

**The UBC Farm: Forming Market Relationships**

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**AGSC 450**

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# **The UBC Farm: Forming Market Relationships**

## **The UBC Food Systems Project, Year 3**

### **Final Paper**

AGSC 450

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## **Abstract**

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The goal of this paper is to demonstrate the potential role that the UBC Farm at South Campus has in the UBC Food System. Our group identified two key problems: 1) The UBC Farm's operating costs exceed its revenue, and 2) UBC food providers have expressed reserved interest in buying UBC Farm produce, but current prices and quantities supplied are not competitive with UBC Food Services current suppliers. We discussed the major constraints preventing the UBC Farm from forming purchasing agreements with UBC Food Services, such as restricted summer availability, quality, and quantity of products. We identified commonalities in our value system, with all group members identifying themselves as weakly anthropocentric. This value identification formed a basis for further exploration of our stated problems. The exploration of Group 14's representative model of food system sustainability from last year led us to refine it so that it correlated with our own priorities and values. To assess the UBC Farm's business model, we conducted an examination of each of the components of a business plan. We explored other University and College Farms and compared their strengths and successes to UBC Farm; with these findings we were able to create recommendations to improve the UBC Farm's profitability in the future. We further emphasize the fact that UBC Farm is limited in food production potential, and has great opportunities for education, research, partnership development, and building social capital. Recommendations for future data collection for next year's AGSC 450 class include production and economic assessments, market, and case study research.

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# 1. Introduction

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The UBC Food Systems project is a five-year collaborative project to explore opportunities for creating a more sustainable UBC food system (Bouris 2003). In 2004, the third year of the project, AGSC 450 students worked upon the foundation of previous years' work to establish a shared vision in specific areas of the food system (Rojas and Wagner 2004). Our group examined the UBC Farm, and in particular, its potential for forming market relationships with on-campus food providers.

## 1.1 *Defining the Problem*

We drew upon the work of Group 14 from last year's AGSC 450 class to define our key problem, develop a model of our food system component, and determine what indicators could be used to assess our subsystem. Group 14 identified their key problem as the lack of a system-level analysis of the UBC food system (Group 14 2003). They further qualified this statement by noting that the interactions between components of the food system should be explored, and a representative model was required to inform further research in this area.

With respect to the UBC farm, we were able to refine this broad problem into something more specific. As the farm's current activities are generally so consistent with the attributes of a sustainable food system as identified by last year's groups (Bouris 2003), our group had the opportunity to focus on specific operational concerns that would affect the Farm's ability to continue and enhance the sustainability of its current activities. The UBC farm has the potential to become a centre for agro-ecological learning and research, build the campus community, and provide fresh local produce to the UBC food system (Masselink 2002). Though excellent progress has been made in the last four years towards accomplishing these objectives, a lack of adequate funding has

seriously inhibited the ability of the farm to invest in the kind of long-term sustainable land management techniques that it advocates. The revenue-generating market garden provides an opportunity for the farm to diversify its funding base and reduce reliance of short-term grants, but it does not yet generate enough revenue to cover its own costs, let alone generate a profit that could help to offset the costs of other programs at the farm. Our group identified this factor as the first key problem to address in our study.

The second problem we identified arose from the perceived opportunity to achieve profitability by expanding the UBC Farm's market relationships with on-campus food providers. Several food outlets, such as the Sage Bistro, Green College, and St. John's College have purchased produce from the UBC Farm in the past. However, there are currently many purchasing barriers and constraints that inhibit the expansion of long-term relationships between the UBC farm and UBC Food and AMS Food and Beverage services. These major constraints in forming an agreement with UBC Farm include the need for quantity, quality and consistency of the farm's production. We identified the disparity between these stated standards and the farm's inability to meet these standards as our second key problem.

## **2. Identification of Group Values**

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As a group, we would identify ourselves as weakly anthropocentric (Murphy 1993). We realize that human existence is not solitary of the entire biological system; therefore we hold an underlying viewpoint that is consistent with an ecological worldview. We recognize that our survival is entirely dependent upon the integrity of the environment, and are generally in agreement with the hypothesis that patterns of human resource use have exceeded the natural rate of resource generation (Brown 2003). In fact, it is likely that it is our weakly anthropocentric nature that leads us to believe that

lessening our use of natural resources is a priority for society. We would like the complex global ecosystem to maintain a regenerative and dynamic equilibrium indefinitely, but ultimately this desire stems from an underlying interest in our own survival.

Upon discussing the question of whether allowing individual freedom was compatible with our ecological priorities, there was considerably more divergence within the group. Much like the division between eco-centrism and anthropocentrism, we felt that perhaps individual vs. community rights was a false dichotomy. If an individual associated their dependence with the integrity of society, they may freely, and even selfishly, make decisions that were in the interests of the larger community. Trying to obtain an answer to the question of whether or not we would give up individual comforts for the benefit of the community was difficult because this question is intimately tied with our own personal goals. These goals are different for every individual.

These values affect our vision of food system sustainability, and how we prioritize different proposed attributes of a sustainable system. Our essentially anthropocentric viewpoint leads us to support the preservation of the UBC human population, even if it currently exceeds the carrying capacity of its regional ecosystem. This means that, as discussed later in the paper, we advocate for strong regional food trade links rather than striving for self-sufficiency on campus, because we feel the latter approach would necessitate reducing the population and restricting food choices. Additionally, the strong feeling in our group that individual freedoms are an important component of a healthy society leads us to believe that the UBC community should have the freedom to purchase foods that are culturally or economically appropriate, even if these foods do not meet our criteria for ecological sustainability.

While advocating a certain degree of individual freedom and anthropocentrism, our ecological concerns also lead us to insist that the current UBC food system needs to change, particularly in regards to its ecological impacts. This gives rise to an apparent conflict in values, but we feel that it is possible to localize our food system – a key strategy to achieve our vision of sustainability – but still provide opportunities for people to have ample choice and diversity in food products. We feel that we have applied our values in a way that fairly represents the differing views of our group. Respecting that many standards and definitions are culturally relative.

Finally, our group identified that our views were “student-centric,” and, more specifically, “agsci-centric.” Without stakeholders from other groups participating more directly in our discussions and research, we thought it was unlikely that we could develop a definition of sustainability that was inclusive from a whole-campus perspective.

