

INTERVENTION

Riverside Unified School District Farmers' Market Salad Bar Program

Nutrition Services Department, RUSD

Center for Food and Justice, Occidental College



INTENT OF THE INTERVENTION

The Riverside Unified School District (RUSD) Farm to School Program is a practice-based intervention designed to promote healthy eating in children by increasing the availability of fruits and vegetables in school lunches and providing nutrition education to increase knowledge of and improve attitudes toward eating a variety of locally grown produce. The RUSD approach is revenue neutral for the district's nutrition services and income-generating for local, small farmers.

The RUSD Farm to School Program addresses multiple levels of the socio-ecologic model with a primary focus on changing the school environment to increase access to fruits and vegetables and a secondary focus on individual behavior change. Additionally, the program impacts community environments by supporting local, small farms and helping to preserve farmland.

The following link provides a short video highlighting the program's 5th Anniversary Celebration: <http://vimeo.com/14257387>

OVERVIEW

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. The percentage of salad bar offerings that are locally grown ranges from 50-100%, depending on the time of year. The daily salad bar is offered year-round as an alternative to the hot lunch meal. For certain meals like hamburgers or tacos, students do not have to choose; they are offered both the hot meal and salad bar.

Intended for primary school children (kindergarten through sixth grade), RUSD changes the school food environment and supports healthy eating behaviors by providing multiple, hands-on educational opportunities. The program offers cooking carts, chef and farmer visits to the classroom, Harvest of the Month teacher training and activities, school gardens, and field trips to farms and farmers markets.

The salad bar component of the program was started with grant funds; however, within a short time it was quickly and fully integrated into the school meal program and food service budget. The program is financially solvent and local foods are paid for through the general budget. Local farmers sell fresh produce to the school, participate in speaking engagements and attend school events, such as farmer presentations and assemblies.

Intended Population: Primary school (K-6) children

Secondary Audience: Local, small farmers

Setting: Elementary schools

Length of time in the field: RUSD Nutrition Services implemented a pilot phase in three elementary schools during the 2005-2006 school year. The following school year, it established one salad bar a month in each elementary school (29 schools total). In addition to the salad bar, it implemented educational components in each elementary school, with activities varying by site.

HEALTH EQUITY CONSIDERATIONS

The Riverside (CA) Unified School District (RUSD) Farm to School Program is designed to promote healthy eating in children by increasing the availability of fruits and vegetables in school lunches and providing nutrition education to increase knowledge of and improve attitudes toward eating a variety of locally grown produce. The RUSD Farmers' Market Salad Bar Program was evaluated with 29 elementary schools in the district with a student population of 24,077. The school district's student population is 53% Latino, and 60% of all students are eligible for free or reduced-price lunch.

CORE ELEMENTS

This section outlines the aspects of an intervention that are central to its theory and logic and that are thought to be responsible for the intervention's effectiveness. Core elements are critical features of the intervention's intent and design and should be kept intact when the intervention is implemented or adapted.

1. **Create support for the program** from the school board, the school administration, teachers, parents, PTAs, PTOs, nutrition services staff, and other stakeholders through meetings, salad bar demonstrations, and taste tests. It is important to gain this support for approval to implement the program, to increase acceptance and build awareness, and to build partnerships for future involvement.
2. **Identify and recruit local farmers** to provide fresh produce for the salad bar. Farmers can be identified by your local farmers' market manager. Establishing relationships with local farmers who are able and willing to sell directly to schools is critical to ensure a supply of locally grown food.
3. **Train school food service staff members** to set up, prepare foods, order foods, document usage, monitor, and take down the salad bar. For the salad bar to run efficiently, school food service staff will need to be trained on how to prepare fresh foods for the salad bar, how to set up the salad bar in the cafeteria, how to monitor students as they go through the salad bar to ensure each student takes the required amounts of fruits, vegetables, and protein, and how to take down the salad bar and appropriately dispose of or save leftover foods.
4. **Conduct promotional activities** (for example, a grand opening, family night, taste tests, "Eat Lunch with Your Child Day," and newsletters). These activities stimulate interest in the program from students, teachers, and parents. Students are given the opportunity to try the salad bar without any costs and to try new fruits and vegetables. These activities create awareness and excitement about the program.
5. **Provide daily salad bar** to all students as a school lunch meal alternative.
6. **Monitor the salad bar** for compliance with the National School Lunch Program requirements for fruits, vegetables, and protein.
7. **Educate students** about nutrition and the growing of local food (for example, food safety lessons, the Harvest of the Month program, farmer visits, taste tests,

cooking carts, farm field trips, and school gardens). Ideally, the salad bar provides students the opportunity to practice healthy eating habits that they are learning in the program's educational components. The educational components generate interest, stimulate learning, and provide the context for healthy eating behaviors.

