Evaluate your work

Evaluate your farm to school program to demonstrate the impact and communicate the value of your work, and learn how to improve. It is useful to track locally purchased product (the tracking tool can help with this), document which items students like and measure changes in student knowledge and eating habits. You can also keep track of how much of your school lunch budget is supporting local farms and vendors.

Local purchasing tracking tool

If your school or partners are interested in a comprehensive evaluation program, the evaluation toolkit produced by the National Farm to School Network and the University of North Carolina provides a thorough resource of tools, measures and implementation strategies.

Farm to school evaluation toolkit

A robust evaluation can demonstrate the health and financial impacts of a farm to school program. This level of evaluation cannot be accomplished by the school nutrition staff alone. The agencies and organizations listed in the “Additional resources” section may be able to help you identify sources of financial and technical support for an in-depth evaluation of your program.
Farm to School Evaluation Toolkit
These tools were used as part of a coordinated Farm to School program evaluation at 4 sites (Riverside, CA; Springfield, OR; Saratoga Springs, NY and Union 74, ME) supported by the National Farm to School Network; conducted by the Center for Health Promotion and Disease Prevention, University of North Carolina at Chapel Hill. The tools were used in 2008-09.

We share the tools here for use by other Farm to School projects, if they so desire. We also share with you background on the tool, administration guidelines, and tips. Before a specific tool from this resource is used, project evaluators and planners are advised to consider how the tool relates to their project’s specific evaluation goals and needs. For questions on any of the tools listed in this toolkit, please contact: Anupama Joshi, National Farm to School Network (ajoshi@oxy.edu); or Amy Paxton, National Farm to School Network and the Center for Health Promotion and Disease Prevention (apaxton@unc.edu).

The development of this Farm to School Evaluation Toolkit was supported by the following funding sources:
(a) The W. K. Kellogg Foundation via grant P3004209 supporting the National Farm to School Network
(b) Department of Health and Human Services - Communities Putting Prevention to Work Technical Assistance Program (through a grant to the Community Food Security Coalition).
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**School Lunch Recall**

**Background and guidelines**

**Background**
In order to evaluate the impact that Farm to School programs have on children’s intake of fruits and vegetables at school, an efficient, relatively inexpensive, dietary assessment tool was needed. Although 24-hour dietary recalls are used frequently with children and adolescents, young children have difficulty in accurately recalling their intake (1-9) and administration of dietary recalls is expensive and time consuming. Meal observations are an alternative to dietary recalls and often regarded as a gold standard for validating dietary assessment tools (2-11). Although research has shown that observations of school meals do not affect children’s dietary recalls (12,13), observations are also expensive and time consuming. Food frequencies, food diaries, and combinations of food frequencies and 24-hour recalls have been used to assess children’s intake at school (14-17). Validation studies of these tools indicate three concerns: overestimation of the amounts of food consumed, significant response burden placed on responding children and high levels of motivation required for completion (2,14). Thus, there was need for a valid and efficient tool to capture what children eat at school from the school-provided meal.

The School Lunch Recall (SLR) was developed to address the above concerns and to evaluate the dietary impact of Farm to School programs on fruit and vegetable consumption during school lunch in elementary schools. The SLR was designed with input from trained nutrition professionals, researchers, and four elementary school teachers. The SLR incorporates elements proven to be helpful to children in reporting their intake. For example, studies have shown that a shorter time interval between consumption and recall improves children’s accuracy (2,4,9,18). Consequently, the SLR is to be administered immediately after lunch. In addition, research has shown that accuracy for recalling school-lunch intake is better when children are asked to recall only school lunch versus meals for an entire day (5), and that children may be aided in recall when food categories are used as prompts (19). The SLR captures intake information based on a single meal and inquires about menu items offered by the National School Lunch Program (NSLP) on the day the SLR is administered.

**The instrument**
The SLR is a paper/pencil tool that is self-administered by the child and consists of four template questions for each menu item (including entrees, side items, and beverages), as shown in Figure 1. The response options for each of the four questions are the same regardless of the menu item and are shown in brackets in Figure 1. See pgs. 6-8 for a full length sample SLR.

**Figure 1. Four template questions on the SLR**

1) Did you choose the **(insert menu item)**? 
   [yes/no]

2) How much of the **(insert menu item)** did you eat? 
   [I didn’t eat any of it, I tasted it, I ate a little bit, I ate half of it, I ate most of it, and I ate all of it]

3) How much did you like **(insert menu item here)**? 
   [I loved it/I liked it/I didn’t like it]

4) Would you choose **(insert menu item)** again? 
   [yes/maybe/no].
The SLR questions can be adapted to capture foods brought from home and to reflect offer-versus-serve food service systems.

To capture fruits and vegetables brought from home, four additional questions can be included on the SLR. The four questions are: 1) Did you bring any vegetables from home?, 2) How much of those vegetables did you eat?, 3) Did you bring any fruit from home?, 4) How much of the fruit did you eat? The response options would be yes/no or the same amount response options listed previously.

Questions on the SLR can also be revised to reflect offer-versus-serve food service systems. For example, if there is no choice in entrée or children must be served each item on the menu, questions asking if the child chose a particular item can be removed. Although not validated as such, the SLR could also be revised to capture intake at school breakfast (i.e. A School Breakfast Recall) or at afterschool.

The SLR was tested against lunchroom observations during summer school in 2008 with 18 third-to-fifth grade students (J Am Diet Assoc. 2011;111:419-424). Among this small group of summer school students, the SLR was found to be a valid, efficient tool for assessing third-to-fifth grade students’ school-lunch intake.

Calculating amounts of food consumed
Standard school-meal serving sizes for menu items should be obtained from school foodservice. Amounts of food a child reports consuming should be calculated using those standard school-meal serving sizes for each item and correspond with the response options as follows: “none”=0, “taste”=10%, “little bit”=25%, “half”=50%, “most”=75%, and “all”=1. For example, if a child reports eating “half” of a serving of applesauce, the amount of applesauce the child ate is calculated as follows: the standard school-meal serving size for applesauce is ½ cup. If the child reports eating “half” of the applesauce, the amount eaten is calculated as 50% of a ½ cup serving, which is ¼ cup. These methods have been used in previous studies (2-4,6,8,9,19).

Calculating amounts of fruits and vegetables consumed
First, determine which menu items contain fruits and vegetables.

Entrées
If fruits or vegetables are included in the entrée option (such as a fruit plate or stir-fry), you will need to determine the amount fruit or vegetables that are in one serving of the entrée. This information can be obtained from school foodservice. Based on that amount, and using the USDA definitions of a serving of fruit or vegetable, determine what portion of a serving of fruit or vegetable is in the entrée.

For example, stir-fry is the entrée and one entrée serving includes ½ cup of sautéed vegetables. ½ cup of sautéed vegetables is equal to one serving of vegetables. To calculate the amount of fruits and vegetables the child ate from the entrée, multiply the number of servings of fruit or vegetables in the entree by the amount the child ate. For example, if a child ate “a little bit” of the stir-fry, the amount eaten is calculated by multiplying ½ cup of vegetables by 0.25, which...
equals 1/8 cup. Based on USDA definitions of a serving of fruit or vegetable, 1/8 cup of sautéed vegetables is ¼ serving (1 serving = ½ cup).

