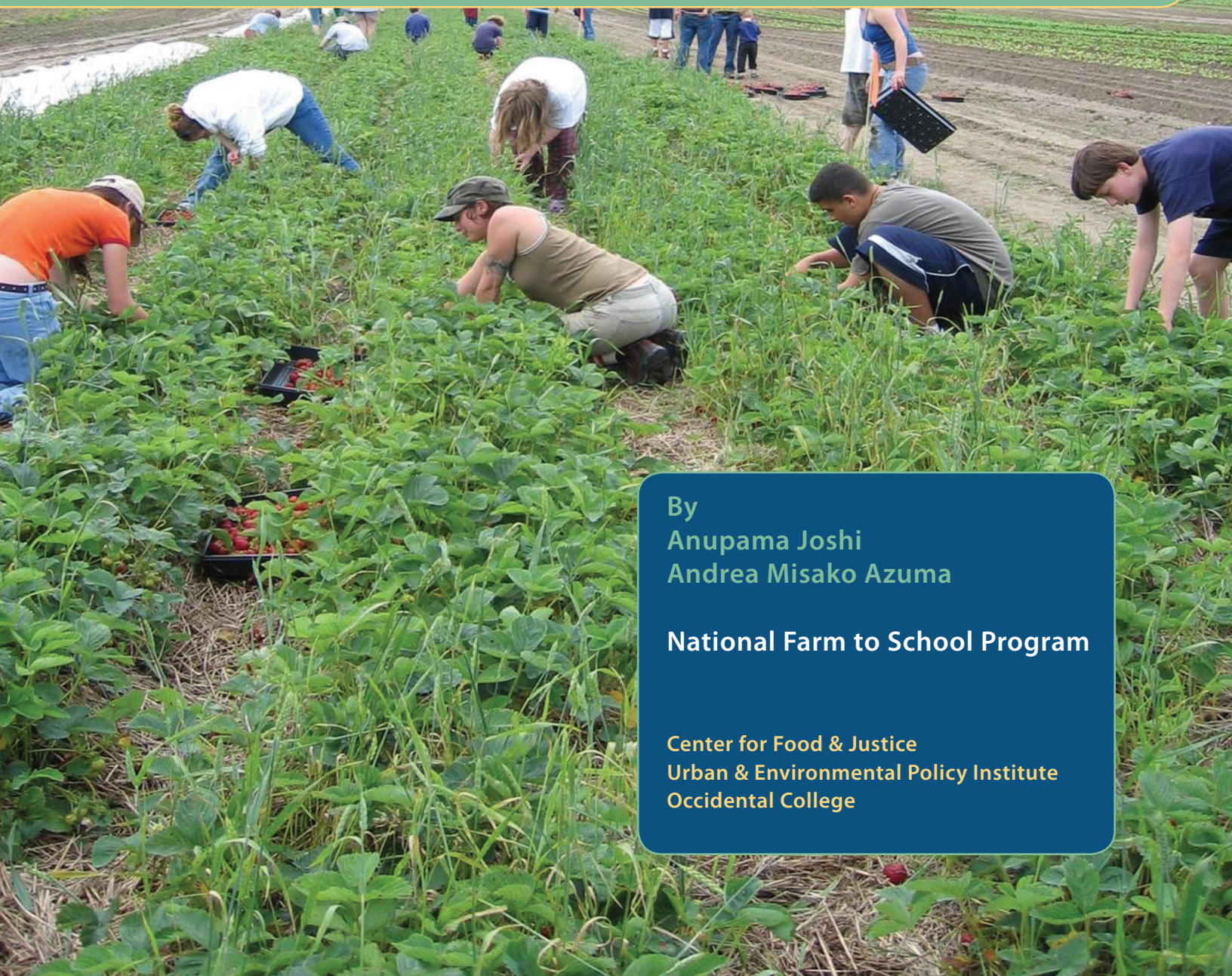
Bearing Fruit:

Farm to School Program Evaluation Resources and Recommendations



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Front cover: Youth from the Healthy City Youth Farm pick berries to be frozen and used in cafeteria meals for the Burlington School District , VT. Photo by Aziza Malik.

Below: 4th grade students at Central Elementary in Haywood County, NC, cook with chefs from Sunburst Trout. Photo by Molly Nicholie.

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Table of Contents

Executive Summary

Farm to school programs, which link local farmers with schools, have increased in number, from fewer than ten in 1997 to more than an estimated 2,000 programs in 2008. With this phenomenal increase, many in the farm to school movement are faced with the question: what are the specific impacts of the program? Funding agencies, advocates and policy makers grapple with this question as they consider farm to school programs as a model to improve school nutrition and farm profitability. While it may seem intuitive that linking students with local foods would lead to positive outcomes in student dietary intake and farm income, well-designed evaluations and research projects are needed to examine impacts on student health, dietary behaviors, school district policies, local farm profitability, and other aspects of the community at large.

It can be difficult to plan farm to school evaluations given the variety of program components and goals. Farm to school programs inherently involve numerous stakeholders and partners, and these different parties ask a diverse range of questions, which may be too many to evaluate depending upon available resources and data. Food service directors assessing the impacts of farm to school programs question financial viability issues as well as impacts on children's knowledge, attitudes, and behaviors regarding healthy eating. For farmers, transportation and distribution issues are questions of interest. Health and nutrition professionals are concerned about fruit and vegetable consumption as well as weight and /or BMI (body mass index) outcomes. With the farm to school model being interpreted and implemented in a plethora of ways, it is difficult to devise common evaluation indicators that are relevant to programs across the spectrum. For this reason, generalizations based on results from a specific program evaluation may not be directly applicable to other programs.

Definition of Farm to School

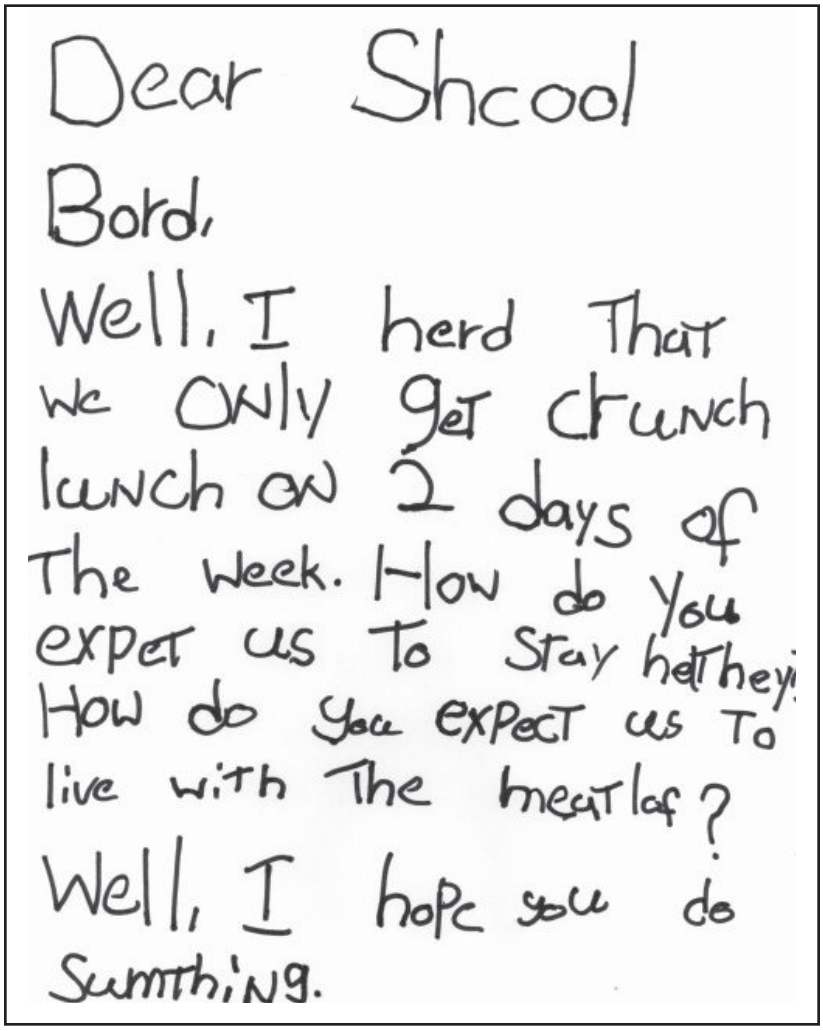
For the purpose of this report, "farm to school" is broadly defined as a school-based program that connects schools (K-12) and local farms with the objectives of serving healthy meals in school cafeterias, improving student nutrition, providing agriculture, health and nutrition education opportunities, and supporting local and regional farmers. The definition of "local" or "regional" farms or food is flexible and varies. Some interpret "local" according to political/geographic boundaries ranging from a city to a state or a region. Others suggest the ecoregion or bioregion size.[i] This lack of a common definition presents challenges for comparing evaluation results.

i "Local food," Wikipedia, http://en.wikipedia.org/wiki/Local_food#_ref-0, accessed April 2008.

Given the challenges of evaluating farm to school programs, this report is intended as a resource guide for planning farm to school evaluations. Drawing upon tools and methods that have been used or have the potential to be used for evaluating program impacts, the report includes a compilation of existing farm to school evaluations, making comparisons where appropriate, and placing them in context when possible. The aim of this comprehensive summary of key evaluation results from farm to school projects is to facilitate the refinement of farm to school programs and their assessments to maximize positive impacts on student diets, farm viability, school meal and snack offerings, and educational programs.

Farm to school programs purchase locally and feature farm fresh foods such as fruits and vegetables, eggs, grains, honey, meat, and beans on their menus. Other programs may use these products in the classroom for education,

incorporate nutrition-based curriculum, and provide students experiential learning opportunities through farm visits, gardening, and recycling programs. This relationship with area schools gives farmers access to a new market, as well as provides an opportunity to connect with the community and educate children about local food and sustainable agriculture. Most cafeteria components of farm to school programs focus on the lunch program with some programs including breakfast and snack programs. Studies reviewed in this report undertook interventions that integrated local purchasing of food products along with one or more of the farm to school components listed above. The resources and reviews of farm to school evaluations presented in this report are based on the information available to us in 2007. Additional data and resources on the topic may have become available since then.


Dear Shcool Bord,
Well, I herd That we only get crunch lunch on 2 days of The week. How do you expet us To Stay hetheyi How do you expect us To live with The meatlaf?
Well, I hope you do Sumthing.

Letter from a student at Davis Joint Unified School District (DJUSD) to the School Board supporting the "Crunch Lunch"
- the DJUSD Farm to School Salad Bar Program

This report is organized into five sections as follows:

- The **introduction** provides brief guidance on planning for program evaluations and establishes the terminology used throughout the report. The section describes a range of farm to school outcomes from baseline/existing program information to impacts on *students, teachers, policies, food service, farmers, parents*, and *communities*.
- The **resources and tools** section delves into more detail about the range of outcomes of interest for farm to school program stakeholders, citing examples of tools used by farm to school programs to evaluate program impacts.
- The **literature review** catalogues all the farm to school evaluation studies referenced in this report. The section includes a summary of findings on the outcomes mentioned in previous chapters. Studies reviewed for this report show that farm to school programs have contributed positively to students' knowledge,[10,26-28,42-44,51] attitudes,[10,14,42,45-46,86] and behaviors toward local, healthy food;[14,18-20,28,43-49,86] promoted healthier dietary choices and increased consumption of fruits and vegetables; as well as demonstrated modest increases in farm incomes.[14,18-19,46-47,52,81-83,88] Evaluations have also shown that programs influence teacher knowledge and attitudes[14,28,43,44-46,52-53] but face challenges in becoming financially self-sustaining [18-19,80] and in demonstrating broader impacts on the local food economy. See Table 1 on page 8 for a summary of key findings on the impacts of farm to school programs, as evident from data referenced for this report. Where data was relevant and available, comparative research studies have been cited from non-farm to school research to place our findings in the broader context of school food research.
- The **conclusions and recommendations** section elaborates on the emerging trends from evaluations of farm to school programs conducted while providing suggestions for areas needing more work and research to fully understand the potential impacts of farm to school programs.
- An appendix of **program profiles and sample tools** is included as a resource for those planning farm to school programs and evaluations.

Table 1. A Summary of Farm to School Program Impacts[i]

Impacts on	Indicator	Demonstrated Impacts
Students	Student knowledge [10,26-28,42-44,51]	Gains in knowledge and awareness about gardening, agriculture, healthy eating, local foods and seasonality
	Student attitudes[10,14,42,45-46,86]	Demonstrated willingness to try out new foods and healthier options
	Student behaviors[14,18-20,28,43-49,86]	Students choose healthier options in cafeteria; consume more fruits and vegetables through farm to school meals (+0.99 to +1.3 servings/day) and at home; consume less of unhealthy foods and sodas; reduce television watching time; positive lifestyle modifications such as a daily exercise routine
	Other student benefits[14,26-27,46,51]	Positive gains in phonological awareness of the alphabet, increased social skills, self-esteem
Teachers	Teacher attitudes/ behaviors[14,28,43,44-46,52-53]	Positive attitudes about integrating farm to school related information in curriculum, positive changes in teachers' diets and lifestyles.
Policy	Policy changes	Farm to School supportive policies, other health / nutrition policies enacted at school district, county or state levels, though policy development has not been assessed as an impact.
Food Service Costs, Revenue, Interest	Food service operations[18-20,45,47-49,80-82,87]	Farm to school cafeteria offerings serve more fruits and vegetables than regular meals; farm to school facilitates development of new seasonal recipes for use in school food service operations, and facilitates changes in cafeteria waste management policies.
	Food service staff interest[14,46]	Increase in knowledge and interest in local food preparation, gains in knowledge regarding seasonal recipes, interest in interacting with teachers to strengthen classroom-cafeteria connections
	School meal participation[18-20,45,47-49,80,83]	Increase in participation rates observed in the range of 3% to 16% due to farm to school programming
	Financial costs[18-20,45,49,60,80]	No clear indication on whether food costs for farm to school meals are higher; labor costs for preparing farm to school meals are higher
	Food service revenue[47,49,84]	Farm to school meals bring in additional revenues through increases in student and adult meal participation
	Local food procurement[14,18-20,44,46-47,49,52,60,80-85]	Purchases from local sources increase as the farm to school program matures towards institutionalization, may reach up to 50% of all produce purchases in season
Farmers	Farmer income[14,18-19,46-47,52,81-83,88]	Average income from farm to school represents up to 5% of all sales for individual farmers
	Farmer benefits[81,82]	Diversification of market, positive relationships with school district, parents and community; farmers contracted to plant crops for schools; opportunities to explore processing and preservation methods for institutional markets; establishment of grower collaboratives or cooperatives to supply institutional markets
Parents	Parent benefits[14,26-27,,43-44,46,51]	Gains in ability and interest in incorporating healthier foods in family diets and guiding children to make healthier choices, positive changes in shopping patterns reflecting healthy and local foods
Community	Community benefits[14,46]	Awareness about local foods, interest in purchasing local foods, interest and awareness about foods served in school cafeterias.

i Information based on a literature review of farm to school evaluation studies as presented in the report "Bearing Fruit: Farm to School Program Evaluation Resources and Recommendations" by Joshi A and Azuma A M, National Farm to School Network, Center for Food & Justice, Occidental College, 2008. Please refer to the full report for data specifics and references.

I. Introduction to Farm to School Evaluation

In this section:

Previous page: Students from Vance Elementary in Asheville, NC participate in the Appalachian Sustainable Agriculture Project's Chef Fest. Photo by Molly Nicholie.

Above: Farmer Dewain Mackey of Madison Farms delivers local tomatoes and strawberries to Hot Springs Elementary in North Carolina. Photo by Libby Hinsley.

I. Introduction to Farm to School Evaluation

Planning for Program Evaluation

A common mistake made by farm to school planners is waiting until the end of a reporting period for a grant, or after the project is up and running, to think about evaluation. Ideally, evaluation planning should take place at the same time as program planning. In order to measure the impacts of a project or to answer specific research questions relating to farm to school, specific data may need to be gathered from the start of the program.

Involving a multitude of stakeholders, program areas and variables, the complexity of farm to school programs presents a challenge in designing a comprehensive evaluation. In addition, most farm to school programs are not adequately funded, or are dependent on external support for start up and operational expenses such as costs for equipment and labor. Farm to school organizers may therefore be wary of focusing on evaluation activities with the fear that evaluation will divert limited resources from program activities, or will over-burden program staff. Also, evaluation terminology and models may appear foreign and academic to grassroots organizers of farm to school programs. For these reasons, it is no surprise that farm to school program evaluations have been limited, and those that have been conducted vary widely in focus.

For relatively new program models such as farm to school, it is essential to utilize sound evaluation methods that add to the body of knowledge on working models. Funding agencies are increasingly focused on evaluation results that provide clear evidence of project impacts. Well-designed evaluations can help program planners gauge how well they are meeting their goals and provide a feedback loop so that programs can adapt and achieve maximum benefits. Evaluations can also guide policy makers in the development of specific legislation that can further farm to school goals.

Farm to school practitioners around the country need to build their capacity to conduct more comprehensive evaluations and invest in the necessary resources. The funds required to evaluate a farm to school program depend on a variety of factors including: what aspects of the program are to be evaluated, the size of the program, kinds of outcomes evaluated, who is conducting the evaluation, the availability of existing data sources, and in-house evaluation expertise. An allocation of 5-10% of the overall program budget for evaluation is recommended, though this may not be feasible for all programs.

The first step in planning for program evaluation is working out the evaluation goals, objectives, strategies, and target populations. The next step is to develop an evaluation framework by identifying feasible evaluation methods, indicators, and targets for the program. For additional resources and information on planning and structuring an evaluation, please see the Community Food Projects Evaluation Handbook[1] developed by the Community Food Security Coalition.

It is important to evaluate both the processes and impacts of farm to school programs. Process evaluation indicators may be monitored to meet the project deliverables and describe implementation of a project. These typically include, but are not limited to, the number of operational programs, schools participating, children participating, farmers supplying food, school gardens developed, trainings and educational sessions conducted, recipes developed, curriculum or lessons implemented, etc. Impact evaluation indicators are aimed at examining outcomes related to program implementation, and usually require more expertise and financial resources to gather and analyze. Farm to school impact evaluation can be conducted through a variety of qualitative methods (interviews, focus groups, surveys with open ended questions), and quantitative methods (changes in weight, body mass index, academic scores, and in local product purchased).

Another consideration for evaluation planning is ethics, which includes the use of human subjects in evaluation. Federal regulations govern the protection of research participants, especially children. An entity known as the Institutional Review Board (IRB), based at universities and other research organizations, is charged with reviewing and approving any research that involves the participation of people. It is important to be aware of and follow these regulations, especially if a farm to school program is funded with public monies. See www.hhs.gov/ohrp/ for more information.

Deciding on the scope and focus area for a farm to school program evaluation depends on resources available – financial, staff expertise, and skills. Hiring or developing a contractual relationship with an experienced professional evaluator is an option, though it may pose a challenge for programs with limited financial resources. Researchers from local universities and colleges may be interested in developing connections with farm to school programs and could serve as valuable partners for evaluation.

For farm to school programs, information generated through research and evaluation may be broadly classified into the following categories, with some examples provided below:

Baseline / Existing Program Information / Feasibility Studies

Baseline information on pre-program indicators, existing information on number of farm to school programs already in operation, key components and features. This may also include a feasibility analysis using findings from the baseline data collection.

Student Impacts

Changes in knowledge, attitudes, behaviors regarding food choices and nutrition, health, local foods, agriculture, environment; changes in Body Mass Index (BMI), academic performance, discipline, attendance, and activity patterns.

Teacher Impacts

Changes in knowledge and attitudes of teachers and school administrators, changes in dietary behaviors.

Policy Impacts

Changes to school district nutrition and health policies, practices and policies regarding waste management and recycling.

Food Service Impacts

Changes in menu plans and recipes to offer more fruits and vegetables and local, healthy food options, changes in meal participation rates, financial viability of food service operations, changes to food procurement patterns, changes in the knowledge, attitudes and behaviors of food service staff.

Farmer Impacts

Sales to schools, changes in planting patterns, adoption of sustainable farming practices, breakthroughs in handling distribution and transportation issues, prevention of farmland loss, increase in the number of farms or farmers in the region.

Parent Impacts

Knowledge, attitude and behavior changes regarding diet and health, support for local farms and agriculture, changes in lifestyle, and food purchasing patterns at home.

Community Impacts

Awareness and interest in local foods and farming, access to local healthier foods, impacts on local economy.

II. Resources and Tools for Measuring Farm to School Impacts

In this section:

Common tools and methods for use in farm to school evaluations

Previous Page: 3rd grade students from Gouge Elementary plant strawberries at Green Toe Ground farm in Celo, NC. Photo by Emily Jackson.

Above: A student enjoys the farm to school salad bar at Emerson Elementary School in Riverside, CA. Photo by Riverside USD.

II. Resources and Tools for Measuring Farm to School Impact

Once evaluation questions and indicators have been decided, the next step in evaluation planning is to choose the best method to measure the selected indicator(s). A wide variety of data collection methods are available, and decisions about which method to select will depend not only on the outcomes to be measured, but also on the credibility of the collected data for the target audience. Assessment tools can be developed from scratch, or tools already developed for other projects can be used in their entirety or modified to suit specific needs. Using tools developed by other projects not only saves time, it may also ensure rigor of the method if the tool has been validated. In some cases, data gathered from other projects that have used the same tool may be used as a control or reference data for comparison. Online survey services, which also provide data analysis services, are increasingly being used in program evaluations, though their use is limited to populations with internet access and basic computer skills. In the case of farm to school evaluations, this may include food service directors, school administrators, parents, community members, farmers and older students.

A compilation of common tools that have been used by existing farm to school program evaluations is included in this section for reference. Before a tool can be considered for use, project planners are advised to consider how the tools relate to the evaluation goals as well as the rigor of the tools and methods. Where possible, samples have been provided in the Appendices. Unless clearly indicated for wider use and distribution, it is advisable to contact the authors or organizations for permission to use the tool in part or in its entirety.

Common Tools and Methods for Use in Farm to School Evaluations

Baseline / Existing Program Information / Feasibility Studies

Collecting information about existing programs to establish baseline data is inherently valuable. This information can be in the form of pre-intervention indicators, which are then compared with data for the same indicators collected after the program has been operational. Data about the scope and coverage of existing programs can be collected to serve as a benchmark of farm to school development. State or regional agencies will find this data useful since it provides a mechanism for tracking the region's farm to school programs over a period of time. Feasibility analyses can lay the foundation for a farm to school program by assessing demand and interest levels.

Examples of tools used in collecting baseline / existing program information / feasibility studies (see appendices p 85-127):

- Farm to School in New York State Survey of K-12 School Food Service Providers[2]
- Survey of Institutional Food Service Providers in Oklahoma[3]
- Survey of K-12 Food Service Providers in Michigan[4]
- National Farm to School Web Survey
- Northeast K-12 Food Service Directors Needs' Assessment Tool[5]
- New Mexico Survey of Fruit, Vegetable and Nut Producers[6]
- New Mexico Survey of School Food Service Providers[6]

Student Impacts

a) Assessing changes in knowledge, attitudes, and beliefs

Farm to school programs are premised on the assumption that if students are provided knowledge about healthy, locally grown foods, in addition to having access to them, then it is more likely that they will have positive attitudes towards such foods, and potentially develop lasting eating habits at an early age. Documenting this first step in knowledge and attitude development is important to ascertain whether the program has potential to impact behavior.

Various surveys have been used to assess knowledge about local foods, nutrition and health, gardening, etc. However, since each program has a specific focus, ready-to-use surveys that exactly meet the needs of a particular program may not be available. Sample tools in the Appendices provide some ideas.

Examples of tools used in assessing student knowledge, attitudes and beliefs (see appendices p 128-153):

- Hawthorne Unified School District Student Knowledge Survey[7]
- Outcome Expectations for Eating Fruits and Vegetables - 5 A Day Power Play Survey[8]
- General Knowledge Survey[9]
- Mixed Greens Michigan Veggie Vote[10]
- Rethinking School Lunch Student Dining Evaluation Form[11]
- Seven Generations Ahead Student Survey [90]
- Harvest of the Month Survey[12]
- Food Preference Survey[13]
- Burlington Schools Student Survey[14]
- Student Interview Protocol - University of California Sustainable Agriculture Research and Education Program (UC SAREP)
- Self-Efficacy Survey: Eating Fruits and Vegetables[91]
- Self-Efficacy Survey: Eating, Asking, Preparing Fruits and Vegetables[92]

- Food preference surveys to assess whether target populations show a change in recognition and palatability for fruits and vegetables.
- Student surveys to assess impacts of nutrition education using seasonal fruits and vegetables.
- Student surveys to assess recognition of foods grown in the region or edible parts of plants.
- Assessing whether participation in a school garden affects student knowledge and attitudes about fruits and vegetables.
- Classroom-based activities have also been used to gauge changes in knowledge, attitudes and preferences. These methods are not as rigorous as others described above, though they may be useful in getting informal feedback from students.
- Students keep journals to chronicle what they have learned from farm to school activities.
- Using a series of cards depicting stages in the food system, students can order the cards to show how food goes from the farm field to the dining table.

b) Dietary behavior

Widespread research demonstrates that students do not consume the required daily amounts of healthy foods such as fruits and vegetables. The ultimate goal of any nutrition education activity is to impact current or future dietary behaviors. Cafeteria interventions that actually alter the foods available to students need to be evaluated to document possible changes in student consumption. Several methods have been used in nutrition research to measure dietary intake. The most rigorous methods involve invasive biomarker methods and aren't often appropriate for farm to school evaluations given the financial and professional resources required. Listed below are methods to measure or approximate dietary intake that have been used or have a strong potential to be used in farm to school evaluations.

- Food records whereby participants keep records of their dietary intake, generally over a three to seven day period, can provide dietary information.

- Food frequency questionnaires gather dietary data through the completion of a questionnaire that covers foods eaten over a span of time, often many months. The questionnaire must be culturally specific so as to capture foods eaten in the participant's diet.
- 24 hour dietary recall is a method whereby an interviewer asks a participant to remember all food items and quantities consumed within a 24-hour period.

Examples of tools used in assessing student dietary behavior (see appendices p 154-162):

- Diet History Questionnaire - National Institutes of Health[21]
- 24 Hour Dietary Recall[22]
- Estimation of Fruit and Vegetable Consumption by Students Based on Analysis of School Food Service Production Records[20]
- Food Recognition Form[23]
- Nutritionquest Kid's Questionnaire[24]
- Youth Risk Behavior Survey Fruit and Vegetable Consumption Survey[25]

- Screeners are usually shorter survey instruments that focus on certain type(s) of foods in the diet, such as fruits and vegetables, or fiber.

These methods have been widely used in nutrition and nutritional epidemiology research and validation studies have been conducted for many versions of these methods. In the farm to school program evaluations reviewed for this report, other approaches have been used as a proxy for measuring dietary intake, for example:

- Digital photographs of school meals have been taken and analyzed to assess what students serve themselves in cafeteria food lines.[15-20] If used along with food waste data in the cafeteria, these photographs can reveal information on an average amount of food students consume through the school meal program.
- Analyses of food production records from the school cafeteria are an indirect method used to estimate how many servings of a particular product (typically fruits and vegetables) every meal produced in the school cafeteria contains. This method assumes that the amount of product offered on each tray is the amount consumed by the students.
- Analysis of meal choices made by students, such as trend data for number of students choosing a farm to school salad bar meal versus a hot meal option combined with nutrition information per meal served can provide information on average student dietary intake from the school meal.

c) Measures of weight and health

Assessing body mass index (BMI) – BMI is a ratio of weight in kilograms divided by height in meters squared (wt/ht2) to measure body fat. BMI measurements are based on height and weight and require trained staff to perform measurements. Some school

districts and states have required that students' weight and height be measured regularly to track BMI as part of student health records. This information may be available for evaluation purposes from the school district or state.

d) Impacts on literacy

The DIBELS (Dynamic Indicators of Basic Early Literacy Skills) are a set of standardized, individually administered measures of early literacy development. They are designed to be short (one minute) fluency measures used to regularly monitor the development of pre-reading and early reading skills. DIBELS can be used for students in Grades K-6, and have been used by one farm to school program reported in this publication, The Kindergarten Initiative.[26,27] This test may already be conducted in some school districts, and data may be readily available. See http://dibels.uoregon.edu/index.php for more information on this system.

e) Impacts on academic performance

Grade point averages from schools with farm to school programs and control schools can be compared to determine impacts on this indicator. Many factors influence GPAs, so care should be taken to infer meaning from GPA data. Only one program cited in this report, The Edible Schoolyard,[28] has examined this outcome.

f) Psychosocial adjustment

A standardized student report questionnaire has been developed by The Edible Schoolyard[28] to assess this outcome for students in a farm to school program, as compared to students in a control school.

g) School attendance records

School attendance records are usually readily available from district offices. If tracked over a period of time and taking into account other variables, these can be used to draw inferences regarding student health.

Teacher Impacts

Examples of tools used in assessing teacher impacts (see appendices p 163-165):

- Teacher Focus Group Questions and Guide – Burlington School Food Project[14, 46]

a) Changes in teacher and administrator knowledge and attitudes

Surveys can be used to assess teacher or school administrator knowledge about local foods, nutrition and health, gardening, etc.; however these will need to be specifi-

cally tailored to outcomes of interest. None of the programs studied for this report have used surveys to assess this indicator; though some have used informal discussions and interviews with the teachers and school administration. For example, the Burlington Farm to School project has conducted focus group discussions with teachers participating in the farm to school program.

Policy Impacts

Impacts on policies are important measures of whether a farm to school program has facilitated systemic changes in the school food environment and school food policies.

a) School food policies

Monitoring of school food policies at the district level doesn't necessarily require specific survey tools. A copy of the food/wellness policy is usually posted on the district's website and may also be available through the district office.

Examples of tools used in assessing policy impacts (see appendices p 166-172):

- Sample School Wellness Policy – Berkeley Unified School District[29]
- Sample State Policy– Oklahoma HB2655[30]

b) City, county, state and federal level policies

Public policies that are supportive of farm to school and other community-based food systems work.

Food Service Impacts

School food service plays a crucial role in implementing change at the cafeteria level in most farm to school programs. The program has more chances of being sustained without external support if it has successfully impacted food service operations, working towards making the farm to school purchasing approach financially viable for the district. An assessment of the processes and factors influencing changes to food service practices is a significant gap in farm to school literature.

a) Financial viability of food service programs

- Cost per farm to school meal: To calculate the real cost of serving a farm to school meal, data on cost of food, labor, equipment, and other costs from the school food service will be needed. Often, this data is presented in comparison with cost per non-farm to school meal option.
- An in-depth analysis of income generation and expenditures for the farm to school portion of food service or nutrition education programs can be carried out. Financial data may not be readily available with the school district in a

Examples of tools used in assessing food service impacts (see appendices p 173-184):

- Template for Assessing Financial Viability of Farm to School Programs[18]
- Rethinking School Lunch Financial Calculator[11]
- Assessing food service experience with using local foods– a template[5]
- K-12 Food service periodic check-in – a template[5]
- Local Food Purchases Record[5]
- Sample questions for food service staff[14]
- Sample Waste Audit Template[34]
- Food Service Director Interview Protocol – UC SAREP
- Salad Bar Coordinator Interview Protocol – UC SAREP

format that you need. Collecting this information will require the cooperation of the school administration and staff, who may be wary of divulging financial information about the district's operations. Depending on the type of record keeping at the school district, it may also be difficult to separate out incomes and expenditures for the farm to school programming.

- Rethinking School Lunch Financial Calculator.[11] This tool is designed to forecast the financial impact of rethinking food service models. The calculator contains several individual worksheets that track income and expense categories for a school district of up to 15 schools from elementary through high school. The worksheets are optimized to support "fresh prep," farm to school lunch programs that promote healthy outcomes for students.

b) Cafeteria meal participation

Since meal participation rates correspond to revenue for school food service, gathering this data is important, especially in schools with a high number of students qualifying for free or reduced price meals. Meal participation data is available from school food service offices, and tracking this over a period of time can provide insights into the effects of any cafeteria-based changes due to the farm to school programming. One factor to consider in addition to student meal participation is teacher/staff participation, as these adult meals, often priced higher than student meals, can add revenue to the school food service budget.

c) School food procurement trends

The volume and dollar value of local food purchased can be calculated from procurement records or invoices available from the school district. Sales records from food service vendors can also provide this information, though this may not be easy to elicit if the program uses multiple vendors.

d) Cafeteria offerings

One way to measure changes in the quality and nutritional value of cafeteria meal options is to examine food procurement records. These records may be requested from the food services division of the school district. Possible changes may be calculated for specific food groups, such as number of servings of fresh fruit and vegetable, or whole wheat and grains offered, or the amount of local products featured for a farm to school meal, as compared to the non-farm to school meal option.

e) Waste management and recycling practices

Audits can be conducted to assess changes in waste streams at farm to school sites implementing a waste management program. Several online resources are available for establishing and assessing waste management and recycling programs in schools.[31-34]

f) Food service staff knowledge and attitudes

Program-specific surveys, informal interviews, or focus group discussions can be conducted to assess any changes in the knowledge and attitudes of food service staff as a result of the farm to school program.

Farmer Impacts

A major goal of the farm to school approach is to increase farm viability and enhance opportunities for local agriculture. Though limited, some information on tools used to assess these impacts is given below:

a) Farmer profitability

Analysis of farmers' sales records can provide information on how much farm to school sales contribute to overall farm income. However, this data is not easily available, and if it is, can be very time consuming for a farmer or researcher to calculate. Often the farmer can provide an educated guess on this question during an interview.

b) Number of farms participating in area farm to school programs

This data reveals the breadth of the impact of a farm to school program on local agriculture.

Examples of tools used in assessing farmer impacts (see appendices p 185-188):

- Farmer Interview Protocol - UC SAREP
- Farmer Survey – National Farm to School Network[35]

c) Farming and marketing operations

Interviews with farmers can provide information on any changes in their farm operations that have occurred as a result of the farm to school program. Some of these may include diversification of products, changes in planting patterns and marketing channels, establishment of processing facilities, as well as participation in collaborative or cooperative marketing structures.

Parent Impacts

a) Parental knowledge, attitudes and behaviors

Examples of tools used in assessing parent impacts (see appendices p 189-190):

- Healthy City Parent Survey - Burlington School Food Project[14]

These attributes regarding food and nutrition and local agriculture can be assessed before and after the program through surveys or focus group discussions. An increase in parental involvement in the school can also be an indicator of parent impacts of the farm to school program. Only a few farm to school programs have developed tools to assess program impacts on parents.

Community Impacts

Examples of tools used in assessing community impacts (see appendices p 191-196):

- Vermonter Poll - a statewide poll conducted to assess parental knowledge and attitudes about school lunch and children's eating behaviors[14]
- Questions for food council members - Burlington School Food Project[14]
- Project Partners Interview Guide - Burlington School Food Project[14]
- Volunteer Interview Guide - Burlington School Food Project[14]

Unlike other school-based educational or cafeteria programs, farm to school has the potential to impact families and the community at large due to its broad-based collaborative approach that aims to involve parents, gardeners, farmers, and community members. Informal discussions and interviews with key community members and stakeholders such as project partners, volunteers, food council, or committee members can reveal useful information about the impacts of farm to school programs in the community. Some impacts worth monitoring include the growth of farmers' markets in the area, campaigns or organizing efforts around other food related issues facing the community, and food dollars spent within the local economy.

III. Review of Farm to School Evaluation Literature

In this section:

Feasibility Analysis for Farm to School Projects

- Student Impacts
- Food Service Impacts
- Farmer Impacts
- Parent Impacts
- Community Impacts

Previous Page: Rodney Taylor, Food Service Director, and students pose with bounty from the Emerson Elementary Garden, Riverside, CA. Photo by Riverside USD.