### **3. Defining Sustainability**

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Our group recognizes the multifaceted nature of sustainability as articulated by our colleagues in 2003. While we agree with the broad vision of a sustainable food system that incorporates the interconnectedness of ecological, economic, and social components, we feel that previous groups often failed to emphasize the critical role of partnerships with systems outside the immediate boundaries of the UBC Food system. The rationale for emphasis on partnerships rather than self-reliance as a strategy to achieve a sustainable food system stems from a recognition that UBC, as a public institution of higher learning, is wholly dependent upon a complex set of external socio-cultural-economic systems.



To define what the attributes of a sustainable food system were, we followed in the footsteps of last year's colleagues, first reviewing a food system model, and then reviewing indicators of sustainability. Group 14's model, in particular, accurately represented the web-like nature of relationships between different food system components, and also identified the role of the UBC Farm and pinpointed several regenerative cycles within the food system. Our group felt that the model could be improved by including more social relationships and external system linkages, particularly to the governmental and economic systems that allow for the existence of the university. In addition, the inclusion of a human-scaled nutrition subsystem into the overall food system model would allow for greater participation in the discussion by the Food, Nutrition, and Health Students.

Following our evaluation of the model, our group discussed the indicators of food system sustainability proposed by Group 14. A complete summary of our findings is presented in a table in 0.Appendix K The ecological indicator we assessed was food mileage, which was measured by the total distance traveled by all food products on campus in one year. This related to both efficient use of biophysical resources, such as fossil fuels, and to the social concept of "distancing" that may be a constraint to an individual's willingness to make decisions about their food consumption (Kloppenburg, 1996). Although food mileage can serve as a useful teaching concept, we also recognized the inherent difficulty of actually measuring such an indicator. As a result, we think that analyzing the percentage of waste that is recycled or composted, as suggested by the majority of last year's groups (Bouris 2003) would be a more appropriate ecological indicator. Being able to set and achieve small goals such as this has important

implications for the consumer when it comes to the perception of being able to make tangible changes.

Group 14 proposed measuring social sustainability through a survey of the awareness about the UBC farm and nutritious foods. Applied to the UBC Farm, conducting such a survey would also provide important market research. In terms of an economic indicator group 14 chose the affordability of nutritious food on campus, since unaffordable food undermines food security in the community (Group 14 2003). Though we agree that affordability is important, we also understand that such an indicator should be treated with caution as “cheap” food is often associated with heavily subsidized (in ecological, social, and economic terms) production practices (Kloppenburg 2004).

Although the revised model will be valid for assessing the entire UBC food system, our group came up with three different indicators that primarily focus on analyzing sustainability of the UBC farm. Though the farm is exemplary in terms of waste reduction and nutrient recycling, it is highly inefficient when it comes to another resource – water (Smit 2004, personal communication). Since the UBC farm uses an unnecessarily large amount of water annually, our group believes that decreasing the use of water would help the UBC farm move towards ecological sustainability. Water meters would help to record the amount of water used and provide the measurement tool to assess this indicator.

Our group also specifically identified a social indicator for the UBC farm. Measuring awareness and involvement in the farm would be particularly useful to assess how socially sustainable the farm is. By investigating the student involvement, volunteer hours per week, total visitors to the farm, and diversity of faculties’ involvement, information on how frequently community members interact with the UBC farm can be

obtained. This method of data collection is easy to obtain and apply for our future colleagues in AGSC 450.

As an economic indicator of the UBC farm sustainability, we saw profitability of the UBC farm as the key indicator. In a highly sustainable UBC farm, the expenses are less than the revenues, allowing the farm to make profit to use in expansion of educational opportunities and partnerships. The profitability of market operation can be simply determined by reviewing the UBC farm financial reports.

#### **4. Project Findings**

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Our group decided to focus on two of the specific tasks outlined in our provided scenario. The first of these was a review of other university and college farms that might be used as informative case studies for the UBC farm. The second task was to assess the UBC Farm's business model, keeping in mind the broad goal of sustainability and the interest in forming new market relationships. To complete these tasks, our group completed literature reviews, interviews with UBC Farm staff and staff at other University farms, and internet searches. As one of our group members had also worked in the UBC Farm initiative for several years, we were able to include a considerable amount of first-hand experiences in our analysis of the business model. Literature that proved useful included the course readings and resources on the course website, but also unpublished documents and records held at the UBC Farm office, and the final papers completed by previous groups. A summary of our findings in each specific area follows. Some additional information is included in the appendices to the paper.

#### **4.1 Subsystem assessment**

In accordance with the models assembled by previous years the physical boundaries of the UBC Farm are largely congruent with the bounds of the UBC Farm property. The components of the physical sub-system include all goods produced and land managed by the UBC Farm administration. Because the majority of farms specialize in food production, most models to date have concentrated on the flow of goods from the UBC Farm Sub-System. However, due to land constraints the UBC Farm Sub-System is limited in its agricultural productive capacity. We believe that the intangible UBC Farm sub-system extends far beyond the physical bounds of the UBC Farm. Services and social capital produced by the farm greatly influence the sustainability of the UBC Food System. The UBC Farm Sub-System's social capital facilitates the development of partnerships between the UBC Food System and other systems. This extraordinary farm social network exists because of the UBC Farm's unique urban location and academic foundations. In addition, the UBC Farm Sub-System helps increase the social sustainability through its role as an educational facility and as a demonstration farm. Despite common conceptions of farm production the UBC Farm Sub-Systems social network is far greater than its ecological or economic network.

#### **4.2 Other case studies**

##### **Beech Hill Farm (College of the Atlantic, Bar Harbour, Maine)**

The Beech Hill student farm in Maine is integrated into the food system in four ways: through a restaurant, a farmstand, wholesale and community gardens. There is an agreement between the restaurant and the farm in which the main restaurant on campus purchases as much local produce from the farm as possible. This agreement is designed to provide patrons with fresh, healthy food while at the same time reducing packaging

and travel distance of food, and thus the environmental impact that our diet has on the environment. A farm market is also set up on the farm that operates a few times a week, selling locally grown food to the public. They not only sell the produce that is grown on the farm, but also other local products such as jams, jellies and honey. Goods are also sold at wholesale to local restaurants. As well, around campus there are several community gardens where students, staff and members of the community can grow their own food, and experience farming, establishing a direct connection between people and land.