**Sides**

The same process can be followed for each of the side items containing fruits or vegetables. If the side items are fruits or vegetables, which will most likely be the case, you will need to determine the amount fruit or vegetables that are in one serving of the side (this information can be obtained from school foodservice). Based on that amount, and using the USDA definitions of a serving of fruit or vegetable, determine what portion of a serving of fruit or vegetable it is.

For example, ½ cup of applesauce is offered as a side option. ½ cup of applesauce is equal to one serving of fruit. To calculate the number of servings of fruits and vegetables the child ate from each side item, multiply the number of servings of fruits and vegetables in the side by the amount the child ate. For example, if a child ate “most” of the applesauce, the amount eaten is calculated by multiplying ½ cup of applesauce by 0.75, which equals about 1/3 cup. Based on USDA definitions of a serving of fruit or vegetable, 1/3 cup of applesauce is 2/3 serving (1 serving = ½ cup).

The total number of fruits and vegetables, separately or combined, can then be summed per child per meal to determine the amount of fruits and vegetables each child consumed at each lunch.

**Administration guidelines**

**Gaining access**

Building positive relationships with the school’s principal and teachers are necessary. It is important to respect what may be strict time issues in the school day and to be flexible in working with teachers.

**When to administer the SLR**

The SLR should be administered immediately after lunch or as soon as possible after the lunch period has ended. Given the current demands on schools and tight daily time frame within which teachers must work, gaining access to children and finding time in the school day to have them take a survey can be a challenge. Administering the SLR at the beginning of the first class children have after lunch is one option. Depending on the recess schedule, administering the SLR in the lunchroom after students have finished their lunches and before heading to recess or their next class can be another option. It also may be necessary to administer the SLR whenever the principal and/or teachers will allow it in the afternoon after lunch.

The SLR takes between five and 15 minutes for a child to complete. However, the time may vary depending on the number of items offered by the foodservice, thereby impacting the length of the survey, and each child’s reading skill.

Previous evaluations using the SLR calculated average daily intakes of fruits and vegetables based multiple days of intake (generally four to five days). The quality of this data improved as the number of days for which data were collected increased.
How to administer the SLR

Most children in the fourth and fifth grades can read and therefore can complete the SLR with a pencil or pen on their own. For younger children or children who have difficulties reading, it may be necessary to read the questions and responses aloud to those children, either as a group or individually depending on the amount of time available and circumstances. Reading questions and responses aloud is more appropriate in a classroom setting, whereas assisting individual students is more appropriate for a lunchroom setting. However, due to the busy environment of a school lunchroom, more staff may be necessary to administer the SLR in a lunchroom setting.

Children who bring a lunch from home do not need to take the SLR or can skip to questions about bringing foods from home if those questions are included on the SLR.

For unexpected scenarios (such as a single child who cannot read, the SLR taking longer than expected, etc.), keep in mind the well being of the child first and foremost. It is best to ask the primary teacher how to handle such situations.

Additional tips and challenges

On each day the SLR is administered, check with the school foodservice to see if any last minute changes have been made to the menu. Occasionally this happens, and the SLRs will have to be revised according to the change in menu. For example, if green beans were on the menu but had to be changed to corn, a line can be drawn through green beans on the SLR and “corn” can written in above it.

If the school foodservice offers several entrée options for the children to choose from, the first question on the SLR can be revised to ask: “Which entrée option did you choose?” Response options would include all of the entrees offered. The remaining questions about the entrée will then ask about that particular entrée: “How much of that entrée did you eat?”, “How much did you like that entrée?”, and “Would you choose that entrée again?”

If the school foodservice offers more than three side items everyday (for example, if they have a salad, roll, and fruit cup always available in addition to one or two featured side items), the SLR becomes very lengthy. Generally, in these situations students are allowed to choose up to three side items. Rather than ask if the students chose each of the five or six side items available, the side item questions can be revised: “What was one side that you chose?”, “How much of that side did you eat?”, “How much did you like that side?”, “Would you choose that side again?”, “What was another side that you chose?”… “What was the third side that you chose?”, etc.

REFERENCES


Monday: What did you eat from the HOT BAR?

School: HYATT

Teacher’s Last Name:

Student’s First Name:

First Initial of Student’s Last Name:

1a. How much of the chicken strips did you eat?
   - I didn’t eat any of it.
   - I tasted it.
   - I ate a little bit.
   - I ate some of it.
   - I ate most of it.
   - I ate all of it.

1b. How much did you like it?
   - I loved it.
   - I liked it.
   - I didn’t like it.

1c. Would you choose it again?
   - yes
   - maybe
   - no

2a. Did you choose the roll?
   - yes
   - no ➔ If no, turn the page and go to 3a.

2b. How much of it did you eat?
   - I didn’t eat any of it.
   - I tasted it.
   - I ate a little bit.
   - I ate some of it.
   - I ate most of it.
   - I ate all of it.

2c. How much did you like it?
   - I loved it.
   - I liked it.
   - I didn’t like it.

2d. Would you choose it again?
   - yes
   - maybe
   - no
Monday: What did you eat from the HOT BAR?

3a. Did you choose the mashed potatoes?
   - ○ yes
   - ○ no ➔ **If no, go to 4a.**

3b. How much of it did you eat?
   - ○ I didn't eat any of it.
   - ○ I tasted it.
   - ○ I ate a little bit.
   - ○ I ate some of it.
   - ○ I ate most of it.
   - ○ I ate all of it.

3c. How much did you like it?
   - ○ I loved it.
   - ○ I liked it.
   - ○ I didn't like it.

3d. Would you choose it again?
   - ○ yes
   - ○ maybe
   - ○ no

4a. Did you choose the mixed fruit?
   - ○ yes
   - ○ no ➔ **If no, turn the page and go to 5a.**

4b. How much of it did you eat?
   - ○ I didn't eat any of it.
   - ○ I tasted it.
   - ○ I ate a little bit.
   - ○ I ate some of it.
   - ○ I ate most of it.
   - ○ I ate all of it.

4c. How much did you like it?
   - ○ I loved it.
   - ○ I liked it.
   - ○ I didn't like it.

4d. Would you choose it again?
   - ○ yes
   - ○ maybe
   - ○ no
5a. Which milk did you choose?
- white
- chocolate
- flavored
- no milk ➔ If no milk, go to 6a.

5b. How much of the milk did you drink?
- I didn't drink any of it.
- I tasted it.
- I drank a little bit.
- I drank some of it.
- I drank most of it.
- I drank all of it.

5c. How much did you like the milk?
- I loved it.
- I liked it.
- I didn't like it.

5d. Would you choose the milk again?
- yes
- maybe
- no

6a. Did you bring any fruit from home to eat?
- yes
- no ➔ If no, to 7a.

6b. How much of fruit you brought from home did you eat?
- I didn't eat any of it.
- I tasted it.
- I ate a little bit.
- I ate some of it.
- I ate most of it.
- I ate all of it.

7a. Did you bring any vegetables from home to eat?
- yes
- no ➔ If no, stop here.

