

UBC Social Ecological Economic Development Studies (SEEDS) Student Report

**UBC Food System Collaborative Project V Agricultural Sciences 450: Land, Food &
Community III**

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AGSC 450

April 14, 2006

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Agricultural Sciences 450: Land, Food & Community III

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Abstract

The ultimate goal of UBC Food System Project is to improve the sustainability of the food system at UBC. Our team's specific task was to research how seasonal and local produce can be incorporated into university food provider menus. This must be done without compromising taste, nutritional quality and affordability of the menu items, or the economic viability of the businesses associated. In order to achieve this task we felt it necessary to set guidelines, one of which was to define the local food system to be within an eight hundred kilometer radius of the food provider. Our group decided to focus on Bernoulli's Bagels as our model food outlet for this project and based most of the seasonal produce substitutions on UBC Farm products. To achieve our task successfully, we obtained relevant information from Bernoulli's Bagels and UBC Farm. Based on the information gathered, we incorporated UBC farm produce into Bernoulli's current menu and developed seasonal specials from the Farm, using recipes we created. We also felt that increasing the level of awareness about the food system as well as the willingness to consume more locally produced products was an important component for the project's success. Therefore, we attempted to address the need for increased awareness on campus through menus, promotional pieces and word of mouth. Finally, to fill in some of the gaps we uncovered, we included recommendations for next year's AGSC 450 class and for our fellow collaborators.

Introduction

The task of Scenario Two of the UBC Food System Project (UBCFSP) was to incorporate seasonal British Columbia (BC) food items into the University of British Columbia (UBC) food provider menus. This involved the analysis of menus from restaurants under the management of both the Alma Mater Society Food and Beverage Department (AMSFBD) and UBC Food Services (UBCFS). While the Scenario's primary function was to include local produce into the menus of UBC food providers, it was also important to consider the ecological effects of such actions, and its impact on the sustainability of the food system. Incorporating local produce into the university food menus will allow students, faculty and staff to enjoy more nutritionally rich, fresh foods while reducing the impact that food transport has on the ecosystem.

In order to incorporate local produce into the menus of the food providers on campus, we reviewed the previous findings of UBCFSP that focused on the feasibility of the localization of produce used by UBCFS and AMSFBD. Their findings showed that ample produce is available locally and can meet the needs of UBC; and that it is feasible to incorporate produce into the menus of UBC food providers. However, due to the unique climate of BC, what can be grown locally and when it can be grown is somewhat limited.

A three tiered approach was taken to address this project. To better understand the purchasing procedures, preferences and their receptiveness to local food producers, an interview with the general manager of AMSFBD was arranged. The menu of Bernoulli's Bagels was analyzed and compared to other menus from similar restaurants off campus and competing restaurants on campus as well. Similarly, in order to understand the nature of UBC Farm's business and what produce is available and when, an interview with the director of the Farm was also arranged. Then recipes were researched and developed, incorporating seasonal produce

from the UBC Farm. Recommendations to each relevant stakeholder were then made to aid in the implementation of the newly developed seasonal menu items and the transition to a more sustainable food system.

Problem definition

The problem is defined as follows: research and propose ways of incorporating seasonal BC food items into UBC menus without compromising taste, nutrition, affordability or profitability, while promoting sustainability at the same time. It was decided that the most effective way to tackle problem would be to focus on one supplier and one food provider, UBC farm and Bernoulli's Bagels, and use them as a model for others.

Definition of "local"

Local produce is defined as that which is grown firstly, within an eight hundred kilometer radius of the food outlet and secondly, grown within British Columbia by local independent farmers.

Connection of Scenario Two with the Broader Problems of the Food System

The current food system is plagued by problems related to the environment, customer demand, lack of education, and affordability. Scenario Two of the UBCFSP, which has the task of incorporating local and seasonal food items into UBC campus food provider menus, faces these same issues. Through collaborative work efforts however, it is attempting to find solutions to these problems.

Environmental pollution is being addressed through an increase in support for local food producers. Buying food from local sources reduces food transport distances and will result in a decrease in pollution and green house gas emissions. The lack of knowledge about the benefits of buying locally has resulted in non-local consumption patterns that cannot be sustained

ecologically. Scenario Two addresses these problems by promoting education and awareness of the importance of buying local food, by incorporating local items into menus of UBC food service outlets.

The results of the research done by Scenario Two will hopefully encourage other food service operations to incorporate local and seasonal items in their menu. Ideally Scenario Two will identify and offer solutions to these food system problems, which will serve as a model for other food service providers in their quest to be more ecologically sustainable.

