



Final Evaluation Report

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Executive Summary

Introduction

The Burlington School Food Project (BSFP) is a citywide collaborative formed to address the integration of local foods into school meals and food insecurity among school-aged children in Burlington, Vermont. The BSFP is a three-year USDA “Community Food Project” funded project. The Center for Rural Studies (CRS) at the University of Vermont is the external evaluator for this project and this evaluation report represents the third year of data collected from September 2005 to September 2006. Where appropriate, cumulative three year data is presented from fiscal years 2004 and 2005.

The Burlington School Food Project has three grant goals, upon which this evaluation report is based:

1. Burlington school children increase awareness and engagement in the local food system and increase awareness about, and consumption of healthy foods.
2. Burlington implements a food action plan that increases access to and use of healthy foods, and foods from local producers.
3. Burlington food, health, and education-oriented organizations and people build capacity (to include increased collaboration and leveraging and directing of funds) toward better meeting the food needs of the low-income Burlington School District student population.

Evaluation Methodology

The University of Vermont’s Center for Rural Studies (CRS) is the third party evaluator of the BSFP. CRS conducted a comprehensive evaluation of the BSFP during the three-year project. Both quantitative and qualitative tools were created for stakeholders, including students, teachers, parents, local farmers, food service professionals, community members, and partners. The evaluation components included written surveys, in-depth interviews, focus groups, observations of events, and content analysis of BSFP related documents such as newspaper articles, newsletters and press releases. The model of evaluation documents the process and outcome of the project. Process refers to the activities conducted and outcome refers to the impact of these activities on the various stakeholders including children, teachers, farmers, project partners, and the community at large.

Goal 1: Burlington School children increase awareness and engagement in the local food system and increase awareness about, and consumption of healthy foods.

Integration of Food, Farm and Nutrition Education (FFN) into School Curriculum

To integrate FFN education into their curriculum, teachers **developed units with specific activities** that focused on FFN as part of their curriculum. This change occurred in areas such as science, mathematics, family and consumer sciences, and technology and design education.

- Students in Family and Consumer Sciences expanded their “semester buffet” to a community-wide dinner that hosted over 200 people.
- In response to the student survey of 4th and 7th graders in most Burlington middle and elementary schools, 90% of students have cooked before, with 26% reporting that they have cooked in a school classroom and 20% having cooked in the school kitchen.

Teachers interviewed commented that their FFN instruction has led to more hands on activities for students through **field trips** to locations such as the Intervale Center, Shelburne Farms, and a maple sugar house.

- More than half of students surveyed reported that they have visited Shelburne Farms through a field trip and 19% have been to the Intervale Center.
- Students gained practical skills and knowledge about healthy nutrition, food, farming, and meal preparation through visiting farms or other sites and then bringing this hands-on work back into the classroom for discussion or activity.

Many schools also developed **school gardens** as an intentional effort to tie garden development into FFN education and help gardens get started at other schools. **FFN education integration is facilitated by** professional development such as the summer science camp and “healthy snacks” workshops, material resources, volunteer assistance from professionals and parents, multiple approaches to integrate FFN, and teaching students by setting a positive example.

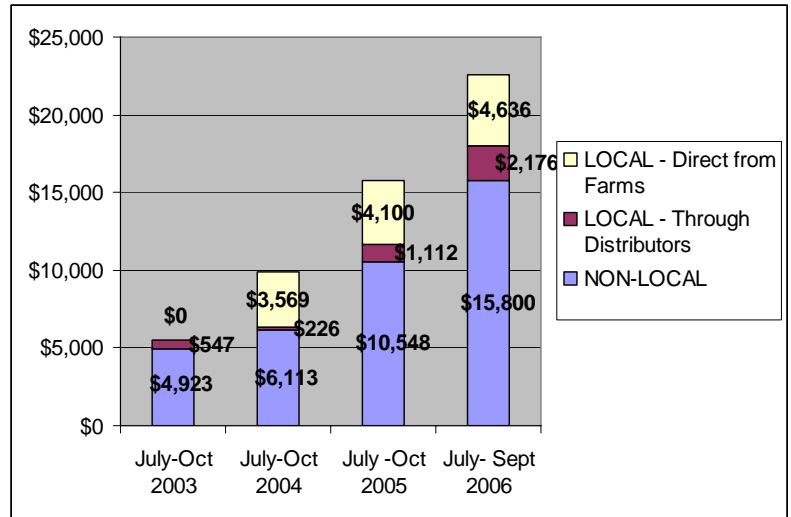
Integration of Fresh and Local Produce into Schools

The integration fresh and local produce into the school cafeteria was another major part of increasing student awareness and engagement in the local food system and awareness and consumption of healthy foods.

- Of the 4th and 7th grade students surveyed in 2005, 32% were aware that some food served in the school cafeteria comes from a local source. This level of awareness is positive as 62% eat lunch served by the cafeteria always or almost always.
- The dollar value of local produce purchased by the BSD directly from farms increased from \$0 in 2003 to \$4636 in 2006.
- The amount purchased on local produce through distributors increased from \$547 in 2003 to \$2,176 in 2006, a 298% increase.

- The number of farms from which BSD purchased produce increased over the one year period from three to five local farms.
- Types of produce purchased include: kale, chard, carrots, raspberries, cherry tomatoes, basil, zucchini, strawberries, green leaf, red leaf, romaine, and mesclun lettuce, cucumbers, tomatoes, and peppers.

Many factors led to the **successful integration of food from local farms** into the BSD cafeterias. These factors include: relationship development between farmers and the BSD, use of the high school cafeteria to lightly process raw foods, availability and willingness of BSD to purchase fresh, local and/or organic produce that are of high quality, and student and volunteer involvement in the farm to school process. To purchase produce, the BSD contracted with and paid farmers up front for produce and the farmers planted the vegetables specifically designated for the schools.



Fresh Produce Purchased by BSD. 2003-2006

Student Breakfast and Lunch Consumption

Three quarters (79%) of 4th and 7th grade students surveyed in 2005 reported eating **breakfast** at home and 62% (236) eat breakfast at school.

- Of the students who eat breakfast at school, 42% said they eat school breakfast *more* this year than last year, with the main reasons being that the student liked what is served for breakfast at school (51%) and that breakfast is served in the classroom (44%).
- Almost half of students (42%) would like more fresh fruit offered for breakfast at school.

Regarding **school lunch consumption**, 68% of students surveyed always or almost always eat lunch offered in the school cafeteria.

- Favorite taste test foods served on the school menu include the sandwich bar, pizza, calzones, soup, fresh fruit, whole wheat bread, pesto, and samosas.
- Students used language in their survey response such as healthy and organic (7%), fresh food or fresher choices (1%), and Vermont made products, specifically the calzones (1%).
- Seven percent commented that the food was “better tasting” and they like that the cafeteria holds taste tests and offers international foods and holiday specialty meals.
- Regarding changes in menu choices that students do not like, 60% do not like the change in pizza and 10% do not like the Baglers instead of bagels and cream cheese for breakfast.

Responses to the student survey also show **positive change in students eating behaviors** in relation to BSFP goals.

- More than half of students (60%) reported eating fruit more often compared to last year.
- Further, 59% reported eating new foods and 57% reported eating healthy snacks more often.
- Students also reported eating less healthy choices less often, such as fast food (56% less) and desserts and sweets (31% less).
- A major source of information on food and healthy eating is the classroom (49%) and the school cafeteria/kitchen (16%). Other main sources include parents, a health professional, and television.

Student Taste Tests

Although not an intentional activity of the grant, student taste tests evolved out of a need for the BSD to understand what foods students would eat if it was offered by the cafeteria. Taste tests became a key activity to increase student awareness and consumption of healthy foods, integrate fresh and local foods into the school cafeteria menu, and build relationships among stakeholders. Products for taste tests were chosen based on a) what was currently local, b) could potentially be purchased locally or c) availability of a nutritious commodity product.

The following is an **example of a taste test process**:

- Students prepare taste test samples with Food Service staff, parents and community volunteers during their morning classes as part of their lesson.
- The taste test station is then set up before the lunch period and items are served to students during lunch by both students and adults.
- Once students have the chance to try an item, students and teachers survey the students to assess their preference and willingness to try the food again.

Taste tests successfully involved students in school lunch change and served to educate and empower students regarding the food they eat. This process also fostered self-

confidence and skill development in food preparation, recipe development, healthy eating and nutrition, and mathematics. BSD Food Service staff embraced their new role of student educator on healthy foods and meal preparation and indicated that their relationship with teachers and students has greatly improved since the start of BSFP. Food Service staff felt respected for their work and enjoyed having students help prepare food in the kitchen. School Food Committees involved local businesses, chefs, and other community volunteers, who helped to develop recipes and prepare and serve the food with students. All BSFP partners commented on the importance of BSFP volunteers coming from within the school and larger community, as they enable the project to be sustainable after the funding is gone.

At Edmunds Middle School, from March 2004 to April 2006, a total of 37 items were taste tested by an average of 210 students per tasting, yielding approximately 6,300 tastes! The number of students who tried a taste test item each time ranged from 22 students who tried red cabbage to 426 who tried Applesauce Muffins.

Three quarters (74%) of students who tried foods at the taste tests said the food was new to them and 43% are now more willing to try new foods because of their experience with the taste tests.

- Examples of reasons why students like to try new foods include: they might like it, a friend told them it was good, the food looks tasty or has a good aroma, to experience food from other cultures, and to have more variety of foods from which to choose.
- Most foods rated a 75% acceptance rate or better. Favorite items included whole wheat bread and cheese, applesauce muffins, and pesto pizza and least favorite items were broccoli and winter squash soup.
- The in-school taste test process made national news as the cover story in the magazine *Time for Kids* in October 2005.

As a result of the taste tests, Food Service staff slowly **integrated new foods into the school cafeteria menu.**

- Raw vegetables were to the sandwich and salad bars in the cafeteria, including cherry tomatoes, green and red lettuce, and whole wheat bread and cheese.
- Prepared items served on the monthly menu include minestrone soup, cinnamon applesauce, yogurt parfaits with granola, chicken Caesar salad, and pesto pasta.
- Samosas and calzones are produced off site by a local business and served on occasion during lunch.

While there is no one way to hold a taste test, here are some suggestions based on success at Edmunds Elementary School and Edmunds and Hunt Middle Schools.

- Involve students in process
- Involve volunteers
- Involve Food Service staff
- Involve and give teachers notice of taste tests
- Hire a farm to school coordinator
- Adequate time, money and resources
- Advertise taste tests and foods
- Advertise taste test foods incorporated into the school menu, emphasizing local and organic
- Organize the taste test process of food preparation, serving, and surveying of students

The Healthy City Project

The Healthy City project was a pre-existing program at the Intervale that was integrated into the BSFP because it aligned with the grant goals and objectives. Healthy City was also not an original grant goal, however because the program emerged as a strong and effective educational program for BSD youth, the grant shifted focus and invested in this program. Students who worked on the Healthy City farm said their participation had many **positive impacts on their lives** such as:

- Gaining a new love for vegetables, with favorites being carrots, cucumbers, strawberries, and melons
- Enjoying taking home food that they grew to cook with their family
- Feeling more fit and strong after working on the farm.

Parents of Healthy City youth also reported **positive changes in their child**, such as healthier eating habits, eating more vegetables, being more responsible, improved social skills and self esteem, saving money, and improved work ethic. Skills and knowledge gained include: gardening, leadership, self-esteem, social skills, knowledge of the environment, and healthy eating.

Gains in Student Knowledge and Awareness about Food, Farm and Nutrition

Because of the BSFP, students demonstrated an improved understanding and awareness of healthy foods.

- Students commonly talked about the “healthy” food that they bring for lunch or snack and the healthy changes that have taken place in the school cafeteria’s food choices
- Students demonstrated understanding through in-class assignments, art work, and by participating in taste tests to try new foods.
- Students learned and practiced food waste reduction by learning about composting in their classroom and implementing this in their cafeteria.

Shift in School Culture

Another factor that indicates increased awareness by Burlington school children, and the school community at large, is a shift in the BSD school culture around healthy food and nutrition. This **shift is demonstrated by:**

- Increased student and teacher awareness of healthy food and FFN issues throughout the school district
- Documentation to FFN lesson plans for future use by other teachers
- Increased community participation at school dinners
- Acceptance of the School Food Action Plan by the Burlington School Board
- Approval of the Wellness and Nutrition Policy (Act 161) and the Farm to School Policy (Act 145) by the Vermont Legislature

Impact of BSFP on Larger Community

Results from the **2006 Vermonter Poll**, a statewide public opinion survey of Vermonters conducted by the evaluators, showed that FFN education through youth education is reaching Vermont at large.

- 71% of parents with school age children surveyed reported that their child has participated in FFN education activities at school.
- As a result of FFN education, 40% indicated that their child has shared this information with their family, 38% have children who are more willing to try new foods, and 26% reported their child now eats more fruits and vegetables.
- Regarding tools that would help parents get their child to eat healthier in school, most would like reinforcement from school, healthy recipes, tips to introduce new foods, and nutritional information about food.
- Half of respondents would encourage their child to eat more school lunches if the school cafeteria served more fresh and local foods. Respondents were willing to pay an average of \$1.63 more for school lunches if the school cafeteria served fresh, local food. Overall, 38% are willing to pay between \$.01 and \$1.00 more for fresh and local foods in the school cafeteria.

Results from the evaluation of the **Burlington Legacy Project's annual town meeting** showed that 86% were aware that there has been an increase in the distribution of more fresh and local food in Burlington schools. In addition, 70% were aware that food taste tests occur in some schools in the BSD and 97% expressed interest in the BSD purchasing more food from local farms.

Goal 2: Burlington implements a food action plan that increases access to and use of healthy foods, and foods from local producers.

The second goal of the BSFP grant was primarily spearheaded by the Burlington Food Council and their collaborative work with BSFP staff, Burlington Legacy Project staff, farmers, parents, BSD employees, students, researchers, and health and nutrition experts.

Sustainability of the Burlington Food Council

The Burlington Food Council examined the farm to school food system and food, farm and nutrition education in Burlington schools. Made up of thirty active members, the Food Council has been active since 2003 and was described by BSFP partners as a “hub for diverse groups and individuals.” BSFP partners and Food Council participants indicated that the Council demonstrated attributes of sustainability as membership remained consistent over time and continued to grow with the momentum of various projects undertaken by the group.

Burlington School Food Action Plan

During the first and second years of the grant, the Burlington Food Council conducted the Community Food Assessment focused on school-aged children (ages 5-18) and their families. The purpose of this assessment was to “systematically examine a broad range of community food issues and assets, so as to inform change actions to make the community more food secure.” The results of the Community Food Assessment served as the foundation for the **Burlington School Food Action Plan**, which was unanimously

adopted by the Burlington School Board in 2006. The Action Plan facilitated collaboration between BSD and farmers and the increase in the amount of local produce bought and served by the BSD. The plan also leveraged over \$100,000 in grant funds for sustainability of the Food Council and BSFP efforts.

Goal 3: Burlington food, health, and education-oriented organizations and people build capacity toward better meeting the food needs of the low-income Burlington School District student population.

The BSFP partners built community capacity through groups such as the Burlington Food Council and school food committees, parent and community volunteers, and collaboration with intended and unintended partnerships.

Burlington Food Council

The Burlington Food Council is an important component to building community capacity among organizations and people to meet the needs of low-income BSD students. The Council meetings:

- Helped members to network, communicate and collaborate with other like-minded organizations and individuals.
- Provided a forum for skills-sharing and enabled participants to take concrete ideas back to their organization to carry out purposeful activities.
- Provided education and professional development opportunities.
- Created awareness among local businesses, such as City Market Cooperative, and individuals, such as local chefs, who are willing to support FFN education through volunteering and fundraising.

At the **Legacy Town Meeting**, which the Council in part hosted, 71% of attendees who completed evaluation surveys agreed that they learned something new about FFN at the meeting. **Suggestions to improve** the workings of the Food Council included learning and evaluation of activities, marketing and logo development, and outreach to new members.

School Food Committees

School Food Committees throughout the BSD also built community capacity toward better meeting the food needs of the low-income students. Food Committees, comprised of teachers, parents and Food Service professionals, were created to coordinate interactions between students, Food Service staff, and BSFP partners. The main goal of the Food Committees was to increase student consumption of fresh and local foods and to facilitate Food Service to become a part of the educational framework. Major accomplishments included:

- Planning and implementing taste tests in the school cafeteria and classrooms
- Facilitating relationships to develop between the BSD and Burlington businesses, food producers, and parent and community member volunteers
- Establishing a school-based taste test coordinator position at each school

Parent and Community Member Volunteerism

Parents of school children in the BSD and community members volunteered for the BSFP in a variety of ways, such as helping with taste tests and special events and dinners, leading field trips, working in classrooms and school gardens, attending Food Council and Committee meetings, and advocating for the project at Parent Teacher Association meetings. All BSFP staff and partners interviewed remarked about the importance of volunteers in the success of this project.

- Volunteers contributed to building community capacity of the project, as they help run activities, connect partners together, and are the ones who return to help out and keep activities running long after funds are gone.
- Volunteers also gain personally and professionally through their experience. As part of volunteer training, parent and community volunteers were invited to attend workshops and trainings on topics such as leading student field trips to the Intervale and Shelburne Farms.

BSFP partners noted that their partnership with City Market Cooperative has been the main source of community member volunteer recruitment, as volunteers are offered a discount on grocery purchases in exchange for volunteer hours.

Strategies for a Successful Collaboration

The BSFP partnership was a successful collaborative, as partners with different capabilities and strengths worked together, learned from and respected each other, and took action to meet the grant goals. All project partners interviewed discussed the importance of relationship building, networking and partnering with a diverse group of people to have a successful collaborative.

- A key factor that made the partnership work was to have monthly project partner meetings to provide a forum to coordinate activities and communicate with project partners.
- Monthly meetings of the Burlington Food Council Having and Food Committees were also crucial to developing networks and partnership and sustaining this over time.
- Two points commonly noted as being crucial to relationship building were the characteristics of partners, such as being willing to take risks and inclusive of other ideas, and collaboration with farmers and unintended partners, such as Healthy City, the City Market Cooperative, and Burlington Parks and Recreation.
- Another strategy recognized by BSFP partners for building a successful collaborative was to involve and empower all stakeholders, such as children, parents, Food Service staff, and volunteers.

Overall, the BSFP partnership has grown since grant inception and the work has become ingrained into the community culture through collaboration.

Several suggestions were made by partners to **improve the overall partnership.**

- Strengthen and diversify the partnership through additional funds
- Ensure that all stakeholders are represented at meetings
- Improve the marketing of the project and FFN issues through branding and use of a consistent message and logo

Key components of a successful farm to school model are the “Three C’s” model of community, classroom, and cafeteria that empowers and integrates all stakeholders is crucial to a successful farm to school model.

- *Community* should include farmers, parents, volunteers and organizations
- *Cafeteria* should include Food Service staff and directors, teachers, school administrators, students, volunteers and the business community
- *Classroom* should include students, teachers, volunteers, Food Service staff, and the business community.



I. Introduction

The Burlington School Food Project (BSFP) is a citywide collaborative formed to address the integration of local foods into school meals and food insecurity among school-aged children in Burlington, Vermont. The BSFP is a three-year USDA “Community Food Project” funded project. The Center for Rural Studies (CRS) at the University of Vermont is the external evaluator for this project and this evaluation report represents the third year of data collected from September 2005 to September 2006. Where appropriate, cumulative three year data is presented from fiscal years 2004 and 2005.

The Burlington School Food Project has three grant goals, upon which this evaluation report is based:

1. Burlington school children increase awareness and engagement in the local food system and increase awareness about, and consumption of healthy foods.
2. Burlington implements a food action plan that increases access to and use of healthy foods, and foods from local producers.
3. Burlington food, health, and education-oriented organizations and people build capacity (to include increased collaboration and leveraging and directing of funds) toward better meeting the food needs of the low-income Burlington School District student population.

It is important to note that many project areas discussed under each grant goal cross over into other grant goals. This is evident as some topics, such as the creation of the Burlington Food Council, are reviewed in more than one place in the report. Areas under each goal were determined in discussion with project partners based on the goal with which the activity or concept most closely aligned.

Project Partners

BSFP project partners include:

Vermont Food Education Every Day (FEED) Program is a collaborative effort between Food Works, Northeast Organic Farming Association of Vermont (NOFA VT) and Shelburne Farms. FEED assists teachers in developing Vermont standards-based units that incorporate the concepts of food, farms and nutrition (FEED, 2006).

Food Works is a “non-profit which works with educators on food, ecology, and cultural issues. Food Works facilitates courses and workshops at the Two Rivers Center organic farm and in schools and communities across the U.S. focused on the practical skills and traditional knowledge of living in places that have been common to all people throughout time (FoodWorks, 2006).”

NOFA Vermont is a “non-profit association of farmers, gardeners, and consumers working to promote an economically viable and ecologically sound Vermont food system for the benefit of current and future generations (NOFA VT, 2006).”

Shelburne Farms is a 1,400 acre working farm and forest, National Historic Landmark, and membership-supported, nonprofit environmental and agricultural education center on the shores of Lake Champlain in Shelburne, Vermont (Shelburne Farms, 2003).

The **Intervale Center** serves as an incubator for sustainable farming, food, and fuel production with a focus on economic development and environmental solutions for communities worldwide. With over 700 acres and 12 organic farms, the Intervale is located less than a mile from downtown Burlington (Intervale Center, 2006, Burlington School Food Project, 2005).

Legacy Project and Burlington Food Council

The Burlington Legacy Project was initiated in 1999 to guide Burlington's efforts to become a more sustainable city. Thousands of residents participated in creating a 30-year vision for the economic, environmental, and social health of the city. Spearheaded by the Legacy Project is the Burlington Food Council, whose participants include parents, chefs, farmers, nutritionists, educators, school food service staff, and community members. The Food Council meets monthly to seek ways to improve the health of Burlington children through better access to nutritious foods and food, farm, and nutrition education. The Food Council's work is guided by the School Food Action Plan, which the Council created in early 2005 (Burlington Legacy Project, 2006).

Sustainable Schools Project (SSP) is an innovative school-wide initiative piloted in Burlington that uses the lens of sustainability as an integrating context for curriculum development. This project is coordinated by Shelburne Farms, and the majority of its activities are reported in a separate evaluation. The Year 2-evaluation report will document SSP activities as they integrate with GFGM goals.

Burlington School District (BSD) is comprised of 9 schools: 6 elementary schools (Barnes, Champlain, Edmunds, Flynn, Smith, and Wheeler), two middle schools (Edmunds and Hunt), and one high school. Approximately 3,551 students attend grades K-12.

University of Vermont is active in the BSFP through several outlets:

- Center for Rural Studies is a non-profit organization serving as program evaluator.
- Department of Community Development and Applied Economics, within the College of Agricultural and Life Sciences, provides academic service-learning opportunities for students to collaborate with local school food initiatives.
- Department of Nutrition and Food Sciences within the College of Agriculture and Life Science provides collaboration and expertise to the Burlington Food Council.
- UVM Extension Service is represented through the Department of Nutrition and Food Science.

Background on Farm to School Programs

The disturbing national trend of youth obesity has alerted doctors and health and education officials to the state of children's wellness (BSFP Newsletter, 2005). By providing healthier options in school cafeterias and through education that connects the food in the cafeteria to farms and health, children can better relate to how their food choices affect their own health, their family, and the local farmer (Center for Food and Justice, 2004). According to the 2002 report, *Northeast Farms to Food: Understanding Our Region's Food*, the small farm is the cornerstone of our agricultural and rural economy (NSAWG, 2002). "Food citizenship," which frames the relationship between people and food in a broader context, is promoted by educating everyone about where their food comes from and why it matters. According to the report, school settings are arguably the first place to start building food citizenship. Farm to school programs are popping up all over the U.S. It is these programs that connect schools with local farms with the objectives of serving healthy meals in school cafeterias, improving student nutrition, providing health and nutrition education opportunities that will last a lifetime, and supporting local small farmers (Center for Food and Justice, 2004).

Vermont Farm to School Programs

Strong partnerships and city and statewide interest in providing healthy, locally grown food sets a fertile stage to improve the food needs of low-income school children and their families in Burlington, Vermont, while serving as a model in Vermont for statewide initiatives (GFGM, 2003). The key aspect that makes the rural farm to school model successful in Vermont is the crucial link of the community (Harmon, 2004). The Burlington School Food Project is the culmination of a movement that has been growing in Burlington in recent years to produce 10% of the community's food needs within the city and to strengthen the local food system (Burlington Food Council, 2005).

Fact: 69% of Burlington's children in grades 8 to 12 do not meet minimum USDA dietary guidelines

Fact: 27% of Burlington's children in grades 8 to 12 are overweight or at risk for being overweight for their age and height

Fact: 40% of Burlington's children in grades 8 to 12 spend three or more hours daily watching TV, playing video games, or playing with computers

Source: Burlington Community Food Assessment, 2005

Through various activities, the BSFP has aimed to develop in students and their families' awareness and understanding of food, farm and nutrition (FFN) issues, such as the benefits of eating local nutritious foods, increase a sense of place, and build appreciation of agriculture and local farmers. Some of these activities include: professional development, education, community engagement, sustainability modeling and planning, and network/partner building (Burlington Food Council, 2005).

The importance of this evaluation lies in providing feedback to the project partners including suggestions for improvements for future activities. Sustainability was an important theme as the three-year grant comes to its conclusion. The project has evolved into a community supported project vital to long-term impacts of a healthy Burlington citizenry, a city supported healthy local farm economy, and of the food needs of Burlington's low income community being met.

II. Methodology

The University of Vermont's Center for Rural Studies (CRS) is the third party evaluator of the BSFP. CRS conducted a comprehensive evaluation of the BSFP during the three-year project. Year one of the evaluation was conducted from September 2003 to August 2004 and year two was conducted from September 2004 to August 2005. The evaluation focus for these grant years was on project process and outcome for the purpose of program improvement and replication. Year three concludes with this an end-of-grant evaluation report.

Both quantitative and qualitative tools were created for stakeholders, including students, teachers, parents, local farmers, food service professionals, community members, and partners. The evaluation components included written surveys, in-depth interviews and focus groups, observations of events, and content analysis of BSFP related documents such as newspaper articles, newsletters and press releases. Focus groups were conducted in-person and took from one to two hours. Interviews were conducted in person, on the telephone, and via email and took from thirty minutes to one hour. The results were recorded and then coded for analysis for common themes based on project goals. In addition, member checking (fact checking among stakeholders) and resource and method triangulation (collecting and analyzing data with multiple approaches) was utilized to increase credibility of the evaluation. Quantitative data collected through written surveys were subsequently entered into SPSS 14.0 (Statistical Package for the Social Sciences) and analyzed using univariate and bivariate analysis.

The model of evaluation documents the process and outcome of the project. Process refers to the activities conducted and outcome refers to the impact of these activities on the various stakeholders including children, teachers, farmers, project partners, and the community at large. Based on a project partner focus group discussion held in September 2005, the following activities list were deemed as key activities on which to based the third year evaluation. The filled bullet indicates the key activity and the clear bullet indicates the method to collect the data for the activity.

Goal 1. Educational Programs for Youth and Families

- *Ongoing Professional development for teachers in Food, Farms, and Nutrition*
 - A focus group with BSFP teachers was held in May 2005. All teachers who played key roles in the BSFP were invited by email to attend. Two teachers from Edmunds Middle and Elementary School attended the focus group (Appendix A-1). Topic areas asked included observations on changes in their students as a result of BSFP, curriculum integration, the taste test process, resources used, the larger impact of BSFP, and feedback on the project. In addition, short focus groups were conducted in May and June 2005 throughout the school district with teachers at faculty meetings. Questions asked about the overall change in students, curriculum, school culture, and the larger community because of the BSFP (Appendix A-2).