7b. How much of the vegetables you brought from home did you eat?
- I didn't eat any of it.
- I tasted it.
- I ate a little bit.
- I ate some of it.
- I ate most of it.
- I ate all of it.
Fruit and Vegetable Neophobia Scales
Background and guidelines

**Background**
Food preferences and eating patterns in childhood have been shown to carry into adulthood. For these reasons, fruit and vegetable (FV) preferences in childhood may impact long-term health as an adult. In addition, food neophobia, an unwillingness to try new foods, among children may impact dietary behaviors. Children’s attitudes toward FV consumption can be captured as fruit and vegetable neophobia, or the reluctance to eat and/or avoid novel fruits and vegetables. Fruit (FNS) and vegetable (VNS) neophobia scales were adapted from the validated food neophobia scale, shown in Figure 1 (1).

**Figure 1. Food Neophobia Scale questions**

<p>| | |</p>
<table>
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<tr>
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<tbody>
<tr>
<td>1.</td>
<td>I am constantly trying new and different foods</td>
</tr>
<tr>
<td>2.</td>
<td>I don’t trust new foods</td>
</tr>
<tr>
<td>3.</td>
<td>If I don’t know what is in a food, I won’t try it.</td>
</tr>
<tr>
<td>4.</td>
<td>I like foods from different countries</td>
</tr>
<tr>
<td>5.</td>
<td>Food from other countries looks strange to eat</td>
</tr>
<tr>
<td>6.</td>
<td>At a friend’s house, I will try a new food.</td>
</tr>
<tr>
<td>7.</td>
<td>I don’t like to eat things that I have never had before.</td>
</tr>
<tr>
<td>8.</td>
<td>I am very picky about the foods I will eat.</td>
</tr>
<tr>
<td>9.</td>
<td>I will eat almost anything.</td>
</tr>
<tr>
<td>10.</td>
<td>I like to try new places to eat that have foods from other countries.</td>
</tr>
</tbody>
</table>

**The instrument**
In order to evaluate the impact farm to school programs have on children’s fruit and vegetable neophobia, the food neophobia scale was revised to reflect questions about fruits and vegetables. The original food neophobia scale had ten items, nine of which asked about affinity towards the food item (1). The tenth item was more behavioral than attitudinal and asked how many times the respondent had tried a new food within a specific time period. The ten items were adapted for the FNS by asking each item specifically about fruit. Similarly, the ten items were adapted for the VNS by asking each item specifically about vegetables. These scales were designed for students of 3rd-grade age and older and to be administered during the school day. Please see the example survey for the full set of questions on pgs. 3-4.

**Administration guidelines**

**Gaining access**
Building positive relationships with the school’s principal and teachers are necessary. It is important to respect what may be strict time issues in the school day and to be flexible in working with teachers.

**When to administer the FVNS**
The Fruit and Vegetable Neophobia Scales (FVNS) is administered one time and can be administered anytime during the school day. Given the current demands on schools and tight daily time frame within which teachers must work, gaining access to children and finding time in
the school day to have them take a survey can be a challenge. Work with the school’s principal and teachers to identify the best times for their students to take the questionnaire. The FVNS should take between ten and 20 minutes at most for a child to complete.

**How to administer the FVNS**
Most children in the fourth and fifth grades can read and therefore can complete the FVNS with a pencil or pen on their own. For younger children or children who have difficulties reading, it may be necessary to read the questions and responses aloud to those children, either as a group or individually depending on the amount of time available and circumstances (i.e. reading questions and responses aloud is more appropriate in a classroom setting, whereas assisting individual students is more appropriate for a lunchroom setting).

For unexpected scenarios (such as a single child who cannot read, the FVNS taking longer than expected, etc.), keep in mind the well being of the child first and foremost. It is best to ask the primary teacher how to handle such situations.

**Summarizing results**
Previous analyses indicate that, in each of the scales, the nine items that inquire about affinity for fruit or affinity for vegetables are essentially asking about the same characteristic. This means that the results can be assessed by looking at the items individually or by adding responses to each set of nine items and using the total scores.

**REFERENCES**

# Sample Fruit and Vegetable Neophobia Scales

## Fruits and Vegetables: What Do You Think About Them?

1a. What is your first name? 

1b. What is the first initial of your last name? 

2. What grade are you in?  
   - 3rd grade  
   - 4th grade  
   - 5th grade

### Fruits

3. How much do you like fruit?  
   - a lot  
   - a little  
   - not very much  
   - not at all

4. How much do you like fruits that you have never tried before?  
   - definitely  
   - probably  
   - probably not  
   - definitely not

5. How much do you like tasting new fruits?  
   - definitely  
   - probably  
   - probably not  
   - definitely not

6. Will you taste a fruit if you don’t know what it is?  
   - not at all  
   - a little  
   - a lot  
   - definitely

7. Will you taste a fruit if it looks strange?  
   - not at all  
   - a little  
   - a lot  
   - definitely

8. Will you taste a fruit if you have never tasted it before?  
   - not at all  
   - a little  
   - a lot  
   - definitely

9. When you are at a friend’s house, will you try a new fruit?  
   - not at all  
   - a little  
   - a lot  
   - definitely

10. When you are at school, will you try a new fruit?  
    - not at all  
    - a little  
    - a lot  
    - definitely

11. When you are at home, will you try a new fruit?  
    - not at all  
    - a little  
    - a lot  
    - definitely

12. How many times have you tried a new fruit since school started this year?  
    - never  
    - 1 time  
    - 2 times  
    - 3 times  
    - at least 4 times
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. How much do you like <em>vegetables</em>?</td>
<td>☐ a lot, ☐ a little, ☐ not very much, ☐ not at all</td>
</tr>
<tr>
<td>14. How much do you like <em>vegetables</em> that you have never tried before?</td>
<td>☐ definitely, ☐ probably, ☐ probably not, ☐ definitely not</td>
</tr>
<tr>
<td>15. How much do you like tasting new <em>vegetables</em>?</td>
<td>☐ definitely, ☐ probably, ☐ probably not, ☐ definitely not</td>
</tr>
<tr>
<td>16. Will you taste a <em>vegetable</em> if you don't know what it is?</td>
<td>☐ definitely, ☐ probably, ☐ probably not, ☐ definitely not</td>
</tr>
<tr>
<td>17. Will you taste a <em>vegetable</em> if it looks strange?</td>
<td>☐ definitely, ☐ probably, ☐ probably not, ☐ definitely not</td>
</tr>
<tr>
<td>18. Will you taste a <em>vegetable</em> if you have never tasted it before?</td>
<td>☐ definitely, ☐ probably, ☐ probably not, ☐ definitely not</td>
</tr>
<tr>
<td>19. When you are at a <em>friend's house</em>, will you try a new <em>vegetable</em>?</td>
<td>☐ definitely, ☐ probably, ☐ probably not, ☐ definitely not</td>
</tr>
<tr>
<td>20. When you are at <em>school</em>, will you try a new <em>vegetable</em>?</td>
<td>☐ definitely, ☐ probably, ☐ probably not, ☐ definitely not</td>
</tr>
<tr>
<td>21. When you are at <em>home</em>, will you try a new <em>vegetable</em>?</td>
<td>☐ definitely, ☐ probably, ☐ probably not, ☐ definitely not</td>
</tr>
<tr>
<td>22. How many times have you tried a new <em>vegetable</em> since school started this year?</td>
<td>☐ never, ☐ 1 time, ☐ 2 times, ☐ 3 times, ☐ at least 4 times</td>
</tr>
<tr>
<td>23. What is your teacher's name?</td>
<td>☐ name blank</td>
</tr>
</tbody>
</table>
Semi-structured Interview Guides

In order to understand, capture, and evaluate the factors involved in Farm to School programs, including the challenges, successes, lessons learned, and motivations, semi-structured interview guides were created to facilitate in-depth discussions with stakeholders.

