTRACT

The UBC Food System Project (UBCFSP) is a Community-Based Action Research project (CBAR) based on the collaboration and visioning of all the project stakeholders. The objective of this project is to improve the sustainability of the UBC food system. The purpose of scenario 4 was to propose the incorporation of the UBC Farm produce to the various campus food providers. The project involved a literature review, along with interviews with the UBC Farm and AMS Food and Beverage Department personnel. A review of the UBCFSP vision statements has also been completed in accordance to scenario tasks and requirements. A farm to campus program was improved upon to incorporate UBC Farm carrots into the AMS as a way to promote local food production and consumption. The program will start with a one month supply by the UBC Farm of 25-50% of the AMS total carrot consumption during the month of September. The objective of the program is to raise awareness of the UBC Farm, build support for local agriculture and to involve all students of UBC. Recommendations have been made regarding the various issues that were unable to be addressed within this paper due to resource, time, and project focus constraints.

INTRODUCTION

The UBC Food System Project (UBCFSP) was first initiated by the Faculty of Land and Food Systems and UBC Social, Ecological, Economic, Development Studies (SEEDS) in 2001. Their goal is to initiate a transition to campus sustainability. The UBCFSP is a community based-action research (CBAR) project involving various research partners and collaborators: Alma Mater Society Food and Beverage Department (AMSFBD), UBC Food Services (UBCFCS), UBC Sustainability Office, SEEDS, the Centre for Sustainable Food Systems at UBC Farm, UBC Waste Management (UBCWCM), UBC Sage Bistro (UBC Food Services operation), Campus & Community Planning, UBC Sauder School of Business Commerce 468 classes, and the Faculty of Land and Food Systems (Richer, 2008).

In 2002, the UBCFSP became a part of a core agricultural course; AGSC 450: Land, Food, and Community III. Over the past 6 years, there had been over 1000 students, 9 key partners and 1 collaborator participating in this project. “The emergence of the UBCFSP arose out of a concern for the sustainability of our current global food system” (Liska Richer, PowerPoint Presentation, January 16th, 2008). One of the main goals of the UBCFSP is to develop a sustainable UBC food system: socially, ecologically, and economically. A sustainable food system is a system that can provide our current needs on food, while maintaining the ability for the future generations. With the increase of

globalization and industrialization, the majority of our food is exported to and imported from different regions of the world. Much fossil fuel is consumed during food transport, and thus this is not a sustainable food system.

The focus of the UBCFSP on the UBC food system allows us to make a direct impact on our community. “The UBC food system provides us opportunities to understand global issues while studying a locally and personally relevant topic and taking action, as a community, to create changes towards sustainability” (Liska Richer, PowerPoint Presentation, January 16th, 2008). Our group chose to examine Scenario 4: Creating a “UBC Farm to Campus Food Provider Program”. The focus of our scenario is to incorporate UBC Farm products into the menus of the AMS food outlets. The creation of a business proposal for a farm-to-campus program takes into account the needs and desires of all stakeholders. This will allow stronger connection between the UBC Farm and the AMS. The use of local food at the university also provides an ideal situation for educating consumers about the local food system.

PROBLEM DEFINITION

The current agro-industrial system results in significant ecological damages. Soil degradation, depletion of clean water supplies, loss of genetic diversity and air, soil and water pollution are all results of an industrial agriculture system (Gliessman, 2000). Pollution due to fossil fuel consumption arise not only from the long-distance transportation and extensive processing of food, but also from the high levels of pesticides, fertilizers, irrigation and farm machinery involved in production (Peters, 1997). The resulting carbon dioxide, nitrogen, methane and other greenhouse gas emissions has contributed to climate change (Homer-Dixon, 2006). Transportation alone in Canada accounts for one quarter of its total energy consumption and greenhouse gas production (Bentley & Barker, 2005).

The proportion of every food dollar that makes its way back to the local farmers has been dwindling (Gliessman, 2000). In Canada, 11% of our net income is spent on food, which is one of the

lowest percentages relative to other high-income countries (USDA, 1997). Therefore, many local farmers struggle to make enough money to support their families, leading to the demise of many rural communities (Pollan, 2006). This system pushes out small farms and isolates the majority of the food system away from consumers. As a result, most consumers have a distinct lack of knowledge about where their food comes from and how they were produced (Pollan, 2006).

To reconnect communities with the food they eat, we must enhance the local economy, adapt local food production and distribution, and provide people with more direct experiences with the local food system (Peters, 1997). Some of the current social, environmental and economic impacts of our current food system can be alleviated with local food systems (Peters, 1997). Farm-to-institution programs are examples of local food systems (Sanger & Zenz, 2004). The programs involve the direct sale of farm products to a food service provider (Markley, 2002). The farms can be acting either individually, as a co-operative or via some other organizational body (Markley, 2002). The food service providers are often in educational facilities, such as elementary schools and universities (Markley, 2002). Such programs increase access to healthy food, reduce food transportation distance, increase economic and food security, strengthen local economies and connect with students while increasing their awareness of local farming and food system (Sanger & Zenz, 2004).

Universities have a role in leading, by example, to the greater society (M'Gonigle & Starke, 2006). This has already begun on the campus at UBC. Across the campus, sustainability initiatives are taking place, from the AMS Lighter Footprint Strategy and the formation of the Sustainability Office to the recent signing of the Climate Change Statement of Action by UBC President Stephen Toope. Another longstanding initiative to add to the list is the UBC Farm. Currently the only working farm in Vancouver, the UBC Farm is a student-driven model farm on 24 hectares on the South Campus (UBC Farm, n.d.). The Farm strives to be a model in sustainable agriculture and has already created a farm-to-institution program that supplies food to a variety of campus food providers (UBC Farm, n.d.). The

UBC Farm is not only interested in supplying food to the campus, but also in educating and connecting to students about the current food system and its alternatives. This project seeks to build on the current farm-to-campus program for the benefit of the farm and the community on campus.