### **UC Davis**

The Student Farm at UC Davis offers a community supported agriculture (CSA) system in which students, staff and the public can pay a set amount of money to receive a weekly produce basket. This is an affordable way for community members to obtain fresh and healthy produce. It also promotes a more sustainable way of growing food and creates a sense of community by providing a direct link between the farm and the consumer. CSA provides a guaranteed funding for the farm, because they know exactly how much money they have to use at the beginning of the growing season.

UC Davis also offers a variety of educational opportunities. These opportunities include course work for students, research opportunities, internships and courses for the public. The campus farm has a Children's farm, where for a fee, the university students teach workshops to school children on different methods of farming, providing them with hands on experience with farming and agricultural practices. Courses offered to the public include: organic farming, sustainable water usage in farming, and soil sustainability. The market garden also sells food to a coffee shop on campus.

## **UC Santa Cruz**

The University of California, Santa Cruz organic farm serves as research, teaching, and training facilities for students, staff, and faculty. The farm is open to the public and sponsors many educational events for the community to increase awareness about organic food production and sustainability issues. According to an email reply from Joan Tannheimer, Program Assistant at the CASFS, the farm does not sell to the food services at UCSC. Rather, the produce is sold at a market cart on the campus, and through shares in a CSA program, to members of the campus and the community.

## **Evergreen State College (Olympia, Washington)**

The produce from the Evergreen State College farm is sold to the campus restaurant, Bon Appétit, whose mission is to: purchase produce that is locally grown, seasonal and minimally processed; use food that is fresh, whole and prepared in a way that is healthy and nutritious; and create menus that include an abundance of fruits, vegetables, legumes and grains from the farm grounds. Additionally produce is also sold at a farm stand directly on the farm as well as on campus. All of the excess is given to the Food bank and the local charities, or composted.

## **What ideas can be applied to the UBC Farm?**

Upon completion of the case studies on other university farms, we have developed the following recommendations. The UBC Farm could develop a CSA alternative to further increase the financial viability and create social ties to the farm. The CSA model has great potential for connecting student and non-student consumers directly to the source of their food, and for giving small-scale farmers and market gardeners a viable alternative to other marketing efforts. A CSA type system could be set up with

UBC food service venues, which could buy into larger shares of the farm, and in turn receive larger boxes of food.

The UBC farm could also make the produce more available to students, by expanding its market by making small outlets around campus, in more common areas, such as the village or the SUB. Making the produce from the farm easier to access would not only increase sales, but it would increase the awareness about the farm as well. The farm could also increase the scope of its educational opportunities and further its income by offering courses on farming to the public for a fee, much like the example at UC Davis.

### **4.3 Analysis UBC Farm business model**

To assess the business model of the UBC Farm, our group analyzed each of the components that would be included in a full business plan: an overall description of the business and its structure, marketing, production, human resources, and finances (Wiseman, 2002). We researched and described each of these business components, and analyzed them using the SWOT (Strengths, Weaknesses, Opportunities, Threats) technique (Wiseman, 2002). A matrix detailing our findings is included in 0. While the full analysis we conducted is beyond the scope of this paper, some of the findings that are more relevant to the goals of a sustainable food system are discussed here.

One recurring source of confusion in performing this analysis was in distinguishing the difference between the business model for the UBC Farm as a whole, and the business model for the Market Garden in particular. The Market Garden encompasses only a small part of the UBC Farm's overall vision, but at the current time is the single most significant project at the UBC Farm. As such, the business model

analysis is primarily concerned with the operations of the market garden enterprise, though many farm-level considerations are also mentioned.

### **Farm Structure and Governance**

The ultimate goal of the UBC Farm initiative is to develop the existing on-campus farm into an international agro-ecology centre for the study of sustainable agriculture, forestry and food systems. The existing on-campus farm, which has operated under a number of different faculties and departments since 1965, has suffered many years of uncoordinated management and neglect. One of the goals of the re-invention of the UBC Farm is to establish a multi-stakeholder, broadly representative governing body, that can provide informed guidance to best steward the farm lands with the future in mind. To date, however, attempts to form this kind of leadership body have been short-lived. The lack of committed leadership beyond the Faculty of Agricultural Sciences continues to be a threat to the integrity of a UBC Farm that involves students and professors from many different faculties.

### **Marketing**

The UBC Farm provides education, research, and social services, as well as high-quality organic produce. The market garden in particular has immense marketing potential because, as the only farm within the City of Vancouver, its products and services are highly unique. To date, production has been a greater challenge than marketing. In fact, the public markets held on Saturday morning regularly sell out, indicating that there is not enough supply to meet the demands of the existing market. However, there are still many opportunities for market expansion, including the



expressed interest of both AMS and UBC Food Services, and the untapped demand of the quickly-expanding University Town.

## **Production**

The Market Garden currently produces about 40 types of vegetables, flowers, and herbs on 1 ha of cultivated land and two greenhouses at the UBC Farm (see 0). There are definitely opportunities to expand the production area, though improving the efficiency of the existing production areas should also be investigated. A production analysis, which could be conducted as a student research project (see 0), would help to make more decisions as to how much expansion might be required to best meet the financial needs of the farm and the demands of market customers.

## **Human Resources**

From 2001 until 2003, the farm maintained a full-time program coordinator to oversee all aspects of the farm's operations, including strategic planning, general management, and stakeholder relations. The market garden, education, and outreach programs operate with seasonal staff. Volunteers from all backgrounds are an integral part of all the farm's programs, and the role of international interns has recently been expanded. During the last 8 months, the farm has been unable to support a full-time program coordinator, however, this position will be reinstated in late April 2004.

## **Finances**

The largest portion of the farm's income has come from the Faculty of Agricultural Sciences, in indirect recognition of the services the farm provides and in support of its potential expanded role. The second largest source of income comes from the sale of organic produce, primarily to customers at the summer farmer's markets.

While the Market Garden is ahead of other farm programs in terms of its revenue-generating capability, its sales revenue currently covers only half its operating costs. The rest of the farm's income comes from individual and business donations, as well as fees for educational services such as student workshops. In order to maintain its core programming at 2002 levels, the UBC Farm needs to cover approximately \$100,000 in expenses, with about \$60,000 required for the Market Garden. In 2003, however the market garden generated only about \$27,000 in revenue. This deficit underscores our focus on economic indicators of sustainability for the UBC Farm.

## **5. Recommendations: Future Data Collection**

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Our brief analysis of the UBC Farm business model and investigation of the larger UBC food system highlighted the need for future research to be conducted. As our project team was not required to conduct primary research, we have created recommendations as to what kind of research will be most useful to conduct in the future, and have created some methodological tools to complete this research.