Methods – Identifying interviewees
A snowball sampling technique can be used to identify subjects to interview. This technique relies on identifying and interviewing a few central stakeholders early in the process who are asked to provide referrals to other relevant stakeholders. To use this technique:

• Identify at least one central contact who is able to name other stakeholders in the population of interest. This key contact may be the school food service director, a school administrator, a manager of a local Farm to School program, or a participating farmer.
• During interviews with these central contacts, ask for referrals to other stakeholders.
• In interviews with these other stakeholders, again request referrals to even more stakeholders.
• Continue this process until you have reached your targeted sample size or until the information that you collect becomes repetitive.

Methods – Scheduling interviews
• Determine the most effective way of contacting potential interviews; e.g., telephone, email, or through their supervisors.
• It may be helpful to have another stakeholder “introduce” you before you make contact. This stakeholder may be a school principal for interviews with teachers, the school food service director for interviews with school food service staff or the school food service director for interviews with farms.
• Contact potential interviewees by the most effective method, explain the purpose and logistics of the interview, ask for their participation, and if possible, schedule the interview (they may prefer to talk with you right then, so be prepared to have the interview when you first make contact).

Methods – Conducting Interviews
Depending on the interview guide used and the interviewee, interviews can last from 15 minutes to 45 minutes. The interview guides in this tool kit are semi-structured, meaning the questions represent a framework of ideas to be explored at the same time that they are flexible. The order of the questions can be changed and new questions can be asked to fit the flow of the conversation.

Methods – Analyzing interviews
It is ideal for interviews to be audio-recorded. Both questions and answers should be transcribed. Transcriptions should be reviewed and coded by a minimum of two staff members using a two-step process. First, the transcriptions are read from an open-ended perspective, allowing themes, ideas, and coding categories to emerge. Second, transcriptions are coded by the two staff members using the themes and coding categories that are identified in the first step. Coding results are compared and discrepancies are resolved when they occur.

Interview guides
The following interview guides are available:
Foodservice Director Interview Guide*
The purpose of this interview guide is to help facilitate a conversation around the motivations for and strategies used to incorporate locally grown foods into school menus, the experiences associated with introducing locally grown goods, and the opportunities and challenges related to implementation of Farm to School programs in the school cafeteria.

Foodservice Staff Interview Guide**
The purpose of this interview guide is to help facilitate a conversation around the experiences that school food service staff have had with Farm to School programs, factors that helped and hindered their willingness to implement and accept Farm to School programs, how food service professionals characterize the opportunities and challenges of Farm to School programs.

Farmer Interview Guide*
The purpose of this interview guide is to help facilitate a conversation around the market potential of selling produce to school food service relative to selling it at other markets available to farmers, how farmers make decisions about the kind of markets they decide to pursue, and how farmers think about the opportunities and challenges of working with Farm to School programs.

Stakeholder Interview Guide
The purpose of this interview guide is to help facilitate a conversation around the factors, activities and resources that contributed to the development of a Farm to School program and the challenges involved in its growth. The questions ask about challenges the program faced, how those challenges were met and overcome, and about the successes of the Farm to School program.

Educator Interview Guide
The purpose of this interview guide is to help facilitate a conversation around factors that help and hinder implementation and acceptance of Farm to School programs in school classroom environments. The questions explore how educators characterize the opportunities and challenges of Farm to School programs.

* These interview guides are based on interview guides designed and used by Betty Izumi, PhD for her dissertation titled ‘Farm to School programs in public K-12 schools in the United States: perspectives of farmers, food service professionals, and food distributors.’

** Originally designed and implemented to explore the impact of salad bars providing locally grown produce. The current version uses “locally grown foods” in place of “salad bar” to increase its usefulness.
The goals of this interview are to learn the motivation for and strategies used to incorporate locally grown foods into school menus, to describe the experiences associated with introducing locally grown goods, and to identify the opportunities and challenges related to implementation of farm to school programs.

1. Please describe your school district in terms of:
   a. Number and approximate size of schools at each level
   b. Approximate percent of students eligible for free and reduced school lunch
   c. Urban, suburban or rural

2. What are the goals of your food service operation?

3. How is the success of your food service operation evaluated?
   *If necessary, probe for:
   a. Profitability
   b. Student acceptance/participation
   c. Other

4. How does your food service operation work in terms of:
   a. Total number of kitchens?
   b. Total number of staff?
   c. Average number of meals served per day?
   d. Food procurement process
   e. Food storage systems (central warehouse?)
   g. Availability of a central warehouse?

5. How about your procurement procedure for commercial foods?
   *If necessary, probe for:
   a. Who are your vendors (e.g. commercial distributors, shippers, wholesaler, farmers)?
   b. What do they offer in terms of products, services, or financial incentives?

6. How do purchases of locally grown food fit with your food service operation?

7. What motivated (benefits) you to begin buying locally grown food?

8. What motivates (benefits) you to continue buying locally grown food?

9. What disadvantages, problems or challenges have you encountered with buying locally grown foods?

10. What factors do you consider when buying locally grown food?
    *If necessary, probe for:
    a. Price? Competitive bidding?
    b. Attributes such as organic, quality, and local?
    c. Quantity that you commit to buying?
    d. Delivery options?
    e. Your relationship with your vendor (including farmers)?
    f. Federal, state or local procurement policies?
11. Do federal, state, or local procurement policies impact your ability to buy locally grown food? If so, how?

12. Does your business manager, school board or state education department influence your decisions or abilities to buy locally grown foods? If yes, how?

13. Does your staff influence your decisions or abilities to buy locally grown foods? If yes, how?

14. Do parents or students influence your decisions or abilities to buy locally grown foods? If yes, how?

15. How about your procurement procedure for locally grown foods?

   If necessary, probe for:
   a. What locally grown foods do you buy?
   b. How do you define “local”? 
   c. When (year) did you start buying locally grown foods?
   d. How did you contact and recruit producers of locally grown foods?
   e. How has what you purchase or your procurement procedure of locally grown foods changed over the years?
   f. Have you requested locally grown food from your broadline distributor? If yes, what has the response been?

16. Do you plan to expand the purchase and use of locally grown foods in your school food service operation? If yes, do you plan to:
   a. Increase the number of farmers from whom you purchase food?
   b. Increase the amount of food you purchase from current farmers?
   c. Buy locally grown food through your food distributors?

17. Have you had to change systems and/or procedures (for menu planning, ordering, receiving, storing, preparing, and/or marketing) because of your use of locally grown food? If yes:
   a. What changes have you had to make?
   b. What impact have these changes had on your staff?

