

UBC Social Ecological Economic Development Studies (SEEDS) Student Report

UBC Farm to Place Vanier Food Initiative

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The UBC Food Systems Project

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Executive summary

Consumer disconnection from our food system is increasing due to globalization of food production. However, there is a growing movement to bridge the gaps in the food system by promoting support for locally grown foods. The University of British Columbia includes a working farm that is an academic resource for teaching and learning. The UBC Farm also provides food to a variety of on and off campus sources. Researching past Agricultural Science 450 papers, reviewing relevant literature, and conducting interviews with collaborating partners of the UBC Food Systems Project provided the idea of creating a connection between the UBC Farm and Place Vanier. By facilitating a meeting between the UBC Farm Marketing Coordinator and the Head Chef at Vanier, a farm-to-campus connection will be achieved by providing the Vanier Dining Hall with items from the UBC Farm which would be either featured in a menu item once a week or displayed within the dining hall, both of which would include UBC Farm promotional signage. Items featured in Vanier Dining Hall would expose 1,370 UBC students, in a wide variety of Faculties, to the fact that UBC has a farm on campus, as well as stimulate advocacy for the Farm in 1st and 2nd year students with the opportunity for increasing the number of farm volunteers. Once a successful connection is made with Place Vanier, farm-to-campus connections can then be made with other residences. Furthermore, increasing student awareness about where their on-campus food comes from can then stimulate students to choose more locally grown food when they are off-campus.

Introduction

The twentieth century has seen a drastic change in the agriculture and food industry. The once common sighting of small farms has been replaced by industrial farms and huge corporations. Families are buying more prepared meals and less whole foods. As a result, farms

are larger and much more specialized (Nestle, 2002). Further, more and more people are moving into the cities leading to development pressure and fragmentation of farmlands (Homer-Dickson, 2006). Food products are also acquiring an increasing amount of food miles. Countries with similar climates are trading foods amongst each other when they could simply be growing their own (Bentley and Barker, 2005). Consequently, this regime has led to an industry where much less of the food dollar is being returned to the farmer. In fact, only about 20% of the value of food is accredited to the farmer. The other 80% goes into labour costs, packaging, transportation, energy and advertisements (Nestle, 2002). All this has led to a greater disconnection with the food system, as well as with the producers growing and harvesting the foods. Everyone is guilty here. This disconnect can only be expected when food is being grown and shipped from all across the world. Institutions such as university campuses and hospitals usually obtain their food from large distribution centers. However, there has been a recent effort to bridge the gaps in the food system to help people to reconnect and become more engaged with the food that sustains them. It has even been stated that purchasing locally grown foods "... can radically change people's attitudes towards the produce" (Halweil and Nierenbery, 2007).

University campuses are in a unique position in terms of improving their campus' sustainability. Universities have the physical land space and creative, passionate and imaginative individuals with strong leadership skills to initiate unique programs (M'Gonigle and Starke, 2006). A particular success story is the farm-to-institution program, an initiative to bring locally produced foods to campus meals and events. Presently, 135 universities across North America partake, including the University of British Columbia (UBC) (Community Food Security Coalition, 2005).

A real success story with the farm-to-institution initiatives is University of California Santa Cruz. The university has developed a program that created a market where, currently 7 small and medium sized farms provide organic produce to the dining halls and restaurants across the campus. All produce comes in from no more than 250 miles of the institution and are all certified organic (UC Santa Cruz, n.d.). UBC joined the farm-to-college program in 2002 after interest expressed from food service personnel, students and farmers. Students are involved by undertaking research projects about local initiatives and actively assisting in farm labour (Community Food Security Coalition, 2005). These programs provide benefits for producers, consumers, students and staff. Producers are given access to new or speciality markets, improving the financial sustainability of their operations. Such programs support local farmers, increase public relations, enhance education and reconnect people with the food system. Consumers are given the opportunity to purchase and consume fresh, local foods while knowing that they are contributing to a more sustainable food chain. Furthermore, they can start to understand where their food comes from and the processes involved in producing that food. Additionally, students, faculty and staff may have increased opportunities to engage in research leading to more funding and grant opportunities for the institution.

UBC is currently striving to do its part in regards to campus sustainability. The Alma Mater Society (AMS), which represents the 45,000 students at UBC, is committed to reducing the ecological footprint of the university through the AMS Lighter Footprint Strategy. The AMS Food and Beverage Department has been working towards incorporating more sustainable methods into its business plans. Some of their initiatives include purchasing organic, shade grown coffee in all of their outlets, providing discounts for students using reusable containers, providing compost bins and actively supporting the university's farm.