Above: Asheville City Schools Child Nutrition Director, Beth Palien, prepares an assortment of local fruits and veggies for students at Hall Fletcher Elementary. Photo by Molly Nicholie.

III. Review of Farm to School Evaluation Literature

Of the more than two thousand farm to school programs operational in 2008, only a few have been evaluated thus far. We reviewed and collated information from 38 resources including evaluation or program reports and articles representing a total of 23 programs. Information was also collated from other farm to school related publications and resources, with the objective of finding commonalities and trends that could be cited as impacts of the farm to school model. The 38 reports and evaluation findings included in this review met our definition of farm to school: conducting local purchasing in addition to one other component of farm to school, and which had evaluation data available through reports released before July 2007. Table 2 provides a list of the programs included and the categories under which data has been cited from these programs.

We acknowledge that there may be programs meeting the above criteria that we were either unaware of or were unable to track and include in this report. However, the 38 program reports and evaluations selected and cited in this publication represent a variety of evaluation methodologies employed by farm to school programs across the country. The findings have been described based on the evaluation categories established in the previous section. A brief program profile highlighting information relevant for understanding the evaluation findings is presented for each program cited (see Program Profiles).

Table 2: Program profiles and evaluation outcomes highlighted in this report

Abbreviation: Farm to School Program or Report	Page # in Appendices	Student Impacts (Knowledge)	Student Impacts (Attitudes)	Student Impacts (Behaviors)	Teacher Impacts	Policy Impacts	Food Service Impacts	Farmer Impacts	Parent Impacts	Community Impacts
AES-OR: Abernethy Elementary School Farm to School Program, Oregon	61		X	X			X			
ASA-NC: Appalachian Sustainable Agriculture Project's Farm to School Program, North Carolina	62						X			
BLP-OR: Bend La-Pine Farm to School Program, Oregon	63						X			
BTV-VT: The Burlington School Food Project, Burlington, Vermont	64		X	X	X		X	X	X	X
CLP-CA: "Crunch Lunch" Program, Davis Joint Unified School District, California	65			X			X	X		
COM-CA: Compton Unified School District Farm Fresh Salad Bar Program, California	66			X			X			
CON-NH: ConVal Farm to School Program, New Hampshire	67						X			
CSA-CA: CSA in the Classroom Program, Los Angeles Unified School District, California	68				X		X	X		
DWM-CA: Davis Joint Unified Waste Management Study, California	69						X			
ESY-CA: The Edible Schoolyard, Berkeley, California	70	X		X	X					
FFF-IL: Fresh from the Farm Program, Seven Generations Ahead, Chicago, Illinois	71	X		X	X				X	
FTK-PA: Farm to Kindergarten Initiative, The Food Trust, Philadelphia, Pennsylvania	72	X		X					X	
FTS-MA: Massachusetts Farm to School Program, Massachusetts	73							X		
LSB-CA: Los Angeles Unified Pilot Salad Bar Program, California	74			X						
MIG-MI: Mixed Greens, Michigan	75	X	X							
MSL-MT: Missoula County Farm to School Program, Montana	76						X			
OSB-WA: Olympia Unified School District Salad Bar Program, Washington	77			X			X			
RHM-CA: Riverside Harvest of the Month Program, California	78				X					
RSD-CA: Riverside Farm to School Program, California	79			X			X	X		
SFP-NY: SchoolFoodPlus, New York	80						X	X		
SMM-CA: Santa Monica Unified "Farmers' Market Salad Bar," California	81						X	X		
VEN-CA: Ventura Unified Farm to School Program, California	82			X			X			
WSD-CA: Winters Joint Unified School District Farm to School Program, California	83						X	X		

Feasibility Analysis for Farm to School Projects

Before starting program implementation, many organizations conduct a feasibility analysis to assess program viability and interest among potential partners and stakeholders. This data may be collected through surveys or interviews with the stakeholder groups, or through informal discussions and meetings. We analyzed nine feasibility studies that are included below.

Four farm to school feasibility studies focused on identifying school food service interest in purchasing from local farmers.

- The Michigan Farm to School Program conducted a statewide survey of school food service directors in 2004 to investigate their interest in and to identify opportunities and barriers for implementing a farm to school program.[4] Respondents (N = 383) reported a high degree of interest in sourcing food from local producers. Seventy-three percent reported being very interested or interested. Interest increased to 83% when respondents were asked to assume that these foods were available through current vendors. Interest was independent of free/reduced lunch participation rate or school district location (rural, suburban, urban location). Food service directors expressed diverse motivations for their interest in farm to school programs, including supporting the local economy and community; accessing fresh, higher-quality food; and potentially increasing students' fruit and vegetable consumption. The most frequently reported barriers and concerns included cost, federal and state procurement regulations, reliable supply, seasonality of fruits and vegetables, and food safety.

- A similar survey was conducted by the Oklahoma Farm to School Program in 2002.[3] It included surveys of food service personnel from other institutions such as colleges and universities, technology centers, prisons, hospitals and state resorts. Over two–thirds (68%) of the institutions agreed or strongly agreed that they would purchase local products, if price and quality were competitive. However, two-thirds (67%) of institutions were not willing to pay a higher price for local foods. The most common motivators for buying local foods were support for the local economy and community (42%), access to fresher foods (42%), and helping Oklahoma farms and businesses (41%). Common barriers or concerns cited were food safety (49%), supply reliability (46%), and lack of producers from whom to purchase (44%). The program website www.kerrcenter.com/ofpc/index.htm provides free downloads of the institutional survey and of "The Oklahoma Food Connection 2003" – a directory of agricultural producers, crops and institutional buyers.

- Under the guidance of the New York State Farm to School Coordinating Committee, the Cornell Farm to School Program[2] took the lead in conducting a survey of food service directors from K-12 public, charter, and private schools in New York State during the 2003-04 school year. The survey was intended to explore ways to strengthen connections among farmers and school cafeterias in New York State (NYS). It examined current farm to school programs and explored the potential for developing new farm to school links. Data from the

373 respondents reveal substantial involvement and an even greater potential for the use of NYS agricultural products in schools. Nearly one-quarter of the food service directors reported purchasing fresh fruits and vegetables directly from a farmer, and 72% reported purchasing NYS foods either directly from a farmer or food wholesaler. Apples, potatoes, and lettuces, all grown within New York, were cited by survey respondents as among the most frequently purchased whole fruit or vegetable products. The majority of food service directors purchased several fresh and seasonal fruits and vegetables from NY farms, and over 95% of those who had not yet purchased local food were interested in doing so in the future. Nearly 88% of food service directors felt that schools support the local economy and community by purchasing local foods. Over half felt that local purchases would benefit students by increasing their access to fresh fruits and vegetables and improving their diets. Over half also indicated that if more partially processed local products were available they would be more likely to purchase them. The most frequently cited concerns were reliability of supply, delivery, and cost. The survey found that the following tools would help food service directors to purchase local foods: lists of locally grown food product and seasonal availability, lists of farmers willing to sell to schools, health and safety information, regulatory guidelines for schools, school-tested recipes and menus, promotional materials, and an indication of food source on vendor order forms.

- Researchers from the University of California at Davis surveyed food service directors (n=38) and farmers (n=8) implementing farm to school programs.[36] The study published in 2006 identifies common characteristics among districts/communities supportive of buying local food. In addition, the study examines how food service directors perceive the benefits and barriers of buying locally and points to solutions to commonly encountered issues to buying local food in California. About half of the food service directors were motivated to buy locally to access fresher food (47%) and support the local economy (47%). Barriers cited were cost (52%), vendor and delivery considerations (47%), inconvenience of multiple invoicing (39%) and produce seasonality (34%).

An additional five studies have assessed the feasibility of multiple aspects of the program– cost of establishing a program, financial viability for food service, the supply potential for local foods, distribution options, and processing needs.

- In 2003, the San Francisco Food Systems Program conducted a feasibility analysis of implementing a farm to school program in the San Francisco Unified School District.[37] The research examined the district's assets and constraints in such areas as food service facilities, labor and training, nutrition policy, school gardens, and nutrition education, as well as mechanisms for identifying local farmers, ordering, and delivery. A School Food Environment Survey was conducted to

explore the school-specific factors that might support and/or inhibit a lasting farm to school project. Some of the difficulties identified included bureaucratic challenges, the scarcity of resources within the district, competitive food sales, lack of integration between district departments, lack of communication and connection with farming communities, and the lack of poverty level adjustments for the city and county that take into consideration the higher cost of living in San Francisco.

- A 2003 report by the Monterey County Farm to School Project provides a detailed analysis (by school district) of the needs and opportunities for procuring and distributing local produce to schools, integrating educational programs and school gardens in Monterey County, CA, and a recommended strategic plan of action for farm to school programs in the county.[38]
- The objectives for a feasibility study of the farm to school project in Montana in 2006 were to fill the need for information on 1) the quantities and types of local food purchased by public institutions and 2) the opportunities institutions may present as a market for food produced in Montana. The study also proposed to assess the state's current and potential capacity for food production, processing, and distribution needed to serve its public institutional food service markets. Results showed that although public institutions purchased a very small percentage (less than 2%) of the food consumed in Montana, successful programs at the University of Montana and Montana State University illustrated that local suppliers could provide food to public institutions.[39]
- A 2006 report from Minnesota explored the opportunities and barriers to greater use of locally-grown produce in public schools in the state.[40] Many of the food service directors interviewed had some experience purchasing directly from farmers, but typically their experience was limited to one or two products (most often local apples). However, numerous barriers to expanding use of local produce were identified. For instance, many districts are able to spend $0.15 or less for each serving of fruit and vegetables. Four key needs emerged as factors that would enable food service directors to use more locally-grown produce: 1) access to locally-grown produce through distributors; 2) risk management strategies to assure the quantity and quality of local produce, reliable delivery,

Comparative Research: Nutrition Education and Consumption of Produce

School-based nutrition programs produced a moderate increase in fruit and vegetable consumption: Meta and pooling analyses from seven studies. Howerton M.W, Bell S, Dodd K.W, Berrigan D, Stolzenberg-Solomon R, Nebeling L. J *Nutr Educ Behav*. 2007; 39:186-196

Data from seven school-based nutrition intervention studies was pooled and analyzed for changes in fruit and vegetable consumption in children. Studies included the Integrated Nutrition Project, Colorado 5 A Day Program, California's 5 A Day Power Play! Gimme 5, CATCH, 5 A Day Power Plus and the Alabama High 5 program. Results showed that at the individual level, the net difference was 0.45 (95% CI 0.33-0.59) servings; the net relative change was 19% (95%CI 0.15-0.23) servings.

and liability protection; 3) costs for local produce compatible with districts' financial realities; and 4) access to local fruits and vegetables that have been further processed.

- A regional study was conducted in four Midwestern states - Iowa, Kansas, Nebraska and Minnesota in the years 1999-2000 to determine existing purchasing practices of school food service and to identify benefits and obstacles to purchasing from local growers or producers.[41] The study found that one-third of respondents indicated that they had purchased from local growers and producers with the most common purchase being fresh produce items. Good public relations and aiding the local economy were perceived as strong benefits of purchasing locally, whereas lack of year-round availability of local product, and inability to obtain an adequate supply were cited as obstacles.

Student Impacts

Farm to school programs may influence students at various levels including knowledge and awareness about food sources, nutrition, eating behaviors and lifestyles, body weight, body mass index, and other physiological indicators of good health. The impacts of farm to school programs on students are of particular interest to school nutrition and food service staff, the public health community, as well as parents and community advocates.

Changes in student knowledge

Farm to school educational programs occur both inside and outside of the classroom on topics including nutrition and health, local foods and agriculture, and environment and ecosystems. These educational opportunities may also extend to teachers, school administration, parents, and the larger community.

Four programs have reported a change in student knowledge about the following topics.

Gardening and Agriculture

- Students participating in The Edible Schoolyard project in Berkeley, CA (ESY-CA) demonstrated greater gains in understanding of garden cycles than did students in a control group without a farm to school program. Students also demonstrated an increase in knowledge about definitions of ecosystems and sustainable agriculture.[28]
- Mixed Greens (MIG–MI) reported that participating students increased knowledge about basic gardening skills and showed a greater ability to identify plants and vegetables growing in their gardens.[10,42]

Healthy Eating

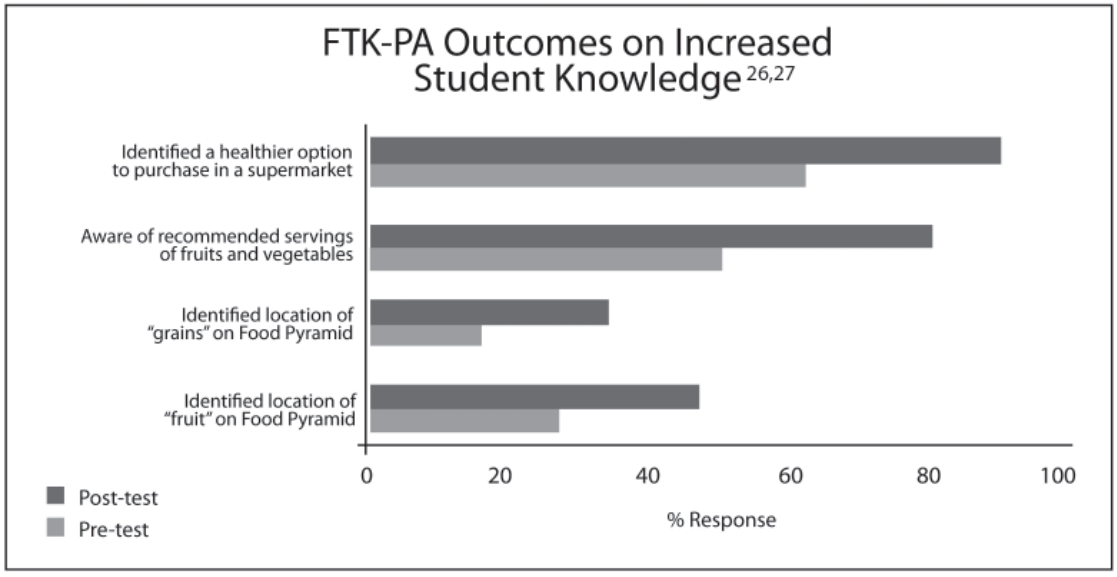
- Using a pre-post survey methodology for fifth and sixth grade students receiving an eight-week food-focused curriculum, Fresh from the Farm (FFF-IL) reported an 8.7% increase in students' awareness about the recommendation to eat more than five servings of fruits and vegetables a day. In the same program, after curriculum implementation, as many as 81% of students were able to select "carrots with veggie dip" as a healthy snack out of several options provided, in comparison to 69.5% before the curriculum was implemented. Post-curriculum, more students were aware that 100% fruit juice is the healthiest juice to drink.[43,44]
- The Farm to Kindergarten Project in Philadelphia (FTK-PA) asked kindergarten students to point out the position of various food groups on the Food Pyramid. After the nutrition education sessions, the proportion of students who could correctly identify the location of fruits increased from 27% to 47%; the propor-

Comparative Research:
Nutrition Education and Fruit & Vegetable Consumption

Getting children to eat more fruit and vegetables: A systematic review. Knai C, Pomerleau J, Lock K, and McKee M. *Preventive Medicine* 42(2006): 85-95.

This systematic review of fifteen studies assessed the impacts of nutrition education interventions to increase fruit and vegetable consumption in children. The authors reported an increase in the range of 0.3 servings to 0.99 servings/day. The studies included in this review focused on youth between the ages of 5-18 that had a control group and used fruit and vegetable consumption as the primary measurement outcome.

tion who could locate grains increased from 16% to 34%. Four out of five students receiving the farm to kindergarten program were aware of the recommended number of fruit and vegetables servings they should be eating every day; while only one of two students in the control group knew the answer. In the schools receiving farm to school programming, there was a twofold increase in the percentage of children who could identify foods they should only eat occasionally, compared to a 10% increase in correct responses from students in control schools. Ninety percent of students who had received nutrition education could identify a healthier option to buy in a supermarket as compared to only 62% in the pre-test. This program also showed an increase in knowledge about reading food labels for both foods and beverages.[26,27]



Source of Food

- Prior to curriculum implementation, about 50% of students participating in the FFF-IL program were aware that all fruits and vegetables do not grow year round. This percentage increased to 57.9% following curriculum implementation.[43,44]
- The FTK-PA evaluation reveals a statistically significant difference in knowledge about the journey of food from farm to fork among students who received nutrition education as part of the farm to school program as compared to those that did not. Correct responses for where food comes from more than doubled from

33% to 88% after children went on a farm tour as part of the farm to school program. In addition, the number of students recognizing farms as the source of food increased from 45% in the pre-test to 89% during the post-test.[26,27]

Foods Grown in the Region

- After the FFF-IL curriculum implementation, there was an increase of 10-20% in the number of students who were able to identify products grown in the region, such as corn, soybeans, carrots, peppers, apples and salad greens.[43,44]
- FTK-PA reported that when asked to point to a picture of a fruit that might be grown in the state of Pennsylvania, more than three times as many students gave the correct response after receiving the local food education.[26,27]

Changes in student attitudes

Exposing children to different types of foods can lead to changes in attitudes about these foods. Several studies have explored changes in children's attitudes about foods or their willingness to try new foods. Three studies reported that students showed a preference for new, healthy foods as a result of farm to school programming:

- A farm to school project at Abernethy Elementary School (AES-OR) reported that 44% of students interviewed preferred the farm to school pilot project lunches over lunches served during the previous year.[45]
- MIG-MI reported an increased student excitement to try new vegetables through their summer programming at Wyoming Public Schools in Grand Rapids, MI.[10] The program conducted a "veggie vote" and reported that 53% of students had tried a new vegetable over the summer when the program was operational. Students also reported an increased preference for 3 out of 5 vegetables offered (beets, peppers and salad greens).
- Almost half of the students (42%) surveyed in the BTV-VT program indicated a preference for more fruit to be served in the breakfast program, as a result of the farm to school activities in school.[14,46]
- As many as 74% of students who participated in taste tests conducted through the BTV-VT program said that the food was new to them; 43% were more willing to try new foods because of their experience with the taste tests.[14,46]
- Students from Edmunds Elementary and Middle School in the BTV-VT program demonstrated a change in perception about fast food establishments. In the pre-assessment, 59% of boys and 65% of girls were of the opinion that they could eat healthy food at a fast food restaurant, only 32% of boys and 57% of girls agreed to the statement in the post-test.[14,46]

Comparative Research: Nutrition Education and Student Dietary Behaviors

Small school-based effectiveness trials increase vegetable and fruit consumption among youth. Stables GJ, Young EM, Howerton MW, Yaroch AL, Kuester S, Solera MK, Cobb K, Nebeling L. *Journal of the American Dietetic Association*. 2005; 105(2): 252-256.

This review article covered evaluations of 5 A Day program interventions aimed at students with a control group and examined the outcome of fruit and vegetable intake. The seven projects included used a variety of nutrition education approaches including classroom lessons, farmers' market tours, media campaigns, parent activities, and lunch lessons. Different intervention and evaluation components were employed by the various projects. Four of the seven projects showed a significant change in fruit and vegetable consumption, ranging from +0.2 to +0.7 serving net change compared to the control groups. Of those four projects with significant changes, three of them are partially due to decreased consumption in the control group, along with increase or no change in the treatment groups.

Changes in student behavior

Farm to school programs are based on the premise that students will choose to eat more of healthy foods including fruits and vegetables, if the products are fresh, locally grown, picked at the peak of their flavor, and supplemented by educational activities.

Seven studies demonstrated that students participating in farm to school programs are offered more fruits and vegetables. Students subsequently choose the fresh fruits and vegetables, irrespective of whether an alternative meal option is available on that day.

Students take more fruits and vegetables from the cafeteria offerings

- In 2003-04, digital photographs of students' meal trays at the Crunch Lunch Program in Davis, CA (CLP-CA) were used to gather data about what children were consuming from the salad bar meals.[18] Data revealed that farm to school salad bars increased fruit and vegetable consumption with students taking more than the USDA minimum requirement.[i] In 2004-05, plate waste studies were undertaken to determine how much of the fruits and vegetables taken on the trays were actually consumed by the students.[19]

These studies were limited to data collection at three schools in the district that operate a comprehensive waste management and recycling program. The plate waste study results showed that, on average, 49% of fruits and vegetables served at the salad bar were consumed, compared to 66% of fruits and vegetables served through the hot lunch. However, it is important to note that on two out of three hot lunch days, apple juice accounted for approximately 50% of the total count of fruits and vegetables consumed. In addition, on salad bar days, about 85% of students took servings of fruits and vegetables, whereas at the hot lunches, only about 35% of children served themselves fruits and vegetables. The fruits and vegetables taken by students from the salad bar were 80-90% raw or unprocessed, whereas the fruits and vegetables taken from the hot lunch were 80-90% processed.

[i] USDA School Meals Initiative for Healthy Children is based on Food Based Menus. With Food Based Menus, foods from specific food groups and in specific quantities must be offered. The minimum USDA requirement in the meal component of Vegetables/Fruits for grades K-6 is two or more servings of vegetables and/or fruits, which is equivalent to 3/4 cup per child per day plus 1/2 cup extra over a week.

- Photographic comparisons of lunch trays and analysis of menu production records from the Compton Unified School District (COM-CA) in California in 2004-05 showed that students eating farm to school salad bar lunches took between 90% and 144% of recommended daily servings of fruit and vegetables while students eating hot lunches took between 40% and 60% of recommended servings. Both groups of students took close to the recommended amounts of proteins and grains.[20]
- Results from the AES-OR program show that the average servings of fruits and vegetables taken by students rose from 1.26 (pre-salad bar) to 2.26, an increase of 1 serving a day per child as a result of the farm to school salad bar program.[45]
- During 2004-06, students from Jefferson Elementary School in the Riverside Farm to School Program (RSD-CA) who chose the hot lunch meal took 1.49 servings of fruits and vegetables per meal, whereas students who chose a salad

Digital photographs of salad bar lunch trays from Davis Joint Unified School District, CA

bar lunch took an average of 2.43 servings of fruits and vegetables per meal. Thus, students who ate the salad bar received, on average, 63% more servings of fruits and vegetables than students who ate the hot lunch meal. Salad bar lunches met an average of 125% of USDA recommended daily allowances for fruits and vegetables for children.[47]

- Olympia Unified School District schools with Organic Salad Bar programs (OSB-WA) reported a 29% increase in fruits and vegetables taken by students at Lincoln Elementary and a 25% increase at Pioneer Elementary compared to schools where no salad bar was offered (2003-04 data).[48]

Comparative Research: Salad Bars and Produce Consumption

Salad bars and fruit and vegetable consumption in elementary schools: A plate waste study. Adams MA, Pelletier RL, Zive MM, Sallis JF. *Journal of the American Dietetic Association.* 2005; 105:1789-1792.

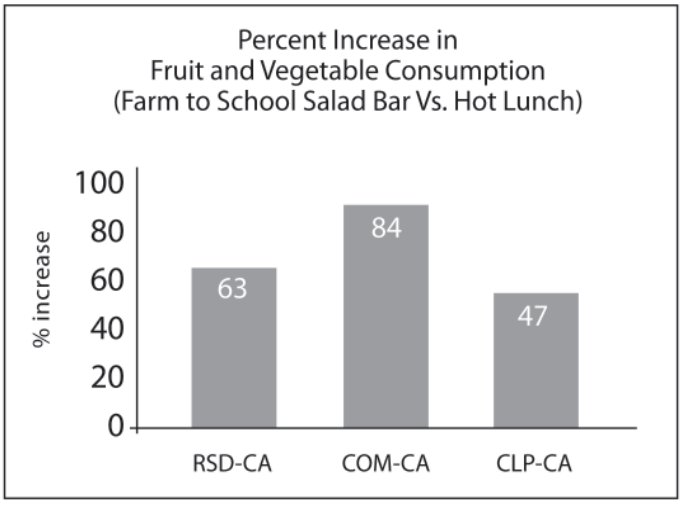
This small study examined differences in fruit and vegetable consumption between self-serve salad bars and proportioned meals. The study was conducted in two San Diego County school districts with different food offerings. Using food plate waste data from 288 students at four schools, the researchers found no significant difference in fruit and vegetable consumption between students that served themselves and those that were served proportioned items. The variety of items available did impact consumption as the lunch program with the greatest number of fruit and vegetable offerings also had the highest consumption.

Students choose farm to school meals over hot meal options

- In the Ventura Unified Healthy Schools Program (VEN-CA), students chose farm to school salad bar meals at a ratio of approximately two to one over hot meal entrees. The salad bar was more popular than all twelve hot entrees offered on salad bar days (2002-03 data).[49]
- In March 2005 when the RSD-CA farm to school salad bar program was initiated, a record 65% of students chose the salad bar lunch over hot lunch. After the initial excitement wore off, participation numbers leveled off to 26%, where they have remained since then. An unexpected result of the program has been a nearly 9% increase in overall school meal participation, including growth in the number of teacher meals served. Prior to the salad bar, the school served approximately six teacher meals per month, post-salad bar they served an average of 11 teachers per day nearly all of whom eat salad bar lunches. This growth in participation has resulted in a substantial increase in revenues that help make the program financially sustainable.
- In the COM-CA program, two farm to school sites had an average of 54.6% and 21.9% of students choosing salad bar meals over hot meals. [20]

Students self-report healthier diets by an increase in consumption of fruits and vegetables and healthy foods or a decrease in consumption of unhealthy foods

- Students participating in the Los Angeles Unified Salad Bar Project (LSB-CA) from 2000-01 reported that they ate an average of 4.09 daily servings of fruits and vegetables after a farmers' market salad bar was introduced at their school compared to 2.97 servings per day before the



salad bar started.[50] The total grams of fruit and vegetable servings consumed by students also increased significantly from 344.1 gm to 415.8 gm daily ($p = 0.07$). The researchers attributed the 84% increase in fruit and vegetable consumption almost entirely to the farm to school salad bar program. Children eating lunch at the farmers' market salad bar also reported eating reduced amounts of total calories, cholesterol, and total fat in their daily diets.

- ESY-CA students who made gains in their overall understanding of ecological principles showed a significant improvement in the numbers of servings of fruits and vegetables they reported eating.[28]
- In the FFF-IL schools, 42% of students self-reported eating 3 to 4 servings of fruits and vegetables per day before the farm to school curriculum was implemented.[43,44] This percentage increased to 53.6% during the post-test. Students also self-reported healthier eating behaviors as a result of the curriculum. (See page 36).
- Over half of the students (60%) surveyed in the BTV-VT schools reported eating fruit more often as compared to a previous year when the farm to school program was not in place.[14,46] Further, 59% reported eating new foods and 57% reported eating healthy snacks more often; many students also said that they ate less healthy foods less often, such as fast food (56% less) and desserts and sweets (31% less).

Parents report healthier eating patterns in children

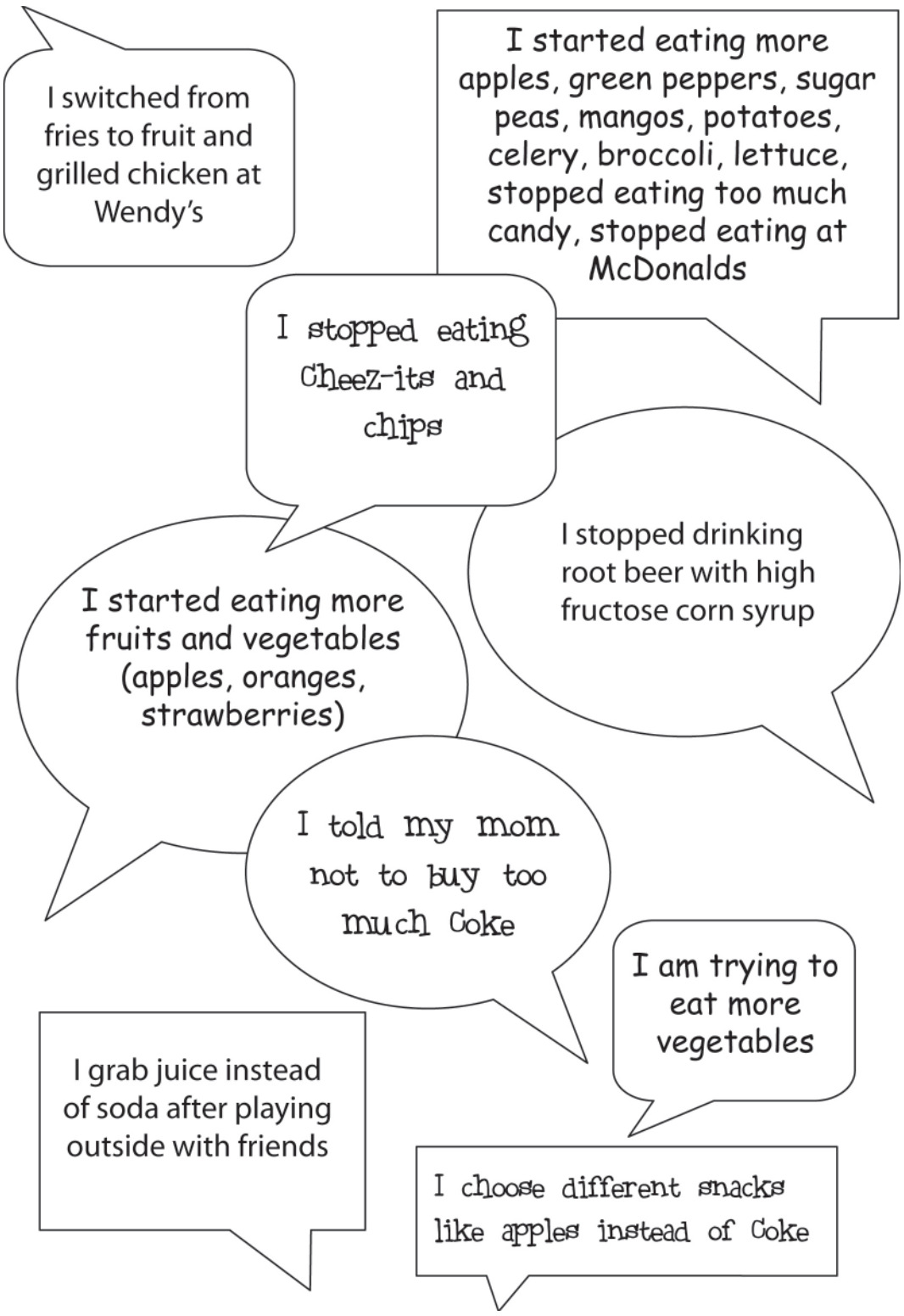
- The FTK-PA study administered a dietary survey to parents in both intervention and control schools. Results showed that children who received the farm to school intervention were opting for more healthy foods.[26,27,51] Specifically there was an increase in their mean weekly consumption of healthy foods such as whole grain bread and a decrease in consumption of foods high in fat and salt.

Comparative Research: Environmental Interventions in Schools

Environmental interventions for eating and physical activity: A randomized controlled trial in middle schools. Sallis JF, McKenzie TL, Conway TL, Elder JP, Prochaska JJ, Brown M, Zive MM, Marshall SJ, Alcaraz JE. ***American Journal of Preventive Medicine*** **2003, 24(3): 209-217.**

Researchers conducted a randomized controlled trial with aims to increase physical activity and reduce fat intake among students in San Diego middle schools. The interventions consisted of physical activity components (including increased physical activity in daily PE classes, increased physical activity outside PE class, purchase of equipment, promotions in newsletters and bulletin boards) and nutrition components (increased offerings of low-fat choices in the cafeteria, food service staff trainings on healthy food preparation, and promotional materials). Environmental and physical components of the project increased school-based physical activity among boys, but the low-fat intervention had no significant effect on fat consumption. The researchers identified financial and structural barriers to implementing the interventions, including food services' requirement to be self-supporting and small marketing efforts for low-fat foods compared to the barrage of marketing for popular snack foods.

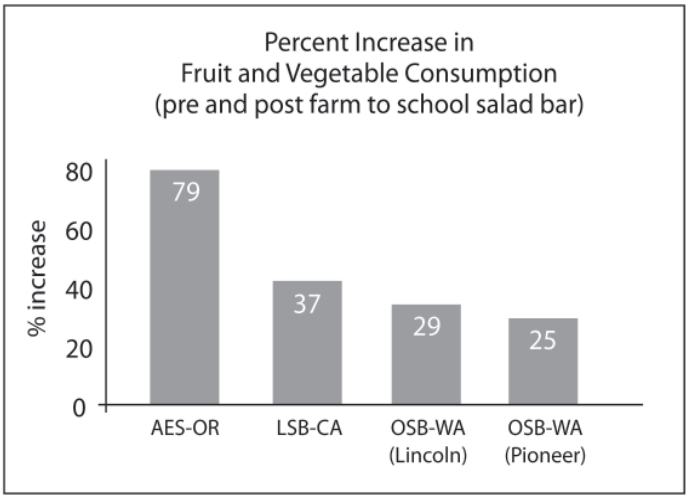
Students Report Changes in Eating Behaviors, Examples from FFF-IL Program:[43,44]



Comparative Research: Benefits of School Gardens

Use of school gardens in academic instruction. Graham H, Beall DL, Lussier M, McLaughlin P, Zidenberg-Cherr S. *Journal of Nutrition Education and Behavior*. 2005; 37:147-151.

A survey of California school principals identified reasons and perceived benefits of school gardens. Fifty-seven percent of respondents reported a garden at their school, and the gardens were "predominantly used by most schools to enhance academic instruction."



The mean weekly consumption of fruits for the experimental group was seven times a week, while for the control group it was only six times a week. There was no statistical difference in the average weekly consumption of vegetables.

Self-reports of healthier eating by students in the FFF-IL schools were corroborated by parents reporting that their children were eating more green salad at home.[43,44]

Positive behavioral changes are associated with farm to school

School-based programs that offer more nutritious foods have been associated with having positive psychosocial impacts such as improvement in academic performance, discipline and attentiveness, as well as in health indicators such as BMI and weight, and other lifestyle changes. Farm to school programs have demonstrated limited impacts on these indicators, though it has not been a focus of program evaluation thus far. Two programs have studied these impacts to some extent.

- Though the FTK-PA program did not show a difference in students' BMI over a one year period, students did report a decrease in the amount of time they spent in front of the television and other screen media. The same study reported positive changes on the DIBELS sound fluency scale (measure of phonological awareness that assesses a child's ability to recognize and produce the initial sound in an orally presented word) and the nonsense word fluency scale (a test of the alphabetic principle - including letter-sound correspondence and of the ability to blend letters into words in which letters represent their most common sounds).[26,27,51]
- Parents of students participating in the Healthy City project, a component of BTV-VT reported positive changes in their children, such as healthier eating habits, eating more fruits and vegetables, being more responsible, improved social skills and self-esteem, saving money, and improved work-ethic. Skills and knowledge gained included gardening, leadership, self-esteem, social skills, knowledge of the environment and healthy eating.[14,46]

Teacher Impacts

In addition to changes observed in students participating in a farm to school program, several positive changes have been demonstrated amongst school teachers and administrative personnel who may be participating in the program only indirectly.