18. How does your staff respond to the purchase and service of locally grown foods?

19. Is there anything else that you would like to talk about with regard to locally grown foods?
The goals of this interview are to learn about the experiences that school food service staff have had with farm to school programs, identify factors that facilitated and hindered their willingness to implement and accept the programs, and explore how food service professionals characterize the opportunities and challenges of farm to school programs.

1. What school are you in and what is your job title?

2. Would you please describe what your typical day is like?
   
   *If necessary, probe for:*
   
   a. What kind of duties do you regularly perform?
   b. What kind of interaction with the students do you have?
   c. In what ways do you participate in the food preparation and food serving processes?

3. Would you please describe how locally grown foods are incorporated into the school menus?
   
   *If necessary, probe for:*
   
   a. How are they purchased and delivered?
   b. How are they incorporated into menus?
   c. What is involved in preparing and serving them?

4. How has the introduction of locally grown foods into school menus affected your job in terms of:
   a. Your regular duties – your involvement with food preparation, the amount of work you do and time you spend?
   b. Your interaction with the students?

5. How has the use of locally grown foods affected the flow of students in the lunchroom? If the flow has changed, how has this affected the responsibilities of school food service staff?

6. How has the use of locally grown foods changed the atmosphere in the lunchroom for students? For the school food service staff?
   a. Has the use of locally grown foods affected what the students eat for lunch? If yes, in what ways?

7. Has the use of locally grown foods affected what you eat for lunch? If yes, in what ways?

8. Has serving locally grown foods changed your relationships:
   a. With students? If yes, how?
   b. With school staff? If yes, how?

9. Has the incorporation of locally grown foods into the school menus or the farm to school program in general changed the way you feel about your job?
   a. If yes, in what ways?

10. Is there anything else that you would like to talk about with regard to the Farm to School program?
In order to explore farm to school programs from the perspective of a farmer, I would like to talk about three issues with you: 1) the market potential of selling your produce to school food service relative to selling it at other markets available to farmers; 2) how farmers make decisions about the kind of markets they decide to pursue; 3) how farmers think about the opportunities and challenges of working with farm to school programs.

1. Can you tell me about your farm operation?
   
   *If necessary, probe for:*
   
   a. What do you grow?
   b. What are your growing practices?
   c. Do you have your own storage and packing facilities?
   d. Who are your customers?

2. What market outlets do you use?

3. How does your product get to each of your market outlets?

   *If necessary, probe for:*
   
   a. What do you need to do (packing, weighing, washing) to get your product ready for market?
   b. Do you go through any intermediaries (brokers, distributors, packers)?

4. Approximately what percentage of your volume goes to each of your market outlets?

5. Approximately what percent of your sales dollars comes from each of your market outlets?

6. When (year) did you begin selling your product to schools?

7. What motivated you to begin selling your product to schools?

8. What motivates you to continue selling your product to schools?

9. What changes, if any, have you had to make in order to accommodate schools?

   *If necessary, probe for:*
   
   a. Have you had to make changes to in terms of your production, marketing, or distribution routines?

10. What have been your experiences working with school food service?

    *If necessary, probe for:*
    
    a. What have been some of the benefits, if any?
    b. What have been some of the problems or challenges, if any?
    c. What has been the downside of working with school food service?

11. Suppose I was a buyer that approached you about buying your product. How would you decide whether you would be willing to work with me?

    *If necessary, probe for:*
    
    a. How important is your consideration of price?
    b. How important is your consideration of the quantity that you could or would deliver?
12. Is there anything else that would be helpful for us to know about your experiences in working with school food service?
The purpose of this interview is to identify the factors, activities and resources that contributed to the development of a farm to school program and the challenges involved in its growth. We also want to learn how those challenges were met and overcome and about the successes of a farm to school program.

1. First, I would like to know how you got involved in the farm to school program?

   *If necessary, use the following probes:*
   a. What was your initial reaction to the program? Was it positive, negative, undecided?
   b. When did your involvement begin?
   c. How would you describe your initial level of commitment to the program and your commitment now?
   d. Who were your first contacts?
   e. How would you describe your association with these contacts? Were they friends, relatives, acquaintances, community leaders, other?
   f. How did you hear about the program?

2. Why did you get involved in the farm to school program? (if not answered in Question 1)

   *If necessary, use the following probes:*
   a. Did you have concerns that you thought the program could address? What were they?
   b. What were the benefits did you anticipate by getting involved? To what extent have you realized these benefits?
   c. Did you have any hesitations about getting involved in the program? What were they?
   d. Have you experienced any downsides to the program or your involvement with it? Would you tell me about them, please?
   e. Are you still involved? If yes, would you describe your involvement, please? If no, why did your involvement end?

3. In your opinion, who have been the key people who have been responsible for getting the farm to school program going? (If no key people, continue to Question 4.)

   List the names of people and/or their positions in the community. For each, ask:
   a. Why do you consider this person to be key?
   b. What contribution did this person make to the program?

4. Who have been the key people who have been responsible to keeping the farm to school program going? (If no key people, continue to Question 5.)

   List the names of people and/or their positions in the community. For each, ask:
   a. Why do you consider this person to be key?
   b. What contribution did this person make to the program?

5. What have been some of the defining events for getting the program going? (If none, continue to Question 6.)

   List the defining event. For each, ask:
   a. Why do you consider this to be a defining event?
   b. Who was involved in those events?
   c. When did they take place?
   d. Why/How did they happen?

6. How about defining events that have kept the program going? (If none, continue to Question 7.)
**Stakeholder Interview Guide**

List the defining event. For each, ask:
- a. Why do you consider this to be a defining event?
- b. Who was involved in those events?
- c. When did they take place?
- d. Why/How did they happen?

7. Has the program made a difference for anyone in your community or for the community as a whole? (If no, continue to Question 8.)

*If necessary, use the following probes:*
- a. What differences has it made? Please describe each one. For each difference, ask:
  - Was this difference positive or negative?
  - Who experienced the positive or negative difference?
  - What was the benefit or the cost?

8. What challenges did the program face during its early development? (If none, continue to Question 9.)

*If necessary, use the following probes:*
- a. What were they?
- b. Were they overcome? If so, how?
- c. Who were important people that helped or hindered facing those challenges?

9. How about as the program continued to develop – what challenges were there? (If none, continue to Question 10.)

*If necessary, use the following probes:*
- a. What were they?
- b. Were they overcome? If so, how?
- c. Who were important people that helped or hindered facing those challenges?

10. Does the program face challenges now? (If no, continue to Question 11.)

*If necessary, use the following probes:*
- a. What are they?
- b. Who are the key people who are working on overcoming them?

11. What do you see in the future for the farm to school program, in terms of:
- a. Scope – number of participating schools, farmers, and counties?
- b. Its funding sources?
- c. Other sources of support?
- d. Its leadership?
- e. Challenges

12. Is there anything else you think we should know about the program?
The purpose of this interview is to learn about factors that facilitate and hinder implementation and acceptance of farm to school programs in school classroom environments. We also want explore how educators characterize the opportunities and challenges of farm to school programs.