UBC is unique in the fact that it has a farm available to supplement academic experiences and contribute to the sustainability of the university campus. The UBC Farm is the only working farmland within Vancouver city limits (UBC Farm, 2008a). It is a 24-ha farm intended for teaching, research and development of community ties. The Farm originated as a student driven initiative to give everyone the opportunity to learn, live and appreciate the value of the connections that exist between the land, the food and the community involved in producing food. Since its incorporation into the university, the Farm has undergone many changes and is currently serving as a model operation for agroecology, a form of farming that applies ecological principles to farming systems, incorporating sustainable practices, biodiversity, community initiatives, and social networks. Furthermore, the Farm acts as a model for the potential of urban agriculture. Currently, the farm produces over 200 varieties of vegetables, fruits, herbs, flowers, free range eggs, and honey which are sold predominantly at weekly Farmers Markets during the spring and summer months (UBC Farm, 2008a).

The Farm is interested in increasing its campus connections in order to establish itself as a vital asset to learning at UBC, one that provides unique educational opportunities to students. Many faculties take advantage of the farm's "outdoor classroom" to enrich academic experiences. Some of the Farm's educational offerings include internship opportunities where students can gain firsthand experience in organic farming and agroecology, as well as an environmental education program through the Faculty of Education. The Farm also hosts international students from Mexico.

However, being a small operation comes with its challenges. Currently, demand for farm produce exceeds supply. Furthermore, when supplying to campus restaurants, difficulties ranging from limited to unpredictable supply, pricing, delivery schedules, and uniform quality

and packaging has hindered some efforts in an industry that requires a greater level of consistency. Nevertheless, the farm is in good position to supply campus with speciality, high quality food items (A. Fry, personal communications, March 12, 2008)

Vision statement

The UBC Food Systems Project (UBCFSP) began in 2001 from the initiation of the Faculty of Land and Food Systems and the Social, Ecological, Economic Development Studies Program (SEEDS), where students work with faculty members to improve operations in becoming more sustainable. In the UBCFSP, Agricultural Sciences 450 (AGSC 450) students are part of this initiative. At this point, the university's sustainability office has initiated projects aiming to increase campus sustainability, but has neglected to include food in any of its plans. Consequently, the AGSC 450 class, consisting of students from an array of backgrounds ranging from food science, nutrition sciences, dietetics, agroecology and global resource systems joined the project, with the common goal to improve the campus's sustainability. This project allows global issues within the food system to be brought back down to a local level; asking questions such as, where food should be purchased from and what are the implications of our food choices. The UBCFSP allows us to better understand global issues and the impacts of our food choices. The goal of such a sustainable food system aims to protect the ecosystem and increase social ties through the *7 guiding principles* (Rojas et al., 2007):

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 and growers pay and receive fair prices

The values of the 7 guiding principles are inherent in a successful food systems project and our group reflected on their importance and how to encompass them within our projects vision. Our group addressed principle one, four, five, six and seven directly. Our project would involve incorporating locally grown, produced and processed food into Place Vanier. We feel that this is a unique opportunity to enhance local knowledge to first and second year students from a variety of backgrounds, studying a range of disciplines across UBC campus about the importance of locally produced foods. Furthermore, we want to increase awareness of the UBC Farm to students who are outside the Faculty of Land and Food Systems. Place Vanier, like many food outlets on campus, already participates in compost and waste recycling programs that sees organic materials being composted and reused across the campus.

As a group, we feel that a sustainable food system is one that enhances and protects the environment all the while providing social equity and economic sustainability to producers and consumers alike. Our group has taken a weak anthropocentric perspective in addressing this project (Murdy, 1993). As a result, we feel that in order to meet the needs of the UBCFSP, the UBC Farm, and UBC Food Services, issues must be faced from a human-orientated point of view. That being said, we value locally produced food and want to see its incorporation into the UBCFS as much as possible. We also value social and community ties and feel that through education and awareness of the local food system, and UBC Farm's contribution to it, we can allow students to gain appreciation of where their food comes from and to reconnect with their food system. We also understand economic constraints brought about by operating a successful farming operation as well as a busy food service outlet. Therefore, we hope to acknowledge these concerns and meet an agreement that increases the economic sustainability of both parties involved.

Problem Statement

Our scenario stems from the question: how can we increase community connections from the UBC Farm to the university institution? With the emergence of the campus sustainability movement, providing the university with local foods produced in socially just, environmentally conscious ways, all the while providing the producer with a fair price for their product, is extremely important. UBC is in a unique position to make this happen. This project has been in effect since 2001 and since then, connections have been forged with food suppliers around campus as well as the UBC Farm. Therefore, our group wants to build on these connections. Specifically, we want to see one UBC Farm food item incorporated into one meal per week at Place Vanier, a junior year residence cafeteria, feeding 1,370 students daily during the academic year (UBC Housing and Conferences, 2008).