Group reflection on the Vision Statement

The UBCFSP vision statements is composed of seven guiding principles organized under three dimensions: ecological, economical, and social (Richer, 2004). The ultimate goal of the seven guiding principles is to "...protect and enhance the diversity and quality of the ecosystem and to improve social equity" (UBCFSP, 2005). We all agreed that a crucial component in achieving sustainability in a community is to have food that is grown and produced locally. A localized food system will increase food security as it is more self reliant and less dependent on external sources. It reduces emissions and hence pollution due to the decreased food miles. It also brings awareness to the community about food production and environmental health. Another important factor in diversifying and improving the quality of the ecosystem is waste management, the second guiding principle, which states that waste must be recycled or composted locally. As a group, we all agreed with this principle. We think that not only should waste be recycled or composted locally, but there should also be a program in place to reduce excess waste. For instance, the UBC waste reduction program and the UBC sustainability office have successfully reduced garbage disposal at UBC and increase the amount of recycling. The third principle states that food is ethnically diverse, affordable, safe, and nutritious. As a

multicultural country, some group members believe that it is important for Canada to have a food system that is ethnically diverse. However, other group members noted that in order to make foreign ingredients more affordable for preparing ethnic food, foreign produce would need to be grown locally in Canada. The introduction of foreign plants and animals could have severe consequences on the balance and health of the ecosystem and might not be a practical option. While food should be ethnically diverse, affordable, safe, and nutritious, it should also be local and ecologically friendly. The fourth principle is for food providers and educators to promote awareness among consumers about cultivation, processing, ingredients and nutrition. We agreed with this idea but felt that education about food production should be targeted to elementary and secondary school students. Moreover, the educational programs should also make connections to the environment and agriculture to increase ecological awareness. While sustainability is achieved by an on-going effort to protect and enhance the quality of the environment, the next generation should be taught to preserve and care for the environment.

The fifth principle relates to the idea that food brings people together and enhances community dynamics. Community dining is a very effective means of strengthening the bond among individuals in a community. Oral communication is one of the most effective ways to share knowledge and information. People in the community will become more aware of the food system and ecological sustainability if information regarding the subject is shared.

We also agree with the sixth principle, that food should be produced by socially, and ecologically conscious producers. It is essential that producers be aware of the social and ecological impacts of different farming styles, methods, and techniques in order to contribute effectively to sustainability. Since profit is the major driving force for any industry, our group thinks that providers should be paid with fair prices, in accordance with the seventh principle. If

farming becomes unprofitable, fewer people will farm, reducing the number of farms worldwide, concentrating the business of food production in the hands of a few. Food crisis will likely occur for those who are unable to pay monopoly prices. In order to prevent this from happening, the market should pay fair prices to producers in order to keep their interest in growing and producing food products.

Methodology

To incorporate seasonal Farm food items into campus food provider menus, we chose to focus on Bernoulli's Bagels, an outlet of AMSFBD. Bernoulli's Bagels is primarily a breakfast and lunch food outlet located in the main floor of the Student Union Building (SUB). They make their "Montreal style" bagels on site throughout the day and serve a small selection of food items with their main focus being bagels. Their menu items including the classic bagel with cream cheese, bagel sandwiches and bagel melts; their top sellers are the Clubhouse and Turkey Gouda. Soups, fair trade coffees, fresh squeezed fruit and vegetable juices are also sold at Bernoulli's.

Bernoulli's is run by the AMSFBD, a component of the Alma Mater Society (AMS), the student society of UBC. Bernoulli's employs primarily students from UBC. For procuring their ingredients, Bernoulli's, through AMSFBD, utilize the following providers: Snow Cap for baking supplies; Central Foods for produce; SYSCO for meat products; and Saputo for dairy products.

We chose Bernoulli's Bagels for our case study for several reasons. First, it is an outlet for the AMS, a body that is responsible to the students of UBC. Because of this, students have a say in how these food outlets operate, and ultimately, they are an expression of what the student body cares about. Secondly, due to its small nature in sales compared to other AMS food service outlets such as Pie R Squared and the Pendulum, we believe that it is feasible to incorporate the

limited amount of seasonal produce required from the UBC Farm into their menu items without compromising the Farm's production limit.

In order to obtain information from Bernoulli's Bagels and UBC farm, we first interviewed Nancy Toogood, the manager of the AMSFBD, to discuss her thoughts and aspiration for Bernoulli's Bagels. Our questions centered on incorporating seasonal farm specials to the current Bernoulli's Bagels menu and the creation of new seasonal items. (See Appendix B) We also contacted Greg Rekken, UBC Farm's Production Coordinator, to find out what seasonal produce can be supplied by UBC Farm (See Appendix A). He provided us with a list of produce currently grown at UBC Farm and the months that they are available (see Appendix A). After speaking with Nancy and Greg, we analyzed the current menu of Bernoulli's Bagels and incorporated UBC Farm seasonal produce into current menu items as well as creating new seasonal items that focus on UBC Farm produce. Finally we incorporated our recipes into the Bernoulli's Bagels menu and made a "Sample Summer Menu." (See Appendix C)

Findings

Our group felt that UBC Farm is the most suitable supplier of seasonal produce for Bernoulli's Bagels. First, according to the 2005 UBC Farm Produce Availability List, the Farm grows different produce each season, such as onions in the summer and pumpkins in October plus many other seasonal vegetables that could be highlighted for each season. Secondly, the produce from the Farm is fresh from harvest, which is a rarity compared to large scale produce suppliers. Thirdly, the Farm is able to provide produce in sufficient quantities for Bernoulli's limited demand with out raising the current production levels.