- *Shelburne Farms works with the Intervale to support school field trips*
 - Periodic interviews and a focus group held in February 2006 were conducted to gather information from Shelburne Farms and Intervale educators (See Appendix B for the generic staff interview guide and Appendix C for the educator’s focus group questions).
- *Ongoing integrated curriculum opportunities*
 - Teacher (Appendix A-1 and A-2) and BSFP partner educator focus groups and interviews (Appendix B and C).
- *Surveys with students*
 - A paper survey that was approved by project partners and BSD administrators was administered to students in the fourth and seventh grades in major Burlington middle and elementary schools to gather information on their meal consumption, cooking food, gardening and farms, and food and healthy eating (Appendix D). Seventh graders only were asked to fill out questions about the in-school taste tests. The results of this survey are compared, where appropriate, to the results of a similar survey of fourth and seventh graders in 2004 that was conducted by the Burlington Food Council as part of the Burlington Community Food Assessment (2005) (N=455). A total of 394 students completed the 2005 student survey. For each school represented by survey respondents, Table 1 shows the frequency and percentage of students who completed this survey, the total number of students enrolled in 2004-2005, the survey response rate (based on total number enrolled), and the percentage of students that qualify for free or reduced meals. An overall response rate of 12% was received for this survey with ranges in response rate from 11% to 28%. Thirty-one percent of the survey respondents were from Hunt Middle School, 26% were from Edmunds Middle and Elementary School (no distinction was made by survey respondents to differentiate the two), 13% from J.J. Flynn Elementary School, 11% from C.P. Smith Elementary School, 8% from Champlain Elementary School, 6% from H.O. Wheeler Elementary School, and 5% from Lawrence Barnes Elementary School.

Table 1. Frequency and percentage of students who completed the BSFP student survey from each school, 2004-2005

	Frequency	Percent	Number of students enrolled 2004-2005	% Survey response rate	% Qualified for free or reduced meals
Lyman C. Hunt Middle School	122	31%	442	28%	49.1%
Edmunds Middle and Elementary School	102	26%	658	16%	42.8%
John J. Flynn Elementary School	50	13%	337	15%	54.3%
Charles P. Smith Elementary School	45	11%	278	16%	31.3%
Champlain Elementary School	31	8%	293	11%	44%
H.O. Wheeler Elementary School	25	6%	230	11%	100%
Lawrence Barnes Elementary School	19	5%	152	13%	100%
Total	394	100%	2,390	12%	49%

- *Healthy City project evaluation*
 - Four focus groups with Healthy City youth were held in December 2005 and May 2006 (Appendix E). Nine youth participated in the winter focus groups and twelve participated in the spring groups. Topics discussed included reasons for participating in the program, knowledge and skills gained, change in eating and exercise habits, and program feedback.
 - Parents of youth who participated in the summer Healthy City program of 2005 were interviewed by telephone to gain a better understanding of the impact of their child's participation on the youth and their families. All ten parents were reached for a response rate of 100% (Appendix F).

Goal 2. Farm/ School Infrastructure and Systems

- *Develop Food Action Plan*
 - Periodic interviews were conducted with Betsy Rosenbluth, Burlington Food Council coordinator (Appendix B).
 - A focus group was conducted of Food Council members in March 2006. Those who were not present at the meeting were invited to answer the questions by email (Appendix G). Topic areas discussed included their goals and expectations of the Council, impact the Council has had on their work and others, strengths and improvements, and strategies for sustainability. A total of eight people responded.
 - Observation of meetings and review of documents and meeting minutes.
 - A paper survey was distributed at the 2005 Legacy Town meeting in December to provide feedback on the meeting and gather their awareness and perspective on FFN issues in schools (Appendix H). A total of 43 people responded.
- *Professional Development and Support school food service staff*
 - A focus group was conducted with food service staff in November 2006 (Appendix I). Questions were asked on the taste test process, menu changes because of the BSFP, and the impact of BSFP on their work.
 - Periodic interviews were conducted with Doug Davis, BSD Food Service director (Appendix B).
- *Part-time Farm to School Coordinator (Education, Production, and Coordination) at the Intervale*
 - Periodic interviews were conducted with Jen McGowen, director of the Healthy City program, and Abbie Nelson, VT FEED coordinator (Appendix B).
- *Introducing new foods with taste tests based on seasonal and local availability*
 - Data gathered by students, teachers and volunteers during taste tests to gather student feedback on the item tested was provided to the evaluators by the Food Committees. Questions asked include if a student tried the food, liked it, and would try it again.
 - Evaluator observation of taste tests
 - Focus group with Food Service staff in November 2006 (Appendix I).
 - Teacher focus group held in May 2005 (Appendix A-1 and A-2).
 - Periodic partner interviews (Appendix B)

Goal 3. Community/ Capacity Building

- *Parent and Community Volunteer Training for Food, Farm and Nutrition education*
 - Paper surveys were distributed at BSFP workshops and trainings (Appendix J-1). Questions were asked on the purpose for attending the workshop, knowledge and skills gained, and feedback. A total of 16 surveys were returned to the evaluators. In-depth interviews by telephone were also conducted of two BSFP volunteers (Appendix J-2). Questions asked about the type of activities for which they volunteered, the impact of their volunteerism, and feedback on the program.
- *Capacity building/Professional Development for Food Council*
 - Focus group with Food Council members (Appendix G).
- *Set up school nutrition action groups (i.e. food committee) with PTO involvement*
 - Periodic interviews were conducted with Abbie Nelson (Appendix B).
 - A paper and email survey was administered to all Food Committee members in November 2006 (Appendix K). Questions were asked about the goals and accomplishments of the Food Committee, the farm to school model, and lessons learned. A total of three members responded.
- *Public information piece for Spring 2006 with Intervale*
 - Periodic interviews were conducted with Dana Hudson from Shelburne Farms (Appendix B).

Vermont Poll methodology

Questions for the BSFP for asked on the 2006 Vermont Poll, which is an annual phone survey of randomly selected Vermont households (Appendix L). The data was collected by the Center for Rural Studies at the University of Vermont. The survey was conducted between the hours of 4:00 p.m. and 9:00 p.m. beginning on February 6, 2006 and ending on February 10, 2006. The telephone polling was conducted from the University of Vermont using computer-aided telephone interviewing (CATI). The sample for the poll was drawn through random digit dialing and used all of the telephone exchanges in the state of Vermont as the sampling frame. Only Vermont residents over the age of eighteen were interviewed. The poll included questions on a variety of issues related to public policy in the state of Vermont. There were 726 respondents to the 2006 Vermont Poll. The results based on a group of this size have a margin of error of plus or minus 4 percent at a confidence interval of 95 percent.

Confidentiality

UVM, CRS agrees that any confidential information received during any furtherance of their obligations in accordance with this contract, which concerns the personal, financial, or other affairs of program participants, staff, Burlington School Food Project, or Burlington Food Council, will be treated by the UVM/CRS in full confidence, and will not be revealed to any other persons, firms or organizations, except as required by law.

III. Findings

Goal 1: Burlington School children increase awareness and engagement in the local food system and increase awareness about, and consumption of healthy foods.

Various activities were carried out by BSFP project partners to increase student awareness and engagement in the local food system and increase student awareness and consumption of healthy foods. The following narrative reviews data collected on 1) the integration of food, farm and nutrition education (FFN) into the school curriculum, 2) the integration of fresh and local produce into school cafeterias, 3) increased student consumption of healthy foods through school breakfast and lunch meals, taste tests, and fresh fruit served in the classroom, 3) the Healthy City project, 4) student gains in knowledge and awareness about FFN, 5) a shift in overall school culture toward a commitment to health and nutrition, and 6) the impact of the BSFP on the larger Burlington and Vermont community.

Integration of Food, Farm and Nutrition Education into School Curriculum

One of the main components of the BSFP that crosses over all three goals of the project is to integrate FFN education into Burlington School District (BSD) classrooms. Two teachers from Edmunds Middle School participated in a focus group to capture how they integrated FFN education into their classroom. Six focus groups were also held at faculty meetings throughout the BSD to gather information on FFN education integration into curricula district wide. A focus group was also held with BSFP project partners who provided education services and support to gather their perspectives on curriculum integration.

To integrate FFN education into their curriculum, teachers reported that they developed a unit with specific activities that focused on FFN as part of their curriculum. This change occurred in areas such as science, mathematics, family and consumer sciences, and technology and design education. Teachers also talked about an increase in school field trips to local farms and the development of school gardens because of FFN integration. This work is facilitated by professional development such as the summer science camp and “healthy snacks” workshops, material resources, volunteer assistance, multiple approaches to integrate FFN, and teaching students by setting a positive example.

Ways Food Farm and Nutrition are integrated into school curriculum

- Field trips
- Project and activities
- School gardens

What makes this all possible?

- Professional Development
- Resources
- Volunteers
- Multiple approaches to integrate
- Teaching by example

Student Projects and Activities

Almost 50% of 4th and 7th grade students surveyed for this evaluation reported that they learn about food and healthy eating as part of a classroom lesson. This response was the second highest response received, which followed parents as a source noted by 56% of students. Teachers who were main partners in the BSFP discussed specific activities they carried out with student to integrate FFN into their classroom. Daniel Treinis of the



Technology Education Department at Edmunds Middle School integrated FFN education into his curriculum by developing a unit on designing and making kitchen utensils that are used in food preparation. His students made a multi-purpose kitchen tool and then went into a cooking classroom to learn how to make a meal with raw foods from the Intervale and the tool they created. Treinis also spearheaded the cafeteria composting project to teach his students about the “food

cycle”, with food coming from the earth and returning to the earth in the form of compost. Students participated in composting during their school lunches and also took field trips to the Intervale Compost Project to learn how compost is made. Dan stated, “Composting shows students the whole cycle. They learn that composting is different from simply throwing something away and filling a landfill.” This is an important concept for students to grasp as they become the next producers and consumers in society.

Ginger Garineau, a teacher of Family and Consumer Sciences at Edmunds Middle School, stated that FFN education changed her classes in many ways. Students added recycling and composting to their

“classroom rituals” and they have also been involved in the “Sprouts Entrepreneurial Adventure”. In addition, because of the integration of FFN education into her curriculum, her students’ “semester buffets” have expanded from being just for the students in her class and their parents to a large community event with over 200 people attending! Her students have played roles in the school taste tests, as food preparers, servers and tasters, which have ultimately shaped the school lunch menu.

Ginger Farineau – Family and Consumer Sciences teacher, Edmunds Middle School –

“Because of the integration of FFN into her curriculum, we have been able to expand our “semester buffets” from being just for the students in my class and their parents to a large community event with over 200 people attending!”

Nicole Arsenault, a teacher at Edmunds Elementary School, commented that she gets parents involved in their students education by asking them to pack a “healthy snack” for their child as part of her “healthy living” unit. After having learned about healthy snacks, the students started asking their parents to buy healthy foods for them to bring to class. Thus, this teacher educated her students to teach their parents about healthy living. Overall, all the teachers interviewed felt that the BSFP provided a positive addition to the traditional curriculum.

Student cooking experiences through BSFP

In response to the student survey of 4th and 7th graders in most Burlington middle and elementary schools, 90% of students have cooked before, with 26% reporting that they have cooked in a school classroom and 20% having cooked in the school kitchen. Further, 14% reported having cooked food during an after school program and 9% cooked during a summer program. Even though many students have cooked food at a school related function, the majority have cooked in a private residence, specifically their home (60%), a relative’s house (43%), and a friend’s house (40%). Examples of items student have cooked include: baked goods, chicken, macaroni and cheese, and breakfast foods such as scrambled eggs and sausage.

Student Field Trips

Teachers interviewed commented that their FFN instruction led to more hands on activities for students through field trips to locations such as the Intervale Center, Shelburne Farms, and a maple sugar house. Students gained practical skills and knowledge about healthy nutrition, food, farming, and meal preparation through visiting



farms or other sites and then bringing this hands-on work back into the classroom for discussion or activity. A second grade teacher commented that she developed a unit for her students on “where our food comes from”. This unit reviews the cycle of food and how food gets from the farm to our plates. As part of this unit, students went on several field trips to the Intervale farms to see how vegetables are grown, glean vegetables, and cook them in the classroom. Students made

pesto out of the basil they picked. They also made mashed potatoes and French fries out of the potatoes they harvested. A teacher from Edmunds Middle School said, “Hands on activities are important because they make the real life connection for students, such as having the kids visit places and see where food actually comes from.”

Student farm experiences

From the student survey results, 84% of students have been to a farm. Of those who have, the most commonly indicated one was Shelburne Farms, of which 57% have visited (Table 2). Other farms visited include a family farm that they either grew up on or is owned by their grandparents or uncle (22%) and the Intervale farms (13%). Shelburne farms and the Intervale farms are two common destinations for school field trips. Other types of farms students have visited are presented in Table 2.

Table 2. Farms that students have visited

Farm	Frequency	Percent
Shelburne farms	98	57%
Family farm	37	22%
Intervale Center	22	13%
Private farm	16	9%
Community farm	13	8%
A friend's farm	8	5%
An animal farm	5	3%
A lot	3	2%

School Gardens

A 1,500 square foot school garden began as a project at Edmunds Elementary and Middle School, with funding received by the Parent Teacher Organization from the Neighborhood Development Grants Fund. The original purpose was the belief that a school garden – supporting vegetables, fruits, flowers and herbs – would complement the ongoing efforts to improve school food and perfect a food recycling program (Burlington Community Food Assessment, 2005). Teachers, community members, and BSFP

partners formed a committee to determine the site of the garden based on the criteria of student safety, care and maintenance, aesthetics, sustainability, usefulness, and a plan for all four seasons. Once the site was determined, students and teachers planted vegetables, raked, weeded, and mulched the garden. The school garden design and development was also turned into a curriculum at the schools. This effort, initiated by the BSFP project partners, has completely



been taken over by the community. Dana Hudson from Shelburne Farms said that the topic of school gardens became a classroom unit as an intentional effort to tie garden development into FFN education and help other gardens get started. This project enabled cross-curriculum teaching/learning and provided a laboratory for experiential learning. Because of the success of school gardens at Edmunds schools, school gardens can now be

found at the Flynn School, Champlain, Lawrence Barnes, and C.P. Smith Elementary schools.

Student gardening experiences

The student survey showed that 72% of students have had experience growing food in a garden. Fifteen percent have grown food in a school garden, 8% in an after school program, and 8% during a summer program. Of the off-school sites, 46% have gardened at home, 19% at a relative's house, and 10% at a friend's house. Students also mentioned growing food at an Intervale farm, Starr Farm, a public garden, or in another state or country. Eighty-four percent reported that they ate the food that they grew, 9% did not eat the food, and 7% did not remember.

Best Practices in Food, Farm and Nutrition Integration

In talking with school teachers who have participated in both the FEED project and BSFP, several best practices for successful FFN integration into the classroom were discussed.

Professional development and resources

Jen Cirillo, coordinator of the SSP out of Shelburne Farms, commented that a key component to assist teachers in integrating FFN into their curriculum is to provide professional development for teachers and curriculum development services and resources. This provides teachers with the tools to easily integrate FFN into their current area of study and meet academic standards. Cirillo has helped teachers to use their local resources and provide them with “big picture” curriculum ideas rather than specific classroom activities. This helped teachers to “understand how FFN fits into their study of science or social studies or literacy and integrate it into their work.” SSP also worked to provide teachers with the tools for the curriculum and the activities they needed to be able to implement their lessons. Cirillo specifically worked with

“In the summer, I develop the Summer Science Camp for teachers, such as “Food Fun and You” and “The Healthy Human Body”. This is a week long professional development for teachers who teach Kindergarten through 5th grade. The teachers then implement a week-long camp for the kids from the community. Over the past 2 years, 50 to 60 kids from Kindergarten to 5th grade have attended the camp. During school year, professional development with teachers includes documentation of units of study on FFN topics and the development of literacy kits.”

-Jen Cirillo on Professional Development for Teachers

Kindergarten through third grade teachers to develop units on FFN that incorporate a service-learning component and address area standards. With assistance from a grant from the Henderson Foundation, Cirillo and other SSP staff developed “literacy kits” that have books and materials on topics such as composting, life cycles of animals, food that animals eat, life on farms, etc. These topics are designed to address both science and social studies standards while focusing on FFN.

Teachers were encouraged and assisted with documenting their FFN curriculum integration work so they would not be recreating their curriculum every year. Cirillo stated, “We try to help them document what they did, what was successful, the books that they used, the resource people, so they can read their lessons the next year.” The BSFP teachers interviewed reiterated Cirillo’s comments in stating that resources provided by the project, such as books from the FEED “Book Barn” and transportation to and from field trips sites have led to successful FFN integration into the classroom. Doug Davis, director of the BSD Food Service also provided teachers with produce and commodities from the BSD supply for use in cooking demonstrations.

Volunteer assistance

Another key component was the volunteers who provided extra hands when students were cooking in the classrooms and kitchen. This volunteer also assisted by going to the grocery store the day of the lesson to get the fresh produce for the class. Cirillo stated that in the summer, when school is not in session, BSFP staff have brought teachers to grocery stores to show them where they can get specific produce, especially items with which they may not be familiar. Teachers interviewed noted the importance of parent volunteers who were trained by Amy Chambers from Shelburne Farms to lead and assist with student field trips to Shelburne Farms and the Intervale Center. Parent volunteer assistance was invaluable to transport students to and from the site and help teach the hands-on lessons.

Teachers interviewed also remarked on the importance of “professional” volunteers, such as chefs, composting educators, and retail store owners. These professionals provided in-school or on-site lessons for students in the classroom or cafeteria kitchen. Dan Treinis stated that the Chittenden Solid Waste District education outreach coordinator was a guest speaker in his class and taught composting education for the school to support the school’s composting project. Treinis’s students also traveled to *Mirabelle’s*, a local café and bakery in Burlington, to look at their kitchen and see how their operations work. His students also took field trips to *Kiss the Cook*, a locally owned kitchen supply store, so his students could conduct market research on the cost of kitchen tools.

Multiple approaches

Teachers and BSFP staff alike emphasized that having a consistent FFN message from multiple sources and by multiple approaches was essential for students to internalize the information. The “interdisciplinary approach” of teaching FFN issues in several subject areas, such as technology and design working with food education teachers, emphasized the message to students the importance of healthy eating and knowing the source of one’s food. In addition to having multiple teachers integrate FFN into their curriculum, in-school taste tests (discussed in detail below) that heavily involved students in preparation, serving, tasting and judging new and healthy foods reinforced what students are learning in the classroom.

“Teaching by example”

Another strategy to integrate FFN into the classroom and have students internalize this message was for teachers to “lead by example” and eat healthy foods with them in the cafeteria during lunch. Several teachers commented that few teachers eat in the school cafeteria. This sends kids a message that the food served is not something they are willing to eat. It also does not show kids the food that teachers eat for lunch, either from the cafeteria or a packed lunch. Several teachers interviewed felt that teachers should “practice what they preach” in the classroom and eat with students to demonstrate healthy eating by their own food choices purchased from the school cafeteria or brought from home.

Suggested Resources and Changes for the Future FFN Education

The teachers provided several suggestions for other resources or professional development that would be useful for future work in FFN integration. One teacher suggested that schools have a mobile “kitchen appliance and utensil bar” that could travel to different classrooms for use in cooking. This could include items such as a blender, hot plate, whisk, knife, and cookbook for classrooms to use. Teachers would also like to be provided with consumable items for in-classroom use, as they often pay for these items out of their own pocket. In addition to physical resources, teachers would like more professional development on general and age appropriate nutrition (i.e. adults and growing children), cooking, how to work with teens who have self image, body image, and/or weight management (from underweight to obesity) issues and eating disorders. The teachers anecdotally noted that many of their middle and elementary school students, particularly females, talk about these issues when discussing food and healthy eating topics. The teachers also suggested that Food Service improve the overall atmosphere of the student’s cafeteria. They suggested the cafeteria focus on food presentation, use table cloths, have condiments on the table, and play music. These changes would make the cafeteria feel more comfortable than “factory feeding.” They also felt that students should have more time allotted for their lunch break.

Integration of Fresh and Local Produce into Schools

Another major part of increasing student awareness and engagement in the local food system and awareness and consumption of healthy foods was to integrate fresh and local produce into the school cafeteria. Of the 4th and 7th grade students surveyed in 2005, 32% were aware that their food serves food in their school cafeteria that is local from Vermont. About two thirds were not sure if their cafeteria served local food and 5% said



it did not serve local food. This level of awareness among students is a positive finding as the majority of these students (62%) reported that they eat lunch served by the cafeteria always or almost always.

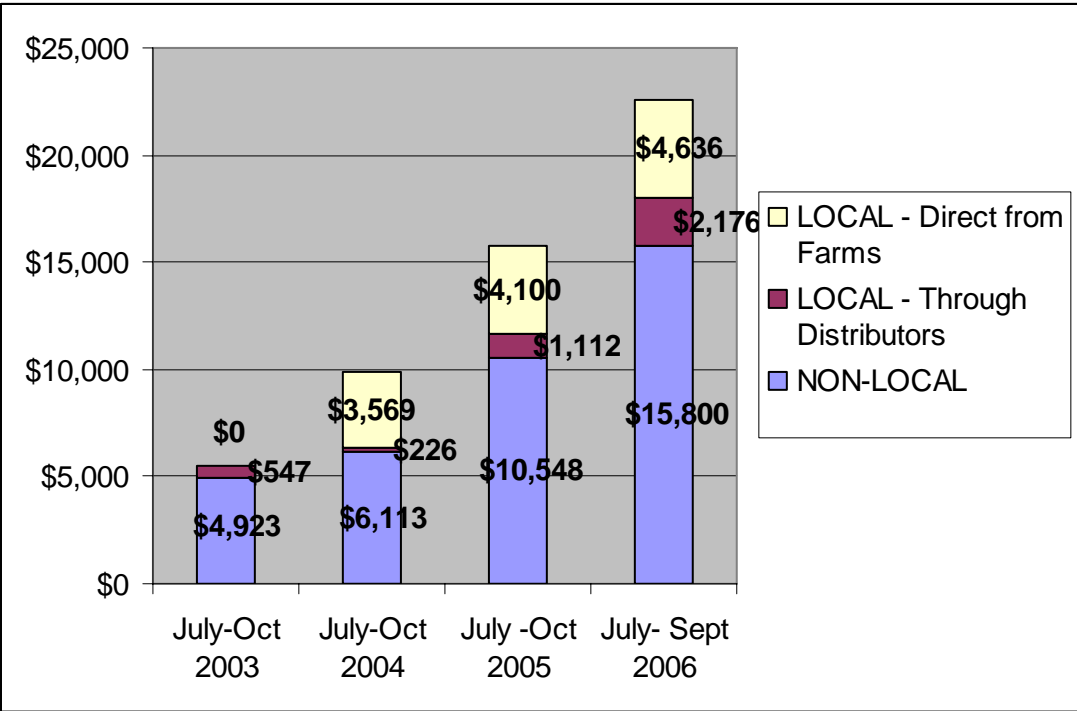
In interviews with members of school Food Committees, they noted several ways in which “farm to school” activities have been integrated into the schools. The purchasing of local products has been paramount to this integration, as farmers now participate in taste tests during school

lunch week and classrooms regularly visit the Intervale farms and local businesses. Farm to school activities have allowed the topics of FFN to integrate into classroom curriculums.

Increase in Fresh and Local Produce Purchased by BSD Over Time

Figure 1 shows the dollar value of fresh produce purchased by the BSD for the academic school years of 2003 to 2006. The figure shows the dollar amount of local produce purchased directly from farms, local produce purchased through distributors, and non-local produce purchased through distributors. Clearly, the dollar amount spent on local produce by the BSD, both directly and through distributors, has greatly increased over time. The dollar value of local produce purchased directly from farms increased from \$0 in 2003 to \$4636 in 2006. Looking at the purchasing of local produce through distributors, this amount increased from \$547 in 2003 to \$2,176 in 2006, an overall percentage increase of 298%!

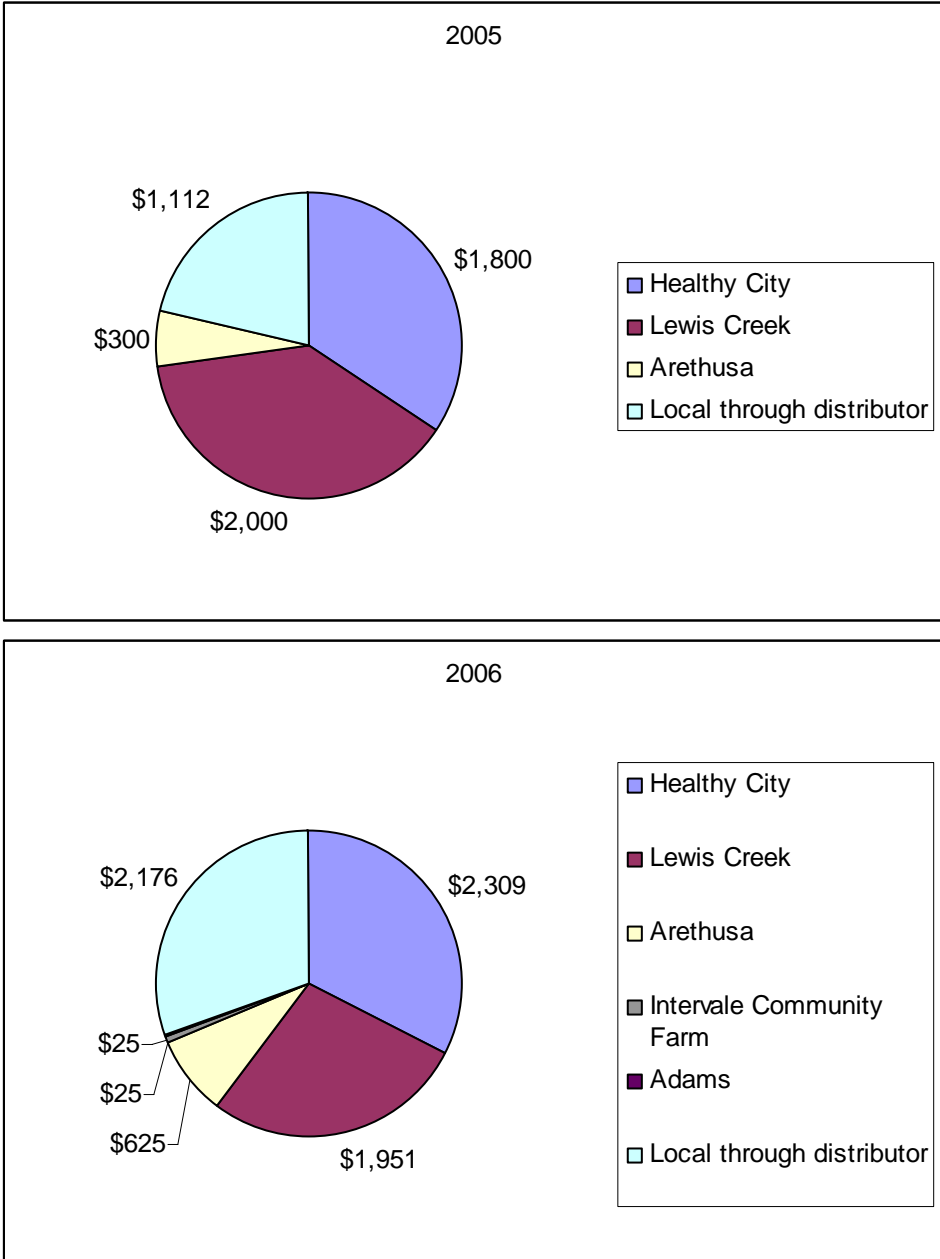
Figure 1. Fresh Produce Purchases by BSD, 2003-2006



Produce Purchased by Source

Figure 2 shows the dollar amount spent by the BSD on local produce by the source, comparing data from 2005 and 2006. The number of farms that BSD purchased produce from increased over the one year period from three to five local farms. The five farms include: The Healthy City Farm, Lewis Creek Farm, Arethusa Collective Farm, Intervale Community Farm, and Adams Farm. The dollar amount spent on produce from the Healthy City farm increased by 28% from \$1,800 in 2005 to \$2,309 in 2006. This is a positive finding as the Healthy City farm is run by local teens who attend schools in the BSD. The amount purchased from Lewis Creek farm remained fairly consistent over the year period with a slight decrease from \$2,000 in 2005 to \$1,951 in 2006. The amount purchased from Arethusa Collective increased by 108% over the one-year time from \$300 in 2005 to \$625 in 2006. Types of produce purchased from the farms include: kale, chard, carrots, raspberries, cherry tomatoes, basil, zucchini, strawberries, green leaf, red leaf, romaine, and mesculin lettuce, cucumbers, tomatoes, and peppers.