- ESY-CA teachers gave a significantly higher rating to the learning environment in their school than did teachers in the control school.[28]
- The majority of teachers (78%) involved in the FFF-IL curriculum found that it was "easy" or "very easy" to integrate nutrition education concepts in their regular curriculum and none found it "too hard."[43,44]
- Ninety-two percent of teachers responding to a survey conducted for the CSA in the Classroom (CSA-CA) program in Los Angeles said that they were "very happy" with the usefulness of the produce in delivering nutrition education messages and 74% were "very happy" with the usefulness of the produce in delivering 5-A-Day messages. As many as 94% of the participating teachers indicated a willingness to participate in the program again.[52]
- All teachers (100%) who responded to a survey about the Riverside Harvest of the Month program (RHM-CA) reported that the educational and promotional materials, including the Harvest of the Month calendar, teacher meetings, monthly newsletters, farmers' market tour, farmer in the classroom sessions, and monthly taste tests were "very useful" or "fairly useful."[53] When asked if they plan to repeat any of the Harvest of the Month activities in the future, 50% of the teachers answered yes, and 25% said no because of factors not associated with the curriculum, such as their unavailability for teaching in the coming year.
- Based on a survey and focus group discussion, all teachers from Edmunds Elementary and Middle School participating in the BTV-VT program reported an increase in awareness about food, farm and nutrition issues, as well as belief that lessons on food, farms and nutrition would affect children's long-term food choices; 71% reported an improvement in their own diets as a result of the program.[14,46]

Comparative Research: Factors Affecting Nutrition and Physical Activity in Schools

Swimming upstream: Faculty and staff members from urban middle schools in low-income communities describe their experience implementing nutrition and physical activity initiatives. Bauer KW, Patel A, Propkop LA, Austin SB. *Preventing Chronic Disease* [serial online] 2006 Apr. Available from www.cdc.gov/pcd/issues/2006/apr/05_0113.htm.

This qualitative study was conducted in five urban schools to learn more about factors that enable or impede nutrition and physical activity improvements among students in low-income schools. Focus groups with approximately seven participants were held at schools where a classroom-based curriculum had been implemented. Several key themes emerged related to nutrition, physical activity opportunities, and weight-related teasing. Teachers were concerned about the contradictions between the classroom messages and the cafeteria offerings. They also expressed concern for low-income students that did not qualify for free or reduced-lunch yet weren't able to bring nutritious meals from home.

Policy Impacts

Farm to school supporters are interested in perceiving impacts of the farm to school program not just at the student level but also at the institutional level. Farm to school programs transform the school food environment by providing a forum for discussions around food and health.

The introduction of a farm to school program or organizing efforts around farm to school can lead to changes throughout the school environment such as increased teacher interest and motivation toward topics such as food, addition of gardening and environmental curricula, improvements in cafeteria environment, increased recess times and policy changes incorporating more stringent food and nutrition standards, local purchasing protocol, and healthy lifestyles for children.

- For example, the BTV-VT program demonstrated a shift in school culture around healthy food and nutrition as a result of the farm to school program. In addition to an increase in student and teacher awareness about healthy foods, farming, and nutrition issues, there was an increase in the community participation at school dinners, teachers started documenting the programs' lesson plans so that they can be used in the future, and the school board accepted the School Food Action Plan. The program was also supported by policies such as the Wellness and Nutrition Policy (Act 161) and the Farm to School Policy (Act 145)[54] enacted by the Vermont Legislature.

Of the studies reviewed for this report, none specifically focused on assessing policy outcomes, though several policies at the school district and state level have been facilitated due to successful models in operation. In this section, we present a few examples of district, county and state level policies passed that may support farm to school efforts.

Changes in school district nutrition policy

- Farm to school programs have facilitated the development of comprehensive food and nutrition policies in school districts, even before the federal mandate for schools to develop local wellness policies came into effect. These policies support farm to school efforts by including language that:
  - Mandates the preferential purchasing of local foods when possible, examples include:

    Alisal Unified School District Nutrition Policy.[55]
    Missoula County Public Schools Resolution passed May 2006.[5]
  - Supports nutrition education or school gardens, examples include:

    Santa Monica-Malibu Unified School District Nutrition and Physical Activity Policy.[57]
  - Establishes stringent standards for foods offered in schools, examples include:

    Comprehensive School Nutrition Policy for Philadelphia schools.[58]
    Seattle Public Schools Nutrition Policy.[59]

Comparative Research: Verbal Prompts for Fruit and Juice

The influence of a verbal prompt on school lunch fruit consumption: a pilot study. Schwartz MB. *International Journal of Behavioral Nutrition and Physical Activity*. 2007; 4:6 doi: 10.1186/1479-5868-4-6.

Researchers conducted a small pilot test to determine if students purchasing school lunch would be more likely to take and eat fruit or juice if a cafeteria worker gave them a verbal prompt. They found that students were more likely to take fruit and juice if they were specifically asked "Would you like fruit or juice with your lunch?" Students were more likely to actually eat the fruit they had chosen with the prompt, but they were not more likely to drink the juice that was taken after the prompt. This study suggests that verbal cues as part of the school food environment could increase fruit consumption among elementary school students, but more studies are needed.

With the local wellness policies, school districts have a unique opportunity to embrace efforts such as farm to school and use the opportunity to develop lasting policies that will ensure health and nutrition for school children in years to come. Policy changes that promote farm to school purchasing and educational programming ensure that the program is not dependent on the presence of a supportive individual to carry it through. Policy support is one way of institutionalizing the farm to school approach in school districts across the country. All five school districts listed on the previous page report that changes in the districts' nutritional policy contributed to the continued success of the farm to school programs.

Changes in city, county, state and federal policy

Information available from the National Farm to School Network on county and state policy initiatives and organizing efforts around farm to school are listed here for reference.

- Missoula County, MT encourages the purchase of local agricultural products through legislation enacted in 2005. The Missoula Greenhouse Gas and Energy Efficiency Plan and Joint Resolution 6889, state that both the city and county governments will "actively support efforts to increase the security of the local food system so that it is based on sustainable agriculture."[60]

At the state level, approximately 19 states have already passed legislation relating to the purchase of local fresh fruits and vegetables, and many more are in the works.[61] The various types of state policies that have been proposed or passed are highlighted below:

- Allocate additional funds for fruits and vegetables, using local product when available, e.g. in CA,[62] NY,[63] WA.[64]
- When price, quality and other factors are equal, local product shall be preferentially purchased, e.g. in CO,[65] KY,[66] WA.[67]
- State sets up a fresh fruit and vegetable pilot program, requiring local fresh product when possible, e.g. in CO.[68]
- A portion of funding from an established program is designated towards purchasing local fruits and vegetables, e.g. in CO.[68]

- Farm to school promotional and educational events are established, e.g. in NY,[69] CT.[70]
- A Farm to School Program is established within a state agriculture or education department, e.g. in KY,[66] OK,[30] CT,[70] IA,[71] OR.[72]
- Resolution requesting that Congress pass farm to school related legislation, e.g. in NM,[73] PA,[74] DE.[75]
- A price buffer, or preference, is allowed for local product, e.g. in MA[76], MD.[77]
- The minimum amount required for an open bid process is increased for local products, e.g. in MA.[76]
- A resolution requires that the specific state departments work together to implement farm to school programs, e.g. in NM,[73] NY.[63]
- A mini-grant program is established for farmers and schools and/or school districts, eg. in VT[78], PA.[79]
- On the federal level, Section 122 of the 2004 Child Nutrition Act authorized a farm to cafeteria program, however, funds were never appropriated. Every four or five years, there is an opportunity for all of those concerned with the health of our nation's children to evaluate, defend, and improve the federal Child Nutrition Programs. Visit www.farmtoschool.org to learn more about state, regional, and national policy priorities and efforts.

Food Service Impacts

Many farm to school programs start from and are rooted in changes to the cafeteria offerings, which may require modifications to the food service program. In order to use local product, school food service may need to employ additional workers to wash, cut, and prepare freshly harvested produce, or process other local products before they can be offered on the cafeteria line. The support of the food service director and cafeteria staff is crucial to the success of a farm to school program.

Nine of the programs studied assessed the impacts of farm to school programs on food service operations. With an improvement in cafeteria food quality and taste, these studies report an increase in overall school meal participation rates in the range of 3 -16%. More specific impacts on the food service operations are listed below:

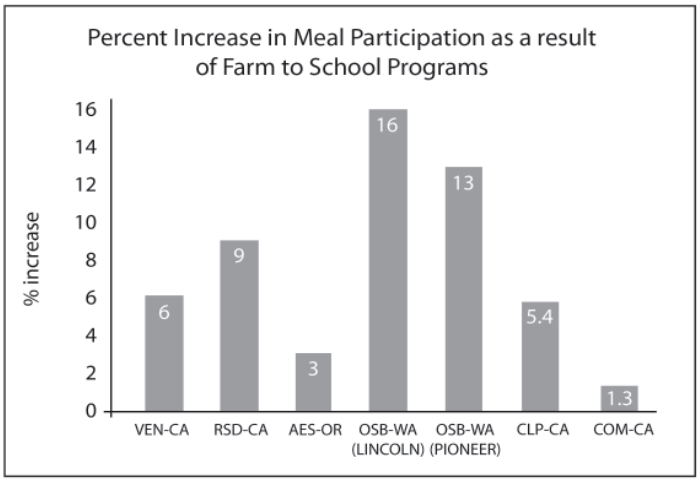
Farm to school programs offer greater variety and quantities of fruits and vegetables to students

- Trend data available from 2002-06 for the CLP-CA program shows that the farm to school salad bar offered a wider variety of fruits and vegetables than the hot lunch option.[80] In 2004-05, the salad bar offerings contributed, on average, 87% of the USDA recommended daily requirements of fruits and vegetables for children.[18] During the 2004-05 school year, students eating farm to school salad bar were offered an average of 105% of the recommended daily serving of fruits and vegetables during lunch – almost twice as much as students eating hot lunches who were served an average of 58% of the recommended servings.[19]
- Students in the Winters Unified School District Program (WSD-CA) eating the farm to school salad bar meal during the 2003-2004 and 2004-2005 school years were served between 107% and 177% of the recommended daily servings of fruits and vegetables.[18]
- The SchoolFoodPlus program in New York (SFP-NY) reported that by the end of school year 2004-05, thirty-two SchoolFoodPlus plant-based recipes had been created, tested, and served as part of the school menu cycle with varying frequency on a citywide basis. From December 2004 to June 2005, these recipes appeared on the citywide menu cycles 97 times.[81, 82]

School meal participation rates increase when schools implement farm to school programs

- The CLP-CA program recorded an increase of 7% to 11% in student participation in the lunch program at schools introducing farm to school salad bars. Overall participation in the salad bar lunches ranged from a low of 23% to a high of 41%, with an overall average of 32.4% of enrollment; in comparison to 26% participation before the salad bars were introduced.[80]

- Student lunch participation at an elementary school in the VEN-CA program rose from 50% to 56% over the first two years that a farm to school program was in place.[49] On days when staff and teachers had a choice between a farm to school salad bar lunch and a hot lunch, they chose the salad bar meal by a fourteen to one ratio.



Notes: CLP-CA, COM-CA represent salad bar and hot lunch meal participation; others represent pre and post salad bar meal participation. Timeline for collection of data – VEN-CA: 2 years; RSD-CA: 5 months; CLP-CA: avg. over 5 years; AES-OR: 1 year; OSB-WA: 1 year; CLP-CA: over 5 years; COM-CA: 1 year.

- At Jefferson Elementary School in RSD-CA, participation rates in the first five months of a farm to school program rose 4% for students receiving free lunches, 5.3% for students receiving reduced price meals, and 8.5% for paid students. Participation by adults (teachers and staff) shot up from 1.9% (just six lunches per month) to 28.8% (133 lunches per month). RSD-CA also reported a 9% increase in overall meal participation, including adult meals. From 1999-2005 (before implementation of the farm to school program) the number of meals served by the district grew at an average of about 2% per year. The school district reported a more than 25% leap in the number of meals served during the 2005-06 school year as compared to 2004-05, during which time farm to school salad bars at five elementary schools were initiated.[47]
- AES-OR reported a 3% increase in participation rates (both in full-priced and reduced-priced meals) over the previous year when the program was not operational. The control school reported no change in meal participation rates.[45]
- The OSB-WA program reported a 16% increase in school meal participation at Lincoln Elementary and a 13% increase at Pioneer Elementary (as compared to previous years); they were the first two schools that implemented the organic salad bar in 2003-04.[48]
- Overall lunch participation at Caldwell Elementary in the COM-CA program showed that salad bar participation was comparable to the hot lunch participation (averaging 51.6% and 50.3%, respectively). As a Provision II district where all students can eat breakfast and lunch free of charge, Compton had higher lunch participation than many other non-Provision II districts.[20]

- In the Santa Monica-Malibu Farmers' Market Salad Bar program (SMM-CA), the number of students choosing a salad bar lunch jumped by over 500% when fruits and vegetables from the farmers' market replaced produce from the existing supplier.[83]

Financial viability of food service operations

Farm to school programs generally serve fresh produce and other products that require additional cleaning and food preparation, potentially leading to higher labor costs. Food from local farms may also be more expensive than similar items procured from large distributors. In order to expand farm to school programs to more schools and to institutionalize farm to school meals as permanent fixtures in school cafeterias, it is critical to understand the costs associated with farm to school and to develop strategies to make these programs financially self-supporting. Farm to school programs often require a modest initial investment of money for equipment at each school site.

- VEN-CA reported initial start-up costs in the range of $3,400 to $7,000 per school site to buy equipment such as child-sized salad bars or extra refrigerator space.[49]

Cost of farm to school meals

Results from five studies show that farm to school meals typically cost more to prepare than non-farm to school meals.

- During the 2004-05 school year, the overall cost per meal for farm to school salad bar meals in the CLP-CA was $2.71/meal vs. $2.27/meal for the non-salad bar meals. With income per meal at $2.14, each salad bar meal represented a loss of $0.58/meal and each non-salad bar meal represented a loss of $0.13/meal. The overall food costs in 2004-05 were about 21% higher for the salad bar meals at $1.52/meal vs. $1.26/meal for non-salad bar meals (a $0.26 /meal difference). Labor costs were $0.80 per meal for a salad bar meal compared to $0.61 per meal for non salad bar meal, a difference of 30% or $0.19 /meal.[19]
- In COM-CA, food ingredients for farm to school salad bar meals cost an average of $0.13 more per meal than hot meals. Labor costs at two farm to school sites were $0.64 and $0.48 higher per meal than two comparative non-salad bar schools.[20]
- Per-meal preparation costs of salad bar meals in a VEN-CA elementary school were $1.19 (excluding protein-rich items) compared to $1.20 for a hot meal.[49]
- AES-OR reported that the cost of goods for the cooked-from-scratch meals at their school was lower than at other schools in the school system ($0.94 versus $0.99). However, labor costs were much higher at the pilot school, increasing the total cost per meal to $3.52 versus $1.67 for the control school. It should be noted that volunteer labor and food donations were estimated at a market value and were included in all calculations. When district level administrative costs were included, both pilot and non-pilot schools posted a deficit.[45]

- The Missoula County Public School District (MLS-MT) found, through a detailed cost analyses of 2006-07 purchases, that buying some local foods in season (apples, cantaloupe, carrot coins, carrot shredded, potatoes and salad mix) was either less expensive or no more expensive than what it would have cost to purchase comparable foods through mainstream suppliers. However, because other local foods were more expensive, the cost of purchasing local products throughout the school year amounted to an additional $1,270.96 or 11% of all produce purchases.[60]

Income generation through farm to school meals

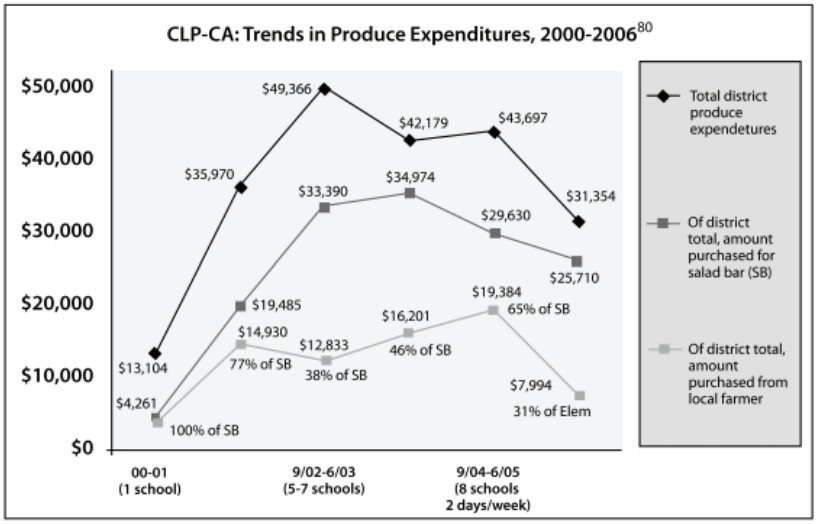
Financial viability of the locally farmed food procurement component of the farm to school program is extremely relevant to schools, since school food service operations are typically required to generate their own funds from sales and are not supported by school district general funds. Farm to school programs typically increase participation rates in school meal programs, hence a promising strategy is to use revenue from increased lunch participation to cover some or all of the labor, equipment or product costs associated with operating a farm to school project. The following four programs report an increase in school meal participation rates, with a subsequent increase in revenue for the food service operations.

- In the VEN-CA program, revenue increased 23% per student per lunch day during the first two years of the farm to school salad bar program. This equaled $11,000 in increased revenue for the school lunch program for every five hundred enrolled students over 200 lunch days.[49]
- Estimates from the RSD-CA program demonstrated that an increase in student participation of approximately 8% can cover the additional labor costs of their farm to school salad bar program.[47]
- Teachers and staff often pay more per meal than students (for example, $3.25 versus $1.90 for a full price student lunch in the VEN-CA program), so an increase in staff participation represents a significant revenue source.[49]
- The ConVal Farm to School Program in New Hampshire (CON-NH) reported an increase in food service revenue from $600,000 to $1 million in three years, attributed to increased meal participation due to the farm to school program and fees generated from their new catering operation which served local foods at sporting and other community events. The new catering endeavor was seen as a critical part of sustaining the effort to serve healthy, local foods in the cafeteria and in other venues.[84]

Changes in food procurement patterns

As a result of farm to school programs, schools change their purchasing patterns for local products and services. The following thirteen programs tracked the changes to institutional food procurement brought about due to a farm to school approach.

- At the RSD-CA program, in the peak growing seasons nearly all of the fruits and vegetables served were from local sources. In off-peak months the salad bar offerings were still about 50% local, owing to the year-round growing season in Southern California.[47]
- The VEN-CA program purchased 43% of its total produce needs from local farmers in 2003-04, up from 15% in 2002-03.[49]
- CLP-CA's spent more than $75,000 on locally grown, farm fresh produce from 2000-06. This represented more than 50% of salad bar or elementary school lunch produce on average and more than one-third of all produce procured by the district. Distributor-bought produce (from non-local sources) for the elementary schools, by comparison, amounted to about $72,000 over the same six year period (about 49% of elementary produce purchases on average). Overall expenditures for fresh, organic produce (almost $30,000 over 6 years) represented 20% of elementary produce and 14% of all district produce.[80] Overall produce purchasing trends for the school district are represented in chart below.



- The CSA-CA program paid $33,513 to Tierra Miguel, the local organic farm that grew produce for the Los Angeles Unified School District's CSA in the classroom program.[52]
- The SMM-CA program purchased produce worth $25,978 from local farmers in 1999-2000.[83]
- In 2004-05, one high school in WSD-CA purchased from three local farmers, a local farm stand, and sourced directly from an organic school garden.[19]

- COM-CA purchased about 6% of produce for its meal programs from local growers and about 94% from non-local food distributors in 2004-05. However, the local farm purchases all occurred in the last four months of the school year, thus purchases throughout the year would possibly result in a higher percentage.[20]
- CON-NH reported that the overall district purchases for local products accounted for 16% of its budget, which included fresh produce, bakery items, cheese and water.[84]
- The Appalachian Sustainable Agriculture Project's Farm to School program in select North Carolina schools (ASA-NC) reported that local products account for 3-5% of all produce purchased by school districts participating in the farm to school program from four counties.[85]
- Bend La-Pine School District in Oregon (BLP-OR) reported that its average spending on local products was $1,500 per week from four farmers, of which about $1,200 is spent on fruits and the rest on vegetables.[86]
- For the summer and fall meals served in New York City schools in 2005-06, SFP-NY facilitated the local purchases of 87,900 lbs of peaches, 40,700 lbs of nectarines and 6,600 lbs of pears through the Office of School Food distributors.[81]
- SFP-NY worked with a local manufacturer, Upstate Farms Cooperative, to develop a 4-oz non-fat yogurt with no artificial colors or flavors. The New York City Office of School Food now orders approximately 7,000 cases of locally produced yogurt at a value of $74,000 per month.[81]
- BTV-VT local purchases direct from farmers increased from $0 in 2003 to $4,636 in 2006; local purchases through distributors increased from $547 in 2003 to $2,176 in 2006, a 298% increase.[14]
- In the 2006-07 school year, MLS-MT purchased approximately 16,000 lbs of Montana grown foods, which corresponds to 24.4% of all food purchases and $11,990 in income to the local economy (up from $4,563 from previous year). Local foods purchased included oats, whole wheat flour, peaches, apples, cantaloupes, carrots, cucumbers, potatoes, zucchini, cheese, pasta, honey and salad greens, with nearly all these products being organically grown.[60]

Changes in waste management practices

- The Davis Unified School District's Waste Management Study (DWM-CA) assessed waste reduction in 2001 linked to a farm to school program. With data collected over a one year period, the study estimated gross savings of $6,320 in disposal fees from programs at two elementary schools. This estimate did not include reductions in custodial staff time and materials, nor did it include program costs, or account for the value of the educational opportunities that the program provided to students. The waste stream at Cesar Chavez Elementary

was reduced by 47%, with an estimated savings of $2,800 for the school year. At Pioneer Elementary, waste reduction was estimated at 50% for the school year, with savings of $3,430.[87]

Impacts on food service staff

Food service staff is a specific segment of the school population that is integral to the success of the farm to school effort. In general, farm to school programs are ultimately directed towards impacting school food service purchasing and serving behaviors and thereby what is served in school cafeterias, though this aspect is often not written in as an objective of the program. However, not only does a successful farm to school program facilitate changes to overall school food service operations, it often improves the knowledge, awareness and interest of school food service staff towards local foods, agriculture and healthy recipes. Anecdotal evidence is available of improved morale and job satisfaction of food service and kitchen workers participating in a farm to school program.

- Feedback from participants at food service professional development workshops conducted through BTV-VT revealed that 35% of food service professionals felt that they had increased their knowledge about local foods for school meals; 35% agreed that they had increased their knowledge of different recipes to make nutritious meals in schools; 29% reported that they would plan to interact more with teachers at their school sites; and 52% stated that using local foods in school meals was very important.[14,46]
- As a result of taste tests conducted in the BTV-VT program, food service staff have slowly started integrating new local foods in the school cafeteria menus: raw vegetables are offered in sandwiches and salad bars, prepared items served on the monthly menu include minestrone soup, cinnamon apple sauce, yogurt parfaits with granola, chicken Caesar salad and pesto pasta. Samosas and calzones are prepared off site by a local business and served on occasion during lunch.

Farmer Impacts

Farm to school programs can open up the expansive school food market to local farmers. Historically, small family farmers have found it difficult to access the cumbersome procurement systems of brokers and "middle men" who service schools and other large institutions. Data from farm to school programs suggests that schools can dedicate a significant percentage of their food budget to local foods. If the number of participating schools and larger school districts could continue to increase, farm to school procurement could come to represent a sizable and stable market for small, local farmers. Data on this aspect of farm to school impacts has been limited, though participating farmers typically report that farm to school programs contribute approximately 5-10% of their income. Of the studies compiled for this report, nine described the impacts on farmers.

- As of May 2006, the two farmers participating in the RSD-CA program averaged more than $1,700 per month in produce sales to the district. Furthermore, both farmers have become very involved with the district: hosting field trips for students to visit their farms, speaking at 'farmer in the classroom' presentations, and participating in a Riverside Farm to School Workshop. This farm to school program has thus extended the farmers' relationships into the classroom.[47]
- CLP-CA purchases from local farmers ranged from $16,201 in 2003-04 (46% of total salad bar purchases), to $22,805 in 2004-05 (65% of total salad bar purchases), and dropping down to $8,000 in 2005-06, when the district started serving pre-packaged salads instead of a salad bar.[80] Over the years the district has purchased from up to nine individual local growers and a Northern California distributor who buys from a group of 18 local producers. The percentage of farmer income from the school district account probably decreased over the six years. For most growers, the school account represented less than 5% of total income. In 2005-06, this may have been even lower than 2%, with the exception of a kiwi farmer who reported district sales representing about 40% of his direct sales income in 2004-05.
- All farmers in the BTV-VT program stated that they enjoyed having the opportunity to educate students about their farms, and that the school field trips provided them with some direct marketing opportunities.[14]
- Between June 2005 and May 2006, produce farmers selling to schools in the Massachusetts Farm to School Program (FTS-MA) grossed more than $55,000 in K-12 sales.[88]
- A 2002 study of six farmers supplying to farm to school projects in different regions of California reported that overall, farmers were dedicated to the idea of the farm to school approach and were passionate about the philosophical underpinnings of the program. However, profits and quantities were too small to contribute to an overall profit margin. Nevertheless, farmers held the pro-

gram in high esteem and wanted to nurture it for its potential benefits. Because the program's values were in line with their own values, these farmers were committed to making the program work. And even though the farm to school marketing was not yet contributing much to their business profits, it appears to be contributing indirectly through the synergy it creates among farmers, school personnel, parents, children and other community members.[89]

- The CSA-CA program generated $33,513 in revenues for the participating farm during the 2002-03 pilot year. This amount was modest, though not insignificant for the farm, and helped established connections for future programming at schools.[52]
- As a result of SFP-NY efforts, Champlain Valley secured a $4.2 million, three-year contract to provide New York-grown, processed and packed apple slices to New York City schools.[81]
- In an effort to replace Department of Defense-supplied baby carrots in schools with locally grown and processed products, SFP-NY supported local farmers in testing the New York State grown Sugar Snack variety and are working towards growing, processing and packing these in the state of New York.[81]
- The number of farms from which BTV-VT purchased product increased from three in 2005 to five in 2006. The successful integration of foods from local farms in the school cafeterias is attributed to relationship development between farmers and the Burlington school district, ability to use high school cafeterias to lightly process raw foods, and availability and willingness of the school administration to incorporate local foods. The Burlington school district contracted with and paid farmers up front for produce and the farmers planted vegetables specifically designated for the schools.[14]

Parent Impacts

Farm to school programs offer parents whose children participate in the program some educational activities such as healthy eating seminars, farm tours and trips to the farmers' market. If parents receive the same information children do through the farm to school program, changes in the family lifestyle and eating habits are more likely to happen. Parents who are strong supporters of farm to school programs also volunteer their time in planning and implementing the program.

Only three programs had a parent education component included in the program and reported on its impacts.

- FTK-PA indicated that 78% of parents reported an increased awareness for having their children eat more fruits and vegetables.[26,27,51] A majority of parents (90%) felt that they had changed the way they shopped for groceries, prepared meals and talked to their children about food. After one year of participation in the FTK-PA, 97% of parents believed that buying locally grown food is "important" or "somewhat important."
- FFF-IL parents indicated a slight increase in their ease and interest in encouraging their children to eat healthy snacks and meals.[43] FFF-IL parents listed a variety of changes they hoped to make in their families' diets as a result of a Parent Nutrition Education Event organized by the farm to school program. The proposed changes included attempts to cook healthier foods at home, serving more fruits and vegetables at home, reducing the use of sugar, reading ingredient labels more carefully before purchasing food products, and becoming good role models for the children.[43,44]
- Parents of school children in the BTV-VT program helped with taste tests and special event dinners, worked in classrooms and gardens, attended Food Policy Council meetings and advocated for the project at the Parent Teacher Association meetings. All the program staff remarked about the importance of parent and community volunteers in the success of the project. Parent feedback on family changes as a result of the BTV-VT program revealed that 32% believed that their family diet had improved since their child's participation in the program; 32% reported buying more local foods; 45% were willing to pay more for the school's hot lunch if it contained food from local farms; and 90% believed that lessons on food, farms and nutrition would affect children's long-term food choices.[14,46]

Community Impacts

One program studied for this report (BTV-VT) addressed the broader impacts of a farm to school program on the food environment in neighborhoods, surrounding school sites, or local food systems and distribution channels.

- BTV-VT conducted the 2006 Vermonter Poll, a statewide public opinion survey of Vermonters.[14] Results showed that the impacts of the Food, Farm and Nutrition Education (FFN) such as the local farm to school program are reaching Vermont at large. As many as 71% of parents with school age children reported that their children had participated in the FFN program, 40% indicated that children had shared FFN information with their family, 38% reported that children were willing to try new foods, and 26% reported that their children eat more fruits and vegetables. Parents were willing to pay an average of $1.63 more for school lunches if the cafeteria served fresh, local food. Overall, 38% were willing to pay between 10 cents and a dollar more for fresh local foods in the school cafeterias.
- Results from the evaluation of the Burlington Legacy Project's Annual Town Hall Meeting showed that 86% of the community was aware that there was an increase in distribution of more fresh and local foods in Burlington schools. In addition, 70% were aware that food taste testing was being conducted in some schools, and 97% of community members expressed interest in the school district purchasing more food from local farms.

IV. Conclusions and Recommendations

In this section:

Previous page: Students pick lettuce at the Emerson Elementary Garden in Riverside, CA. Photo by Riverside USD.

Below: A girl holds a baby chicken in the "Garden of Wonders" at Abernethy Elementary School in Portland, OR. Photo by Rachel Torchia.

IV. Conclusion and Recommendations

Farm to school programs are based on the premise that students will choose to eat more healthy foods, such as fruits and vegetables, if the foods are fresh, locally grown, picked at the peak of their flavor, and supplemented by educational activities that link them with the food cycle from seed to table. Since its launch a decade ago, the farm to school model has emerged as a strategy for schools to improve their cafeteria meals and incorporate educational opportunities for students. Farmers have also seen farm to school as an opportunity to explore new markets for their products. The term "farm to school" is better understood now than it was a decade ago, and there is a growing body of evaluation results that document the process and outcomes of farm to school programs. However, well-constructed evaluation studies are still needed to cover information gaps and answer remaining key questions about farm to school impacts.

Due to the localized flavor of the program, the farm to school model is uniquely interpreted in every single program in the country. There is a deepening understanding of how the model translates in different community conditions and in different growing regions. The program reports and evaluation studies referenced in this publication are evidence of the efforts underway to comprehend the multi-faceted implementation processes and effects of the farm to school approach.

There is a growing community of farm to school practitioners and evaluators who are diligently working towards validating the impacts of the farm to school model through concrete data and research. A total of 38 resources, program reports, evaluations and articles were studied for this report. In presenting this review of evaluation findings and tools from existing farm to school programs, we have tried to showcase the strength of current farm to school evaluation practice, as well as highlight the limitations and need for future efforts. Furthermore, presenting findings from farm to school studies next to select findings from similar (but non-farm to school) school-based nutrition, health, and education interventions helps to place these farm to school findings in the larger context of efforts to improve student health and education.

In this concluding section, for each of the indicators highlighted in this report, we discuss the gains made in understanding impacts of the farm to school model and focus on future research needs.

- With regards to assessing interest in the farm to school approach, adequate baseline data and feasibility analyses are available from across the country indicating that there is interest from school food service and farmers to participate in a farm to school program, as well as an understanding of strategies needed to make farm to school work under different conditions.
- Impacts on students represent one side of the farm to school equation. A majority of farm to school evaluations are focused on changes at the student level, including outcomes related to knowledge and attitudes regarding local foods and healthy eating and dietary behaviors. More comprehensive longitudinal studies are needed to understand whether knowledge and awareness translates to specific changes in dietary behaviors and any subsequent health benefits as

a result of farm to school. A large-scale experimental design study with appropriate control groups and validated measures of dietary intake would provide useful information, but would also be expensive to conduct.

- Increase in fruit and vegetable consumption reported by farm to school studies cited in this report is in the range of 0.99 to 1.3 servings per student per day. In comparison, several other non-farm to school studies focused on school-based nutrition education interventions report a range of 0.2 to 0.99 more servings of fruits and vegetables per student per day. Student dietary behavior in schools (reflected through school meal participation rates) are subject to factors other than the quality of the food itself, such as meal cost, cafeteria environment, and lunch break time constraints to name a few. The interplay of these issues along with farm to school supportive activities such as school gardens, nutrition education, farm visits etc. ultimately result in the food choices children make in school cafeterias. The contributions of all these factors – individually and as a whole on student behaviors – is critical to making the lasting changes that we hope to accomplish through farm to school. More clarity and data on dietary changes that can be facilitated and sustained in home settings is required, as well as the exploration of a causal relationship, if any of these, with the farm to school program.
- Current data on farm to school impacts on school teachers is limited to knowledge and attitudinal changes regarding farm to school implementation in the classroom. Whether teacher involvement in one aspect of the farm to school program implementation translates into positive lifestyle and dietary behavior changes has not been studied adequately.
- Long lasting impacts of the farm to school approach can only be sustained if supportive policies exist. Clearly, a lot of effort has gone into community organizing at the school district, state, and federal levels to support farm to school efforts through policy advocacy, and documentation of these efforts is available. For organizers interested in learning from policy gains made at other locations, it maybe useful to develop resources and trainings based on real-life experiences in advocating for farm to school policies.
- School food service is a key factor in determining the success or failure of a farm to school program, and hence there are several studies that have attempted to document implications from the food service perspective. Since school food service operations are separated from the overall district budget, it is almost impossible to undertake a true cost benefit analysis of a holistic program such as farm to school, which also imparts educational and community benefits to the school. Anecdotal evidence of increase in staff morale and motivation, knowledge about local and seasonal foods and healthy eating is an indirect benefit that has not been studied adequately. For example, a non-farm to school study reports that verbal cues from school food service staff affected an increase in fruit

and vegetables amongst students. Farm to school's positive impacts on school food service staff could potentially be a selling point for sustaining long-lasting and systemic changes in the school food environment.

- Despite being another side of the farm to school equation, concrete data on monetary and other benefits to farmers is scarce. Some data from specific programs is available on this outcome, though generalizations are inappropriate due to wide variations in types of products, quantities, and scale of local products sold through each program. More resources need to be invested to delve deeper into the impacts of direct marketing programs such as farm to school for small and mid size farmers. Data on the economic development benefits of farm to school for a city, county or state is currently not available and could provide the much needed impetus for local governments to invest in a farm to school approach.
- Few studies cited in this report document farm to school impacts from the parent perspective, though there is enough anecdotal evidence that supports this intended outcome. Increasingly, parent education is becoming a key component of farm to school, and its impacts need to be studied further to understand the positive ripple effects of farm to school on families and communities.
- Though farm to school has the potential to affect communities at large, much more concrete data and information is needed to understand the role of farm to school in community dynamics and connections. It is hypothesized that farm to school programs have a role in creating and maintaining strong, vibrant communities that support a local/regional food system, but little if any evaluation work has focused on this aspect.

Emerging farm to school programs should consider conducting a thorough evaluation of the various aspects of program implementation, as feasible. The tools and resources needed for conducting an evaluation may be already available through previously conducted evaluations or may be adapted to meet the specific needs of a program. Program evaluators who have conducted the studies cited in this report, as well as other nutrition and health researchers, are eager and available to assist new farm to school program evaluations.

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V. Appendices

In this section:

Program Profiles

*Notes: These profiles are based on program information and evaluation results available through references and online resources.

Program profiles are included for farm to school programs, not for feasibility studies or reports or citations used for sample tools and policies.

School district statistics on free/ reduced meal eligibility, number of schools, enrollment and demographics are only provided to understand the context of the program site, and were obtained from secondary online sources such as http://nces.ed.gov

Sample Tools and Resources

Previous page: A student from the Kindergarten Initiative , PA holds up a freshly picked strawberry. Photo by Tegan Hagy.

This page: Students from Vance Elementary in Asheville, NC participate in the Appalachian Sustainable Agriculture Project's Chef Fest. Photo by Molly Nicholie.