The flexibility of the Farm in terms of the range, quantity and freshness of produce that it can confidently supply Bernoulli's is the greatest advantage over other local suppliers. As Nancy

Toogood emphasized during our interview with her, it is impossible for the AMSFBD to deal with different suppliers for produce since they order from the same supplier – Central Foods– for all their produce (Toogood). It is simply impractical for Bernoulli’s to obtain local and seasonal produce in limited quantities from a multitude of different suppliers (Toogood). Also, since the Farm is situated on campus, delivery economic and environmental costs would be minimal.

The UBC Farm grows around fifty different crops year-round, plus numerous edible flowers and herbs (see Appendix A). A large number of crops can be found during the spring and summer months, such as broccoli, spinach, squash, and cucumber (see Appendix A). Some produce is only available during the summer, such as tomatoes, peppers, eggplant, and corn (see Appendix A). A small number of produce are available during the winter, or all year-round, such as kale, salad greens, and sage (see Appendix A). By working around the produce availability from the Farm, it is easy to incorporate seasonal produce into the current menus at Bernoulli’s as well as creating new menu items with ingredients almost exclusively from the Farm.

One way to incorporate seasonal produce into the menu items at Bernoulli’s is to replace current ingredients used in these items with those from the Farm. Ingredients in numerous menu items can be found in the UBC Farm depending on the season. For instance, lettuce in the bagel sandwiches and bagel melts can be provided by the Farm from February through November (see Appendix A). Tomatoes in these bagels are available during late June to mid-September, and cucumbers from July through mid-September (see Appendix A). The vegetables in the Garden Bagel (vegan) can be supplied by the Farm and could be easily rotated to account for seasonal produce changes. The Mediterranean Bagel Melt contains eggplant and onions which can be supplied by the Farm from June to September (see Appendix A). Peppers used in the Soprano Bagel Melt can be substituted with those from the Farm during late June to mid-September (see

Appendix A). The basil used in the Four Cheese and Tomato Bagel Melt can also be supplied by the Farm (see Appendix A).

In addition to produce, free range eggs can also be employed from the Farm. These free range eggs can replace those used in Breakfast Bagel and the Just Like Mom's Bagel Sandwich.

The current menu offered at Bernoulli's also includes freshly squeezed vegetable juices. These can also be replaced with fresh seasonal vegetables from the Farm, depending on the availability. According to Greg during the interview, strawberries are available in June as well as wine grapes, which can also be made into juice (see Appendix A).

To facilitate the incorporation of seasonal menu items into Bernoulli's Bagels menu, we came up with a number of new recipes that contain ingredients from the UBC Farm, as well as ingredients that can be obtained by Bernoulli's Bagels current suppliers. In total, ten bagel sandwiches and two vegetable dishes were created. These include: UBC Farm Poached Eggs with Baby Spinach Bagel; Cabbage and Avocado Bagel; Tuna and UBC Farm Vegetable Salad Bagel; Feta cheese, Turkey, and UBC Farm Vegetables Bagel; UBC Farm Pumpkin Cream Cheese Bagel; Goat Cheese and Spinach Bagel; Turkey and Carrot Bagel Sandwich; Savory Farm Fresh Egg Salad Bagel; UBC Farm Brunch Benny; Fresh UBC Farm Veggie Bagel Sandwich; UBC Farm Fresh Roasted Vegetables; and the UBC Farm Fresh Salad.

Since the ingredients for these sandwich bagels would be obtained from the UBC Farm they would not all be available year round, they would have to be sold as seasonal menu items. Appendix A shows the different seasons in which these menu items can be offered at Bernoulli's Bagels. The recipes and pictures of these seasonal menu items can be found in the Appendix B.

In addition to incorporating these seasonal items into the menu, they also have to be promoted. Promotion is aimed at informing customers of Bernoulli's Bagels that the product they

are buying has components from the UBC Farm. It is also intended to explain the importance of consuming local foods. Promotional ideas are discussed later in this paper under “Materials and Activities Prepared”.

Discussion

There were many issues encountered that could have been interpreted as obstacles to incorporating seasonal local food items into Bernoulli’s menu. For example, the narrow focus of Bernoulli’s menu limited the scope of what food items could actually be introduced as alternatives. However, it was discovered that this fit well with UBC Farm’s current produce availability and their constraints on increased production. The relatively small quantity of produce required by Bernoulli’s, due to the nature of its menu, turned out to be a great opportunity to showcase locally grown produce without having to make significant changes to any links in the food system.

Similarly, one of the primary criteria the general manager of the AMSFBD placed on the project was to keep the number of suppliers to a minimum. There was an explicit desire not to increase the amount of administrative work that is required by product procurement. Focusing on one local food supplier therefore was central. Using a supplier whose production philosophy is already closely tied to sustainability, which is eager to encourage and help their customers, seemed to be the most logical choice. It was a bonus that UBC Farm’s niche is unique and wonderful.

Next, produce availability was thought to be constrained considerably by the growing season. If farm fresh items were to be included seasonally as “Seasonal Specials” there would be an absence of fresh produce at the end of the growing season, October through to April. Yet, because of the combination of mild winters and well drained soils, it was shown that UBC Farm

is able to extend their growing season somewhat (Rekken). This year for example spinach, broccoli and cauliflower were available in early March (Rekken). Salads grown in hoop-houses are available year round and many items can be stored (Rekken). Herbs can be dried, and beets and carrots can be stored right in the ground creating no immediate need for additional storage facilities (Rekken). Things like pesto, made from fresh basil, can also be frozen (Rekken). The dilemma only required a little imagination and know-how.