Research Questions

Our group started out with a variety of research questions and our focus became narrower as we gathered more information from the literature search and interviews with our research partners. After reading our scenario described in the introduction, our initial idea focused on the fact that the UBC Farm's growing season (April/May to October) was more or less opposite to the UBC campus' busy instructional season (September to April). With this in mind, we were stimulated to pursue whether the idea of long-term storage, such as a root cellar, was feasible for the UBC Farm in order to extend the availability of farm products into the fall and winter. Most online resources showed plans for non-commercial, family-sized root cellars (Durtschi, 1996; Gysi, 2008; Organic Gardening, 2007). The material and labour costs of building a commercial sized root cellar far exceeds the current resources of the UBC Farm. However, Mark Bomford, UBC Farm Program Coordinator, stated he would be open to building a root cellar if it were

provided for 'free' (M. Bomford, personal communications, March 12, 2008). Therefore, the idea of long-term storage may be a viable future research option if funding, materials and labour could be secured.

Although the UBC Farm produces large quantities of many items, Steve Golob, chef at Place Vanier Dining Hall, stated that his weekly orders grossly exceeded the capacity of the current UBC Farm production. Golob quoted some weekly quantities used during the much slower 'reading week' as including 22 cases (15-20lbs per case) of cucumbers, 100lbs of garlic, 200-300lbs of tomatoes, 80lbs of baby spinach and 80lbs of peppers. In addition to such large quantities, Golob also stated that most of the produce he orders is processed, meaning peeled, chopped, sliced or diced, as his workers do not have time to process the above mentioned quantities among their other duties. Furthermore, it is cheaper for him to pay slightly more for the processed produce than pay his unionized staff their hourly wage to process them (S. Golob, personal communications, March 5, 2008).

Also, the idea of a local UBC distribution center was considered. This concept, however, includes many obstacles, such as the lack of volunteer time from the farm to run an additional time-consuming program, lack of transportation and storage, food safety concerns of the chefs regarding non-federally inspected food, consistency of delivery times and produce quality/quantity, inability to secure pricing contracts from small farmers, cost per unit, and relative absence of processing (S. Golob, personal communications, March 5, 2008; M. Bomford, personal communications, March 12, 2008; A. Kodis, personal communications, March 7, 2008).

Amy Frye, UBC Farm Marketing Coordinator, admitted that the demand for UBC Farm food far exceeds its current supply, due to not enough volunteers and lack of financial resources;

she then stated that she would like the farm to campus connections to focus on ‘quality’ rather than ‘quantity’ (A. Frye, personal communications, March 12, 2008). This prompted the idea of getting Golob to feature one UBC Farm item once a week in the Place Vanier dining hall to expose the 1st and 2nd year students to the fact that there is a farm at UBC, initiate interest in becoming a farm volunteer, become more aware of where their food is coming from and stimulate advocacy for the UBC Farm. The featured UBC Farm item would be accompanied by a promotional signage to bring student awareness to the UBC Farm (see Appendix 1).

After our preliminary research, our group decided to focus our efforts on the following questions:

1. a) How can we connect the UBC Farm with the UBC campus food providers when they seem to have opposite schedules?
b) Can we lengthen the UBC Farm schedule with long-term storage, such as root cellars?
2. a) How can the UBC Farm provide enough produce to feed approx. 40,000 students, faculty and staff?
b) Can we initiate a UBC distribution center that includes UBC Farm and other local farm produce?
3. Which UBC campus food provider would expose the most students to the existence and idea of the UBC Farm?

Methodology

AGSC 450 Papers

In preparation for further research in the community, we reviewed previous AGSC 450 reports relating to our scenario, as well as other scenarios, in order to gain an overall understanding of what had been accomplished to date. Throughout the brainstorming phase of our research we looked at many of the previous year’s papers involving the UBC Farm, such as Group 9 2004 that looked into UBC Farm market relationships, as well as papers that focused on developing root cellars and possible farm networks/distribution centers. With our final decision

to focus mainly on Place Vanier and the integration of Farm produce and educational material into their cafeteria menu we reviewed several AGSC 450 papers of importance, specifically Group 23 2006 and Group 1 2002, which focused mainly on Place Vanier. Group 23 2006 wrote on incorporating BC seasonal and local produce into Place Vanier, which is similar to our objectives except that our focus is specifically on the UBC Farm. Group 1 2002 did an assessment of Place Vanier in terms of sustainability in the UBC Food System with respect to nutritional content and components of the food served at the cafeteria.

Literature Review

To aid in our research we utilized several resources such as other universities websites, published journals and farm sales reports. There are several universities that have managed to integrate student farms or agricultural systems into the university's food system through farm stands, community supported agriculture (CSA), restaurants, as well as research teaching and training. The most prominent universities to incorporate such agricultural practices are UC Davis, UC Santa Cruz, Beech Hill Farm, and Evergreen State College. Researching about these university programs of incorporating locally produced foods onto their campuses, provided valuable information and ideas regarding possible growth opportunities at UBC in respect to student education and connection to the UBC Farm. Published journals and farm sales reports provided the necessary background information to further our investigation opportunities into possible growth avenues at the UBC Farm in terms of prospective clients.