AES-OR: ABERNETHY ELEMENTARY SCHOOL FARM TO SCHOOL PROGRAM, OREGON

Abernethy Elementary School, OR

Free / reduced meal eligibility: 25.7%
Enrollment: 357
Demographics: 84.6% White, 8.4% Asian, 3.4% Hispanic
Local product used in: Scratch cooking at one school site, salad bars.
Other program components: The Garden of Wonders, in-class educational opportunities

The evaluation of the first year of the AES-OR project was conducted by Ecotrust. The objective of the evaluation was to coordinate a comprehensive quantitative and qualitative analysis so that the project at Abernethy School accelerated discussion and decisions at the district level. In addition to Ecotrust staff, the research team included the Injury Free Coalition for Kids at OHSU / Doernbecher Children's Hospital.

The evaluators of the Abernethy program recognized the challenges of isolating and understanding the effects of change within a complex system. The multi-component nature of the program made it difficult to pinpoint impacts related specifically to one change. Seeking to provide feedback on the program that would be most valuable to the school district, the evaluation focused on the kitchen and cooking "from scratch;" it did not specifically extend the analysis to the garden or classroom. Much of the analysis relied on data already generated by the school district, including participation rates, income and expenses, and nutritional information. Other data was gathered via interviews, focus groups and surveys. In some cases, Abernethy data was compared to an anonymous control school within the school district that served the standard school lunch fare.

With the findings from the 2005-06 school year forming the baseline, the Portland Public Schools Nutrition Services has changed the program, making adjustments where necessary to help institutionalize the program. The cafeteria program plans to include product from the garden, initiate a Harvest of the Month program, and explore opportunities to expand the Abernethy model to other schools in the district. Local purchasing, while an aspect of the program, was not a part of the 2005-06 analysis but will be a goal for the coming years.

New on the Menu, District wide changes to school food start in the kitchen at Portland's Abernethy Elementary. Abernethy Elementary, Portland Public Schools Nutrition Services, Injury Free Coalition for Kids, and Ecotrust, October 2006.

Joshi A, Kalb M, Beery M, *Going Local: Paths to success for farm to school programs.* Case study "Oregon: Getting Farm to School Programs Started," December 2006.

ASA-NC: APPALACHIAN SUSTAINABLE AGRICULTURE PROJECT'S FARM TO SCHOOL PROGRAM, NORTH CAROLINA

Appalachian Sustainable Agriculture Project (ASAP) has been leading farm to school efforts in western North Carolina – in the Asheville City schools and in the counties of Mitchell, Yancey and Madison. Its "Growing Minds" program arranges field trips to farms, encourages parental involvement and education, and facilitates local purchasing by the school system. An extensive evaluation of the program has not been carried out, though information on the program is available from the school districts and ASAP.

In 2006, 12,000 children in four school systems - Mitchell, Yancey and Madison counties and Asheville city schools – ate produce from local farms. There was a small, informal network of seven to ten farmers providing lettuce, apples, potatoes, squash, cucumbers, greens, okra, tomatoes, decorative pumpkins, turnips, red cabbage, watercress, and zucchini. Most of these farms were less than 10 acres and many were tobacco farmers transitioning to new crops. A couple of the farmers were expanding their greenhouses so that they could grow vegetables year-round. The farmers delivered directly to the schools, traveling an average of 30 miles. In Madison and Mitchell counties, farmers delivered their product to one designated farmer who then delivered for the group. Local products made up 3 – 5% of all produce purchased by the schools.

The schools in these four counties were equipped with full kitchens, and food service workers were accustomed to preparing fresh fruits and vegetables. The only additional facilities needed by a few schools were cold storage units.

One of the biggest benefits of the farm to school program in western North Carolina was that it provided a connection to students' rural heritage. Many of these children were just one generation removed from agriculture, and the exposure to farmers and farming helped them to understand the history of the area as well as how their predecessors lived and worked. Farm to school found strong supporters among school food service staff as well as the school administration, the health department and staff from a processing facility. ASAP staff has been enthusiastic about working to expand the Growing Minds program to a Head Start group, offering workshops and field trips to different audiences, including farmers and teachers, and focusing on nutrition education by collaborating with chefs who are eager to offer students the opportunity to cook with them.

Joshi A, Kalb M, Beery M, *Going Local: Paths to success for farm to school programs*. Case study "North Carolina: How the Price of Lettuce Started a Farm to School Program," December 2006.

Mitchell County Schools, NC

Free / reduced meal eligibility: 3.2%
Total schools: 8
Enrollment: 2200
Demographics:
94% White, 5% Hispanic, 1% African American

Yancey County Schools, NC

Free / reduced meal eligibility: 51%
Total schools: 9
Enrollment: 2500
Demographics:
91% White, 6% Hispanic, 2% African American

Madison County Schools, NC

Free / reduced meal eligibility: 53.2%
Total schools: 6
Enrollment: 2600
Demographics:
97% White, 2% Hispanic, 1 % African American

Asheville City Schools, NC

Free / reduced meal eligibility: 51.7%
Total schools: 10
Enrollment: 4400
Demographics:
49% White, 44% African American, 5% Hispanic
Local product used in:
Cafeteria meals
Other program components:
Farm visits by students, school gardens and nutrition education

BLP-OR: BEND LA-PINE FARM TO SCHOOL PROGRAM, OREGON

Bend La-Pine School District, OR

Free / reduced meal eligibility: 32.5%
Total schools:
32 + 3 Head start programs
Enrollment: 14,685
Demographics:
76.3% White, 12.2% Hispanic
(based on data available for the state of Oregon public schools)
Local product used in:
Once a week product is served in the cafeteria before lunch, also served with breakfast, and in the summer feeding program.
Other program components:
School gardens, greenhouse, cooking demonstrations, and contests with food

Local farmers made deliveries of fresh, local produce once a week to all the schools in the district 14 elementary, eight middle, seven high and alternative schools, three private schools and three Head Start programs in 2005-06. The farmers harvested the product on Tuesdays and brought it to the school nutrition services warehouse on Wednesdays before heading off to sell another portion of the harvest at the farmers' market. The food was then divided into equal portions for each of the schools and transported to each school where the kitchen staff cleaned, prepared, and served it to students. In the spring, a variety of products such as strawberries, blueberries, green beans, cucumber, cauliflower, broccoli, melons, watermelons, cantaloupe, cassava, tomatoes, peppers, celery, and carrots were available in a school produce box. Fruit from the farmers' market was also used in the "breakfast in the classroom" program in seven schools. There wasn't much wasted from the produce, but if there were leftovers, they were used in the after-school snack program that fed 300 children/day or the supper program that fed 150 children/day. Any leftovers from the farmers' market were also served in the cafeteria the next day.

The school district found that the cost of fresh, local produce was not prohibitive. The produce purchase data available from the program was compiled by the food services department.

An extensive evaluation of the program was not carried out. Anecdotal information was very supportive of the program, in fact program organizers said that they could incorporate more local produce if it was available from farmers in the vicinity.

Joshi A, Kalb M, Beery M, *Going Local: Paths to success for farm to school programs.* Case study "Oregon: Getting Farm to School Programs Started", December 2006.

BTV-VT: BURLINGTON SCHOOL DISTRICT, VERMONT

The Burlington School Food Project, a citywide collaborative, has addressed the integration of local foods in school meals and food insecurity among school-aged children in Burlington, Vermont.

The goals of the project included:

- Increased awareness and engagement in the local food system and increased awareness about and consumption of healthy foods in school.
- Implementation of a citywide food action plan that increased access to and use of healthy foods and foods from local producers.
- Building capacity of Burlington food, health and education-oriented organizations to better meet the food needs of the low-income Burlington school district population.

Burlington School District, VT

Free / reduced meal eligibility: 42%
Total schools: 11
Enrollment: 3577
Demographics:
83% White, 2% Hispanic, 7% African American, 6% Asian Pacific Islander
Local product used in:
School breakfast and lunch, taste tests
Other program components:
Food, Farm and Nutrition Education curriculum, farm tours, recipe development using local products, local food council, School Food Action Plan, School Food committees, food service workshops, parent trainings

The Center for Rural Studies (CRS) served as the evaluator for the three-year project funded by the USDA Community Food Projects Grants. CRS used both qualitative and quantitative tools to gather information about project impacts from stakeholders, including students, teachers, parents, local farmers, food service professionals, community members and partners. Evaluation tools included written surveys, in-depth interviews, focus groups, observations of events, and analysis of project related data and records. The evaluation provided feedback to the project partners including suggestions for improvement of future activities. Evaluation reports from this project are available from Vermont FEED.

Croom E, Nasrana R and Kolodinsky J. Growing Farms, Growing Minds: The Burlington School Food Project, Year One Evaluation 2003-04, Center for Rural Studies.

Schmidt M.C. and Kolodinsky J, The Burlington School Food Project, Final Evaluation Report, December 2006, Center for Rural Studies.

CLP-CA: DAVIS JOINT UNIFIED SCHOOL DISTRICT, CALIFORNIA – THE "CRUNCH LUNCH" PROGRAM

Davis Joint Unified School District, CA

Free / reduced meal eligibility: 15.9%
Total schools: 16
Enrollment: 8537
Demographics: 64.7% White, 14.2% Asian, 13.6% Hispanic
Local product used in: Salad bars / pre packaged salads
Other program components: In-class nutrition education, school gardens, waste management and recycling program, farm tours, farmer in the classroom

Davis Joint Unified School District's farm to school program was started in 2000. Through its years of operation, the program had strong support in the community through the Davis Farm to School Connection, a project of the Davis Educational Foundation whose members participated in the planning, implementation and marketing of the project, as well as supporting the food service as needed. Several of the members on this committee were parents who joined others in volunteering at the school district to support the educational activities, gardens and recycling programs. A brief history of how the program progressed is outlined below.

A key driver for the changes in the salad bar model was the attempt to attain financial viability. Initially, it was thought that increasing the number of schools, and therefore the volume of local product served, would even out the costs of the farm to school salad bar program. However, with expansion of sites came increases in labor and equipment costs that were prohibitive. To cut down overall labor costs for the food service operations, a state of the art central kitchen was established, which has the capacity to package more salads per day. The inauguration of the central kitchen meant the end of the self-service salad bar. The packaged salads also used some local produce.

DJUSD's farm to school program, one of the few in the country that has been studied extensively, is the only one evaluated on a longitudinal basis from 2000 to 2006. Unfortunately, the cafeteria model for serving local product in DJUSD schools changed substantially over the six years for which data was available, making it difficult to make comparisons, without taking into account all the related factors. The data gathered, however does provide a strong base for understanding six years of a farm to school program, its impacts, and the reasons behind the changes that occurred at the district.

2000-01	One elementary school operating a salad bar; students offered choice between salad bar and hot entrée everyday
2001-02	Three elementary schools operating salad bar; students offered choice between salad bar and hot entrée everyday
2002-03	Five elementary schools, only salad bar offered as the meal everyday, including protein, bread and milk and adhering to USDA requirements for a fully reimbursable meal. Growth to seven elementary schools, only salad bar offered as the meal everyday, including protein, bread and milk and adhering to USDA requirements for a fully reimbursable meal
2003-04	All eight elementary schools operational with same model as above
2004-05	All eight elementary schools, change to salad bar offered on two days a week with choice of hot entrée
2005-06	Pre-packaged salads offered daily to all eight elementary schools, along with hot entrée

Feenstra Gail and Ohmart Jeri, UC Sustainable Agriculture Research & Education Program, Yolo County Farm to School Evaluation Report 2005.

Feenstra Gail and Ohmart Jeri, UC Sustainable Agriculture Research & Education Program, Yolo County Farm to School Evaluation Report Year 4 Annual Report Fall/Winter 2005-06.

Feenstra Gail and Ohmart Jeri. Yolo County Farm to School Evaluation Report for the California Farm to School Program, Center for Food & Justice, Occidental College. October 2004.

COM-CA: COMPTON UNIFIED SCHOOL DISTRICT (CUSD), CALIFORNIA

Compton Unified School District, CA

Free / reduced meal eligibility: 95.2%
Total schools: 40
Enrollment: 30,233
Demographics: 72.3% Hispanic, 25.9% African-American
Local product used in: Salad bars as USDA reimbursable meal
Other program components: In-class nutrition education, salad bar etiquette trainings, farm tours, farmer in the classroom

The COM-CA evaluation focused on the efforts to increase student consumption of fruits and vegetables through farm fresh salad bars. The program evaluation was led by the University of California Sustainable Agriculture Research and Evaluation Program (UC SAREP) with support from the Center for Food & Justice at Occidental College.

CUSD is a Provision 2 school district where all students are provided school meals free of charge. The reach and impact of a farm to school program was thus potentially more significant since all students ate in the cafeteria. CUSD began their farm fresh salad bar program by opening five salad bars in elementary schools in the spring of 2004. In the 2004-05 school year, Tracie Thomas, the CUSD Salad Bar Coordinator, opened salad bars in the remaining 19 elementary schools, for a total of all 24 elementary schools. Schools offered the salad bars every day as a USDA fully reimbursable meal and as an alternative to the hot lunch. District-wide data was collected for some aspects of the farm to school program. A more detailed comparison of two salad bar schools, Willard and Caldwell, with two non-salad bar schools, Clinton and McKinley, was conducted to gain insights on the impacts of the salad bars on produce purchases, financial viability, meal participation, and consumption patterns. Methodology for data collection:

- School District Produce Purchases: Monthly data on total fruit and vegetable purchases for the district and for four study schools collected from invoices and year-end budgets.
- Student Participation: Meal participation rates collected on a monthly basis for salad bar and non-salad bar schools.
- Student Food Choices: (a) Food service daily production records collected to analyze the number of servings of fruits/vegetables per student in two or three sample months for two salad bar/hot lunch schools and one non-salad bar school. (b) Took digital photos of school lunches, comparing hot lunch and salad bars at two salad bar schools.
- School Food Service Fiscal Feasibility: Analysis of school food service budgets for four study schools for the 2004/05 school year to determine the costs and feasibility of maintaining a salad bar program.
- Challenges/Lessons Learned: Interviews with key stakeholders, including the salad bar coordinator, the food service director, kitchen personnel, and teachers/principals to learn about their experiences in implementing the program and what solutions were developed.

Data from this project was available for one year, which was somewhat useful, but insufficient for making broader interpretations. Unfortunately, the Farm Fresh Salad Bar program at CUSD was discontinued after a year of implementation, though associated nutrition education activities through the California Network for a Healthy California continue at the school sites.

Feenstra Gail and Ohmart Jeri, UC Sustainable Agriculture Research & Education Program, Final Evaluation Report, *Compton Farm to School Demonstration Project*, July 1, 2004- June 30, 2005.

CON-NH: CON-VAL SCHOOL DISTRICT FARM TO SCHOOL PROGRAM, NEW HAMPSHIRE

Contoocook Valley School District, NH

Free / reduced meal eligibility: 32.5%
Total schools: 12
Enrollment: 3,186
Demographics: White 96.5%, Hispanic 0.9%, Asian 0.8%, African American 0.6%, Others 1.2%
Local product used in: Salad bars, scratch cooking, Fruit of the Month features
Other program components: School gardens, greenhouse, nutrition education, strong connections with community

An extensive evaluation of the CON-NH program has not been conducted, though the program has been monitored and data was available from the school district and program coordinators.

Data from farm to school programs in New Hampshire was available from the annual reports submitted by the New Hampshire Farm to School Program, Office of Sustainability, at the University of New Hampshire to SARE (Sustainable Agriculture Research and Education).

The NH Farm to School Program, a collaboration between the Office of Sustainability, UNH and the NH Coalition for Sustaining Agriculture received initial funding from Northeast SARE to staff the NH Farm to School program in 2003. Year 2004-05 data estimated that a total of 44 school districts were participating in the farm to school program. As a result of the program, more than 108,000 students in the state of New Hampshire had access to fresh NH apples and cider in their cafeterias.

As a result of the program, students have started identifying the apple as a NH product, and districts are ordering more apples and cider than they were before, and some are also buying other local products such as greens, root vegetables, berries, and honey.

Information on the Con-Val school district's program was gathered from conversations with Tony Geraci, food service director at the district from 2003 – 2006, when the program was conceived and initiated.

A typical meal at the Con Val schools has five choices of fruits and vegetables each at every meal, with two to three choices from a hot bar, salad bar and sandwiches, and plenty of vegetarian options, as well as whole grain bread from local artisan bakeries. A hot breakfast is available to all school children. All the eleven schools in the district have school gardens and a farm to school program in place. The district has three production kitchens that supply meals cooked from scratch to all the 11 schools. Meals are transported through vans owned and operated by the district. The district serves close to 3,000 students daily and has 16% of those enrolled for free and reduced meals.

Joshi A, Kalb M, Beery M, *Going Local: Paths to success for farm to school programs*. Case study "New Hampshire: Get Smart, Eat Local: Step A is Apples," December 2006.

Northeast SARE grant reports 2003-2005 for project LNE03-183 - *Towards a community-based school food system*, Office of Sustainability, University of New Hampshire, http://www.sare.org/projects/.

New Hampshire Farm to School Program, a project of the University of New Hampshire's University Office of Sustainability Food & Society Initiative, www.nhfarmtoschool.org.

CSA-CA: CSA IN THE CLASSROOM PROGRAM – LOS ANGELES UNIFIED SCHOOL DISTRICT, CALIFORNIA

Los Angeles Unified School District, CA

Free / reduced meal eligibility: 77.2%
Total schools: 768
Enrollment: 722,319
Demographics: 73.2% Hispanic, 11.4% African American, 8.8% White
Local product used in: In-class nutrition education and taste tests
Other program components: Farm trips, Farmer in the Classroom, Farmers' market stands on school sites

During the 2002-03 school year, students in more than 990 classrooms in 41 different Los Angeles Unified School District schools had the opportunity to taste and learn about farm fresh produce grown in Southern California. These activities were part of CSA-CA: an educational program seeking to integrate health and nutrition, agriculture and the environment. Project partners included the Center for Food & Justice (CFJ), Occidental College, Tierra Miguel Foundation CSA Farm, and the Los Angeles Unified School District Network for a Healthy California – previously LAUSD Nutrition Network (LAUSD NN).

CFJ acted as a liaison between the farm and the LAUSD NN's nutrition education program. CFJ coordinated product delivery schedules and communicated with participating schools and teachers to facilitate the purchasing and payment process. CFJ paid the farm in advance for produce deliveries which were ultimately funded by the Nutrition Network. CFJ also evaluated the program.

LAUSD NN developed promotional materials to market the project to teachers. The project was promoted along with existing farm to school programming coordinated by the LAUSD NN which included farmer visits to classrooms and farmers' market stands set up for schools. A newsletter for teachers was developed and inserted in the produce box. The newsletter included information about the farm, nutritional information about the produce in the box, and related nutrition education messages.

The CSA in the Classroom program established a direct connection between the LAUSD classrooms and Tierra Miguel, a community supported agriculture farm based in the San Diego area. Tierra Miguel delivered weekly boxes of organic fruits and vegetables to classrooms at the participating low-income LAUSD Nutrition Network schools. The produce was used for nutrition education and taste testing.

Teacher feedback on the program was encouraging. Over 90% of teachers were "Very Happy" with the quality, variety and overall aspects of the produce and usefulness for nutrition education. A wide variety of topics was covered in classroom discussion ranging from agriculture, farming, nutrition and the environment and incorporated into subject areas such as literature, arts, math and geography. Teachers responded overwhelmingly positively regarding the educational value of the program.

A major challenge to the widespread replication of the project was the need for the participating farm to be paid in advance of planting, which is the business model of a CSA farm. This was not feasible through the existing LAUSD NN purchasing system, and hence CFJ offered to front the payments to the farm for the pilot project. This posed a problem with the long-term viability of the program. The CSA-CA program was discontinued after two years of CFJ involvement.

Margaret Haase et al, Center for Food & Justice, *Fresh from the Farm and Into the Classroom*, 2004.

DWM-CA: DAVIS JOINT UNIFIED SCHOOL DISTRICT FOOD WASTE DIVERSION PROJECT, CALIFORNIA

Davis Joint Unified School District, CA

Free / reduced meal eligibility: 15.9%
Total schools: 16
Enrollment: 8537
Demographics: 64.7% White, 14.2% Asian, 13.6% Hispanic
Other program components: Vermi-composting, composting, food rescue, offer versus serve plan in cafeteria, replacement of polystyrene lunch trays with molded fiber trays, links with curriculum, operational farm to school salad bars

The Davis Joint Unified School District piloted food waste composting systems at three elementary schools (Birch Lane, Cesar Chavez and Pioneer) in the 2000-01 school year. At the cafeterias in all the district schools, including these three, students could choose a healthy farm to school lunch option, including plenty of fruits and vegetables. Providing students with a choice of foods can itself reduce food waste. The goal of the project was to reduce the lunch waste stream and in particular reduce food waste, while engaging students in the ongoing practice of composting and recycling. The project was created by the Davis Farm to School Connection.

At the three school sites, three different methods of composting food waste and reducing other portions of lunch waste stream were implemented, in order to better understand which would be most appropriate for the schools' needs and resources. Lunch waste audits were conducted at all three sites at the beginning of the project.

Establishing a team of teachers, parents and students at each school was the first step in initiating this program at schools. Successful implementation was also a result of trainings conducted for staff, teachers, parents and students throughout the project, integrating the composting into the curricula, assessment of results and outreach in the community. The project received support from the California Integrated Waste Management Board and was supported by interested teachers, parents and volunteers.

Two of the three school sites showed a reduction in the food waste stream. The data from this study was only available for the initial year of the project.

Havstad Cynthia and Wheeler Lynn, *Davis Joint Unified School District Food Waste Diversion Project Final Report*, 2001.

ESY-CA: THE EDIBLE SCHOOLYARD AT MARTIN LUTHER KING JR. MIDDLE SCHOOL, BERKELEY, CALIFORNIA

Martin Luther King Jr. Middle School
Berkeley, CA

Free / reduced meal eligibility: 38.4%
Total schools: 1
Enrollment: 886
Demographics: 33.6% White, 25.2% African-American, 19% Hispanic
Local product used in: Garden produce used in kitchen classroom
Other program components: Organic Garden, Kitchen Classroom, ecological and environmental education

The mission of The Edible Schoolyard is to create and sustain an organic garden and landscape that is fully integrated into the school's curriculum and lunch program. It involves the students in all aspects of farming the garden along with preparing, serving and eating the food.

An evaluation of the first two years of the ESY-CA program was conducted by the Center for Ecoliteracy and published in 2003. The study focused on the experiences and learning patterns of participating students at Martin Luther King Jr. Middle School. Participants spent time in ESY's garden and kitchen classroom, compared with other students from another Berkeley middle school with no garden or kitchen classroom on its school grounds at the time of this research. This initial study focused on the holistic pattern of education for sustainability, including: ecological knowledge and understanding; environmental attitudes and behaviors; cooperative school culture (e.g. improvement in self-esteem, interpersonal relationships, and attitude toward school); and sense of place. In addition, the study included children's health by looking at their attitudes, beliefs, and knowledge regarding fruits and vegetables.

Information sources included both qualitative and quantitative data. Data were derived from surveys and interviews with students, school leaders, teachers, and parents. The research team consisted of several researchers who looked at school records to assess grades, test scores, and attendance. One hundred five sixth graders, half from the Martin Luther King Jr. Middle School and half from the control school, were surveyed for this study. Pre-and post-assessments took place at the beginning and end of the school year, respectively.

Sixty-four teachers from the two schools filled out surveys about educational climate and 26 ESY teachers contributed information about the subjects and students they taught. The assessment tools looked for students to: identify fruits, vegetables, and parts of plants; order eleven garden-cycle scenes; demonstrate their understanding of ecological concepts; reflect upon their sense of place by ascertaining if the students knew the name of the closest bay as well as where the water for this bay originates; and probe each student's relationship to the environment.

Education for Sustainability. Findings from the Evaluation Study of the Edible Schoolyard, April 2003.

FFF-IL: FRESH FROM THE FARM PROGRAM AT LOZANO BILINGUAL AND INTERNATIONAL CHARTER SCHOOL (LBICS)– A PROJECT OF SEVEN GENERATIONS AHEAD, ILLINOIS

Lozano Bilingual and International Charter School, Chicago, IL

Free / reduced meal eligibility: 95%
Total schools: 1
Enrollment: 615
Demographics: 93% Hispanic, 4% African-American, 3% White
Local product used in: Classroom taste tests as part of curriculum
Other program components: School garden, farm tours, parent education, local foods market basket program for parents and teachers

Seven Generations Ahead and its project partner, Growing Power, implemented a myriad of activities related to local food and nutrition education at Lozano Bilingual School in Chicago, IL.

An evaluation of 2005-06 year activities was conducted to assess the impacts of the Fresh from the Farm (FFF) curriculum implementation at LBICS on healthy eating and lifestyle changes in students and parents. The FFF program aimed to change student knowledge, attitudes, and behavior related to food and nutrition through implementation of an eight week curriculum in grades five and six at LBICS. Students in participating classrooms completed pre and post curriculum surveys (N=69). A farm field trip was conducted and evaluated using a survey (N=75). Parents (40 pre and 32 post) completed surveys designed to assess their perception of their children's eating behaviors and their own knowledge and attitudes about food and nutrition. Another goal of the program was to increase parental knowledge and change attitudes about diet and nutrition through a Health Eating Night event, and 19 parents evaluated this event.

A more rigorous assessment of what students were actually eating during the day was not feasible. The impact of FFF on parental knowledge and attitudes was not as clearly defined. Since this was a one-time intervention, it was not possible to follow up. For a more lasting and substantial effect, parents need to be engaged through regular interactions and involvement in the curriculum activities.

The results generally showed a positive effect of the program, but it is not known if the results were lasting or resulted in sustained behavioral changes. Funding was provided by the USDA Community Food Projects Competitive Grants.

The evaluation of the program was led by researchers from the Center for Food & Justice, UEPI, Occidental College.

Joshi A and Azuma AM, Y*ear One Evaluation Report: Fresh from the Farm Program Implementation at Lozano Bilingual and International Center Schoo*l, Chicago, October 2006.

Joshi A, Kalb M, Beery M, *Going Local: Paths to success for farm to school programs.* Case study "Illinois: Fresh from the Farm -and into the Classroom," December 2006.

FTK-PA: FARM TO KINDERGARTEN INITIATIVE, THE FOOD TRUST, PENNSYLVANIA

The Food Trust's Kindergarten Initiative reached out to kindergarten students in several Philadelphia public schools, with the goals to increase children's consumption of nutritious foods, increase their awareness of where food comes from, and instill in them an appreciation for farms and farmers. Kindergarten students were served healthy snacks sourced and made from local products thrice a week and offered nutrition education in the classroom; parents were also offered nutrition education sessions.

After a successful year of pilot programs in four schools, FTK-PA expanded to six new schools in 2005-06. Schools that were eligible to participate were ranked in order based on a random number assignment and systematically approached until six gave their consent. Thereafter, three schools were randomly assigned to receive the intervention while the remaining schools served as controls. In return for participation, the control schools receive the program the following year.

Philadelphia Public Schools, PA

Free / reduced meal eligibility: 76%
Total schools: 291 public, 55 charter
Enrollment: 196,309
Demographics: 14.5% Hispanic, 65.5% African American, 14.2% White, 5.3% Asian, 2% Native American
Local product used in: Snacks served to kindergarten students
Other program components: Nutrition education curriculum, parent education, teacher training

Across the six schools, a total of 201 kindergartners consented to participate. A wide range of outcomes were measured by this study including changes in student knowledge about healthy diets, local foods and farming, ability to read food labels, preference for healthy foods, body mass index, literacy, parent's dietary intake, parent involvement and knowledge. Teachers were also asked to provide feedback on a teacher training conducted as part of the initiative.

Funding support was provided by the Claniel Foundation and the USDA Food Stamp Nutrition Education Program.

The Food Trust, *Kindergarten Initiative Evaluation Report* February 2007.

The Food Trust, *Kindergarten Initiative, 2004-05 Evaluation results*.

The Food Trust, *School Market Program End of the Year Evaluation Report* 2003-04.

FTS-MA: MASSACHUSETTS FARM TO SCHOOL PROGRAM, MASSACHUSETTS

Massachusetts Public Schools (statewide data)

Free / reduced meal eligibility: 27.7%
Total schools: 1878 public; 57 charter
Enrollment: 975,574
Demographics: 11.8% Hispanic, 8.9% African American, 74.2% White, 4.8% Asian / Pacific Islander, 0.3% Native American
Local product used in: School cafeterias
Other program components: School gardens

The Massachusetts Department of Agricultural Resources (MDAR) has been matching up schools and farmers as they try to make that "locally grown connection." Primarily funded by MDAR, the FTS-MA has assisted more than 30 public school districts and colleges find ways to buy and prepare locally grown foods on a regular basis. Sustainable sales routes for local farmers have been developed. The program stated that it has been inspiring to see school systems as large as Worcester and as small as Maynard beginning to serve fresh local foods in their cafeterias. In their opinion, good communication at the beginning of the process, including between school food service directors and their frontline staff was crucial to make this work. Between June 2005 and May 2006, Massachusetts farmers selling to Massachusetts schools grossed more than $55,000 in K-12 sales and more than $80,000 in college sales. The majority of these sales were made by Czajkowski Farm and Lanni Orchards and there were about 45 school districts, private secondary schools, and colleges involved in purchasing from Massachusetts farms.

Future efforts for promoting farm to school will involve engaging K-12 food management companies, encouraging them to buy direct from farmers. While this is a preferred method, as it can mean more dollars going directly to farmers, a team of farm to school organizers is also working on developing a preferred vendor list that would be available to institutions. This would include a seal of approval for vendors who purchase direct from local farms.

An extensive evaluation of the FTS-MA program was not been conducted, though the program was been monitored and data made available through a MDAR consultant working on farm to school programming.

Joshi A, Kalb M, Beery M, *Going Local: Paths to success for farm to school programs.* Case study "Massachusetts: Sowing Seeds in Farms and Schools," December 2006.

LSB-CA: LOS ANGELES UNIFIED SCHOOL DISTRICT (LAUSD), CALIFORNIA – PILOT SALAD BAR PROGRAM

Los Angeles Unified School Disitrct, CA

Free / reduced meal eligibility: 77.2%
Total schools: 768
Enrollment: 722,319
Demographics: 73.2% Hispanic, 11.4% African American, 8.8% White
Local product used in: Salad bars as a USDA reimbursable meal option
Other program components: Salad bar etiquette training, nutrition and health education, trips to farms and farmers' markets

In the fall of 1999, a pilot salad bar program and nutrition education were implemented by LAUSD Department of Food Services and the Center for Food & Justice (then called the Community Food Security Project). Collaborators from the UCLA School of Public Health conducted an evaluation to measure possible changes in fruit and vegetable consumption of elementary school children attending three schools in the LAUSD after the introduction of the salad bar program. Nutrition education components included salad bar etiquette training, simple messages about health benefits of fruits and vegetables, and trips to farms and farmers' markets. This was a pre-post study, i.e. baseline data was collected using the same tools and methodology before the implementation of the salad bar program. Schools participating in the program evaluation were: 59th Street, Castelar, and 42nd Street Elementary Schools. The student evaluation components included:

1. Ninety-six and 241 children who lived in low-income neighborhoods were interviewed for 24-hour dietary recall in the years 1998 and 2000, respectively. To be included in the study, the children needed to attend one of the three pilot salad bar schools, be in the second to fifth grades at the onset of the study, and return informed consent forms signed by parents or guardians. Participation in the study was voluntary. Food intake was analyzed using the Food Intake Analysis System (FIAS) developed by the Human Nutrition Research Center at the University of Texas School of Public Health Version 3.98.

2. Lunch room observations were conducted in year 2000.

3. Focus group discussions were conducted in the three schools at the beginning, middle and end of the study period to assess the nutritional information delivered and the children's attitudes towards the salad bar. A total of 13 focus group discussions were held.

This study used a 24 hour dietary recall method to assess fruit and vegetable consumption in students. Regardless of the age of the child, the average frequency of fruits and vegetables consumed increased after the introduction of the salad bar. The increase in frequency of fruits and vegetables consumed as reported in this study and the associated reductions in intake of fats is consistent with previous studies conducted.

Slusser WM, Cumberland WG, Browdy BL, Lange L, Neumann C. *A school salad bar increases frequency of fruit and vegetable consumption among children living in low-income household*s. Public Health Nutrition. Published online 5 July 2007.

MIG-MI: MIXED GREENS PROGRAM, MICHIGAN

Grand Rapids Public Schools, MI

Free / reduced meal eligibility: 78%
Total schools: 42 (23 receive LOOP program)
Enrollment: 2,324
Demographics (Grand Rapids City): 67.3% White, 20.4% African American, 13.1% Hispanic, 1.6% Asian
Local product used in: Local food tastings
Other program components: School gardens

The purpose of the Mixed Greens Program was to improve the health and academics of children by re-establishing their relationship to whole foods through the use of vegetable gardens and kitchen classrooms.

Mixed Greens offered after-school programming and summer enrichment programming at three Wyoming Public Schools, three Grand Rapids Public schools, and one community center (Grandville Avenue Academy for the Arts), as well as school day programming at one Grand Rapids Public School through the Snack Facts and Brain Breaks programs, offered in conjunction with the USDA Fruit and Vegetable grant the school received. More sites were expected to be added in the future.

The Grand Rapids after school program called LOOP was run by three community partners: Camp Fire USA, City of Grand Rapids Department of Parks and Recreation, and the YMCA. The Wyoming Public Schools after school program called TEAM 21 was run by the City of Wyoming Parks and Recreation Department and funded through a 21st Century Community Learning Centers grant.

The programs included a once a week garden program at the school based on themes such as trying out new foods, learning about foods grown in Michigan, seasonal plants, harvesting, garden maintenance, and nutrition. Other activities presented in the garden setting included math, spelling, geography, literacy, yoga, teamwork, and the environment. Students were also taken on farm field trips.

Evaluations of the summer programs of 2005 and 2006 were available that included information collected through "Veggie Votes" (developed by Mixed Greens in collaboration with Spectrum Health and the C.S. Mott Group for Sustainable Agriculture, Michigan State University). Veggie Votes was a tool developed to assess students' preferences and changes in attitudes towards specific vegetables as a result of taste tests conducted.

S*ummary of Mixed Greens Veggie Vote Analyses*, Academic Year 2005-2006.

Triant Sally Laughter, Ryan Ashley, *Mixed Greens: City of Wyoming Parks and Recreation Summer 2005 Programming Evaluation.*

MLS-MT: MISSOULA COUNTY FARM TO SCHOOL, MONTANA

Montana's first pilot farm to school program was implemented in August 2005 in the Missoula County Public School District (MCPS). Two "Montana Made Meal Events" in 2005-06, through which 3,000 students received a meal made from locally grown ingredients, helped set the stage for a more comprehensive program at the district. In the 2006-07 school year, several Montana grown products such oats, whole wheat flour, peaches, apples, cantaloupes, carrots, cucumbers, potatoes, zucchini, cheese, pasta, honey and salad greens were introduced in the school cafeterias.

Educational aspects of the program include classroom lessons about where food comes from, how it is processed and prepared, farm trips, taste tests of Montana grown products and cooking demonstrations.

The Missoula Farm to School Program has broad support of the community and school board. The Community Food Security Coalition (which Farm to School is a project of) has focussed efforts on addressing challenges associated with local food procurement at institutional level, such as need for value-added products, distribution and delivery systems at state and regional levels. The coalition has organized many community meetings to bring together food service staff, producers and distributors to discuss these issues.

Though an extensive evaluation of the program has not been conducted so far, data is available through information available from reports cited below.

Missoula County Public School District, MT

Free / reduced meal eligibility: 35.5%
Total schools: 16
Enrollment: 13,375
Demographics:
1.5% Hispanic, 1.0% African American, 91.5% White, 4.1% American Indian/ Alaskan Native, 1.8% Asian, 0.1% Native Hawaiian/ Pacific Islander
Local product used in:
Cafeteria meals, taste tests
Other program components:
Classroom-based education, farm tours

Dillon C, Counties and Local Food Systems, Ensuring Healthy Foods, Nurturing Healthy Children. National Association of Counties p 11-13, July 2007.

