UBC Social Ecological Economic Development Studies (SEEDS) Student Report

A Step Towards Food System Sustainability: A Feasibility Analysis of Community Gardens in Hawthorn Place

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A Step Towards Food System Sustainability: A Feasibility Analysis of Community Gardens in Hawthorn Place

University of British Columbia Food System Project

Scenario 8

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Abstract

A community garden proposal is presented as a vehicle towards food system sustainability in South Campus. The problem identified is the 2006 rejection of the community garden proposal for the UBC Farm. The extent of this problem is elaborated from research of AGSC 450's 2005 (group 12) and 2006 colleague's reports (group 7, 21 & 26), the Usable Neighborhood Open Space (UNOS), and the University Neighborhood Association (UNA). The 7 guiding principals and UBCFSP vision have been integrated into the foundation of our proposal for a community garden at an alternate location: Hawthorn Place. Our project proposal for a community garden within University Town is based upon the vision of using the food system as a catalyst for bringing people together in an ecologically and socially sustainable way. Our paper aims to integrate food system sustainability into campus sustainability initiatives. Based on this vision there are three key recommendations for the further development of a community garden at Hawthorn. These include: (1) appraisal of demand for a community garden; (2) involvement and consent of land use from UNOS and UNA, and; (3) education strategy for food systems within the community garden context.

Introduction

As part of an ongoing collaborative and interdisciplinary food system analysis project (the University of British Columbia's Food System Project), this paper presents the findings of our 2007 group's work on food system sustainability in University Town Neighbourhoods. The UBC Food System Project (UBCFSP) focuses on bringing food security and food system sustainability into the limelight of campus discourse and planning for sustainability. As UBC was originally an agricultural school and UBC campus development plans are on the cutting edge of university campus sustainability efforts from around the world (M'Gonigle & Starke, 2006), UBC is in a unique position to pioneer campus food system sustainability. The UBCFSP brings together partners from diverse fields to work towards this goal. As the Land and Food Systems (LFS) faculty plays a vital role in advocating for food system sustainability, AGSC 450 (a core, fourth year LFS course) students research eight components (scenarios) of food system sustainability on UBC campus.

Food production systems are essential building blocks of communities. The status of a community's food system serves as an indicator for the well-being of the community as a whole (Pollan, 2006). However, the planning field notoriously excludes the food system from sustainable development initiatives (Pothukuchi & Kaufman, 2000). The UBCFSP includes a planning scenario, which aims to introduce food system sustainability to campus planning initiatives.

This paper details the findings of our 2007 group's work on food system planning. The remainder of the introduction fully outlines the history of this scenario and the starting points for our research. Next, the paper describes our vision statement and value assumptions, details the definition of our problem, and provides a rationale for our thought processes. Finally, we outline our methodology, findings, discussion, and recommendations for future work.

Community gardens are integral to urban food system sustainability. The findings of three consecutive years (2005, 2006, 2007) of UBCFSP food system sustainability research illuminate the relevance of community gardens to food system sustainability on the UBC campus. While the UBCFSP historically builds on previous years' reports and findings, our scenario is based more on previous, collaborative work of the University Neighbourhood Association (UNA) and the UBC farm. This section discusses the previous work of both UBCFSP groups and the UNA and explains how our 2007 project came to focus on promoting community gardens.

Last year's reports contributed little to this year's focus. The 2006 UBCFSP campus planning scenarios focused mainly on the adoption and enactment of the ecovillage concept in UBC communities and marketing, advertising, and increasing accessibility of the UBC farm (Brown, van der Lely, Cortes et al., 2006). The eco-village concept would require fundamental, systemic paradigmatic shifts, which are too extreme for the scope of the UBCFSP. The majority of this work was not applicable or relevant to the direction of our 2007 project. Group twelve's 2005 community development scenario report recommends introducing urban agriculture (including community gardens) to UBC to raise awareness of food system functions and to foster a culture of food system awareness within the community of UBC (Brown, van der Lily, & Cortes et al, 2005). While the 2005 paper is highly theoretical, the findings that urban agriculture at UBC would significantly increase the security of the UBC food system are in line with our findings from this year (*ibid*). The proposed urban agriculture is not intended to create self-sufficiency of the UBC food system. Rather, by allowing community members intimate contact with food production, community gardens will stimulate passion in sustainable food production. We recommend a stepwise progression towards food system sustainability, starting with the introduction of community gardens.