VISION STATEMENT & VALUES

Our group discussion and reflection of the vision statement for the sustainable UBC food system brought forth a variety of ideas. In the course of our reflection, we were able to identify how our value assumptions influenced our views throughout this project. We felt that UBC should be able to create a sustainable environment of food production since it has been accomplished in many universities in the United States. As students in the Faculty of Land and Food Systems, we found the topic of a sustainable UBC food system is relevant, interesting, and important; which may not be the same for the general public. We found it easy to assume that everyone knows as much as we do about food sustainability, thus making further education a more daunting task. As well, being student, we are conditioned to seek out knowledge and strive to understand the world around us. Our group consisted of members with different areas of specializations: food science, food nutrition and health, animal studies, and agroecology. With all these different disciplines, we have more knowledge of the background information on nutrition than the average population. Since our group has a more in depth understanding of the current issues that revolve around campus food security, it differentiates our perspectives and values from the majority of the student populace. With these value assumptions in mind, a review and analysis of the seven different goals of the UBCFSP vision statement was done.

The goals of the vision statement served as the guiding principles of this project; therefore, the discussions of these goals gave insight on the impact that this project is to bring on the UBC campus food security and sustainability. The overarching theme is a food system that “protects and enhances the diversity and quality of the ecosystem and to improve social equity.” Our group felt that overall, these goals were necessary for any sustainable food system and clearly layout all of the different

aspects involved in a food system. The first and fourth goals of the vision statements were identified as being the most pertaining for scenario 4. The first goal states that “food is locally grown, produced and processed”; however, we felt that the word ‘consumed’ should be added to fully embrace the purpose of our scenario, because the consumption of locally produced food is important enough to be stated and should not just be assumed. Also, the word ‘consumed’ creates an action that a consumer can participate in. The group has come to consensus that, for us, the term “local” is defined as regions within the province of British Columbia. We defined it within B.C. due to the wide range of produce that is essential for the ethically diverse consumers of the AMS and to support the Canadian economy. The fourth goal states that “providers and educators promote awareness among consumers about cultivation, processing, ingredients and nutrition.” This goal is directly related to our objective to promote the connection of local fruits and vegetables that are grown on the UBC Farm with the food sold on campus. Our group decided that it is important to integrate the idea of food miles into this goal, as we feel that it is an important aspect to educate the public about the issue. Many people do not know the impact that the transport of food has on the environment, and if given the knowledge, it may alter their food choices. The second goal that “waste must be recycled or composted,” was not in relation with the focus of our scenario; however, it was agreed upon by the group as a whole that the goal is vital for the establishment of an overall sustainable food system. The third goal stated that “food is ethically diverse, affordable, safe and nutritious.” Our group felt that the focus of our scenario on crop production at the UBC Farm cannot realistically supply culturally diverse products during the winter months. The fifth goal is “food brings people together and enhances community.” Our group concluded that, in our scenario, this goal is to strengthen the bonds between two major participants in the UBC food system: the UBC Farm as a food producer and the AMS as food provider. The sixth goal, that food “is produced by socially, ecologically conscious producers,” is connected to our scenario because of our focus is on the UBC Farm, which embodies these main principles. The last

goal focused on “the providers and growers paying and receiving fair prices.” We found this to be the biggest challenge of our project since there is a large disparity between the price of produce that the AMS is willing to pay and what the UBC Farm is charging for its costs. It appears that the sustainable, local, high quality food comes at a higher price and, in many cases, it may be impossible for the AMS to afford it while still making a profit. We felt that this goal could be expanded upon to show that fair prices help more than just providers and growers. When an equitable economic balance is achieved, the whole local economy benefits, including the consumers who live in that environment. Our discussion on the vision statement yielded many different ideas through which we were able to find a consensus within the group.

METHODOLOGY

The project was initiated through discussion on the scenario within our group. Henceforth, each group member understood the various stand points of other members regarding locally produced food and the role of the UBC Farm. From the outcomes of the discussions, a preliminary framework for the project scenario was drafted.

Throughout the project, literature review, guest lectures, interviews and discussions with stakeholders, and electronic telecommunications were carried out in order to obtain tangible data in which conclusions could be drawn. The “community based action research” (CBAR) method was adapted based on the effectiveness of the method observed from the successes of previous UBCFSP. The main goal of the CBAR is to improve the health of the community as well as the land it stands on. The CBAR is “organized and conducted in ways that are conducive to the formation of community and that strengthen the democratic, equitable, liberating, and life-enhancing qualities of social life” (Stinger, 1999). This characteristic of the CBAR connects with our scenario, which aims to improve the UBC community as a whole through sourcing local foods and conveying the importance of local food production and consumption.

Literature review was done on past UBCFSP papers, which allowed us to know what had been done and helped us found the focus of our project. The UBC Farm “sales data report,” the UBC Farm “produce pricing and availability report,” and the AMS food service “food purchasing listing” were reviewed. These reports gave us detailed information on the UBC Farm production and the AMS purchasing. Literature Reviews also were done to gain knowledge about the seasonal production in B.C., the similar food products at other universities or colleges, and other related topics.

Information was also gathered through attending guest lectures. The UBC Farm, the AMS Food and Beverage Department and the UBC Sustainability Office all gave us insights into developing a sustainable food system. Interviews were carried out with the key stakeholders from the AMS and the UBC Farm. Nancy Toogood, general manager of the AMS Food and Beverage Department, and Nick Gregory, the AMS Purchaser, gave us vital information in the perspective of the AMS. The perspective of the UBC Farm was provided by Amy Fry, Marketing Coordinator, and Mark Bomford, Program Coordinator.