The first area of interest, which we feel is the most applicable to future AGSC 450 classes, is to conduct market research. Students taking the course in the fall could set up discussion meetings with representatives from UBC Food Services and AMS food services. We have provided a list of sample questions (0) that would provide the kind of information that would be most useful to the farm. The goal of this discussion would be to identify, in explicit terms, how the farm could become more integrated into the UBC food system.

If AGSC 450 is offered in the summer, students would have the opportunity to conduct research with summer market customers. Because on-farm markets generate

more than 75% of the farm's sales revenue, a better understanding of this group's needs is of utmost importance. We have provided a survey (Appendix C) that we suggest future groups use as a guideline for this research.

Additionally, a better understanding of the financial management of other student farms would help to provide more detailed precedents for the UBC Farm to consider following. We have suggested some questions (0) that students could pose via email to some or all of the campus farms that we identified in this study.

Finally, a thorough production analysis of the Market Garden would aid the UBC Farm staff in determining which crops were the most profitable or efficient, using a number of different benchmarks. A set of measurable indicators and suggested approaches to this task are included in 0. This analysis might be beyond the scope of AGSC 450, but collaboration between agroecology and commerce students might provide very useful information.

Our recommendations for future research are driven by the pressing need for the market garden to achieve financial sustainability. Though there are many opportunities at the site to conduct social and ecological research that would undoubtedly improve our understanding of the UBC Food system, we have chosen to prioritize the economic component since short-term financial stability is, arguably, the greatest threat facing the UBC Farm.

## **6. Conclusion**

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In evaluating the sustainability of the UBC Food System it is important to realize that sustainability does not necessarily equate to self-sufficiency. The population of UBC is large and unique. It would be a mammoth task to accommodate the volume and

diversity of food goods and services demanded by the UBC population. Acknowledging the ecological and geographical limitations of Pt. Grey, it quickly becomes evident that the UBC Food System must extend beyond its physical bounds in order to provide food to the UBC population. Although it is a near impossibility for UBC to vertically integrate the food production process, it is possible for UBC to develop numerous, mutually beneficial partnerships with other organizations. As a local, educational and urban farm, the UBC Farm can act as an interface between food producers and the UBC Food System. While UBC will never be self sufficient, we agree that the UBC Farm has the potential to become a learning medium that represents a sustainable form of agriculture, while being financially viable at the same time.

Although the UBC Farm shows more promise as a generator of social capital, it is important that the farm's market performance be improved in order to consolidate its status as a working farm. A functioning, sustainable agroecosystem will serve as a working example, providing a starting point for future land, food and community sustainability projects. Once the UBC Farm is self-sustaining it will then have the capacity to serve as a symbolic rallying point for sustainability initiatives both on and off campus. The UBC Farm's role as an educational facility will help the UBC Farm System develop sustainable partnerships with other agribusinesses. For these reasons it is important that the UBC Farm work to develop its social capital. The UBC Farm's exceptional location and its proximity to large human populations give it almost unlimited potential to develop its social programs. In this manner a small, urban farm can do much more to improve sustainability through social mechanisms than it could through any ecological or economic efforts.

## **7. Epilogue: Recommendations to Campus Sustainability Office**

The UBC Farm's mission is not simply to produce food. Rather, within the context of a community food systems program area that incorporates education, outreach, research, and facilitates community partnerships, food production is one of the functions we fulfill. In order to increase the farm's food production role in the campus food system, the UBC Farm needs to improve the economic performance of its market garden enterprise. Though strong business planning and refining the production methods will help to improve the farm's economic position, stakeholders also need to recognize and support the valuable education, research, and social services that are provided by the market garden. When the farm's revenue sources are diversified and accurately represent not only the value of the food goods the farm provides, but also of the many social services the farm provides, then the farm will have good foundation to move forward.

Further research will inform the decision as to whether alternative marketing arrangements, including large-scale orders with UBC Food services, are a viable way to improve the farm's position in the UBC Food system.

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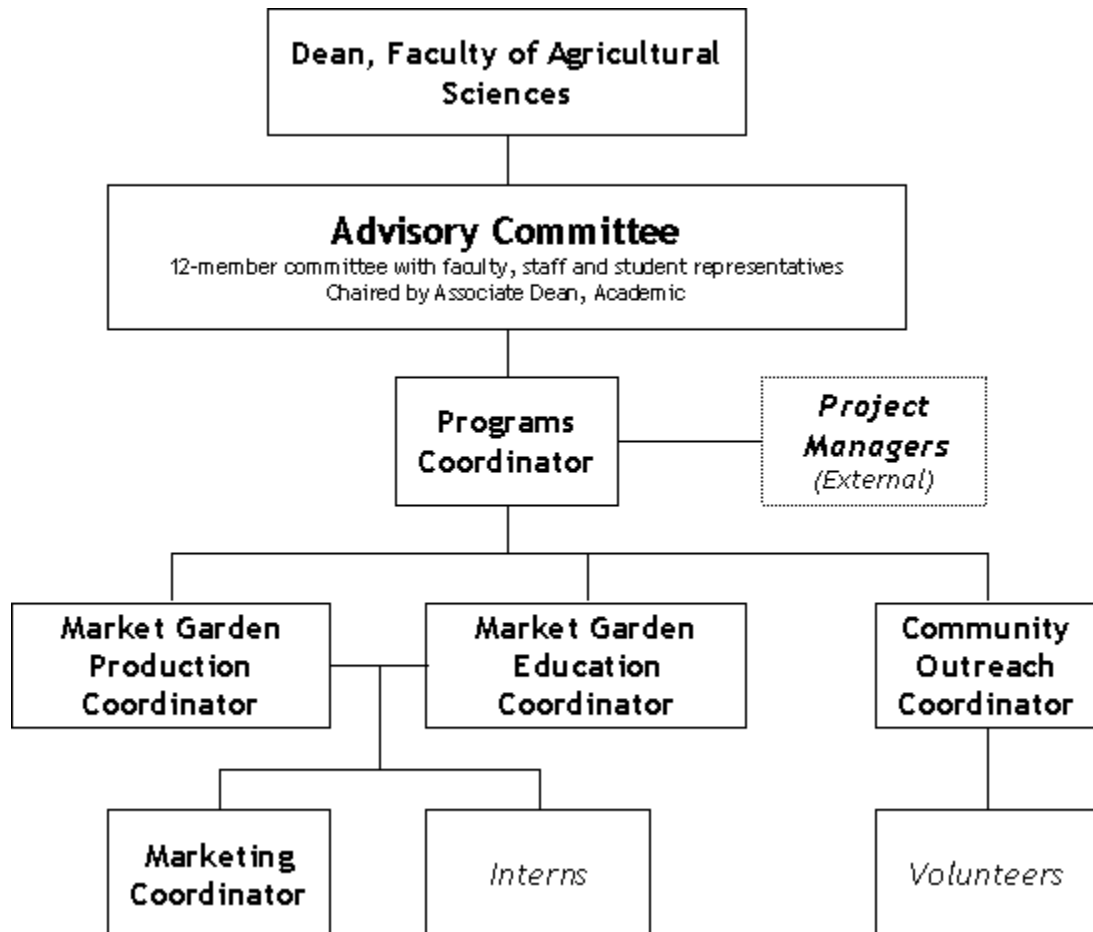
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## Appendices

