



**Burlington School Food Project
Evaluation Report Executive Summary
December 2006**

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 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.

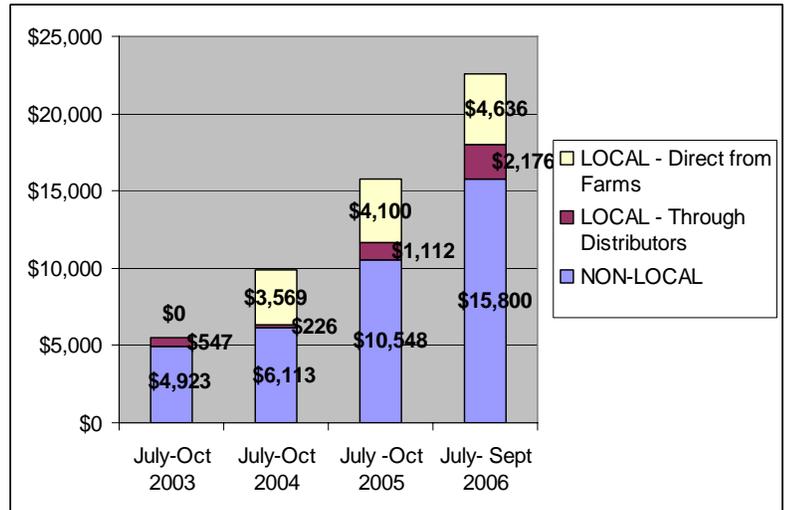
Integration of Fresh and Local Produce into Schools

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

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.

school and larger community, as they enable the project to be sustainable after the funding is gone.

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 examines 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 is described by BSFP partners as a “hub for diverse groups and individuals.” BSFP partners and Food Council participants indicated that the Council demonstrates attributes of sustainability in that membership has remained consistent over time and has 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 has 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.