The unpredictability of climate and pests, as well as markets (the Farm also supplies the public at farm markets and restaurants), puts pressure on the Farm's supply too, influencing what produce is on hand and when. Therefore availability is not limited to growing season and storability alone. The few items in the current menu that actually do incorporate fresh produce at Bernoulli's however are believed to be no trouble for the Farm to supply. Nonetheless, contracting with the farm to ensure their availability, especially over the summer months when they do most of their business, would reduce much of the risk associated with supply. Maintaining a relationship with another supplier would also be a good idea for backup. The commitment to "local" would not be deemed to be destroyed by occasionally using non-local sources under these circumstances.

It is the seasonal specials though that would require Bernoulli's to have some flexibility. To help them with this, the task of finding appropriate recipes was one that everyone in the group contributed to. It was thought, given the ethnic diversity of the group, that this would be the best way to come up with a good variety of recipes. The biggest challenge was to find recipes that contained only (or mostly) ingredients grown in a particular season. In spite of these restrictions it turned out to be quite a positive experience. Besides generating an environment of creativity, the opportunity to work closely together in a different environment (testing recipes) strengthened

the bond between the group members. Although many of the recipes do contain ingredients that may not fall into the definition of local there is at least one ingredient in each that can be obtained from the Farm and showcased as such. All the recipes were unique as well as tasty, and the commitment to highlighting “local” and fresh from UBC Farm was preserved.

Despite the enthusiasm and support of the general manager of the AMS Food and Beverage Department to go “local” however there still remains an economic responsibility. The AMS Food and Beverage Department is constrained by the fact that customers make purchasing decisions based primarily on price, quality and taste in that order; most do not consider or even care about the origin of their food when making purchasing decisions. Bernoulli’s and the UBC Farm are limited by time and labor. Not only do the recipes have to match what the Farm can produce they also have to be relatively simple and efficient to make. All that added to the fact that most of the produce costs are unavailable in advance and tend to fluctuate. Additionally the Farm has pledged not to compete unfairly with other local producers by providing produce at discounted rates to UBC because of its university and volunteer worker subsidies.

Recognizing that profit margin is relatively inflexible – AMS Food and Beverage Department requires that final products must cost no more than 26% of the sell price – it was clear that it was necessary to focus on a different aspect of consumer’s decision making psyche to expect any success with seasonal specials (Toogood). According to Group Twenty from Scenario Three, the most important thing consumers consider when purchasing food, next to price, is quality and taste. Although the recipes were chosen primarily based on taste it was only the members of the group who taste tested them. Even though the members of the group are diverse, seemingly extensive enough to be a good sample from the student body at UBC, the fact is the group is a small sample size and is more open to different tastes. It is unfortunate that due

to funding and time constraints none of these recipes could be tested on site at Bernoulli's.

Another important concern Scenario Three exposed was that consumers' attitudes do not match their behavior (Group 20). Even though consumers are generally positive toward local foods it is not something they consider when making purchasing decisions. This is an issue that warranted considerable thought since it speaks to the priority of consumers and their values. In order to improve the likelihood that UBC will be a leader in food system sustainability the attitudes and values of the students and staff must change. Regrettably the AMS Food and Beverage Department does not have a budget for educational or promotional materials (Toogood). The group however did come up with some ideas that would not require a great deal of money to implement. Highlighting fresh from the Farm on their menu board coupled with supporting literature (provided by other institutions) that links seasonal and local foods to sustainability could serve as encouragement to make sustainable food system choices (see Appendix B & C). The staff too could provide the link between buying Farm Fresh specials and sustainability by sharing their enthusiasm and knowledge. Educating the staff, in this case, may be the key to encouraging a shift in Bernoulli's customers' values.

Taking a closer look at the whole food system brought to light the enormous challenge it is to achieve a seemingly simple task like incorporating local produce into UBC food menus. The whole process was a great learning experience. It revealed the length of the roots and branches of the current food system, not only those that exist on campus but those that extend beyond and to the rest of the World. A deeper awareness has developed within the group, about how complex the global food system has become and how the uncertainties associated with local supply is why the AMS Food and Beverage Department is drawn to a multinational company for food supply. Not only was it an adventure to go through the process itself, it was great to be part

of an important and current problem.

Activities and Materials Prepared

After incorporating the recipes into the Bernoulli's Bagels' menu, we decided to incorporate the UBC Farm logo (see Appendix B), placing it next to each menu item that contained ingredients from UBC farm. As an alternative, the "UBC Grown" logo (see Appendix B), designed by Group Seven in the spring of 2005, or any other logo that evokes the same effect could also be incorporated. However, although Group Seven's logo is an attractive alternative we believe the UBC Farm logo would be more readily recognized by the student body and staff at UBC since it has already been established. Moreover, the UBC Farm logo would not only serve as an aid to increasing awareness about locally grown but it would also serve as an aid to improve awareness about the Farm, farming and the greater food system, by linking food to agriculture. This increased awareness will expand the collective knowledge about the food system, which will then impact the attitudes of students and staff toward sustainability and their desire to consciously participate in working toward sustainability. The underlying reasoning behind incorporating a logo was to draw out a demand for locally grown produce that would not be seriously influenced by differences in price.