8. **Work to ensure a revenue-neutral program** through inventory control, ordering control, and cost control. For example, incorporating the use of some commodities received from the federal government drastically reduces the cost of certain items (e.g., proteins) that can offset the higher cost of fruits and vegetables purchased from farmers. Additionally, waste management decreases with the implementation of the salad bars, resulting in a lower food cost per student and contributes to offsetting the additional labor cost required to oversee the salad bar. Working with local farmers on the cost of seasonal produce and creating a rotational menu and daily meal count will also help to ensure a revenue-neutral program. A major contributor to the long-term sustainability of the program is that it changes perceptions of the nutrition program by students, staff, and parents, resulting in greater trust and increased participation, which leads to greater revenues.

RESOURCES REQUIRED

Staff:

Farmers' Market Salad Bar

Salad Bar Coordinator

- Establish a district Salad Bar Coordinator position whose responsibilities include but are not limited to coordinating all salad bar activities, monitoring salad bars at each school, taking food orders from each school, placing food orders with farmers, and conducting salad bar trainings.

Food Service Staff per school

- If a salad bar is to be offered every day, it will take an employee three hours to prepare, serve, and clean up for 40 or more servings of Farmers' Market Salad Bar.
- Two staff members are needed to monitor the salad bar (one on each side of the salad bar) to ensure each student takes the required amount of fruits, vegetables, and protein (four ounces of fruit, four ounces of vegetables and two ounces of protein) in order for the meal to meet the requirements of a National School Lunch Program meal.

Educational components

Program educator

- A Nutrition Specialist oversees, coordinates, and implements the educational components. Riverside Unified School District (RUSD) had this position before the Farmers' Market Salad Bar program began. RUSD redefined the duties of their Nutrition Specialist beyond writing menus, doing nutrient analysis of the menu, and nutrition education. RUSD simplified the menu by moving away from the monthly menu to a five-week cycle menu, which freed more time for the Nutrition Specialist to focus on administrating and coordinating nutrition education activities throughout the district.

Training:

Farmers' Market Salad Bar

- Nutrition Services staff are trained in three ways: Elementary School Kitchen Operators spend six to eight hours at another school that has a salad bar to learn the system, the Salad Bar Coordinator spends three or four days teaching the staff the salad bar system, and monthly salad bar in-services are conducted by the Salad Bar Coordinator to provide ongoing training to the site managers and to update them on changes as they occur.
- During the Taste Test day, teachers and students visit the cafeteria outside the designated lunchtime to check out the salad bar and taste a variety of fruits and vegetables for free. During this event, teachers and students learn salad bar etiquette (i.e. how to use the tongs, how much to take of each food group, etc.). In addition, students fill out surveys related to their familiarity with the offered fruits and vegetables and their preferences.

Materials:

Farmers' Market Salad Bar

- The cost for all salad bar equipment is \$6,777 (according to 2009 prices). In the Intervention Materials section, please see page 26 of the "Farmers' Market Salad Bar Program Guide" for the table, "Approximate cost of equipment for one salad bar setup," which shows the price, manufacturer, and item number for each piece of equipment.

Educational/Promotional components

- The cost of educational materials will vary (for a description of RUSD educational components, see Implementation section). The cost of activities that occur throughout the school year (i.e. Cooking carts, farmers' market field trips, etc.) is estimated at \$615 per school.
- RUSD estimates a cost of \$500 per school to promote the salad bar (i.e. the grand opening, newsletters, advertisements, etc.)

IMPLEMENTATION

How It Works:

A Farm to School program is a unique way to forge a partnership among the school, the community, and the farmers who produce the food. Buying seasonal, locally grown produce also ensures the freshest, most flavorful fruits and vegetables for salad bars. The colors and variety of tastes on a salad bar serve as effective sales tools to reach both children and teachers.

Getting Started

- **Plan/arrange for start-up funding.** Schools can look to external sources for funds to cover start-up costs. Schools should look beyond the traditional sources for grant funding. In many cases there are community organizations receiving grant funds that may be used to help fund the start-up costs. Search various websites (there are many out there) that provide information on the availability of grants. Consider hiring a temporary grant writer to ensure success in obtaining funds. Approximate how much

is needed and/or what activities need to be funded before the salad bar program can begin to generate sufficient income for it to become revenue neutral.

- **Develop a working relationship with the school's business manager/purchasing director.** Get that person's "buy in" up front. A purchase order will need to be set up for each farmer for a specified amount and will be drawn on during the year. After relationships with farmers have been built and prices established, estimates can be included for how much each purchase order will be.
- **Locate the nearest farmers' market (www.ams.usda.gov/farmersmarkets) and visit the market to see what kinds of produce are being offered.** Make a list of the desired produce for the salad bars. Be specific (i.e. red leaf lettuce, green leaf lettuce, Romaine lettuce, broccoli, celery, etc.). Set up a spreadsheet with a column for anticipated amount of produce needed per week and a column for the farmers' price.
- **Set up a meeting with the farmers' market manager.** The market manager can suggest which farmers to contact. This person will be anxious to help, as it benefits the market, the farmer, and creates an important community coalition. Take copies of the produce list; the market manager may offer to give them to farmers to gauge interest level and price ranges.
- **Go to the farmers' market early, before it opens to customers, to talk to farmers.** Establish relationships with farmers; collect their contact information and which days and times per week are best to contact them.
- **Establish a Salad Bar Coordinator position.** This position can initially be funded by external grants but is ideally included in the labor cost of the food services annual budget within a year or two.
- **Establish pick up, sorting and delivery procedures for produce.** If the order is large enough, some farmers may be willing to deliver to a central kitchen or multiple kitchens. Otherwise, using the farmers' market as a delivery/pick up location can also work. Try to work with farmers to establish procedures that fit the needs of both the farmers and school foodservice needs (i.e. one drop off location for a system that uses a centralized kitchen or delivery of produce to multiple kitchens for a non-centralized kitchen system).