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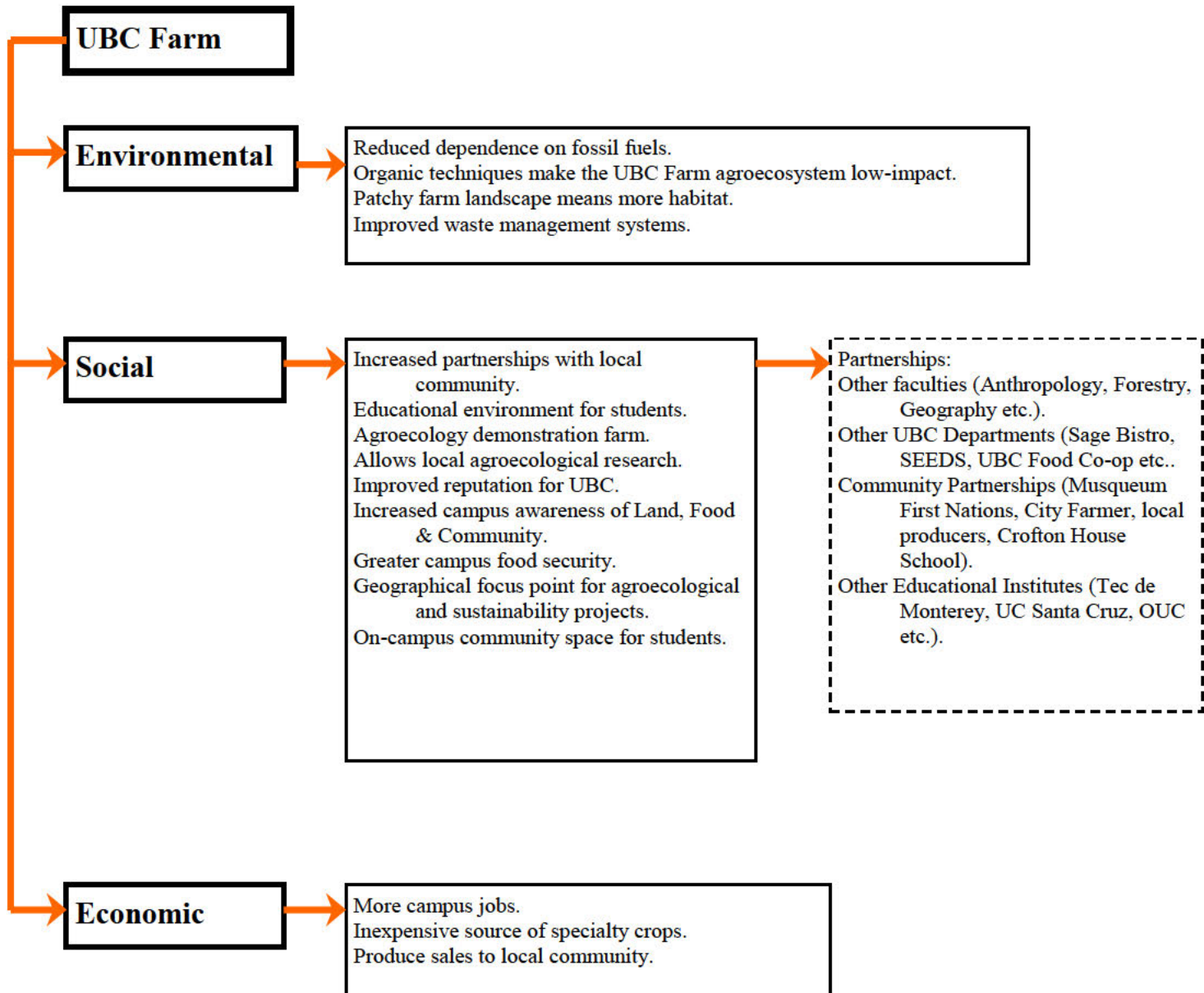
### Appendix A UBC Farm: Proposed Organizational Structure

The UBC Farm does not currently have the broadly representative governing body it requires to be a truly community and campus-wide organization. Currently, mostly due to shortage of resources needed to organize an executive council or board with representation from many faculties and groups, the UBC Farm's governance has fallen entirely back to the Faculty of Agricultural Sciences. Re-invigorating a good governance model is a priority for the farm.





## Appendix B Goods and Services produced by UBC Farm



## **Appendix C     Market Surveys**

Our group deemed that a market survey would help the UBC farm determine how it can best improve its production. Our survey is a nonparametric method of data collection. Using a survey that returns nonparametric data is advantageous because: it allows us to collect information on ordinal and nominal data, it does not require extensive information about the population being sampled, and nonparametric data is easier to calculate and understand than parametric data. Nonparametric sampling methods are not good for determining definitive statistics, but provide a useful tool for assessing general opinions.

Measuring the response rate (the number of surveys released in relation to the number of surveys completed and returned) will give surveyors some indication of the accuracy of any statistics generated by this survey. To improve the accuracy of a survey it is also important to employ a variety of survey methods, as the population demographics of the response differ depending on the mode in which the survey is delivered. Two general groups of people were identified as important to survey: current clients and the general UBC population. Current clients are probably best surveyed person-to-person, or with a short questionnaire to accompany every purchase from the UBC Farm Market. The general UBC population can also be surveyed employing a person-to-person approach, but caution must be used because survey statistics can be skewed if the surveyors are taking samples of convenience. A random e-mail and/or a telephone survey of the UBC staff, faculty and students would probably be the most efficient and powerful way to survey the UBC population.

