

Farm to School Evaluation Toolkit



UNC
CENTER FOR HEALTH
PROMOTION AND
DISEASE PREVENTION

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)

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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 entrée 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 1/4 serving (1 serving = 1/2 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, 1/2 cup of applesauce is offered as a side option. 1/2 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 1/2 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 = 1/2 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 be 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.

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MONhot v. 1.0
1 / 3

Monday: What did you eat from the HOT BAR?

Student ID

School: **HYATT**

Grade: **3**

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?

Student ID

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

Monday: What did you eat from the HOT BAR?

Student ID

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

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

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..

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Sample Fruit and Vegetable Neophobia Scales

Fruits and Vegetables: What Do You Think About Them?

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-
FAV1 v. 1.0 1 / 2

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? a lot a little not very much not at all

5. How much do you like tasting new **fruits**? a lot a little not very much not at all

6. Will you taste a **fruit** if you don't know what it is? definitely probably probably not definitely not

7. Will you taste a **fruit** if it looks strange? definitely probably probably not definitely not

8. Will you taste a **fruit** if you have never tasted it before? definitely probably probably not definitely not

9. When you are at a **friend's house**, will you try a new **fruit**? definitely probably probably not definitely not

10. When you are at **school**, will you try a new **fruit**? definitely probably probably not definitely not

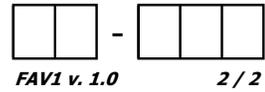
11. When you are at **home**, will you try a new **fruit**? definitely probably probably not definitely not

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

Fruits and Vegetables: What Do You Think About Them?

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Vegetables:

- | | a lot | a little | not very much | not at all |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| 13. How much do you like vegetables ? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 14. How much do you like vegetables that you have never tried before? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 15. How much do you like tasting new vegetables ? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
-
- | | definitely | probably | probably not | definitely not |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| 16. Will you taste a vegetable if you don't know what it is? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 17. Will you taste a vegetable if it looks strange? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 18. Will you taste a vegetable if you have never tasted it before? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 19. When you are at a friend's house , will you try a new vegetable ? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 20. When you are at school , will you try a new vegetable ? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 21. When you are at home , will you try a new vegetable ? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
22. How many times have you tried a new **vegetable** since school started this year?
- never 1 time 2 times 3 times at least 4 times
23. What is your teacher's name?

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.

Food Service Director Interview Guide

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?)
 - f. Food preparation processes? (Central kitchen? Scratch kitchen? Etc.)
 - 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?

Food Service Director Interview Guide

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?

Food Service Staff Interview Guide

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?

Farmer Interview Guide

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?

Farmer Interview Guide

12. Is there anything else that would be helpful for us to know about your experiences in working with school food service?

Stakeholder Interview Guide

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?

Educator Interview Guide

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](mailto:Anupama.Joshi@oda.state.or.us)

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](mailto:Michelle.Markesteyn@oda.state.or.us)

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
<http://socialmarketing-nutrition.ucdavis.edu/tools/somarktools.php>

(3) California Department of Public Health
<http://www.cdph.ca.gov/programs/cpns/Documents/Network-Compendium.pdf>

(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)
- Self-Efficacy Survey – Eating, Asking, Preparing Fruits and Vegetables (Reynolds, et al.) (3)
- Self-Efficacy Survey: Eating Fruits and Vegetables (1)
- Self-Efficacy Survey: Eating, Asking, Preparing Fruits and Vegetables (1)
- Self-Efficacy Survey—Asking about and Shopping for Fruits and Vegetables (Baranowski, et al.) (3)
- Self-Efficacy Survey—Eating Fruits and Vegetables (Baranowski, et al.) (3)
- Seven Generations Ahead Student Survey (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

- Brief Teacher reports of: 1. Student Engagement in the Gardens, 2. Student Engagement in Science, 3. Student Engagement in School, 4. Student Everyday Academic Resilience (5)
- Sample surveys, interview guides, observation guides (4)
- Student reports of experiences in School: 1. Engagement in School, 2. Everyday Academic Resilience in School, 3. Belonging at School, 4. Academic Competence, 5. Intrinsic motivation for learning, 6. Autonomous self-regulation in school, 7. Teacher Motivational Support (5)
- Student reports of experiences in Science class: 1. Engagement in Science, 2. Science Teacher Engagement in Teaching (5)
- Student reports of experiences in the Gardens: 1.Engagement in the Gardens, 2.Belonging in the Gardens, 3. Competence in the Gardens, 4. Value of gardening activities, 5. Intrinsic motivation for

gardening activities, 6. Autonomous self-regulation in gardening activities, 7. Sense of Purpose in the Gardens, 8. Garden Educator Motivational Support, 9. Garden Educator 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)