FINDINGS / DISCUSSION

Past UBC Food System Projects

In 2006, the UBCFSP included a scenario entitled “Incorporating Seasonal B.C. Food Items into Campus Food Provider Menus.” This scenario was created to allow groups to “explore and propose ways to incorporate seasonal BC food items into existing campus menus at a selection of campus food outlets” (Richer, 2006). The most successful of these groups in this scenario was Group 13, 2006 who worked with Pie R Squared (PRS) at the AMS to create two new pizza recipes using butternut squash from the UBC Farm. The group found out that the PRS did not have a set menu; therefore, it was possible to incorporate a new pizza. The group gained the support from Warren Harshenin, the manager of the PRS, and worked with Nancy Toogood. The group obtained a list of produce that grows at the UBC Farm, commodity prices, and availability. They developed the recipes

and taste-tested the pizzas within their members. Then, they conducted a taste-test by handing out free samples and surveyed the customers at the PRS. Based on the responses from the survey, the trial was a success. Warren Harshenin and Nancy Toogood sat down with Greg Rekken, who is the UBC Farm production coordinator, and settled for an agreement to proceed with the project.

Other groups in this 2006 scenario worked with different food service providers on campus. Group 3 worked with Bernoulli's Bagels at the AMS to incorporate some seasonal B.C. food items into their menus. They suggested creating new recipes by replacing the ingredients with fresh seasonal fruits and vegetables from the UBC Farm. However, the unpredictability of climate and pests created an uncertainty of supply that was not acceptable to Bernoulli's Bagels. Group 6 and 8 worked with several UBCFS food outlets, which includes Café Perugia and 99 chairs, and the Barn, respectively. Both groups had the goal to incorporate locally produced foods into the menus of their interested food outlets. Although the managers were interested in incorporating free-range products into their menus, the cost was too prohibitive. The managers felt that they could not risk increasing their food prices to compensate for the higher costs. Group 23 worked with Place Vanier and Totem Park residence cafeterias to integrate more local and seasonal products into their menus. The group suggested creating an event during night time with food as their theme to be held at the two residence cafeterias, thus to increase awareness of local and seasonal foods as a short term goal. The group planned to work with the students from the FNH 440 class to promote UBC Farm products by inviting guest speakers to discuss sustainability. The limitations to the previous group of setting long term goal to incorporate local food products into the residence cafeterias at UBC were high prices of the meal and lack of supply to accommodate the demand from students.

The goal of scenario 4 from 2006 was to develop educational campaigns to promote awareness about the benefits of local foods. They suggested events like local markets, tasting events, and information booths that can be held in the Student Union Building (SUB) for the public to attend. The

groups also proposed to invite the students from AGSC 100 class to volunteer in the event. The groups planned to hold the events around October 16th because that date is recognized as “World Food Day”.

In 2007, the groups from scenario 4 found that it was difficult to incorporate local produce from the UBC Farm to the UBCFS. The main concern of the UBCFS was cost as both parties worked within a firmly defined budget. The UBCFS required a contractual eight month fixed price, which is extremely difficult for farms to accept due to the nature of weather and season dependence on farming. The UBCFS also requires the distributor to have a steady supply of produce, which is a challenge for local farms and the UBC Farm.

Other projects from 2007 suggested using Discovery Island Organics (DIO) as a partner distributor. The DIO is a wholesale business that supplies in Certified Organic produce and whole bulk foods. Their goal is to create healthy communities, keep economies local, promote fresh foods and build living soils. The DIO is also concerned about sustainability, as all of their practises are carried out with this concept in mind. In addition, the paradigms and visions of the DIO are similar to those of the UBC Farm, which makes the DIO a desirable partner as a food distributor to the UBC Farm. One of the past papers stated that the DIO did not have fixed prices on their products; however, they would be open up for negotiations with the UBCFS.

Seasonal Production

A wide variety of crops are grown in the province of British Columbia due to its unique climatic conditions. Summers are especially cool due to the influence of continental air mass from the ocean and winters are chilly (Sunset Magazine, 2008). Ample rainfall is a unique characteristic which is suitable for many perennial and bulb productions. B.C. is well-suited for many types of agriculture production while certain places focus on particular production; such as, the Fraser Valley and southern Vancouver Island are favourable for the production of berries and vegetables due to cooler and wetter climate, the southern interior has excellent production of tree fruits and grapes, and the Peace and Rive

Region has excellent grain and oilseed crop production (AGF, 2003). B.C. has a seasonal production from early May to early October (Sunset Magazine, 2008). For the rest of the year, the province relies on the United States and Mexico producers that have the advantages of a consistent year-round growing season for vegetable production (AGF, 2003).

The UBC Farm is located on the South Campus that benefits early production of potatoes and cool season vegetables (2008). It produces over two hundreds varieties of fruits and vegetables grown in the market garden, which includes salad mix, carrots, radishes, kale, peas, beans, beets, artichokes, basil, turnips, bok choy, and various herbs (UBC Farm, 2008). The production for winter squash, melons, cucumber, zucchini, pumpkins, peppers, tomatoes, broccoli, cabbage, corn, and tomatoes continues as the season moves forward. Eggs and honey are also for sale to the customers. The farm is not fully certified organic, but they follow Certified Organic Associations of British Columbia's (COABC) guidelines for organic of no synthetic pesticides, herbicides, or fertilizers since 2000.

Farm and University Connections

Universities across North America run farms or farm related programs. The Illinois State University, for example, also has a farm that serves a similar purpose to the UBC Farm: to support education and research (Illinois State University, 2006). Several universities in the United States have developed a program called the Small Farms. Although each university differs slightly in terms of their program objectives, in general the programs seek to promote the development of sustainability within thriving small farms that plays a role in food security, community and environmental health. The programs push themselves towards their objectives through encouraging small farms-focused research and extension programs and to facilitate the collaboration between small farms.

Many post-secondary institutions in the United States and Canada have initiated farm-to-campus programs. The similarities of these programs were studied by Markely (2000) who found that farm-to-campus programs are increasing in popularity. Most often the food is seasonal produce that

only forms a portion of the business of any given farm. Although the programs are similar overall, each is unique because it is based on the systems, resources and people of a particular school. The farm products are incorporated into different outlets, catering, and conferences or at special events. These programs are generally initiated by food service directors or students, and have significant student involvement. Through programs like these, students are reconnected to the food system in a very tangible way. The key to the success of many of these programs is the relationship that develops between the farmers and the food service department: communication, collaboration and trust are required.

