

UBC Farm: Contributions to a Sustainable Food System

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UBC Farm: Contributions to a Sustainable Food System



AgSc 450, Group #16

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Abstract

As a working team, our group collectively assessed the sustainability of the UBC food system and identified the ways in which the UBC South Campus Farm (UBC Farm) can contribute to a sustainable food system. Specifically, we have examined the potential of the UBC Farm to supply healthy, diverse food products to various local UBC outlets. Through interviews we discovered that the productive capacity of the farm can be increased to meet growing demand for local foods, either through small-scale animal systems, greenhouse production, or expanding the UBC Market Garden project. The barriers which hinder these expansions were also identified, and include the following: degraded or missing infrastructure, government regulations concerning meat production, and limited market opportunities for non-processed food.

This document also serves as a “stepping stone” for future students to use by identifying areas for future research. Future students should examine the possibility of processing food from UBC Farm, labeling the food as locally or organically grown, incorporating wetland and forested areas in agriculture production, and methods of integrating animals back onto the farm. By examining where the “holes” (or weaknesses) in the current food system lie, our group envisioned the ways in which the UBC Farm could fill these “holes” and fulfill our utopian view of a sustainable food system.

Introduction

As a group, our members were composed of students from different cultures and backgrounds. As such, each member brought with them different values and ideas to our discussions but our underlying values were primarily from a community-based, and ecocentric perspective. These values helped us form a utopian view of what a sustainable

food system should encompass. Of primary concern was that all food production should be done in an ecologically sound manner whereby production actually increases the quality of soil and water, without exploiting the natural resources. Our ideal food system would also rely on local food production, processing, distribution and marketing with the use of crops that are suited to the environment. We feel that having a local-based food system not only allows consumers and producers to have a vested interest in the land, but it also gives the community the power to self-regulate their food system instead of relying on external forces. Thus, the central values of independence, self-control, pride and beauty were all important in shaping our group's vision for a sustainable food system. It was felt by some group members that if farmers and consumers were not able to make a reasonable profit in their food system, it would be impossible for the food system to be truly sustainable. Thus, a high standard of living and wealth were mentioned as important values in our food system.

Currently, the UBC food system has a number of weaknesses which our group has identified for improvement. There is a decreased variety of food available to students, and little opportunity for local products to be sold on campus either through market-places or as value-added products (ie. salads, soups, sandwiches). The lack of local product choices in our food system was our major concern and therefore, formed the basis for this group paper.

Role of UBC Farm in the Food System: Productive Capacity of the Farm

Located south of 16th avenue, the UBC South Campus Farm is the only farm in the Greater Vancouver Area and is of vital importance to the UBC food system. The

farm is located on approximately 55 hectares of land, which includes large, open and forested areas that support crop, animal, forest, and wetland elements (UBCFAS, 2000). The primary mandate of the farm is the provision of learning for students, faculty, staff and community members, and to produce sustainably certified products that enhance the visual landscape (UBCFAS, 2000). With these goals, the UBC Farm provides the perfect setting for students to learn about a sustainable food system as well as providing products to the UBC food system.

The stakeholders and players in the UBC food system include students, staff, faculty, food producers, UBC food services and the UBC Farm. But it is ultimately the consumers who are the driving force for change. Through surveys, the students and staff (more than 50%) have indicated that they consider the variety of food at UBC to be “fair to poor”, stating that there is not a huge selection, and that the food is mostly fast or greasy food (Farrell Research Group Ltd., 1996) It has been identified that there is a growing demand for locally produced organic food that elicits a feeling that the food was “made just for me” rather than mass produced (Farrell Research Group Ltd., 1996).

The UBC Farm can fill this “hole” by growing healthy food for sale in local UBC food outlets. For this to occur, the productive capacity of the farm will need to be increased. Our group’s method of research relied on interviews with Derek Masselink (UBC Farm Project Coordinator), and Ted Cathcart (UBC Farm Manager) to provide us with a context of how UBC Farm fits into the UBC food system.