1. Can you tell me about the farm to school program in which your class participated?

2. Why did you decide to participate in the farm to school program?

3. What was it like to try to fit this program into your daily curriculum?
   
   If necessary, probe for:
   a. How difficult or easy was it?
   b. What about the program made it difficult or easy?
   c. How long did the sessions last?
   d. For which subjects or specific lessons did the program help to teach?

4. What do you see as some of the benefits, if any, of the program? What do you see as some drawbacks, if any, of the program?

5. What impact, if any, do you see the program having on your students?

6. Within the last school year, what changes did you notice any changes in the school cafeteria?
   
   If necessary, probe for:
   a. Changes with regards to foods served?
   b. Changes with regards to promotional activities?
   c. If there were changes, did it impact you or the way you eat?

7. What do you think is the biggest “take-away” message the students get from farm to school lessons and activities?

8. Have you received any feedback from parents about the farm to school program?

9. To what extent does the school administration support the farm to school program?

10. Will your class participate in the program again next year?

11. Is there anything else that would be helpful for us to know about your thoughts about or experiences with farm to school programs?
FARM TO SCHOOL & SCHOOL GARDEN PROGRAMS - SAMPLE EVALUATION TOOLS

This list of measurement tools used by Farm to School and school garden programs was compiled by the National Farm to School Network and its partners for a short course conducted in May 2010. The list includes instruments that have been validated and/or piloted to varying degrees. 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. 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. This is a work in progress. If you know of, or have developed any measurement tools/methods that you would like to share with others, please email them to Anupama Joshi

We would like to work towards identifying and/or developing “preferred measures” as a way to facilitate better comparison studies. This would allow us to distinguish the most effective dimensions and components of Farm to School and school garden programs. We see the compilation of this list as a first step in that process. If you’d like to participate in this collaborative process of agreeing upon preferred methods of evaluation for Farm to School & School Garden programs, please email Michelle Markesteyn Ratcliffe

Sources:

(1) Bearing Fruit: Farm to School Program Evaluation Resources and Recommendations  
http://departments.oxy.edu/uepi/cfj/bearingfruit.htm

(2) Center for Advanced Studies in Nutrition and Social Marketing  

(3) California Department of Public Health  

(4) Cornell Garden-Based Learning Evaluation Toolkit http://blogs.cornell.edu/garden/grow-your-program/evaluation-toolkit/

(5) Learning Gardens Laboratory Evaluation Research Team. (2007). Learning Gardens Laboratory Assessment Package for Schools. Lane Middle School, Psychology Department and Graduate School of Education, Portland State University, Portland, OR.

(6) Ratcliffe, M.M. (2007). The effects of school gardens on children’s knowledge, attitudes and behaviors related to vegetable consumption and ecoliteracy. (Doctoral Dissertation, Tufts University, Friedman School of Nutrition Science and Policy). Email:mmarkesteyn@oda.state.or.us
SAMPLE MEASUREMENT TOOLS *(Numbers in parentheses indicate location of sample tool)*

Collecting baseline / existing program information / feasibility studies

- Availability Survey—Fruit, Juice, and Vegetables at School (3)
- California Grocery Store Observational Protocol Survey and Key (2)
- Farm to School in New York State Survey of K-12 School Food Service Providers (1)
- Food Stores Survey (2)
- National Farm to School Web Survey (1)
- New Mexico Survey of Fruit, Vegetable and Nut Producers (1)
- New Mexico Survey of School Food Service Providers (1)
- Northeast K-12 Food Service Directors Needs’ Assessment Tool (1)
- Rhode Island Needs Assessment Tool (2)
- Survey of Institutional Food Service Providers in Oklahoma (1)
- Survey of K-12 Food Service Providers in Michigan (1)

Student knowledge, attitudes, beliefs

- Burlington Schools Student Survey (1)
- Family Norms *(Reynolds, et al.*) (3)
- Food Preference Survey (1)
- Garden Vegetable Frequency Questionnaire –assess preferences for a variety of vegetables typically grown in school gardens (6)
- General Knowledge Survey (1)
- Harvest of the Month Survey (1)
- Hawthorne Unified School District Student Knowledge Survey (1)
- Mixed Greens Michigan Veggie Vote (1)
- Outcome Expectations for Eating Fruits and Vegetables – 5 A Day Power Play Survey (1)
- Rethinking School Lunch Student Dining Evaluation Form (1)
- Social Norms *(Baranowski, et al.*) (3)
- Student Interview Protocol - University of California Sustainable Agriculture Research and Education Program (UC SAREP) (1)

School gardening activities

- Sample surveys, interview guides, observation guides (4)
- Student reports of experiences in Science class: 1. Engagement in Science, 2. Science Teacher Engagement in Teaching (5)

Student dietary behaviors
- 24 Hour Dietary Recall (1)
- A Day in the Life Questionnaire (DILQ), p. 27 (3)
- California Healthy Kids Survey (CHKS), p. 41 (3)
- Diet History Questionnaire - National Institutes of Health (1)
- Estimation of Fruit and Vegetable Consumption by Students Based on Analysis of School Food Service Production Records (1)
- Food Frequency Questionnaire, p. 48 (3)
- Garden Vegetable Frequency Questionnaire (GVFQ) - GVFQ assesses variety of vegetables consumed and frequency of consumption (6)
- NutritionQuest Kid’s Questionnaire (1)
- The Food Recognition Form (Cullen et al. 2003), p. 45 (3)
- Youth Risk Behavior Survey (YRBS) p. 43 (3)

Teacher impacts
- Teacher Focus Group Questions and Guide – Burlington School Food Project (1)

Food service impacts
- Assessing food service experience with using local foods – a template (1)
- Food Service Director Interview Protocol – UC SAREP (1)
- K-12 Food service periodic check-in – a template (1)
- Local Food Purchases Record (1)
- Rethinking School Lunch Financial Calculator (1)
- Salad Bar Coordinator Interview Protocol – UC SAREP (1)
- Sample questions for food service staff (1)
- Sample Waste Audit Template (1)
- Template for Assessing Financial Viability of Farm to School Programs (1)

Farmer impacts
- Farmer Interview Protocol - UC SAREP (1)
- Farmer Survey – National Farm to School Network (1)

Parent impacts
- Healthy City Parent Survey – Burlington School Food Project (1)

Community impacts
- Community Food Security Assessment Toolkit (2)
- Hunger Task Force Food Service Survey (2)
- Project Partners Interview Guide – Burlington School Food Project (1)
- Questions for food council members – Burlington School Food Project (1)
- Vermonter Poll - a statewide poll conducted to assess parental knowledge and attitudes about school lunch and children’s eating behaviors (1)
- Volunteer Interview Guide - Burlington School Food Project (1)
FARM TO SCHOOL PROGRAM EVALUATION:
Springfield School District, OR
Demographics: 59% eligibilities for free/reduced meals; 76% white

INTRODUCTION:
The Willamette Farm and Food Coalition (WFFC) implemented a Farm to School program at three elementary schools in the Springfield School District during 2008-09, consisting of integrated educational activities including Harvest of the Month in the cafeterias, farm field trips, garden sessions, nutrition lessons, tasting tables, and harvest days. All activities were coordinated and overseen by the WFFC Farm to School coordinator.