Figure 2. Local produce purchased by source, 2005 and 2006



Factors that Have Led to Successful Integration of Farm to School

Interviews with project partners show that many factors have led to the successful integration of food from local farms into the BSD cafeterias. One of the most important factors is the relationship between farmers and the BSD.

Change in relationships between farmers and BSD over time

Doug Davis, director of the BSD Food Service, stated that through relationship building, the farmers and BSD have improved the way they do business over time.

Initially, a staff person working at the Intervale would visit farms weekly to ask if they had any produce to sell to the schools. This did not result in a lot of sales because most of their produce was spoken for by other customers at a specific price. Through relationship building by convening farmers, BSD staff, and BSFP partners in the winter, farmers have used a community

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| <p style="text-align: center;">Factors that Have Led to Successful Integration of Farm to School</p> <ul style="list-style-type: none"> • Change in relationships between farmers and BSD over time • School cafeteria resources to lightly process foods • High quality produce • Fresh, local and/or organic produce • Student and volunteer involvement |
|--|

supported agriculture (CSA) model to sell produce to the BSD. Under this model, the BSD contracted with and paid farmers up front for specific produce at a certain price.

<p><i>“The Burlington School Food District has really been the local hero...He (Doug Davis) oversees the whole school district foodservice and I think that was the biggest part of this program’s success.”</i> -Megan Camp, Shelburne Farms</p>

The farmers then planted vegetables specifically designated for the school cafeterias. Davis noted that this model improved relationships through confidence, “the farmers are confident that the BSD will purchase their produce and the BSD is confident that the farmers will

deliver on what they say they will. Both ends hold up their side of the bargain.” Davis commented that he “credits his superintendents for being open to recognizing the importance of the BSFP project and desiring to help the project” to make the CSA model work for the BSD.

School cafeteria resources to lightly process foods

Another factor mentioned by project partners is having access to the Burlington High School kitchen and staff to lightly process fruits and vegetables, which are then distributed to schools. Many of the schools in the BSD do not have kitchens with equipment or space to process foods. Thus, the use of the High School cafeteria provided a valuable resource to the project. Betsy Rosenbluth of the Burlington Food Council stated that being able to lightly process and freeze foods has extended the shelf life of produce and the use of produce in the schools beyond the short Vermont growing season.

High quality produce

Abbie Nelson, Vermont FEED coordinator and farm to school mentor, commented that the quality of the produce coming from local farms to the schools has been very high. Students find these fruits and vegetables to be tastier than other produce that they are

used to eating. High quality food and that students like the produce makes the purchasing of local produce worth it to the BSD Food Service.

Fresh, local and organic produce

Several partners acknowledged that although project partners like to integrate local foods into the school cafeteria, this is not always possible due to the short growing season in Vermont. Thus, the emphasis for the project is placed on serving fresh produce in the cafeteria and providing local where possible.

Jen Cirillo explained how this notion was integrated into school curriculum. She noted, “There is *fresh* and then there is *local* and then there is *organic*. Fourth and fifth graders were looking at the differences between fresh produce coming from California that is organic compared to a local product that was not organic but coming from Vermont.” This allowed students to understand the differences between fresh, local and organic and the impact each type of food has on people and the environment during its life cycle.



Student and volunteer involvement

Finally, project partners noted that student and volunteer involvement in all aspects of the project, such as growing and harvesting produce and participating in classroom curriculum, field trips and taste tests have led to the successful integration of food from local farms into the BSD.



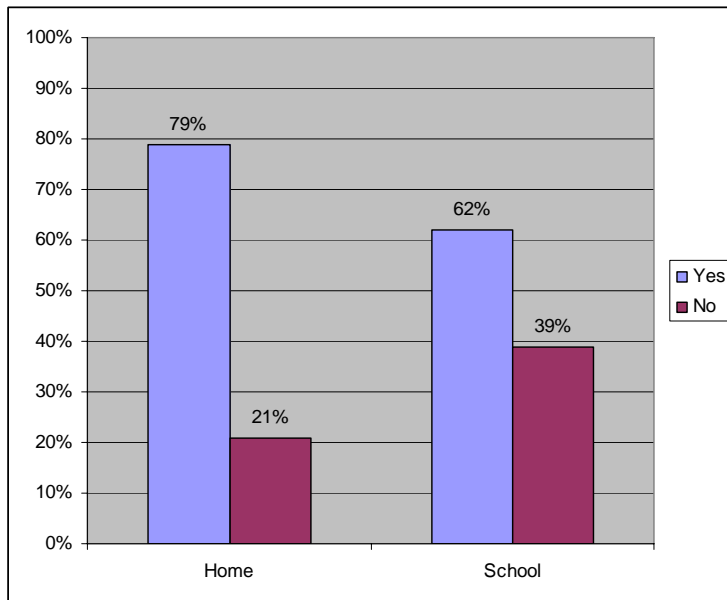
Student Breakfast and Lunch Consumption

As previously discussed, a survey was administered to fourth and seventh grade students in major Burlington middle and elementary schools in the spring of 2005 (N=394). This section presents the responses to the meal consumption and healthy eating sections of the survey. Student aggregate responses are compared, where appropriate, to the results of a similar survey of fourth and seventh graders in 2004 that was conducted by the Burlington Food Council as part of the *Burlington Community Food Assessment* (2005) (N=455).

Student Breakfast Consumption

Figure 3 shows that 79% (310) of students surveyed in 2005 reported eating breakfast at home and 62% (236) eat breakfast at school.

Figure 3. Student breakfast consumption at home and school, 2005 survey



In comparing student frequency of eating breakfast at home, results suggest that 4th and 7th grade students surveyed in 2005 eat breakfast at home more often than the 4th and 7th graders from 2004. Table 3 shows this comparison. Almost two thirds (63%) of students in 2005 reported eating breakfast at home “always” or “almost always”, compared to 47% of those surveyed in 2004.

Table 3. Frequency that students reported eating breakfast at home, 2004 and 2005

Frequency of eating breakfast at home	2005 survey	2004 survey
Always	41%	28%
Almost always	22%	19%
Sometimes	31%	42%
Never	6%	11%

Most likely the increase in the number of students who eat breakfast at home is not due to those eating breakfast less often at school, as those numbers remained fairly consistent over time. Slightly more students in 2005 (34%) reported eating breakfast at school “always” or “almost always”, compared to 29% of those in 2004 (Table 4).

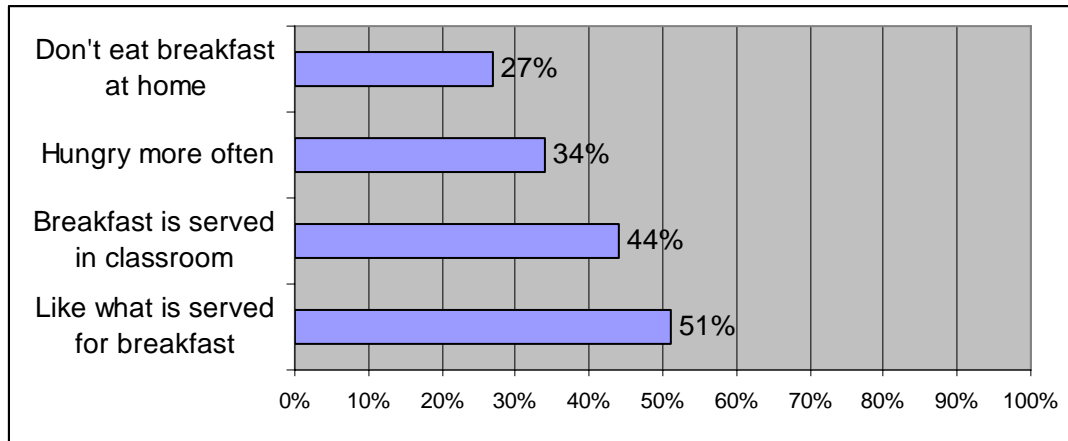
Table 4. Frequency that students reported eating breakfast at school, 2004 and 2005

Frequency of eating breakfast at school	2005 survey	2004 survey
Always	13%	10%
Almost always	21%	19%
Sometimes	44%	49%
Never	22%	22%

Reasons for eating breakfast more often at school

Of the students who eat breakfast at school, 42% said they eat breakfast at school *more* this year than last year. Reasons cited for eating breakfast at school more this year are presented in Figure 4. The top reason was that the student liked what is served for breakfast at school (51%), followed by breakfast being served in the classroom (44%).

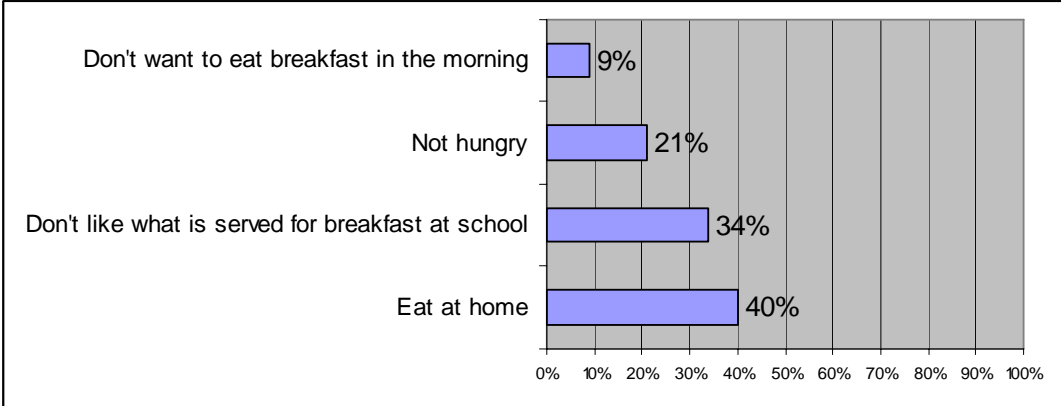
Figure 4. Reasons why students reported eating breakfast at school more this year compared to last year



Reasons for eating breakfast less often at school

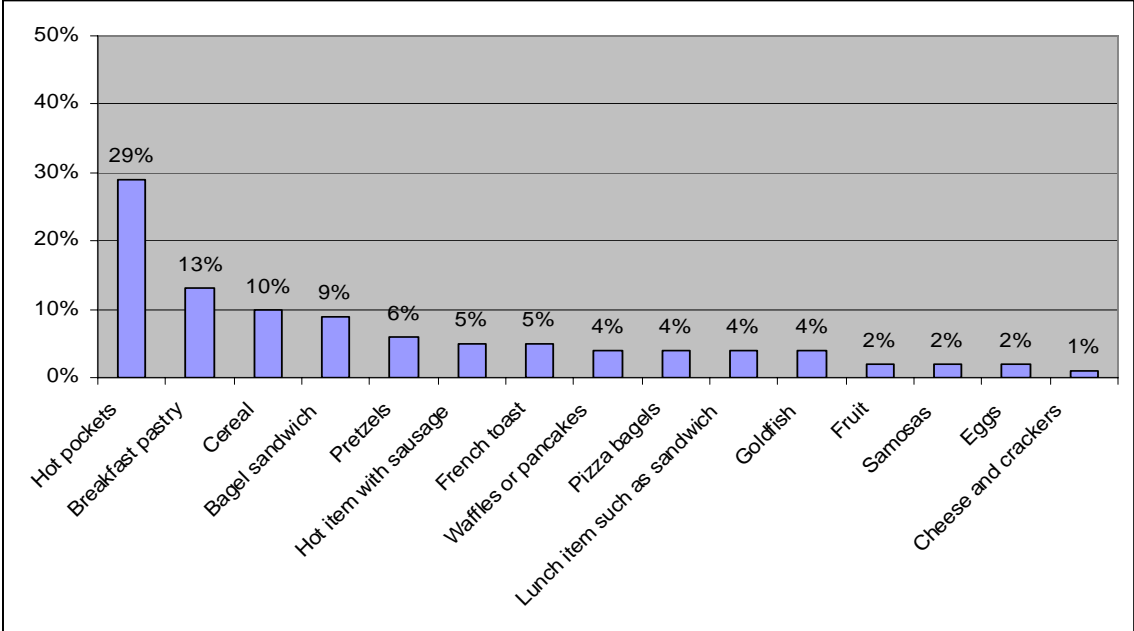
More than half of students surveyed (59%) said that they *do not* eat breakfast at school more this year compared to last year. Thus, they are either eating school breakfast as often as or less often than last year. Reasons for this are presented in Figure 5, with the top reasons being they eat at home (40%) and students do not like what is served for breakfast at school (34%).

Figure 5. Reasons why students reported eating breakfast at school more this year compared to last year



Students were asked to indicate their favorite breakfast foods served in the cafeteria. After categorizing the open-ended responses, Figure 6 shows that 29% of respondents like the hot pockets, followed by 13% who like a breakfast pastry item such as a muffin or donut, 10% who like cereal, and 9% who like bagel sandwiches with items such as eggs, cheese, and/or meat. Overall, 60% of students prefer a hot breakfast item (such as French toast or eggs), while 40% like a cold breakfast item.

Figure 6. Favorite breakfast foods served in the cafeteria, categorized



Students were asked to name up to three healthy foods that they would like offered for breakfast at school. Table 5 shows the frequency and percentage of categorized items. The most popular item that students would like offered for breakfast at school is more fresh fruit (42%). This is followed by a variety of items, with the top items being bagel sandwiches (8%), different types of cereal (5%), and some type of egg item (4%). Because the demand for more fruit was so high, the frequency and percentage of the different types of fruit desired is presented in Table 6. The top fruits named are more commonly known fruits including apples, strawberries, bananas, and oranges. Several students also named more exotic fruits such as kiwis and mangos.

Table 5. Frequency and percentage of “healthy foods” that students would like offered for breakfast at school, categorized

Item	Frequency	Percent
More fruit	243	42%
Bagel sandwich	45	8%
Different cereal	31	5%
Egg item	23	4%
Pancakes	20	3%
Breakfast pastry	19	3%
Waffles	18	3%
Yogurt	17	3%
Raw vegetables	14	2%
Toast	14	2%
Fruit juice	13	2%
Crackers	9	2%
Breakfast bars	8	1%
Pizza	8	1%
Bacon	7	1%
Hot pocket	7	1%
Lunch item	7	1%
Cheese	6	1%
Oatmeal	6	1%
Salad	6	1%
Smoothies	6	1%
Donuts	5	1%
Pop Tarts	5	1%
Samosas	5	1%
Specialty beverage	5	1%
Peanut butter	4	1%
Sausage	4	1%
Sweets	4	1%
Apple with PB	3	1%
Banana bread	3	1%
Bread	3	1%
French toast	3	1%
Pretzels	3	1%
Flavored yogurt	2	0%
Crepes with fruit	1	0%
Hash browns	1	0%

Table 6. Favorite fruit items students want served in school for breakfast

Fruit item	Frequency	Percentage
Apple	49	26%
Strawberries	28	15%
Banana	24	13%
Orange	20	10%
Watermelon	18	9%
Grapes	17	9%
Pears	9	5%
Peaches	7	4%
Pineapple	7	4%
Berries	6	3%
Kiwi	5	3%
Mango	1	1%
Plums	1	1%

Student Lunch Consumption

Almost half of students surveyed in 2005 reported eating lunch served in the school cafeteria “always” and 22% reported to eat school lunch “almost always”. Table 7 shows the frequency that students reported eating school lunch. Overall, 68% of students eat lunch served in the cafeteria a good amount of time.

Table 7. Frequency that students reported eating lunch offered in school cafeteria, 2004 and 2005

Frequency of eating breakfast at home	2005 survey
Always	46%
Almost always	22%
Sometimes	21%
Never	11%

The main reasons why students don’t always eat lunch at school, whether or not they bring it from home or buy lunch at school, are presented in Table 8. Students were allowed to select up to three options from the list provided and/or write in another choice not provided. Almost two thirds of students reported that they don’t always eat lunch at school because they don’t like the food that is packed for them from home. This is followed by 56% of the students who bring or prefer lunch from home rather than eating lunch from the school cafeteria. Twenty-three percent of students do not eat because they are not hungry, 15% do not like what is served in the cafeteria, and 15% feel teased by the type of food they eat or because of their weight.

Table 8. Reasons why students do not always eat lunch at school

Reason	Frequency	Percent
I don't like the food that I bring from home	150	62%
I bring/prefer lunch from home	137	56%
I am not hungry	55	23%
I don't like what is served in cafeteria	37	15%
People tease me about the food I eat at lunch/my weight	36	15%
I don't have enough time to eat during lunch	28	12%
I forget my lunch money/lunch	22	9%
School lunch costs a lot of money	10	4%
My lunch time is too early/late in the day	7	3%
Always buy lunch	6	2%
There is no food to bring for lunch from home	5	2%
Other: doing homework, saving lunch money, attend field trips, not enough food leftover from previous lunches		

Of the 39% of students who bring lunch from home, the top three foods they bring from home are presented as categorized responses in Table 9. The top three responses are a sandwich (25%), a piece of fruit (17%) and a snack item such as chips (8%). Overall, 61% of students surveyed do not bring lunch from home.

Table 9. Food students bring from home for lunch, categorized

Food	Frequency	Percent
Sandwich	99	25%
Fruit	68	17%
Snack item	31	8%
Vegetables/Salad	23	6%
Desert	23	6%
Yogurt	17	4%
Peanut butter and jelly	15	4%
Fruit juice	13	3%
Crackers	13	3%
Specialty beverage	12	3%
Meat	12	3%
Pasta/rice	10	3%
Bread/Bagel	10	3%
Cheese	9	2%
Soup	7	2%
Pizza	7	2%
Store prepared meal	6	2%
Snack bar	5	1%
Granola bar	5	1%
Water	4	1%
Leftovers	4	1%
Breakfast item	4	1%
Sushi	3	1%

Favorable changes in school food offerings

Students were asked what changes they like in the food offered for school lunch. Table 10 displays the categorized responses of the 243 students who provided a food related response. The top answer provided was the sandwich bar (19%). This was followed by students referencing “lots of deserts” with some specifying items such as cookies, ice cream, and pie. In addition, 10% liked the changes in pizza, including pesto and cheese crust pizza varieties. Ten percent also noted they liked the “nachos grande” and 8% like the calzones. Interestingly, many students used language such as “healthy” and “organic” (7%), fresh food or fresher choices (1%), and Vermont made products, specifically the calzones (1%). Seven percent also commented that the food was “better tasting”. Three percent of respondents like that the cafeteria holds taste tests and 3% like the international foods and holiday specialty meals offered. Many of the items that students reported liking are the result of taste tests, including the sandwich bar, pizza, calzones, soup, fresh fruit, whole wheat bread, pesto, and samosas. In addition to food related responses, 20% reported that they did not like any of the changes, 5% were not sure of changes, 3% reported that they do not eat school lunch, and 1% reported that they were not at the school the past year to judge the changes. Overall, responses show that many students recognize changes that have occurred in their school cafeteria and have learned to recognize healthy food and related language and healthy options such as the sandwich bar.

*Unfavorable changes in school food offerings*

Students were also asked to indicate the changes that they do not like in the food offered for school lunch. Ten percent of the students who responded said “nothing” and 6% did not respond because they do not eat the school lunch. Table 11 shows the responses given related to a food or cafeteria item. More than half of the students (60%) do not like the change of making homemade pizza in the cafeteria instead of ordering Domino’s pizza that was delivered to the cafeteria. Ten percent do not like the “Baglers” instead of bagels and cream cheese for breakfast, 8% do not like the new soups, and 6% said the cafeteria now serves a specific food that they do not like. In addition, 4% said the cafeteria is no longer serving an item that they liked, such as bacon, cereal, soda, tacos, waffles, and skim milk. Further, 4% indicated they do not like the hot lunch served, which included a variety of items listed individually such as meatballs, lasagna, and grilled cheese. Other hot lunch items that students do not like, which were listed by more than two students include: burritos/fajitas, calzones, macaroni and cheese, spaghetti, hamburgers, mashed potatoes, nachos, and popcorn shrimp. Ironically, several of the new items listed as unfavorable changes are also items that many listed as being favorable changes. It is not possible to please the palate of all students; however, there is large support for change in school pizza and Baglers.

Table 10. Changes in school cafeteria offerings that students like, categorized

Food	Frequency	Percentage
Sandwich bar	47	19%
Lot of deserts	33	14%
Pizza	25	10%
Nachos	24	10%
Calzones	20	8%
Healthy/organic	17	7%
Soup - minestrone and chicken noodle	16	7%
Better tasting food	16	7%
Chicken - fajita/nuggets/patties/fried/grilled	14	6%
Salad bar	14	6%
Fresh fruit	13	5%
Taste tests	7	3%
International foods/holiday meals	7	3%
Beverages	6	2%
Hot dogs	5	2%
Pasta	4	2%
Hot pockets	4	2%
French fries	4	2%
Like all changes	4	2%
Tacos	4	2%
Whole wheat bread	3	1%
Fresh food	3	1%
Samosas	3	1%
Breakfast choices	3	1%
VT made	3	1%
Vegetarian items	2	1%
Spaghetti	2	1%
Pesto	2	1%
Peanut butter and jelly	2	1%
Cheese and crackers	2	1%
Posting of lunch	1	0%
Second helpings	1	0%
Grilled cheese	1	0%

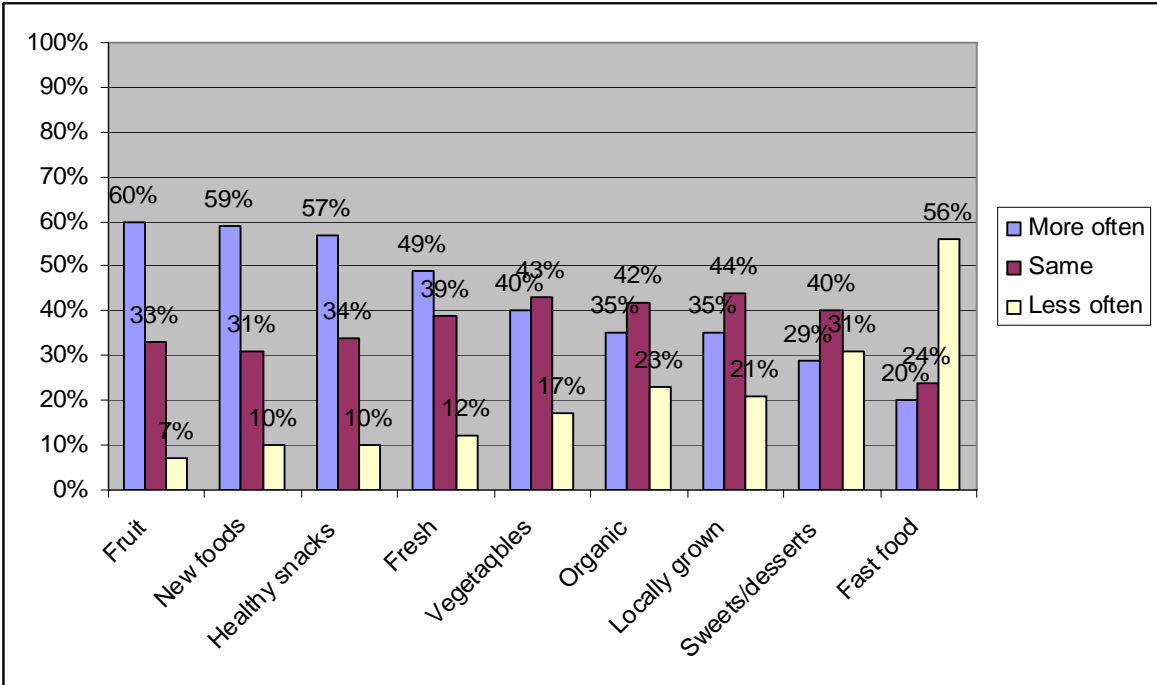
Table 11. Changes in school cafeteria offerings that students dislike, categorized

Food	Frequency	Percent
No longer serving Domino's pizza at lunch	179	60%
Baglers instead of bagels	31	10%
Soups	25	8%
Serve foods that I don't like	18	6%
No longer serving item liked, not including Domino's pizza	12	4%
Hot lunch – miscellaneous	11	4%
Burritos/fajitas	5	2%
Calzones	4	1%
Lunch trays	4	1%
Macaroni and cheese	4	1%
Spaghetti	4	1%
Too greasy	4	1%
Not enough choices	4	1%
Unhealthy food choices	4	1%
Not fresh	4	1%
Egg salad	3	1%
Hamburgers	3	1%
Mashed potatoes	3	1%
More healthy	3	1%
Nachos	3	1%
Popcorn shrimp	3	1%
Items in salad bar	3	1%
Items in sandwich bar	3	1%
International food	2	1%
Bagged fruit	1	0%
Change lunch menu daily	1	0%
Less lunch time	1	0%
Lunch staff are not nice	1	0%
Too much pasta	1	0%
Want more samples	1	0%

Change in Student Food Consumption Over Time

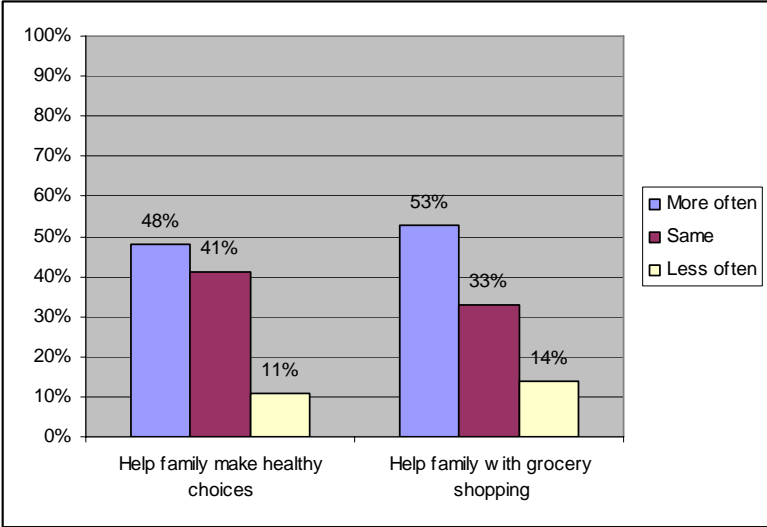
Students were asked to indicate how often they eat foods, such as fruits and vegetables, at the time of the survey compared to the past year. Figure 7 shows the change in self-reported food consumption over the one year time frame, with responses including “more often”, “less often”, and “same”. Overall, responses show positive change in students eating behaviors in relation to BSFP goals. More than half of students (60%) reported eating fruit more often compared to last year. Further, 59% reported eating new foods and 57% reported eating healthy snacks more often. As many students reported eating more healthy choices, they also reported eating less healthy choices less often. More than half (56%) of students reported eating fast food less often and 31% said they eat dessert and sweets less often.

Figure 7. Change in student food consumption over one year



Students were also asked about their changes in helping their family to make healthy food choices and with grocery shopping from the current time to last year. The majority of students reported changes to be either more often or the same compared to last year. More than half (53%) of those surveyed help their family with grocery shopping more often and 48% help their family make healthy eating choices more often.

Figure 8. Change in frequency that child helps family make healthy food choices and grocery shop



Sources of Information on Healthy Food and Eating

Students were asked where they learn about food and healthy eating and were allowed to select all the responses that applied to them. Related to the BSFP, a major source of information for almost half of the respondents was as part of a classroom lesson (49%). Sixteen percent reported learning about this while working in the school cafeteria or kitchen, 15% through an after school program, 10% through a summer program, and 7% from a school cafeteria worker. The lower percentages for these options possibly reflect that not all students participate in these areas, while most students are introduced to healthy foods and eating through their classroom lessons. Figure 9 shows that the top five sources for

information on healthy food and eating are: parents (56%), a classroom lesson (49%), a doctor or nurse (43%), television (36%), and another family member (33%).