Missoula County Public Schools Resolution www.farmtoschool.org/mt/montanaFTSResolution.pdf

Unlocking the Food Buying of Montana's Public Institutions. *Towards a Montana-based Food Economy*, Grow Montana, 2006.

OSB-WA: ORGANIC CHOICES SALAD BAR AT OLYMPIA SCHOOL DISTRICT, WASHINGTON

Olympia School District, WA

Free / reduced meal eligibility: 20.4%
Total schools: 18
Enrollment: 9,231
Demographics:
78.9 % White, 9% Asian, 5% Hispanic
Local product used in:
Organic Choices Salad Bar offered daily
Other program components:
Nutrition and environmental education, strong parent involvement, taste tests, promotional activities for Organic Choices Salad Bars, organic garden, greenhouse, students involved in harvesting and selling garden product, children activity kitchen, Harvest Festivals, composting and recycling program

The Olympia School District in Washington state piloted an Organic Choices Salad Bar in October 2002 at Lincoln Elementary. The pilot program was started when a concerned parent from Lincoln Elementary approached the Child Nutrition Supervisor at the district about the quality of school lunches. As a result of several meetings between parents, teachers, community members, the school principal and the Child Nutrition Supervisor, a new meal program was designed for Lincoln Elementary.

Many other schools expressed interest in the pilot program at Lincoln, and by 2003, four others had added organic choices to their cafeterias - Pioneer Elementary, Boston Harbor Elementary, Griffin School District, and Garfield Elementary. The "Organic Choices Salad Bar" resembled a restaurant style salad bar featuring organic fruit and vegetable choices, whole grain bread, vegetarian meat alternatives, eggs, and organic soy milk. The salad bar could be chosen as a complete meal or in combination with hot lunch options.

The OSB-WA program was supported by the district's Child Nutrition Supervisor and received strong support from the parent community.

Data from this program was available from reports written on the project for school year 2003 – 04.

Flock Paul et al. *A Salad Bar Featuring Organic Choices: Revitalizing the School Lunch Program*, 2003.

RHM-CA: RIVERSIDE HARVEST OF THE MONTH PROGRAM, CALIFORNIA

The RHM-CA program was initiated at Jefferson Elementary School in October 2005, to support the existing Farm Fresh Salad Bar offering in the cafeteria. The project was implemented and evaluated by the Center for Food & Justice, Occidental College.

Supported by the California Network for a Healthy California, project activities included monthly taste tests of local produce items; development and promotion of nutrition education materials; farmers market tours for students, teachers and parents; farmer visits to classrooms; gardening and parent education activities. A total of 629 students, teachers and parents were reached during this project.

Two farmers who supplied to the salad bar program in the cafeteria also participated in the farmer in the classroom activities. The project was most successful in creating a year-round program that provided innovative and recurring nutrition education opportunities for third grade students.

Riverside Unified School District, CA

Free / reduced meal eligibility: 47.5%
Total schools: 47
Enrollment: 43,052
Demographics: 50.6 % Hispanic, 34.5% White
Local product used in: Taste tests, in-class nutrition education
Other program components: Farm Fresh Salad bars, tours to farms and farmers markets, farmer in the classroom, school garden, parent education

Pre and post tests were used to evaluate the effectiveness of the project for teachers involved in activities. Evaluation activities for students were planned, though only those involving teachers were conducted, due to changes in the district's calendar and delays in receiving Human Subjects Research approvals from the Institutional Review Board.

Limited data was available from this project evaluation. The project may continue at this school, Jefferson Elementary, in the coming years, with potential for collecting more detailed information on the impacts of the nutrition education on student knowledge, attitudes and behaviors about nutrition and healthy foods.

California Nutrition Network for Healthy, Active Families, Annual Report for "Riverside Harvest of the Month," project number 05-46018, 2006.

RSD-CA: RIVERSIDE UNIFIED SCHOOL DISTRICT (RUSD), CALIFORNIA

Riverside Unified School District, CA

Free / reduced meal eligibility: 47.5%
Total schools: 47
Enrollment: 43,052
Demographics: 50.6 % Hispanic, 34.5% White
Local product used in: Salad bars as USDA reimbursable meal
Other program components: In-class nutrition education, salad bar etiquette trainings, farm tours, farmer in the classroom, Harvest of the Month program

The RSD-CA program was started off at Jefferson Elementary School in March 2005. The evaluation of the RSD-CA program focused on the implementation of the program at one school only (Jefferson), though the program has since expanded and as of January 2007 was operational in five schools. The evaluation was conducted by the Center for Food & Justice, Occidental College. Indicators studied were:

- School District Produce Purchases: Monthly data on total fruit and vegetable purchases for the district and for the two local farmers was collected from invoices and year-end budgets.
- Student Meal Participation: Collected on a monthly basis for salad bar and hot meal options at Jefferson Elementary.
- Student Food Choices: (a) Food service daily production records were collected at Jefferson Elementary to analyze the number of servings of fruits and vegetables per student for salad bar and hot lunch.
- Challenges/Lessons Learned: Interviews with key stakeholders, including the salad bar coordinator, the food service director, kitchen personnel, school principal and farmers were conducted.
- Financial Viability: Some data necessary to calculate the cost of the salad bar meal versus the hot meal and the financial viability of the program was collected. However, CFJ realized that there was inadequate data to make any inferences on this indicator.

The Jefferson Farm to School pilot program was supported by a two year grant from The California Endowment, which also supported the evaluation activities. Thus, data from this project was only available over a two year period and only for one school site. An in-depth evaluation of the fiscal viability of the program at the school district level as well as gathering impact evaluation data from all the school sites may be useful.

Unlike some other programs which report difficulties in obtaining food service records, data collection for this evaluation was made easier due to a supportive food service director and staff at RUSD.

Riverside Farm to School Demonstration Project, Final Grant Report December 1, 2004 to November 30, 2006, submitted by Center for Food & Justice, UEPI, Occidental College to the California Endowment.

SFP-NY: SCHOOL FOOD PLUS PROGRAM, NEW YORK CITY SCHOOLS, NEW YORK

New York City Schools (citywide data for 2005-06)

Free / reduced meal eligibility: 73.7%
Total schools: 1,456
Enrollment: 10,71,630
Demographics (2004-05 data): 14.3 % White, 33.1 % African American, 39% Hispanic, 13.5% Asian and others
Local product used in: School meals
Other program components: Recipe development/ testing, review of nutrition standards, CookShop / other curricula, Cafeteria as a Classroom program, SPARK physical education program, coalition building nutrition interventions for parents/ community

SchoolFoodPlus was a project of FoodChange. Market Ventures, Inc. in partnership with Karp Resources and the Center for Health & Public Service Research at New York University were retained to evaluate the SchoolFoodPlus Initiative.

The logic model for the SchoolFoodPlus evaluation reflected the three pronged approach toward achieving the goals of improving children's health and academic performance while invigorating the state's agricultural economy. These included institutional change within the New York City Office of SchoolFood (OSF), school-based programming, and coalition building.

Most of the school-based programming for SchoolFoodPlus took place at the elementary school level in three targeted neighborhoods around New York City. These were low income neighborhoods identified as catchment areas for intense focus – East and Central Harlem, the South Bronx and Central Brooklyn. Key questions the evaluation was designed to answer were:

1. How have SchoolFood Plus recipes been utilized by OSF and participating schools?

2. Has students' consumption of SchoolFood Plus recipes increased in participating schools and why?

3. Has SchoolFood Plus led to increases in the number of students eating school meals?

4. How have students, teachers, administration, parents, and coalition partners responded to SchoolFood Plus?

5. Does participation in CookShopB Cafeteria or CookShopB Classroom lead to change in knowledge, attitude, and behavior about food, farming, cooking, and consumption compared to non-participants?

6. Have the three different combinations of SchoolFood Plus programming (cafeteria only, classroom only, or saturation intensive model) led to different outcomes in terms of student knowledge, attitudes, behavior, and program satisfaction?

7. How has procurement of locally grown fruits and vegetables changed as a result of SchoolFood Plus and who are the participating farmers?

8. How has participating in SchoolFood Plus affected local farmers, individually and in aggregate?

9. What value have the various coalitions added to the SchoolFood Plus program?

School Food Plus Evaluation, Interim Evaluation, Phase 2 Report, October 2005.

School Food Plus Interim Evaluation Phase 3 Report, April 2007.

SMM-CA: SANTA MONICA-MALIBU UNIFIED SCHOOL DISTRICT (SMMUSD), CALIFORNIA

Santa Monica-Malibu Unified School District, CA

Free / reduced meal eligibility: 24.7%
Total schools: 17
Enrollment: 12,191
Demographics: 57.1% White, 26.9% Hispanic
Local product used in: Daily salad bars as USDA reimbursable meal
Other program components: In-class nutrition education, farm tours, farmer in the classroom, school gardens

The SMMUSD Farmers' Market Salad Bar was the first of its kind in the Los Angeles area and in the nation. The program began in 1997 at one elementary school and within four years had expanded to include all 14 elementary, middle and high schools in the district. The salad bar was prepared fresh daily from ingredients purchased at the local farmers' market by a salad bar coordinator at each site. Every day students were given a choice of a hot meal or the salad bar for their lunch.

Major funding for this program came from a Network for a Healthy California (previously California Nutrition Network) grant and donations from the Parent Teacher Association. After ten years in operation, the Farmers' Market Salad Bar became institutionalized as a lunch option and was independent of any outside funding with the exception of an annual grant of $10,000 from the City of Santa Monica.

An evaluation of the first three years of operation of this program was undertaken by the Center for Food & Justice, Occidental College (previously the Community Food Security Project). Major components of the evaluation were:

- School District Produce Purchases: Data on the district's purchases from local farmers was tracked over the 1999-2000 school year including total direct fruit and vegetable purchases for the district and for four study schools collected from invoices and year-end budgets.
- Student Participation: Average daily participation collected for all salad bar schools before and after the introduction of the salad bar, as well as comparison data for number of students choosing salad bar versus hot meal.
- School Food Service Fiscal Feasibility: Analysis of school food service budgets for the 1998-99 school year was conducted to determine the costs and feasibility of maintaining a salad bar program.

After ten years in operation, the project still receives strong support from parents, teachers and administrators in the district, as well as from the City of Santa Monica through its Farmers' Market program.

Data from this project was ground breaking since this was one of the pioneering farm to school programs. However, it does not provide trend data over the three years studied, nor is it able to establish pre-post comparisons regarding the impacts of the program.

Gottlieb R, Mascarenhas M: Evaluation of the Santa Monica Farmers' Market Salad Bar Program. Center for Food & Justice, Occidental College, Los Angeles, 2001.

VEN-CA: VENTURA UNIFIED SCHOOL DISTRICT FARM TO SCHOOL "HEALTHY SCHOOLS PROJECT," CALIFORNIA

Ventura Unified School District, CA

Free / reduced meal eligibility: 37.4%
Total schools: 29
Enrollment: 17,545
Demographics:
49% White, 38.6% Hispanic, 2.5% Asian, 1.1% American Indian
Local product used in:
Salad bars
Other program components:
In-class nutrition education, school gardens, farm tours, farmer in the classroom

The Healthy Schools Project at Ventura Unified School District was designed to promote healthy nutritional behaviors and to teach students how to make healthy choices now and throughout their lives. The program consisted of sequential nutrition education, garden-enhanced nutrition education, and a school salad bar lunch program. The evaluation of the Ventura program was led by Heidi Christensen in the 2001-02 school year and focused on Juanamaria Elementary School, the first to implement the farm to school program in the district. Key objectives of the evaluation plan were to:

1. Monitor implementation of program components (sequential nutrition education, garden-enhanced nutrition education, farm-fresh school salad bar lunch program).

2. Determine the effectiveness of program components on children's, parents', and school staff's knowledge, attitudes, and behavior, particularly in terms of the following:

- Salad bar usage by students and staff
- Changes in dietary habits of participating children
- Changes in nutritional knowledge of participating children
- Changes in student awareness of issues regarding the production, consumption, and disposal of food waste.

3. Examine the practical and financial viability of the salad bar program, especially as related to sustainability and generalizability to other schools. Information on financial issues of the farm-fresh salad bar component was collected.

Because components of the project had been implemented prior to the evaluation, it was not possible to administer pre-test surveys to the Juanamaria students. In order to provide comparative data, students at two elementary schools with planned but not yet completed implementation of the Healthy Schools components were also surveyed. These students served as a control group for the Juanamaria students. It is important to note that there were demographic differences between the control group students and the Juanamaria students.

Qualitative data was collected through a series of interviews and focus groups by the evaluator. Interviews were conducted with the Juanamaria principal, Juanamaria teachers, and food service staff (district and school-level). Focus groups were held with twenty randomly selected fourth and fifth grade students. Only upper grade students were chosen for the focus groups because of their increased capacity for reflection, insight, and verbal expression. Unfortunately, access to randomly selected parents for interview or survey purposes could not be attained but is expected to be accomplished in the future. Also missing is the measurement of students' awareness of waste issues related to food.

Christensen, Heidi. *Juanamaria Healthy Schools Project Final Evaluation Report.* Ventura County Superintendent's Office. 2003.

WSD-CA: WINTERS JOINT UNIFIED SCHOOL DISTRICT, CALIFORNIA

Winters Joint Unified School District, CA

Free / reduced meal eligibility: 48%
Total schools: 16
Enrollment: 1,940
Demographics:
63.6 % Hispanic, 43.2% White
Local product used in:
Once a week salad bars offered as USDA reimbursable meals
Other program components:
In-class nutrition education, school gardens, farm tours

Winters' Farm to School program was initiated in 2002 as a pilot demonstration site supported through a grant from the W.K. Kellogg Foundation received by the Center for Food & Justice, Occidental College. The program evaluation was conducted by the University of California Sustainable Agriculture Research and Education Program (SAREP) from 2002-04. In the first year of the project, one school implemented the farm fresh salad bar (Rominger Elementary). In the second year, Waggoner Elementary also started implementation. Evaluation components included:

School District Produce Purchases: Monthly data on total fruit and vegetable purchases for the district and for the two schools was collected from invoices and year-end budgets.

School Meal Participation Rates: Average daily participation collected from both schools, 2002-04 to compare participation on salad bar and non-salad bar days, as well as salad bar and hot meal option.

Student Food Choices: Collected food service daily production records to analyze the number of servings of fruits/vegetables per student in the two schools – salad bar and hot meal option.

School Food Service Fiscal Feasibility: Analysis of school food service budgets for two schools for the 2002-04 school years to determine the costs and feasibility of maintaining a salad bar program.

Challenges/Lessons Learned:

Interviews with key stakeholders, including the salad bar coordinator, the food service director, kitchen personnel, farmers, teachers, and principals were conducted.

The two year trend data available from WSD-CA was valuable in understanding how the program operated in those years. In 2006, Winters Joint Unified School District hired a new food service director, who continued with the once a week salad bar program, but was not buying the salad bar foods from the local farmers. The reasons for discontinuing relate to the cost of the food and associated labor. Due to previous connections made with local farms, some farmers sometimes offered excess crops to the school district to be served to students.

Feenstra Gail and Ohmart Jeri, UC Sustainable Agriculture Research & Education Program. *Yolo County Farm to School Evaluation Report.* 2005

Feenstra Gail and Ohmart Jeri. *Yolo County Farm to School Evaluation Report* for the California Farm to School Program, Center for Food & Justice, Occidental College. October 2004.

Notes

About Your Food Service Operation:

For questions 1 to 14, base your response on the current (2003-2004) school year.

1. How many students are enrolled in your school district? _____

2. How many K-12 schools are in your school district? _____

3. In which county is your school district located? _____

4. How is your school food service operation managed?
__ Self-managed
__ Contracted-managed
Name of management company: _____

5. What is your annual food service budget?
Food: $_____
Labor (not including benefits): $_____
Total Operating Costs: $_____

6. During the school year (September through June), approximately how many reimbursable meals are served each day?
Number of breakfasts: _____
Number of lunches: _____
Number of dinners: _____

6a. How many after school snacks are served each day? _____

7. What percent of students are eligible for free/reduced meals? _____%

8. What is the price charged for a full-price lunch in your:
Elementary school(s): $_____
Middle school(s): $_____
High school(s): $_____

9. Did your district provide a summer feeding program in 2003? (Summer feeding programs include meals provided to children in summer camps and other organizations as well as meals provided through National School Breakfast and Lunch Programs.)
__ Yes
__ No

9a. If yes, what was the total number of meals (breakfasts and lunches combined) served during the summer season? _____

10. Do you plan to offer a summer feeding program in 2004?
__ Yes
__ No

11. Do you have salad bars in your district?
__ Yes
__ No

12. Do you sell fresh fruits and vegetables a la carte in your school district?
__ Yes
__ No

13. Do you sell fresh fruit and vegetables in vending machines in your district?
__ Yes
__ No

14. The following is a list of equipment helpful in preparing and serving fresh fruits and vegetables. For each piece of equipment, please select the appropriate response for your primary kitchen.

Equipment	Don't have	Don't have, but need	Have, but need more	Have enough
Apple corer				
Cutting boards				
Floor or countertop vegetable chopper				
Fruit/vegetable wedger				
Fryer				
Industrial food processor				
Industrial mixer				
Knives				
Oven				
Salad bar				
Sinks				
Slicer				
Any additional equipment you find helpful				

Current Buying Practices:

15. Do you purchase any food items through a cooperative bid process?
__ Yes
__ No

15a. If yes, what categories of food do you purchase this way? (Please select all that apply)
__ Fresh fruits and vegetables
__ Dairy products (milk, ice cream, and cheese)
__ Meats
__ Canned or frozen fruits and vegetables
__ Bread
__ Other: _____

16. Do you have a prime vendor from whom you purchase a majority of food items?
__ Yes
__ No

16a. If yes, name of vendor: _____

17. Do you purchase any fresh fruits and vegetables from this vendor?
__ Yes
__ No

18. Does your district purchase fresh fruits and vegetables from any other sources?
__ Yes
__ No

18a. If yes, from what other sources does your district purchase or receive fresh fruits and vegetables? (Please select all that apply.)
__ Produce vendor
__ Farmer
__ Division of Donated Foods
__ Department of Defense Fresh Program
__ Other: _____

19. In your district, how many schools do all, part, or none of the meal preparation on site?
All of the meal preparations on site: _____
Part of the meal preparations on site: _____
None of the meal preparations on site: _____

Please complete questions 20 to 22 based on food used during the current year. (If your school participated in either the food service program, or in providing food to camps or other childcare programs in the summer, please include that data as well.)

20. What were the top 5 WHOLE FRESH FRUITS OR VEGETABLES purchased? (e.g., whole potatoes, whole apples, whole pears)

1) Name of Fruit or Vegetable:
Unit of Purchase: _____
Average number of units purchased at One Time: _____
Frequency of Purchase: _____
Average cost per unit: _____

2) Name of Fruit or Vegetable:
Unit of Purchase: _____
Average number of units purchased at One Time: _____
Frequency of Purchase: _____
Average cost per unit: _____

3) Name of Fruit or Vegetable:
Unit of Purchase: _____
Average number of units purchased at One Time: _____
Frequency of Purchase: _____
Average cost per unit: _____

4) Name of Fruit or Vegetable:
Unit of Purchase: _____
Average number of units purchased at One Time: _____
Frequency of Purchase: _____
Average cost per unit: _____

5) Name of Fruit or Vegetable:
Unit of Purchase: _____
Average number of units purchased at One Time: _____
Frequency of Purchase: _____
Average cost per unit: _____

21. What were the top 5 PREPARED OR PROCESSED FRESH FRUITS OR VEGETABLES purchased? (I.e., salad mix, baby carrots, broccoli florets, etc.)

1) Name of Fruit or Vegetable:
Unit of Purchase: _____
Average number of units purchased at One Time: _____
Frequency of Purchase: _____
Average cost per unit: _____

2) Name of Fruit or Vegetable:
Unit of Purchase: _____
Average number of units purchased at One Time: _____
Frequency of Purchase: _____
Average cost per unit: _____

3) Name of Fruit or Vegetable:
Unit of Purchase: _____

Average number of units purchased at One Time: _____
Frequency of Purchase: _____
Average cost per unit: _____

4) Name of Fruit or Vegetable:
Unit of Purchase: _____
Average number of units purchased at One Time: _____
Frequency of Purchase: _____
Average cost per unit: _____

5) Name of Fruit or Vegetable:
Unit of Purchase: _____
Average number of units purchased at One Time: _____
Frequency of Purchase: _____
Average cost per unit: _____

22. In the table below, the DARK SHADED areas represent the months when the listed fruits and vegetables are available FRESH in New York state. For each fruit and vegetable, please indicate if you purchased it fresh REGARDLESS OF WHERE IT WAS GROWN during the NY availability period.

Example: If you purchased fresh pears from California or any other state anytime from August through November, you will choose "Yes."

Product Item	Purchased During Availability Period?		January	February	March	April	May	June	July	August	September	October	November	December
Fruits	Yes	No												
Apples			■	■	■	■	■	■	■	■	■	■	■	■
Blueberries									■	■	■	■		
Cherries								■	■					
Grapes										■	■	■		
Melons										■	■			
Peaches									■	■	■			
Pears										■	■	■	■	
Plums										■	■			
Raspberries									■		■	■		
Strawberries								■						
Watermelon										■	■			

NY Survey of K-12 Food Service Directors

Product Item	Purchased During Availability Period?		January	February	March	April	May	June	July	August	September	October	November	December
Vegetables	Yes	No												
Beans								■	■	■	■	■		
Beets									■	■	■	■	■	
Broccoli							■	■	■	■	■	■	■	■
Cabbage, green			■	■					■	■	■	■	■	■
Cabbage, red			■	■					■	■	■	■	■	■
Carrots			■	■	■	■				■	■	■	■	■
Cauliflower									■	■		■	■	■
Celery									■	■	■	■	■	
Corn									■	■	■			
Cucumbers										■	■	■		
Eggplant										■	■	■		
Lettuce									■	■	■	■		
Onions			■	■	■	■				■	■	■	■	■
Parsnips			■	■	■									
Peas								■	■	■				
Peppers									■	■	■	■		
Potatoes, baking			■	■	■	■				■	■	■	■	■
Potatoes, small/"salt"			■	■	■	■				■	■	■	■	■
Pumpkins											■	■		
Radishes							■	■	■	■	■	■	■	
Rhubarb							■	■	■	■				
Rutabagas			■	■	■							■	■	■
Spinach							■	■	■		■	■		
Squash, summer								■	■	■	■	■		
Squash, winter			■	■	■					■	■	■	■	■
Tomatoes									■	■	■	■		
Turnips			■	■	■				■	■	■	■	■	■

Making the Connection with Local Foods

For the purpose of this study, local foods are considered those foods grown in New York.

23. Many school food service directors purchase local foods either directly from a farmer or from their usual vendor. Have you ever purchased local foods?
__ Yes __ Not that I know of (SKIP TO QUESTION 26)

23a. If yes, please indicate which of the following local foods you have purchased either directly from a farmer or through a vendor. Please also indicate any local foods you have not yet knowingly purchased, but are interest in purchasing.

Local Vegetables	Farmer	Vendor	Not yet, but interested
Beans, green			
Beans, dry			
Beets			
Broccoli			
Cabbage, green			
Cabbage, red			
Carrots			
Cauliflower			
Corn			
Cucumbers			
Lettuce			
Onions			
Peppers			
Potatoes, baking			
Potatoes, small or "salt"			
Squash, summer			
Squash, winter			
Tomatoes			
Other:			

Local Fruits	Farmer	Vendor	Not yet, but interested
Apples			
Blueberries			

Cherries			
Grapes			
Melons			
Peaches			
Pears			
Plums			
Strawberries			
Watermelon			
Other:			

Local Meat	Farmer	Vendor	Not yet, but interested
Beef			
Chicken			
Pork			
Turkey			
Other:			

Local Dairy	Farmer	Vendor	Not yet, but interested
Milk			
Cheese			
Yogurt			
Other:			

24. How likely are you to continue purchasing local foods?

	Not likely	Somewhat likely	Very likely
Local vegetables			
Local fruits			
Local meat			
Local dairy			

Comments:

24a. If you are NOT LIKELY to purchase local foods again, please indicate why: (Please select all that apply)

__ Inconsistent quality
__ Unreliable source
__ Too much effort
__ Too expensive
__ Other, please specify: _____

25. From your observations, when you served local fruits and vegetables, did student intake increase, decrease, or stay about the same?

	Decreased	Stayed about the same	Increased
Local vegetables			
Local fruits			
__ I have not observed how local foods changed intake			

PLEASE SKIP TO QUESTION 27.

26. Do you have any interest in purchasing local foods?

__ Yes __ No
__ Not sure, or "it depends," please explain: _____

26a. If yes, please select the foods you are interested in purchasing:

Local Fruits
__ Apples
__ Blueberries
__ Cherries
__ Grapes
__ Melons
__ Peaches
__ Pears
__ Plums
__ Strawberries
__ Watermelon
__ Other: _____

Local Vegetables
__ Beans, green
__ Beans, dry
__ Broccoli
__ Cabbage, green
__ Cabbage, red
__ Carrots
__ Cauliflower
__ Corn
__ Cucumbers
__ Lettuce
__ Onions
__ Peas
__ Potatoes, baking
__ Potatoes, small or "salt"
__ Pumpkins
__ Spinach
__ Squash, summer
__ Squash, winter
__ Tomatoes
__ Other: _____

Local Meat
__ Beef
__ Pork
__ Chicken
__ Turkey
__ Other: _____

Local Dairy
__ Milk
__ Cheese
__ Yogurt
__ Other: _____

27. In your opinion, what are the potential benefits to serving local food in your district? (Please select all that apply.)

__ Students gain greater access to fresh fruits and vegetables
__ Schools support the local economy and the local community
__ Students have healthier diets
__ Schools know the sources of products

__ Transportation costs are lower
__ Local purchases result in good public relations
__ Schools can purchase variable quantities
__ Schools can purchase special varieties
__ Other: _____
__ In my opinion, there are no benefits to serving local food in my district

28. What would motivate you to increase the use of local foods in your district? (Please select all that apply)

__ More products available partially processed (baby carrots, salad mix, chopped onions, etc.)
__ More products available canned or frozen
__ Assurances of food safety
__ More producers in area from whom to purchase
__ One place to order from multiple farmers (I.e., farmer cooperatives)
__ Farmers contacting me and showing me their products
__Regulations that make it easier to purchase directly from farmers
__ Financial incentives for purchasing local food
__ Additional facilities and/or equipment in the school district to prepare food
__ Additional food service staff
__Programs for food service staff to increase culinary skills
__ Interest from parents or community member
__ Classroom teaching about local foods and agriculture
__ Support from district board of education
__ Other: _____

29. What concerns do you have about purchasing local foods? (Please select all that apply.)

__ Quality
__ Food safety
__ Adequacy of supply
__ Reliability of supply
__ Ordering procedures
__ Payment procedures
__ Delivery consideration
__ Seasonal availability of New York fruits and vegetables
__Potential threat to relationship with usual vendor
__ Product costs
__ Consistency of packaging
__ Other: _____

30. How important is each of the following to increasing the use of local foods in your district?

	Not at all important	Not very important	Somewhat important	Very important
A list of when local foods are available in New York state				
A list of local farmers willing to sell to schools				
Health and safety information about using local foods				
Regulatory information (I.e., procedures for buying from farmers)				
School-tested recipes and menus that incorporate local foods				
Promotional materials about local foods to display in the cafeteria				
Information and newsletters about local foods to share with families				
Examples of how other school districts use more local foods				
Vendor indicates on order sheet or in catalog where foods come from				

31. Which of the following steps has your district taken to link students with local farms and agriculture in the last three years? (Please select all that apply.)

__ Celebrated NY Harvest for NY Kids Week
__ Served meals featuring NY products
__ Provided education about NYS food and agriculture
__ Held a harvest festival
__ Invited a farmer to school
__ Taken students to visit a farm or farmers' market
__ Planted a school garden
__ Held a farmers' market at school
__ Visited the Cornell Farm to School Program website
__ Other: _____

Adapted from "Farm to School in New York State: A Survey of K-12 Food Serivice Directors" Cornell Farm to School Program.

OK Survey of Institutional Food Service Providers (Page 1 of 7)

1. My institution's consumers prefer most of their fruits:

□ Fresh
□ Frozen
□ Canned

2. My institution's consumers prefer their vegetables:

□ Fresh
□ Frozen
□ Canned

3. Does your institution utilize salad bars?

□ Yes □ No

3a. If yes and you represent a school district, how many schools in each category currently have salad bars?

High Schools _____

Middle Schools _____

Elementary Schools _____

4. Approximately what percent of menu items are: (a+b+c must total 100%)

a. Prepared at the service site _____%

b. Prepared at a central district processing site _____%

c. Prepared off site by a vender/caterer and delivered _____%

(Assume the site at which a food is "prepared" is where the most ingredients are brought together for a final dish. With the exception of fresh fruits and vegetables, heating a food is not considered "preparation".)

5. Please check all methods used to dispose of unneeded prepared food:

□ We donate to food banks
□ We donate to local charities
□ We allow employees to take food home
□ We sell excess foods
□ We place excess foods in the garbage or down a disposal
□ We make excess foods available to farmers or ranchers

□ We add excess foods to our composting arrangements

6. Are you a member of any purchasing cooperatives?

□ Yes □ No

a. If yes, does this cooperative arrange for product delivery?

□ Yes □ No

b. Name of cooperative: _____

7. Do you have a prime vendor from whom you purchase the majority of your food items?

□ Yes □ No

7a. If yes, is the company Oklahoma owned:

□ Yes □ No

8. Do you have a contract with a food vendor that prohibits your from making local purchases?

□ Yes □ No

9. Does your supplier require an exclusive agreement?

□ Yes □ No

10. How many days in advance of actual food preparation do you order food supplies?

Canned Food ____ days

Produce (fresh) ____ days

Dairy ____ days

Meats ____ days

Instructions: Please complete the following based on food used during your fast fiscal year (If your institution is a school and participates in summer food services, please include that data as well).

11. What were the top 5 FRESH PRODUCE purchases you made in 2000-2001?
(I.e. whole potatoes, whole apples, fresh strawberries, etc.)
1._____
2._____
3._____
4._____
5._____

12. What were the top 5 PREPARED PRODUCE purchases you made in 2000-2001?
(i.e. shredded lettuce, peeled carrots, etc)
1._____
2._____
3._____
4._____
5._____

Instructions: Please complete the following based on food used during your last fiscal year (If you institution is a school and participates in summer food services, please include that data as well).

13. What were the top 5 MEAT & DAIRY purchases you made in 2000-2001?
(i.e. hamburger, cold cuts, pork chops, cheeses, milk, eggs,)
1._____
2._____
3._____
4._____
5._____

14. Have you purchased foods from a local food producer in the last year?
(If no, skip to question #15)

□ Yes □ No

14a. If yes, what products have your purchased?

□	Pumpkins	□	Cabbage	□	Ground Beef
□	Lettuce	□	Mushrooms	□	Cheese
□	Peas	□	Cucumbers	□	Melons
□	Dairy Products	□	Blackberries	□	Squash
□	Spinach	□	Potatoes	□	Eggs
□	Tomatoes	□	Chicken	□	Pork
□	Sweet Corn	□	Grains	□	Pecans
□	Beans	□	Okra	□	Lamb
□	Strawberries	□	Onions	□	Other (please describe):

14b. Did you see an increase in fruit and vegetable consumption by consumers when serving locally produces foods?

□ Yes □ No

14c. Would you buy products from local producers again?

□ Yes □ No □ Not Sure

14d. If no, please describe why (check all that apply):

□ Inconsistent quality
□ Not reliable
□ Too much effort
□ Price
□ Other: please describe why _____

15. Please check information that would be helpful for you in making local food purchasing decisions. Check all that apply.

□ Information on local food programs from around the country
□ Lists of suppliers and products for local sources
□ Health and Safety information of local foods
□ Regulatory information:
(What are the rules about buying foods direct from farmers? Is it legal?)
□ Assistance in developing a system for buying from multiple sources
□ Assistance/research on consumers' vegetable & fruit serving preferences in your institution

16. I would purchase food directly from a local producer (grower/farmer) if price and quality were competitive and a source was available.

□ Strongly Agree
□ Agree
□ Disagree
□ Strongly Disagree
□ Uncertain

17. I would purchase locally produced foods if the Oklahoma Office of Central Purchasing offered local foods as a part of their contract services.

□ Strongly Agree
□ Agree
□ Disagree

□ Strongly Disagree
□ Uncertain

18. My institute would be willing to pay a higher price to buy locally produced foods to serve in cafeterias.

□ Strongly Agree
□ Agree
□ Disagree
□ Strongly Disagree
□ Uncertain

19. My institution would be interested in buying these foods from local producers. (Check all that apply)

□ Pumpkins
□ Lettuce
□ Peas
□ Dairy Products
□ Spinach
□ Tomatoes
□ Sweet Corn
□ Beans
□ Strawberries
□ Cabbage
□ Mushrooms
□ Cucumbers
□ Blackberries
□ Potatoes
□ Chicken
□ Grains
□ Okra
□ Onions
□ Ground Beef
□ Cheese
□ Melons
□ Squash
□ Eggs
□ Pork
□ Pecans
□ Lamb
□ Other (please describe): _____

20. What would motivate you to serve locally grown or processed food in your institution?
(Check all that apply)

□ Access to fresher food
□ Support local economy and local community
□ Higher consumption of fruits and vegetables
□ Buyer knows product sources
□ Lower transportation costs
□ Less use of pesticides
□ Higher quality food
□ Good public relations
□ Would help Oklahoma farms and/or Oklahoma businesses
□ Ability to purchase small quantities
□ Ability to purchase special varieties, types of produce
□ Other_____
□ None

21. What concerns do you have with regard to purchasing locally produced foods? (Check all that apply)

- □ Food safety
- □ Adequate volume
- □ Reliable supply
- □ Ordering method
- □ Payment arrangement
- □ Delivery consideration
- □ Prime vendor considerations
- □ Cost
- □ Package consistency
- □ Quality
- □ Other_____

22. What barriers currently stop you from purchasing foods directly from local producers?
(Check all that apply)

- □ State spending cap on discretionary purchases (Institutional food service must enter into formal contract for any purchases over a certain amount)
- □ Institutional (internal) purchasing policies
- □ Lack of local producers in area from whom purchase
- □ Other Regulations
- □ Lack of products available during certain time of the year
- □ Safety
- □ Budget
- □ Convenience (one-stop shopping)
- □ Lack facilities to handle large amounts of fresh produce/uncooked bulk meat, etc
- □ Lack staffing to prep large amounts of fresh produce/uncooked bulk meat, etc
- □ Other:

The Oklahoma Food Policy Council is interested in knowing what would encourage you to change your purchasing behavior to include more state produced and processed food. There are over one-hundred and thirty different types of food products made in Oklahoma.

23. Are you aware of the Made in Oklahoma program of Oklahoma Department of Agriculture (www.madeinoklahoma.net)?

□ Yes □ No

24. What percentage of the food you serve is Oklahoma grown or processed? (Please estimate if not know)

_____ %

25. Please identify the title of the person who makes your food purchasing decisions?

□ Nutritionist/dietician
□ Chef/food service director
□ Administrator
□ Financial officer
□ Other: _____

26. Does a nutritionist prepare your menu?

□ Yes □ No

27. If you represent a school, how many students do you serve daily on average?

□ Breakfast □ Lunch

The Oklahoma State Department of Agriculture and the Oklahoma Food Policy Council are working to link local food growers and school food service operations in Oklahoma. If you are interested in linking your institution's food service with local producers, and/or would like to know more about these connections, please provide your name and contact inform below. This information will only be used to link you with local producers, as a way to contact you and/or to send more information about local food connections in your area, and will be kept separate from your survey information.