Market Garden

Currently, the UBC Farm has the capacity to produce forages, vegetables, berries, mushrooms, animal products and forestry products. The Market Garden project at UBC Farm provides a variety of these products and was identified by our group as a starting point for increasing the farm's productivity. By producing products such as lettuce, beans, squash, cucumbers, cabbages, pumpkins, artichokes and corn, this market could potentially supply local products to UBC markets. The garden is only one acre in size and products are sold to limited markets such as Green College, St. John's College, and directly to consumers at MacMillan building, SUB, and on the farm. There is a lot of interest from individuals who support this local production as well as from Food Services to purchase greens and vegetables (Masselink, 2002).

With the past investment of money and labour on clearing, rock picking, subsurface drainage and irrigation equipment (UBCFAS, 2000) future expansion of the market garden looks promising. This coming summer two acres will be cultivated and production increased by over 100%. After an initial period of slow production due to start-up costs, and learning anew, the farm has secured a market and expects to break-even after three years (Masselink, 2002). The farm does not rely on pesticides but instead makes use of biological control (chicken grazing), companion planting, and crop rotations to handle all pest problems. The use of fertilizer is mainly from dolomitic lime, sheep and chicken manure, green manure crops, and inorganic sources. By using these practices the farm can continue to be ecologically sustainable and produce a valuable product.

Livestock

As part of a sustainable agricultural system, the integration of animal components is critical. Livestock and poultry help to cycle nutrients through the production and application of manure, and can make use of non-productive land for grazing. Currently, the only animal products that leave the farm are eggs from chickens and quail. The chicken eggs are sold to dining societies and students, and quail eggs are sold to specialty markets. Other animals on the farm include sheep for medical research, and cows for student research. The expansion of animal production would aim to get the animals out of the barns and onto the field according to Derek Masselink. There would be an emphasis on small-scale field-based systems with animals being fed by the land and using minimal inputs. There is the possibility of using sheep for milk, wool and meat, as well as pigs and poultry for slaughter. Poultry also play a role in “cleaning up the land” after crop production and can help control pest populations. Working horses could replace tractor use and a small number of cattle could be used for milk production (Masselink, 2002).

Marketing

By reducing the number of intermediaries between production and consumption of food, the UBC food system can achieve a higher level of sustainability. This allows farmers, consumers, and processors to have relationships through direct contact and emphasizes strong communities based on fairness and equity instead of motivation for profits (Kloppenburger *et al.*, 2000). Currently, the UBC Farm sells products to Green College, St. John’s College, and to students at MacMillan building and the SUB.

When selecting a market, the UBC Farm sells to the highest bidder, and therefore outlets such as Agora and the Barn are not options. Instead, UBC Farm wants to target high-end retailers such as Sage Bistro, and the Pendulum, which are focused on food quality and are willing to pay a premium price for the produce (Masselink, 2002). However, these outlets sell their food at higher prices and may not be affordable by all students. As an indicator of sustainability, all people should have equal access to healthy food, and our group does not think that selling solely to high-end retailers meets this criteria.

Barriers to Expansion

The major barrier facing meat production on UBC South Campus Farm is that animal slaughter and handling methods must meet federal inspection standards to ensure human health and animal welfare (Cathcart, 2002). Meeting these requirements can prove to be labour and capital intensive. In addition, since the primary mandate of the farm is focused on education instead of production, there is an emphasis on the quality of learning experience rather than the quantity of output (Masselink, 2002). Therefore, a majority of animal systems might be inefficient in terms of supplying products to the food system.

Although there is a demand for local products from Green College and dining outlets, there is reluctance among institutions such as Food Services to buy non-processed food from UBC Farm due to costs and labour issues. Currently, UBC Farm does not have the facilities to prepare food and this is preventing them from selling to such outlets as Food Services.