Final Summary

In closing, we found that it would be feasible to incorporate UBC Farm produce into Bernoulli's Bagels. Currently the Farm's level of production is sufficient to fulfill Bernoulli's produce requirements. Due to the nature of the bagel and Bernoulli's relatively small market share, Bernoulli's does not require large quantities of produce to make changes to any of the existing menu items to incorporate season produce from UBC Farm, nor do the newly developed menu items proposed. The limited produce requirement of each bagel item allows Bernoulli's to

make the produce substitutions without having to make significant, if any, changes to price. Moreover, the AMS Food and Beverage Department is willing to participate by paying more for local produce (Toogood). Since Bernoulli's is part of the AMS Food and Beverage Department, it is also ultimately responsible to the students. Thus, what the student body cares about should be expressed through the various AMS outlets, such as Bernoulli's Bagels. The students of UBC have the ability to determine how UBC runs its food outlets, and ultimately how it pursues the path of sustainability. As an institution of higher learning, UBC should be a beacon for how the world ought to be. UBC should embody the values, morals and concerns of the students throughout the university. By doing so, knowledge will be shared and will radiate outward from the university food system to the global food system through example.

Link between UBCFSP and the Global Food System

The UBCFSP is a research project that aims at serving as a model for the international community. It is an important stepping stone in making a transition towards a more sustainable global food system at a global level. Regardless of the size of the project, these are the fundamental components that must be addressed when developing any sustainable food system. Although the UBCFSP functions at a much smaller scale, it does reflect the international situation as it deals with many of the same issues. These issues include: lack of food security and safety; problems involving pollution, health, sustainability and urbanization; and market forces of supply and demand. Experimenting at a local level provides a unique opportunity to examine those issues in depth and gain greater understanding of the complexity of each link in the greater food system. Moreover, the small scale of this project enables participants to quickly identify flaws within each component and provide solutions that can take relatively immediate effect. The UBCFSP can act as a dynamic example for international food system sustainability

projects and as a test model that can be perfected. What knowledge is gained can then be applied to the global food system; and findings can be shared to ensure success at the global level.

Recommendations

We recommend that 2007 colleagues should develop an Ecological Footprint for each menu item at Bernoulli's Bagels. An Ecological Footprint would be a great quantitative way to help educate consumers about food miles and encourage them to think about sustainability. Since budget and time constraints did not allow us to test our recipes on the public, we also recommend that our 2007 colleagues perform this test to assist Bernoulli's in deciding which recipes would be most salable.

The AMS Food and Beverage Department should consider using Discovery Island Organics Distributor as a supplier for their local produce. Most of their produce is grown in British Columbia and all of it is supplied by environmentally conscious producers. Secondly, prices should be adjusted gradually in the food outlets. This can be done either by absorbing some cost temporarily, by introducing local produce into recipes one ingredient at a time or by reducing portion sizes. Thirdly, all food outlet staff should be trained to promote the benefits of consuming locally produced foods as well as encouraged to learn more about the importance of sustainability and how it relates to the food system. Fourth, some form of educational literature, relating to Ecological Footprint, recycling, the UBC Farm and/or sustainability as it relates to the food system should be displayed at Bernoulli's. Pamphlets that already exist may be available for this purpose through the sustainability office, AMS, City of Vancouver or Earth Day. Fifth, the UBC Farm logo should be placed next to the items that contain UBC Farm products on the menu board. A reusable magnet or Velcro with the Farm's logo on it for example could be used. Sixth, all AMS and UBC food outlets should reduce the amount of garbage produced.

Individually packaged condiments for example should really be eliminated. Lastly, nutrition facts should be made available on the AMS website in a Food and Beverage Department section.

UBC Waste Management should incorporate or encourage the use of re-usable and bio-degradable containers (plates, plates, paper bags, etc.) to further decrease waste production and should also provide a compost station in the breezeway of the upper level of the SUB (near Bernoulli's). UBC should encourage more student involvement in sustainability throughout campus, particularly where awareness is lacking. Imagine UBC should require their MUG leaders to educate new students about sustainability, composting, recycling and UBC Farm during initial orientation. UBC Farm too should post information about the food outlets on campus that serve Farm produce to complete the connection and encourage patronage. Finally, Campus and Community Planning should require that at least half of the businesses given leases on campus are locally owned and operated, and all of the outlets be required to employ some students.