## Appendix D Survey for General Community

The purpose of this survey is to measure the familiarity that the *average UBC community member* has with the UBC Farm, and to determine how they feel the farm can best meet the needs of the UBC community. This survey, if possible, would be conducted among a random sampling of UBC community members. If a true random sample is not attainable, then opinions could be sought via surveys in the SUB or other central meeting place. The goal would be to seek opinions of a population that is more broadly representative of the overall UBC population than a sample of AgSci students, for example.

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- 1) How familiar are you with the UBC Farm?
  - a) Not familiar at all (i.e. There's a UBC Farm?) → Skip questions 2 and 3
  - b) A little bit familiar (i.e. I've heard of it)
  - c) Fairly familiar (i.e. I've visited there before, or bought produce at the market)
  - d) Quite familiar (i.e. I've participated in activities there, subscribe to the newsletter, or am a regular market customer)
  - e) Very familiar (i.e. I am directly involved with one or more projects at the farm)
  
- 2) How did you hear about the UBC Farm?
  - a) Word of mouth
  - b) Internet (websites, email)
  - c) Road signs
  - d) Print media (Georgia Straight, Ubysey, etc.)
  - e) Other \_\_\_\_\_
  
- 3) About how often do you purchase produce from the UBC Farm Market during the summer?
  - a) Not at all
  - b) Less than once per month
  - c) Once per month
  - d) 2-3 times per month
  - e) Once or more per week
  
- 4) *This question asks you about what things are important to you when you choose where to buy produce. On a scale of 1 to 5, with 1 being not at all important, 3 being neutral, and 5 being extremely important, please rank the following factors:*
  - a) Location
  - b) Price
  - c) Quality
  - d) Quantity
  - e) Variety
  - f) Other (please specify)

- 5) PART II: (UBC Farm customers only) If you buy produce at the UBC Farm, please tell us how you would rank the UBC Farm Market in each of the categories we just discussed. On a scale of 1 to 5, with 1 being not at all satisfactory, 3 being neutral, and 5 being extremely satisfactory, how would you rank the UBC Farm in each of the following areas:
- a) Location
  - b) Price
  - c) Quality
  - d) Quantity
  - e) Variety
  - f) Other
- 6) On a scale of 1 to 5, with 1 being “strongly disagree”, 3 being neutral, and 5 being “strongly agree”, how would you respond to the following statement:  
“A farm is a necessary part of the UBC Campus”
- 7) On a scale of 1 to 5, with 1 being not at all important, 3 being neutral, and 5 being extremely important, please rank how important you feel the following functions are at UBC Farm or any university farm:
- a) Research
  - b) Teaching/learning for UBC students
  - c) Teaching/learning for primary students and community members
  - d) Community Services, such as the UBC Farm Market
  - e) Other (please specify)
- 8) How important is buying locally-produced food to you?
- a) Not at all important (i.e. I don’t know if what I purchase is local and I don’t care)
  - b) Somewhat important (i.e. I purchase local food if it is available and competitively priced)
  - c) Fairly important (i.e. I purchase local food as often as possible)
  - d) Quite important (i.e. I purchase local food almost every time I shop)
  - e) Very important (i.e. I only purchase food locally, unless impossible)
- 9) Are you aware that UBC Farm sells organically grown vegetables, fruits, flowers, and herbs grown right on campus during the summer and also sells produce from other local organic growers?
- Yes No
- 10) If you answered “no,” now that you know about the market, how likely are you to visit it this summer?
- a) likely (I will make sure that I visit the market)
  - b) possibly (I will visit the market if it is convenient)
  - c) unlikely (Please state the main reason why you would be unlikely to visit the market) \_\_\_\_\_

## UBC Farm Market Customer Survey

The purpose of this survey is to measure the responses and feedback *from current UBC Farm customers and/or workers*, and to determine how they feel the farm can best meet the needs of UBC food services.

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- 1) In order of importance, what changes are most essential to suit your needs as a customer?
- a. Shorter line-ups \_\_\_\_\_
  - b. More variety of produce, brought from local farmers \_\_\_\_\_
  - c. Selling processed/packaged foods, dry/baked goods, consignment \_\_\_\_\_
  - d. \_\_\_\_\_  
Larger quantity of food \_\_\_\_\_
  - e. Better quality of food \_\_\_\_\_

- 2) How satisfied are you with the (a) or (b) or (c) of produce available at the UBC Farmers' Market? 1=Very Satisfied    3=Satisfied    5=Neutral    7=Unsatisfied  
(Circle your response)

(a) Quality	1	3	5	7
(b) Quantity	1	3	5	7
(c) Variety	1	3	5	7

- 3) Rank these ideas in order of importance for the UBC community and the UBC Farm:
- a. Expanding the market garden \_\_\_\_\_
  - b. Introducing Box Schemes: \_\_\_\_\_  
(With a Box Scheme, farmers make several different boxes of fruit or vegetable varieties, and assign fair and proportionate prices to each different one for all consumers.)
  - c. Introducing CSA: \_\_\_\_\_  
(In CSA a consumer will purchase a share of the season's harvest. The money goes to farm necessities, and in return the consumer is guaranteed fresh, organic produce throughout the growing season.)
  - d. Expanding research and teaching \_\_\_\_\_
  - e. Other \_\_\_\_\_
- 4) The UBC Farm may undergo development in the near future. To combat this the farm must receive money faster than spending it, and at the same time we must prove the necessity of the farm for the UBC community. Please rank these in the order that you believe will earn the farm some "points" to decrease the possibility of development.
- a. More or closer partnerships with local suppliers in Vancouver \_\_\_\_\_
  - b. More student disciplines helping out on the farm to prove its importance for every faculty \_\_\_\_\_
  - c. Greater participation from Commerce students to come up with a plan to help the farm run \_\_\_\_\_
  - d. Other \_\_\_\_\_

## Sample questions for UBC Food Services

UBC Food services has expressed interest in purchasing more food from the UBC Farm, but notes that there are several barriers to establishing a more broadly-based contract. Based on Group 14's research from 2004, these include:

- Availability of products year round
- Providing the quantity required, the UBC Farm does not produce the volume or selection of products that are required to sustain UBC Food Service, as well a significant volume of what the UBC Farm sells is currently being sold at the Farmers Market
- The consistency of quality in appearance and size of products – as to what the general public/customers are used to seeing at the supermarkets

If the volume and selection were made available by the UBC Farm then details that would have to be worked out would include:

- Making the UBC Food Service's current produce suppliers aware that they are no longer the exclusive produce provider to UBC. This would have to be done as an addendum to the current contract. If the effect was significant in terms of volume reduction it could have an adverse effect on the UBC Food Service's purchasing price, thereby limiting the overall success of the partnership.
- Establishing a standard with the UBC farm regarding the quantity and selection of product needed, delivery times, cleanliness of product, quality and uniformity of product in terms of appearance, and payment terms.