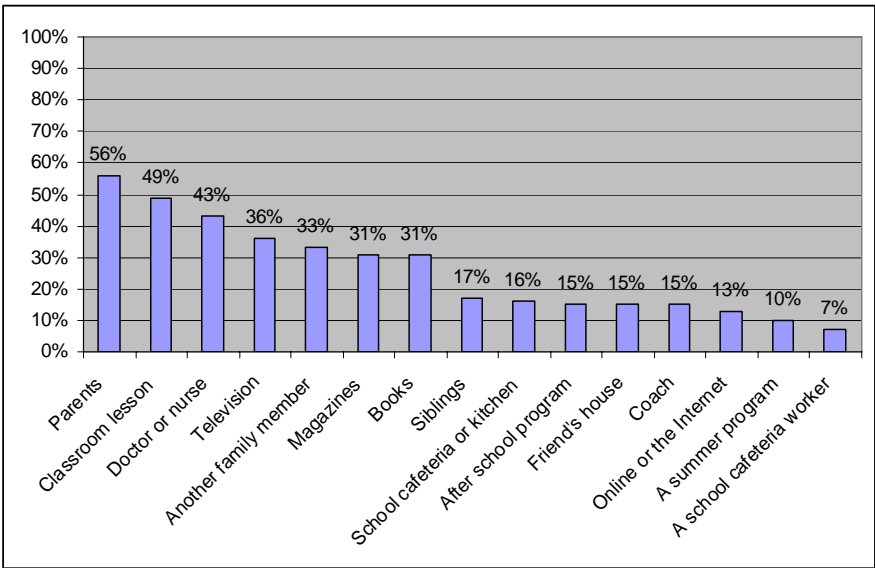


Figure 9. Sources of information on healthy eating and food

Student Taste Tests

Student taste tests were a key activity carried out by BSFP partners to increase student awareness and consumption of healthy foods. At the grant conception, when local interest in improving school food gained momentum, BSD Food Service director Doug Davis stated, “I want to serve foods that the students will eat. Students need to try new foods first before they see them in the lunch line.” As a result, student in-school taste testing of food items started at Edmunds Middle and Elementary School through the work of the Edmunds Food Committee. This committee, comprised of teachers, parents and Food Service professionals was created in response to the need for coordinated interactions between students, Food Service professionals and BSFP partners.



The main goal of the Food Committee is to increase student consumption of fresh and local foods and to facilitate Food Service to become a part of the educational framework. Their main work throughout the course of the grant was to plan and implement taste tests in the school cafeteria, with the intention of exposing students to more fruit, vegetables, whole grains, local, and seasonal products and integrating well-liked and feasible items into the regular lunch menu over time. Products for taste tests were chosen based on a) what was currently local, b) could potentially be purchased locally or c) availability of a nutritious commodity product. With these guidelines, Food Committee members chose a product each month for students to prepare, serve and sample and provide feedback.

- | |
|---|
| <p>Edmunds Taste Test Facts</p> <ul style="list-style-type: none"> • 37 items tested • Average 210 students tried items • Range of 22 to 426 students tried new foods • 6,300 tastes of food occurred • At least four new raw foods and six new prepared meals are now offered during lunch |
|---|

Dana Hudson noted that student taste tests in school classrooms and cafeterias were not an original objective of the BSFP grant. However, this process has grown to be one of the most successful means for increasing student consumption of healthy foods, integrating fresh and local foods into the school cafeteria menu, and building relationships among students, teachers, Food Service staff, farmers, local business owners, chefs, and community volunteers.

Taste Test Facts

At Edmunds Middle School, between March 2004 to April 2006, a total of 37 items were taste tested by an average of 210 students per tasting, yielding approximately 6,300 tastes! The number of students who tried a taste test item each time ranged from 22 students who tried red cabbage to 426 who tried Applesauce Muffins. At Hunt Middle School, from March 2005 and April 2006, a total of 20 items were taste tested by an average of 220 students per tasting, which resulted in approximately 3,500 tastes! The number of students who tried an item ranged from 116 who tried the Cranberry Fruit Bars to 298 who tried the Apple Samosas. Based on results from the student survey of 4th and 7th graders, 90% of 7th graders have eaten food from a school lunch taste test (only 7th graders were asked to answer the questions regarding school taste tests). Three quarters (74%) of students who tried foods at the taste tests said the food was new to them and 43% are now more willing to try new foods because of their experience with the taste tests. Examples of reasons why students like to try new foods include: they might like it, a friend told them it was good, the food looks tasty or has a good aroma, to experience food from other cultures, and to have more variety of foods from which to choose.



Taste Test Process

To carry out the taste tests at Edmunds schools, students prepared taste test samples with Food Service staff, parents and community volunteers during their morning classes as part of their lesson. The taste test station was set up before lunch periods and items were served to students, by both students and adults, during lunch. Once students had the chance to try an item, students and teachers, as part of a class project, surveyed the students to assess their preference and willingness to try the food again. Students were asked:



- 1) Did you eat the [taste test food]?
- 2) Did you like it?
- 3) Would you try it again?

Students recorded the Yes/No responses and adult volunteers and students aggregated the responses as both a frequency and percentage. Results were reported at Food Committee meetings. Based on the results and feedback from the Food Service professionals, the

Food Committee then decided on whether to propose serving the taste test recipe as a featured menu item at a future lunch meal. The decision-making process is detailed below.

Figures 10 and 11 show the results of the taste test survey for items tried over the course of the grant at Edmunds Middle and Elementary school and Hunt Middle School, respectively. The percentage of students who liked an item and who would try it again is presented in descending order of the percentage of student who would try the item again. Items without scores presented did not have data available at the time of this report but are included to show the variety of items offered, from raw vegetables to prepared foods. Overall, most foods rated a 75% acceptance rate or better. Favorite items tried at Edmunds were whole wheat bread and cheese, applesauce muffins, and pesto pizza, which also received the highest percentage of students who would try these items again. Least favorite items were broccoli and winter squash soup, with more than half of students showing willingness to try broccoli again. At Hunt Middle School, calzones and apple samosas were favorite items, with 100% wanting to try applesauce muffins and calzones again! The in-school taste test process through the BSFP made national news as the cover story in the magazine *Time for Kids* in October 2005, as shown below.



Make Lunch Fresher

COVER STORY

On a recent Thursday, a long line of excited kids formed in the cafeteria at Edmunds Elementary School. The students were **eager** to try a tasty new treat—bright green pizza! “People liked it,” says Elizabeth Brown, 8. “They were spreading the word.”

Bright green pizza? It may sound like a science experiment gone bad. It’s actually a fresh menu item made with locally grown vegetables. The students were trying pesto pizza for the first time. Pesto is a thick sauce made with garlic, cheese and **herbs**.

Farmers Serve Up School Lunch

Edmunds and other public schools in Burlington, Vermont, are part of a farm-to-school program. The program brings locally grown fruits and vegetables to the cafeteria. The **basil** that the students used to make pesto was picked that day at a nearby farm.

At least 400 school districts in 23 states serve farm-fresh foods for lunch. The program is good for local farmers who sell their **produce** to the schools. It’s also good for kids’ health to eat more fresh produce. Best of all, students seem to like it. Third-grader Tian Berry says the food just tastes better: “It hasn’t been sitting on the shelf for 10 days.”

WHAT’S THE SCOOP? What are some other ways to make school lunch more healthful?

- 1 A farmer picks basil on the same day that kids will cook with it.
- 2 After mixing a batch of basil pesto, Tian Berry, 8, scrapes it into a tray.
- 3 Will Boardman, Josh Hill, Ezra Ouellette and Tian (left to right) spread pesto on dough. They are making pizza.
- 4 Students at Edmunds Elementary School sample the pizza that their classmates made.

2 TIME FOR KIDS

Figure 10. Taste test results from Edmunds Middle and Elementary Schools

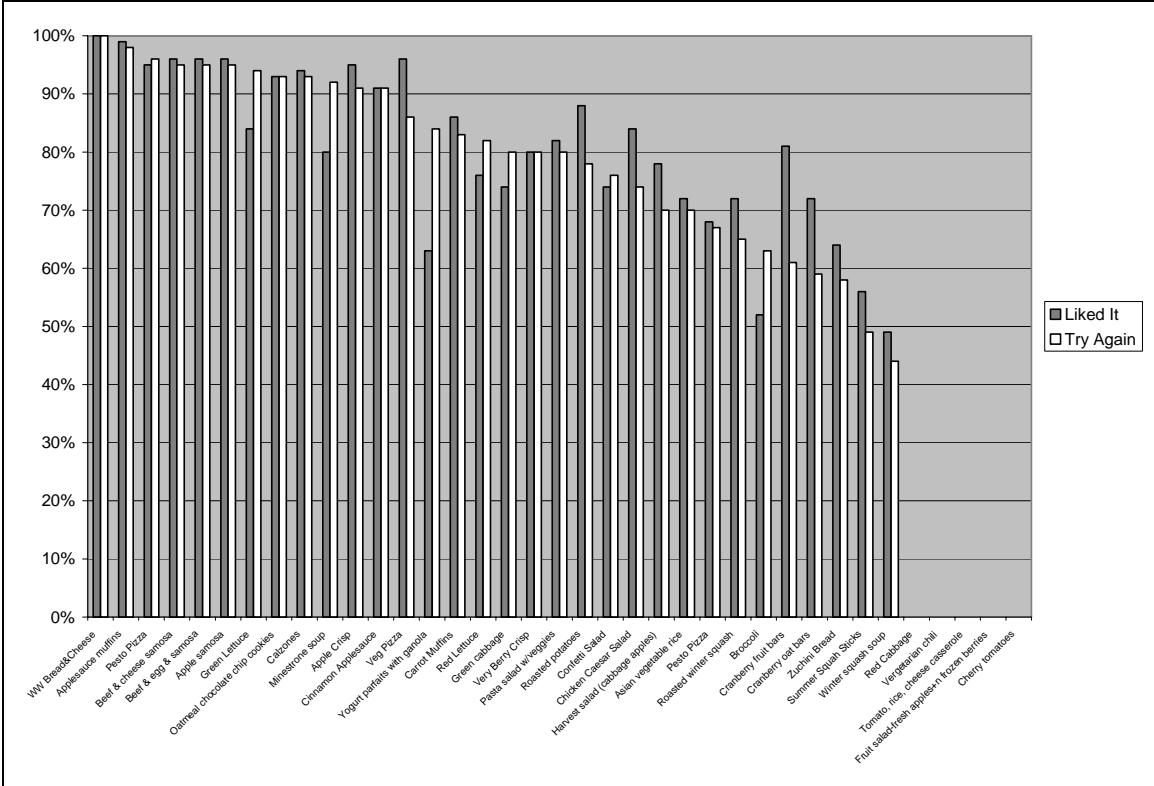
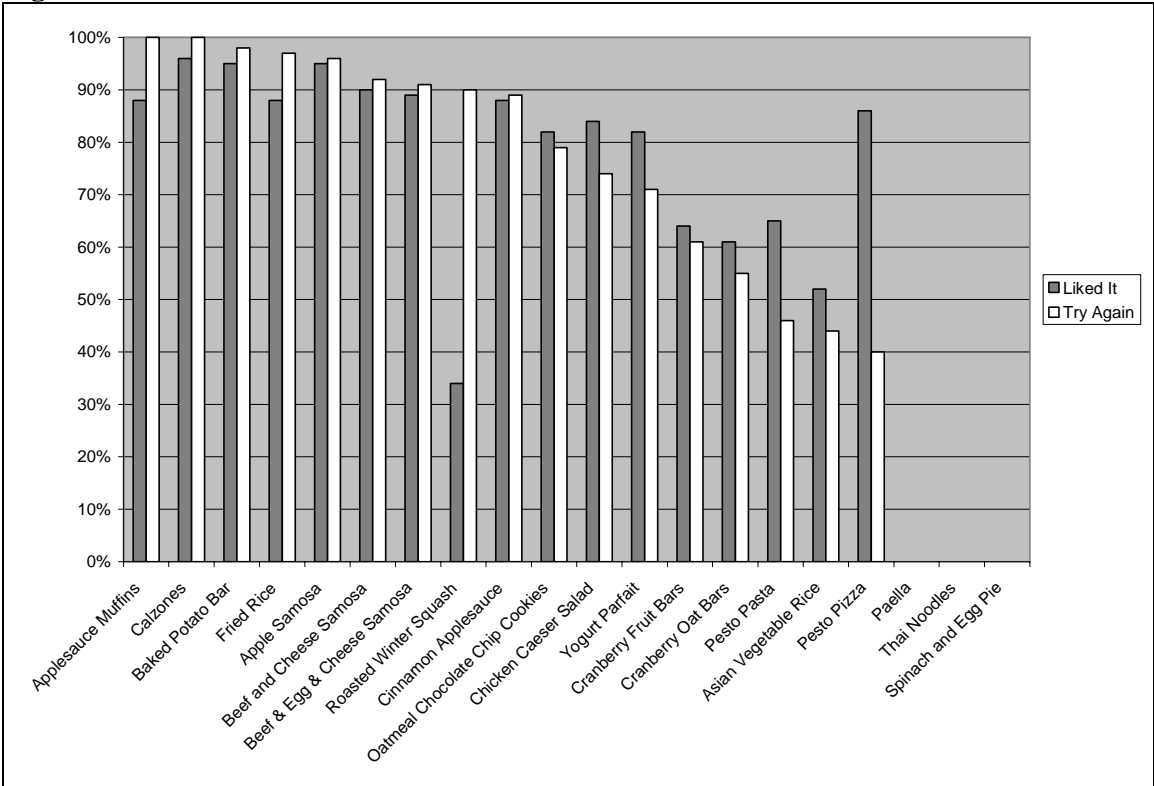


Figure 11. Taste test results from Hunt Middle School



Impact of Taste Tests

Interviews, focus groups, and surveys with key stakeholders, including Abbie Nelson, a BSFP partner from NOFA-VT and key member of the Food Committee, Bonnie Acker, a parent/volunteer and member of the Food Committee, Edmunds school teachers, Food Service staff, and students, document the immense impact of taste tests on stakeholders and school lunch changes.

Student involvement, education and empowerment

Taste tests have successfully involved students in school lunch change and have served to educate and empower students regarding the food they eat. Students are involved in preparing and serving of food as part of their classes, tasting the food during lunch, surveying students to get their feedback on the food they tasted, and compiling results of the surveys. One of the Edmunds Elementary School teachers interviewed stated that her students have made taste test foods three or four times in the 2005-06 academic year. She noted, "There is a lot of power in getting kids to make things and feel good about themselves." This process has not only fostered self-confidence among students, they have also acquired a broad spectrum of skills and thinking regarding food preparation, recipe development, healthy eating and nutrition, and mathematics. Students are excited about the taste tests and sampling food promotes an open mind among youth and encourages them to try new foods. Students also feel empowered as they are a part of changes that affect the food they eat and improve school life.



In a focus group with BSD Food Service staff, they unanimously agreed that by having students help prepare the food, they take ownership in the process and are more likely to try new foods. In addition, other students who do not help out in taste tests are more willing try new foods knowing that their peers are the ones who prepared it. Helping with taste tests is seen as a privilege and "cool" rather than "grunt work in

the kitchen." Doug Davis noted that the BSFP has changed the lunch line conversation of students. Students who participate in growing and/or preparing taste test foods, through either their class project or the Healthy City project, are now proudly commenting that they "grew that tomato" or "helped to make that food" in reference to tomatoes on the salad bar station or the taste test item of the day. Davis noted that students who are involved in the BSFP feel confident and empowered to talk about what they are doing and their peers tolerate and respect the conversation. In conversation with Abbie Nelson, she commented that aside from numbers of students who try foods, the taste tests are successful because there are more students interested in working on taste tests than there are spaces to work. Students look forward to the taste tests and are now more open to try new foods and give their opinion about the food.

Improved relations between Food Service and the school community

Through the BSFP, Food Service staff working in Burlington schools have embraced their new role of student educator on healthy foods and meal preparation. Food Service staff are involved in most aspects of the project by participating on the Food Committees that decides on the taste test, preparing foods with students, and determining what is feasible to integrate into the school lunch menu based on their experiences. Abbie Nelson and the Food Service staff interviewed commented that since implementing the taste tests, students show a greater respect Food Service staff. One staff person stated that a student exclaimed “You really do a lot!” after cooking in the kitchen. Students are also in awe of food service equipment and preparing recipes on a large scale. In addition, Nelson and Food Service staff alike feel that the relationship between Food Service staff and both teachers and students has greatly improved since the start of BSFP. Food Service staff feel respected for the work they do and enjoy having students helping to prepare foods in the kitchen. Nicole Arsenault, a teacher at Edmunds Elementary School, commented that her students have built relationships with cafeteria workers as they now know them by name and enjoy cooking with them.

When asked about the change in their work, the Food Service providers commented, “although the process of the taste tests tends to be hectic, once a month is manageable and the students are excited to try new foods.” Staff also have the opportunity to try new foods and share the foods they like with their families. The lead Food Service person at Burlington High School has also put well-liked recipes from taste tests on menus at Senior Centers where she is also employed. Overall, as students are their main customers, they are happy when they can provide a variety of healthy food choices to students that they will eat and enjoy.

Changes made to school lunch menu

As a result of the taste tests, Food Service staff have slowly integrated items into the school cafeteria menu. Easy changes were the addition of raw vegetables to the sandwich and salad bars in the cafeteria, including cherry tomatoes, green and red lettuce, and whole wheat bread and cheese. Several prepared items that were well-liked by the students and feasible for staff to make are now served on the monthly menu. These items include minestrone soup, cinnamon applesauce, yogurt parfaits with granola, chicken Caesar salad, and pesto pasta. Other well-liked items, such as the samosas and calzones, are produced off site by a local business and served on occasion during lunch.

Several taste test foods were determined to be too labor intensive and the Food Committee changed them into a less labor intensive version to be offered on the lunch line. For instance, the popular applesauce muffins and zucchini bread was reworked into a zucchini and carrot bread that is made at Burlington High School. Some items were not a hit with students, such as vegetarian chili and tomato, rice and cheese casserole, thus the recipes were changed to meat chili and Spanish rice, respectively, and tried again at another taste test. Other items were determined to be too labor intensive for Food Service staff, however the BSD is working with Vermont businesses to affordably produce the product. An example of this is the apple crisp, which was well liked by students but the peeling and cutting of apples was too labor and time intensive for staff. BSD is working

with the Vermont Food Venture Center to produce an affordable version of this product. Finally, items such as winter squash soup and summer squash sticks were not well received by students and were determined by the Food Committee as not worth repeating.

Purchasing of local produce

As a result of the taste tests and relationships that the BSD has built with local farmers, the BSD is now purchasing produce from local farms including the Healthy City Farm in the Interval run by local teens and Lewis Creek Farm in Starksboro, among other farms. This topic is presented in detail in a previous section of this report. City Market grocery store has provided discounts on taste test ingredients.

Involvement of community members

The taste tests have successfully involved students in change. However, the Food Committees have also involved local businesses, chefs, and other community volunteers in taste tests, who help

develop recipes and prepare and serve the food with the students. Chefs involved include people such as Justin Halvorson from Smokejack's restaurant and "Samosa Man" Fuad Nbidalema. In addition to individuals, local businesses got involved in the BSFP through taste tests. City Market grocery store and American Flatbread restaurant helped fundraise for the



purchasing of local produce by the BSD. City Market, in partnership with the Merrill-Roxy Cinema, showed the movie *Super Size Me* to raise \$1,800 in funds to purchase cooking supplies for school taste tests. City Market also worked with BSFP volunteers to bake and sell for than 5,000 cookies at City Market to raise money for the project. American Flatbread fundraised by donating a certain percentage of every pizza pie purchased on one evening to the BSFP for purchasing local and organic food for the school cafeteria. City Market also helped with volunteer recruitment by offering Market members a discount on grocery purchases in exchange for a certain number of hours volunteered. All BSFP partners commented on the importance of BSFP volunteers coming from within the school and larger community, as they enable the project to be sustainable after the funding is gone.

Best Practices for Taste Tests

Various stakeholders involved in the taste test process spoke of best practices, ways to improve the taste tests, and the replication of the taste test model for other schools.

School community and volunteer involvement

Food Committee members, Food Service staff, and BSFP partners commented that the involvement of the local school and Burlington communities has made the taste test model successful. Students, teachers, volunteers and Food Service staff prepare and serve the foods, as well as survey students on their opinions of the foods tested.

Community members and parent volunteers and local businesses, such as chefs and City Market, are involved in supplying and preparing food as well. Abbie Nelson stated, “A school has to have volunteers to pull off a taste test. It is fun and exciting to have guests such as farmers and chefs as part of the taste tests.” Megan Camp, grant manager of the BSFP, agreed that “having a strong volunteer system is key to make sure the taste tests go well and are not eliminated by schools.” It is also essential that Food Service professionals are present at the Food Committee meetings, the

taste test process, and give and receive feedback on taste tested items, so they have a say in the changes taking place at their work environment.

Recipe for a Successful Taste Test

While there is no one way to hold a taste test, here are some suggestions based on success at Edmunds Elementary School and Edmunds and Hunt Middle Schools.

- Involve students in process
- Involve volunteers
- Involve Food Service staff
- Involve and give teachers notice of taste tests
- Hire a farm-to-school coordinator
- Adequate time, money and resources
- Advertise taste tests and foods
- Advertise taste test foods incorporated into the school menu, emphasizing local and organic
- Organize the taste test process of food preparation, serving, and surveying of students

Farm to school coordinator position

Another best practice of the taste test model is to fund a position of farm to school coordinator in the schools to make and expand the connections with farmers and the school Food Service for the purchasing of produce, recipe development, and the integration of local foods and farmer volunteers into the taste test process. This position was funded during the third year of the BSFP grant by a grant from Green Mountain Coffee Roaster’s and a private donation to make this a sustained position for future work.

Time and resources

Food Service staff noted that adequate time is needed to prepare taste test items so they are presented in a thoughtful and aesthetically pleasing way. Money is also needed to purchase raw ingredients and the necessary equipment to carry out the taste tests. Based on equipment available, only feasible items should be tested to avoid wasting time with something that is too labor intensive or not cost effective. In addition, resources should be allocated so that Food Service staff are compensated for their time to attend Food Committee meetings, visit farms, and participate in professional development.

Strategies to Improve the Taste Test Model

Teachers, Food Service providers, and BSFP staff interviewed remarked on ways the taste test model could be improved based on their experiences.

Advertisement

Several teachers and BSFP staff interviewed observed that the taste test model could be improved by better advertising of taste test dates and food items to teachers, parents and community member volunteers. Food Service staff also recommend that only one food item is tested per day. In addition, the food being tested should be labeled so that people know what they are trying. Along the same lines of advertising, once a taste tested item or an organic or local product is incorporated into the menu, signs should be used to indicate this to students and faculty. Improved displays indicating food changes would increase student awareness of taste test results and products that have been incorporated into the menu.

Improved organization of taste tests and serving students

In addition to advertising, teachers interviewed stated that the process for trying taste test samples should be more orderly and organized, emphasizing social manners and taking a small portion of the food to taste. One person suggested that schools invest in a cart that students or teachers can push around the cafeteria to each table to try the food rather than a central location where students go to try the samples. Teachers would also like results of the taste tests posted for both the elementary and middle schools. In line with composting food in the cafeteria, teachers recommended that schools with composting capability use items in the taste test process, such as cups, napkins and utensils, that can be composted to decrease the waste produced during the taste tests. Or, schools should have a way of encouraging students to reuse their flatware. Abbie Nelson recommended that the taste tests could be improved by having a system where teachers and their classrooms sign up for specific tasks including prepping, serving and surveying specific food items over the course of a year. She noted that this model is used at a school in Jericho, VT and would also advertise the process, increase involvement, and possibly speed up the time frame it takes for a favorable taste test item to be incorporated into the school menu.

Increased student involvement

Food Service staff suggested that students be more involved in the processing of the food that is served during the taste tests. They noticed that children become more willing to be involved and try new food when they see their peers preparing the foods for the tests. Perhaps if the students are trained to use some of the processing equipment, enthusiasm for the taste tests and new menu options would increase.

Replication of the Taste Test Model

Based on the experience of the Food Committee at Edmunds Elementary and Middle School, the following recommendations are made for replicating a taste test model in another school. It is crucial for a taste test project to have teacher participation in and support for the process. It is also essential that the Food Service professionals are paid to be a part of the process and attend Food Committee meetings. The taste tests require structure and regularity, which makes it important for there to be a taste test committee that decides the format of the taste tests and when they occur. Abbie Nelson recommends that taste tests should be “kept simple...trying one new product at a time, keeping recipes not complicated, considering equipment present in the cafeteria to use, and considering the school’s food culture.” The tests should occur in the school dining hall, and the students should be encouraged to work closely with volunteers. By involving the students in the setup and production of the tests, they are able to see first hand the classroom/dining hall connection. Students are more likely to try the taste test foods if they are involved in the processing and also if they are free. It is also a good idea to inform the teachers of the tested foods’ nutritional information, prior to the taste tests, with the intention that the information will be incorporated into the teachers’ lesson plans.

Doug Davis noted that based on the success of taste tests at Edmunds schools and word of mouth through the Burlington community, taste tests in various forms are held in other schools. Hunt Middle School students participate in taste tests in a similar fashion to Edmunds. Flynn Elementary School has a salad and sandwich bar to try new items and students at Lawrence Barnes Elementary school have fresh fruit in the classroom. Abbie Nelson commented that, in general, there is no one way to hold a taste test, but people all over Vermont have taken the model and used it in different ways to accommodate their school and situation.

Fresh Fruit in the Classroom

Another example that demonstrates increased awareness and consumption of healthy food is the fresh fruit program at Lawrence Barnes Elementary School. Through a gift by the Brennan Foundation, fresh fruit is currently available every day as a healthy snack to all students at Barnes. The goals of this program are to increase fruit consumption by students, to identify barriers to reaching this goal, and to improve students’ current snacking habits, overall diet, and health. Children are invited to take fruit from coolers and Tupperware throughout the day and have done learning activities with the fruit, such as making fresh fruit kabobs. The teachers found that this program is not at all

“I believe it’s the first graders...have all the fresh fruit they want to eat in the classroom at all times...a bowl or a cooler of fruit...they can get up and eat. They’re not used to eating fresh food and so the idea would be that they would see a change in their practices of eating fresh fruit. The teachers at first were worried that it would be disruptive...it’s hard for the little people at lunch because it’s so stressful, but it was in the classroom and they were comfortable. It was great.”

-Megan Camp, BSFP Grant Manager, Shelburne Farms

distracting to their classroom work, feel the fruit is a good source of nutrition, have fruit and healthy eating into their curriculum. Overall, teachers at Lawrence Barnes Elementary School would like to see this program continued after the grant is finished.

The Healthy City Project

The Healthy City project was a pre-existing program at the Intervale that was integrated into the BSFP because it aligned with the grant goals and objectives. Megan Camp and Dana Hudson noted that partnering with the Healthy City project was not a part of the original grant. Rather the grant focused on hiring a part-time staff to coordinate educational efforts at the Intervale. However, because the Healthy City program emerged as a strong and effective educational program for BSD youth, grant partners shifted their focus and invested in this program.

Healthy City is an educational effort to increase farm to school infrastructure development. This activity was identified as a strategy to effectively use the skills and expertise of the Intervale Center to meet the needs of the low-income youth in the community. Healthy City is a farming intensive summer program that teaches select youth from the BSD to grow, market, and distribute fresh vegetables. The youth are paid a stipend of \$500 to run the farm and operate the small business.

Healthy City youth spoke with the evaluators during a focus group discussion at the end of the 2005 growing season. The students applied to work at Healthy City for a variety of reasons. Most of the students wanted to learn more about gardening, needed a summer job, or wanted to meet people and hang out with their friends who were also involved in the program. The students' workday consisted of typical farm work, including harvesting, weeding, washing vegetables, and



feeding and collecting eggs from the chickens. They also rotated working at the farmers' market stand on Church Street, a pedestrian marketplace in Burlington. Other business oriented tasks include ordering seeds, designing a planting schedule, writing a business plan, managing the farm stands, and selling vegetables to the BSD to help boost the amount of local fresh foods served in the cafeterias. The students had a time card to keep track of their hours worked. Healthy City director Jenn McGowen and coordinator Aziza Malik worked very closely with the youth and said, "Everyone got along most of the time." The youth reported liking and disliking different things about working at Healthy City. Some of the main reasons why youth liked worked there were harvesting produce, the challenging work, getting the fresh food, working with others, and that it gave them

something to do. Some of the least favorite things were weeding, taking eggs from the chickens, waking up at nine in the morning, business planning, and writing in a journal.