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Appendix A:

Breakdown of Farm Fresh Specials by season

| Spring | Summer | Fall | Winter |
|---|--|--|---|
| - UBC Farm Poached Eggs with Baby Spinach - Turkey and Carrot Bagel Sandwich - Savory Farm Fresh Egg Salad on a Bagel - UBC Farm Brunch Benny - UBC Farm Fresh Roasted Vegetables - UBC Farm Fresh Salad | - Cabbage and Avocado Bagel - Tuna and UBC Farm Vegetable Salad on a Bagel - Savory Farm Fresh Egg Salad on a Bagel - Fresh UBC Farm Veggie Bagel Sandwich - UBC Farm Fresh Roasted Vegetables - UBC Farm Fresh Salad | - UBC Farm Poached Eggs with Baby Spinach - Cabbage and Avocado Bagel - Tuna and UBC Farm Vegetable Salad on a Bagel - Feta cheese, turkey, and UBC Farm Vegetables on a Bagel - UBC Farm Pumpkin Cream Cheese on a Bagel - Goat Cheese and Spinach Bagel - Turkey and Carrot Bagel Sandwich - Savory Farm Fresh Egg Salad on a Bagel - UBC Farm Brunch Benny - Fresh UBC Farm Veggie Bagel Sandwich - UBC Farm Fresh Roasted Vegetables - UBC Farm Fresh Salad | - Savory Farm Fresh Egg Salad on a Bagel - UBC Farm Fresh Roasted Vegetables - UBC Farm Fresh Salad |

Summary of 2005 UBC Farm Produce Availability List:

Spring: Carrots, fennel, parsley, lettuce, broccoli, cabbage, kale, mustard, pac choi, radish, turnip, beets, spinach, cilantro, dill, lemon balm, sage, savory, chives, mint, salad green, amaranthus, arugula, mibuna, mizuna, tah tsai





Summer: Onion, carrots, celeriac, celery, fennel, parsley, lettuce, broccoli, cabbage, cauliflower, kale, kohlrabi, mustard, pac choi, radish, turnip, beet, swiss chard, cucumber, melon, summer squash, bush bean, pea, pole bean, soy bean, basil, chamomile, cilantro, dill, feverfew, lemon balm, sage, savory, chives, mint, salad green, amaranthus, arugula, mibuna, mizuna, tah tsai, okra, corn, eggplant, ground cherry, pepper, tomatillos, tomato





Fall: Onion, carrot, celery, fennel, parsley, lettuce, broccoli, cabbage, cauliflower, kale, kohlrabi, mustard, pac choi, radish, turnip, beet, spinach, swiss chard, cucumber, melon, pumpkin, summer squash, winter squash, bush bean, pea, pole bean, soy bean, basil, cilantro, dill, feverfew, lemon balm, sage, savory, chives, mint, salad green, amaranthus, arugula, mibuna, mizuna, tah tsai, corn, eggplant, ground cherry, pepper, tomatillos, tomato





Winter: Carrot, lettuce (red salad bowl & salad bowl), brussel sprouts, kale, mustard, radish, sage, savory, salad green, arugula, mibuna, mizuna, tah tsai

Appendix B:

Seasonal Menu Item Recipes for Bernoulli's (For each recipe, UBC farm products are highlighted in yellow and their seasonality is shown in orange.)

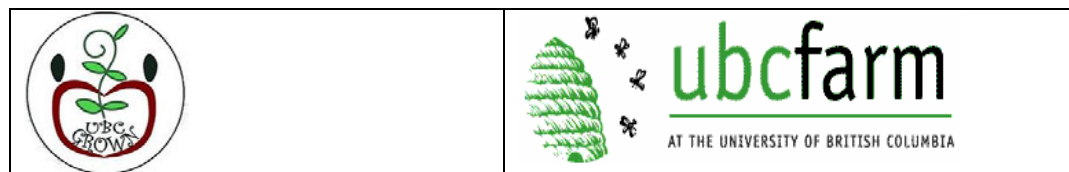
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| <p>Ingredients:</p> <ul style="list-style-type: none"> • 1 oz goat cheese • 10 spinach leaves (spring and fall) • ½ tomato, diced (summer and fall) • 1 garlic clove • 1 tbsp of olive oil • Salt and pepper to taste • 1 bagel, halved and toasted | <p>Procedure:</p> <p>Heat olive oil in a saucepan, add garlic and tomato. Stir until tomato is soft. Add spinach, toss quickly until spinach is just wilted. Taste with salt and pepper.</p> <p>Place spinach and tomato mixture on half of bagel, top with crumbled goat cheese.</p> <p>Broil the bagel until goat cheese is slightly browned.</p> <p>To with the other half bagel.</p> | <p>Goat Cheese and Spinach Bagel (Fall item) Recipe by Verena</p>  |
| <p>Ingredients:</p> <ul style="list-style-type: none"> • 1 tsp butter • ½ carrot, cooked and sliced (spring, summer, fall, winter) • 1 tbsp celery leaves, washed and chopped (summer, fall) • 2 slices turkey breast • 1 tsp mayonnaise sauce • 1 bagel, halved | <p>Procedure:</p> <p>Spread butter and mayonnaise on bagel.</p> <p>Top with carrots, celery and turkey breast.</p> | <p>Turkey and Carrot Bagel Sandwich (Summer or Fall item) Recipe by Stephen</p>  |
| <p>Ingredients:</p> <ul style="list-style-type: none"> • 1 eggs hard boiled, chopped (year long) • ½ tablespoon of mayonnaise • ½ teaspoon of Dijon mustard • ½ shallot clove chopped finely • Leaf lettuce (spring, summer, fall, winter) • Pepper and salt to taste • 1 bagel, halved and toasted | <p>Procedure:</p> <p>Mix eggs, mayonnaise, mustard and shallots in a bowl. On a toasted (optional) bagel half place a scoop of egg salad atop a fresh lettuce leaf. Lightly pepper the sandwich with fresh ground pepper. Serve open-faced with a parsley and fruit garnish.</p> | <p>Savory Farm Fresh Egg Salad on a Bagel (year long item) Recipe by Cindy</p>  |
| <p>Ingredients:</p> <ul style="list-style-type: none"> • 1 egg poached (year long) • 2 leaves of fresh spinach (spring and fall) • 1 bagel, halved and toasted <p>Hollandaise Sauce:</p> <ul style="list-style-type: none"> • 2 egg yolks (year long) • 2 tablespoons lemon juice (fresh if possible) • 2 tablespoons butter • 2 tablespoons flour • 1 cup of milk • salt (to taste) • white pepper (to taste) | <p>Procedure:</p> <p>Place the poached egg atop the fresh spinach on one half of a toasted bagel. Drizzle two or three tablespoons of Hollandaise Sauce over the egg. Pepper with fresh ground pepper, garnish with fruit and parsley and serve open faced immediately.</p> <p>For Hollandaise Sauce: Melt butter on low - medium heat (do not brown). Add flour while stirring constantly (makes a paste). Then add the milk gradually while stirring constantly (with a whisk). Cook until thickened, stirring constantly. Add a tablespoon of the cooked sauce to the slightly beaten yolks and lemon juice and stir it in until smooth. Add the yolk mixture to the sauce and continue to stir until smooth. Add salt and pepper to taste. Serve immediately. *Makes 4 – 6 servings.</p> | <p>UBC Farm Brunch Benny (Spring or Fall item) Recipe by Cindy</p>  |