Given these findings from our colleagues in group 14, and given the following rationale, we would proposed the following additional questions be discussed with UBC Food Services:

Rationale	Question
The UBC Farm is unlikely to ever provide year-round produce. Even local BC hothouse growers, who have immense amounts of capital and energy at their disposal, do not produce for the full calendar year.	Are there any opportunities to change the nature of the UBC Food Services' food procurement contracts to allow for seasonal suppliers? If this is at all a feasible option, what steps would need to be taken in order to proceed?
The UBC Farm currently has a limited amount of produce to sell to on-campus locations. However, if the UBC Farm does increase its volume to a point, existing suppliers may change their prices to reflect the fact that they are no longer the sole produce providers.	How much produce are you able to purchase from the UBC Farm before it is necessary to notify your existing suppliers that they are no longer the exclusive supplier to UBC? In other words, what is the "upper limit," in terms of costs and volumes, on the current "ad-hoc" purchasing arrangements, agreed upon between UBC farm staff and chefs in the kitchens?
Due to its small size, the it makes more economic and ecological sense for the UBC Farm to grow specialty, "niche" food products. These type of products, such as heritage fruit and vegetable varieties, are unlikely to have the consistent size and appearance demanded by UBC Food services. Currently, there is a market for these niche products at the Sage Bistro.	Besides the Sage Bistro, are there any UBC Food Services outlets or anticipated catering events that would be willing to purchase "niche" food products, such as heritage tomato varieties, young salad mixes, fresh basil, garlic scapes, zucchini blossoms, forest-harvested berries, or unconventional varieties of fruits and vegetables? How large would you estimate the market for these types of products would be within the scope of existing UBC Food services providers?

## **Sample Questions for other University Farms**

1. How much revenue is generated from the farm sales each year?
2. What are other sources of revenue, if any?
3. To what degree does the farm rely upon grants and donations?
4. Does the farm employ staff or student workers?
5. How many full-time equivalent positions are paid to manage the farm?
6. How much of the farm labour is performed by volunteers?
7. Are there other major expenses?
8. Do you consider the farm to be financially self-sufficient?
9. Is the farmland itself secure, or are there conflicts over its long-term use?
10. Does the farm have the support of the senior administration of the University/college?

## ***Production Analysis Framework***

<b>Desired Indicator</b>	<b>Benchmark</b>	<b>Primary data source</b>
Crop yields, on a per-crop basis	BCMAFF planning for profit series -- target yields for organic crops  BC yield averages for crops, 2001 census	Sales and harvest records  Field plans and seeding records  As units were not consistently applied (some by weight, some by count), this will be an estimate
Price per unit, on a per-crop basis	Wholesale and retail price records from local distributors, grocery stores, and box programs	Sales and harvest records
Revenue per unit area, on a per-crop basis	BCMAFF planning for profit series -- target revenues for organic crops  BC yield averages for crops, 2001 census	Sales and harvest records  Field plans and seeding records
Direct expense per unit area, on a per-crop basis	BCMAFF planning for profit series -- suggested direct expenses for organic crops	Farm financial records (FMIS, internal accounting records)  Volunteer labour records  Staff log books
Return per unit area, on a per-crop bases	Total returns sufficient to cover indirect expenses	Revenue - Direct expense  This would be the single most useful economic indicator, but the most difficult to calculate due to uncertainty of its dependent indicators.



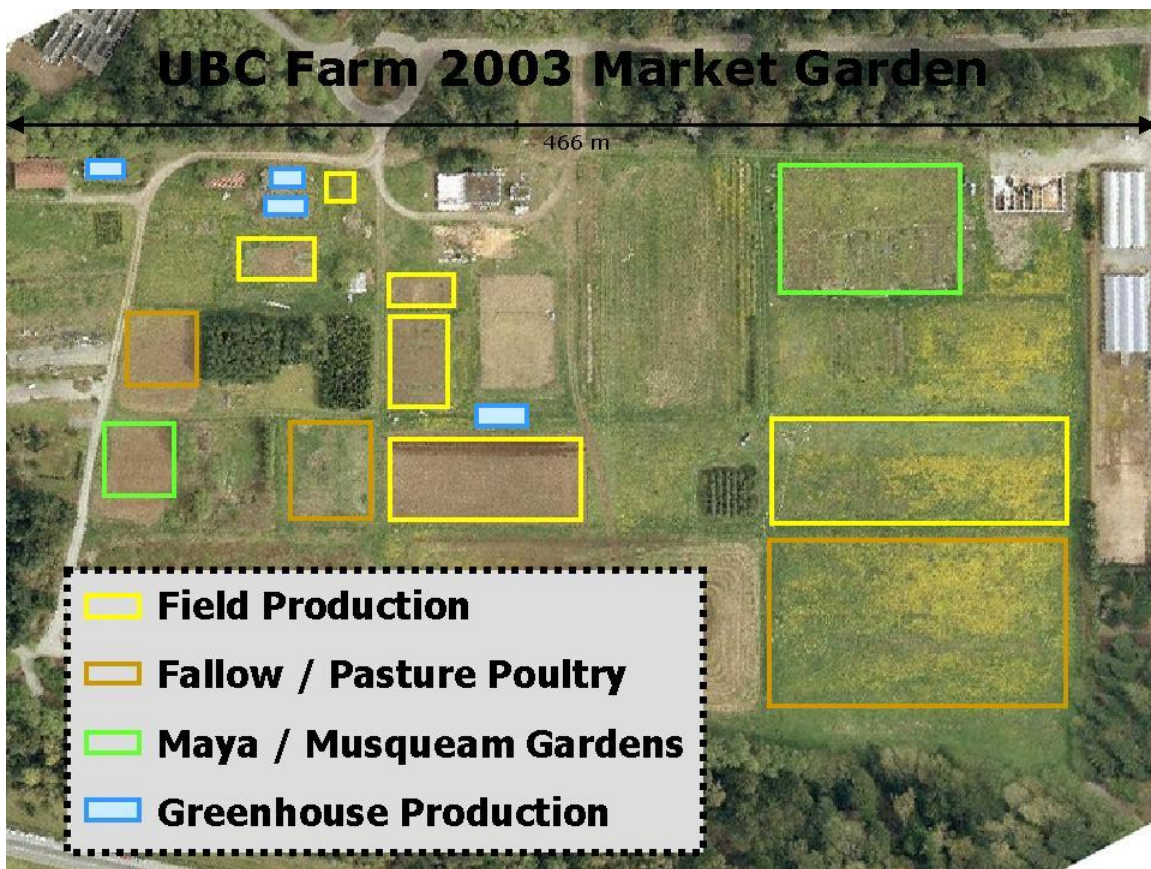
## ***The UBC Farm Business Model: An analysis of critical components***