Impact of Healthy City on Youth Eating and Exercise Habits

The students reported that they loved taking home food that they grew at the farm. Favorite vegetables included carrots, cucumbers, strawberries, and melons. Least favorites were eggplant, cabbage, onions, kale, radishes and beets. With the food they grew, the students liked making zucchini bread, soups, stir fry, grilled vegetables, and stuffed peppers. Based on their responses, it is difficult to judge if the youth's eating habits changed since their participation in Healthy City, as most reported eating whatever food is available in their home. However, all reported that they like vegetables because of their work on the farm, which is a positive finding. For instance, some students began to like cherry tomatoes, hot peppers, cabbage and zucchini as a result of trying these items while working at Healthy City. When asked about school lunch, the youth were not that impressed with their school cafeteria's offerings. They felt that the menu is not very healthy and desired more fresh food. All of the youth who attended schools where taste tests take place reported that they liked testing new foods and participated in them.

While working on the farm, students engaged in a lot of physical labor. Students thought that the physical work was difficult at first, but that it got easier as the season progressed. Most interviewed felt stronger and more physically fit because of the exercise from farming. In addition to farming for Healthy City, many of the students reported regularly participating in other activities such as yoga, walking, floor hockey, handball, and swimming.

Parent Reported Changes in Healthy City Youth

Parents of the youth who participated in the 2005 Healthy City program were interviewed through a telephone survey to understand the impact of the program on their child and family from their perspective. All ten parents completed the survey for a response rate of 100%. To evaluate changes in the youth and their family after participation in Healthy City, a five point likert scale of change was used, as indicated in Table 12, from "no change at all" to "a great deal" of change.

When asked about the amount of change parents observed in their child's eating habits after participating in Healthy City, parental response was distributed over the scale. As shown in Table 12, "no change at all", "a little" and "to some degree" each received 20% (2) of responses. Thirty percent (3) reported that their child's eating habits changed "very much" and 10% reported their child's eating habits changed "a great deal". Of the 80% (8) of respondents who noted a change in their child's eating habits, they reported their child ate more vegetables, had a greater general awareness of nutritious food, and one youth became a vegan. More specifically, 90% (9) of parents noted that their child now eats more vegetables at home and 70% (7) see their child eating more nutritious foods at home. All of respondents indicated that their child talked to them about what they did during the day at Healthy City and 100% also found that their child became more responsible because of the program. More than half (60%, 6) indicated that their child increased their amount of physical activity after participating in Healthy City and

55% (5) said their child showed an improvement in overall health. Further, 60% (6) reported that after the program their child had improved communication with their family. Regarding saving money, 70% (7) of parents noted that their child increased their savings with the money they earned from Healthy City. Finally, 90% (9) of parents responded that their child showed an improved work ethic after participating in Healthy City.

Table 12. Parent reported change in youth after participating in Healthy City farm

	Not at all	A little	To some degree	Very much	A great deal	n
Child's Eating Habits	20% (2)	20% (2)	20% (2)	30% (3)	10% (1)	10
Eats more veggies at home	10% (1)	10% (1)	30% (3)	0% (0)	50% (5)	10
Eats more nutritious foods at home	30% (3)	0% (0)	20% (2)	30% (3)	20% (2)	10
Talks about what they did during the day at Healthy City	0% (0)	10% (1)	20% (2)	10% (1)	60% (6)	10
Is more responsible	0% (0)	0% (0)	20% (2)	30% (3)	50% (5)	10
Has increased physical activity	40% (4)	10% (1)	30% (3)	10% (1)	10% (1)	10
Has had improvement in overall health	44.4% (4)	11.1% (1)	11.1% (1)	11.1% (1)	22.2% (2)	9
Has improved communication with family	40% (4)	10% (1)	20% (2)	10% (1)	20% (1)	10
Has increased savings with earnings from Healthy City	30% (3)	0% (0)	0% (0)	40% (4)	30% (3)	10
Has Improved Worth Ethic	10% (1)	20% (2)	10% (1)	30% (3)	30% (3)	10

Several open-ended questions were posed to parents to better understand the impact of Healthy City on their child. Changes within the child because of Healthy City included increased responsibility, improved social skills, increased self-esteem, and more outgoing. One parent commented that their family benefited from eating more fresh vegetables that their child brought home from Healthy City. Further, one family reported that they were going to get their own chickens because of their son's participation in Healthy City.

From the parents perspective, Healthy City youth also gained various skills and knowledge, including: gardening, leadership, self-esteem, social skills, knowledge of the environment, and healthy eating. When asked about their child's response to having to be to work on time, some parents saw no response, while others noted that their child did not want to be late. Regarding what the child did with their earnings, most noted that their child saved at least part of the money they earned from Healthy City. Money earned was also spent in a variety of ways such as purchasing magic cards, school clothes, CDs, pizza, paying off a fine, and sharing the money with the participant's family.

Youth and Parent Likes and Dislikes of Healthy City

The youth were asked what they liked or disliked about working at Healthy City. The youth liked working with the chickens, working outside, and eating fresh vegetables that they grew. They also enjoyed working at the market and attending the gatherings at the barn. The kids did not like the heat, mosquitoes, weeding, participating in interpretive dance, and when other youth showed a poor attitude during work. Parents were also asked what they liked the most about their child's participation in Healthy City.

Comments included:

- Child's exposure to the work world
- Gave child responsibility
- Growing one's own food is good for kids
- Good work ethics
- Everything
- Good people to work with and positive role models
- Child improved their social skills and is now more outgoing
- Helped daughter grow to be a responsible young lady
- Opened a new world to the child
- The program took care of their child
- Skills and knowledge gained
- The appreciation of each child
- The program worked with child's disability

Feedback on the Healthy City Program

Using a five point likert scale of satisfaction/dissatisfaction, 90% (9) of parents indicated that they were "very satisfied" with Healthy City and one reported being "somewhat satisfied" with the program. Parents commented that they felt the program was "awesome" and liked that gatherings were held for the youth after the program ended so they could keep in touch with each other. Most parents noted that there was nothing to improve about Healthy City because they were very satisfied with it. Comments that were provided include allowing children to drink soda, paying the children a little more money, and teaching the parents the same skills through a workshop. Students who attended the focus group were enthusiastic about the Healthy City program and wanted to see it continue. They reported that they would all participate in the program again. Recommendations for improving the program were: paying the youth more money, working later during the day and evening to avoid the summer heat, having music, a bigger washing station, and moving the field to avoid the vine weeds.

Gains in Student Knowledge and Awareness about Food, Farm and Nutrition

Stakeholders interviewed, including teachers and BSFP staff, commented on the many gains that students experienced in knowledge and awareness of FFN issues. Areas discussed include improved understanding and awareness of healthy foods through a variety of mediums and improved understanding of composting. Staff and parents of the Healthy City kids also talked about the gains that their children made because of participation in this program.

Improved Understanding and Awareness of Healthy Foods

Many teachers commented that the integration of FFN education into their curriculum has positively impacted students' understanding of healthy foods. One of the main sub-themes focused on student discussion of healthy foods surrounding their own food and changes in the cafeteria's food. Teachers at Champlain Elementary School observed that in the past three years, students' awareness of what is a healthy snack or meal has increased. For instance, students are now pointing out to teachers and their peers, "look what I have in my lunch today, this is healthy." The teachers noted that this type of comment was not made prior to the BSFP. Teachers at Edmunds' schools reiterated this notion in stating that their students often open their lunch boxes and talk about the healthy foods that they have brought for lunch. Students have also demonstrated a greater understanding of the USDA Food Pyramid and what is considered a "balanced meal" from the food groups based on their lunch choices. In addition, students talk about the positive changes in their school cafeteria, such as the sandwich and salad bar as an alternative to the hot lunch. One teacher commented, "Students are on the line talking about veggies they are trying, recognizing that vegetables are good for them".

Teachers from Edmunds Middle and Elementary school also noted that their students have demonstrated increased knowledge and awareness about healthy foods through classroom assignments. For instance, students who take field trips are asked to write about what they learned on the trip, such as "where does an apple come from?". Students' papers show that they understand that apples come from trees rather than from a grocery store.

In addition, teachers have recognized that students are more aware about FFN issues because they are now open to trying new and different foods through the taste tests. One teacher stated, "Students realize that it is good to try foods, knowing that it is ok if they do not like it." In addition, their students recognize that the diverse cultural foods that are tested in the cafeteria represent the many cultures present in the school. Students also talk about how they enjoy visiting the Intervale and other farms and meeting farmers. Students' then go to farmer's markets in the area with their family and say hi to

"Some kids are so disconnected from their food source. The kids will harvest a carrot and will say, "Oh, this is what a carrot looks like?" They have no idea....or, "Can I eat this?" Kids are so removed from vegetables that they eat; it's amazing to see them try stuff."

Jenn McGowan, Healthy City
Coordinator, Intervale Foundation

and buy produce from the farmers that they met in school. This experience is then proudly reported back to their teacher and peers.

Results from the student survey of fourth and seventh graders showed that students have an appreciation and understanding of the importance of farms. When asked why farms are important, responses included: farms provide food such as vegetables, milk and eggs; provide a place for animals to live; keep rural agrarian culture alive; grow organic food; and grow healthy food in general. Students who participated in the Healthy City project in the summer of 2005 also commented on the implications of their farming on the greater community during their focus group. They reported that Healthy City program impacts their community in part because the project donates food to the food shelf. They realized that growing fresh organic food is healthier and tastes better for the consumers and that by working at Healthy City, they were providing a service to the community and their school cafeteria.

Learning about Food through Art

Several of the teachers and a parent volunteer, Bonnie Acker, talked about the use of art as a medium to learn about food. One teacher from Edmunds Elementary commented that there are now murals and student artwork of food and farming in the cafeteria because of the BSFP. Bonnie Acker wrote that she coordinated art projects with the Edmunds Middle School art teacher and nearly 400 students. These students created numerous Vermont agriculture scenes, which now hang in the school.

Composting in School

Students in Dan Treinis's Technology Education class also learned about composting in efforts to reduce cafeteria waste. In the fall of 2002, Treinis and his students weighed all of the waste generated at lunch for one week. They discovered that 80% of the waste could be composted, including 50% from food and napkins and 30% from liquids. With this discovery, Treinis, parent and community volunteers, and Chittenden County Solid Waste District educators started the Edmunds' composting program. Champlain and Barnes Elementary, Hunt Middle, and Burlington High Schools all now compost and students participate by being "Compost Captains", writing cheers about composting and presenting them to community forums, and helping to sort food from trash if something is put in the wrong bin.

Skills and Knowledge Gained by Healthy City Youth

The Healthy City kids who participated in a focus group reported that they gained knowledge and skills in farming, marketing and personal financial management because of their work with Healthy City. Some of the students came to Healthy City with previous experience of working at a home-based garden or farm. However, everyone reported that they learned new skills related to gardening and farming through Healthy City. Skills gained were: caring for plants, washing vegetables, making bouquets, controlling pests with natural measures, and composting farm waste. After participating in Healthy City, the students recognized the challenges faced by organic farmers. Specifically, they noted that pests and diseases are harder to control in organic farming, such as controlling them by hand instead of with chemicals.

The students also reported that they gained marketing skills through their experience in selling produce at the farm stand on Church Street. They learned how to sell their products more effectively and understood the importance of being respectful, on time, and staying on task. For example, some noted that they learned the value of offering samples to customers, and being polite, informative, and professional as ways to sell their products. They also learned how to manage the money earned from selling the produce, such as calculating total cost and changed due in their head, making change, and writing receipts. Further, the students gained personal financial management skills and appreciation. Almost all of the students put some of the money they earned working at Healthy City into a savings account at a bank. However, some spent some of the money earned. Most of them also have other ways of earning money, including chores around the house, helping their parents on other jobs, or babysitting.

Shift in School Culture

Another factor that indicates increased awareness by Burlington school children, and the school community at large, is a shift in the BSD school culture around healthy food and nutrition. As discussed by key stakeholders during interviews, this shift is demonstrated by increased student and teacher awareness of healthy food and FFN issues, the approval of policy and guidelines by governing bodies, curriculum development for use in future lessons, and an increase in community participation at school dinners.

Increased Awareness of Healthy Food and Food, Farming and Nutrition Issues

Most of the project partners interviewed commented that school culture around food and awareness of FFN issues has positively changed as a result of this project. One teacher commented, “I like being a part of the whole culture that is developing – that highlights the relationships and interconnectedness between food and student learning. We are literally planting seeds to make connections in the future. Food is one of the most fun common threads all humans have and it is important to learn about healthy eating especially at a time with high rates of childhood obesity.”

Teachers who participated in the district-wide focus groups commented overall that a school-wide culture shift is evident in that children are now willing to taste new food and make healthy changes to their own food choices. Students are talking among themselves about making changes to cafeteria food and noticing what is in the food they are eating. There are also, for the most part, no more soda machines in the cafeterias. Doug Davis noted that with this change, students are no longer complaining that there are no soda machines because of an improved awareness of healthy options. Additions have also been made to salad and sandwich bars, which students are now using more. Overall there is more understanding within the school community of what are healthy food choices and what are not.

“I like being a part of the whole culture that is developing – that highlights the relationships and interconnectedness between food and student learning. We are literally planting seeds to make connections in the future. Food is one of the most fun common threads all humans have and it is important to learn about healthy eating especially at a time with high rates of childhood obesity.”

- Edmund’s Middle School teacher

Jen Cirillo reiterated this opinion of a shift in school culture in stating, “Teachers have a better understanding of what is healthy and also showing the kids. If you’re going to tell the kids in the classroom that something is healthy, you can’t serve cake for dinner at a function. Or if you’re going to say to kids what they should be accomplishing in the classroom, you’re going to have to do this again next year too because you told them this in the grade prior.” Many teachers in all schools are also asking children and parents to bring in a “healthy snack” rather than leaving the term “snack” open for interpretation. Cirillo feels that this message is being consistently delivered to the children across the school district. As part of this culture shift, behavior has changed in some of the schools as well. Composting in many school cafeterias has grown and Doug Davis has been able to change food selections based on children’s preferences, such as a change from orange cheese to white cheese. More faculty have also participated in taste tests and FFN curriculum integration as well.



Jenn McGowen, director of the Healthy City teen run farm, commented on the increased awareness of FFN issues that her students demonstrated after working on the farm. She stated that initially, teens came to the project fairly removed from their food source, as they did not know what certain vegetables looked like or even if they could eat them. They started the program with the idea that they do not like vegetables, and half way

through, McGowen stated, “We have to limit the amount of sugar snap peas they can eat so we’ll have enough for our community supported agriculture shares.” She continued that “the kids are not used to eating vegetables and don’t know that they taste good.” As part of the Healthy City program, the students were allowed to take home any of the produce that they wanted. However, the teens commented that they and their parents did not know what to do with them. As a response, McGowen started a cooking class called “Healthy for Life”, where a chef from the New England Culinary Institute worked with the kids once a week on how to cook with the food they brought home. Overall, this experience instilled a sense in youth that vegetables are good for their body and taste good, and they learned cooking skills that they can share with their family and use later on in life.

Several BSFP partners commented how awareness across schools was growing because of student matriculation and interaction in general. For example, students from Burlington High School started a student-led food committee because of the work they did in middle school from the BSFP. There are also “taste test ambassadors”, a program where sixth grade students from Edmunds Middle School visited students in the local elementary schools to talk about how taste tests work and why they enjoy participating in them.

Approval of Policy and Guidelines

Another change that provides evidence of a shift in school culture is the approval of various policy and guidelines relating to FFN issues in Burlington and at the state level. In 2004, the Vermont Legislature approved the Wellness and Nutrition Policy (Act 161), which requires all schools to develop wellness programs for healthy eating and physical activity among Vermonters. In 2006, the Burlington School Board approved the School Food Action Plan, developed by the Burlington Food Council. The School Food Action Plan set up a two year work plan impacting student access to healthy food, farm to school integration into the classroom and cafeteria, and empowerment of students to make healthy choices. Finally, in 2006, Vermont passed legislation on the use of Vermont products and nutrition education in schools (VT Act 145 of 2006). The bill contains the following:



- Mini-grants of up to \$15,000 for schools to:
 - purchase Vermont products
 - acquire cafeteria equipment to process fresh products
 - provide materials and professional development for teachers with food, farm and nutrition activities
 - take trips to local farms
- Training of Food Service staff on how to purchase and prepare Vermont products in school meal programs.
- Training of farmers on how to sell products to schools and other government agencies.
- Funding for a Vermont food processor to process locally grown products for schools and institutional markets, or for equipment for farmers to process products.
- Researching strategies to increase use of locally grown products in Vermont schools and state agencies.

Curriculum Development

The Sustainability Schools Project (SSP) at Shelburne Farms conducted professional development for teachers of the BSFP, which taught them about sustainability through the lens of FFN issues. The SSP worked with kindergarten through third grade teachers to develop units on FFN issues that incorporated a service learning and community component. For the past three summers, SSP focused on teaching educators about food and agriculture, the healthy human body, and food science. SSP has documented the curriculum they have developed at several BSFP schools that addresses food and nutrition in the form of “Literacy Kits” that will be used throughout the BSD.

“It terms of curriculum, just the teachers’ excitement about it...their kids are really connecting and learning,...the culture of teaching about farming and nutrition in an urban school is pretty different.”

Jen Cerillo, Sustainable Schools Program
Coordinator, Shelburne Farms

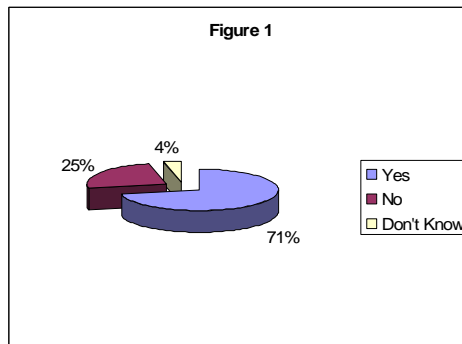
Increased Community Participation at School Dinners

Culture change in the eating habits of families, because of their children’s involvement in this project, is also evident in the increased participation of parents and community members at school dinners. These family dinners incorporated many healthy new recipes that highlighted items taste tested and served on the school menu. The students created the menu for the dinner and prepared and served the food to their family and community. Cirillo stated, “This is the start of a culture change by example.” In addition, parents have expressed excitement about the food changes in the cafeteria and more families know about the Intervale and how to access it.

Impact of BSFP on Larger Community

The BSFP has successfully reached a large portion of the BSD community, including teachers, students, staff, and parents. In addition, results from the 2006 Vermonter Poll, a statewide public opinion survey of Vermonters conducted by the evaluators, showed that FFN education through youth education is reaching Vermont at large. Data is presented for the state of Vermont, as this data is not generalizable at the county level and can not be broken down by town. Figure 12 shows that of the 167 families surveyed (25% of the total 656 surveyed) who have a child or any children in kindergarten through twelfth grade, 71% (119) have children who have participated in FFN education activities at school.

Figure 12. Participated in food, farm and nutrition education at school



As a result of FFN education, Table 13 shows that 40% of parents indicated that their child has shared this information with their family, 38% have children who are more willing to try new foods, and 26% reported their child now eats more fruits and vegetables.

Table 13. Ways FFN education activities have changed child’s eating habits (n=119)

Change in Child’s Eating Habits	n	%
Has shared this information with family	47	40%
Willing to try new foods	45	38%
Eats more fruits and vegetables	31	26%
Has changed family’s eating habits	17	14%
Other	15	13%
No change	44	37%

Tools to Help Parents Get their Children to Eat More Healthy in School

Respondents to the Vermonter Poll were also asked what tools would help them to get their child to eat healthier in school. The top percent distribution for the top three ranked tools is indicated in Tables 14 through 16. The top response of the first ranked tool was “reinforcement from school”, given by 36% of those surveyed. The top response of the second most important tool was “healthy recipes” (26%), followed by a quarter each who wants “tips to introduce new foods” and “nutrition information.”

Table 14. Top ranked tool to help get child to eat more healthy in school

Change in Child's Eating Habits	n	%
Reinforcement from school	55	36%
Healthy recipes	35	23%
Tips to introduce new foods	31	20%
Nutrition information	16	11%
Parent workshops on buying and cooking food	16	11%

Table 15. Second ranked tool to help get child to eat more healthy in school

Change in Child's Eating Habits	n	%
Healthy recipes	37	26%
Nutrition information	32	23%
Reinforcement from school	31	22%
Tips to introduce new foods	29	20%
Parent workshops on buying and cooking food	13	9%

Table 16. Third ranked tool to help get child to eat more healthy in school

Change in Child's Eating Habits	n	%
Tips to introduce new foods	33	25%
Nutrition information	33	25%
Healthy recipes	26	20%
Reinforcement from school	21	16%
Parent workshops on buying and cooking food	20	15%

Vermonters' Willingness to Pay More for Fresh and Local School Lunch

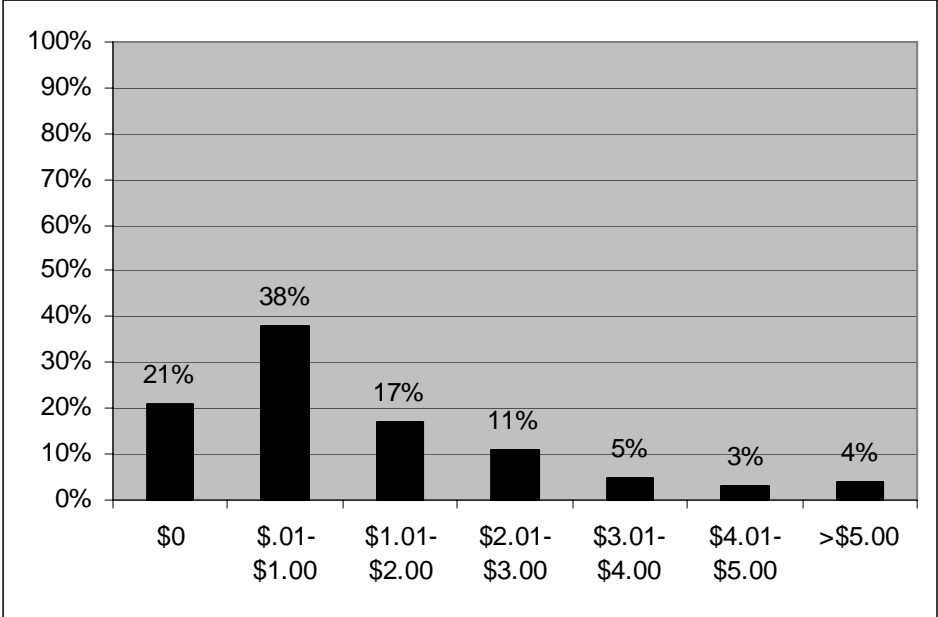
Results show that 51% of respondents who have school aged children would encourage their child to eat more school lunches if the school cafeteria served more fresh and local foods (Table 17).

Table 17. Change in parent encouragement of child to eat school lunch if school cafeteria served more fresh and local foods

Change	n	%
More school lunches	85	51%
Same amount of school lunches	63	38%
Don't know	14	8%
Refused	4	2%
Fewer school lunches	1	0.6%

The children of those 167 families, on average, eat lunch in the school cafeteria three days per week. These families currently pay an average of \$2.00 for school lunch. Respondents were willing to pay an average of \$1.63 more for school lunches if the school cafeteria served fresh, local food. The grouped dollar amount that respondents are willing to pay more if the school cafeteria served fresh and local food is presented in Figure 13. Overall, 38% are willing to pay between \$.01 and \$1.00 more for fresh and local foods in the school cafeteria.

Figure 13. Grouped dollar amount that respondents are willing to pay more if the school cafeteria served fresh and local food (n=136)



Burlington Legacy Project Town Meeting

Another indicator of increased community awareness surrounding the BSFP and FFN information is the attendance at the Burlington Legacy Project’s annual town meeting. The topic of the town meeting, held in December 2005, focused on FFN education and outreach in schools. Students gave presentations about their experiences through the BFSP, such as taste tests, composting, and field trips. Meeting attendees were asked to complete an evaluation questionnaire at the meeting. A total of 43 people completed this questionnaire. Eighty-six percent of respondents noted that they were aware that there has been an increase in the distribution of more fresh and local food in Burlington schools. In addition, 70% were aware that food taste tests are occurring in some schools in the BSD. An overwhelming 97% expressed interest in their school district purchasing more food from local farms.

Goal 2: Burlington implements a food action plan that increases access to and use of healthy foods, and foods from local producers.

The second goal of the BSFP grant was primarily spearheaded by the Burlington Food Council and their collaborative work with BSFP staff, Burlington Legacy Project staff, farmers, parents, BSD employees, students, researchers, and health and nutrition experts. During the first and second years of the grant, the Burlington Food Council conducted the Community Food Assessment focused on school-aged children (ages 5-18) and their families. The purpose of this assessment was to “systematically examine a broad range of community food issues and assets, so as to inform change actions to make the community more food secure.” The results of the Community Food Assessment served as the foundation for the Burlington School Food Action Plan, which was unanimously adopted by the Burlington School Board in 2006. This plan is not a policy or a mandate, but a guideline and philosophy for which the BSD Food Service can base decisions for menu offerings.

Sustainability of the Burlington Food Council

The Burlington Food Council examines the farm to school food system and food, farm and nutrition education in Burlington schools. The Food Council has been active since 2003 and is described by BSFP partners as a “hub for diverse groups and individuals.” The Council is made up of thirty active members and more than sixty supporting members, including: farmers, parents, school district employees, students, researchers, and health and nutrition experts. The City of Burlington’s Legacy Project organizes and coordinates the Food Council with a paid coordinator and an AmeriCorps VISTA staff support person. The purpose of the Food Council is to improve the healthy of children through better access to nutritious foods and food and nutrition education. The primary goals of the council include:

1. **Building food knowledge and experience** – Youth will develop critical eating/thinking skills and gain sensory experiences in order to evaluate food choices and the food system as it relates to personal healthy, sustainability, and equity.
2. **Building food appreciation and access** – School-age youth and their families will examine their approaches to food in school and home settings and increase awareness of the importance and value of healthy and diverse foods in their lives.
3. **Building local food systems** – Stronger links will be established between local food producers and the Burlington School District to improve market opportunities for local producers, improve Food Service choices and enhance youth connection to food sources.

Detailed evaluation results on the impact of the Burlington Food Council are presented under goal three in this report. Overall, BSFP partners and Food Council participants indicated that the Council demonstrates attributes of sustainability. Council membership remained consistent over time and continued to grow with the momentum of various

projects undertaken by the group. Betsy Rosenbluth, the director of the Food Council, stated that the Food Council “took on a life of its own” in that the group became empowered to work on important issues that affect their community and had a strong sense of ownership of their work.

Community Food Assessment

Betsy Rosenbluth, the director of the Food Council, noted that a major accomplishment of the Food Council was the Community Food Assessment (2005) that led to the development and adoption of the Burlington School Food Action Plan. The Community Food Assessment is a comprehensive report on the state of Burlington’s food system and food, farm, and nutrition education and awareness among Burlington’s school-age children and their families. This assessment was presented by Council members at the annual Legacy Project Town meeting, at local Neighborhood Planning Assemblies, and the School Board curriculum committee.

Methodology

Based on the goals of the Food Council, the Council decided that the Burlington Food Assessment would focus on BSD students and families and their participation in the food system, as well as the barriers they face to obtaining local and nutritious foods. The methodology for the assessment included personal interviews, written surveys, focus forums, and secondary data sources. Specifically:

- Focus groups were held with teachers in Burlington School District to learn what educational opportunities exist for the 3,551 Burlington School District children and their families to learn about food, nutrition, farming, gardening, and cooking within the school environment.
- Local agencies were surveyed to identify what educational opportunities they offered related to food, farms and nutrition that complement the formal school setting.
- A survey of nearly all 4th and 7th graders in the school district was completed to find data on: (a) what barriers kids face in accessing food, (b) what new healthy foods they would like offered in the cafeteria, (c) where kids learn about food, as well as (d) what experiences they have had with gardening, farming and cooking. Four hundred and fifty-five 4th and 7th graders took the survey during May and June 2004.
- A survey was conducted at Burlington High School to find out what foods High School students would like offered in the cafeteria that are healthy and reflect the preferences of the culturally diverse student body (Burlington Food Assessment, 2004).”