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| <p>Ingredients:</p> <ul style="list-style-type: none"> • 1 egg (year long) • 5 g butter • 100 g baby spinach (spring and fall) • 1 tsp lemon juice • ½ clove garlic • Salt and pepper • 1 bagel, cut in half and toasted | <p>Procedure:</p> <p>Poach egg in a shallow frying pan, then remove with a slotted spoon and drain on a clean towel. Melt butter in a saucepan over medium heat. Add spinach, lemon juice, garlic, salt and pepper. Toss quickly until spinach is just wilted. Place toasted bagel of a plate, top with spinach and poached egg.</p> | <p>UBC Farm Poached Eggs with Baby Spinach (Spring or Fall item) Recipe by Brad</p>  |
| <p>Ingredients:</p> <ul style="list-style-type: none"> • 1/3 teaspoon salt • 1/8 cup extra virgin olive oil • ½ tablespoon fresh lemon juice • ¼ teaspoon minced garlic • 1/16 teaspoon ground black pepper • ½cup red cabbage shredded (spring, summer and fall) • cream cheese • 1/8 cup chopped green onions or dill (spring, summer, fall) • 2 slices of bagel • ½ avocado, peeled and sliced • ½ medium tomato sliced (summer and fall) • ½ ounce alfalfa sprouts | <p>Procedure:</p> <p>To make the slaw, combine oil, lemon juice, garlic, ¼ teaspoon salt, and pepper in a medium bowl, and whisk until well blended. Add cabbage and toss until coated with dressing.</p> <p>To make the cheese spread combine cream cheese and green onions or dill in a bowl with a spoon until thoroughly blended. On a work surface, place bagel halves and spread each with 2 tablespoons of the cream cheese mixture. On one half bagel, place the avocado, tomato, red-cabbage slaw, and sprouts in layers. Top with the other bagel half, cut in half, and serve.</p> | <p>Cabbage and Avocado Bagel (Summer or Fall item) Recipe by Brad</p>  |
| <p>Ingredients:</p> <ul style="list-style-type: none"> • ¼ Carrot (spring, summer, fall, winter) • ¼ Celery stick (summer, fall) • 1 Radish (spring, summer, fall, winter) • ¼ Yellow pepper (summer, fall) • ¼ Cucumber (summer, fall) • 1 Tuna can • 2 leaves of Lettuce (spring, summer, fall, winter) • 2 tbsp olive oil • 1 tbsp Lime juice • Salt and pepper to taste • 1 bagel, halved and toasted | <p>Procedure:</p> <p>Dice carrots, celery, radishes, yellow peppers and cucumber, and place in a bowl. Add tuna, olive oil, lime juice, salt and pepper. Place lettuce leaves over bagel, add tuna mixture.</p> | <p>Tuna and UBC Farm Vegetable Salad on a Bagel (Summer or Fall item) Recipe by Verena</p>  |
| <p>Ingredients:</p> <ul style="list-style-type: none"> • ½ a tomato, sliced (summer and fall) • ¼ cucumber sliced (summer and fall) • 5 spinach leaves (spring and fall) • ¼ cup feta cheese, crumbled • ¼ cup cream cheese • 2 slices of turkey breast • Salt and pepper to taste • 1 bagel, halved | <p>Procedure:</p> <p>Mix cream cheese with the feta cheese and season with salt and pepper. Spread over both halves of the bagel. Top one bagel half with spinach, cucumber, tomato and turkey breast. Place the other bagel half on top.</p> | <p>Feta cheese, turkey, and UBC Farm Vegetables on a Bagel (Fall item) Recipe by Verena</p>  |
| <p>Ingredients:</p> <ul style="list-style-type: none"> • 1oz cream cheese • ¼ cup cooked, mashed pumpkin (fall) • 1 tsp cup sugar • ¼ tsp vanilla • 1 cinnamon raisin bagel, halved and toasted | <p>Procedure:</p> <p>Mix all ingredients in a small bowl. Spread on bagel halves.</p> | <p>UBC Farm Pumpkin Cream Cheese on a Bagel (Fall item) Recipe by Verena</p> |