EVALUATION FOCUS:
Impact related to educational activities

DESIGN:
Pre and post measures collected for students from School 1 (3rd grade) and School 2 & 3 (3rd-5th grade) participating in:
- School garden sessions—soil preparation, planting, harvesting, composting, plant identification, and tool use (with the School Garden Project of Lane County)
- Garden-Enhanced Nutrition Curriculum—nutritional content of fresh fruits and vegetables (taught by Oregon State University Extension Service)
- Oregon State University’s Nutrition Education Program for schools with a > 50% free/reduced lunch rate.
- Farm Field Trips* to local farms (2 times)
- Tasting Tables* with fresh produce from local farms (made available for all school students in the cafeterias)
- Harvest Days*—students prepared a meal in their classrooms using produce harvested from the school gardens and farm field trips
* Activities “taught” by the WFFC Farm to School coordinator

OUTCOMES:
- Changes in students’ fruit and vegetable consumption assessed by the School Lunch Recall (J Am Diet Assoc. 2011;111:419-424). Student fruit consumption increased > 0.5 servings per day.
- Change in students’ knowledge about Oregon-grown foods and agricultural processes assessed by a knowledge test. Average increase of 2.37 in test scores from baseline to post-intervention and increased experiences on farms and in gardens.
- Perspectives of educators (school garden and classroom) and farmers who participated in field trips and Farm to School experiences assessed through one-on-one interviews.
  » School garden educators were enthusiastic about the integration of gardens with Farm to School programs and identified potential for integrating garden education into the school curricula.
  » The classroom teacher interviews described tensions created by introducing enrichment programs into time-constrained school days.

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Perspectives of participating farmers on success factors, advantages, and requirements associated with selling produce to schools and participating in Farm to School activities were assessed through one-on-one interviews. The primary barrier for selling to schools was the inability of small farms to fulfill large orders. In order to establish a successful relationship with schools, farmers need to be flexible in their order fulfillment, find ways to reduce costs of packing materials, and have a centrally organized delivery system.

- **Farmers appreciated the opportunities to teach children** about important issues related to agriculture and ecology.
- **Opportunities to expand marketing** to parents in the community.

**LESSONS:**

- Teacher buy-in of evaluation activities is as important as their buy-in of the implementation of the educational activities. Teachers and principals/administrators need to know why participation in evaluation warrants use of children’s time and exactly what to expect.
- An on-site evaluation coordinator and volunteers for data collection result in a smoother process.
- Limited reading ability of 3rd graders at the beginning of the school year may warrant that the printed questionnaires be read out to them.
- Lack of support from school administration may prevent access to comparison groups and school food service data.

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**Logic Model**

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<th>Inputs</th>
<th>Activities</th>
<th>Outputs</th>
<th>Short-term Outcomes</th>
<th>Intermediate Outcomes</th>
<th>Long-term Outcomes</th>
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<td>Students try local fruits and vegetables</td>
<td>Knowledge</td>
<td>Healthy eating habits</td>
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<tr>
<td>Support from teachers</td>
<td>Tasting tables</td>
<td>Students learn about and experience food production</td>
<td>Increased income stream for OR farmers and OR processors</td>
<td>Healthier school lunches</td>
<td></td>
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<tr>
<td>Local farmers</td>
<td>Harvest of the Month</td>
<td>Increased consumption of fruits and vegetables</td>
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<tr>
<td>Farmer / Distributor</td>
<td>Oregon Food Processors</td>
<td>Weekly offering of fresh, OR grown fruits and vegetables</td>
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Evaluation conducted as part of a coordinated Farm to School program evaluation at four sites (Riverside, CA; Springfield, OR; Saratoga Springs, NY and Union 74, ME). Supported by the National Farm to School Network; conducted by the Center for Health Promotion and Disease Prevention, University of North Carolina at Chapel Hill.
INTRODUCTION:
Focus on Agriculture in Rural Maine Schools (FARMS) is a Farm to School program that connects classrooms, cafeterias, local farms, and communities. FARMS’ primary strategy is to increase access to fresh, local food in schools through direct purchase from local farmers. Initiated by a parent and a staffer from the Lincoln County Economic Development office, the Farm to School program at FARMS began in one Union 74 district school and included classroom taste tests and a Harvest Day Lunch. The program expanded to include additional schools, more regular activities, and the direct purchase of foods from local farmers by individual schools.

EVALUATION FOCUS:
• Grassroots processes involved in initiating, supporting, and implementing the FARMS program during its early development
• FARMS’ early impact on farmers, school food service, students, and the community

DESIGN:
FARMS was four years into its development and programming when this evaluation of its Farm to School project began [2008-09]. All 1,576 K-8 students have access to FARMS, which includes direct purchase of local foods for use in cafeterias, classroom taste tests, and Harvest Day lunch. Key informant interviews were used to retrospectively document the development of FARMS.

OUTCOMES:
Factors characterizing FARMS early growth and development:
• Commitment to open and inclusive participation
• Contributions of different skills by stakeholders who pursued varied but compatible outcomes
• Early and ongoing support of school district decision makers
• Early and ongoing funding, including support from the county economic development office
• Attention to the needs of all stakeholders, particularly school food service
• Small first steps in implementation that expanded as skills and resources increased.

Highlights of FARMS success in Union 74:
• FARMS now reaches all Union 74 students, providing access to locally grown foods in school cafeterias.
• More scratch cooking in kitchens; school food service recognized and proud of their jobs.
• Increase in school meal participation (both students and teachers, as indicated through interviews).

Other successes:
• State and national recognition for FARMS, influencing Farm to School policies in Maine. FARMS co-directors have become spokespeople for FARMS and the Farm to School movement at state, regional and eventually national levels.
**LESSONS:**
Although the impetus for FARMS did not come from school food service, recognition of their pivotal role as potential promoter and supporter or naysayer was critical to FARMS success. Throughout the account of FARMS’ history, a common theme is the necessity of including school food service in discussions and the decision-making process. Attention was given to making early participation by school food service convenient and inexpensive and also to the value and importance of the role of the school food service in the community.

FARMS started small, e.g., with four taste tests and a Harvest Lunch in one school, and built on those successful events by expanding and seeking funding for additional events. FARMS developers recognized the importance of having start-up funds, as it allowed the school food service staff most affected by the program to participate initially at no cost. Securing endorsements from stakeholders with decision-making power in the schools (i.e. superintendent, principals, and school board members) and from other influential people in the community was a key strategy in the development process.

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**Evaluation conducted as part of a coordinated Farm to School program evaluation at four sites (Riverside, CA; Springfield, OR; Saratoga Springs, NY and Union 74, ME). Supported by the National Farm to School Network; conducted by the Center for Health Promotion and Disease Prevention, University of North Carolina at Chapel Hill.**
FARM TO SCHOOL PROGRAM
EVALUATION:
Saratoga Springs School District, NY
Schools: 6 elementary, 1 middle, 1 high;
Demographics: 15% eligible for free/reduced meals

INTRODUCTION:
During the 2008-2009 school year, the school lunch director worked with two local farmers, who sold apples and potatoes to the school district. One farmer also helped with educational activities like field trips to the farm and classroom visits. Processed food items, many of which were very popular, were removed from the cafeteria and replaced with from-scratch items. Over the next two years, the school lunch director tried to include healthier, locally grown foods in the school lunch menu but encountered challenges finding farmers who were interested in submitting bids to sell products to the school district.