A Draft of the Food Assessment was presented to both Food Council members and Legacy Project Steering Committee at the June 2004 meeting. This presentation served as forum for collecting suggestions and recommendations to include in the final report.

Report Dissemination

The main goal of the Food Council with respect to the Food Assessment in Year 2 was to widely disseminate the information from the food assessment to the school boards and appropriate authorities to support the consumption of nutritious and local foods in the BSD. The Burlington Food Assessment focused on BSD students and their families and their participation in the food system, as well as the barriers they faced to obtaining local and nutritious foods. The Assessment featured an overview of the BSFP as well as demographic information about the community and its agricultural resources. The assessment was presented at the Annual Burlington Legacy Project town meeting, local Neighborhood Planning Assemblies, School Board curriculum committee, BSD Principals and Administrations. More than 10 presentations were made across the school district to publicize the assessment, receive feedback, and lay the groundwork for adoption of School Food Action Plan.

With the exception of the Legacy town meeting which was well attended by over 200 people and the television presentation, each presentation had an average of 16 attendees. The assessment was also widely distributed through newspaper inserts, newsletters, mass emails, list serves, presentations on public access television, mass mailings, and the Internet. The Food Assessment received widespread recognition in the local newspapers and editorials. The local press and media carried several articles highlighting the work of the BSFP and the objectives of the food assessment.

Seventy responses were received from attendees who completed the evaluation questionnaire at the Legacy Project town meeting in December 2004. Thirty percent of the participants had attended the town meeting in the previous year and 80 percent were aware of the BSFP and its activities. The majority of participants were interested in the school districts increase in local food purchasing and 40 percent considered the presentation of the Food Assessment as a valuable and helpful part of the meeting. The Food Assessment report was considered an “eye opener”, informative, and inspiring by participants. However, many attendees were not aware of the activities conducted by the BSFP. Fifty percent agreed that they had learned something new about “food, farms and nutrition” in the BSD through the presentation and it had changed their perception about the same. Fifty-five percent agreed that the event had been a valuable use of their time.

Burlington School Food Action Plan

The Community Food Assessment results led to the development of the School Food Action Plan. The Food Action Plan promotes greater access to healthy food and increased FFN education throughout the school district. The objectives of the Food Action Plan are to:

- Impact Food access and hunger in the community;
- Build the farm-to-cafeteria food system;
- Provide positive mealtime experiences
- Educate the community for greater awareness;
- Empower students for lifelong learning and healthy choices;
- Integrate food, farm, and nutrition education into the classroom; and
- Strengthen out-of-school learning opportunities and access to healthy foods.

School Board Approval of Action Plan

The Food Action Plan was presented to the Burlington School Board in 2006 and was unanimously adopted by the Board. Though this adoption did not guarantee funds for the project, it solidified administrative support for Doug Davis, Food Service director, to continue the work of the BSFP over time. Davis stated that this plan is not a policy or a mandate, because he “doesn’t like to leave mandates for others to follow.” Instead the Food Action Plan is a guideline and philosophy for which the BSD Food Service can base decisions for menu offerings without a financial impact.

Examples of Action Plan Success

During interviews with key project stakeholders, many examples were discussed that demonstrate the success of the Food Action Plan’s implementation. A main theme frequently mentioned was the collaboration between BSD and farmers and the increased amount of local produce bought and served by the BSD. Abbie Nelson talked about the importance of meeting with farmers in the spring time to plan with Doug Davis what produce will be grown for the school district. In addition, the Healthy City teen run farm was a successful partner in growing and harvesting produce and harvesting produce grown at other farms that do not have the labor to harvest produce quickly to be served by the BSD. Other examples provided by project partners that demonstrate the success of the implementation of a Food Action Plan include the:

- Increased student involvement in improving school lunches;
- Expansion of school food committees;
- Expansion of taste tests into other schools;
- Increased enrollment of students’ in free and reduced lunch programs;
- Incorporation of FFN into summer lunch programs, and;
- Increased in attendance at school-wide community dinners at Barnes and Edmunds elementary schools.

Megan Camp stated that these changes provide evidence that the school community is taking ownership of FFN issues and project activities.

Funds Leveraged with Action Plan

The approval of the Burlington School Food Action plan leveraged funds for continued FFN work in the BSD. The Burlington Food Council (2006) reported that Green Mountain Coffee Roasters gave the BSFP \$75,000 over a three year period. "Green Mountain Coffee Roasters is excited to support the efforts and leadership of the Legacy Project, Vermont FEED and Burlington Schools to integrate healthy and local Vermont produce into school meals. This program is unique in its blend of support for the local economy, the promotion of sustainable agriculture, and education on healthy consumer choices," says Michael Dupee, Vice President of Corporate Social Responsibility at Green Mountain Coffee Roasters. "The program aligns wonderfully with our social and environmental goals and is already generating measurably increased awareness in the student population. We look forward to contributing to even greater success in the future. Doug Davis, Burlington School Food Service Director says, "This gift from Green Mountain Coffee Roasters makes all the difference in moving toward more fresh local product in the schools."

Goal 3: Burlington food, health, and education-oriented organizations and people build capacity toward better meeting the food needs of the low-income Burlington School District student population.

The third goal of the BSFP is that Burlington food, health, and education-oriented organizations and people build capacity toward better meeting the food needs of the low-income BSD student population. Building community capacity included increased collaboration and leveraging and directing of funds. Evaluation results show that the BSFP built community capacity through groups such as the Burlington Food Council and school food committees, parent and community volunteers, and collaboration with intended and unintended partnerships.

Burlington Food Council

The Burlington Food Council examines the farm to school food system and food, farm and nutrition education in Burlington schools. The Food Council has been active since 2003 and is made up of thirty active members and more than sixty supporting members. People involved include: farmers, parents, school district employees, students, researchers, and health and nutrition experts.

Impact of the Food Council on Organizations and Individuals

Surveys and interviews were conducted of Food Council members to capture the impact of the Council over the course of the BSFP grant on organizations and individuals involved. Common themes that emerged from the interview data include networking, communication and collaboration and assisting member organizations.

Networking, communication and collaboration

Abbie Nelson, a core member of the Food Council commented that, “The Food Council is important to the Burlington Community by bringing together volunteers, activists, and organizations to work towards nutritional needs facing the low-income families and children of Burlington. Success of the Council is measured by networking and

relationship building rather than activity.” Nelson discussed some of the relationships that the Council built over time between organizations such as the Burlington Food Service, Fletcher Allen Health Care, the Burlington summer food program, the Healthy City farm, City Market Cooperative, and the Intervale Foundation. Most Council members who completed the survey on the work of the Food Council echoed Nelson’s opinion.

Most noted that the greatest accomplishments of the Council were to bring people together to network and examine FFN issues from a community perspective, create and strengthen local partnerships, increase communication among partners, and provide a forum on a regular basis to discuss FFN issues. High stakeholder commitment

I think the Food Council has been great. I think members have really taken on a level of ownership and have a sense of empowerment. I think for a volunteer group, they are very committed with high attendance. There are people coming and going, but there is a lot of continuity. And usually these things wane after a few years but the Food Council has not. Actually it’s grown. There is momentum.

-Megan Camp

to the Food Council was evident as meeting attendance increased over time and certain core members attended consistently over time. Through increased communication among school Food Service personnel, teachers, parents, and farmers, the Food Council helped to develop the taste test models for each school where this activity occurs and build direct relationships between producers and consumers of fresh and local food within the BSD. The Council also served to develop a coherent image and media presence regarding FFN issues in Burlington schools and the larger community.

Assisting organizations to carry out mission

Along the same lines, Council members felt that meetings provided a framework for story-telling and skills-sharing and enabled participants to take concrete ideas back to their organization to carry out purposeful activities. One person wrote that stories and ideas from Food Council meetings

“inspires and keeps participants focused on issues related to food.” Members of the Council also noted that their participation in meetings assisted them to fulfill their organization’s mission and goals and bring specific issues to light, and publicize their work. Meetings provided a forum for organizations to bring their issues forward, educate others, and make connections to work towards the cause. In addition, the Food



Council created awareness among local businesses, such as City Market Cooperative, and individuals, such as local chefs, who are willing to support FFN through volunteering and fundraising.

Impact of the Food Council on the larger Burlington Community

The Burlington Food Council had a great impact on community organizations and individuals involved. However, the Food Council also had an impact on the larger Burlington Community. As indicated in previous sections of this report, the taste tests, in part due to the work of the Council, led to many changes and improvements in the school cafeteria offerings. Through the farm to school process, the Food Council fostered better connections between the schools and local farms. Children in the Burlington area also benefited from improved meals and nutrition education. One respondent to the Food Council survey noted, “The Food Council sends a unified message to kids about food, whether they are buying lunch in the cafeteria, getting a snack in the after-school programs, or learning about growing crops at Healthy City farm.” This message will improve their and their family’s eating habits over time.

Education and community outreach

The Food Council also benefited members by providing education and professional development for individuals and organizations during meetings. For example, the Food Council convened guest speakers at one meeting to talk about issues of hunger facing Vermonters and residents of Burlington. The Food Council also served to educate the larger community at meetings such as the annual Legacy Project Town meeting. At the 2005 Legacy Town meeting, held in December, a total of 43 people completed an evaluation of the meeting. Table 18 shows that 71% agreed or strongly agreed that they learned something new about FFN at the meeting. In addition, 88% agreed or strongly agreed that they learned something new about school food efforts happening in Burlington. The majority of respondents (84%) also commented that the meeting was a valuable use of their time.

Table 18. Highlight of Results from the Legacy Town Meeting survey, December 2005

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I learned something new about “food, farms and nutrition” at this event	7% (2)	7% (2)	16% (5)	29% (9)	42% (13)
I have learned something new about school food efforts happening in Burlington	3% (1)	3% (1)	6% (2)	41% (13)	47% (15)
This event has been a valuable use of my time	3% (1)	3% (1)	7% (3)	29% (9)	55% (17)

A little over a quarter of respondents (28%) attended both the 2004 and 2005 Legacy Town meetings. Respondents felt that the most informative and compelling aspects of the meeting were the focus on youth activities and presentation, hearing about project happening in local schools, and learning about the vision of the Food Council.

Strengths of the Food Council

In discussing the impact the Food Council had on individuals, organizations and the larger Burlington community, many members discussed the strengths of the Council that provide the backbone for the work. The majority commented on the importance of consistent meeting attendees, including the BSD Food Service director, FEED staff, the nutrition educator from City Market/Onion River Food Coop, and the farmers from Healthy City. They also appreciate the information from people with diverse backgrounds and fields. One person commented, “The Food Council brings together a diverse group of people who are all focused on the same issues; however we go about addressing them differently. We can communicate about the issues, successes, and ways to work together.” In addition to the diversity of individuals and meeting attendees, members appreciated that there are paid staff persons from the Burlington Legacy project to coordinate and facilitate meetings and record and disseminate meeting minutes.

Others commented on the meeting format and felt that clear agendas, timely minutes, and regular meetings with time limits are key pieces to getting work done. Respondents also indicated that a strength of the Food Council is the ability of members to adjust the basic concepts of a food council to the particular opportunities available in Burlington and to

connect to Burlington's momentum and commitment towards sustainable practices in many areas of public policy, such as support for local agriculture, livable wages, micro-business startup support, and downtown economic revitalization.

Suggestions to Improve the Food Council

Food Council members interviewed made several suggestions for ways to improve the Council. Four common themes came from the data, including learning and evaluation, marketing and logo development, activities, and outreach to new members.

Learning and evaluation

Most respondents suggested that the Food Council continue to seek out information and learn from the work of other Food Councils in the United States. Some suggested that the Council evaluate its work and progress made towards short and long term goals, possibly in comparison to other Food Councils. Other recommended that the Council develop a “best-practices list of the most creative and perhaps unusual school-food-change activities in the country (and in the world)” to share the model of the Burlington Food Council with others.

Marketing and logos

Many respondents felt that the Food Council should improve its marketing efforts through the use of consistent logos, messages, and branding. A suggestion was made for the Council to develop a media message and press kit to communicate the work of the Food Council with the public in a regular and consistent manner.

Activities

A few suggestions were made for different activities that the Food Council could undertake. One person suggested that the Council have a “work day” where the members participate in hands-on FFN activities such as serving meals at a summer program or helping with taste tests. Another suggested that the Council focus some efforts on nutrition education during summer programs for children.

Outreach to new members

Finally, members suggested that the Food Council should reach out to bring in new members with different interests and backgrounds through the use of diverse agenda items. One person said, “We should make more effort to invite and inspire additional people to join in. Potential funders, for example, might see in a concrete way that generosity on their part would be supporting a truly grassroots effort, without any regular ongoing means of support.”

School Food Committees

The formation of Food Committees in BSD schools also facilitated community capacity building to better meeting the food needs of the low-income BSD student population. Food Committees, comprised of teachers, parents, and Food Service professionals, were created in response to the need for coordinated interactions between students, Food Service professionals and BSFP partners. The main goal of the Food Committees is to increase student consumption of fresh and local foods and to facilitate Food Service to become a part of the educational framework.

Major Accomplishments and Activities of the Food Committees

One of the major accomplishments of the Food Committee at Edmunds Middle and Elementary School and Hunt Middle School was to plan and implement taste tests in the school cafeteria. The

intention of the taste tests was to involve the student body in making positive change in school menu offerings and expose students to

“...there was a group of parents who took a class with our staff called “Healthy Children, Healthy Planet.” They got really jazzed about doing something in... (Barnes)...and they heard that Edmunds had a parent group so they wanted to start a parent group. They started this group called the Food & Wellness Committee.”

- Jen Cerillo, Shelburne Farms

more fruit, vegetables, whole grains, local, and seasonal products. With student support and feedback, new foods were integrated into the regular breakfast and lunch menus over time. The Food Committees also created many relationships with Burlington businesses and food producers. Because of these strong relationships, the Committees were able to establish growing contracts with several local farmers to grow specific produce to be used by the BSD Food Service staff. The schools involved also processed local summer produce for later use during the school year. The Food Committees also forged relationships between parents, community members, BSFP staff and Food Service staff. Food Service staff were heavily involved on the committee, as they were the ones who prepared the new foods offered on the menu.

Strengths and Challenges of the Food Committees

A major strength of the Food Committees was to involve Burlington Food Service professionals in all aspects of activity. Another strength was the diversity of participants involved in meetings, including teachers, parents, farmers, and other individuals within the local community. The Food Committees also succeeded in getting a school-based taste test coordinator position in schools. Because of this new position, the Committee improved their ability over time to select recipes that can be replicated and are affordable. One of the main challenges that the Food Committee faced was that some teachers and school administrators were somewhat removed from the changes that occurred in the cafeteria. Both groups rarely gave feedback and support for the Food Committee. However, the involvement of teachers and parents on the committees helped to make connections with other teachers, administration, and groups such as the Parent-Teacher Organizations.

Best Practices for Food Committee Development

Through their experiences, the Food Committees of the BSFP learned that it is crucial to have teacher participation and support for their work. It was also essential that the Food Service professionals were paid to attend the food committee meetings to gain their support and interest. The taste tests required structure and regularity, which made it important for there to be a taste test committee that decided the format of the taste tests and when they occurred. The tests should occur in the school dining hall, and the students should be encouraged to work closely with the volunteers; by involving the students in the setup and production of the tests, they were able to see first hand the classroom/cafeteria connection. Teachers should also be informed of the tested foods' nutritional information prior to the taste tests, with the intention that the information will be incorporated into the teachers' lesson plans. By having a school-based taste test coordinator at each school, the Food Committee hoped to make farm to school activities sustainable. In order to continue community involvement in a sustainable manner, it was imperative that the lines of communication between the classrooms, Food Service professionals, and the food producers remained open.

Parent and Community Member Volunteerism

Parents of school children in the BSD and community members volunteered for the BSFP in a variety of ways, such as helping with taste tests and special events and dinners, leading field trips, working in classrooms and school gardens, attending Food Council and Committee meetings, and advocating for the project at Parent Teacher Association meetings. All BSFP staff and partners interviewed remarked about the importance of volunteers in the success of this project. Volunteers contributed to building community capacity of the project, as they helped run activities, connect partners together, and are the ones who will return to help out and keep activities running long after funds are gone. As part of volunteer training, parent and community volunteers were invited to attend workshops and trainings on topics such as leading student field trips to the Intervale and Shelburne Farms. BSFP partners noted that their partnership with City Market Cooperative was the main source of community member volunteer recruitment, as volunteers are offered a discount on grocery purchases in exchange for volunteer hours.

Reasons for Becoming BSFP Volunteers

Parents and volunteers who attended workshops or trainings were asked to complete an evaluation questionnaire after their participation. The majority of respondents (9) were after school program coordinators and staff, one was a community volunteer, and one was a parent of a child in the BSD. Other attendees included BSFP interns, a student from Burlington College, volunteers with the Healthy City project, a public health nurse and the parent community involvement coordinator from Lawrence Barnes Elementary School. Respondents reported that they attended these events and became involved in the BSFP for several reasons.

Most respondents attended to get new information and ideas about healthy eating for children. Many did it for work related reasons, such as being able to lead more knowledgeable field trips or bring important information back to the classroom. One respondent attended simply because “the last one [workshop] was great”. Other reasons included that the respondent found it interesting and/or important. Respondents also indicated their goals for attending the workshop or training. Most people who attended the workshop had the goal of becoming more knowledgeable and informed about healthy eating so they could provide better nutrition and variety in the snacks they offer their students. Attendees also wanted to provide kids with knowledge to make healthy food and snack choices. Others wanted to learn specific things such as how to facilitate an Intervale field trip, how to connect children to local food, farming and harvesting techniques, and one desired to learn how to recognize the signs of hunger.

During in-depth interviews with volunteers, one woman commented that she became a BSFP volunteer to earn hours for a member credit and discount at the City Market Cooperative grocery store. She learned of this opportunity at a Legacy Project meeting and she was already a volunteer math tutor at Barnes Elementary School. Caroline Homen of City Market directed her to BSFP training to be a volunteer. She thought this was a wonderful opportunity to continue working with Barnes Elementary School through FFN issues, which is important to her and helpful to children.

“I train parent and community member volunteers on FFN topics, so they can lead programs at the Intervale farms and other local farms. Volunteers learn how to teach about seeds, soil, farming, etc and then lead trips for children in Burlington schools. Volunteers can also work with teachers in the classroom. They teach on seasonally appropriate topics such as maple syrup production in the spring and apple growing in the fall. We try to relate the FFN topic to the teachers’ curriculum. Our overall goal is to get students to visit local farms in Burlington and the surrounding areas. This helps students learn where their food comes from and establishes more of a link to their local food system...making links that food from the Intervale is served in the cafeteria in some schools.”

-Amy W. Chambers on **volunteer training**

Volunteer Projects and Activities

Overall, interviews with BSFP partners indicated that volunteers were the glue that fostered the work of the BSFP to come to fruition. Volunteers provided assistance for BSFP staff and impacted youth by showing that they care and taking time to teach and work with them. Abbie Nelson stated that “Volunteers are crucial to pulling off the taste tests, harvest dinners, school lunch week, and advocating for the project at Parent-Teacher Organization meetings.” Jen Cirillo noted that she worked with a lot of volunteers at Barnes Elementary School and they were involved in the Food and Wellness Committee there. These volunteers helped to organize and plan school and community dinners, such as meals to be served and specific roles for individuals. Cirillo noted that parent volunteers also helped in getting school gardens started and worked

with teachers in the classroom. In describing her interactions with volunteers and their importance in farm to school curriculum integration, Jen Cirillo commented,

“We’ve had a couple [volunteers] stay with us for a long time. There’s three women who have been working in the classroom working on the chicken reports and actually helping the teachers with the actual writing process for the students all on the life cycle of chickens, what chickens that lay eggs, and then a gentleman who worked with the kindergarten class and some of them have done their own projects. It’s been incredible. Like they’ve actually designed curriculum, brought in supplies, made apple sauce with kids, done a whole project on something called Eating the Rainbow looking at all different kinds of colors of fruits and vegetables.”

Jenn McGowen, director of the Healthy City youth farm, noted that volunteers helped the youth out with planting and harvesting, but they were also helpful in tending to the farm in the spring and fall when the youth were not working on the farm. The volunteers kept the approximately one acre farm running while McGowen and Aziza Malik, Healthy City coordinator, were recruiting teens and reviewing and accepting applications. In addition to the work mentioned by project partners, volunteers interviewed described many other projects and activities they did for BSFP. Examples include:

- Helping to prepare food for community dinners for parents, families and students.
- Working with teachers to make granola for units on grain.
- Writing grants and receiving funding to plant bulbs in school garden.
- Planting vegetables in the school garden, including “kid friendly foods” like green beans, carrots, cucumbers, cherry tomatoes.
- Attending Burlington Food Council meetings
- Assisting monthly cafeteria-wide taste-tests
- Coordinating food-invention/sampling/rating sessions with students for taste test product development.
- Leading Intervale and Shelburne farms field trips
- Holding workshops to recruit and train volunteers
- Developing art projects with the Edmunds Middle School art teacher and approximately 400 students who have created numerous Vermont agriculture scenes



- Coordinating and attending meetings hosted by the Intervale Center to better connect residents of the Old North End in Burlington to the Intervale and fresh produce
- Coordinating service-learning projects connecting UVM students and staff with local food, farming and nutrition research and hands-on activities.

Impacts of Volunteering

Based on conversation with project partners, it is clear that volunteers had a great impact on the BSFP success and sustainability. However, the volunteering also enriched the lives of the volunteers.

Project sustainability

Volunteers provided the BSFP with time and resources and helped to accomplish activities and projects that teachers, staff and BSFP partners could not do alone. In addition, all BSFP partners noted that volunteers were the key to project sustainability as they are the ones who will return to help out and keep activities running long after funds are gone. By involving a lot of volunteers in BSFP projects, Jen Cirillo noted that the schools and the project gained a lot of community support. Cirillo stated, “These are the people you want to make long-term relationships with because they’re the ones that can make things keep happening. When we don’t have the funding anymore, they are free. They’ll come back, or they might know someone who could work with a classroom.” Reiterating this sentiment, Megan Camp stated the following when describing the impact parent volunteers have had on gaining school administration acceptance and support for FFN issues in school.

“This past fall one of the parents organized an assembly program for the whole elementary school about FFN issues and we didn’t even know about it. They invited a BSFP chef and vegetable grower to talk about farming and cooking with local foods. And the principle stood up and proclaimed commitment to FFN issues! This was a bold statement that we had not gotten the principal to say but a parent got him to say. We thought, this is a real indication of success because a parent was taking things one step further to make healthy foods and nutrition a prominent issue on the school’s radar.”

Enrichment of volunteers

In addition to the impact volunteerism had on the project, volunteer opportunities with BSFP also enriched the lives of the volunteers in many ways. Volunteers who were interviewed or who filled out workshop evaluations after trainings noted that volunteering impacted their lives personally and gained something important from the experience. One hundred percent of the respondents who filled out the evaluation stated that the workshop and/or training met their goals and expectations for attending. One said that the training was “more helpful than what I thought was going to be taught.” Many volunteers indicated that they personally learned something from their experiences, such as issues on hunger in Vermont, recipes for healthy snacks, and games and activities to help inspire their students to eat healthier foods and make better choices. One

volunteer commented that she learned about community gardening and resources available in the community concerning FFN. She also noted that it “feels good to volunteer” and that she met a lot of neighbors and community members through her volunteerism. Another volunteer commented on insight she gained while working with youth. She remarked,

“The most important insight for me has been the awareness that students, young people in general, need to be the ones to suggest, invent, sample, and rate new foods. Approval from the consumers, the people eating in school, is the key to school-food change. And the steps towards this approval, hands-on experiments and inventions, nutrition and lifestyle discussions, time for students to ask a whole host of questions, are ones where many different people from the community need to be involved.”

Another person commented that this experience allowed her to connect to aspects of her life that are important to her. She wrote,

“Volunteering with the Burlington School Food Project has allowed me to connect with several loves in my life, including my love of parenting, art, farm work, and community involvement. Overall, I now see much potential for social, economic and political change with good food for all as a central issue. As an example, during my weeks spent with nearly a hundred art students and their teacher every day, I have taken to heart the incredibly diverse opinions of what constitutes good food!”

Suggestions for Improving the Volunteer Experience

Respondents to workshop and training questionnaires made several suggestions to improve future volunteer training and the overall experience. Some wanted more information on food, such as food allergies and myths, more hands-on recipes, and foods that could help kids become more open-minded about what they eat. One responded that more time should be allotted for the training and another person wanted more “interaction and discussion.” One thought less time should be spent organizing and moving and more energy should be focused on the actual demonstrations. This same person suggested that workshops focus on “various age groups” as well. Another wanted more information on sustainable farming and one wanted more information specifically on the Intervale, so they would be able to answer children’s questions. Through an in-depth interview with a parent volunteer, she commented that volunteers should be partnered with school-food partners and co-workers who can accompany them, work with them, advise them, and talk over ideas until newer volunteers feel confident enough to participate on their own. With enough initial support, each newer volunteer will, in time, be the “trainer” for an even newer volunteer in the future.

Strategies for a Successful Collaboration

The BSFP partnership was a successful collaborative in that partners with different capabilities worked together, learned from and respected each other, and took action to meet the grant goals. For the process component of this evaluation, project partners were interviewed individually and collectively to understand and document strategies used for a successful collaboration and components of a farm to school model. Key strategies include relationship building and partnering, communication, characteristics of partners, and involvement of stakeholders. Recommendations were also made for improving the BSFP partnership. Finally, partners suggested components of a successful farm to school model, including classroom, cafeteria and community.

Relationship building and partnering

All project partners interviewed discussed the importance of relationship building, networking, and partnering with a diverse group of people to have a successful collaborative. A key factor that made this work was to have monthly project partner meetings that provided a forum to coordinate activities and communicate with project partners. In addition to regular partner meetings, monthly meetings of the Burlington Food Council Having and Food Committees were crucial to develop networks and partnership and sustain this over time. Two points commonly noted as being crucial to relationship building were partner characteristics and collaboration with intended partners, specifically farmers, as well as unintended partners.

Characteristics of partners

Many partners interviewed talked about characteristics of partners that helped to make the collaborative work. These included having patience, taking risks, and being open and inclusive to new ideas. Partners also talked about sharing responsibility and communicating with others to keep everyone involved and updated.

Collaboration with farmers

As discussed in many sections of this report, farmers such as the Lewis Creek Farm, Healthy City Farm, and many other Intervale farms were critical partners to integrating fresh and local produce into the BSD. Many partners discussed factors that led to success in collaborating with farmers as both educators and producers of food. During an interview, Abbie Nelson discussed the importance of meeting with farmers in the spring, during their planning season, to come to an agreement on what produce will be grown for the school district at what price. This model to work with farmers evolved over the course of the project as relationships were built between farmers and BSD staff. At the beginning of the project, Jen McGowen of the Intervale would visit or speak with Intervale farmers on a weekly basis during the growing season to ask if they had any produce to sell to the BSD. This model did not work well as farmers did not have specific produce available at a specific price for the BSD, or the BSD could not use or afford to buy the produce that was available. McGowen commented, "This strategy would be hit or miss as to what the farms had that day. For example, one farm had 3,000 ears of corn to sell on a Wednesday and I told Doug [Davis] on Thursday. I called the farmer back on Thursday to make sure the corn was still available and it was all gone

because he needed to sell the corn and could not sit on it.” However after a year or so of collaboration, farmers, BSD staff, and other project partners decided to meet in the late winter/early spring to specifically designate produce that would be grown for the BSD at a specific price. They also decided on the variety of produce to be grown based on



school needs, such as a new variety of basil that is easier to process into pesto. Because of this change in the model to purchase produce from local farmers, BSD has increased the amount of produce they have purchased over time (see Figure 1).