Community Based Action Research (CBAR)

From our knowledge of community based action research, a method of research that involves “open communication, participation, inclusion, relationship-building, and capacity building,” we worked to build relationships with several of the individuals working for the UBC

Farm, as well as AMS Food and Beverage and UBC Food Services Department (Rojas A. et al. 2007). Our main contact was Steve Golob, the head chef at Place Vanier. We approached him to understand how Place Vanier operates, what his needs are in terms of quantity and quality of food, and whether he would be interested in working with the UBC Farm. Furthermore, we interviewed Aryin Ferguson manager of Vanier Residence Food Services in order to get his perspective on the financial possibility of working with the UBC Farm.

Research Findings

Findings

Currently there are several different venues and locations at UBC that sell, promote, and/or use UBC Farm produce. Sprouts, a small student run grocery store and café sells UBC Farm produce to the local populace of students and faculty members. Agora café also uses produce from the UBC Farm on occasion for their hot lunch program. Due to the small size of the UBC Farm, it makes more economic and ecological sense for it to grow specialty, “niche” food products (Group 9, 2004). There is a market for these “niche” products at the Sage Bistro where a standing order with the UBC Farm for select items is currently in place. AMS Food and Beverage Service, UBC Food and Beverage Services and Pacific Sprit Place are all involved with the integration of UBC Farm produce and public awareness. Since the UBC Farm is limited in the amount of food that they can produce, they often have to turn down requests for large orders of their produce due to insufficient supply. Place Vanier does not currently order from the UBC Farm, but discussions with Vanier’s Head Chef and Manager, show a desire to initiate a farm-to-campus connection with the UBC Farm (S. Golob, personal communications, March 28, 2008; A. Ferguson, personal communications, March 28, 2008).

Farm Sales Data

The UBC Farm, in the form it is today, began its operation in year 2000 as a student driven organization and an academic resource to the community, providing a sustainable model for agroecological farming practices. Sixty six percent of the total farm revenue comes from the Saturday markets held every Saturday from June to October. The Community Supported Agriculture (CSA) box program, initiated in 2005, accounts for 11% of the total farm revenue, while 19% of the revenue comes from direct sales to Vancouver restaurants and in-campus food outlets. The UBC Farm provides 93% of its food to customers off campus. The current farm revenue distribution sees 66% allocated to the Market garden sales, 11% to CSA and 19% to other food providers. However, their goal is to eventually have an equal distribution from these three sectors (33-33-33) (Frye, personal communication, March 12, 2008).

The UBC Farm produces a variety of products, Figure 1 shows the Farm's top 15 vegetable crops sold to UBC on-campus food providers; however the cut off for the data was at the end of October 2007, so this does not include the large quantities of squash that was sold to the AMS food outlet Pie R Squared as a result of AGSC 450 group 13, 2006.

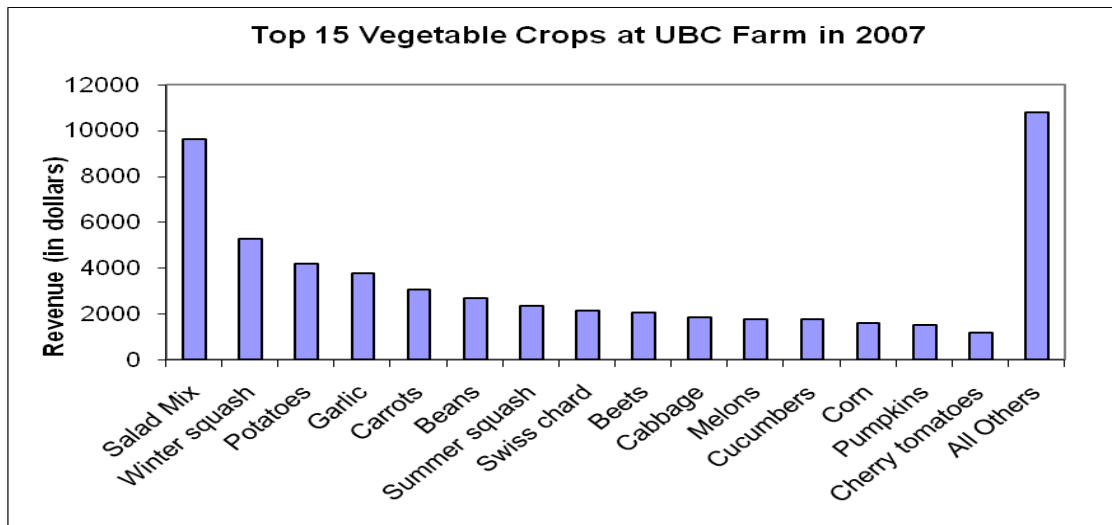


Figure 1: UBC Farm gross sales of the top 15 vegetable crops in 2007 (UBC Farm, 2008c).