In September of 2006, the University Neighbourhood Association put forward a proposal to start a community garden at the UBC farm. Heather Friesen, the chair of the UNA, while reading on the UBC farm's website, found that the coordinators of the farm actively promoted community garden proposals for their space (UBC farm, 2007; Friesen, 2007). As the UBC farm's mission includes enhancing social sustainability and promoting community building, the farm (logically) endorses community gardens. While the farm's interest in community garden projects served as the impetus for the UNA proposal, Heather Friesen quickly found that a solid group of University residents were also interested in plots at a University community garden. Accordingly, with support in designing the garden from UBC farm employees and volunteers, the UNA Sustainability Committee submitted a detailed proposal, including a timeline, a budget, and aims of the project, to the University in September (UNA Sustainability Committee, 2006). The proposed community garden was to include up to 315 plots for residents (*ibid*, page 4). The UNA's proposal makes provisions for a mutually beneficial relationship between the resident gardeners and the farm community to include financial support for the farm from the UNA, explicit guidelines for sharing multi-use space, and knowledge sharing (*ibid*). The goals of the community garden project are: to provide a framework for a successful community garden, to promote community building and social interaction, to promote

broad-based learning for all ages and to foster relationships with UBC faculties (i.e. LFS, Forestry, Sauder School of Business) and connected organizations (i.e. SEEDs, Sustainability Office) (UNA, 2006).

The University Neighbourhood Association (UNA) community garden project would enact the stated values of the University of British Columbia's Sustainable Campus initiative and comprehensive Community Plan. Community gardens incorporated into residential areas provide residents an opportunity to connect with the land and their natural environment. As well, a community garden facilitates a leisure activity, interaction with the community, and the cultivation of food within the immediate community (UNASC, 2006).

In 2006, the UNA Community Gardens Committee proposed development on a plot of land at the UBC Farm for a community garden. Proponents of this proposal include the UBC farm, the UNA, the faculty of Land and Food Systems, and a group of UBC residents whom were in interested in community garden plots. While neighbourhood community gardens are in line with UBC's stated goals of sustainability and community-building, in 2006, the proposal for a community garden on UBC land was unsuccessful. UBC Properties Trust denied the UNA proposal with approval contingent upon exhausting potential community garden sites within University Town neighbourhoods.

Our goal was to progress from the collaborative work done by past UBCFSP groups, the UNA, and UBC farm to investigate a more agreeable and suitable location for a community garden. Our scenario eight project's purpose is to locate a new plot(s) of land suitable for a community garden within the vicinity University Town, which will cultivate the connection of residents to the natural environment. The following paper encompasses the foundations for development of a community garden at Hawthorn Place, which is located just north of the South campus boundary.

Vision Statement

Our group's goal is to reconnect people with food system sustainability in the University Town Neighborhood, specifically Hawthorn Place. With this goal as a focus, we recognized that the implementation of community gardens would be beneficial to the advancement of food system sustainability within the community. A community garden contributes to the ecological-economic aspect of sustainability by decreasing the distance food needs to travel and the social-ecological aspect by increasing the amount of related knowledge of a community. By acknowledging the importance of the three integrated social, ecological and economic pillars in food sustainability, we feel that the following vision statement and seven guiding principles initiated by UBCFSP are precisely what were needed to pave the road to a sustainable UBC food system.

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

- 1. Food is locally grown, produced and processed.
- 2. Waste is 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" (UBCFSP 2005)

In evaluating the 7 guiding principles, we all agreed that a community garden

applies particularly to principles 5 and 6. Principles 5 and 6 emphasize the social,

ecological, and educational value, which we strongly believe a community garden is capable of delivering. However, we are also aware of the economic issues and opinions from various stakeholders from the UBC community involved in this project. In order to implement this proposal, we feel that it is essential to amalgamate all parties' conflicting perspectives. As a result, our goal is to have a better understanding of different voices involved in this project and build a bridge for next year's Land and Food Systems students to further investigate this project.