The situation at UBC is special in that the UBC Farm is part of the campus; meaning that there is even greater incentive to be involved in a farm-to-campus program. The academic nature of the UBC Farm means that it has a greater responsibility to educate the students. This will then empower the students, allowing them to make more responsible food choices. This also means that UBC Farm has the opportunity to act as a leader in creating a farm-to-campus program that can serve the needs of the entire campus community.

UBC Farm

The UBC Farm strives to provide education, research and extension, to enhance the overall educational value of the campus (UBC Faculty of Agricultural Science, 2000). The objectives of the UBC Farm revolve around issues of sustainability and health, extending programs beyond the Farm gate, encouraging and supporting meaningful student participation, fostering support by the university and exposing the Farm to a variety of students (UBC Farm, 2001). Currently, the land that the UBC Farm uses is in the Future Housing Reserve according to the UBC Official Community Plan and it is under threat of development (Bomford, 2008). This predicament means that ensuring that the Farm is an important, relevant and well-known part of the university campus is more important than making money (Frye, 2008). The number of farm visits and the extent of community awareness and support

are two ways that the Farm measures its success (Masselink & Bomke, n.d.). Although the Farm continues to focus on being a community resource and connecting to students, even at the risk of being financially unsustainable, the farm can benefit from greater exposure within the UBC community (Chan *et al.*, 2006).

The production season at the UBC Farm is approximately from June to October (UBC Farm Sales Data, n.d.). An interview was conducted with Amy Frye and Mark Bomford, who gave detailed information on the practices of the UBC Farm to our group (A. Frye & M. Bomford, personal communication, March 12, 2008). The farm tries to focus its production on a large diversity of high value crops on a limited landbase. This method seems to be successful, as demand outstrips supply for the UBC Farm products. Although the farm is not certified organic, they follow sustainable, organic practices and can charge a premium for their products. Due to natural variations in the climate, pest problems and other issues inherent in the nature of farming, the UBC Farm has an unpredictable supply of produce. September is the largest harvest month at the UBC Farm; however, that time is plagued by a lack of staff and a loss of continuity because of field crews returning to school and new staff.

The UBC Farm staff stated in the interview that the UBC Farm sells its over 200 varieties of produce via Saturday markets, Community Supported Agriculture (CSA) boxes and direct sales to restaurants and campus food outlets. Direct sales to campus food outlets include Sage Bistro, UBCFS, Agora, AGUS, Sprouts and the AMS. Markets provide 66% of the UBC Farm sales, CSA is 11% and 19% of sales comes from direct sales; this is far from the ideal of 33% for each. To attain this goal, both CSA and direct sales need to be increased, which can only be achieved by increasing production. Not only would a sustainably managed production provide greater income and more customers for the UBC Farm, but also can provide many ecosystem services to the UBC campus, such as: clean air and water, nutrient cycling and increased biodiversity.

According to the UBC Farm staff, the production increases in root vegetables, which are compatible with squash, are being considered. The current limiting factor at the UBC Farm is the lack of labour to grow, harvest, and process any extra production. Squash is the highest volume crop that the UBC Farm produces. UBC Farm strives to incorporate multi-functional programming, where “nothing does just one thing” (UBC Faculty of Agricultural Science, 2000). For example, squash grown in 2007 was part of a biofertilizer trial, as well as, providing large volumes of squash for “Squash and Rosemary Pizza” at the PRS. The Farm has already shifted to higher yielding varieties to increase production without needing more labour. The scale at which UBC campus purchases produce is often far too large for the UBC Farm to supply, only a distributor carries those volumes. However, a short-term contract for squash was successfully created between the AMS and the UBC Farm in 2007. Although the Farm shies away from strict contracts due to the uncertainty of production, the Farm does tailor their production if a demand is presented early in the season.

The AMS

The AMS runs its food outlets out of the Student Union Building (SUB). The mission statement of the AMS is “[t]o improve the quality of the educational, social, and personal lives of the students of UBC.” (AMS, 2008). This mission statement works well with the goals of the UBCFSP which is focused on educating the public, bringing people together, as well as providing more environmentally friendly sustainable food on campus. The AMS runs nine permanent food establishments within the SUB along with a seasonal barbeque outdoors (AMS, 2008). Our research found the two of the food outlets are currently using produce from the UBC Farm on a permanent basis: Pie R Squared, Bernoulli Bagels. (N. Toogood, personal communication, 2008).

We were able to find more information regarding the AMS Food and Beverage department buying and storage situation from the department purchaser Nick Gregory (N. Gregory, personal communication, 2008). The produce used by all AMS outlets is purchased by the AMS Food and

Beverage Department and then distributed to the various outlets. Nick explained that all the products stored in the loading dock warehouse located at the basement of the AMS building have a turn around rate of four to five days. Nick also discussed the local purchasing in the AMS as something that they are constantly trying to strive for. He explained that in many situations that produce is either not available at the UBC Farm or cannot be guaranteed to be delivered. Nick spoke of the problems regarding UBC Farm's growing season not coinciding with the majority of the school year. The fact that the warehouse was small and produce needed to be moved within four to five days made it difficult to have large amounts ordered from the Farm during the season for the lack of storage over the school year. These were some of the major obstacles that needed to be surpassed to increase local food in the AMS food outlets.

The UBC Farm to AMS Campus Food Provider Program: A Business Proposal

Connecting UBC Farm & the AMS

The UBC Farm to Campus Food Provider Program incorporates the needs and wants of the UBC Farm, the AMS Food and Beverage Department, and the consumers of the AMS outlets. The program will be initiated in the form of a business proposal and will run in the month of September. The month was chosen due to the high production for the UBC Farm and the higher flow of students during the start of a new semester. The AMS has great potential for reaching to a wide variety of students that frequent the SUB, the type of audience that the UBC Farm is interested in attracting. The AMS Food and Beverage Department is supportive of the UBC Farm, as it already purchases some of the products from the Farm.