Seasonal production

Farming depends on many different climatic variables such as minimum and maximum temperatures, rainfall, snow, frost as well as elevation (Agriculture and Agri-Food Canada, n.d.). Agriculture Canada scientists created 'Plant Hardiness Zones' that reflect the average temperatures for the different regions of Canada (Agriculture and Agri-Food Canada, n.d.). West Coast Seeds zone finder uses a map of Canada that is similar to Agriculture Canada's 1967 Plant Hardiness Zones (West Coast Seeds, 2008). According to Agriculture Canada's new 2000 map there are nine zones with zero being the harshest zone and 8 being the mildest zone (Agriculture and Agri-Food Canada, n.d.). Vancouver is currently designated as 7b, meaning that we are in one of the mildest zones in Canada (Agriculture and Agri-Food Canada, n.d.). Although this mild plant hardiness zone allows Vancouver to enjoy a longer growing season than some other areas, Bomford stated that annual temperature fluctuations of just a few degrees can affect the success of many of UBC Farm's crops (M. Bomford, personal communications, March 12, 2008).

Direct farm marketing

Direct farm marketing is a method of selling food items where farmers sell their products directly to consumers. In this process, producers gain the satisfaction that they are providing consumers with local, fresh food, while consumers are content in knowing where their food comes from and who produces it. The Fraser Valley Farm Direct Marketing Association (FVFDMA) provides a network for local farmers and their products, making them more readily accessible (Direct Farm Marketing Association, 2008). The UBC Farm direct markets their products at weekly Market Gardens held on Saturdays from June to October.

On the Gathering of Information

Each year of the Land, Food, and Community (LFC) series courses, group research was done along the principles of Community Based Action Research (CBAR). AGSC 450, being the capstone course of not only the LFC series, but also the Faculty of Land and Food Systems, is a course whose success depends on both the students' and collaborators' commitment to the principles of CBAR. Extensive archives of past years' papers, important contact information of collaborators, and other supporting documents, both general and scenario specific, were provided to help prep and guide the AGSC 450 students in their research.

Literature reviews of past papers provided much insight into past mistakes and promising ideas that nonetheless failed. Other supporting documents, such as Farm sales data, provided information on the nutritional variety and scale of supply on which the UBC Farm operates. Once briefed on this information, it was time to communicate with food providers in the community.

Our group brainstormed many ideas on finding ways more UBC Farm food can be incorporated into campus eateries. We first thought of how to conquer the problem of the misalignment between growing season and the fall and winter terms. We explored the idea of building a root cellar on or near the UBC Farm, which would preserve root vegetables for at least part of the school year for students' consumption. However, due to the enormous demand there is for fresh food on campus, building a root cellar of sufficient scale seemed an unrealistic option.

The issue of unrelenting demand versus the small-scale output of the UBC Farm, coupled with the non-overlapping growing season and school year, are two very structural problems hindering a burgeoning farm to campus food program at UBC. We thought best to simplify,

meaning rather than attempting to stretch the Farm to try and supply campus with a steady distribution of food all year long, it would be best to start small, within the means of the Farm. This was accompanied by a shift in objectives, from facilitating the Farm's role as a major campus food provider, to facilitating ways the Farm can gain more exposure on campus through supplying smaller amounts of food. Place Vanier Dining Hall, led by progressive chef Steve Golob, seemed like a suitable environment to explore this concept.

Potential UBC Farm items for Vanier's Dining Room

Our group staged a meeting between chef Golob, manager Ayrin Ferguson, and Amy Frye, marketing coordinator at the UBC Farm. The purpose was to try and find a viable strategy for Place Vanier to feature UBC Farm grown produce for one or two days a week during the fall months. Rather than contractually establishing produce orders early in the growing season, Amy had mentioned that in the past it has worked best when orders could be placed on a weekly basis. Harvest forecasts are done and submitted to buyers on Tuesday or Wednesday, orders need to be placed on Thursday, for delivery on Friday (A. Frye, personal communications, March 28, 2008). This schedule seemed to work for chef Golob, as the following week's menu can be confirmed or changed upon notification of the harvest forecast, then the items can be stored over the weekend for Monday preparation, to be served on Tuesday. Golob acknowledged the challenges faced by the UBC Farm (i.e. fluctuations in seasonality and time of harvest for produce, labour constraints) and would be willing to work with the farm and adapt as needed. His menus are flexible enough so that when enough quantity of a farm item becomes available (with a one-week notice in advance) he can easily incorporate it into one of his entrees (S. Golob, personal communications, March 28, 2008).