Abbie Nelson stated that in working with farmers, it is important that they make a profit from their produce or else the project is not sustainable in the long run. Thus, growing

contracts were set that were convenient to the farmer the BSD. Farmers could charge the school district less than the traditional retail market for a particular item because the BSD would take produce that was too large, misshapen, or dented. These produce could otherwise not be sold at a higher price on the traditional market. Megan Camp stated that the project opened up a new market for farmers to sell their produce and the farmers are supportive of the project because their food is going to feed kids in their community. By trying out produce from farmers during taste tests, BSD could be certain that their students would like the foods before investing money into something new.

In addition to collaborating with privately owned farms in the local area, BSD also partnered with the Healthy City teen run farm. These students grew and harvested produce such as kale, cherry tomatoes, and basil, which was purchased and used by the BSD in meals. Healthy City teens also traveled to other farms to harvest their produce for use in school meals. For

Healthy City students, along with youth and adult volunteers, harvested 280 pounds of strawberries grown at Lewis Creek Farm that were then taken to Burlington High School for processing.

instance, Healthy City students, along with youth and adult volunteers, harvested 280 pounds of strawberries grown at Lewis Creek Farm that were then taken to Burlington High School for processing. The Healthy City farmers and volunteers also harvested green beans and basil at the Intervale Community Farm for use by the BSD. The strawberries were served on yogurt parfaits and desserts, the kale was used in soups and to make calzones, the cherry tomatoes and green beans were used on the salad bar, and the basil was used to make the popular pesto for use on potatoes, pasta and pizza.

The Healthy City teens attended school in the BSD, so they were present during taste tests and could tell their friends that they grew the food being tested and served. However, farmers were also invited to attend and participate in taste tests so that students could make the connection between the grower, production, and the end product that was consumed.

Unintended partnerships and outcomes

In addition to collaborating with farmers, many project partners discussed the importance of collaborating with unintended partnerships that developed during the course of the grant. These unintended partnerships and the resultant outcomes also fostered and supported the BSFP to be successful. This was a strength of the BSFP collaborative to recognize and build on unintended partners and opportunities as they emerged. As a result of many of these partnerships, many unintended outcomes transpired within the project. Unintended partnerships and their main role in the project include:

- City Market Cooperative – provided volunteer recruitment, fundraising, offering produce at a reduced price
- The Healthy City Farm – provided educational opportunity for students, provide produce for BSD, provide labor for harvesting produce at other farms
- Burlington Parks and Recreation – Held summer programs and focused on FFN and healthy snacks and meals during the summer time
- Vermont Food Venture Center and other farms – provided processing support
- Farms outside the Intervale – provide produce for BSD
- Parent and Community Volunteers - provided support in all aspects of the project
- Americorps VISTA – provided administrative and managerial support for the project
- Funding agencies – provided financial support for project sustainability
- Fletcher Allen Health Care and other health focused organizations – recognized the importance of fresh and local foods to healthy communities
- School Administration – provided support for BSD to make changes in the school lunch menu
- Chefs and Local Businesses – provided support and resources for project during taste tests and field trips

In comparing the intended outcomes written into the BSFP grant with what actually happened after the three years of activity, many unintended outcomes occurred as the project took on a life of its own in many areas. Two of the main themes discussed by project partners when interviewed about unintended outcomes were the Healthy City teen run farm and the in-school taste tests. These projects were not written into the original grant. However, the intuition and flexibility of partners to recognize an opportunity led for these projects to become strong components of the BSFP that meet the grant goals. For instance, the grant focused on hiring a part-time education coordinator who would coordinate educational efforts at the Intervale. However, because the Healthy City program emerged as a strong and effective educational program for BSD youth, the partners shifted the focus of this piece and invested funds into this program. Many other unintended project outcomes were observed by partners, depending on their role with the grant. The following highlights those discussed.

- Establishing growing contracts with farmers
- Gleaning produce from the Intervale farms for BSD consumption
- Processing produce during the summer months with the support of parent and community member volunteers

- Partnering with the Vermont Food Venture Center to develop and mass produce recipes for the BSD and determine which food products to out source.
- Building networks through the Food Council
- Hosting field trips to the Healthy City farm
- Involving parents on Food Committees at schools
- Planting school gardens
- Developing the literacy kits for schools and projects such as composting and fresh fruit tasting in the classroom
- Gaining momentum to pass farm to school policy at the local and state wide level

Communication

Consistent and clear communication with partners also emerged as another theme when partners discussed strategies for a successful collaboration. Partners stressed the importance of having open lines of communication through in-person, telephone and email communications. Partners recommended that individual needs and preferences be taken into consideration when deciding the modes for communicating with partners, as some people prefer email communication, while others collaborate best in-person. Communication among BSFP partners was facilitated in part by the regular monthly meetings of a variety of groups, including general partner meetings, Burlington Food Council meetings, and Food Committee meetings. In particular, one partner commented that in-person meetings were important because they guaranteed communication among people who collaborated but did not work in the same space and may not have been accessible by telephone or email. Some partners noted that it was important to communicate events or projects in advance so that others can help spread the word or garner support or resources needed. In addition, partners commented that they asked for support of other partners when they needed it, rather than taking on a task themselves. In addition to meetings and conversations through technology, other effective ways partners communicated included: evaluation, training/professional development, written plans and documents, public forums, school assemblies, school administrator and board meetings, and newsletters.

Stakeholder Involvement and Empowerment

Another theme that emerged in talking about strategies for a successful collaboration was involving all stakeholders, especially children who are the major consumers of project outputs. Stakeholders were also empowered to make positive change in their school community and youth nutrition. Doug Davis stated that students were empowered to have a voice in school menu changes because of this project and asked to participate in BSFP school activities, such as taste tests and field trips. Food Service staff were empowered because they “felt a part of something” that helps children to learn about health and nutrition and makes positive change in children’s diets. Parents were also empowered to become involved in the school food changes through volunteer participation and community dinners. This project also opened up doors between the larger community and the BSD. Finally, partner organizations were empowered to be involved in a larger movement that embraces FFN issues, while their individual organizational cultures were respected.

Success, Challenges and Sustainability

Project partners discussed examples that demonstrated how the collaborative worked effectively together, the challenges faced, and how the project is working to be sustainable without the grant funds. Many people commented that because the partnership grew, FFN education became ingrained into the community culture. This especially occurred by working with unintended partners who became interested in the project as it evolved. In addition, parent and community member volunteers became more involved than initially intended and took local ownership of the project. The commitment from the school and larger community, coupled with support from the school administration demonstrated how the project built community capacity over time. Jen Cirillo stated that the BSFP made a lot of positive changes in the school district. She noted, “The fact that we worked with almost all of the elementary and middle schools and the high school...it is a pretty big population and I think we have seen a lot of change.” In addition to the expanded partnership, many persons interviewed commented that people continue to remain committed to the project goals and work together after three years. Megan Camp reiterated this notion in stating, “I think that the fact that the project has grown stronger and evolved and has a future would be an indication that the partnership worked well.”

The diversity of partners added a layer of complexity in things changing and evolving throughout the project. One partner in particular experienced a lot of turnover in her organization, which created a lack of clarity and misunderstandings of the roles for people who came in and out of the project. Another obstacle was balancing the different needs of partners. Some partners wanted more structure and others wanted less. Other challenges cited were the number of partners involved, the evolving roles, and adapting activities to better fit the needs of partners (such as the model to work with farmers). Another obstacle that was mentioned frequently was funding; for example, not being able to provide each teacher with the resources that they need. To meet this need, many parents took it upon themselves to raise money for teacher resources.



The partners expressed in conversations that the project has become sustainable beyond the work of the main partners for several reasons. Many suggested that because a variety of constituent groups were represented throughout the project, there was “community buy-in” by the end of the grant. In addition, the Food Council was created through this project and emerged as a sustainable force within the community. The success of the BSFP also leveraged funds in the form of grant, foundation and state money. The Burlington Food Council received over \$100,000 in grant funds to continue the work of the BSFP. Within the schools, the Food Service staff gained strong support and

leadership to carry out the work of this project from their director and within the staff. Students and their social networks, through friends, siblings, and parents, also grew to love participating in taste tests and learning about FFN topics. Thus, the legacy of the project will continue with the raised expectations and desires of students. Overall, the community capacity for FFN issues generated through the work of the BSFP resulted in many teachers, administrators, volunteers and students ready to continue the work even after the project funds have ended.

Suggestions for Improving the Partnership

While the BSFP partnership was very successful as a collaborative working towards common goals, all partners interviewed offered suggestions for improving the partnership, including strengthening and diversifying the partnership and branding and marketing the work of the BSFP and FFN.

Strengthen and diversify the partnership

A main suggestion was to strengthen and diversify the partnership through additional funds, which could ensure that all stakeholders are represented at meetings. One person suggested that the BSFP forge a stronger connection to the Burlington School Board to make some permanent changes for FFN education. Another recommended that if partners continue to meet, they should set meetings for the year in advance so that they get priority on everyone's calendar. Another suggestion was made to ensure that all partners are educated on appropriate community resources and agencies so that the right people are sitting at the right table, depending on the discussion. For instance, the Food Council meetings were held during the day to maximize attendance. However this change from early evening to morning reduced the number of teachers who could attend meetings due to schedule conflicts. In addition, one partner specified that other fields were not represented at meetings stating, "We could have been better about including the healthy community from the onset." However, several partners commented that even though the Food Council had diverse partners, it was difficult to have all stakeholders present at every meeting.

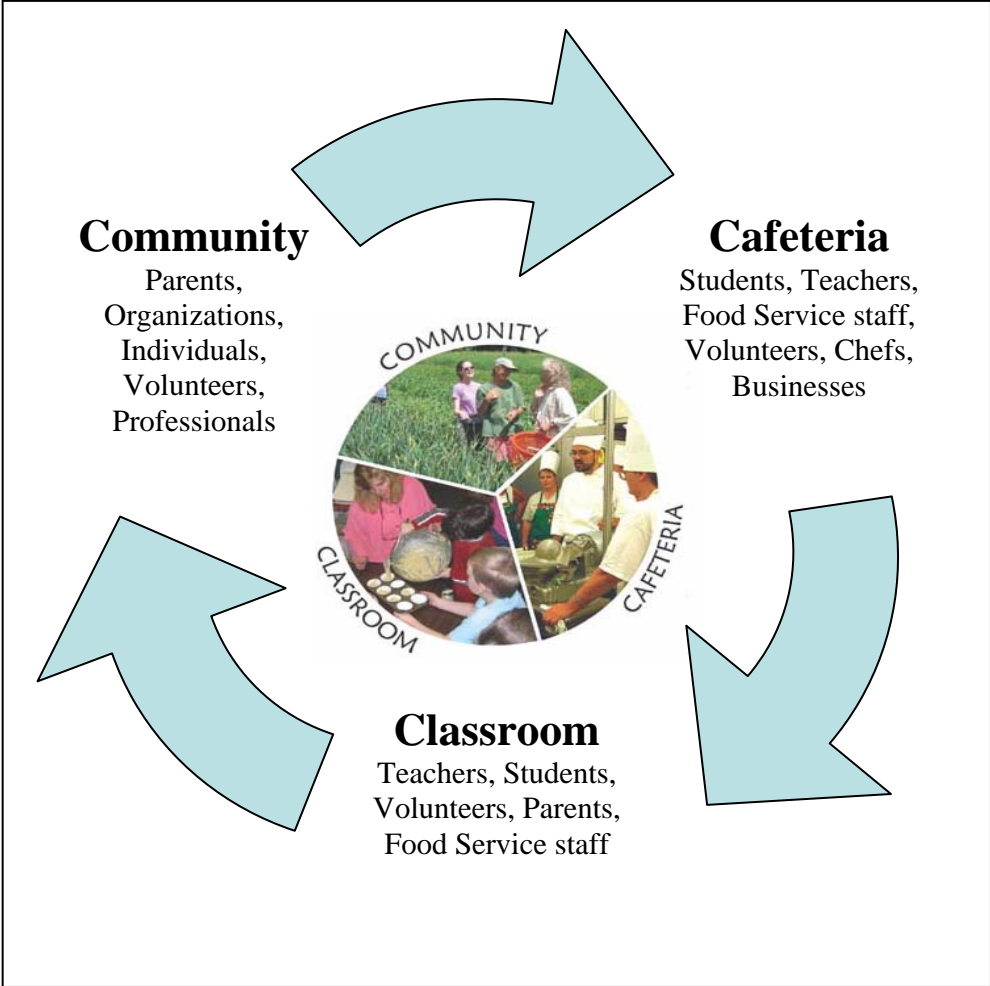
Branding and marketing

Another area for improving the BSFP and outreach surrounding FFN education was to improve the marketing of the project and FFN issues through branding. One person exclaimed, "California knows more about Burlington than Burlington does." Another commented that the BSFP should establish a "brand" or logo to help raise awareness of FFN issues in the school community.

Key Components of a Successful Farm to School Model

Also as part of the process evaluation, partners discussed the key components of a successful farm to school model. Several people voiced that the “Three C’s” model of “community, classroom, and cafeteria”, which empowers and integrates all stakeholders, is crucial to a successful farm to school model (Figure 14). Partners specified that *community* should include farmers, as well as parents and interested individuals and organizations. The *cafeteria* piece must include Food Service providers, teachers and school administrators, as well as students who are the ultimate consumers of FFN in schools. One partner commented.” I believe in involving youth in every step of the way...cooking, taste tests and field trips, there is so much buy-in for so many kids.” With respect to the *classroom* component, one partner emphasized the importance of a consistent message from teachers and after school programs to children, which will hopefully be carried into their homes. This lesson also connects back to the cafeteria in the new healthy, fresh, and local food choices that are served in school cafeterias. Given this model, one project stakeholder noted that projects must be realistic about what can be accomplished in a certain time frame. Small successes need to be built upon gradually rather than changing the whole cafeteria menu at one time.

Figure 14. Components of a successful farm to school model



IV. Discussion

From the evaluation perspective, data collected from project stakeholders and activities demonstrate that the BSFP grant met and exceeded all of the grant goals. In comparing the intended outcomes written into the BSFP grant with what actually happened after the three years of activity, many unintended outcomes occurred as the project took on a life of its own in many areas. The fact that unintended outcomes occurred, in addition to intended ones, demonstrated project success and future sustainability through partnership, networks, ownership, and empowerment of all stakeholders.

Goal 1: Burlington School children increase awareness and engagement in the local food system and increase awareness about, and consumption of healthy foods.

Teachers successfully integrated FFN education into their curriculum, through unit and curriculum development, field trips to local farms and businesses, art work, lunchroom composting, and the creation of school gardens. Integration occurred with an interdisciplinary approach, in areas such as science, mathematics, family and consumer sciences, and technology and design education. This interdisciplinary approach provided students with a consistent message about FFN issues and their importance to health and the local and Vermont communities. FFN education integration was facilitated by professional development such as the summer science camp and “healthy snacks” workshops, material resources, volunteer assistance from professionals and parents, using multiple approaches to integrate FFN, and teaching students by setting a positive example through teacher food choices.

Students were also exposed to healthy and nutritious foods through cafeteria and classroom taste tests, fresh fruit served in the classroom, participation in the Healthy City farm, and changes that occurred in the breakfast and lunch cafeteria menus. Many students reported being aware of the changes that occurred in their school cafeteria menu and understanding that these changes were a direct result of their opinions expressed through taste tests. Favorite taste test foods that are now served on the school menu because of the BSFP grant include: the sandwich bar, pizza, calzones, soup, fresh fruit, whole wheat bread, pesto, and samosas. Because students were exposed to trying new foods in a risk free manner, more than half of fourth and seventh graders surveyed noted that they now are more willing to try new foods. Many students also said that their palate has expanded to include more fruit and healthy snacks and less sweets and fast food. This behavior change most likely came from their understanding of why healthier food is better for their body and liking the healthy foods that they have tried. Participating in taste test production as part of a classroom lesson also fostered self-confidence and skill development in food preparation, recipe development, healthy eating and nutrition, and mathematics.

BSD Food Service staff were also positively impacted by the taste test process as they embraced their new role of student educator on healthy foods and meal preparation. They also indicated that their relationship with teachers and students greatly improved since the start of BSFP, as they feel more respected and enjoyed working with the

students. School Food Committees also involved local businesses, chefs, and other community volunteers in the taste test process, who helped to develop recipes and prepare and serve the food with students. All BSFP partners commented on the importance of BSFP volunteers coming from within the school and larger community, as they enable the project to be sustainable after the funding is gone.

As a result of the taste tests, Food Service staff slowly integrated new foods into the school cafeteria menu.

- Raw vegetables were to the sandwich and salad bars in the cafeteria, including cherry tomatoes, green and red lettuce, and whole wheat bread and cheese.
- Prepared items served on the monthly menu include minestrone soup, cinnamon applesauce, yogurt parfaits with granola, chicken Caesar salad, and pesto pasta.
- Samosas and calzones are produced off site by a local business and served on occasion during lunch.

To make healthy change in school lunch, the BSFP facilitated the BSD to increase the amount of fresh produce purchased by local farms, either directly from the farm or through a distributor. This dollar amount increased by 1,145% over the course of the grant. Purchasing fresh and local produce not only ensures that children will eat more nutritious meals, but it also supports local farmers and the economic infrastructure supported by farms, such as laborers and suppliers. A strength of the BSFP partnership was to recognize that their original model to purchase produce from farms did not work and modify and adapt their process to meet the needs of the school district and farmers. To purchase produce, the BSD used the model of contracting and paying farmers up front for produce so the farmers could purchase and plant seeds specifically designated for the schools. Many other factors led to the successful integration of food from local farms into the BSD cafeterias. These factors include: relationship development between farmers and the BSD, use of the high school cafeteria to lightly process raw foods, availability and willingness of BSD to purchase fresh, local and/or organic produce that are of high quality, and student and volunteer involvement in the farm to school process.

The Healthy City farm was another BSFP project that served to increase student awareness and engagement in the local food system and awareness about, and consumption of healthy foods. Students who participated in Healthy City gained valuable experience in working on a farm and selling produce at a farm stand. A lot of their produce was also purchased by the BSD and served in their school cafeterias. These students experienced many gains, including knowledge and skills, improved confidence and work ethic, practical experience, and physical fitness. This experience also expanded their food preferences to include fresh fruits and vegetables.

All of these changes that took place, among BSD students, curriculum, cafeteria, and community, led to a shift in school culture toward a better understanding and appreciation of FFN issues. This is evident in the many sustainable facets of the project, such as Literacy Kits that were developed for curriculum development and an increase in parent and community volunteers. The Burlington School Board also demonstrated commitment to FFN issues in unanimously accepting the School Food Action Plan

presented by the Burlington Food Council. The Vermont Legislature also approved the Wellness and Nutrition Policy (Act 161) and the Farm to School Policy (Act 145), in part because of the public support and advocacy efforts rallied by BSFP partners and supporters.

Goal 2: Burlington implements a food action plan that increases access to and use of healthy foods, and foods from local producers.

The second goal of the BSFP grant was primarily spearheaded by the Burlington Food Council and their collaborative work with BSFP staff, Burlington Legacy Project staff, farmers, parents, BSD employees, students, researchers, and health and nutrition experts. BSFP partners and Food Council participants indicated that the Council demonstrates attributes of sustainability because membership has remained consistent over time and continued to grow with the momentum of various projects undertaken by the group. Sustainability of the Food Council is important as this group was recognized as a major facilitator of partnership development. The Food Council also conducted the Community Food Assessment, of the Burlington community, which served as the foundation for the Burlington School Food Action Plan. The Action Plan facilitated collaboration between BSD and farmers and the increase in the amount of local produce bought and served by the BSD. The plan also leveraged over \$100,000 in grant funds for sustainability of the Food Council and BSFP efforts.

Goal 3: Burlington food, health, and education-oriented organizations and people build capacity toward better meeting the food needs of the low-income Burlington School District student population.

The BSFP partners built community capacity through groups such as the Burlington Food Council and school food committees, parent and community volunteers, and collaboration with intended and unintended partnerships. The Food Council was a crucial element of community capacity building as the group provided a forum for members to network, communicate and collaborate, provided education and professional development opportunities, and generated partnerships with local businesses and individuals.

School Food Committees throughout the BSD also built community capacity toward better meeting the food needs of the low-income students. Food Committees, comprised of teachers, parents and Food Service professionals, coordinated interactions between students, Food Service staff, and BSFP partners. Their work led to in school cafeteria and classroom taste tests, the purchasing of local produce, and hiring of a school based taste test coordinator.

BSFP partners also built community capacity for FFN education in schools by recruiting parent and community member volunteers. Volunteers worked for the BSFP in a variety of ways, such as helping with taste tests and special events and dinners, leading field trips, working in classrooms and school gardens, attending Food Council and Committee meetings, and advocating for the project at Parent Teacher Association meetings. All BSFP staff and partners remarked that volunteers contribute to the sustainability of the BSFP because they help run activities, connect partners together, and are the ones who return to help out and keep activities running long after funds are gone. BSFP partners

noted that their partnership with City Market Cooperative has been the main source of community member volunteer recruitment, as volunteers are offered a discount on grocery purchases in exchange for volunteer hours.

The BSFP partnership was a successful collaborative, as partners with different capabilities and strengths worked together, learned from and respected each other, and took action to meet the grant goals. All project partners interviewed discussed the importance of relationship building, networking and partnering with a diverse group of people to have a successful collaborative. This work is facilitated by monthly partner, Food Council and Food Committee meetings that connect partners face to face on a regular basis. Strengths of the BSFP partnership fostered the success of the collaborative and laid a foundation for future project sustainability. A main strength of the BSFP partnership that led to project success was the flexibility of the project and partners to evolve based on arising needs, such as the process to work with farmers and nurturing unintended partnerships, such as Healthy City, the City Market Cooperative, and Burlington Parks and Recreation. Another strength was the characteristics of partners, such as being willing to take risks and inclusive of other ideas. The partnership and project also prospered because they involved and empowered all stakeholders, such as children, parents, Food Service staff, and volunteers.

The partners expressed in conversations that the project has become sustainable beyond the work of the main partners for several reasons. Many suggested that because a variety of constituent groups were represented throughout the project, there was “community buy-in” by the end of the grant. In addition, the Food Council was created through this project and emerged as a sustainable force within the community. The success of the BSFP also leveraged funds in the form of grant, foundation and state money. The Burlington Food Council received over \$100,000 in grant funds to continue the work of the BSFP. Within the schools, the Food Service staff gained strong support and leadership to carry out the work of this project from their director and within the staff. Students and their social networks, through friends, siblings, and parents, also grew to love participating in taste tests and learning about FFN topics. Thus, the legacy of the project will continue with the raised expectations and desires of students. Overall, the community capacity for FFN issues generated through the work of the BSFP resulted in many teachers, administrators, volunteers and students ready to continue the work even after the project funds have ended.

Key components of a successful farm to school model are the “Three C’s” model of community, classroom, and cafeteria that empowers and integrates all stakeholders is crucial to a successful farm to school model.

- *Community* should include farmers, parents, volunteers and organizations
- *Cafeteria* should include Food Service staff and directors, teachers, school administrators, students, volunteers and the business community
- *Classroom* should include students, teachers, volunteers, Food Service staff, and the business community.

V. Recommendations for BSFP Improvement

The following recommendations for improving future work of the BSFP are provided by all stakeholders who participated in this evaluation and general conclusions drawn from the data.

- **Suggested resources and changes for future FFN education** - Teachers provided several suggestions for resources or professional development that would be useful for future work in FFN integration.
 - Schools should have a mobile “kitchen appliance and utensil bar” that could travel to different classrooms for use in cooking. This could include items such as a blender, hot plate, whisk, knife, and cookbook for classrooms to use.
 - Teachers would also like to be provided with consumable items for in-classroom use, as they often pay for these items out of their own pocket.
 - Teachers would like more professional development on general and age appropriate nutrition (i.e. adults and growing children), cooking, how to work with teens who have self image, body image, and/or weight management (from underweight to obesity) issues and eating disorders.
 - The teachers also suggested that Food Service improve the overall atmosphere of the student’s cafeteria. They suggested the cafeteria focus on food presentation, use table cloths, have condiments on the table, and play music. These changes would make the cafeteria feel more comfortable than “factory feeding.” They also felt that students should have more time allotted for their lunch break.
 - Students and teachers recommended to continue serving fresh fruit in the classroom at Lawrence Barnes Elementary School.
 - Parents of school age children who responded to the 2006 Vermonter Poll suggested tools that would help them to get their children to eat healthier in school. Tools include reinforcement from school, healthy recipes, tips to introduce new foods, and nutrition information.

- **Continue working with farmers using the community supported agriculture model** – Under this model, the BSD contracted with and paid farmers up front for specific produce at a certain price.

- **Student requested changes in the cafeteria** – The majority of students in fourth and seventh grade who responded to the survey would like more fresh fruit offered for breakfast at school (42%). The top fruits named were apples, strawberries, bananas, and oranges, kiwis and mangos. This is followed by a variety of items, with the top items being bagel sandwiches (8%), different types of cereal (5%), and some type of egg item (4%). There was also large support for change in school pizza and the discontinuation of the Baglers breakfast bar.

- **Strategies to improve the taste test model** - Teachers, Food Service providers, and BSFP staff interviewed remarked on ways the taste test model could be improved based on their experiences.
 - *Advertisement* - Taste test dates and food items should be advertised to teachers, parents and community volunteers. In addition, the food being tested should be labeled so that people know what they are trying. Once a taste tested item or an organic or local product is incorporated into the menu, signs should be used to indicate this to students and faculty.
 - *Improved organization of taste tests and serving students* - Teachers interviewed stated that the process for trying taste test samples should be more orderly and organized, emphasizing social manners and taking a small portion of the food to taste. Schools should invest in a cart that students or teachers can push around the cafeteria to each table to try the food rather than a central location where students go to try the samples. Teachers would also like results of the taste tests posted for both the elementary and middle schools. Schools with composting capability should use items in the taste test process, such as cups, napkins and utensils, that can be composted to decrease the waste produced during the taste tests. Or, schools should have a way of encouraging students to reuse their flatware.
 - *Have teachers sign up to participate in taste tests in advance* - Abbie Nelson recommended that the taste tests could be improved by having a system where teachers and their classrooms sign up for specific tasks including prepping, serving and surveying specific food items over the course of a year.
 - *Increased student involvement* - Food Service staff suggested that students be more involved in the processing of the food that is served during the taste tests, such as training them in the use of processing equipment.
- **Recipe for a Successful Taste Test** - While there is no one way to hold a taste test, here are some suggestions based on success at Edmunds Elementary School and Edmunds and Hunt Middle Schools:
 - Involve students in process
 - Involve volunteers
 - Involve Food Service staff
 - Involve and give teachers notice of taste tests
 - Hire a farm to school coordinator
 - Adequate time, money and resources
 - Advertise taste tests and foods
 - Advertise taste test foods incorporated into the school menu, emphasizing local and organic
 - Organize the taste test process of food preparation, serving, and surveying of students

- **Recommendations to improve the Healthy City program** – Youth and parents who participated in the Healthy City project recommended that the program pay the youth more money, have hours available in the late day and evening to avoid the summer heat, play music while working, and increase the size of the washing station. Parents would also like a workshop, farm visit, or cooking class to learn about skills that their children are learning.
- **Suggestions to improve the Burlington Food Council** – Council members recommended that the Council evaluate their activities, develop marketing materials and a logo to have a consistent message, and increase outreach to new members to ensure that all stakeholders are represented at meetings
- **Suggestions to improving the volunteer experience** - Respondents to workshop and training questionnaires made several suggestions to improve future volunteer training and the overall experience.
 - Provide more information on food, such as food allergies and myths, more hands-on recipes, and foods that could help kids become more open-minded about what they eat.
 - Provide more time during workshops for the training and interaction and discussion.
 - Focus workshops on various age groups.
 - Provide specific information about field trip sites such as the Intervale and Shelburne Farms.
 - Partner volunteers with school-food partners and co-workers who can accompany, work with, and advise them, and talk over ideas until newer volunteers feel confident enough to participate on their own. With enough initial support, each newer volunteer will, in time, be the "trainer" for an even newer volunteer in the future.
- **Suggestions to improve the overall BSFP Partnership** - While the BSFP partnership was a successful collaborative that worked toward common goals, all partners offered suggestions for improving the partnership.
 - *Strengthen and diversify the partnership* - A main suggestion was to strengthen and diversify the partnership through additional funds, which could ensure that all stakeholders are represented at meetings. All partners should also be educated on appropriate community resources and agencies so that the right people are sitting at the right table, depending on the discussion.
 - *Increase outreach to broader community* – The communication worked well among the various stakeholders, but as the project evolved, there was greater opportunity to involve the community as a whole as well as other fields of interest, such as the health community.