Identification of Value Assumption

As a group, we originate from diverse fields within the faculty. These include Dietetics, Food Science, Global Resource Systems, Agroecology, Food Market Analysis, and Nutritional Sciences. However, we share the same value assumption: weak anthropocentrism. Our group's vision statement and approach to the project is strongly influenced by this value assumption. Anthropocentrism denotes a human-centered lens through which to envision the world. Strong anthropocentrists are exclusively humancentered. We, as weak anthropocentrists, value nonhuman existence as it pertains to humans. This is why we realize our wellbeing is inseparable from the wellbeing of our environment. As a group, we are also interested in how people foster their relationship with their surrounding environment and how environments possess the ability to unite people.

Problem Definition

The UNA proposal was denied, despite the careful and well thought out intricacies of the proposal. As part of our 2007 UBSFCP campus planning research, we spoke directly on this matter with Joe Stott, the Director of Campus and Community Planning at UBC. Joe Stott explained that the UNA proposal was rejected by the Vice President's office due to its proposed location at the UBC farm (Joe Stott, personal communications, February 28th, 2007). As the University Town's neighbourhoods are theoretically designed with the capacity for self-reliance, the overseers of campus land use would prefer resident community gardens to be contained within the residents' respective neighbourhoods. While the farm may ultimately prove to be the best location for residents' community gardens, alternative locations within the university town neighbourhoods must first be exhausted (*ibid*).

Being a globally perceived role-model for environmentally friendly campuses, the University of British Columbia has a responsibility to lead by example in this regard (M'Gonigle & Starke, 2006). Failure to do so may not only impact the environment and food system of UBC but of other campuses as well. Our group was given the specific task of investigating ways of improving food system sustainability of South campus or one of the already existing neighbourhoods in the University Town. We chose to focus on Hawthorn Place. We feel that the goal of self-reliant neighbourhoods has yet to be realized; therefore we took it upon ourselves to investigate ways to accomplish this at Hawthorn Place.

Rationale

Community gardens provide a context for reconnecting 'farm to fork' for urban residents, for neighbourhood-based social interaction, for cultivating a passionate food culture and healthy lifestyle, and for educating future generations about the importance of the food system. Community gardens in University Town neighbourhoods would provide aforementioned benefits, while fueling interest in food security.

'Farm to Fork'

Globalization of the food system and increased urbanization created a schism between food producers and urban consumers. With the advent of supermarket grocery shopping, the origin of our food was obscured. Most consumers do not fully understand what food production and processing entails (Pollan, 2006). Community gardens play a role in allowing urbanites to regain control and understanding of their food. The importance of community gardens in high density housing units (such as University Town units) is magnified, as most residents have no other means by which to regain a connection with food production.

Social Interactions

Community gardens foster neighbourhood-based social interactions. Community gardens facilitate strong community, as residents work together towards a common goal (ACFCGN, 2007). Plot holders manage their gardens side by side, sharing gardening knowledge, tools, and often forming friendships. While the gardeners themselves are the most obvious beneficiaries, the strengthened sense of community benefits all community

members. That is to say, the community garden will bring residents together and provide a common place where many residents could spend time together.

Community gardens do have a potential social downside. The private use of public open space is a source of concern for community members not interested in gardening. Accordingly, community gardens must be situated in underutilized open spaces or be carefully designed to fit into multi-use park spaces.

Healthy Lifestyle/Food Culture

It is apparent that gardening promotes healthy activity, recreation and lifestyle. It is also a healthy hobby, and promotes a healthy food culture. In other words, gardening serves to rekindle interest in food production, preparation and consumption in North America, which is largely void of a deep food culture (Pollan, 2006).

Education

The future community garden at Hawthorn Place would help increase the knowledgebase of plot holders as they work side by side, learning how to cultivate fruits and vegetables (ACFCGN, 2007). As Hawthorn Place is very close to the Faculty of Land and Food Systems, it is possible for plot holders to make connections with the faculty members when problems/needs arise.