With that element of logistics worked out, the issues of scale and processing were discussed. In past years, previous AGSC 450 groups had contacted Vanier Dining Hall manager, Ayrin Ferguson, with the idea of connecting Place Vanier with the UBC Farm. However, with the Farm's limited supply and Vanier's enormous demand, a working relationship could not be established. Our suggestion of a one-day a week produce item seemed to be a model that both Vanier and UBC Farm could work with.

UBC Farm's admitted inconsistency of harvest quantity was another issue that could potentially not only result in bad business for the Farm and thus Place Vanier, but it could also create a poor image of the Farm in students' eyes. Chef Golob, with his creative menu design and ability to change menu items on the fly, could offer some much needed flexibility if a Farm-Vanier relationship is to be successful. Nevertheless, some consistency on the part of the Farm is required. Therefore, upon discussing in late March which potential items could be purchased for September, crops with strong yields were preferred. Crops showing greatest promise were fennel, kale, scallions, leeks, and Asian vegetables such as bok choy, gailan, sui choy, and Chinese long beans (S. Golob & A. Frye, personal communications, March 28, 2008).

Chef Golob saw great potential in Asian vegetables due to their increasing popularity and high demand from students. Specifically, Golob suggested bok choy, because it is one of the students' all-time favourites. Asian-style vegetable crops are not huge sellers at the Saturday Market and thus, the farm would be able to provide enough quantities for Place Vanier. The restaurant currently orders about 30 pounds of bok choy twice a week; the price per unit offered by the farm is \$1.50/each (S. Golob & A. Frye, personal communications, March 28, 2008).

Chef Golob was also interested in purchasing fresh herbs such as basil, parsley, and cilantro from the UBC Farm. Herbs can be used in a wide range of menu features for flavour

enhancement and decorative purposes. They are not needed in large quantities and thus, the cooks at Place Vanier Dining Hall would be able to wash and, if necessary, chop them in a short period of time. Herbs seemed feasible from both the Farm and food provider perspectives; however, Frye was uncertain of their yield at the Farm this year. If the herbs are grown inside the hoop house where they are protected against excessive rain, heavy dew, frosts and wind, then adequate yields could be achieved (S. Golob & A. Frye, personal communications, March 28, 2008).

Processing being a concern, Place Vanier often chooses to buy washed, chopped, sliced, and/or diced vegetables when possible, rather than pay union wage to a cook to perform these tasks in the kitchen. However, the items mentioned above arrive with minimal, if any, processing from their current suppliers, so little to no extra costs due to processing would be incurred to the students if chef Golob bought these items from the UBC Farm.

One of the produce items Golob inquired about was pre-washed beets. Currently, beets are roasted and featured regularly in his salads and have been very popular and well-liked among his customers. However, according to Amy Frye, the washing and bunching of beets is too labour-intensive and at the moment, the Farm does not have enough volunteers to process a large amount. Instead, she recommended cabbage and butternut squash, both of which were best sellers in 2007, but these were rejected by Golob as they require extensive processing on Vanier's end (S. Golob & A. Frye, personal communications, March 28, 2008).

Fennel was a particular item Golob found desirable and Frye was quite certain of its prospects at the Farm. Golob stated that fennel can be added to soups, salads, stews, pizzas, pastas and many other food products. As fennel is not a huge seller at the Saturday Market, enough quantities can be grown and supplied to Place Vanier's Dining Room. The estimated

volume and cost for fennel would be between 12 to 24 heads per week at a whole-sale price of \$3 per pound (S. Golob & A. Frye, personal communications, March 28, 2008).

Kale was another item chef Golob would consider sourcing from the UBC Farm in the future. Currently, this item is purchased from a local food distributor, Allied Foods, in an unprocessed form (S. Golob, personal communication, March 28, 2008). As a result, switching suppliers would not affect the manual operations of Place Vanier's kitchen to a large extent. Kale would still have to be washed and chopped by the cooks whether it came from Allied Foods or the Farm.

To aesthetically promote the UBC Farm, chef Golob expressed interest in presenting a couple of UBC Farm flower bouquets in the entrance to the dining hall or purchasing pumpkins for the decorative autumn/Halloween season to place on the dining tables (S. Golob, personal communication, March 28, 2008).

Business proposal

List of items that food providers would like and UBC Farm's ability to produce it

Table 1 outlines products from the UBC Farm that chef Golob at Place Vanier would be interested in integrating into his menus, in particular products that require minimal processing time, as well as the feasibility of producing such items from the UBC Farm's perspective. In addition, Golob would be interested in other items not on Frye's list.

Table 1: List of food items chef Golob of Place Vanier would incorporate into menus as well as the feasibility of the UBC Farm in producing such items. Comments represent dialogue brought about during the meeting of our group with Amy Fry and Steve Golob.