- *Strengthen School Board connection* – The Burlington School District is a key partner in the project and a stronger school board connection is needed, especially with their support of the Food Action Plan.
- *Meeting format* – A suggestion was made that if partners continue to meet, they should set meetings for the year in advance so that they get priority on everyone's calendar.
- *Branding and marketing* – Similar to the suggestion for the Food Council, partners recommended improve the marketing of the project and FFN issues through logos, consistent messaging, and branding.
- *Increase funding* – More funding is needed to ensure partnerships, project activities, and supply teachers with the resources and tools they need to continue improving the school culture around healthy eating.
- *Evaluation* – Evaluate project partners and activities, including process and outcome, throughout the grant and create a system to ensure that the partners are getting and reading the feedback and sharing the feedback with each other.
- *Increase documentation* – More of the activities need to be documented rather than depending on the BSFP newsletter. Increased documentation of the curriculum in particular needs to be done on a regular basis, such as the development of Literacy Kits for teachers.
- *Establish a system for handling unanticipated activities* – Many unanticipated partnerships and outcomes evolved as the grant transpired, such as taste tests, purchasing produce from local farmers ahead of the growing season, working with the City Market to recruit volunteers, and working with the Healthy City project as an educational resource and source of produce. The partnership should remain flexible and establish a system to identify and adapt to unintended partnerships and outcomes.

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VII. Appendices

Appendix A-1. Teacher Focus Group Questions

The BSFP has been working in your school district for 2 years and has taken on these three goals:

1. Increased awareness, engagement, and consumption of local and healthy foods by Burlington School children
2. Implementation of a Food Action Plan to increase access and use of local and healthy foods
3. Build community capacity to meet the food needs of low-income Burlington school district students

The following are questions on what impacts you have seen as a result of this project in your school district. All of your responses will be confidential and your answers will in no way affect your participation in the BSFP. By **food, farms and nutrition education** we mean a way to integrate critical issues of children's diets and health and the impact of nutrition on academic performance into your existing curriculum.

Students

1. Since this project started working with the school district 3 years ago, what specific food, farm and nutrition **topics** have been covered in your classroom?
2. What changes have you seen in your **students skills, knowledge and attitude** towards food, farms and nutrition education?
3. What are **examples** of how you know students are more aware, more engaged, and consuming more healthy and local foods?

Curriculum

4. What changes in **your curriculum** have been made in food, farm and nutrition education?
5. In what ways have you integrated food, farm and nutrition education into **your curriculum**? i.e. farm tours, ag/food related curriculum, cooking, etc.
6. What are the **top three best practices** that you recommend other teachers use to integrate food, farm and nutrition education?
7. How have you **measured the success** of integrating food, farm and nutrition education in your curriculum and what were the results?

Taste Tests

8. At what level did your students participate in the school **taste tests**?
9. How did your **students** respond to participating in the taste tests?
10. What has been the **impact** of the taste test on your **students**? The school **food service**? School cafeteria **offerings**?
11. In what ways is the taste test model used in your school **successful** or **not successful** for your school's needs?
12. In what ways would you recommend **improving** the school taste tests?

Resources

13. What are the **key resources** that you have used to integrate food, farms and nutrition education into your classroom and curriculum?
14. What **other resources or professional development** would be useful for future work in this project?

Larger Impact

15. Since this project started working with the school district 2 years ago, what changes have you seen in the **overall school culture** towards food, farms and nutrition education? What changes have you seen in your school and district administrators?
16. How has your involvement in this project personally **impacted you**?
17. What impacts have this project had on the **larger community**?

Final Feedback

18. What did you **like most** about being a partner in the Burlington School Food Project?
19. What are ways in which the BSFP **may be improved**?
20. Do you have any **additional comments** regarding the BSFP?

Thank you for taking your time to attend this focus group today. We really appreciate all the work you have done as part of the BSFP.

Appendix A-2. District-Wide Teacher Focus Group Guide

The BSFP has been working in your school district for 3 years and has taken on these three goals:

1. Increased awareness, engagement, and consumption of local and healthy foods by Burlington School children
2. Implementation of a Food Action Plan to increase access and use of local and healthy foods
3. Build community capacity to meet the food needs of low-income Burlington school district students

The following are questions on what impacts you have seen as a result of this project in your school district.

By **food, farm and nutrition education** we mean a way to naturally integrate critical issues of children's diets and health and the impact of nutrition on academic performance into your existing curriculum.

1. Since this project started working with the school district 2 years ago, what changes have you seen in your **students skills, knowledge and attitude** towards food, farm and nutrition education?
2. Since this project started working with the school district 2 years ago, what changes in **your school's curriculum** have been made in food, farm and nutrition education? What resources have been used to make this happen?
3. Since this project started working with the school district 2 years ago, what changes have you seen in the **overall school culture** towards in food, farm and nutrition education?
4. What impacts have you seen on the **larger community** as a result of this project?

Thank you for your participation in the Burlington School Food Project and for taking the time to complete these questions.

Appendix B. Project Partner Interview Guide

I. PERSONAL ROLE

1. Briefly describe **your role** in the Burlington School Food Project (BSFP) and any **changes that may have occurred** from the beginning of the grant to the end.
2. What are some **obstacles** you personally have faced in your work with the project? How have you overcome these obstacles?
3. What are specific lessons you have learned that you would recommend others who might take on your role?

OR

What are the **top three best practices** that you recommend others use to carry out **your role** in the BSFP?

II. MEETING GRANT GOALS

1. What are examples from your experiences in this project that demonstrate increased awareness, engagement, and consumption of local and healthy foods by **Burlington School children**?
2. What factors have led to the **successful integration of food from local farms** into the Burlington School District cafeterias?
3. What are the key **components** of a farm to school integration model?

If you work directly with children

- a. What changes have you seen in students' **skills, knowledge and attitudes** towards food, farms and nutrition?

If you work directly with teachers

- b. In what ways have **teachers** integrated food, farm and nutrition education into their **curriculum**?

If assisted with taste tests

- c. How did **students** respond to participating in the taste tests?
- d. What has been the **impact** of the taste test on your **students**? The school **food service**? School cafeteria **offerings**?
- e. What are attributes of the taste test model that you would recommend to others who want to replicate try this out?
- f. In what ways would you recommend **improving** school taste tests?

If you work with Food Service Staff

- g. How have the Food Service staff been **integrated** into this project?
- h. What factors have led to Food Service **Staff buy-in** to make this project work in the school cafeterias?
- i. What have been the **lessons learned** from Food Service Staff to make this project work in the school cafeterias?

If you work with farmers

- j. How have farmers been **integrated** into this project?
 - k. What factors have led to **farmer buy-in** to produce and/or sell products for farm to school integration?
 - l. What have been the **lessons learned** to make farm to school integration successful from the perspectives of the farmers?
4. What are examples that demonstrate the success of the **implementation of a Food Action Plan** to increased access and use of local and healthy foods by the Burlington School District?

If you work with the Food Council

- a. How has the Food Council served to meet the **goals** of the BSFP?
5. What are examples that demonstrate that this project has built **community capacity** to meet the food needs of low-income Burlington school district students?
6. What changes have you seen in the **overall school culture** towards Food Farm & Nutrition?

If work you with parents, volunteers, and community members

- a. What **role** have **parents, volunteers and community members** played in the success of this project?
7. What are **unintended outcomes** that occurred because of this project? What factors caused them to occur?

III. COLLABORATIVE

- 1. There are many partners and organizations involved in the BSFP. What are lessons that you have learned to make this type of **multi-stakeholder collaborative work**?
- 2. What are effective ways to **communicate** with partners?
- 3. What are effective ways to keep partners **informed** about your activities?

4. What demonstrates that this partnership has **worked effectively** together? OR How has this partnership worked effectively together?
5. What are ways you would recommend **improving** the partnership?
6. What **unintended partnerships** have developed that have fostered the BSFP? How have they assisted in the project?

IV. LESSONS LEARNED AND AREAS TO IMPROVE

1. What lessons have you learned from the **overall project** as factors that have made this project **successful**?
2. What are the **key components** of a successful farm to school **model**?
3. What are ways in which this project may be **improved**?
4. How is the project working to make the **program sustainable** beyond key people?
5. Feel free to share any final thoughts on anything that I have not covered.

Thank you so much for your time and all your hard work and effort for the BSFP.

Appendix C. Education Focus Group Questions

Please reflect on the following questions looking back over the past two years.

1. What projects related to the BSFP have you worked on over the past two years? What role do these projects play in meeting the goals of the BSFP?
2. What different strategies for teaching and learning do you use in your education programs and for what reasons do you think these strategies work? What are ways to improve the strategy?
3. What are best practices that have worked well for you in your activities related to the BSFP?
4. Who is your target audience and for what reasons do your programs work for your target audience?
5. What has not worked?
6. What are lessons learned that you would recommend to other educators in the BSFP or in other communities?
7. How have your activities been integrated into the school system thus far? How will your activities be sustained in the future?

Thank you for your participation in the Burlington School Food Project and for taking the time to complete these questions.

Appendix D. Student Survey

Dear Student,

Thank you for taking the time to fill out this survey. Your responses will be used to make the school meals even better!

1. What school do you go to? _____

Questions About Breakfast

2. Do you eat breakfast at home? Yes No (If no, go to question 4)

3. How often do you eat breakfast at home?
 Always Almost always Sometimes Never

4. Do you eat breakfast at school? Yes No (If no, go to question 11)

5. How often do you eat breakfast at school?
 Always Almost always Sometimes Never

6. Do you eat breakfast at school *more this year* than last year?
 Yes No

7. If you eat breakfast at school *more* this year, for what reasons? Please check all the answers that apply to you.

- Breakfast is served in the classroom
- I like what is served for breakfast
- I don't eat breakfast at home
- Hungry more often
- Other (please explain) _____
- I don't eat breakfast at school more this year*

8. If you eat breakfast at school *less* this year, for what reasons? Please check all the answers that apply to you.

- I eat at home
- I am not hungry
- I don't like what is served for breakfast while at school
- I don't want to eat breakfast in the morning
- Other (please explain) _____
- I don't eat breakfast at school less this year*

9. What is your favorite *breakfast food* served in the *school cafeteria*?

10. Please name up to 3 healthy foods you would like offered for breakfast at school.

- 1.
- 2.
- 3.

Questions About Lunch

11. *If you bring lunch from home*, please name the top three foods that you usually bring.

- 1.
- 2.
- 3.

 Do not bring lunch from home

12. How often do you eat lunch offered in the school cafeteria?

 Always Almost always Sometimes Never

13. In this past school year, what changes do you *like* in the food offered for school lunch?

14. In this past school year, what changes do you *not like* in the food offered for school lunch?

15. If you *don't always* eat lunch at school, please check your top 3 reasons why.

- I bring lunch from home
- I am not hungry
- I never eat lunch
- My lunch time is too early in the day
- I don't like what is served in the school cafeteria
- I don't like the food that I bring from home
- There is not food to bring for lunch from home
- School lunch costs a lot of money
- I forgot my lunch money
- I don't have enough time to eat during lunch
- People tease me about the food that I eat at lunch
- Other (please explain)_____

QUESTIONS 16-22 ARE FOR 7TH GRADERS ONLY.

16. In the past year, have you eaten food from a school lunch taste test?

Yes No I don't know (if no, go to question 23)

17. Were any of the foods that you tried new to you?

Yes No I don't know

18. If yes, now that you tried new food at a school lunch taste test, are you *more willing* to try new foods in other places such as at home or in a restaurant? Yes

No I don't know

19. For what reasons do you like to try new foods?

20. What was *your favorite food* that was taste tested in the school cafeteria?

21. What was *your least favorite food* that was taste tested in the school cafeteria?

22. What was your favorite food from a taste test food that is *now served in the school cafeteria for breakfast or lunch*?

Questions About Cooking Food

23. Have you cooked food or helped someone else cook before?

Yes No (if no, go to question #26)

24. If yes, where have you cooked food? Please check all the answers that apply to you.

School classroom

School kitchen

At home

A friend's house

Relative's house

During an after school program

During a summer program

Other (please explain):

25. What did you cook?

Questions About Gardening and Farms

26. Have you ever grown food in a garden?
 Yes No (if no, skip to question #30)

27. Where did you garden? Please check all the answers that apply to you.

- At home
- At school
- A friend's house
- A relative's house
- During an after school program
- During a summer program
- Other: (please explain):

28. Did you eat any of the food that you grew in the garden?
 Yes No I don't remember

29. Name up to 3 foods you grew that you *liked* to eat:

- 1.
- 2.
- 3.

30. Have you ever been to a farm?
 Yes No

31. If yes, which farm or farms you have visited:

32. For what reasons do you think farms are important?

33. Does some of the food served in your school cafeteria come from Vermont farms?
 Yes No I don't know

34. If yes, please name some of these foods?

Questions About Food and Healthy Eating

35. Where do you learn about food and healthy eating? Please check all the answers that apply to you.

- As part of a classroom lesson
- In the school cafeteria or kitchen
- A school cafeteria worker
- As part of an after school program
- As part of a summer program

- A doctor or nurse
- At a friend's house
- My parents
- My brother or sister
- Another family member (aunt, uncle, grandparents, etc)
- My coach
- Friends
- Online/the Internet
- Magazines
- Books
- Television
- Other (please explain):

36. How often do you eat the following foods, compared to last year? *Please circle the answer.*

Eat fruit	More often	Less often	Same	Don't know
Eat vegetables	More often	Less often	Same	Don't know
Eat food grown locally	More often	Less often	Same	Don't know
Eat fresh fruits and vegetables (not from a can or frozen)	More often	Less often	Same	Don't know
Eat organic food	More often	Less often	Same	Don't know
Eat fast food like McDonald's	More often	Less often	Same	Don't know
Eat new kinds of foods	More often	Less often	Same	Don't know
Eat healthy snacks	More often	Less often	Same	Don't know
Eat sweets or desserts	More often	Less often	Same	Don't know

37. How often do you do the following, compared to last year? *Please circle the answer.*

Help my family make healthy food choices	More often	Less often	Same	Don't know
Help my family with grocery shopping	More often	Less often	Same	Don't know

Questions About Yourself

38. What grade are you in: ___4th grade ___7th grade

39. Are you a: ___Boy ___ Girl

40. How do you describe yourself:

- ___ White
- ___ Black/African American
- ___ Asian/Pacific Islander
- ___ Hispanic/Latino/Latina
- ___ Native American
- ___ Biracial/multiracial
- ___ Other (please explain):

That was our last question. Thank you for completing our survey! Please give your completed survey to your teacher.

Appendix E. Healthy City Focus Group Guide

Thank you for agreeing to participate in this discussion on the Healthy City Project. We want to talk with you to learn about your experience and get your feedback about the program. Your answers will only be shared collectively and your names will not be attached to any of your responses. There are no right or wrong answers and anything you say will not affect your participation with Healthy City.

1. For what reasons did you apply for the job with Healthy City?
2. What are your goals for working with the Healthy City program?
3. What would you like to learn by working with the Healthy City program?
4. How will this experience help you in a future job or in school?
5. How will this experience help you in life, with your friends and family?
6. Have you ever worked on a farm before? What was this experience like?
7. What are some of the challenges that farmers face in growing produce?
8. Have you ever grown vegetables before? What did you grow?
9. Do you eat vegetables? What are your favorites veggies? What are your least favorite veggies?
10. Do you ever participate in the taste tests at Edmunds? What do you think about the taste tests? Do you ever eat school food? How do you think school food could be made better?
11. Do you ever cook or help your parents cook? What kinds of things have you cooked before? How do you think your parents cooking could be made better?
12. Do you exercise or play sports? How many days of the week do you get to exercise or play sports?
13. What will you do with the money that you earn this summer at Healthy City? Do you have a bank account? Aside from Healthy City, how else do you earn money?
14. How will the work you do with Healthy City benefit your community?
15. How will you personally contribute to Healthy City?
16. What communities do you consider yourself to be a part of?
17. Do you have any other comments or anything that I did not cover?

Thank you for your participation, we really appreciate your time!

Appendix F. Healthy City Parent Survey

Hello, may I please speak with _____. This is _____ and I am calling on behalf of the Healthy City program with Jenn and Aziza. We are calling the parents of all teenagers who participated in the program to follow up with them on the impact of Healthy City on their child and family. Aziza mentioned that we could contact you. Is now a good time to answer some questions? It should take about 7-10 minutes and all responses will be kept confidential.

If no: Can I schedule a time to call you back? [RECORD TIME]

If yes: Thank you for agreeing to participate and again, all your answers will be kept confidential and will not impact your child’s ability to participate in this program in the future in any way.

1. First off, we would like to understand the impact your child’s participation in the Healthy City Program had on your child and your family. I’m going to read several statements and I’d like for you to tell me the level of change using the responses “not at all”, “a little”, “to some degree”, “very much”, and “a great deal”. I’ll repeat those responses again.

Did the participation of your son/daughter in the Healthy City Program change:
[REPEAT SCALE EACH TIME AS NEEDED]

	Not at all	A little	To some degree	Very much	A great deal
Your child’s eating habits? <i>If some change, please explain</i>					
Your child’s involvement in school? <i>If some change, please explain</i>					
Your family’s eating habits? <i>If some change, please explain</i>					
Your family’s involvement in your child’s school activities? <i>If some change, please explain</i>					

2. Did your child bring home fresh vegetables to share with you and your family?
Yes No

IF YES:

- a. What vegetables did you like the most?
- b. What vegetables did you like the least?
- c. Were there any you would have liked information on how to cook with?

3. Using the same responses from “not at all” to “a great deal”, how did your child’s participation in the Healthy City program impact the following areas?

	Not at all	A little	To some degree	Very much	A great deal
Your child eats more vegetables at home					
Your child eats more nutritious foods such as fruits, vegetables and whole grains at home					
Your child talks about what they did during the day when they got home from Healthy City					
Your child has become more responsible overall					
Your child has increased his or her physical activity, exercise, or playing					
Your child has had an improvement in his or her overall health					
Your child has improved communication with you and your family					
Your child has increased his or her savings with the money they earned from participating					
Your child has an improved work ethic, such as showing up on time and valuing working hard					

4. Did their participation cause any other changes in your child or family?
5. What skills or knowledge did your son or daughter learn from their participation in the Healthy City Program?
6. What was your child’s response to being to work on time?
7. What did your child do with their earnings from participating?
8. Did your child share with you anything they liked or disliked about the Healthy City program? Yes No
 a. **If yes**, please explain comments:
9. What did you like most about the Healthy City program?
10. Overall, how satisfied are you with the Healthy City Program?
 Very satisfied Somewhat satisfied Neither Somewhat dissatisfied Very dissatisfied
11. What would you change about the Healthy City Program to improve it in the future?

*That was my final question. Thank you so much for your time, I really appreciate it.
 Have a good day/evening.*

Appendix G. Food Council Member Questions

Please answer the questions below to give us feedback on the Burlington Food Council. Your responses are important to capture the successes of the Food Council as well as ways we may improve in the future. *Thank you for your time.*

1. For what reasons did you/ your organization become involved in the Food Council?

Goals, Expectations and Impacts

2. What are your goals/expectations in working with the Food Council? How have these goals/expectations been met? Not met?
3. How do the Food Council meetings impact your work and your organization?
4. In what ways has the Food Council been successful this past year?
5. How has the community benefited from the work of the Food Council?
6. How has the Food Council strengthened community partnerships?

Strengths and Improvements

7. What are the strengths of the Food Council?
8. What suggestions do you have to improve the FC? Improve meetings? What agendas would you like to the FC address? What other activities would you recommend the FC focus on?

Sustainability

9. What are ways that the Food Council can sustain itself after the BSFP funding is gone?
10. What is your perspective on public support for the Food Council work?
11. Should the BSFP expand its work beyond the school district and school-aged children to other institutions or community members?
12. Who else should be invited to attend or present at FC meetings?

Thank you for your participation in the Burlington School Food Project and for taking the time to complete these questions.

Appendix H. Legacy Town Meeting Survey

Please complete this survey and return to the collection box. Thank you for your time!

1. Why did you attend this meeting? (Check all that apply)

- Policymaker
- Burlington Food Project Volunteer
- Local business owner
- Farmer/gardener
- Parent (child in school)
- Curious
- Teacher
- To gain more knowledge
- Community member
- other, please specify:*
- Legacy Project

2. Did you attend the Legacy Town Meeting in December '04? Yes No Don't know

3. Are you aware that there has been an increase in the distribution of more fresh and local food in Burlington Schools? Yes No

4. Are you aware that food taste tests are occurring in some schools in the Burlington School District? Yes No

5. Are you interested in your school district purchasing more food from local farms? Yes No

6. Using the following scale, please circle your level of agreement with regards to the food related presentations today. 1= Strongly Disagree (SD), 2= Disagree (D), 3= Neutral (N), 4= Agree (A), 5= Strongly Agree (SA)

	SD	D	N	A	SA
I learned something new about "food, farms and nutrition" at this event	1	2	3	4	5
I have learned something new about school food efforts happening in Burlington	1	2	3	4	5
This event has been a valuable use of my time	1	2	3	4	5

7. What was the most helpful or informative part of the presentation?

8. What are the most important actions or recommendations for improving nutrition of students and strengthening the local food system?

9. What are the main barriers to your child getting more nutritious meals *while at school*?

10. What are the main barriers to your child getting more nutritious meals *while at home*?

Thank you for attending the Legacy Project town meeting and taking the time to complete these questions.

Appendix I. Questions for Food Service Providers

We would like to get your feedback on the Burlington School Food Project and lessons you have learned in participating as a Food Service Provider. Your responses will help in the evaluation of this project so that other schools may learn from your good work!

Taste Tests

1. What are the main lessons that you have learned in carrying out taste tests of new foods in your cafeteria?
 - a. How has the taste test been successful?
 - b. How would you recommend improving the taste tests?

Menu Changes

2. How has the school cafeteria menu changed because of this project? What have been some reactions to these changes?
3. How has your cafeteria been successful in bringing fresh and local foods into your menu choices?
4. What response have you gotten from students regarding the taste tests and new menu choices?

Impact on your work as a Food Service Provider

5. How has this project changed your work as a Food Service provider?
6. What are barriers or challenges that you have faced as Food Service staff to integrate fresh and local foods to your school cafeteria?
7. What are overall lessons you have learned that you would like to share with others who may try to replicate this project in another school?
8. Please feel free to add anything that was not covered above.

Thank you very much for participating in this focus group.

Appendix J-1. Workshop Evaluation

Please answer the following questions about this Burlington School Food Project workshop. Your responses are important so we may understand the benefits of this training and ways to improve future trainings. *Thank you!!*

1. Why did you attend this workshop?
2. Are you a: 1) parent of a child in the Burlington School System, 2) community volunteer, 3) other, please specify:
3. What were your goals for taking this workshop?
4. Did the workshop meet your expectations? Yes No
5. What was *most helpful or most useful about* of this workshop?
6. What can we improve or add for next time?
7. What are your plans now that you have participated in this workshop?

8. What is your level of agreement or disagreement with the following statements:	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree
I have the knowledge and skills necessary to lead a student field trip to the Intervale	1	2	3	4	5
I am confident to lead a student field trip to the Intervale	1	2	3	4	5

Please return this completed form to Amy Watmough. Thank you for your participation!

Appendix J-2. Volunteer Interview Guide

Dear Volunteer,

Thank you for volunteering your time and energy with the Burlington School Food Project. As part of this project's evaluation, we would like to hear from you about your experiences. Please answer the questions below and email your responses to Michele, the project evaluator, at mschmidt@uvm.edu. You may also mail your responses to Michele C. Schmidt, Center for Rural Studies, 207 Morrill Hall, University of Vermont, Burlington, VT 05405. Please feel free to email Michele if you have any questions.

1. Please describe what trainings and activities you volunteered for with the Burlington School Food Project through City Market, taste tests, or field trips.
2. Why did you decide to volunteer for the Burlington School Food Project?
3. What specific skills or knowledge did you gain from your volunteer experience with the Burlington School Food Project?
4. How did your volunteerism for the Burlington School Food Project impact your life? What did you gain out of this experience?
5. How does the volunteer activity that you did with the Burlington School Food Project impact your child or youth in Burlington Schools?
6. How does the volunteer activity that you did with the Burlington School Food Project impact the larger community?
7. What feedback do you have on ways to improve this type of volunteer experience for others in the future?
8. Please feel free to make any other comments.

Thank you for your participation in the Burlington School Food Project and for taking the time to complete these questions.

Appendix K. Questions for Food Committee Members

1. What are the goals of the Food Committee?
2. What are the major accomplishments/activities that the Food Committee has made over the course of the grant?
3. What aspects of the taste test model make it successful?
4. In what ways has “farm to school” activities been integrated into the school?
5. How is this project and the work of the Food Committee received by others (i.e. administrative support, food service, students, parents, etc.)? Please provide examples of feedback you have received.
6. What are the strengths of the Food Committee?
7. What barriers or challenges does the Food Committee face?
8. How is the Food Committee working to make farm to school activities sustainable within the school?
9. What are lessons you have learned that you would like to share with others who may try to replicate this project in another school?
10. Please provide any other comments that were not covered in the above questions.

Thank you for your participation in the Burlington School Food Project and for taking the time to complete these questions.

Appendix L. Vermonter Poll 2006 Questions

The next set of questions is about children's nutrition and school lunch.

Q1 Do you have a child or any children in kindergarten through 12th grade?

1 Yes

2 No

3 Don't know [DO NOT READ]

4 Refused [DO NOT READ]

If (q1>1) skip all questions

Q2 Has your child participated in any food, farm and/or nutrition education activities at school?

1 Yes

2 No

3 Don't know [DO NOT READ]

4 Refused [DO NOT READ]

If (Q2>1) skip Q4

Q3 How have these education activities changed your child's eating habits?
[READ RESPONSES AND CHECK ALL THAT APPLY.]

No change

Willing to try new foods

Eats more fruits and vegetables

Has shared this information with your family

Has changed your families eating habits

Anything else? (other, please specify)

Don't know [DO NOT READ]

Refused [DO NOT READ]

Q4 Of the following choices, please select the top 3 tools that would be most helpful to get your child to eat more healthy foods.

READ LIST. ASK: What is your first choice that would be most helpful to get your child to eat more healthy foods?

SELECT FIRST CHOICE

ASK: What is your second choice? [READ LIST IF NEEDED]

SELECT SECOND CHOICE

ASK: What is your third choice? [READ LIST IF NEEDED]

[RANDOMIZE OPTIONS every time they are asked]

Nutrition information

Healthy recipes

Parent workshops on buying and cooking food

Tips for introducing new foods to kids

Reinforcement from school

Q5 How many days a week does your child eat lunch served by the school cafeteria?

0

1

2

3

4

5

98 Don't know [DO NOT READ]

99 Refused [DO NOT READ]

Q6 If your school cafeteria served more fresh and local foods would you encourage your child to eat:

1 More school lunches

2 Less school lunches

3 The same amount of school lunches

4 Don't know [DO NOT READ]

5 Refused [DO NOT READ]

Q7 Approximately how much do you pay per day for your child to eat lunch served in your school cafeteria?

[ENTER DOLLAR AMOUNT AND HIT NEXT TO CONTINUE]

\$

9.98 Don't know [DO NOT READ]

9.99 Refused [DO NOT READ]

Q8 Based on this amount, how much more money would you be willing to pay per lunch if the school cafeteria served fresh, local food?

[ENTER DOLLAR AMOUNT AND HIT NEXT TO CONTINUE]

\$

Range allowed: \$.00-\$5.00

\$5.01 Don't know [DO NOT READ]

\$5.02 Refused [DO NOT READ]

For additional copies of this report or for more information about
this evaluation, please contact:

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