In order to supply the seasonal demand of the fluctuating student population, the farm must be productive during the fall and winter months and find alternative markets during summer months. During the winter it is hard to grow crops outside due to extreme rain, minimal sunlight, and low temperatures. And in the summer, student population is low and farm projects often become abandoned. Maintaining interest in UBC Farm is essential to guarantee that the productive capabilities of the land are realized. It is hoped that the UBC Farm can feed 2000 people per year (Masselink, 2002), but in order to do so these barriers must be overcome.

Future Directions for Research

As our group's vision for a sustainable food system took shape, we realized that there were many ways for UBC Farm to contribute, but with limited time and resources these ideas were not fully developed in this paper. Therefore we would like to offer these ideas for future students to start where we left off.

Greenhouse production of vegetables during the winter months is a way for products to be grown year-round at school to meet demands and maintain student interest in the farm. Students could look at how existing infrastructure could be upgraded and the type of products greenhouse production could contribute to the food system.

Our group identified the lack of processing as a major barrier to selling food to places like Food Services. A cost-benefit analysis could be performed by agro-economic students to determine the feasibility of a food processing program at UBC Farm, and whether there is a large market demand for processed foods.

With niche markets opening up for organic and humanely produced food products, there is the opportunity for the farm to fill these niches. In order to be

successful, a labeling program must identify UBC products as being unique. Future students could look at the acceptance from consumers for labeled foods as well as the costs of a labeling program.

Our group identified livestock operations as a major weakness in the current food system. We would like to know what kind of livestock would be best suited to the farm, what would be an optimal stocking density, what type of forages would need to be grown, how to process and market animal products, and what the costs of upgrading the animal facilities will be.

The farm is also composed of wetland and forested areas and we would like to know how these resources could be incorporated into a sustainable food system. What types of products could they produce, and what is their ecological significance to the farm? With the impending threat of development, it is important that we have a good idea of the ecological value of the land and not rely on market value as the sole indicator of the land's worth. The diversity of species within the area should be monitored to determine the impact that our farming practices have on the land.

Recommendations

As a group we offer the following recommendations to the UBC Farm for contributing to the UBC food system in a sustainable manner:

1. Our group believes that a labeling program would be a valuable tool for identifying UBC products. A label should inform buyers of where and how the food was produced and identify the distance traveled from farm to market. The label should also include information on how to prepare the food, and recipes for eating with the seasons.

2. Currently, UBC Farm has neither the capacity nor facilities to supply large amounts of processed food to UBC Food Services. Our group feels that UBC Farm would be better served to sell their products to smaller outlets that prepare their own food and can afford to pay higher prices for the produce. Food should continue to be made available through direct channels such as farmer's markets, but future expansion could include a local marketplace at the SUB, food co-ops, subscription farming, food stamps, or letting people grow their own food in garden plots at UBC Farm. This will achieve a wider distribution and equitable access to food.

- 3 Our group feels that the livestock component of UBC farm is underutilized and that a return to small-scale animal production would diversify the farm and supply products for the UBC food system. Animals such as horses, pigs, sheep, cattle and poultry should be integrated into the food system with the focus of providing secondary animal products such as milk, wool, and eggs. Animals such as pigs and chickens could also be used to assimilate food wastes and culled produce.

- 4 Processing of locally grown food can create value-added products for sale to UBC Food Services or directly to customers. UBC Farm facilities should be upgraded to provide such products as wine, pickled vegetables, flower bouquets, meat products, or apple cider. This will require the cooperation of Food, Nutrition, and Health Science students.

As agriculture is becoming more specialized there is a growing concern among consumers to know where and how their food is produced. This places great pressure on the farmer to not only supply a product which is sustainably grown but, which can also be competitively priced and supplied year-round to satisfy customer preferences. By following our group's recommendations, the UBC Farm can become a sustainable participant in the revival of our local food system.

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