Most importantly, a community garden will benefit the children in the neighbourhood as they could grow up connected with the earth. More specifically, the community garden could serve as a great educational tool to the young of the neighbourhood.

Proposed Site

The suggested site for a community garden in Hawthorn Place is located at the corner of Larkin Dr. and West Mall. This green space is currently poorly managed, and provides little aesthetic appeal for the residents as planned. Therefore, as a piece of underutilized land, it is a perfect site for a community garden, which will add more value to the land and the community.

Methodology

Due to the broad nature of this scenario and the limited temporal scope of the project, the two scenario 8 groups collaborated by investigating two different aspects of the same issue. For this project, we utilized community-based action research (Stinger, 1999). The research question originally came from the community, and many stakeholders were involved in every aspects of our research process. The main methods used by our group were personal and electronic communications. In more detail, the workshop, "Placemaking: Methods for Improving the Public Realm", by Fred Kent was attended by two group members on February 07; a meeting with Joe Stott was conducted on February 28; we took an investigative exploration around Hawthorn Place to search for possible future community garden plots on March 07; an interview discussion session with Heather Friesen was attended by four group members (2 from each scenario 8 group) on March 14; email communications took place between group members and Joe Stott (Director of Planning, Campus & Community Planning), Heather Friesen (Chair, UNA Sustainability Committee at University Neighbourhood Association), Paul Young (Director of Planning & Design at UBC Properties Trust), Rachel Wiersma (Planning

Assistant, Community & Land Use Planning at UBC Campus & Community Planning), Cathie Cleveland (UNA Administrative Manager), and Samantha Charlton (Urban Agriculture Coordinator); unreturned phone calls were made to UBC Property Trust; and personal communications were made with an active Hawthorn Place resident, Diane Ledingham, during the visit on March 07.

Findings

After our first meeting with the Director of Campus and Community Planning Joe Stott, we soon found out that there was a possibility for community gardens within the current neighbourhoods in the University Town, those being Hampton Place and Hawthorn Place. Through discussion with the other scenario group, we divided the community garden project into two smaller sections. Our group focused on current communities while the other group worked on the future South Campus neighbourhood of Westbrook Place.

Since our focus was now on the current neighbourhoods, we needed to find a potential piece of land available for development into community gardens within the neighbourhood. On the corner of West Mall and Larkin Dr., there is a small (27 x 46 feet) piece of land we believed to be perfect for development into community gardens for Hawthorn Place. Through speaking with the current residents of Hawthorn Place who are within close vicinity of this land, we learned that the land was not, in fact, part of their gated neighbourhood. Rather, this land is owned and managed by UBC. The residents thought that they had no say in how the land should be maintained.

Through more research, we found out that the land was actually classified as Usable Neighbourhood Open Space (UNOS) land. UNOS lands are owned by UBC, but controlled by and leased to the University Neighbourhood Association (UNA), to which many residents belong.

Figures 1, 2, 3, and 4 illustrate our proposed site location and design.



Community Gardens in Hawthorn Place 16

Figure 1. Location for Proposed Community Garden Site. (Campus and Community Planning, 2007)



Figure 2. Overview of Hawthorn Place.

The proposed community garden location at Hawthorn Place is situated at the corner of Larkin Dr. and West Mall. This plot of land is currently planted with only grass and is underutilized. It is situated adjacent to a single home and open on the East and West sides to the road and on the North side to a walkway. This plot is ideal for a community garden as it is flat, exposed to sun and is easily accessed.



Figure 3. Photograph of Proposed Community Garden Site.

As can be seen in the above picture, the land available is not very large. However, we see this piece of land as a viable location in which to implement a community garden within the neighborhood. This plot can offer 15 garden plots that are arranged in three rows of five, where each plot is seven by nine feet in sizes. This gives each gardener enough space to grow and experiment with different kinds of vegetables and fruits. Between the rows, a pathway of 2 feet is maintained for passage. Water can be introduced from the nearby horticulture test plot located at Totem Field.

27 ft



Figure 4. Layout of Garden Plots

The area for the garden is 27 feet wide and 46 feet long and has a main pathway of 2 ft in between rows. A single plot area consists of a 7 by 9 ft space; from this, we get a total of 15 plots.