EVALUATION FOCUS:
- Strategies to develop a Farm to School program
- Stakeholder responses to these strategies
- Barriers to successful implementation

DESIGN:
The school lunch director sourced local food from two farmers and involved them in educational activities. Processed foods were replaced with healthier options. Key informant interviews were conducted during the implementation of the program in 2008-09 to access the best strategies to develop a Farm to School program, stakeholder responses to those strategies, and barriers to success.

OUTCOMES:
The school lunch director had the vision and commitment to implement a Farm to School program. She built strong relationships, won the support of key stakeholders and professionalized the school food service staff. She won the support of school administration, including the superintendent, the school board president and individual school principals; and elicited the cooperation of school food service staff. At the time this evaluation was conducted, only two farmers were willing to sell produce to the school district outside of the winter farmers’ market, although all farmers interviewed respected and admired her commitment and hard work. Many students and some parents resisted efforts to move from processed foods to healthier foods. Despite challenges, the following outcomes were achieved:
- Introduction of new foods and food preparation methods to the lunch menu
- Produce purchasing arrangements with two farmers
- Taste tests and other educational activities for students
- School gardens and composting initiated
- Collaboration with farmer to organize a potato recipe contest
- School Nutrition Director became a Farm to School spokesperson in surrounding counties and states
- Creation of space for a winter farmers’ market at one elementary school, in exchange for products served with school lunches.
- Buy-in by school district decision makers to the Farm to School concept, as evidenced by short-term increases in the food service budget to accommodate potential higher prices of locally grown foods
- Improvements in the quality of cafeteria foods.

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• Improvements in food service staff: acquisition of new skills and opportunities for expanded roles, positive perceptions of their jobs and greater commitment to serving healthful foods to children. School food service more integrated into school community.
• Positive media attention for school food service

LESSONS:
Despite the hard work and vision of the school lunch director, circumstances beyond her control—such as actions by the state legislature, the recession, competing markets, and seasonality of the growing season in upstate New York—restricted the development of the Farm to School program to it’s full potential. As a result, the focus of Farm to School in the school district has been on hands-on educational activities such as school gardens, farm field trips, and nutrition lessons.

There were also barriers that prevented farmers from participating:
• Competing markets and prices through other avenues. Farmers did not need the additional school market to be viable.
• Seasonality
• Order size

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Evaluation conducted as part of a coordinated Farm to School program evaluation at four sites (Riverside, CA; Springfield, OR; Saratoga Springs, NY and Union 74, ME). Supported by the National Farm to School Network; conducted by the Center for Health Promotion and Disease Prevention, University of North Carolina at Chapel Hill.

Logic Model

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Activities</th>
<th>Outputs</th>
<th>Short-term Outcomes</th>
<th>Intermediate Outcomes</th>
<th>Long-term Outcomes</th>
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</thead>
<tbody>
<tr>
<td>Access</td>
<td>Contacting farmers</td>
<td>Farmers are aware and interested in participating (start conversation)</td>
<td>Create demand and increase acceptability of local produce</td>
<td>Get more bids from local farms</td>
<td>Source more local foods</td>
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<tr>
<td>Producers</td>
<td>Produce from local farmers</td>
<td>Serve potatoes in school lunch</td>
<td>Winning recipe is replicated on menu</td>
<td>Increase parent and staff awareness of local produce</td>
<td>Involvement of parents, staff, students throughout district</td>
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<tr>
<td>Support from local farmers</td>
<td>Propose produce as fundraiser</td>
<td>Positive response from children</td>
<td>Increase children’s consumption of locally grown produce</td>
<td>Farm to school integrated into all aspects of school, not just cafeteria</td>
<td></td>
</tr>
<tr>
<td>Support from school administration and board</td>
<td>Fruit and veggies More Matters Campaign</td>
<td></td>
<td></td>
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<tr>
<td>Support from partners Saratoga Hospital Cornell Cooperative Extension New York Harvest for New York Kids</td>
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</tbody>
</table>
INTRODUCTION:
The Riverside Unified School District (RUSD) Farm to School Program takes a comprehensive approach to promoting healthy eating. Its primary component is the Farmers’ Market Salad Bar, a daily salad bar stocked with produce provided by local farmers, and offered year-round as an alternative to the hot lunch meal. The program reaches 24,077 students in the K-6 grades (55% of all students in the district). RUSD’s Nutrition Services is a financially stable operation.

EVALUATION FOCUS:
Impact related to introduction of Farmers’ Market Salad Bars during 2008-2009 school year

DESIGN:
Four schools received salad bars without any related educational activities and served as intervention schools; two comparison schools did not receive salad bars until 2009-2010. Various outcomes were measured with tools as noted below.

OUTCOMES:
• Salad bar eaters consumed 2 times more fruit servings and 1.66 times more vegetable servings than hot bar eaters. (assessed by the School Lunch Recall - J Am Diet Assoc. 2011;111:419-424.)
• The program did not decrease productivity of school food service staff, as measured by “Meals per Labor Hour.”
• The program did not decrease revenue per child.
• 50-100% of salad bar offerings were purchased from local growers.
• Monthly salad bar participation ranged from 21-67%, depending on when the salad bar was introduced.
• Improved the perceptions that food service staff had of their jobs and their roles in the school (assessed through one-on-one interviews).

Feedback from stakeholders:
“Yes, I’m getting to know them [kids] more. Before it was just, ‘Put in your number and grab your food.’ But now we actually have time to chat with them. Yes, we’re interacting a lot more… We say to the kids, ‘What did you think of this? Should we do it again?’ We take time to talk to them and keep them excited about it.” – RUSD food service staff

“Now I’m having kids who have never bought lunch before. I’m meeting their parents because now that we have the salad bar, they want to buy school lunch. So I’m interacting with a lot more parents now, which is really nice.” – RUSD food service staff

“I probably lost 25 pounds in the last year and one half. I think probably a good chunk of it is due to the salad bar… We all love it, all four of us eat the salad bar every day.” – RUSD food service staff
Summary of perspectives of participating farmers:
(assessed by one-on-one interviews):
- The program created a stable market for produce
grown by relatively small farmers.
- A total of $381,017 was paid to 5 local farmers
during the 2008-2009 school year for produce for the
salad bars.
- The program facilitated the formation of a farmer
cooperative, enabling small farmers to meet RUSD’s
needs, then go on to market to other institutions
and school districts, thus supporting a more regional
food system.

LESSONS:
This evaluation effort only looked at the impact of the
Farmers’ Market Salad Bar component of the RUSD’s Farm
to School program. Next steps for evaluation should
include assessment of the entire Farm to School program,
including educational aspects. In addition, behavioral
economic principles might be considered for changes in
the cafeteria arrangements to encourage greater partici-
pation in the Farmers’ Market Salad Bar program.

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