28. Are you interested in connecting your institution with local food producers?

□ Yes □ No

29. If yes, may we share your name with producers in your area?

□ Yes □ No

Adapted from "Oklahoma Institutional Food Service Survey," The Oklahoma Farm to School Report, Oklahoma Food Policy Council, 2003.

PLEASE NOTE: You are being asked to participate in a survey sent to all food service director in Michigan contained in the Michigan Department of Education database. This survey is intended to aid the Department of Education in developing a Farm to School Program in Michigan. It is estimated that this will take 20 minutes of your time. Your participation in this survey is entirely voluntary, you may choose not to participate or you may refuse to or answer certain questions or discontinue your participation at any time without penalty or loss of benefits. Return of this survey will constitute informed consent. All information collected as part of this survey will remain confidential, it will be stored in a locked file in the offices of Dr. Hamm and the surveys will be destroyed after 3 years. Access to the surveys will be restricted to investigators approved through the MSU Human Subjects Review procedure. Your privacy will be protected to the maximum extent allowable by law. There are no anticipated risks to you for participating. It is anticipated that you, as a food service director, will benefit from helping determine the direction of a Farm to School Program in Michigan.

If you have any question about this survey, please feel free to contact Mike Hamm, 517-432-1611 or mhamm@msu.edu. If you have any questions or concerns regarding your rights as a survey participant you may contact-anonymously, if you wish- Peter Vasilenko, Ph.D., Chair of the University Committee on Research Involving Human Subjects (UCRIHS) by phone: (517) 335-2180, fax: (517) 432-4503, email: ucrihs@msu.edu, or regular mail: 202 Olds Hall, East Lansing, MI 48824.

Thank you very much for you participation.

Name:_____

School District or School:_____

1. Are you a member of any purchasing cooperatives?
__ Yes __ No

2. If yes, are you a member of?
__ SPARC
__ Great Lakes Cooperative (GLC)
__ Other: _____

3. Who are your major vendors (please list the percentage or purchases you make from these vendors)
1. _____ _____%
2. _____ _____%
3. _____ _____%
4. _____ _____%
5. _____ _____%

Survey of K-12 Food Service Providers in Michigan

4. How much do you currently spend annually on fresh produce?
$_____

5. Do you have a contract with a food vendor that prohibits you from making local purchases?
__ Yes __ No

6. Does your supplier require an exclusive agreement?
__ Yes __ No

7. How many days in advance of actual food preparation do you order food supplies?
Canned Food ____ days
Produce (fresh) ____ days
Dairy ____ days
Meats ____ days

8. Approximately what percent of menu items are: (a+b+c must total 100%)
a. Prepared at the service site _____%
b. Prepared at a central district processing site _____%
c. Prepared off site by a vender/caterer and delivered _____%

(Assume the site at which a food is "prepared" is where the most ingredients are brought together for a final dish. With the exception of fresh fruits and vegetables, heating a food is not considered "preparation".)

9. Your students prefer most of their fruits:
__ Fresh
__ Frozen
__ Canned

10. Your students prefer their vegetables:
__ Fresh
__ Frozen
__ Canned

11. Do your students utilize salad bars?
__ Yes __ No

11a. If yes and you represent a school district, how many schools in each category currently have salad bars?
High Schools _____
Middle Schools _____
Elementary Schools _____

Instructions: Please complete the following based on food used during your last fiscal year (If your institution is a school and participates in summer food services, please include that data as well).

12. What were the 5 most popular FRESH PRODUCE purchases you made in 2002-2003?

(I.e. whole potatoes, whole apples, fresh strawberries, etc.)

1. _____
2. _____
3. _____
4. _____
5. _____

13. What were the 5 most popular PREPARED FRESH PRODUCE purchases you made in 2002-2003? (i.e. shredded lettuce, peeled carrots, etc.)

1. _____
2. _____
3. _____
4. _____
5. _____

14. Have you purchased foods from a local farmer/producer in the last year?

(If no, skip the question #15)

__ Yes __ No

15a. If yes, what products have you purchased? (Check all that apply)

Vegetables

__ Green Beans	__ Peas	__ Spinach	__ Sweet Corn	__ Mushrooms
__ Asparagus	__ Broccoli	__ Soy Beans	__ Dry Beans	__ Lettuce
__ Squash	__ Tomatoes	__ Cabbage	__ Pumpkins	__ Cucumbers
__ Potatoes	__ Grain	__ Onions	__ Other: _____	

Fruits

__ Cherries	__ Blueberries	__ Peaches	__ Melons	__ Strawberries
__ Apples	__ Apple Varieties: _____		__Other: _____	

Meat Products

__ Lamb	__ Fish	__ Ground Beef	__ Chicken	__Pork
__Dairy	__ Cheese	__ Eggs		

15b. Did you see an increase in fruit and vegetable consumption by students when serving locally produced foods?

__ Yes __ No

15c. Would you buy products from local farms/producers again?
__ Yes __ No __ Not Sure

15d. If no, please describe why (check all that apply):
__ In consistent quality
__ Not reliable
__ Too much effort
__ Price
__ Other: please describe why _____

16. I would purchase food directly from a local producer (grower/farmer) if price and quality were competitive and a source was available.
__ Strongly Agree
__ Agree
__ Neutral
__ Disagree
__ Strongly Disagree

17. I would purchase locally produced foods if my vendors and/or state warehouse distributor offered local foods as part of their contract services.
__ Strongly Agree
__ Agree
__ Neutral
__ Disagree
__ Strongly Disagree

18. My district/school would be willing to pay a higher price to buy locally produced foods to serve in cafeterias.
__ Strongly Agree
__ Agree
__ Neutral
__ Disagree
__ Strongly Disagree

19. My district/school would be interested in buying these foods from local producers. (Check all that apply)
Vegetables

__ Green Beans	__ Peas	__ Spinach	__ Sweet Corn	__ Mushrooms
__ Asparagus	__ Broccoli	__ Soy Beans	__ Dry Beans	__ Lettuce
__ Squash	__ Tomatoes	__ Cabbage	__ Pumpkins	__ Cucumbers
__ Potatoes	__ Grain	__ Onions	__ Other: _____	

Fruits
__ Cherries __ Apples __ Peaches __ Melons __ Strawberries
__ Other: _____

Meat Products
__ Lamb __ Fish __ Ground Beef __ Chicken __Pork

Dairy
__ Cheese __ Eggs

20. What would motivate you to serve locally grown or processed food in your institution?
(Check all that apply)
__ Access to fresher food
__ Support local economy and local community
__ Higher consumption of fruits and vegetables
__ Buyer knows product sources
__ Lower transportation costs
__ Less use of pesticides
__ Higher quality food
__ Good public relations
__ Would help Michigan farms and/or Michigan businesses
__ Ability to purchase small quantities
__ Ability to purchase special varieties, types of produce
__ Other _____
__ None

21. What concerns do you have with regard to purchasing locally produced foods?
(Check all that apply)
__ Food Safety
__ Adequate volume
__ Reliable supply
__ Ordering method
__ Payment arrangement
__ Delivery consideration
__ Seasonality of Michigan fruits and vegetables
__ Prime vendor considerations
__ Cost
__ Package consistency
__ Quality
__ Other _____

Survey of K-12 Food Service Providers in Michigan

22. What barriers could stop you from purchasing foods directly from local producers? (Check all that apply)

__ Federal and state procurement regulations (School food services must enter into formal contract for any purchases over a certain amount)
__ Institutional (internal) purchasing policies
__ Lack of local producers in area from whom to purchase
__ Other Regulations
__ Lack of products available during certain time of the year
__ Safety
__ Budget
__ Convenience (one-stop shopping)
__ Lack facilities to handle fresh produce/uncooked bulk meat, etc.
__ Lack staffing to prep fresh produce/uncooked bulk meat, etc.
__ Other: _____

23. Please check information that would be helpful for you in making local food purchasing decisions. Check all that apply.

__ Information on local food programs from around the country
__ Lists of suppliers and products for local sources
__ Health and Safety information of local foods
__ Regulatory information (What are the rules about buying foods direct from farmers? Is it legal?)
__ Assistance in developing a system for buying from multiple sources
__ Assistance with marketing techniques for expanding the palate of children
__ Other

24. Are you interested in connecting your institution with a local farmer?

__ Very interested __ Somewhat interested
__ Neutral __ Not very interested
__ Not interested

25. Thank you for taking time to fill out this survey. Your participation is very important to us. If you have any additional comments regarding this survey or purchasing locally produced foods, feel free to write them here.

_____
_____
_____
_____

Adapted from "Survey of K-12 Food Service Providers in Michigan" Izumi BT, Rostant OS, Moss MJ, Hamm MW. Results from the 2004 Michigan Farm-to-School Survey, J Sch Health 2006 May; 76(5) 169-74.

1. Introduction to the Request for Information

Thank you for filling out this request for information. We anticipate this form will take 15 to 20 minutes to complete.

The National Farm to School Program is conducting a survey of farm to school programs across the country. We are asking school food service staff and /or administrators to respond to this survey.

If you oversee food service operations for the entire school district, please answer questions based on data available for the school district. If you oversee operations for a single school, please provide data from your school.

The information you provide will help develop a national clearing house of farm to school project information that will promote successful farm to school models to more school districts across the country. The information will help inform policy makers, legislators, funding agencies, media and other school districts about the scope and importance of the farm to school program, which in turn will provide more credibility, support and resources for your efforts at the local level.

The information will be compiled and reported at the national level, and your individual responses will not be used or reported without your prior consent.

2. School District Data/ General

1. Please provide the following information.

Your State:	
Name of your school district:	
If you are not representing a school district, indicate the name and type of your individual school (i.e. Alternative Schools or Preschools).	

2. Please indicate the student enrollment number of each type of school within your school district or for your individual school. PLEASE PROVIDE TOTAL IF BREAKDOWN BY SCHOOLS IS NOT EASILY AVAILABLE.

DISTRICT TOTAL (If you fill this in, you do NOT need to fill out the rest)	
Elementary	
Middle / Junior High	
High	
Other schools (i.e. Alternative Schools / Preschools)	

3. Please indicate the percentage of student enrollment participation in the Free or Reduced Lunch Program (check one) PLEASE PROVIDE DISTRICT TOTAL IF BREAKDOWN BY SCHOOLS IS NOT EASILY AVAILABLE. If you are just answering for an individual school, check one category AFTER 'OTHER SCHOOLS.'

	0-25 %	26-50 %	51-75 %	76-100 %
District Total (If you fill this in, you do NOT need to fill out the rest)	◯	◯	◯	◯
Elementary	◯	◯	◯	◯
Middle / Junior High	◯	◯	◯	◯
High	◯	◯	◯	◯
Other schools (i.e. Alternative Schools/ Preschools)	◯	◯	◯	◯

4. Please check whether you are filling out this survey for an individual school or an entire school district.

◯ Individual School

◯ School District

3. Questions if Answering for School District

You are being prompted to answer questions on this page, because you indicated in the previous question that you are filling out this survey for an entire school district, not just an individual school. IF YOU ARE ANSWERING FOR AN INDIVIDUAL SCHOOL AND MISTAKENLY ENDED UP ON THIS PAGE, CLICK 'PREV' TO CORRECT YOUR RESPONSE ON THE PREVIOUS QUESTION.

5. Please indicate the number of each type of school within your school district. PLEASE PROVIDE DISTRICT TOTAL IF BREAKDOWN BY SCHOOLS IS NOT EASILY AVAILABLE.

DISTRICT TOTAL (If you fill this in, you do NOT need to fill out the rest)	
Elementary	
Middle / Junior High	
High	
Other schools (i.e. Alternative Schools / Preschools)	

6. Indicate the number of schools with operational farm to school activities you are aware of in your school district. Please indicate DK if your response is "Do Not Know". PLEASE PROVIDE TOTAL IF BREAKDOWN BY SCHOOLS IS NOT EASILY AVAILABLE.

District Total (if you fill this in, you do NOT need to fill out the rest)	
Elementary	
Middle / Junior High	
High	
Other schools	

7. Please indicate the level of schools implementing the various farm to school components in your school district

	Local purchasing	School gardens	School Garden product in cafeteria or classrooms	Composting / Waste Management	In-class nutrition education	In-class snacks	Out-of-classroom learning	Other
Districtwide implementation	☐	☐	☐	☐	☐	☐	☐	☐
Elementary	☐	☐	☐	☐	☐	☐	☐	☐
Middle/Junior High	☐	☐	☐	☐	☐	☐	☐	☐
High	☐	☐	☐	☐	☐	☐	☐	☐
Other schools for example Alternative/Preschools	☐	☐	☐	☐	☐	☐	☐	☐

4. Overview of Farm to School Activities

Farm to school encompasses a variety of activities in the cafeteria and the classroom as well as education outside the classrooms. If you oversee food service operations for the entire school district, please answer questions based on data available for the school district. If you oversee operations for a single school, please use data from your school.

8. From the following list of activities, please indicate any farm to school activities that your school or school district conducts, and which year it began.

	Activity conducted	In which year did the activity begin?
A. Purchasing food from local farmers	□ Yes □ No □ Don't Know	
B. School gardens	□ Yes □ No □ Don't Know	
C. Incorporating school garden produce in cafeteria or for use in classroom taste tests	□ Yes □ No □ Don't Know	
D. Composting /Waste Management Programs	□ Yes □ No □ Don't Know	
E. Conducting In-Class Nutrition Education	□ Yes □ No □ Don't Know	
F. In -class snacks using local products	□ Yes □ No □ Don't Know	
G. Offering out-of-classroom learning opportunities such as farm and farmer market visits	□ Yes □ No □ Don't Know	
H. Other	□ Yes □ No □ Don't Know	

9. Please indicate the number of farmers selling to the school or school district via each avenue.

	Check HERE if you use this avenue BUT do not know the number of farmers involved	0 FARMERS	1-5 FARMERS	6-10 FARMERS	11-20 FARMERS	21-30 FARMERS	31-40 FARMERS
Purchase directly from farmers	◯	◯	◯	◯	◯	◯	◯
Purchase directly from farmers market	◯	◯	◯	◯	◯	◯	◯
Purchase through distributors / processors, who buy from local farmers	◯	◯	◯	◯	◯	◯	◯
Purchase from grower cooperatives	◯	◯	◯	◯	◯	◯	◯
Other	◯	◯	◯	◯	◯	◯	◯

National Farm to School Web Survey (Page 4 of 5)

10. To your knowledge, are there any in-class education activities related to farm to school in your school or school district? These may be conducted either by the schook, the school district, or by other agencies or organizations. Please check any activities that you are aware of:

- ☐ DO NOT KNOW of any in-class education related to farm to school being conducted
- ☐ Nutrition / Health education
- ☐ Agriculture education
- ☐ Farmer in the classroom
- ☐ Chef in the classroom
- ☐ Cooking demonstrations
- ☐ School district doesn't conduct in-class education related to farm to school
- ☐ Other (please specify)

11. To your knowledge, are the activities outlined in this survey supported by external funding sources? These may include grants, contracts and other monies received either directly by the school, school district, or by program partners. Please check sources from the list below:

- ☐ Federal funds
- ☐ State funds
- ☐ Local government
- ☐ Private Foundations
- ☐ Individual donors
- ☐ Local Universities / Colleges
- ☐ No external support received
- ☐ Other (please specify)

12. We would like to document the partnerships that bring together a successful farm to school program. Please indicate which agencies or organizations, if any, assisted with farm to school activities in your school or school district - check all that apply. Indicate DK if your response is "Do Not Know"

	Participate in Farm to School Committee	Event planning	Promotion	Farm to school implementation	Evaluation	Other
Faith-based / Religious organizations	☐	☐	☐	☐	☐	☐
Agriculture focused organizations	☐	☐	☐	☐	☐	☐
Cooperative Extension agencies	☐	☐	☐	☐	☐	☐
Health / Nutrition organizations	☐	☐	☐	☐	☐	☐
Educational institutions – universities and colleges	☐	☐	☐	☐	☐	☐
Parent groups	☐	☐	☐	☐	☐	☐
Others	☐	☐	☐	☐	☐	☐

13. The National Farm to School Program is developing a network to promote and support farm to school programs and practitioners across the country. We would like to know what support from the regional or national level you need most to further develop your farm to school program. Please select three options from the list below, and rank them on the basis of priority need.

	Highest Priority	Medium Priority	Low Priority
Policy Development and Advocacy	◯	◯	◯
Developing a Support Network	◯	◯	◯
Program Development – such as finding farmers, developing seasonal menus, bid specifications.	◯	◯	◯
Outreach to Media / Public Relations Campaigns	◯	◯	◯
Seeking and Maintaining Collaborations	◯	◯	◯
Sustaining fundraising efforts	◯	◯	◯

14. Which of these categories of food do you source locally?

- ☐ Fresh Produce (fruits and vegetables)
- ☐ Dairy products and eggs
- ☐ Bread, Bakery items, Grains
- ☐ Meats and entrée options
- ☐ Canned items
- ☐ Beverages and Water

15. For the food categories you checked as sourcing locally on the previous question, what is the Total Annual Budget (FY 2004-05) for these categories? ONLY PROVIDE THIS INFORMATION FOR THE CATEGORIES YOU CHECKED ON THE PREVIOUS QUESTION.

Total Food	
Fresh Produce (fruits and vegetables)	
Dairy products and eggs	
Bread, Bakery items, Grains	
Meats and entrée options	
Canned items	
Beverages and Water	

16. As per FY 04-05 budget indicated in the previous question, please estimate amount spent on LOCAL product. Check N/A if you do not buy this product locally.

	0-10%	11-20%	21-30%	31-40%	More than 40%	N/A
Total Food	◯	◯	◯	◯	◯	◯
Fresh Produce(fruits and vegetables)	◯	◯	◯	◯	◯	◯
Dairy products and eggs	◯	◯	◯	◯	◯	◯
Bread, bakery items and grains	◯	◯	◯	◯	◯	◯
Meats and entree options	◯	◯	◯	◯	◯	◯
Canned items	◯	◯	◯	◯	◯	◯
Beverages and Water	◯	◯	◯	◯	◯	◯

National Farm to School Web Survey (Page 6 of 6)

17. Please estimate your future expenditures on local product, indicated as percentage (%) of FY 2005-06 budget

Total Food	
Fresh Produce (fruits and vegetables)	
Dairy Products	
Bread, Bakery items and Grains	
Meats and entree options	
Canned items	
Beverages and Water	

18. THIS IS AN OPTIONAL QUESTION

Please describe briefly your experiences with implementing a farm to school program in your school or district- include any innovative strategies you have applied to overcome barriers, and any tips you would like to share with other food service directors interested in the farm to school approach. Please also include a few lines about your future plans for the program.

THANK YOU FOR COMPLETING THIS REQUEST FOR INFORMATION. We would like to provide your contact information and program details on the National Farm to School Website and include you on our mailing list. Please check the boxes below to indicate your consent or non-consent. If you would like to learn more about the farm to school program, please visit www.farmtoschool.org.

*** 19. Please indicate your contact information.**

Name of respondent:	
School/Organization:	
Position:	
Mailing Address:	
City:	
State:	
Zip:	
Phone:	
Fax:	
email:	

*** 20. We would like to provide your contact information and program details on the National Farm to School Website. We would also like to add your name to our mailing list. We anticipate sending you periodic updates on farm to school events, networking and funding opportunities in your region. Please check the boxes below if you consent to this.**

☐ I DO consent to my name, contact and program information being featured on the National Farm to School website at www.farmtoschool.org

☐ I DO wish to receive periodic updates from the National Farm to School Program. We anticipate sending you periodic updates on farm to school events, networking and funding opportunities in your region.

Adapted from "National Farm to School Program Request for Information" National Farm to School Network, Center for Food & Justice, UEPI, Occidental College, 2006.

K-12 Food Service Directors Needs Assessment

Date_____

Name_____ Email _____

School/District_____ County_____

Address_____

City_____ State_____ Zip code_____

Telephone_____ Fax_____

Basic Information

Total Student Enrollment_____

Number of schools in your district_____ Elementary_____ Middle_____ High

Do you participate in USDA school meals program? YES_____ NO_____

Number of students on free and reduced breakfast/lunch program_____

ON average, how many student lunches do you serve in a day? _____
ADP (Average Daily Participation) rate: _____%

What is the price of lunch? Full Price_____ Reduced_____

Do you have a summer feeding lunch program? YES_____ NO_____

If yes, how many children take part in it?_____

Do you participate in the DoD Fresh program? (if in a DoD area)
YES_____ NO_____

The Food Service Facility

Does each school in your district have a "scratch" kitchen? YES_____ NO_____

If no, how many are there and in which schools?_____

Do you have central kitchens that deliver to other schools? YES_____ NO_____

Do you nave enough cold storage and/or dry storage space to accommodate an increased use of fresh and fresh stored fruits and vegetables? (Describe)

Is your Food service equipped to prepare whole fruits and vegetables? (Please list) (e.g. Do you have an adequate supply of knives, food processors, wedgers, peelers, slicers, etc.?)

Food Service Staff Skills, Experience, and Interest

Number of food service staff:_____ Full Time_____ Part Time

Number with culinary training_____

Are there any time constraints on food preparation in the school? (Describe)

Do time constraints influence what you put on your menu? (Describe)

To what extent is time a deterrent from using more whole fruits and vegetables in your lunches?

□ Large extent □ Moderate extent □ Small extent □ Time is not a deterrent

Is your staff adequately trained to prepare whole fruits and vegetables? If not, what training would be helpful?

Are there any whole fruits or vegetables that you do not use because of the amount of prep time required? (i.e. pumpkin, butternut squash, acorn squash)?

Menus and Recipes

Do you have full control over menu development? YES_____ NO_____

If yes, what are your main considerations when developing your menu(s) (Is it labor, Is it student preferences, Is it pricing)? If no, how is it developed?

Do you develop different menus for different schools or districts?

Do you have a menu cycle? If so, for what time period?

How often are your recipes reviewed and revised?

Have you modified or changed recipes recently? Is so, how?

How are new items/recipes introduced to the students? Provide an example.

Fruit and Vegetable Use and Procurement

What fruits and vegetables do you use most frequently in your school lunches? (Please list)

Most schools require at least a small degree of processing in fruit and vegetables. Looking at your list above, describe the least processed form (e.g. chopped, sliced, peeled, etc.) in which you could accept each product for you food service. Circle any you have purchased whole (fresh or fresh stored).

Are there any fruits and vegetables you don't currently use but would like to?
YES_____ No_____
If yes, which ones?

K-12 Food Service Directors Needs Assessment

How would you describe your knowledge of what fruits and vegetables are grown locally?

Very good Ok Need Help

What are some things that would make it easier for you to purchase local fruits and vegetables in the school?

How many produce deliveries do you get in a week?

What, if any, flexibility do you have in your delivery schedule?

Local Food Practices

(by "local" we generally mean within your state or region)

Do you purchase any of the fruit and vegetables on your menu locally?

YES NO Don't Know

If yes, which ones?

If no, are there any fruits and vegetables you would like to get from local or regional sources? Which ones?

There are many ways to start using locally grown fruits and vegetables. For example, have you (or are you interested in…)

Let your supplier/distributor know of your interest in locally produced fruits and vegetables?

_____Interested _____Have Done _____Not Interested

Purchased produce directly from a farmer?

_____Interested _____Have Done _____Not Interested

Featured local food in a school event, special meal, or harvest event?

For example, celebrating NY Harvest for NY Kids Week

_____Interested _____Have Done _____Not Interested

Developed seasonal menus or recipes using local foods?

_____Interested _____Have Done _____Not Interested

Are there any other steps besides these that you've taken to increase you use of local produce?

In your opinion, what barriers are there, if any, to your district's ability to purchase fruits and vegetables from your area? (e.g. concern about cost, location, options provided by distributor, etc.)

School and Community

Does your school hold any harvest, farm, or food system events? If so, what sorts of activities are involved?

Does your districts wellness or nutrition policy include… (please check all that apply)

_____Restrictions on food served in vending machines?

_____A soda ban on campus?

_____Specifics on allowable competitive foods?

_____Specifics on foods allowed in fund-raisers or class parties?

_____Specifics on foods children can bring to school?

_____An emphasis on locally grown/produced food?

Does your school have a wellness committee? YES_____ NO_____

Are there other committees working on nutrition and food service issues? (e.g. parent association) YES_____ NO_____

Are you included in any of these committees? YES_____ NO_____

How would you describe administrative, school board, and community support for purchasing local products?

K-12 Food Service Directors Needs Assessment

Student Preferences and Involvement in Food Service

Do you have a process for learning about food interests of the students?
YES_____ NO_____ If so, describe:

What kind of contact do you have with students?

Do you hold taste testing with students before new recipes or new foods are introduced in the cafeteria? YES____ NO____ If so, describe:

Where do you do taste testing? (e.g. in the cafeteria, a garden, or classroom)

Does anyone else in the district do taste testing with students? (e.g. classroom teachers or food service director/staff) YES_____ NO_____

What do you think would help kids at your school to eat more fruits and vegetables?

Does your food service collaborate with classroom learning around food (i.e. classroom cooking demonstrations, taste-tests, etc.)? Describe:

Your Farm to School Vision

What would you like to see in a Farm to School project in your food service?

What would help you get started with the process of using more locally grown foods in your cafeteria?

_____Assistance in identifying local foods and potential sources
_____Meeting with farmers and suppliers
_____Local purchasing connection
_____Taste test plan
_____Parent/volunteer training program
_____Other:_____

Is there anything else you would like to add or ask?

Adapted from "Northeast K-12 Food Service Directors' Needs Assessment Tool" Wilkins J, Mouillesseaux-Kunzman H, Graham M, Bacelli B, Goodsell M, Farm to School in the Northeast: Making the Connection for Healthy Kids and Healthy Farms, A Toolkit of Extension Educators and Community Leaders. Cornell Farm to School Program, NY Farms! and New York School Nutrition Association, May 2006.

Survey of Fruit, Vegetable, and Nut Producers

1. What are your primary agricultural products?

Fruits

□ Apples □ Pears □ Peaches
□ Plums □ Melons □ Cherries
□ Berries

Vegetables

□ Chile □ Tomatoes □ Carrots
□ Sweet Corn □ Green Beans □ Squash
□ Lettuce □ Mixed Salad Greens □ Spinach
□ Okra □ Cucumbers □ Potatoes
□ Pumpkins □ Cabbage □ Onions

Nuts/Beans/Grains:

□ Pistachios □ Peanuts □ Dry Pinto Beans
□ Whole Wheat Flour □ Other (please describe) _____

2. What value-added products do you produce?

_____ _____ _____

3. Do you participate in any form of group sales?

□ Yes □ No

a. If yes, does this group arrange for product delivery?
b. Name of group _____

4. How would you describe your operation? (Check all that apply)

□ I sell all my product and am not looking for new markets
□ I can sell most of my product, but am looking for additional markets
□ I would like to change the way that I sell my product
□ Given the rising costs to deliver my product, I want to sell only to outlets within ____ miles of my place.
□ I would require additional season extension infrastructure in order to produce crops year round.
□ Certified organic
□ Uncertified Organic
□ Certified any other label—please specify _____

5. Approximately what percent of your overall sales are at: (combined must total 100%)

a. Broker/Packing House _____%
b. Schools and Institutions _____%
c. Local Stores _____%
d. Larger Regional Stores (i.e. Raley's, Smith's) _____%

e. Farmers Markets _____%
f. Side of the Road _____%
g. Restaurants _____%
h. Cooperatives/Group Sales _____%
i. Community Supported Agriculture _____%
j. Personal Contacts/ Friends _____%
k. Other _____% Please Specify: _____

6. Do you generally have extra product that you could sell to schools and institutions?
□ Yes □ No

7. Would you be willing to sell your product to local schools and institutions?
□ Yes □ No

8. Do you have the following infrastructure to deliver your product to schools, institutions or a central kitchen?

Truck:	□ Yes	□ No
Staff Driver:	□ Yes	□ No
Cold Storage:	□ Yes	□ No
Liability Insurance:	□ Yes	□ No

9. Have you ever sold any product to a local school or institution?
□ Yes □ No

9a. If so, what did you provide and to what institution?
Product(s): _____
Institution Name: _____

9b.Would you sell to institutions again?
□ Yes □ No

9c. If no, please describe why: (Check all that apply)
□ Unable to physically deliver product
□ Could not adequately process food (chop lettuce, cut carrots)
□ Could not provide lowest price
□ School or institutional market was too small
□ Could not produce sufficient volume of produce
□ Could not adequately ensure safety/quality of product
□ Inability to provide product during whole school year

10. Which of the following venues would you like to sell your product to but do not currently sell to?

□ Schools and Institutions
□ Restaurants
□ Farmers Markets
□ Side of the road
□ Local stores
□ Larger Regional Stores (i.e. Raley's, Smith's)
□ Community Supported Agriculture (CSA)
□ Other _____

11. Do you have school-age children?

□ Yes □ No

11a. If so, in what school district is/are your child(ren) enrolled? _____

The Southwest Marketing Network is a collaboration that seeks to ensure that farmers in New Mexico, Utah, Colorado and Arizona have access to the latest technical, financial and marketing information, as well as personal contacts with successful farm marketers. The Network is a collaboration of Farm to Table, Western Rural Development Center, the National Center for Appropriate Technology, the Navajo Nation Department of Agriculture and higher education universities. We provide quarterly newsletters, an annual conference, and specialized trainings.

12. Do you receive the Southwest Marketing Network Newsletter?

□ Yes □ No

13. Would you like to receive this newsletter in the future?

□ Yes □ No

Our goal for this survey is to receive the opinions of as many agricultural producers in the state of New Mexico as possible. Because it is difficult to keep up-to-date lists on all the agricultural producers in the state we are relying on farmers such as you to aid us in capturing the opinions of as many farmers as possible.

14. Do you know of other farmers who should get this survey? Please list their contact information below.

Adapted from "Survey of Fruit, Vegetable and Nut Producers," Central New Mexico Institutional Directory 2007, Farm to Table, New Mexico Department of Agriculture. Available at: http://www.farmtotablenm.org/central_nm_directory_oct07.pdf

Survey of Institutional Food Service Providers

This is a survey to ascertain what the potential market would be if major NM institutions were to purchase fresh agricultural products from local (New Mexico) growers. Your answers to these survey questions will be held in confidence. Only the aggregate information from all respondents will be published unless your permission is expressly granted. We do plan to publish your contact information and a general list of desired products. Please state if you do not want that information published.

Contact Information

Name of Institution:_____

Name:_____

Title:_____

Address:_____

City, State, Zip:_____

Telephone:_____

Fax:_____

Email: _____

1. What is the size and makeup of the population that you serve?

2. How many meals do you serve?

3. Which meals do you serve? q Breakfast q Lunch q Dinner

4. Do you serve food year round?

5. Do you have a prime produce vendor?
Or use several vendors?

6. How often do you receive deliveries of fresh produce?

7. What are your top fresh produce purchases?
Please also list the unit of purchase, the average number of units you purchase at one time, how often you purchase, and the average cost per unit per item.

Item	Unit	How many	How often	Price per unit
Apples				
Melons				
Pears				
Cherries				
Peaches				
Berries				
Plums				

Item	Unit	How many	How often	Price per unit
Chile peppers				
Tomatoes				
Carrots				
Sweet corn				
Green beans				
Squash				
Head lettuce				
Salad mix				
Onions				
Spinach				
Cucumbers				
Okra				
Pumpkins				
Cabbage				
Potatoes				
Sprouts				
Pistachios				
Peanuts				
Pecans				
Dry Pinto beans				
NM organic flour				
Other				

8. Have you purchased foods from a local producer within the past year?

□ Yes □ No

9. I would purchase food directly from a local producer if price and quality were competitive and a source was available:

□ Strongly agree □ Agree □ Disagree □ Strongly disagree □ Uncertain

10. My institution would be interested in buying these foods from local producers. (*Check all that apply*)

Fruits:

□ Apples □ Melons □ Pears □ Cherries □ Peaches □ Berries □ Plums

Vegetables:

□ Chile Peppers	□ Tomatoes	□ Carrots	□ Sweet corn
□ Green beans	□ Squash	□ Head lettuce	□ Salad mix
□ Onions	□ Spinach	□ Cucumbers	□ Okra
□ Pumpkins	□ Cabbage	□ Potatoes	□ Sprouts

Nuts/Beans/Grains:

□ Pistachios □ Peanuts □ Pecans □ Dry pinto beans □ NM organic flour
□ Other (*please describe*)

11. Please check information that would be helpful for you in making local food purchasing decisions. (*Please check all that apply*)

□ Lists of suppliers and products from local sources
□ Information about local food programs from around the country
□ A list of when local foods are available in New Mexico (availability / seasonality chart)
□ Broker indication on order sheet of where food comes from (place of origin)
□ Other (*please describe*)

12. What concerns do you have in regard to purchasing locally produced foods? (*Check all that apply*)

□ Adequate volume
□ Reliable supply
□ Payment arrangement
□ Delivery considerations
□ Prime vendor considerations (potential threat to existing relationships)
□ Seasonal availability of New Mexico fruits and vegetables
□ Cost
□ Package consistency
□ Quality
□ Other (*please describe*)

13. What would primarily motivate you to serve locally grown or processed foods in your institution? (*Check all that apply*)

□ More products available that are partially processed (carrot sticks, salad mix)
□ One place to order from multiple farmers (ie, farmer cooperatives)
□ Lower transportation costs
□ Financial incentives for purchasing local food
□ Interest from my customers
□ Better taste
□ Longer shelf life
□ Additional facilities, equipment, or staff
□ Ability to purchase in small quantities, or special varieties
□ Support for or pressure to buy local foods from management
□ Other (*please describe*)

14. What barriers currently prevent you from purchasing foods directly from local producers?
(*Check all that apply*)

□ Budget
□ Internal purchasing policies
□ I don't know any farmers
□ Lack of local producers in this area
□ Lack of products available during certain times of the year
□ Convenience (I prefer one-stop shopping with my regular broker)
□ Lack of staff or facilities to handle much fresh produce
□ Other (*please describe*)

15. Can we share your name and the list of what you would like to buy with local producers?
□ Yes □ No

16. If you would like to know more about New Mexico agricultural products, would you like to sample some of these products when they are in season?
□ Yes □ No

Thank you for taking the time to fill out this survey. Your participation is very important to us. Please place the completed survey in the enclosed envelope and return it to Farm to Table, 3900 Paseo del Sol, Santa Fe, NM 87507. *If you have any additional comments regarding this survey or purchasing locally available foods, feel free to write them down here.*

Adapted from "Survey of Institutional Food Service Providers," Central New Mexico Institutional Directory 2007, Farm to Table, New Mexico Department of Agriculture. Available at: http://www.farmtotablenm.org/central_nm_directory_oct07.pdf

Student Knowledge Survey

Directions: This is a survey to find out what you know. Circle the let the one best answer.

1. Fruits and vegetables contain vitamins and _____.
   a. protein
   b. fiber
   c. cholesterol
   d. fat
   e. I don't know

2. Fruits and vegetables that are high in Vitamin A are _____ in color.
   a. red and white
   b. blue and light brown
   c. yellow-orange and dark green
   d. brown and purple
   e. I don't know

3. Which ONE of these foods is a healthy snack?
   a. Ice cream
   b. Potato chips
   c. Fresh fruit
   d. Fruit Roll-ups
   e. I don't know

4. The healthiest juice to buy has _____ on the label.
   a. 100% fruit juice
   b. contains fruit juice
   c. 100% fruit punch
   d. tastes great
   e. I don't know

5. A fruit salad will be higher in Vitamin C if you add _____ to it.
   a. apples
   b. grapes
   c. bananas
   d. oranges
   e. I don't know

Adapted from "Hawthorne Unified School District Student Knowledge Survey," available at: http://socialmarketing-nutrition.ucdavis.edu/Tools/Downloads/Hawthorne_Unified_School_District.pdf Giarratano Russell, S. 2004. Validity and Reliability of a Knowledge survey for Hawthorne Unified School District. Unpublished.