	<b>Organization and Governance</b>	<b>Marketing</b>	<b>Production</b>	<b>Human Resources</b>	<b>Finance</b>
<b>Strengths</b>	<p>Several strong champions in Faculty of Agricultural Sciences</p> <p>Staff-driven management allows operation to be relatively responsive</p>	<p>Unique placement: only farm in the city of Vancouver</p> <p>Good relationships with regular customers established</p> <p>Demand exceeds supply</p> <p>Good proximate market at UBC</p>	<p>Good soils, sources of organic material, and basic equipment and infrastructure available</p> <p>Considerable room for expansion of market garden</p> <p>Production has become more efficient</p>	<p>Dedicated, inspired young staff and volunteers</p> <p>Growing interest from interns</p> <p>Volunteer labour can potentially provide a comparative cost savings</p>	<p>Revenue sources have diversified in last three years</p> <p>Production has become more financially efficient</p> <p>Small grants and donations continue to be secured</p> <p>Faculty support continued for 2004</p>
<b>Weaknesses</b>	<p>Lack of support in upper level administration</p> <p>Lack of strong, legally binding governance model</p> <p>Site is still split between several faculties</p>	<p>Services, particularly with fees, poorly defined</p> <p>Isolated location of farm relative to other campus amenities</p>	<p>Cannot currently meet requirements for consistency and volume in large orders</p> <p>Tracking and accounting system under-developed</p>	<p>High staff turnover and lack of continued funding support</p> <p>Student staff are often inexperienced</p> <p>Over-filled job descriptions and minimal security can lead to increased turnover</p>	<p>Farm operation still highly unprofitable</p> <p>Market garden still highly unprofitable</p>
<b>Opportunities</b>	<p>Recent change in advisory committee may allow for creation of new governance body</p> <p>Possible growing acceptance in senior administration</p>	<p>Increased residential population on campus (yes, a double-edged sword)</p> <p>Large-scale purchase arrangements with on-campus food providers</p> <p>Increased product differentiation; value-added products</p> <p>On-campus retail outlet</p> <p>Establishment of fee-for-service</p>	<p>Expand production areas</p> <p>Increase specialty and high-value crops</p> <p>Utilize on-site resources, for example greenhouses, more fully</p> <p>Establish perennial crops and increased animal component</p>	<p>Expand internship program for both domestic and international students</p> <p>Partner with other campus agencies to co-manage volunteers</p>	<p>Increased revenue for market garden</p> <p>Budget for 2004 is currently balanced</p> <p>Many granting agencies have not been approached</p> <p>Internship program brings in net profit</p> <p>More fee-for-service projects</p>
<b>Threats</b>	<p>Lack of clarity and communication will lead to conflict among site users</p> <p>New governance could reduce day-to-day responsiveness</p>	<p>Service fees reduce site users</p> <p>Production isn't able to meet volume and consistency requirements of purchase agreements</p>	<p>Lack of continuity prevents many high-value perennial crops from being established</p> <p>Lack of legal approval prevents live-in caretaker to initiate livestock program</p>	<p>Lack of funds</p>	<p>Withdrawal of faculty funding in 2005</p> <p>Financial performance of market garden does not improve quickly enough</p>

## **Market Garden Map and description**

Currently, the market garden occupies about 2.4 acres (1 ha) of cultivated land, two hoophouses, and a greenhouse for starting transplants. The intensively cultivated section of the garden is currently just under 1 acre. The remaining field areas produced pumpkins and corn in 2003. One of the hoophouses grew tomatoes and peppers, and the other grew flowers. All production practices at the market garden comply with COABC organic standards, though the produce is not officially certified.

Public markets occur every Saturday throughout the summer in the Harvest Hut building on the UBC Farm site. This means that the UBC Farm market is the only market in Vancouver that is actually located at the farm production site. Proximity to the fields and interaction with the students who grow the food provides for the kind of social connections identified as a key component of a localized food system (Kloppenburg, Pretty). The Market is 1.4 km from Hampton place, and 2.8 km away from either the bus loop or the Macmillian building. Members of our group, and other students in AGSC 450, expressed how the relatively remote location of the farm was a marketing challenge.



**Indicators of Sustainability for the UBC food system and the UBC Farm**

<b>Aspect of Indicators</b>	<b>2003's Group 14 Indicators</b>	<b>2004's Sustainability Indicators for the UBC food system</b>	<b>2004's Sustainability Indicators for the UBC Farm</b>
<b>Ecological</b>	Food mileage of produce for 3 major food providers at UBC	Percentage of recycled and composted wastes on campus  (Referring to the UBC Waste Management Annual Report)	Water use of the UBC Farm  (installing water meters on the farm)
<b>Social</b>	Awareness of nutritious foods among students, staff, faculty, and residents at UBC	Awareness of the UBC Farm, nutrition, and health at UBC  (Conducting a biannual qualitative survey of students and residents in UBC)	Awareness and involvement in the UBC Farm  (Obtaining number of student involvement, volunteer hours per week, total visitors to the farm, and diversity of faculties' involvement)
<b>Economic</b>	Affordability of nutritious food on campus	Affordability of nutritious food on campus  (Conducting a consumer survey to determine percentage of income spent on nutritious food for a typical UBC resident)	Profitability of the UBC Farm  (reviewing the UBC Farm financial reports)

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