Produce that Vanier would like to have from UBC Farm (Steve, Vanier)	List of the items that UBC Farm is able to produce (Amy)	Comments
Beets	No. Too labour intensive as needs washing /bunching	orders unprocessed
Basil	Possible – if grow in hoop house	orders unprocessed
Herbs	Need to check (see above note re: basil)	orders unprocessed
Cherry tomato (or tomatoes in general)	Last year lost $\frac{3}{4}$ crop to blight, not good guarantee	Vanier goes through 12 pints x 3-4 boxes per day!
Kale	Yes	orders unprocessed
Asian Vegetables: Bok choy, Gai lan, Sui choy, Chinese long beans, baby bok choy	Yes. Not a big seller at the market but can grow lots if requested.	Large demand for Asian style veggies -orders 30-60lb twice a week
Fennel (bulb and tops) Use 12- 24 heads/week	Yes. Not a big seller at the market but can grow lots if requested.	Can use for a variety of menu items (soup, salad, pizza, pasta)
Leeks	Yes	orders unprocessed
Scallions	Yes	orders unprocessed
Spinach – uses 15lb/day	Harvest in March/April. Can increase winter planting for 2009 harvest if needed.	orders unprocessed
Swiss Chard	Maybe	Ayrin: not willing to commit to a ‘trial vegetable’ that students may not like
	Cabbage(Amy’s suggestion)	No – req. too much processing time
	Squash(Amy’s suggestion)	No – req. too much processing time

Cost per unit

Table 2 outlines selected UBC Farm produce items that were agreeable to both Golob and Frye, their units of measurement, pricing from 2006 to 2007 and their relative seasonal availability.

Table 2. UBC Farm produce availability and pricing for 2006 – 2007 (UBC Farm, 2008b).

Name	Unit	2006	2007	Availability'06	Availability'07
Scallions	bunch	\$0.30	\$1.00	Jun-Aug	Jul-Aug
Swiss Chard	bunch	\$1.25	\$2.00	Jun-Oct	Jun-Oct
Fennel	pound	\$2.00	\$3.00	Jul-Oct	Jul-Sep
Kale	bunch	\$1.20	\$1.50	Jul-Nov	Jul-Oct
Leeks	bunch	\$2.00	\$2.50	Sep-Oct	Oct
Herbs	bulk		\$20.00		Jul-Oct
Bok Choy	Each	\$0.30	\$1.50	Jun-Jul Sep-Nov	Jun-Aug Oct

Preliminary time for harvesting

Table 3 outlines relative availability of the selected UBC Farm items throughout the April 1st to October 11th growing season for 2007.

Table 3: Percent of relative abundance of selected UBC Farm produce in 2007 (UBC Farm, 2008b).

Name	April	May	June	July	August	September	October
Scallions				20%	80%		
Swiss Chard			10%	20%	20%	30%	10%
Fennel				60%	20%	20%	
Kale				30%	20%	40%	10%
Leeks							100%
Herbs			10%	30%	30%	30%	10%

Education and Research Opportunities

A large component of the UBC Farm’s vision is “to support the University’s educational mandate and to provide an on-campus experiential learning environment for University students, staff, faculty and neighbouring residents.” (Quayle, Masselink, & Brunetti, 2000) In keeping with its educational mandate, a greater integration of university curriculum is a fundamental component of sustainability at UBC and the UBC Farm (Group 4, 2004). By increasing the experiential learning programs and outreach programs that are currently in place at the UBC Farm, the students, faculty and community members will greatly benefit from the enhanced learning assets that are available. Enhancing the current programs and developing new ones allows for the community to become closely involved with the only working urban farm in

Canada (UBC Farm, 2008a) and be able to use it as a teaching resource. With the increased awareness of farm programs and teaching programs perhaps an opportunity for professors to become actively involved in UBC Farm activities is a possibility.

The UBC Farm offers a great opportunity for research projects as well as field studies and trips for students. Interest of students, professors and community members in the sustainable practices of the UBC Farm will promote the educational efforts of UBC to be one of the leaders in the sustainability movement towards a greener campus. Currently, UBC is an internationally recognized leader in the campus sustainability movement (Sustainability Office, 2008) and therefore UBC Farm can be promoted as a key component in the University's efforts to be sustainable, which should attract eager and enthusiastic academic scholars to the farm. Awareness is a vital component that should be utilized to increase the support and encouragement for the programs at the UBC Farm.

Students are crucial to the success of the farm since it is largely student-driven and the ideal time for recruitment of young eager volunteers is in their first year at UBC. Our initiative was to interact with the students at Vanier and get them involved with the UBC Farm but there are many other first year opportunities available for an awareness campaign such as: orientation, classrooms, large events and other residences. Since the location of the UBC Farm is not centralized it is important students are made aware that there is an extremely important part of the UBC Campus that needs their support.