I. FRUITS AND VEGETABLES

We want to know what you think about fruits and vegetables. There are no right or wrong answers, just your opinion. Please choose the answer that best describes what you think.

	False	True
1. Eating fruits and vegetables protects you from diseases.	F	T
2. Fruits and vegetables are high in fat and sugar.	F	T
3. Most of the vitamin C we get comes from fruits and vegetables.	F	T
4. Have you visited the website called mypyramid (www.mypyramid.gov) ?	No	Yes

II. FRUITS AND VEGETABLES (IF I EAT)

We want to know what you think will happen if you eat fruits and vegetables every day. There are no right or wrong answers, just your opinion. Please choose the answer that best describes how much you disagree or agree with each sentence below.

If I eat fruits and vegetables every day...	**I disagree very much**	**I disagree a little**	**I am not sure**	**I agree a little**	**I agree very much**
5. I will become stronger	A	B	C	D	E
6. My friends will start eating them too	A	B	C	D	E
7. I will have stronger eyes	A	B	C	D	E
8. I will have a nicer smile	A	B	C	D	E
9. My friends will not come to my house to eat	A	B	C	D	E
10. I will be healthier	A	B	C	D	E
11. I will think better in class	A	B	C	D	E

Outcome Expectations for Eating Fruits & Vegetables

If I eat fruits and vegetables every day...	I disagree very much	I disagree a little	I am not sure	I agree a little	I agree very much
12. it will keep me from getting fat	A	B	C	D	E
13. I will have more energy	A	B	C	D	E
14. My friends will make fun of me	A	B	C	D	E
15. I will have less energy than if I eat a candy bar	A	B	C	D	E
16. My family will be proud of me	A	B	C	D	E
17. I will not enjoy eating that meal or snack	A	B	C	D	E

IV. FRUITS AND VEGETABLES (I THINK)

We want to know how sure you are that you can do things to eat more fruits and vegetables. There are no right or wrong answers, just your opinion. Please choose the answer that best describes how much you disagree or agree with each sentence below.

If I eat fruits and vegetables every day...	I disagree very much	I disagree a little	I am not sure	I agree a little	I agree very much
21. I think I can write my favorite fruit or vegetable on the family's shopping list	A	B	C	D	E
22. I think I can ask someone in my family to buy my favorite fruit or vegetable	A	B	C	D	E
23. I think I can go shopping with my family for my favorite fruit or vegetable	A	B	C	D	E

If I eat fruits and vegetables every day...	I disagree very much	I disagree a little	I am not sure	I agree a little	I agree very much
24. I think I can pick out my favorite fruit or vegetable at the store and put it in the shopping basket	A	B	C	D	E
25. I think I can ask someone in my family to make my favorite vegetable dish for dinner	A	B	C	D	E
26. I think I can ask someone in my family to serve my favorite fruit at dinner	A	B	C	D	E
27. I think I can ask someone in my family to have fruits and fruit juices out where I can reach them	A	B	C	D	E
28. I think I can ask someone in my family to have cut up vegetables out where I can reach them	A	B	C	D	E

V. PHYSICAL ACTIVITY

We want to know what you think about physical activity. Remember that physical activity can be any play, game, sport, or exercise that gets you moving and breathing harder. There is no right or wrong answer, just your opinion.

29. Moderate physical activity makes you breathe hard and sweat (Example: running).	F	T

30. How many minutes of physical activity do you think elementary school students should get each day to be healthy?

A. At least 15 minutes each day
B. At least 30 minutes each day
C. At least 60 minutes each day
D. At least 90 minutes each day
E. Don't know

31. Why is physical activity good for kids? A. Helps keep you from getting sick B. Helps you pay attention in school C. Builds healthy bones and muscles to keep you strong D. Gives you more energy E. All of the above
32. Which of the following choices does not count as physical activity? A. Taking a dog on a walk B. Shooting a basketball C. Playing a board game (Example: Monopoly) D. Playing tag at the park with a friend E. Going on a bike ride

VI. PHYSICAL ACTIVITY (I THINK)

Please choose either "No" or "Yes" for each of the sentences below. "No" means that you do not agree with the sentence. "Yes" means that you agree with the sentence. Remember that physical activity can be any play, game, sport, or exercise that gets you moving and breathing harder.

33. I think I can be physically active most days after school	N	Y
34. I think I can ask my parent or other adult to do physically active things with me	N	Y
35. I think I can ask my parent or other adult to sign me up for a sport, dance, or other physical activity	N	Y
36. I think I can be physically active even if it is very hot or cold outside	N	Y
37. I think I can ask my best friend to be physically active with me	N	Y
38. I think I can ask my parent or other adult to get me the equipment I need to be physically active	N	Y
39. I think I can ask my parent or other adult to take me to a physical activity or sport practice	N	Y
40. I think I can be physically active even if I have a lot of homework	N	Y
41. I think I have the skills I need to be physically active	N	Y

42. I think I can be physically active no matter how busy my day is	N	Y
43. I think I can be physically active no matter how tired I may feel	N	Y
44. I am physically active	N	Y

VII. PHYSICAL ACTIVITY (IT WOULD)

Please circle your answer.

If I were to be physically active most days…

45. it would make me get hurt	N	Y
46. it would help me be healthy	N	Y
47. it would help me control my weight	N	Y
48. it would make me tired	N	Y
49. it would give me energy	N	Y
50. it would make me embarrassed in front of others	N	Y
51. it would be fun	N	Y
52. it would get or keep me in shape	N	Y
53. it would be boring	N	Y
54. it would make me better in sports	N	Y

Adapted from "Outcome Expectations for Eating Fruits and Vegetables," Five a Day Power Play! Survey available at: http://socialmarketing-nutrition.ucdavis.edu/Tools/SomarkToolsList.php?key_m=16

Baranowski T, Davis M, Resnicow K, Baranowski J, Doyle C, Smith M, Lin L, Wang DT. Gimme 5 fruit and vegetables for fun and health: Outcome Evaluation. Health Education & Behavior 2000; 27(1):96-111.

California Nutrition Network. (2005) Five a Day Power Play! Pre-Post Impact Survey. Unpublished.

Saunders, R. P., Pate, R., Felton, G., Dowda, M., Weinrich, M., Ward, D., Parsons, M., & Baranowski, T. Development of questionnaires to measure psychosocial influences on children's physical activity. Preventive Med 1997; 26, 241-247.

General Knowledge of Healthy Eating

We want you to tell us what you know about healthful eating.
Please check ☑ your answer

1. What you eat can make a difference in your chances of getting heart disease or cancer.
1 ❑ True
2 ❑ False
3 ❑ Don't know

2. People who are overweight or underweight are more likely to have health problems than people of normal weight.
1 ❑ True
2 ❑ False
3 ❑ Don't know

3. People who are underweight are more likely to have health problems than people who are who not underweight.
1 ❑ True
2 ❑ False
3 ❑ Don't know

4. Which of these would be the best example of a SHORT-TERM Goal to help you begin to eat more fruits and vegetables?
1 ❑ Eat fruit or drink juice every day for breakfast and lunch
2 ❑ Try to eat more fruits and vegetables
3 ❑ Drink juice at breakfast 3 days this week
4 ❑ Don't know

5. Which of these would be the LOWEST Fat sandwich choice?
1 ❑ Cheeseburger
2 ❑ Tuna salad sandwich with mayonnaise
3 ❑ Plain grilled chicken breast sandwich
4 ❑ Don't know

6. Which of these would be the best way to add a fruit or vegetable to your meal at a fast food restaurant?
1 ❑ Add a tomato slice to your hamburger
2 ❑ Order apple pie for dessert
3 ❑ Order a large serving of French fries
4 ❑ Order a side of salad
5 ❑ Don't know

7. Which of these is the HEALTHIEST way to eat potatoes?
1 ❑ Potato salad
2 ❑ French fries
3 ❑ Baked potato without toppings like butter
4 ❑ Don't know

Adapted from "General Knowledge," available at:
http://socialmarketing-nutrition.ucdavis.edu/Tools/Downloads/General_Knowledge.pdf

Hoelscher D, Day RS, Lee ES, Frankowski RF, Kelder SH, Ward JL, Scheurer ME. Measuring the prevalence of overweight in Texas school children. American Journal of Public Health 2004; 94: 1002-1008.

Reynolds K, Yaroch A, et al. Testing mediating variables in a school-based nutrition intervention program. Health Psychol 2002; 21(1): 51-60.

1.) Do you like to try new foods? YES NO

2.) Have you participated in Mixed Greens programs before? YES NO

3.) Please use a sticker to show how you feel about each food.

Food	Haven't Tried	Liked It	Sort of Liked It	Did Not Like It	Yes, I would like to taste it again	No, I would not like to taste it again
Tomato 	?	☺	😐	☹	YES	NO
Corn 	?	☺	😐	☹	YES	NO
Amaranth 	?	☺	😐	☹	YES	NO
Apple 	?	☺	😐	☹	YES	NO
Potato 	?	☺	😐	☹	YES	NO
Salad 	?	☺	😐	☹	YES	NO
Squash 	?	☺	😐	☹	YES	NO

Adapted from Veggie Vote, Mixed Greens, C.S. Mott Group for Sustainable Food Systems, Michigan State University and Spectrum Health, Fall 2007.

Student Dining Evaluation

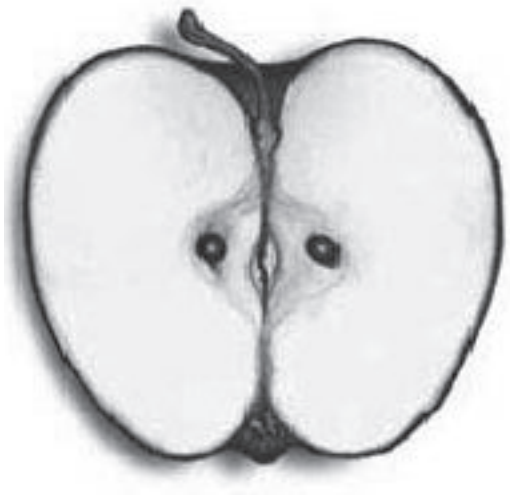
Students report that the environment in which meals are served is as important to them as the quality of the food. The purpose of this questionnaire is to assist adults and students in evaluation the dining environment at school.

This form can be filled out by adults who want to compare different school meal settings, or by the students themselves.

For each of the ten areas of eating experience listed below, please mark the box that best describes you assessment of this area today. Please rate each time as Negative, (makes the eating experience less than pleasant) Neutral, (does not make eating either unpleasant or pleasant) or Positive (makes the eating experience much better). Please also include any additional comments you may have.

	Negative	Neutral	Positive
1. The noise level in the cafeteria Comments:	☐	☐	☐
2. The smells in the cafeteria Comments:	☐	☐	☐
3. The lighting in the cafeteria Comments:	☐	☐	☐
4. The taste of the food Comments:	☐	☐	☐
5. The way the meals are presented Comments:	☐	☐	☐

6. The amount of time allowed for eating Comments:	☐	☐	☐
7. The hospitality of the people who serve the food Comments:	☐	☐	☐
8. The way others who are eating make you feel Comments:	☐	☐	☐
9. The way the cafeteria looks Comments:	☐	☐	☐



Adapted from "Student Dining Evaluation Form" The Dining Experience, Rethinking School Lunch, developed by the Center for Ecoliteracy, in collaboration with J. Michael Murphy, Ed.D., Department of Child Psychiatry, Harvard School of Medicine Available at:
http://www.ecoliteracy.org/programs/pdf/rethinking_dining.pdf

Fresh From the Farm Student Survey

Please answer the following questions. You **do not** need to write your name on this paper.

Broccoli	**Cucumber**	**Radish**	**Spinach**
Potatoes	**Squash**	**Lettuce**	**Carrots**
Cabbage	**Tomatoes**	**Apples**	**Blueberries**
Peaches	**Parsnips**	**Eggplant**	**Turnips**
	Pears	**Bell Peppers**	

1. Pick four fruits and /or vegetables from the list above that can be grown in this region.

   a)

   b)

   c)

   d)

2. Name your favorite vegetable from the list above.

3. For the favorite fruit / vegetable you picked in the previous question, can you name another place in the world where people eat it a lot?

4. Tell us an interesting fact for the favorite fruit / vegetable you picked in Q 2.

5. Name two fruits or vegetables from the list that are a good source of Vitamin C.

   a)

   b)

6. Name one fruit or vegetable from the list that is a good source of Iron and Calcium.

7. Apples are a good source of _____(name of nutrient).

8. Not enough _____ (name of nutrient) in your diet can lead to weak bones.

9. _____ is an important nutrient required for good vision.

10. Fruits and vegetables are a good source of vitamins and _____. (check one)

- ❑ protein
- ❑ fiber
- ❑ cholesterol
- ❑ fat
- ❑ I don't now

11. Fruits and vegetables that are high in Vitamin A are _____ in color.(check one)

- ❑ red & white
- ❑ blue & light brown
- ❑ yellow-orange & dark green
- ❑ brown & purple
- ❑ I don't know

12. A healthy diet includes a variety of fruits and vegetables of different colors. (check one)

- ❑ True
- ❑ False

Fresh From the Farm Student Survey

13. Please fill out the chart below by circling the answer for how much you like the following fruits and vegetables.

FRUIT OR VEGETABLE	I do not like this ☹	I like this a little ☺	I like this a lot ☺☺☺	I don't know what this is ?
Broccoli	☹	☺	☺☺☺	?
Cucumbers	☹	☺	☺☺☺	?
Radish	☹	☺	☺☺☺	?
Spinach	☹	☺	☺☺☺	?
Potatoes	☹	☺	☺☺☺	?
Squash	☹	☺	☺☺☺	?
Lettuce	☹	☺	☺☺☺	?
Carrots	☹	☺	☺☺☺	?
Cabbage	☹	☺	☺☺☺	?
Tomatoes	☹	☺	☺☺☺	?
Apples	☹	☺	☺☺☺	?
Blueberries	☹	☺	☺☺☺	?
Peaches	☹	☺	☺☺☺	?
Parsnips	☹	☺	☺☺☺	?
Eggplant	☹	☺	☺☺☺	?
Turnip	☹	☺	☺☺☺	?
Pears	☹	☺	☺☺☺	?
Bell Peppers	☹	☺	☺☺☺	?

Adapted from "Seven Generations Ahead - Fresh From the Farm Student Survey," Joshi A and Azuma AM, Year One Evaluation Report: Fresh from the Farm Program Implementation at Lozano Bilingual and International Center School, Chicago, October 2006.

Confidentiality information to be explained to students

We would like for you to complete this survey. You may skip questions you do not want to answer but we hope that you will answer all of them. Any information about who you are will be kept secret. We will not share you name or identification number. They will only be used for reports.

Funded by the U.S. Department of Agriculture Food Stamp Program, an equal opportunity Provider and employer, through the California Nutrition Network for Healthy, Active Families.

Student identification number _____

We want you to tell us what you know about healthful eating. Please bubble your answer
1. Eating fruits and vegetables can help decrease your chances of getting heart disease or cancer. O True O False O Don't know
2. Fruits and vegetables that are high in Vitamin A are _____ in color. O Red and white O Blue and light brown O Yellow-orange and dark green O Brown and purple O I don't know
3. Almost all fruits and vegetables contain a lot of vitamins and _____. O Protein O Fiber O Cholesterol O Fat O Don't know
4. Which of the following fruits and vegetables are grown in California: O Spinach O Apples O Pears O All of the above
5. Fruits and vegetables, like apples and pears, are best when eaten with the peel because that is where most of the fiber and antioxidants are. O True O False O Don't know

6. **How much do you like these fruits and vegetables?** Please bubble your answer.

	I do not like this ☹	I like this a little 😐	I like this a lot ☺	I don't know what this is ?
Acorn Squash	O	O	O	O
Asparagus	O	O	O	O
Avocados	O	O	O	O
Beets	O	O	O	O
Broccoli	O	O	O	O
Cabbage	O	O	O	O
Carrots	O	O	O	O
Cherries	O	O	O	O
Cooked Greens	O	O	O	O
Corn	O	O	O	O
Dried Plum	O	O	O	O
Grapefruit	O	O	O	O
Green Beans	O	O	O	O
Mandarins (Tangerines)	O	O	O	O
Melons	O	O	O	O
Mushrooms	O	O	O	O
Nectarines	O	O	O	O
Onions	O	O	O	O
Peas	O	O	O	O
Peppers	O	O	O	O
Persimmons	O	O	O	O
Plums	O	O	O	O
Potatoes	O	O	O	O
Pumpkins	O	O	O	O
Radishes	O	O	O	O
Salad Greens	O	O	O	O
Spinach	O	O	O	O
Sweet Potatoes	O	O	O	O
Tomatoes	O	O	O	O
Zucchini	O	O	O	O

	Please bubble your answer.				
7. For breakfast, I think I can…	I disagree very much	I disagree a little	I am not sure	I agree a little	I agree very much
A. drink a glass of my favorite juice	O	O	O	O	O
B. add fruit to my cereal	O	O	O	O	O
8. For lunch at school, I think I can…	I disagree very much	I disagree a little	I am not sure	I agree a little	I agree very much
A. eat a vegetable that's served	O	O	O	O	O
B. eat a fruit that's served	O	O	O	O	O
9. For lunch at home I think I can…	I disagree very much	I disagree a little	I am not sure	I agree a little	I agree very much
A. eat carrot or celery sticks instead of chips	O	O	O	O	O
B. eat my favorite fruit instead of my usual dessert	O	O	O	O	O
10. For a snack I think I can choose…	I disagree very much	I disagree a little	I am not sure	I agree a little	I agree very much
A. my favorite fruit instead of my favorite cookie	O	O	O	O	O
B. my favorite fruits instead of my favorite candy bar	O	O	O	O	O
C. my favorite raw vegetable instead of my favorite cookie	O	O	O	O	O
D. my favorite raw vegetable instead of my favorite candy bar	O	O	O	O	O
E. my favorite raw vegetable instead of chips	O	O	O	O	O
11. For dinner I think I can…	I disagree very much	I disagree a little	I am not sure	I agree a little	I agree very much
A. eat a serving of vegetables	O	O	O	O	O
B. eat my favorite fruit instead of my usual dessert	O	O	O	O	O

Harvest of the Month Student Evaluation

11. For dinner I think I can…	I disagree very much	I disagree a little	I am not sure	I agree a little	I agree very much
A. eat a serving of vegetables	O	O	O	O	O
B. eat my favorite fruit instead of my usual dessert	O	O	O	O	O

During the past 24 hours (yesterday), how many times did you… (please circle the number of times)						
12. Drink 100% fruit juices, such as orange, apple or grape?	0	1	2	3	4	5 or more
13. Eat fruit? (Do not count fruit juice.)	0	1	2	3	4	5 or more
14. Eat vegetables? (Include salads and non-fried potatoes.)	0	1	2	3	4	5 or more

15. How old are you? _____
Years

16. Are you
O Boy
O Girl

17. How do you describe yourself? (You may fill-out more than one)
O Latino, Hispanic
O Black, African American
O White
O American Indian, Alaskan Native
O Asian, Pacific Islander
O Other

Adapted from "Harvest of the Month Survey," available at http://www.cdph.ca.gov/programs/CPNS/Documents/Network-Compendium.pdf

Cullen K, Baranowski T, et al. Availability, accessibility, and preferences for fruit, 100% fruit juice, and vegetables influence children's dietary behavior. Health Educ Behav 2003; 30(5): 615-26.

Baranowski T, Davis M, Resnicow K, Baranowski J, Doyle C, Smith M, Lin L, Wang DT. Gimme 5 fruit and vegetables for fun and health: Outcome Evaluation. Health Education & Behavior 2000; 27(1):96-111.

Food Preference Survey

How much do you like these fruits and vegetables? Please bubble your answer ●

	I do not like this 	I like this a little 	I like this a lot 	I don't know what this is 
Acorn Squash……	O	O	O	O
Asparagus……..	O	O	O	O
Avocados……..	O	O	O	O
Beets……..	O	O	O	O
Broccoli……..	O	O	O	O
Cabbage……..	O	O	O	O
Carrots……..	O	O	O	O
Cherries……..	O	O	O	O
Cooked Greens……	O	O	O	O
Corn……..	O	O	O	O
Dried Plum……	O	O	O	O
Grapefruit……..	O	O	O	O
Green Beans……	O	O	O	O
Mandarins (Tangerines)	O	O	O	O
Melons……..	O	O	O	O
Mushrooms……	O	O	O	O
Nectarines……	O	O	O	O
Onions……..	O	O	O	O
Peas……..	O	O	O	O
Peppers……..	O	O	O	O
Persimmons……	O	O	O	O
Plums……..	O	O	O	O
Potatoes……..	O	O	O	O
Pumpkins……..	O	O	O	O
Radishes……..	O	O	O	O
Salad Greens……	O	O	O	O
Spinach……..	O	O	O	O
Sweet Potatoes……	O	O	O	O
Tomatoes……..	O	O	O	O
Zucchini……..	O	O	O	O

Adapted from "Food Preference Survey," available in English and Spanish at:
http://socialmarketing-nutrition.ucdavis.edu/Tools/Downloads/preferences_only_9_14.pdf

Cullen K, Baranowski T, et al. Availability, accessibility, and preferences for fruit, 100% fruit juice, and vegetables influence children's dietary behavior. Health Educ Behav 2003; 30(5): 615-26.

Domel, S. B., T. Baranowski, et al. (1993). "Measuring fruit and vegetable preferences among 4th- and 5th-grade students." Prev Med 22(6): 866-79.

Baxter, S. D. and W. O. Thompson (2002). "Fourth-grade children's consumption of fruit and vegetable items available as part of school lunches is closely related to preferences." J Nutr Educ Behav 34(3): 166-71.

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):

Student Survey

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.

Adapted from "BSFP Evaluation Report FY III," Evaluation Services, Center for Rural Studies, University of Vermont

[BEFORE: You may want to conduct these interviews within focus groups in participating schools]

- Describe concept of a salad bar
- What foods would you like to see on the salad bar?
- What foods would you NOT want to see?
- Is there anything about the salad bar that would make you excited about trying it out?

[AFTER: Focus groups with kids that have participated]

- What do you like best about the salad bar?
- What foods do you especially like? [Probe re: taste, quality, presentation]
- What don't you like about the salad bar? [Probe re: time spent in line,]
- What foods don't you like? [Probe re: taste, quality, cultural differences, newness, presentation]
- How could we improve the salad bar for you?
- Do the vegetables in the salad bar remind you of anything in your school garden? [Probe for connections between garden and salad bar]

[AFTER: Focus groups with kids who have not participated]

- Have you seen or heard about the salad bar?
- Have you thought about trying it out? Why/ why not?
- How could we improve the salad bar?

Indicators to gather

- Participation rates in school lunch before and after salad bar
- Participation rates broken down by free/reduced/paid

Adapted from "Bi-annual Interview Protocol - Students," UC SAREP

Self Efficacy Survey - Eating Fruits and Vegetables (Page 1 of 1)

Self-Efficacy Survey - Eating FVs (Baranowski et al.)

How sure are you that you can:	Please check ☑your answer				
1. For breakfast, I think I can…	**I disagree very much**	**I disagree a little**	**I am not sure**	**I agree a little**	**I agree very much**
A. drink a glass of my favorite juice	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑
B. add fruit to my cereal	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑
2. For lunch at school, I think I can…	**I disagree very much**	**I disagree a little**	**I am not sure**	**I agree a little**	**I agree very much**
A. eat a vegetable that's served	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑
B. eat a fruit that's served	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑
3. For lunch at home I think I can…	**I disagree very much**	**I disagree a little**	**I am not sure**	**I agree a little**	**I agree very much**
A. Eat carrot or celery sticks instead of chips	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑
B. Eat my favorite fruit instead of my usual dessert	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑
4. For a snack I think I can choose…	**I disagree very much**	**I disagree a little**	**I am not sure**	**I agree a little**	**I agree very much**
A. my favorite fruit instead of my favorite cookie	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑
B. my favorite fruit instead of my favorite candy bar	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑
C. my favorite raw vegetable with dip instead of my favorite cookie	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑
D. my favorite raw vegetable with dip instead of my favorite candy bar	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑
E. my favorite raw vegetable with dip instead of chips	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑
5. For dinner I think I can….	**I disagree very much**	**I disagree a little**	**I am not sure**	**I agree a little**	**I agree very much**
A. eat a big serving of vegetables	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑
B. eat my favorite fruit instead of my usual dessert	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑
6. I think I can…	**I disagree very much**	**I disagree a little**	**I am not sure**	**I agree a little**	**I agree very much**
A. eat at least 2 cups of fruit and juice each day	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑
B. eat at least 2½ cups of vegetables each day	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑
C. eat at least 4½ cups of fruits and vegetables each day	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑

Adapted from Self-Efficacy Survey: Eating, Fruits and Vegetables available at http://socialmarketing-nutrition.ucdavis.edu/Tools/Downloads/self_effic_fruitveg.pdf

Baranowski T, Davis M, Resnicow K, Baranowski J, Doyle C, Smith M, Lin L, Wang DT. Gimme 5 fruit and vegetables for fun and health: Outcome Evaluation. Health Education & Behavior 2000; 27(1):96-111.

Self-Efficacy Survey – Eating, Asking, Preparing FVs (Reynolds et al.)

How sure are you that you can:	Please check ☑your answer		
	Not Sure	**Sure**	**Very sure**
1. eat fruits I like (such as bananas or raisins) at breakfast	1 ❑	2 ❑	3 ❑
2. eat vegetables I like (such as green peppers or tomatoes) at breakfast	1 ❑	2 ❑	3 ❑
3. drink a glass of my favorite juice (such as orange juice or apple juice) with my breakfast	1 ❑	2 ❑	3 ❑
4. eat fruits I like (such as applesauce or fruit cocktail) at lunch	1 ❑	2 ❑	3 ❑
5. eat vegetables I like (such as salad or a plain baked potato) at lunch	1 ❑	2 ❑	3 ❑
6. drink a glass of my favorite juice (such as grape juice or V-8 juice) with my lunch	1 ❑	2 ❑	3 ❑
7. eat fruits I like (such as apples or oranges) for dessert at dinner	1 ❑	2 ❑	3 ❑
8. eat vegetables I like (such as corn or beans) at dinner	1 ❑	2 ❑	3 ❑
9. drink a glass of my favorite juice (such as tomato juice or orange juice) with my dinner	1 ❑	2 ❑	3 ❑
10. snack on fruits I like (such as grapes or bananas) instead of on foods like cake or cookies	1 ❑	2 ❑	3 ❑
11. snack on vegetables I like (such as carrot or celery sticks) instead of on foods like potato or corn chips	1 ❑	2 ❑	3 ❑
12. drink a glass of my favorite juice (such as apple juice or grape juice) with my snack	1 ❑	2 ❑	3 ❑
13. ask my mom or dad to buy fruit for snacks	1 ❑	2 ❑	3 ❑
14. ask my mom or dad to fix my favorite vegetable dishes at dinner	1 ❑	2 ❑	3 ❑
15. ask my mom or dad to keep 100% juice in the refrigerator	1 ❑	2 ❑	3 ❑
16. help my mom or dad fix a fruit or vegetable snack	1 ❑	2 ❑	3 ❑
17. cook a vegetable (like corn-on-the-cob) for dinner	1 ❑	2 ❑	3 ❑
19. eat at least 4½ cups of fruit and vegetables each day	1 ❑	2 ❑	3 ❑
20. eat at least 2 cups of fruit and juice each day	1 ❑	2 ❑	3 ❑
21. eat at least 2½ cups of vegetables each day	1 ❑	2 ❑	3 ❑

Adapted from Self-Efficacy Survey: Eating, Asking, Preparing Fruits and Vegetables available at http://socialmarketing-nutrition.ucdavis.edu/Tools/Downloads/Self_efficacy_survey_Reynolds.pdf

Reynolds K, Yaroch A, et al. Testing mediating variables in a school-based nutrition intervention program. Health Psychol 2002; 21(1): 51-60.

Diet History Questionnaire

(Information about the tool is provided here for reference. Sample tool available in English and Spanish at http://riskfactor.cancer.gov/DHQ/)

The Diet History Questionnaire (DHQ) is a food frequency questionnaire (FFQ) developed by staff at the Risk Factor Monitoring and Methods Branch (RFMMB) of the National Cancer Institute (NCI). This FFQ consists of 124 food items and includes both portion size and dietary supplement questions. It takes about 1 hour to complete and was designed, based on cognitive research findings, to be easy to use.

Data show that the DHQ provides reasonable nutrient estimates, and the tool has been validated. The DHQ is available in a variety of file formats, each designed for a specific method of capturing the data from paper-based forms. Review the options below and determine the method that you will use to capture the data before downloading and printing copies for distribution. The DHQ and other required files are available on each method's page. As of August 2005, a web-based version of the DHQ is also available as an option for capturing data. The tool is available in both English and Spanish.

DHQ data stored in an ASCII text file can be analyzed using the Diet*Calcsoftware. Please be aware that although Diet*Calc is available at no cost, there may be costs associated with printing the forms and with scanning or entering the data. There are 3 methods for capturing survey data -- scanning, data entry, and computer-assisted interviews. To date, scanning has proven to be the most effective method for DHQ. The NCI website (http://riskfactor.cancer.gov/DHQ/) provides additional information on the costs associated with this tool as well as a sample survey.

NCI also suggests that users may be able to reduce costs by sharing information and resources with other users. join the DHQ LISTSERV mailing list (https://list.nih.gov/archives/dhq-l.html).

Adapted from "Diet History Questionnaire," National Cancer Institute.
Available at: http://riskfactor.cancer.gov/DHQ/.

24 Hour Diet Recall

The purpose of the 24 Hour Dietary Recall is to estimate the types of food and drink a participant consumes in a typical day, the method of preparation, the amount eaten, and the approximate time the food or drink was consumed.

Please be as specific and honest as possible for review with the Registered Dietitian.

Thank you.

Day 1

Food Item	Serving Size	Time Consumed	Where

Day 2

Food Item	Serving Size	Time Consumed	Where

Day 3

Food Item	Serving Size	Time Consumed	Where

Adapted from "24 Hour Diet Recall," Dearborn County Hospital. Available at: www.dch.org/eventseduc/24%20Hour%20Diet%20Recall.doc

Estimating Fruit & Vegetable Consumption by Students

Methodology:
School cafeteria "Daily production records" or "daily menu production worksheets" are the form on which food service kitchen staff record the amounts of specific foods served at the beginning and end of the lunch meal everyday. The difference between these two figures indicates the amount of food within each category that children took off the lunch line, in other words, how much was served to students that day. These records do not account for how much students actually ate off their plates, which will require further plate waste studies.

The USDA School Meals Initiative for Healthy Children is based on Food Based Menus. With Food Based Menus, foods from specific food groups and in specific quantities must be offered. The minimum USDA requirement in the meal component of Vegetables/Fruits for grades K-6 is two or more servings of vegetables and/or fruits, which is equivalent to 3/4 cup per child per day plus 1/2 cup extra over a week.

Calculate the fruit and vegetable amount taken by students by recording the beginning and end amounts on the production records. This figure is calculated on ¼ cup servings. Total the number of ¼ cup servings for each day, and divide by 3 to obtain the number of $3/4^{th}$ cup servings. Sum the $3/4^{th}$ cup servings for the entire month, and divide by total number of meals served for a percentage of the $3/4^{th}$ cup servings per meal. Divide this by the number of students consuming meals to obtain the servings/meal or student /day (A).

Assuming that students consume what they take on their lunch trays, (A) can be used as a proxy for consumption. It may also be necessary to calculate this data over selected months during the year to account for seasonal differences.

Adapted from "Estimation of Fruit and Vegetable Consumption by Students Based on Analysis of School Food Service Production Records" Final Evaluation Report, Compton Farm to School Demonstration Project, Feenstra and Ohmart, UC SAREP, July 1, 2004 - June 30, 2005.

Directions: Mark each food you ate at lunch, supper and snacks for the last 24 hours. Drinks and breakfast are on the back of this sheet.