This program focuses on supplying UBC Farm carrots to the AMS. This choice was made to accommodate the Farm's desire to expand their root vegetable production and to decrease the food miles of the carrots that the AMS currently sources from the United States. As well, Nancy Toogood mentioned that the AMS is interested in purchasing more root vegetables from UBC Farm. Crops such

as carrots and beets are desired because of their ability to store well. Further, the carrots are used at three outlets, includes the Honour Roll, the Moon, and the Pendulum, that at the current time do not consistently use produce from the UBC Farm. Through the incorporation of UBC Farm crops into the various food outlets in September, we can help initiate a more widespread use of UBC Farm crops for that month and give the UBC Farm more public exposure. These outlets serve a unique clientele and would therefore introduce a new subset of consumers to the UBC Farm and local food.

A month long initiative would help educate a variety of UBC students and faculty passing through the AMS on a daily basis on the importance of local food and the UBC Farm. Both the UBC Farm and the AMS stated that it was very important to generate public awareness on these issues. The project to incorporate the UBC Farm and local products into more food outlets at the AMS is vital to spread awareness of the Farm and local food production.

The farm-to-campus program is designed to offset some of the current issues that plague a long-term contract between the AMS and the UBC Farm, as identified by the stakeholders. The UBC Farm produced approximately 500 bunches of carrots in 2007 (Amy Frye, personal communication, April 1 2008). The AMS used approximately 200 pounds of carrots in the month of September in 2007 (Table 1) (Coleman, 2008). Since the AMS requires higher volumes than the UBC Farm has the capacity to provide due to its other commitments, local carrots from a distributor should be used to supplement the supply of 20 pounds per week by the Farm. This means that the AMS will not consume the entire carrot production of the UBC Farm, but is being provided a significant amount. The UBC Farm could then sell the rest of the carrots to their regular September clientele. The remaining 20 to 30 pounds of carrots that are required by the AMS can be easily supplied by a distributor that can provide local carrots. While this will create more work for the AMS, it is believed that this will provide the benefit of a supply of all local carrots. Both the DIO and Central Foods, the current AMS food distributor, were contacted to determine if they could be potential suppliers of local carrots. Although we did not

have a reply from the DIO, Central Foods did let us know that they could provide local carrots in September (A. Wong, personal communication, April 7, 2008).

Table 1: Use of carrots in AMS outlets for the month of September

	Carrots (lbs) used in September				Total for September
	Week 1	Week 2	Week 3	Week 4	
Honour Roll	11.5	19.9	24	18.5	73.9
The Moon	29.95	40.8	43.5	0	116
The Pendulum	1.85	4.4	5.75	6.5	18.5

Cost differences are a huge challenge between the Farm and AMS. In September of 2007, UBC Farm charged \$1.50/lb of carrots (A. Frye, personal communication, April 1, 2008). From the information given to us by Tom Coleman, we were also able to establish last years prices of carrots based on the different months; carrots cost \$0.48 cents/lb in September. However, the problem still remains that the price the Farm is currently selling its carrots for is more than triple what the AMS is paying, which is a concern for the AMS (N. Toogood, personal communication, 2008). The short duration of this program and the flexibility of the two stakeholders means there is potential that an acceptable price could be agreed upon. As well, preliminary data from a survey done by Group 6 of 54 students found that consumers are willing to pay \$0.25 more for a more sustainable food product (Group 6, UBCFSP 2008, personal communication, April 2008).

Another issue expressed by both the AMS and the UBC Farm was the production at the Farm cannot be guaranteed. The Farm's dependence on the growing conditions during the year makes it impossible to be certain that enough crops can be produced. We have decided to offset this uncertainty of UBC Farm products through the use of a local distributor, for example Central Foods, that can provide the carrots when the UBC Farm cannot. If the Farm is unable to provide 20 lbs. of carrots each week, the AMS can simply increase the amounts ordered from the local distributor.

Education & Outreach

An educational campaign was designed by our group to bridge the connection between the UBC Farm and the various campus food providers. The target population of the campaign is for all UBC consumers, which includes faculty, staff, and students. The campaign not only raises awareness about the benefits of purchasing and consuming local food, but also promotes the UBC Farm products that are available on campus. The project involves most of the food outlets at the AMS, which includes: AMS Catering, Bernoulli's Bagels, Blue Chip Cookies, Pie R Squared, the Gallery Lounge, the Patio BBQ, the Pit Burger Bar, the Pit Pub, the Pendulum, Honour Roll, and the Moon. As mentioned before, some UBC Farm products have already been incorporated into various AMS food outlets. Our project focused on the incorporation of carrots, targeting three outlets that currently do not use UBC Farm produce regularly. The consumers of the food outlets will benefit from having the opportunity to eat local carrots and other UBC Farm products.

The campaign also includes a one-day event during the month that includes various promotional activities. First, we suggest inviting organizations and clubs that support UBC Farm and local food, such as Sprouts and Friends of the UBC Farm, to join the event by setting up booths at the SUB. A roundtable discussion will be set up for coordinators, volunteers and students for everyone to discuss issues revolving around local food and also serve a method of promotion. Secondly, information booths should be set up to provide educational materials for people at the event. The "Think Globally, Eat Locally" Pamphlets, designed by the AMS, contains reliable information on local food and we suggest printing more copies for people to pick up at the booth. A scanned copy of the pamphlet is located in *Appendix A*, many hard copies can be picked up currently at various food outlets at the AMS, and document files may need to reach Nancy Toogood for more information. Thirdly, information about the event and the educational material contained in the pamphlet should be printed largely on posters. The posters should be designed to attract consumers to access UBC Farm and local

food information. As well, an “Eat Local” webpage could be created for the AMS website to provide more information for students, including locations of where to purchase local foods and which foods are local. Creating an email contact list will allow direct contact with students who are interested in receiving information updates regarding local consumption events. Fourthly, we suggest creating pins and stickers of the UBC Farm logo and local food messages to encourage consumers to become more aware of the UBC and other local farms. The pins can be worn by managers and employees of the AMS and also distributed amongst participants of the event. The stickers can be placed on the menu boards of the food outlets next to the food items that contain UBC Farm or locally produced food products. Customers will then be able to identify where their food comes from and be encouraged to think about this in the future. The cost of the pins and stickers for the event should be opened up to sponsorship by companies and organizations that have an interest in sustainable development.