Short Term Goals

To realize the full potential of the UBC Farm as an educational resource, general awareness of the Farm needs to reach new areas of the UBC campus, beyond the Faculty of Land and Food Systems. By creating a one-day a week menu item, composed of all or mainly UBC

Farm produce for the early fall semester, is a way first and second year students from a variety of faculties can have the opportunity to taste fresh, local, seasonal produce directly from the UBC Farm. Once their palate is wet with the taste of fresh UBC Farm food, we hope to educate Vanier staff and residents on the many different ways they can get involved with the Farm.

To expose the benefits the UBC Farm offers to campus, as well as to promote information of the educational opportunities of the Farm, including volunteer opportunities and field project proposals, pamphlets and posters will be displayed. For an example, featured items used for meals or displays can use promotional signage that identifies the item as from the UBC Farm, see Appendix 1. As the Farm relies heavily on volunteer energy, getting more students involved in summer volunteering will help it run more smoothly in all facets of operation.

Also suggested to Steve Golob and Ayrin Ferguson was that they organize a short (hour long) tour of the UBC Farm for their kitchen staff. This would make the dining hall staff more knowledgeable about the farm food they are serving to the students, and hopefully they would be able to communicate some of that knowledge and enthusiasm to their customers. Although Golob and Ferguson regarded this in principle as a good idea, realistically they admitted that it might not be cost-feasible as it would be required to be a paid field trip for their unionized staff.

Long Term Goals

Though the UBC Farm has existed on campus as a Center for Sustainable Food Systems since 2000 its connections to students and campus food providers still has much room for expansion. Place Vanier is one venue that the Farm has wanted to develop a relationship with, but has of yet not had the proper opportunity to coordinate. Past AGSC 450 groups have tried to open talks between Place Vanier and the UBC Farm, but the Farm could not meet the considerable demand that Place Vanier had for Farm produce. Suggesting that Vanier serve a

one-day a week menu item featuring UBC Farm grown produce was done in an effort to try and accommodate the Farm's limited supply capability and occasional inconsistency of crop harvest.

The UBC Farm-Place Vanier relationship may start small, but once the relationship is established, it has much room to grow. Vanier Dining Hall serves a nutritionally diverse menu and operates on a scale large enough that it is able to take on larger produce orders as long as the Farm is capable of supplying them. During the meeting with representatives of Place Vanier, Golob expressed interest in more items than would be required to produce a weekly menu item. He was also excited to hear that the Farm had an orchard and was eager to purchase fresh fruit from the Farm if given the opportunity (S. Golob, personal communication, March 28, 2008).

Conclusion

As UBC continues to expand, it is important to embrace sustainable practices throughout the campus. Since the mild climate of Vancouver allows for a longer growing season, campus food providers should make it a priority to incorporate more locally produced food into their businesses. Although the UBC Farm is unable to supply large quantities of produce to meet the demands of all on-campus food providers, making small connections can have large effects. By facilitating a farm-to-campus connection between UBC Farm and Place Vanier Dining Hall, an opportunity exists not only for students to enjoy food produced on campus but to build awareness and support for the UBC Farm. Becoming aware of where their food is coming from while on-campus can stimulate students to bring that awareness to the food choices that they make when off-campus. By choosing to support locally-grown foods and make direct connections with local farmers we can reduce the food miles traveled to produce our meals. In turn, the ecological impact of our food choices today will determine our food system for tomorrow.

Recommendations

The following recommendations may be used as guidance to enhance future UBCFSP research by AGSC 450 students and staff:

Recommendations for the AGSC 450 Teaching staff

- To facilitate the presentations for the scenario groups earlier in the term, to ensure each group has the pertinent information needed to start the project.
- To have the contact people related to each scenario come in on the same day, and have presentations in different rooms, so that all scenario groups have the information to start the project at the same time.
- To schedule a second meeting with the contact groups, a few weeks after the initial presentation, to answer questions that have developed after further research has been done.

Recommendations to future AGSC 450 Groups

- Explore the feasibility of long term storage possibilities, such as a root cellar at the farm. Due to the high cost of labour & materials, come up with some ways the farm can raise funds, and whether or not this would be feasible. Also AMS Food and Beverage department might develop long term storage; can they work with the UBC Farm to increase farm-to-campus connections through long-term storage.
- Discover ways to increase awareness about the farm and volunteer opportunities present at the farm particularly in 1st and 2nd year students in faculties outside the Land and Food Faculty. Some examples we came up with are, to put posters in cafeterias and buildings,

to incorporate M.U.G. leaders to talk about the farm and its location during their September orientations.

- Increase campus connections with the Farm, showcasing other objects that the Farm produces such as flower bouquets with UBC Farm signage, or using squash dishes during sustainability week in October.
- Contact Totem Park Dining Hall to explore their interests in collaborating with the Farm.
- Survey Place Vanier students to gauge their response to increased food prices due to increased costs of incorporating more UBC Farm food items into menus.

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Appendix

Appendix 1. Signage for Vanier dining hall to promote UBC Farm item(s).
To be laminated and used with non-permanent, water-soluble markers.