Discussion

Feasibility

After all the hard work of investigating, finally we confirmed that the University Neighbourhood Association (UNA) has the right to determine the use of the Usable Neighbourhood Open Space (UNOS) (Paul Young, personal communication, March 16, 2007), which includes the area that our group found at West Mall and Larkin Dr. at Hawthorn Place. In other words, the green area that our group identified during investigation of Hawthorn Place has the potential to be a sample site for a community garden. The major task for now is to examine the feasibility of incorporating a community garden at that small plot of green space.

According to Samantha Charlton, an Urban Agriculture Coordinator,

"the main criteria for a community garden in terms of location are the energy, desire and commitment of the people. The location has to be as close as possible to the people who will be doing the gardening for the garden to thrive and survive into the future. Logically, the site has to be close to water access, or a water line that can be tapped, and it has to be sunny. Bad soil is not such an issue, as it can be amended and improved over time. And, it is easiest in Vancouver to set up a garden on underutilized land. The barriers in short are: getting permission to use land, start up money, lack of knowledge about the bylaws, leasing, licensing etc, and lack of a solid committed group" (personal communication, March 21, 2007).

By close examination of the area at Hawthorn Place, we realize that it is a great location for a community garden. The area is very close to the residents and is close to the horticulture experiment land, as well. In other words, water and energy supply could hopefully be provided by the collaboration of the residents living nearby and the horticulture experiment facility. The area is easily accessible by walking, biking, or driving. From the interview with Heather Friesen, we were told that at least 50 UNA residents are very interested in gardening and these people can be contacted in the future for supporting and working at the area (personal communication, March 14, 2007). More importantly, the area has great exposure to sunlight. In terms of current use of the area, it was designed to provide green space for the residents at Hawthorn Place; however, nothing specific was planned for this plot of land (Diane Ledingham, personal communication, March 07, 2007). During our visit, that area seemed to be poorly managed, and it was not utilized often by the residents. By introducing a community garden into this area, the green space could be better utilized, and could be of more value to the residents. The benefit of introducing a community garden into an existing neighbourhood, such as Hawthorn Place, is that the implementation would not affect the future value of the land since no other potential development could be possible for the existing neighbourhoods.

Barriers

Even with numerous potential benefits of having a community garden within Hawthorn Place, there are, inevitably, many potential barriers preventing its implementation.

The most relevant barrier is potential disapproval by the UNA and current supporting residents of a proposed community garden in existing neighbourhoods. As the suggested community garden site is very close to some houses, a big concern is that residents living nearby could have complaints as the existence of a community garden will affect their daily living. Another concern is how to protect the community garden once it is in place since the location is fairly accessible to everyone, and is also very close to Totem residences. As the community garden expands, the size of the land is so small that it is impossible to meet the potential increasing demand for community garden plots. As well, the start up money (from UNA) is needed for modifying the existing space into garden plots and ensuring that the newly created garden plots are designed in keeping with the surroundings. Last but not least, the management of the community garden is also very challenging in terms of the composting, irrigation, drainage, and space needed for tool storage.

Recommendations

Throughout our project this semester, we felt the overall objective we wanted to accomplish was to prepare future groups of this scenario with the tools required to possibly implement community gardens in South Campus or in the already existing neighborhoods of University Town. Our recommendations are focused on to three sections: The future students involved in this scenario, the University Neighborhood Association, and Campus and Community Planning.

Recommendations to Future Students:

 Prepare a draft letter to be passed to the current residents of Hawthorn Place or Hampton Place in order to explain the project's goals and objectives, as well as to raise awareness to the residents of the idea of community gardens on South Campus.

2 -Create a survey to residents on community gardens within their neighborhoods at University Town. The purpose of this would be to determine the interest, if any, for community gardens, within their neighborhoods. This might include questions on

whether or not they would mind a community garden nearby, or within sight of their townhouses, and whether or not they would be interested in owning a plot of land in one of the community gardens.