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| <p>Ingredients:</p> <ul style="list-style-type: none"> • 1 bagel, sliced in half • 1 tablespoon coarse-grain brown mustard • 1 leaf romaine lettuce (spring, summer, fall, winter) • 2 (1/4 inch thick) rings green bell pepper (summer, fall) • 4 slices cucumber sliced (summer and fall) • 2 slices tomato (summer and fall) • salt and freshly ground black pepper to taste • 2 slices red onion (summer, fall) • 1/2 cup alfalfa sprouts | <p>Procedure:</p> <p>Spread mustard onto the cut sides of the bagel. Layer the lettuce, green pepper, cucumber, and tomato on one half. Season the tomato with salt and pepper. Top with onion and alfalfa sprouts, then cover with the other half of the bagel.</p> | <p>Fresh UBC Farm Veggie Bagel Sandwich (Summer or Fall item) Recipe by Earlene</p>  |
| <p>Ingredients:</p> <ul style="list-style-type: none"> • Onion (summer, fall) • Garlic • Mushrooms • Carrots (spring, summer, fall, winter) • Potato • Beets (spring, summer, fall) • Squash (fall) • Zucchini • Beans (summer, fall) • Broccoli (spring, summer, fall) • Cauliflower (summer, fall) | <p>Procedure:</p> <p>Chop vegetables (choose favourite seasonal vegetables) into bite-sized pieces and place in a roasting pan. (Dense vegetables should be partially cooked before adding the rest). Lightly coat them in olive oil and salt them. Add fresh Rosemary (to taste - optional) and roast covered until they start to become tender. Uncover and roast until tender. Serve warm as a side vegetable or cold, dressed with oil and vinegar dressing, as a salad.</p> | <p>UBC Farm Fresh Roasted Vegetables (year long item) Recipe by Cindy</p>  |
| <p>Ingredients:</p> <ul style="list-style-type: none"> • 1 -2 handfuls of red lettuce (spring, summer, fall, winter) • ¼ cup grated beet raw (spring, summer, fall) • ¼ medium sized carrot finely sliced (spring, summer, fall, winter) • 2 medium radishes finely sliced (spring, summer, fall, winter) | <p>Procedure:</p> <p>Toss sliced carrots, radishes and ½ of the beets into the lettuce. Place the salad on a plate and top it with the remaining beets. Drizzle Dijon mustard dressing (or favourite dressing) over it and serve. (Seasonal favourites can easily be added or substituted.)</p> | <p>UBC Farm Fresh Salad (year long item) Recipe by Cindy</p>  |

Promotion logo:

UBC Grown and UBC Farm logos



Appendix C: Sample Menu for Bernoulli's to be written/drawn/ movable magnet on the menu boards

* Note: the UBC Farm logo can also be placed next to the specific ingredient that is from the farm

Bagel Sandwich



Turkey & Carrot

carrots, celery leaves, turkey, mayonnaise



Cabbage & avocado

garlic, lemon juice, red cabbage, tomato, avocado, alfalfa sprouts, cream cheese, and dill,



Garden bagel (vegan)

lettuce, tomato, cucumber, broccoli, red onion, miso-mustard, relish and mayonnaise,



UBC Tuna & Farm Vegetable Salad

tuna, carrots, celery, radishes, yellow peppers, cucumber, lettuce, olive oil and lime juice



Savory Farm Fresh Egg Salad

eggs, mayonnaise, Dijon mustard shallots , and leaf lettuce



Just like Mom's

chicken, salmon salad, egg or tuna with tomato, cucumber, lettuce, mayonnaise and a dill pickle



Poached egg with Baby spinach

egg, baby spinach, lemon juice and garlic



Bagel Melt



Mediterranean

eggplant, cucumber, onion and mozzarella



Clubhouse

turkey, bacon, cheddar, lettuce and tomato



Mozzarella & Tomato

fresh mozzarella, tomato, basil, olive oil, balsamic vinegar, salt and pepper



Baked mushroom & cream cheese

cream cheese, BC mushrooms, chives

Soprono

abruzzo salami, pepper, mushroom, mozzarella

Specialty Items



Breakfast bagel

egg, chicken, cheddar



Brunch Benny

egg, spinach with hollandaise sauce



Fresh Salad

lettuce, beets, carrots, radishes with Dijon mustard dressing



Freshly squeezed fruit or vegetable juices

melon, tomato, strawberry, wine grape or carrot



Fresh roasted vegetables

onions, garlic, mushrooms, carrots, beets, broccoli, cauliflower and string beans

Soup

daily special