We made some tentative contacts were made with some groups and organizations to find out if they would be interested in participating in the one-day event in September. The groups contacted were the following: Green Party of UBC, the UBC Food Society, Friends of the UBC Farm, AgUS, Sprouts, Agora, and the UBC Farm. All of the groups and organizations, except Agora, replied and showed great interest. They are willing to participate in the event and are willing to be kept in contact with further information.

To further build the bond between the Farm and university education, more courses should utilize the Farm and this scenario as a practical tool. Courses that relate to the biology, economics, and infrastructure of the Farm are candidates; however, the directed studies relating to agriculture are probably the best fit. These studies could focus on improving the UBC Farm production and creating a framework for local distribution. Economics, business and/or commerce students could practice their accounting and apply their knowledge to create business strategies and proposals to expand the purchase of local food by the AMS. Fine arts students could design promotional materials for the Farm

and for local food events. The core AGSC courses (Land Food and Community I, II and III) could include mandatory volunteering at the UBC Farm. This would provide the much needed labour required to expand production on the Farm, while providing students with a practical, hands-on experience.

Business Proposal Specifics

To further build the bond between the AMS and the UBC Farm, a proposal for trade of more UBC Farm grown produce to the AMS food services has been formed. The carrots currently distributed amongst the various AMS outlets within the SUB are sourced from the United States. A percentage of the source shall be substituted with local produce sources such as the UBC Farm to better meet sustainability standards. The objective of this proposal shall be met with the establishment of the trade of twenty-five to fifty percent of the total carrot consumption of the AMS for a price between the range of forty-eight cents to one dollar and fifty cents Canadian dollars per pound. A documentation of the agreement shall be formed and put into effect after negotiations of price and volume between the two bodies have come to an agreement. Price negotiations should be carried out while acknowledging the student body's willingness to accept a price increase of at most \$0.25 Canadian according to a survey carried out by group 6 of this year's AGSC 450 UBCFSP that was based on 54 student responses. Sample related documents are presented within *Appendix B* and *C*. The specifics of the UBC Farms and the AMS are tabulated as follows in Table 2:

Table 2. – The specifics for carrot production and consumption

UBC Farm	
Total Capacity	500 bundles (approx. 500lbs)
Production	
<i>Availability upon harvest</i>	June - October
<i>Estimated plantation periods</i>	April - July
<i>Estimated time required for maturation</i>	60 – 120 days
Delivery Schedule	Friday 3 – 9 pm each week
Post harvest Processing	Washing, boxing and quality assurance ^a
Asking Price	\$1.50 / lbs
AMS	
Total Consumption	208.50 lbs
Buying Price	\$0.48 / lbs

^a Quality assurance by basic hazard analysis (*Appendix D*)

The trade of produce between the UBC Farm and the AMS has been opened up after the efforts of AGSC 450 students with squash and has been extended with the proposal made here in this paper. In the future, the bond should be strengthened by students' collaboration with the farm. Students should involve themselves in the process up until the point of negotiation. An example of a form that students would fill out for the farm is presented in *Appendix B* and *D* of this project report. The form can be used by the farm for documenting production; however, the task of documentation would be passed on to students during project times. Handling of this documentation by students can take the burden of record keeping off the farm during the duration of the project. Further, it will serve as a way for students to put the knowledge they learn in courses to practical use.

RECOMMENDATIONS

UBC Farm and AMS Food and Beverage Department

1. Expand research at UBC Farm to increase production capabilities

UBC Farm should continue to expand research in ways that also expand the Farm's production capabilities. For example, the situation in 2007 that allowed the extra production of squash was because of biofertilizer trials. This type of research allows the Farm to profit in more ways than one.

2. Create UBC Farm tours for managers and employees at AMS Food outlets

AMS Food and Beverage Managers, including those from each of the food outlets, can plan for a farm visit in August. This will allow them to become more familiar with the UBC Farm, and hopefully spur their interest in local food. As Mark Bomford said, the best way to ensure information gets from the seller to the customer is to get the seller excited about UBC Farm produce.

3. Create advertising space in the new future sustainable AMS Student Union Building

With the possible AMS Student Union Building renovation and renewal there is an opportunity to create better permanent spaces for advertising. This advertising space could include the promotion of local sustainable food as well as the UBC Farm. Nancy Toogood stated one of the major issues with advertising for sustainability currently is the competition for space with other advertising (2008).

4. Promote the UBC Farm and local food consumption yearly

We encourage continuing our groups idea of the month long UBC Farm and local food production fair every year in order to promote the importance of local food production and consumption on not only the local economy but also the local environment. The large groups of new students that enter UBC each year in September will be educated at the event, thus the students will likely to develop new eating habits of local food for at least the next four years.

5. Negotiation on the price of carrots

The current price of carrots sold by UBC Farm in September is at \$1.50/lb and it is three times greater the price that the AMS usually pays for other sources. Nancy Toogood is asking for a better price from the UBC Farm for a minimum order of carrots through-out the month of September, which enables her to make the decision on this partial purchase in the fall. We encourage the UBC Farm and the AMS to set a time and negotiate for a price that both parties agree upon in order to make the incorporation of carrots into the AMS food system successful.

Future AGSC Scenario Groups

6. Enhance the conditions of storage facilities for seasonal crops

Future scenario groups can also take time to look at possible produce storage facilities on campus since one of the major obstacles for both the AMS as well as the UBC Farm is the lack of large storage facilities. These storages can help fight the problem of were to put large amounts of seasonal crops so that they can be used over a longer period of time

7. Continue to incorporate more local crops into the UBC food providers on campus

Future AGSC 450 groups can expand this project can be by looking at other products that the UBC Farm could produce in September and incorporating them also. As well, a coordinated approach with other food service facilities would impact a wider range of students. Even the other major food service provider on UBC campus, UBC Food Services, is enthusiastic about purchasing local food.