3 – Contact the Landscape Architecture (LARC) students in Macmillan in pursuit of creating a joint project with them, or to ask for help in designing a community garden plot. Matt Filipiak, the current Graduate Student Society President would be an ideal contact for this portion, as he is also in the LARC program.

4 – Create a preliminary budget with the help of the Landscape Architecture students (if available) on potential costs of implementing a community garden in the Hawthorn Place neighborhood. From our findings, the UNA have control over the land marked as UNOS in the zoning map, and would also have to cover the costs of implementing a community garden. It would be important to keep the budget as efficient as possible.

Recommendations to UNA:

1 - Hold a meeting with the different representatives of each neighborhood to discuss the potential of community gardens within their respective neighborhoods. It is our understanding that the UNA was interested in community gardens, but this interest was only for at the UBC farm.

2 – Inform current residents of Hawthorn Place that UNOS land within their neighborhood is still under their control, even if it is technically owned by UBC. It is our understanding from the residents that they believe the land is in sole control of UBC.

Recommendations to Campus and Community Planning:

1 – Even with added interest for community gardens in University Town neighbourhoods, we urge you to reconsider community gardens at the UBC Farm. The idea of a trial community garden for 5 years at the farm could raise awareness to the possible social and ecological benefits of community gardens and help in their possible implementation around the entire UBC campus.

Conclusion

Within the scope of the UBCSFP vision, our scenario goal (to reconnect people with the food system) is vital. The implementation of community gardens contributes to social, environmental, and economic sustainability, and enhances the educational capacity of the UBC community. Accordingly, reconnecting 'farm to fork' serves as the foundation for our research.

An on-campus community garden will initiate the movement toward food system sustainability. For the residents at Hawthorn Place, development of a community garden will add value to the neighborhood by serving as a channel for connecting people to their food system. Our research substantiates that Hawthorn Place would be an ideal location for a community garden. We recommend that future students approach residents in an attempt to raise awareness of the proposal as well as to quantify resident support. To develop a comprehensive design, future AGSC 450 groups should collaborate with LARC students. Involvement of the UNA should expand to facilitate discussions with Hawthorn Place residents to clarify ownership and control over UNOS land. To further develop this project, the UNA must dedicate this plot of UNOS land for a community garden. Financial and residential support must be solidified.

A community garden at Hawthorn Place will serve as a catalyst for the expansion of community gardens to other locations on UBC campus.

References

Australian City Farms & Community Gardens Network [ACFCGN]. (2007). About Community Gardens. Retrieved March 20, 2007, from

http://www.communitygarden.org.au/about/benefits.html

- BC Farm. (2007). *Community Garden Projects*. Retrieved March 20, 2007, from http://www.landfood.ubc.ca/ubcfarm/community_garden.php
- Brown, Amanda; Antonin van der Lely; Camilo Cortes; Hielen Leung; Fung Lam; Liz
 Overton, Muneera Hussain. (2005). *Greening the Development Monster: UBC Food Systems Project Scenario 4- Development at UBC*. University of British
 Columbia, Vancouver: UBCFSP.
- Campus and Community Planning. (2007). *Land Use Plan*. Retrieved March 23, 2007, from http://www.planning.ubc.ca/corebus/pdfs/pdf-landuse/MCNP_P07.pdf
- M'Gonigle, M., & Starke, J. (2006). *Planet U: Sustaining the World, Reinventing the University.* Gabriola Island, BC: New Society Publishers.
- Pollan, M. (2006). The Omnivore's Dilemma: A Natural History of Four Meals. New York: The Penguin Press.
- Pothukuchi, K. & Kaufman, J. (2000). The Food System: a stranger to the planning field. Journal *of the American Planning Association*, 66, 113-124

Stinger, E.T. (1999). Action Research. London: Sage Publications.

- UBC Food Systems Project 2005 (UBCFSP 2005). (2005). Vancouver: UBC Faculty of Land and Food Systems.
- UNA Sustainability Committee. (2006). UBC Farm Project Proposal: UNA Community Gardens at UBC Farm. Vancouver: UNA.

University Neighborhood Association Sustainability Committee (UNASC). (2006). UBC

Farm Project Proposal: UNA Community Gardens at UBC Farm.