	LUNCH	SUPPER	SNACKS
	☐ Buy	O Buy	◇ Buy
Protein Foods	☐ Take	O Take	◇ Take
Beef, Pork, Ham	☐	❍	◇
Chicken, Fish	☐	❍	◇
Pizza	☐	❍	◇
Lasagna	☐	❍	◇
Spaghetti and Meat sauce	☐	❍	◇
Tacos, Enchiladas	☐	❍	◇
Tuna fish, Cheese, Egg	☐	❍	◇
Hamburger, Hot dog	☐	❍	◇
Peanut butter sandwich	☐	❍	◇
Lunch meat, bologna	☐	❍	◇
Beans, black-eyed peas	☐	❍	◇
Other_____	☐	❍	◇
Breads & Grains			
Noodles, macaroni, rice	☐	❍	◇
Biscuits, cornbread	☐	❍	◇
Bread, buns	☐	❍	◇
Tortillas	☐	❍	◇
Vegetables			
Corn	☐	❍	◇
Mixed Vegetables	☐	❍	◇
Green Beans	☐	❍	◇
Broccoli	☐	❍	◇
Peas	☐	❍	◇
Carrots	☐	❍	◇
Tomatoes	☐	❍	◇
Celery	☐	❍	◇
Lettuce, tossed salad	☐	❍	◇
Squash, Zucchini	☐	❍	◇
French fries, tater tots	☐	❍	◇
Potatoes: mashed, baked	☐	❍	◇
Spinach	☐	❍	◇
Other_____	☐	❍	◇

Food Recognition Form

Fruits

Apples, applesauce	☐	❍	◇
Bananas	☐	❍	◇
Berries or cherries	☐	❍	◇
Grapes	☐	❍	◇
Oranges or grapefruit	☐	❍	◇
Peaches	☐	❍	◇
Melon	☐	❍	◇
Pears	☐	❍	◇
Kiwifruit, mango	☐	❍	◇
Raisins	☐	❍	◇
Other_____	☐	❍	◇

Chips

Potato Chips, corn chips	☐	❍	◇
Nachos, Nuts	☐	❍	◇
Pretzels, Popcorn, Crackers	☐	❍	◇
Other_____	☐	❍	◇

Sweets & Desserts

Cookies, Granola Bar	☐	❍	◇
Cake, cupcakes, pie	☐	❍	◇
Donuts, sweet rolls	☐	❍	◇
Candy (pieces, bar)	☐	❍	◇
Pudding, jello	☐	❍	◇
Ice cream, popsicle	☐	❍	◇
Other_____	☐	❍	◇

Drinks

Milk, low-fat white or chocolate	☐	❍	◇
Milk, regular white or chocolate	☐	❍	◇
Iced tea	☐	❍	◇
Soft drink	☐	❍	◇
Fruit drink, Kool-aid, drink box	☐	❍	◇
Fruit juice_____	☐	❍	◇
Coffee	☐	❍	◇
Water	☐	❍	◇
Hot Chocolate	☐	❍	◇
Other_____	☐	❍	◇

Other

Butter	☐	❍	◇
Margarine	☐	❍	◇
Jam or Jelly	☐	❍	◇
Sugar	☐	❍	◇
Salad Dressing	☐	❍	◇

BREAKFAST

Drinks

Orange juice	☐
Apple juice	☐
Other juice	☐
Milk, lowfat	☐
Milk, regular	☐
Coffee, Tea	☐
Other_____	☐

Cereals

Hot cereal (oatmeal, grits)	☐
Cold cereal_____	☐

Breads

Toast or bread	☐
Biscuits	☐
Muffins	☐
Donuts, sweet rolls	☐
Poptarts	☐
French toast	☐
Pancakes	☐
Waffles	☐

Protein Foods

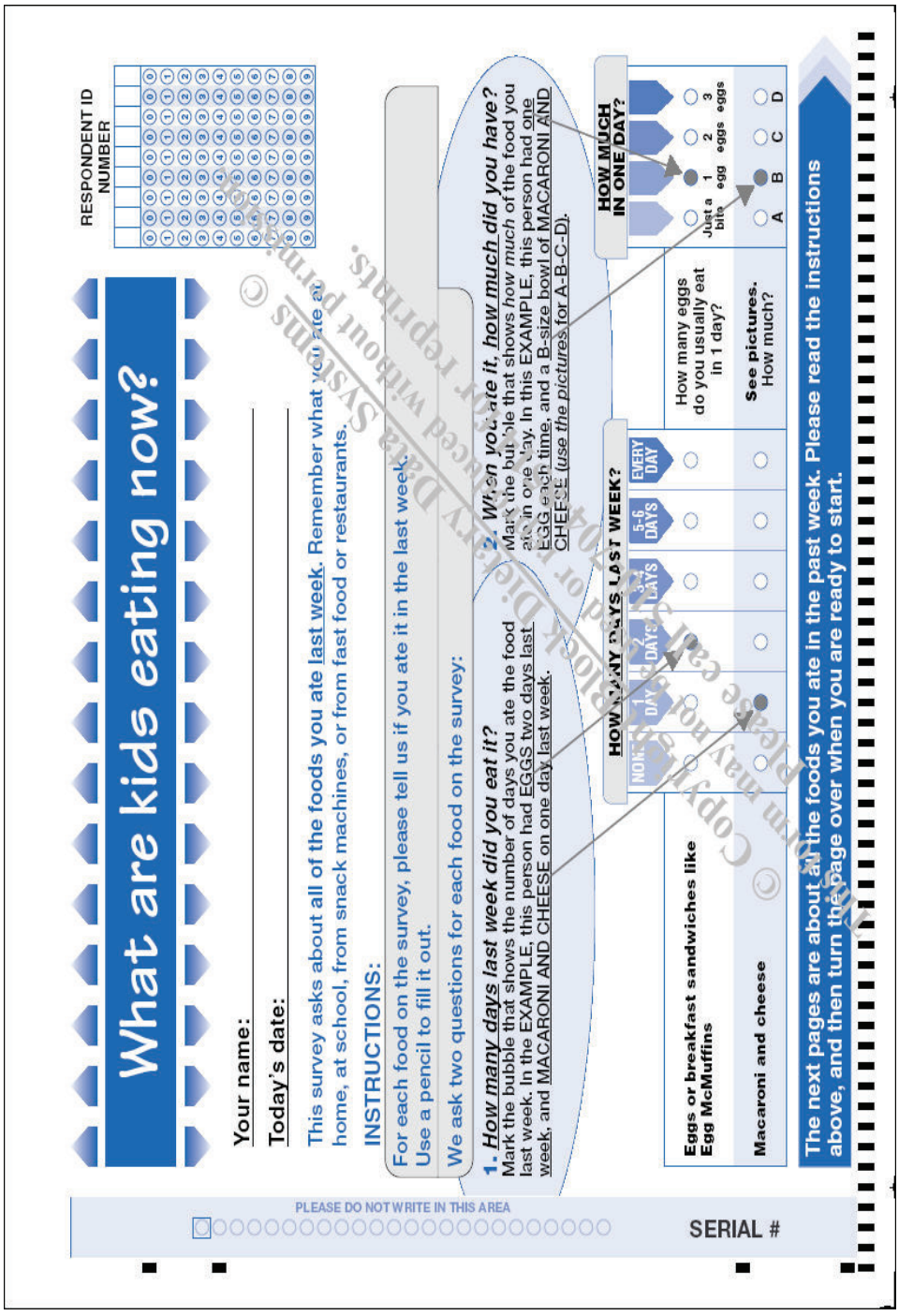
Eggs	☐
Sausage	☐
Bacon	☐
Cheese	☐

Adapted from "Food Recognition Form," available at http://www.cdph.ca.gov/programs/CPNS/Documents/Network-Compendium.pdf

Cullen K, Bartholomew L. Validity of a 1-day food recognition form to measure fruit and vegetable consumption in 9-12 year old girls. Poster Presentation: American Dietetic Association Food and Nutrition Conference and Expo. 2003.

Kids Questionnaire

Sample questions from the Kids Questionnaire© (Block Dietary Data Systems-www.nutritionquest.com)



Adapted from Sample Questions from the Kids Questionnaire, Block Dietary Data Systems, www.nutritionquest.com

1. During the past 7 days, how many times did you drink **100% fruit juices** such as orange juice, apple juice, or grape juice? (Do **not** count punch, Kool-Aid, sports drinks, or other fruit-flavored drinks.)
   - (A) I did not drink 100% fruit juice during the past 7 days
   - (B) 1 to 3 times during the past 7 days
   - (C) 4 to 6 times during the past 7 days
   - (D) 1 time per day
   - (E) 2 times per day
   - (F) 3 times per day
   - (G) 4 or more times per day

2. During the past 7 days, how many times did you eat **fruit**? (Do **not** count fruit juice.)
   - (A) I did not eat fruit during the past 7 days
   - (B) 1 to 3 times during the past 7 days
   - (C) 4 to 6 times during the past 7 days
   - (D) 1 time per day
   - (E) 2 times per day
   - (F) 3 times per day
   - (G) 4 or more times per day

3. During the past 7 days, how many times did you eat **green salad**?
   - (A) I did not eat green salad during the past 7 days
   - (B) 1 to 3 times during the past 7 days
   - (C) 4 to 6 times during the past 7 days
   - (D) 1 time per day
   - (E) 2 times per day
   - (F) 3 times per day
   - (G) 4 or more times per day

4. During the past 7 days, how many times did you eat **potatoes**? (Do **not** count french fries, fried potatoes, or potato chips.)
   - (A) I did not eat potatoes during the past 7 days
   - (B) 1 to 3 times during the past 7 days
   - (C) 4 to 6 times during the past 7 days
   - (D) 1 time per day
   - (E) 2 times per day
   - (F) 3 times per day
   - (G) 4 or more times per day

Fruit and Vegetable Consumption Survey (YRBS)

5. During the past 7 days, how many times did you eat **carrots**?
   - (A) I did not eat carrots during the past 7 days
   - (B) 1 to 3 times during the past 7 days
   - (C) 4 to 6 times during the past 7 days
   - (D) 1 time per day
   - (E) 2 times per day
   - (F) 3 times per day
   - (G) 4 or more times per day

6. During the past 7 days, how many times did you eat **other vegetables**? (Do **not** count green salad, potatoes, or carrots.)
   - (A) I did not eat other vegetables during the past 7 days
   - (B) 1 to 3 times during the past 7 days
   - (C) 4 to 6 times during the past 7 days
   - (D) 1 time per day
   - (E) 2 times per day
   - (F) 3 times per day
   - (G) 4 or more times per day

Adapted from "Fruit and Vegetable Consumption Youth Risk Behaviour Survey (YRBS)," Centers for Disease Control available at: http://socialmarketing-nutrition.ucdavis.edu/Tools/Downloads/Fruit_and_Vegetable_Consumption_Survey.pdf

The Burlington School Food Project 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.

Adapted from "Teacher Focus Group Questions," Schmidt M.C., Kolodinsky J, The Burlington School Food Project, Final Evaluation Report, December 2006, Center for Rural Studies.

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

Adapted from "District-Wide Teacher Focus Group Guide," Schmidt M.C., Kolodinsky J, The Burlington School Food Project, Final Evaluation Report, December 2006, Center for Rural Studies.

Responsibilities

The Board of Education recognizes the important connection between a healthy diet and a student's ability to learn effectively and achieve high standards in school. The Board also recognizes the school's role, as part of the larger community, to promote family health, sustainable agriculture and environmental restoration.

The Board of Education recognizes that the sharing of food is a fundamental experience for all peoples; a primary way to nurture and celebrate our cultural diversity; and an excellent bridge for building friendships, and inter-generational bonds.

Mission

The educational mission is to improve the health of the entire community by teaching students and families ways to establish and maintain life-long healthy eating habits. The mission shall be accomplished through nutrition education, garden experiences, the food served in schools, and core academic content in the classroom.

Goals

1. Ensure that no student in Berkeley is hungry.

2. Ensure that a healthy and nutritious breakfast, lunch and after school snack is available to every student at every school so that students are prepared to learn to their fullest potential.

3. Eliminate the reduced-price category for school lunch, breakfast and snacks, so that all low-income children have healthy food available at no cost.

4. Ensure that all qualified children become eligible for free meals by frequently checking with Alameda County Social Services.

5. Ensure maximum participation in the school meal program by developing a coordinated, comprehensive outreach and promotion plan for the school meal programs.

6. Shift from food-based menu planning to nutrient-based planning (as set forth under USDA guidelines) to allow for more flexible food selection.

7. Ensure that the nutritional value of the food served significantly improves upon USDA Dietary Guidelines by providing nutritious, fresh, tasty, locally grown food that reflects Berkeley's cultural diversity.

8. Ensure that the food served shall be organic to the maximum extent possible, as defined by the California Certified Organic Farmers.

9. Eliminate potential harmful food additives and processes, such as bovine growth hormones, irradiation, and genetically modified foods.

10. Serve meals in a pleasant environment with sufficient time for eating, while fostering good manners and respect for fellow students.

11. Maximize the reduction of waste by recycling, reusing, composting and purchasing recycled products. Each school site shall have a recycling program.

12. Ensure that a full service kitchen will be installed at school sites where public bond money is expended to repair or remodel a school.

Strategies

A. Integration into the Curriculum

1. Integrate eating experiences, gardens, and nutrition education into the curriculum for math, science, social studies and language arts at all grade levels.

2. Establish a school garden in every school. Give students the opportunity to plant, harvest, prepare, cook and eat food they have grown.

3. Establish relationships with local farms. Encourage farmers and farm workers to come to the school classroom and arrange for students to visit farms.

B. Student Participation

1. Solicit student preferences in planning menus and snacks through annual focus groups, surveys, and taste tests of new foods and recipes.

2. Ensure that 5 students are represented on the Child Nutrition Advisory Committee.

C. Waste Reduction

1. Ensure that cafeterias are part of the environmental education of students and staff through reducing waste, composting, recycling and purchasing recycled material.

D. Sustainable Agriculture

1. Purchase food from school gardens and local farmers as a first priority, based on availability and acceptability. Child Nutrition Services will coordinate its menus with school garden production and provide to garden coordinators a list of the produce it wishes to purchase.

2. Work with the Alameda County Cooperative Bid (13 school districts) to increase the amount of products purchased from local farms and organic food suppliers.

E. Nutrition Education and Professional Development

1. Provide regular professional development to enable the Food Services Staff to become full partners in providing excellent food for our students.

2. Provide regular training, at least annually, to teachers and the Food Service Staff on basic nutrition, nutrition education, and benefits of organic and sustainable agriculture.

3. Provide Child Nutrition Services with USDA approved computer software, training and support to implement nutrient-based menu planning.

F. Business Plan

1. The Board of Education shall do a comprehensive cost/benefit analysis and business plan. The plan shall include an examination of different development models of increased fresh food preparation at the central and satellite kitchens.

G. Public Information

1. Each year in March, Child Nutrition Services shall prepare The Director's Annual Report for the Board of Education, which will include: a) Description of the level of service for each site and level of participation; b) Profit and Loss Statement for the past fiscal year; c) Outreach and Promotion Marketing Plan (with assistance from Advisory Committee) d) Budget for the future year; e) Report on the progress in meeting the food policy goals ; f) Nutritional quality of the food being served; g) Inventory of equipment; h) Budget for maintenance and replacement equipment; i) Accounting of Child Nutrition Services' financial reserve and a budget allocating the reserve.

2. The Berkeley Unified School District's Food Policy, Director's Annual Report, Monthly Menus and food policy information shall be available at District Office and on the Board of Education's Web site.

3. A summary of the Director's Annual Report shall be distributed as part of the April and May menus.

H. Public Policy

1. Advocate for label disclosure: a) Request State and Federal representatives support legislation that will clearly label food products that have been irradiated, genetically modified or have been exposed to bovine growth hormones. b) Send a Board of Education resolution requesting support for labeling legislation to: 1. Every School Board in the State of California. 2. The State School Boards Association. 3. The Nation School Boards Association.

I. Establishment of a Child Nutrition Advisory Committee

1. Child Nutrition Advisory Committee shall be established to discuss food-related topics of concern to the school community and help make policy recommendations to the Board of Education.

2. The 24 Member Child Nutrition Advisory Committee shall be as follows: a) 10 Community/Parent representatives appointed by the Board of Education b) The Superintendent. c) The Director of Child Nutrition Services. d) 3 Classified employees appointed by their employee organization. e) 3 Teachers (elementary,

middle and high school) appointed by their employee organization. f) 1 Principal appointed by their employee organization. g) 5 Students (3 middle school and 2 high school) appointed by student government

3. The Advisory Committee shall meet at least six times a year at hours convenient for public participation.

4. The Duties and Responsibilities shall be as follows: a) Present to the Board of Education an Annual Report in April of each year on the status of meeting the food policy goals.

The report shall contain:

1. Review and comment on the Director's Annual Report, Profit and Loss Statement, Marketing Plan and Business Plan.

2. Recommendations for improving the delivery and cost effectiveness of food services. b) Assist the Director of Child Nutrition Service in the development and implementation of the Outreach and Promotion Marketing plan. c) Review and report by February 1 to the Board of Education on recommendations to eliminate potentially harmful food additives and processes. d) Make periodic reports, as the Advisory Committee deems necessary. e) Establish rules for decision-making.

J. Maintenance and Repair of Equipment

1. The Board of Education instructs the Maintenance Committee to include kitchen facilities, food preparation and storage of equipment as high priority in its comprehensive maintenance policy.

2. Modernize computer equipment and programs, and institute an automated accounting system.

K. Community Use of School District Property

1. District facilities, including school kitchens shall be available to community based groups for their use and enjoyment under terms established by the Board of Education.

Adapted from Berkeley Unified School District Wellness Policy www.schoollunchinitiative.org

HOUSE OF REPRESENTATIVES

Wednesday, February 15, 2006

Committee Substitute for

House Bill No. 2655

COMMITTEE SUBSTITUTE FOR HOUSE BILL NO. 2655 — By WINCHESTER, LINDLEY and SHELTON of the House and LAWLER of the Senate.

An Act relating to agriculture; creating the Oklahoma Farm-to-School Program Act; establishing the Oklahoma Farm-to-School Program; stating purpose of the Program; making the Oklahoma Department of Agriculture, Food, and Forestry the lead agency for the Program; directing the State Department of Education to provide assistance and staffing; requiring the Oklahoma Department of Agriculture, Food, and Forestry to establish grant guidelines; creating the Oklahoma Farm-to-School Task Force; stating purpose of the Task Force; providing for membership, appointment of chair, and staffing; requiring a written report; providing for travel reimbursement; providing for codification; providing an effective date; and declaring an emergency.

BE IT ENACTED BY THE PEOPLE OF THE STATE OF OKLAHOMA:

SECTION 1. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 1960 of Title 2, unless there is created a duplication in numbering, reads as follows:

This act shall be known and may be cited as the "Oklahoma Farm-to-School Program Act".

SECTION 2. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 1961 of Title 2, unless there is created a duplication in numbering, reads as follows:

A. The Legislature, recognizing that school children in the state need access to fresh, tasty, and nutritious food and that farmers in the state need a market for the food they grow, hereby establishes the Oklahoma Farm-to-School Program. The purpose of the Program shall be to:

1. Provide fresh, high-quality, locally grown foods to school cafeterias;

2. Teach students about healthy eating through nutrition education and school gardens, thereby setting the stage for life-long healthy eating habits; and

3. Provide Oklahoma farmers with new markets for their products.

B. The Oklahoma Department of Agriculture, Food, and Forestry shall be the lead public agency for general administration and monitoring of the Oklahoma Farm-to-School Program and activities related to the Program. The State Department of Education shall provide assistance and staff support for the implementation of the Oklahoma Farm-to-School Program Act.

C. The Oklahoma Department of Agriculture, Food, and Forestry shall establish guidelines for the award of grants to:

1. School districts to incorporate food from local farmers on school menus and to implement nutrition education programs; and

2. Local farmers to do the planning, development, and implementation of the new school market.

SECTION 3. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 1962 of Title 2, unless there is created a duplication in numbering, reads as follows:

A. There is hereby created until July 1, 2007, the Oklahoma Farm-to-School Task Force. The purpose of the Task Force shall be to study the obstacles to the operation of the Oklahoma Farm-to-School Program and make recommendations to address the problems and issues.

B. The Task Force shall be composed of fifteen (15) members as follows:

1. The Secretary of Agriculture or a designee;

2. The Superintendent of Public Instruction or a designee;

3. A representative of the Oklahoma State University Extension Services;

4. A person who represents a vendor that supplies food to school districts in the state; and

5. Eleven persons who are members of a nonprofit food policy council appointed by the Governor.

C. The Secretary of Agriculture shall serve as chair of the Task Force and shall call the meetings of the Task Force. Staffing assistance shall be provided by the staff of the Oklahoma Department of Agriculture, Food, and Forestry and the State Department of Education.

D. The Task Force shall present a written report to the Governor, the Speaker of the Oklahoma House of Representatives, and the President Pro Tempore of the State Senate by December 31, 2006.

E. Members of the Task Force shall receive no compensation for serving on the Task Force but may receive travel reimbursement as follows:

1. Legislative members of the Task Force may be reimbursed for necessary travel expenses incurred in the performance of duties, in accordance with Section 456 of Title 74 of the Oklahoma Statutes from the legislative body in which they serve; and

2. Other members of the Task Force may be reimbursed for necessary travel expenses incurred in the performance of duties by the respective appointing authorities in accordance with the State Travel Reimbursement Act.

SECTION 4. This act shall become effective July 1, 2006.

SECTION 5. It being immediately necessary for the preservation of the public peace, health and safety, an emergency is hereby declared to exist, by reason whereof this act shall take effect and be in full force from and after its passage and approval.

COMMITTEE REPORT BY: COMMITTEE ON HEALTH AND HUMAN SERVICES, dated

2-14-06 — DO PASS, As Amended and Coauthored.

Adapted from "Oklahoma HB 2655," available at:
http://www.okhouse.gov/Legislation/BillFiles/hb2655cs_lrp.PDF

Sample Template: XXXX Student Nutrition Services COSTS & INCOME, Yrs XX-

	Total District	Salad Bar Meals (Farm to School Component)	Non-Salad Bar Meals (Non-farm to School)
Number of meals			
Pro-rate of total district			
Pro-rate of elementary, if applicable			
COSTS			
Food and Food Supplies			
Produce			
Non-produce			
Subtotal food			
Food supplies			
Subtotal food/supplies			
Non-capital Equip, Supplies			
Fuel			
Rent/repairs			
Other*			
Subtotal equip, supplies			
Labor			
Total labor			
Additional Salad Bar			
Labor / requirement for farm to school program			
Subtotal labor			
Interest			
Sales tax			
Indirect			
Total costs			
INCOME			
NSLP			
Breakfast			
Needy breakfast			
Misc. food service sales			
Supplemental grants			
Total income			
PROFIT (OR LOSS)			

Adapted from "Assessing Financial Viability of Farm to School Programs" Yolo County Farm to School Evaluation Report Year Two Annual Report, Gail Feenstra and Jeri Ohmart, 2004-05

Rethinking School Lunch Calculator

Introduction

This tool for financial analysis is designed to help you forecast the financial impact of rethinking your food service models. The calculator contains several individual worksheets that track income and expense categories for a district of up to 15 schools, from elementary through high school. The worksheets are optimized to support "fresh prep", farm-to-school lunch programs that promote healthy outcomes for students and districts.

This financial calculator is provided for informational purposes only and is not intended, and should not be construed, as a financial advisor or software budgeting application. The Center for Ecoliteracy and Bon Appétit Management Company does not provide technical support or budget advice and you should consult with a professional business advisor about your individual circumstances.

On the next page, find an example of the "Assumptions" spreadsheet, the first part of the Financial Calculator. The full calculator also includes spreadsheets to enter Ops Revenue, Ops Management, Ops Labor, Ops Expense, District Overhead and Proforma, and includes a Help file as well. To download the tool to use in your own school lunch calculations, please visit:

http://www.ecoliteracy.org/programs/pdf/rethinking_calculator.zip

Scenario - Assumptions Input Grid					
School District Name	XYZ Unified School District				
School Name (Unit)	A	B	C	D	E
Student Population	1200	1200	800	800	800
Adult Population	100	100	75	75	75
Operating Days	180	180	180	180	180
Operating Weeks	36	36	36	36	36
Café/Retail Food Cost %	38%	38%	38%	38%	38%
Vending Food Cost %	65%	65%	65%	65%	65%
Contract Food Cost %	0%	0%	35%	0%	0%
Catering Food Cost %	28%	28%	28%	28%	28%
Management Tax & Benefit Rate	30%				
Full Time Staff Tax & Benefit Rate	35%				
Part Time Staff Tax & Benefit Rate	20%				

Federal & State Reimbursement Input Grid					
	Full Pay	Partial Pay	Free		
Federal Reimbursement - Breakfast	$ 0.22	$ 0.87	$ 1.17		
State Reimbursement - Breakfast	$ -	$ -	$ -		

Rethinking School Lunch Calculator

Federal Reimbursement - Lunch	0.20	$	$ 1.74	$	2.14	
State Reimbursement - Lunch	$ -		$ 0.13	$	0.13	
Federal Reimbursement - Snack	0.05	$	$ 0.29	$	0.58	
State Reimbursement - Snack	$ -		$ -	$	-	

Available - Annual Commodity Assistance Calculation

Scenario	A	B	C	D	E
Daily - Full Pay	60	60	56	56	56
Daily - Partial Pay	96	96	88	88	88
Daily - Free	144	144	112	112	112
Daily - Total	300	300	256	256	256
Annual - Operating Days	180	180	180	180	180
Annual - Lunches	54000	54000	46080	46080	46080
Commodity Assistance per Meal	0.16	$ 0.16	$ 0.16	0.16	$ 0.16
Annual - Commodity Assistance	8,640	$ 8,640	$ 7,373	7,373	$ 7,373

Adapted from Rethinking School Lunch Financial Calculator, Center for Ecoliteracy's Rethinking School Lunch Guide, J. P. Dozier, Bon Appétit Management Company, in collaboration with the Center for Ecoliteracy and its Food Service Directors' Roundtable, March 30, 2004. Available at: http://www.ecoliteracy.org/programs/rsl-guide.html.

For each of the fruits and vegetables listed below, over the past year have purchases of fresh produce during the availability period from any source been made? For example, did you purchase fresh blueberries from any source anytime from mid July though October?

Once the school or college has identified which locally grown fruits or vegetables could be purchased ruing specific periods of the year, documenting actual purchases is the next and very important step. School administrators, school meals program budget managers, funding agencies and community supporters are all interested in the economic impact farm to school is having on the school and on the local economy. Keeping track of local purchases and their costs to the school is essential in making a solid assessment.

The form on the next page was developed to track the quantity of fruits and vegetables purchased from in-state producers and the cost.

Seasonal Use of Locally Grown Fruits & Vegetables Assessment (Page 2 of 2)

Produce Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yes	No
Apples	■	■	■	■	■	■		■	■	■	■	■		
Blueberries								■	■	■				
Cherries, sweet							■	■						
Cherries, sour							■							
Grapes									■	■				
Melons								■	■					
Peaches								■	■					
Pears									■	■	■			
Plums									■					
Raspberries							■		■	■				
Strawberries						■								
Asparagus					■	■								
Beans							■	■	■	■				
Beets								■	■	■	■			
Broccoli						■	■	■	■	■	■	■		
Cabbage	■	■				■	■	■	■	■	■	■		
Carrots	■	■	■	■				■	■	■	■	■		
Cauliflower							■	■		■	■	■		
Celery								■	■	■	■			
Celery root	■	■	■							■	■	■		
Corn								■	■	■				
Cucumber								■	■	■				
Eggplant								■	■	■				
Lettuce							■	■	■	■				
Onions	■	■	■	■				■	■	■	■	■		
Parsnips	■	■	■							■	■	■		
Peas							■	■						
Peppers														
Potatoes	■	■	■	■				■	■	■	■	■		
Pumpkins									■	■				
Radishes					■	■	■	■	■	■	■			
Rhubarb						■	■	■						
Rutabagas	■	■	■							■	■	■		
Spinach					■	■	■		■	■				
Squash, summer						■	■	■	■	■				
Squash, winter	■	■	■						■	■	■	■		
Tomatoes							■	■	■	■				
Turnips	■	■	■					■	■	■	■	■		

Adapted from "Making the Cafeteria Connection Toolbox," Farm to School in the Northeast: Making the Connection for Healthy Kids and Healthy Farms. By Jennifer L. Wilkins, Heidi Mouillesseaux-Kunzman, Martha Goodsell, Betsey Bacelli, Meredith Graham Cornell Farm to School Program, NY Farms!, and the New York School Nutrition Association. May 2007. The toolbox was developed as part of a project funded by the Northeast Sustainable Agriculture Research and Education Program.

K-12 Food Service Check-in Form

Date: _____ School Name: _____ in _____ district

1. What local fruits and vegetables did you use in your food service this past month? (list items mentioned)

For each food, did you get these items through a supplier or did you purchase them directly from a farmer? (Circle one or both if applicable)

Supplier Farmer

2. What other locally produced food products (such as dairy products, meats, poultry, eggs, maple syrup, honey) did you use in your food service this past month?

For each food, did you get these items through a supplier or did you purchase them directly from a farmer? (Circle one or both if applies)

Supplier Farmer

3. Did you ask/talk with your supplier about availability of local (state or regional) foods?

4. Did you seek out any other sources of local foods?

5. Have you talked directly with any farmer about what they grow and could provide?

6. Did you encounter any difficulty in procuring local foods? Describe.

7. How would you describe the quality of the local foods that you served? Name the foods.

_____

Excellent Good Fair OK Poor

8. Did you do any sort of marketing to make student and the school community aware that locally produced foods were being served?

Yes_____ No_____

Describe: _____

9. How would you describe the reactions of the students to the local foods that you served?

Ecstatic Enthusiastic Neutral Mildly Negative Other: _____

10. How did the price of the local items compare with similar items you would have received through national/regional distribution?

Adapted from "Periodic Check-in with K-12 Schools," Making the Cafeteria Connection Toolbox, Farm to School in the Northeast: Making the Connection for Healthy Kids and Healthy Farms. By Jennifer L. Wilkins, Heidi Mouillesseaux-Kunzman, Martha Goodsell, Betsey Bacelli, Meredith Graham Cornell Farm to School Program, NY Farms!, and the New York School Nutrition Association. May 2007. The toolbox was developed as part of a project funded by the Northeast Sustainable Agriculture Research and Education Program.

Local Food Purchases Record

Once the school or college has identified which locally grown fruits or vegetables could be purchased during specific periods of the year, documenting actual purchases is the next and very important step. School administrators, school meals program budget managers, funding agencies and community supporters are all interested in the economic impact farm to school is having on the school and on the local economy. Keeping track of local purchases and their costs to the school is essential in making a solid assessment.

The form below was developed to track the quantity of fruits and vegetables purchased from in-state producers and the cost.

School District: _____ Week:_____

Item	Unit	No. of Units	Price/Unit	Name of Supplier or Farmer	Comments: delivery, quality, service, use, acceptance, etc.

Adapted from "Making the Cafeteria Connection Toolbox," Farm to School in the Northeast: Making the Connection for Healthy Kids and Healthy Farms. By Jennifer L. Wilkins, Heidi Mouillesseaux-Kunzman, Martha Goodsell, Betsey Bacelli, Meredith Graham Cornell Farm to School Program, NY Farms!, and the New York School Nutrition Association. May 2007. The toolbox was developed as part of a project funded by the Northeast Sustainable Agriculture Research and Education Program.

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.

Adapted from "Questions for Food Service Providers," Schmidt M.C., Kolodinsky J, The Burlington School Food Project, Final Evaluation Report, December 2006, Center for Rural Studies.

Classroom/School Waste Audit

Type of Material	Estimate Percentages Visually estimate the amount in % or weight the material (pounds or ounces)	Location Found	Please check below the appropriate box or boxes to determine what can be done with the materials you have found during the waste audit					
			Compost	Reduce	Reuse	Recycle	Donate or Exchange	Dumpster
Mixed Paper								
Cardboard								
Plastic Bottles #1(PETE) #2(HDPE)								
Glass Bottles & Jars								
Aluminum Cans								
Newspaper								
Food Waste								
Polystyrene #6								
Other Plastics #3, 4, 5, 7								
Yard Waste								
Misc. Items, Textiles, Electronics								
Other Waste								

Try and keep your food and green waste separate from the dumpster waste during the audit. This is not necessary for a visual audit.

Adapted from Performing a School Waste Audit, Recyclworks.org. Complete instructions available at: http://www.recycleworks.org/schools/s_audits.htm

[Interview school food service director, kitchen prep personnel at schools. May want to organize a focus group at each school to discuss issues, concerns before program starts.]

- How has the salad bar program worked for you the last few months?
- What works well? What doesn't work? What are the major challenges?
- Have labor issues (prep, clean-up) been addressed satisfactorily? What could be improved? Have volunteers been helpful or not?
- Have equipment issues been addressed? What could be improved?
- Is delivery and storage an issue? What could be improved?
- Are food costs for this program acceptable, within limits?
- Have you been able to integrate USDA commodities into the salad bar? Which ones? Can you use more/less than you used to? Has this affected the program cost?
- What is your sense about the acceptance of the salad bar among the children? Plate waste estimate?
- How is the program accepted by teachers? Parents? School administrators?
- How could this program be improved?

Indicators to gather

- Monthly food and labor costs for salad bar program compared to no salad bar
- Participation rates in each school (students and teachers)
- List of produce purchased monthly-quantities, prices
- Percentage of produce and/or food sales that come from local farmers. [There may be other direct purchases from local growers in addition to the salad bar]
- List of commodities used in lunch program, in salad bar program.

Adapted from "UC SAREP Bi-annual Interview Protocol – Food Service Director," Feenstra and Ohmart, UC SAREP

Salad Bar Coordinator Interview

[Review the monthly reports to help you conduct this interview]

- How has the salad bar been working?

- What works well? What doesn't work? What are the major challenges?

- How as the interface with farmers' been? Problems? How have you dealt with difficulties?

- How has the interface with school food service been? Problems? How have you dealt with difficulties?

- How has the interface with children gone? Problems? How have you dealt with them?

- How has the interface worked with parents? Teachers? Administrators? Problems? How have you dealt with them?

- What advice would you give another district that is trying to start such a program?

- What advice would you give another district about sustaining such a program?

- What do you need to do your job better?

- What are your plans for the next 6 months?

Adapted from "UC SAREP Bi-annual Interview Protocol – Salad Bar Coordinator," Feenstra and Ohmart, UC SAREP

Farmer Interview Protocol

[Depending on the number of participating farmers, you may want to select a random sample to conduct the following brief interview]

- How has the salad bar program worked for you the last few months?
- What works well? What doesn't work? What are the major challenges?
- Have you planted additional acreage for the program? How much?
- What additional crops have you planted? How much?
- Do you use any season extension practices as a result of the program?
- Are the prices you receive adequate, competitive?
- Do you have additional costs from this program? What are they?
- Are there additional requirements (pack? delivery? labor, etc.)
- Has your marketing plan changed as a result of this program? How?
- Overall, is this program profitable for you?
- What would it take to make this program more profitable?
- How could this program be improved?

Indicators to gather

- Weekly or monthly quantities sold and prices
- Gross sales per farmer
- Additional costs associated with program
- List of produce items sold each month

Adapted from "UC SAREP Bi-annual Interview Protocol – Farmers" Feenstra and Ohmart, UC SAREP

Farmer Survey

Name: Date:

Title:

School District:

Street Address:

City: State: Zip:

Telephone: Fax:

E-Mail:

1. Are you currently supplying produce to the schools in your area?

If yes, skip to number 8

If no, go to number 2.

2. Is there excess capacity on your farm that you could plant specifically for a farm-to-school program?

3. Do you currently have extra product that you could sell to schools?

4. Do you do value-added processing? If no, skip to number 6.

5. Do you have the capacity to do additional processing to make your product acceptable for sale to your school or district?

6. Are you a member of a cooperative?

7. Do you have the infrastructure (e.g., trucks, driver, cold storage) to deliver product to schools or a central processing location?

If you are currently participating in farm to school

8. Please describe the products and quantities you are selling to schools.

9. Do you sell to Dept. of Defense Fresh program?

10. How did you become involved in selling to schools?

11. Is this project economically viable from your perspective?

12. Do you sell to other institutions?

13. Are there policies at the school, district, local, state or federal level which support or undermine selling to schools?

Transportation and Delivery

14. Who delivers your products to schools? How?

15. How often are pick-ups made?

16. How often are deliveries made?

17. Are they picked up from your farm?

18. Are they delivered on the same day?

19. Are deliveries made to a central location or to individual schools?

20. How did the transport mechanism evolve?

Supply

21. How many schools are you supplying?

22. Are you able to consistently meet demand?

23. Are you able to provide products to schools year-round? What, when?

24. Do you sell processed products, e.g. apple juice, dried fruit?

Farmer Survey

Pricing

25. How is the price for your product determined?

26. Are you selling at or below the standard wholesale price?

27. Are you selling at, above, or below the retail price?

28. Are you making enough profit to continue selling to schools?

29. If you deliver your product washed, pre-cut, packaged or processed in any way do you charge extra for that service?

Outside Support

30. Are you part of a group that has helped organize this project?

31. Do you or the organizing group receive outside support for this project such as grant funds, donations, or services?

Adapted from "Initial Questions for Farmers," Community Food Security Coalition and the Center for Food & Justice, Occidental College

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?					
If some change, please explain					
Your child's involvement in school?					
If some change, please explain					
Your family's eating habits?					
If some change, please explain					
Your family's involvement in your child's school activities?					
If some change, please explain					

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?

Healthy City Parent Survey

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.

Adapted from "Healthy City Parent Survey," Schmidt M.C., Kolodinsky J, The Burlington School Food Project, Final Evaluation Report, December 2006, Center for Rural Studies.

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) skp 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]

Citizen Interview

[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]

Adapted from "Vermonter Poll 2006 Questions" Schmidt M.C., Kolodinsky J, The Burlington School Food Project, Final Evaluation Report, December 2006, Center for Rural Studies.

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.

Adapted from "Food Council Member Questions," Schmidt M.C., Kolodinsky J, The Burlington School Food Project, Final Evaluation Report, December 2006, Center for Rural Studies.

Project Partner Interview

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 you 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.

Adapted from "Project Partner Interview Guide" Schmidt M.C., Kolodinsky J, The Burlington School Food Project, Final Evaluation Report, December 2006, Center for Rural Studies.

Volunteer Interview

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.

Adapted from "Volunteer Interview Guide," Schmidt M.C., Kolodinsky J, The Burlington School Food Project, Final Evaluation Report, December 2006, Center for Rural Studies.

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Notes

Above and back cover: Kids at Abernethy Elementary in Portland, OR learn about squash grown on the Hertel family Sun Gold Farm as part of the Portland Public Schools Harvest of the Month program. Photos by Rachel Torchia.

The national farm to school community brought together through the National Farm to School Network is committed to supporting farm to school program evaluations that will build upon the existing knowledge base for this innovative program. In 2008, the National Farm to School Network embarked on a comprehensive evaluation of farm to school programs at multiple sites across the country. Please contact the authors of this publication if you are interested in learning more about participating in this initiative, or would like to enlist evaluation services for the future.

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