8. Search for clubs and organizations

Future groups can spend more time finding clubs on campus that will be willing to volunteer their time to promote the fair. They can look into the details of the advertising as well as booths that educate the students on the importance of local food and how each of them has an impact. It will be excellent to invite local food supporters and organizations to provide funding for the event. Potential clubs for collaboration that we have contacted and have shown interested in our proposed event were: AgUS, Friends of the UBC Farm, Green Party of UBC, Sprouts, The UBC Food Society, UBC Farm, and UBC Responsible Consumption Week.

9. Create volunteer programs

Since labour shortages seem to be one of the biggest challenges of UBC Farm, future AGSC 450 groups could look into creating volunteer programs to help alleviate the current shortcomings.

10. Communicate with other groups and share findings

Maintain consistent communications and share finding with other groups to prevent overlapping of project ideas and to increase the speed of progress in research.

CONCLUSION

Our group hopes to build on the current UBC Farm-to-campus program by implementing local produce from the Farm to the UBC community, while increasing the exposure of the UBC Farm. This goal can be achieved by strengthening the relationship between the AMS and the UBC Farm. One crop, carrots, from the UBC Farm will be incorporated into the current the AMS food outlets for the month of September. The major benefit of this program is the potential to attract the attention of students to the UBC Farm and to raise the awareness about the benefits of local food. This month long event is paired with a one day event, in which information booths, activities, posters, and pins can be set up to further expose UBC Farm. In addition to this program, the awareness can be raised by creating advertising space for the Farm in the SUB and by future scenario groups continuing to pursue a farm-to-campus program. This program will not only create a more sustainable food system on campus, but also allow students to gain valuable knowledge before they leave the university campus.

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APPENDIX A - AMS Pamphlet

Indicators and Criteria for Assessing Food Locality

FOOD MILEAGE

The distance food travels from the farm to your plate. The concept is used to underline how far many foods are transported through global trade and the costs of this transport, in economic, social, and environmental terms.

% OF LOCALITY

Some foods may be manufactured locally though the ingredients may not be grown locally. For example, you may buy a sandwich, in which the bread is from Washington, lettuce and tomatoes from California, meat from Alberta and cheese from Quebec. Ask questions about the manufacturing, processing and origin of your food.

PRODUCTION METHODS

Production methods also impact the desirability of local food. Many types of food production have vastly different repercussions. It is preferable to purchase products that are grown using low-impact systems and do little harm to the natural environment. Examples are local foods (reduced food miles) and organics.

Collaboration of indicators & criteria from Agsci 450 group 13 (2005)

Resources for action

Faculty of Land & Food Systems
(formerly Agricultural Sciences)

The UBC Food Systems Project (UBCFSP)

is an ongoing joint collaborative Community Based Action Research Project between the Faculty of Land & Food Systems and Social Ecological Economic Development Studies (SEEDS) program of the UBC Campus Sustainability Office (CSO).

For more info visit www.agsci.ubc.ca

Sprouts

This UBC Food Co-op is a not-for-profit, student-run co-operative whose mission is to provide affordable organic and fair-trade products to the UBC community, encourage and contribute to campus sustainability by supporting local producers and obtaining produce from the UBC Farm, and to inspire students to take an active role in their community's food system.

For more info contact info@ubcfcoop.ca or visit www.ams.ubc.ca/clubs/nfc.

The Campus Sustainability Office

This is Canada's only sustainability organization at a post-secondary institution. After making the commitment to sustainability in 1997, UBC is now an internationally recognized leader in the campus sustainability movement. Check out the catalogue, Inspirations and Aspirations for the many and varied ways in which sustainability is practiced here on campus by students, staff and faculty.

For more info contact sustain@ubc.ca or visit www.sustain.ubc.ca

UBC Farm

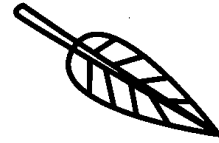
The UBC Farm comprises of 40 hectares of sustainably managed field and forest land, and is the last working farm in Vancouver. UBC Farm is a student-driven initiative where students, faculty, staff, and the local community have been working together to create a place where people can come to learn, live and value the connection between land, food and community.

For more info contact ubcfarm@interchange.ubc.ca or visit www.agsci.ubc.ca/ubcfarm/

UBC SEEDS

SEEDS helps students organize and implement sustainability projects on campus. Students are currently researching biodiesel fuel sources, a campus composting program, paper recycling, reducing greenhouse gas emissions and many more. For more info contact brenda.sawada@ubc.ca or visit www.sustain.ubc.ca/seeds.html

Think globally eat locally



Produced organically through the UBC Food System Project (UBCFSP) of the Faculty of Land and Food Systems (group 13, 2005) to increase awareness of consuming locally & sustainably.

Sponsored by the AMS Food and Beverage Department.



brought to you by your student society

Owned and operated by your

Student Society, the AMS Food and Beverage Department endeavours to procure, prepare and serve food and beverage products by the most sustainable means available to us. Our purchasing practices are in accordance with the AMS Ethical Purchasing policy and we make every effort to procure from local sources whenever possible.

We are strong supporters of the UBC Farm and are working towards incorporating organic farm ingredients into some of our menu items on a regular, year round basis. In our on-going commitment to support environmental stewardship, local economy, global justice and student social sustainability we are pleased to offer the following information about the AMS Food and Beverage departments sustainability initiatives:

Sustainability action from your AMS

The following is a list of sustainability initiatives currently in effect within the AMS Food and Beverage Operations.

Eco-cards:

Buy 10 coffees in your own mug and receive your next coffee free. Cards available at Snack Attack, Blue Chip Cookies, Bernoullis Bagels and the Pendulum restaurant.

\$0.15 Discounts

On any hot beverage (coffee, tea, hot chocolate) at Snack attack, The Pendulum, Bernoullis Bagels and Blue Chip Cookies, when you bring your own mug. Also receive a \$0.15 discount at the Burger Bar on fountain pop, when you bring your own cup. Green tea is always free at the moon Noodle House, when you bring your own mug.

Save even more! Avoid the Green Tax!

Get your \$0.15 discount and avoid paying the \$0.10 Green Tax for a total savings of \$0.25, when you bring your own mug to Blue Chip Cookies, The Pendulum, Bernoullis and Snack Attack!

Fair Trade Coffee

Did you know that all AMS Food and Beverage Outlets only serve Fair Trade Coffee? All of our coffees are shade grown, bird friendly and organic. Our coffee supplier, Canterbury, is also a locally owned company who make regular visits to the coffee plantations from whom they purchase their beans, to ensure the fair and ethical employment, production and sale of the raw beans. All the beans purchased by Canterbury are shipped by sea and delivered directly to the port of Vancouver, thus eliminating an additional fossil fueled truck trip from Seattle.

Travel Mugs!

Dont have your own mug? Purchase one at cost (\$6.00 incl tax) from Blue Chip Cookies and receive your first medium coffee free.

Bring your own Container!

Save \$0.25 when you bring your own re-usable food container at The Pendulum Restaurant, The Honour Roll Sushi Bar, the moon Noodle Bar and Bernoullis Bagels

Bio-degradable Food Containers.

If you forgot your own container and dont want to use Styrofoam, we are currently offering for purchase 100% bio-degradable food containers at cost (\$0.25) at the Pendulum, Bernoullis Bagels, the moon and The Honour Roll. Just a reminder that the coffee cups we use at Blue Chip Cookies, are made from paper and are bio-degradable/compostable

Bio-diesel

Did you know that vegetable oil used in deep-frying at the Burger Bar is collected and processed to become bio-diesel? A number of campus service vehicles are being run on this renewable fuel! French fires are now officially good for the environment

Composting

Did you know that UBC has a giant in-vessel composter that is capable of handling up to four to five tonnes of compostable material a day? The AMS Food and Beverage department currently composts 100% of its pre-consumer food waste and is working with UBC Waste Management to expand the program to include composting stations around the SUB for post-consumer food waste. Please assist us in our efforts by composting your food and food paper waste at the recycling/composting station located on the south-side lower level of SUB across from Snack Attack and beside the Honour Roll. Meat & meat bones, paper plates and napkins, Blue Chip coffee cups and all your food waste can be composted. Please, no wood, sand, glass, plastic or metal. Look for more composting stations in the SUB in January 2007

Why Styrofoam?

Food waste and foam food containers contribute to over 40% of the waste taken off the UBC campus. Unfortunately for all campus food service providers, foam products are the safest and most economical way to serve hot and/or liquid food/drink for take-out. Please help us to eliminate the amount of foam take-out containers we are using by participating in our discount programs, bringing your own containers or choosing bio-degradable food containers from the participating food outlets.

Putting Your Dollars to Work

Did you know that like all AMS businesses, the AMS Food and Beverage Department contributes 100% of the net profits back into the student society? We employ over 250 UBC students annually, and pay out over a million dollars in part-time wages each year.

Think globally eat locally and support your AMS food outlets!

APPENDIX B – Agreement of Trade (Sample)

AGREEMENT OF TRADE

Upon date (yyyy/mm/dd) ____ / ____ / ____ , a price of _____ Canadian Dollars per Pound of produce _____ of volume _____ pounds shall be agreed upon between the UBC Farm and _____. The product shall be made available between dates (yyyy/mm/dd) ____ / ____ / ____ and ____ / ____ / ____.

Both parties shall understand that the agreement was reached and this documentation formed after fair negotiation(s) between both parties in which both parties have fully participated in and were in full understanding of terms of negotiation(s).

If the produce of interest is known to be unavailable any time after the completion of this agreement, a warning along with proper documentation of reason(s) of unavailability shall be given by the UBC Farm one month prior to the agreed available date. If the named product becomes unavailable for any reason past the one month warning deadline, the UBC Farm shall be in full responsibility of acquiring the agreed volume at the agreed price.

If the buying organization is to withdraw from this agreement any time after the completion of this agreement, the same requirement of one a month warning with proper documentation of reason(s) shall apply. If the withdraw is made after the one month warning, compensation by the buying organization towards the UBC Farm shall be made to cover the cost of production of the produce of interest.

The agreement has been completed by UBC farm representative _____ , and, buying organization representative _____ , under the witness of a third party person, _____ , that was involved throughout the negotiation process.

Signatures of Representatives

UBC Farm

X _____.

Buying organization

X _____.

Witness

X _____.

APPENDIX C – UBC Farm Produce Trades Report – (Sample)

UBC Farm Produce Trades Report

Section 1 – Product description		
Product name	Product harvest interval (mm/dd) / _____ to _____ / _____.	
	Maximum production capacity per season lbs.	
Section 2 – Buyer information		
Buyer	Buyer contact name	Phone number of contact (_____) - _____ - _____.
Section 3 – Pricing		
Asking price range of Farm	Minimum asking price \$ _____ /lbs.	
	Maximum asking price \$ _____ /lbs.	
Buying price of Buyer \$ _____ /lbs.		
Requested buying volume of Buyer lbs.		
Section 4 – Agreement		
In completion of this form, I _____, fully understand that information presented within this form are not to be circulated among or relayed to persons or organizations other than personnel of the UBC Farm.		
Form completion Date (yyyy/mm/dd) / _____ / _____.		
Phone Number for Contact (_____) - _____ - _____.		
Signature		

APPENDIX D – Product Hazard Analysis (Sample)

Product	Situation	Hazard Type	Hazard Description	Possible causes	Solution
eg. Carrots	Covered with dirt and mud	Physical	Hazardous Extraneous Material (HEM) Contamination	Improper post harvest washing procedure	Send batch back for washing
eg. Carrots	Evidence of spoilage	Biological	Pathogen contamination	Contamination post harvest	Discard