Operating the salad bar

- **Design the menu.** Consider the following questions:
 - Will this be a lunch option that will serve as a reimbursable meal?
 - Will it be used only as the fruit and vegetable component of the hot lunch?
 - Will it be offered every day?
 - Will the hot lunch dessert also be served at the salad bar?
 - How will variety be incorporated into the salad bar?
 - What are the nutritional requirements for the option selected?
- **Order equipment** (In the Intervention Materials section, see "Farmers' Market Salad Bar Program Guide")

- **Begin a marketing campaign.** Send emails/memos to principals announcing the salad bar. Create flyers introducing the salad bar to parents and families. Send flyers to principals for inclusion in weekly packets that go home with students. When possible, attend teacher meetings to talk about the salad bar and to answer questions. With teacher permission, bring samples of fruits and vegetables to classrooms. Contact PTA presidents and discuss the salad bar at their meetings.
- **Provide in-service training for cafeteria staff.** It is important that school food service staff be included in the process and feel supported in their roles. Include them in taste testing.
- **Plan and hold a Grand Opening.** This should be an eventful day, with balloons and promotional signage and activities. This is the first day the students can choose the salad bar for lunch.

Educating students about nutrition and the growing of local food

- **Harvest of the Month** – This program is voluntary and teachers wishing to participate and incorporate lesson plans into their curricula receive training and materials free of charge. Upon request from any elementary school teacher, the Nutrition Specialist conducts a Harvest of the Month training (see Harvest of the Month Training Guide in the Intervention Materials). The Nutrition Specialist also conducts activities with students in the classroom when requested.
- **School gardens** – School gardens are voluntary and are generally started and maintained by teachers, parents, and students.
- **Farmer visits, chef visits, farm field trips, and farmers' market field trips** – The Nutrition Specialist coordinates these visits and field trips with individual teachers and the farmers, chefs, or farmers' market directors.
- **Cooking carts** – Cooking carts are made available by Nutrition Services and utilized in classrooms by teachers, Registered Dietitians, chefs, and farmers who are conducting nutrition education activities. Activities include but are not limited to students preparing salads and salsas with local produce, planting lessons, and making fruit smoothies while teaching students lessons related to math, language arts, and nutrition. Cooking cart items include but are not limited to the utility cart, cutting boards, various utensils used for food preparation, measuring cups and spoons, ladles, scoops, spatula, and a blender.

For additional details about establishing invoices, ordering procedures, maintenance, sample menus, and more, please see the “Farmers’ Market Salad Bar Guide” in the Intervention Materials section of the template.

Keys to Success:

- From the outset, gaining the support of the administration, school board, nutrition services staff, teachers, parents, and students is critical to the success and long-term maintenance of the program.
- Work with farmers who are interested and excited to be selling to schools; they will be more likely to meet the needs of the school food service and salad bar.
- Promote the salad bar to everyone (principals, teachers, students, parents, school food service staff, etc.). For example, mail buy-one-get-one-free salad bar coupons.

These groups need to know the salad bar is coming, when the salad bar is open, and why they should choose it.

- Be flexible. School holidays, seasonal produce, or running out of produce can create difficulties. Be flexible enough to use other resources to keep the salad bar operating.
- Ensure the program is revenue-neutral.

Barriers to Implementation:

- Acquiring start-up funds to purchase salad bar equipment and educational/promotional supplies, and to establish the Salad Bar Coordinator position.
- Finding local farmers who are interested in selling to schools and designing a contract and pricing strategy that meets both the needs of the school food service and the farmer.
- Planning for delivery of produce to schools, particularly if the school food service does not have a centralized kitchen system from which the produce can be distributed to each individual school.
- Overcoming the lack of interest from teachers to implement the educational activities and lessons.
- Managing the difficulties of maintaining a revenue-neutral program due to salad bar participation.

EVIDENCE REVIEW SUMMARY

Underlying Logic: This intervention is guided by a detailed logic model that specifies intended audience, program components, activities, and objectives.

Strategy Used¹: The Riverside Unified School District (RUSD) Farm to School Program applies the following evidence-based strategy for healthy eating:

- **School nutrition programs to promote healthy eating:** The Farm to School Program at RUSD worked with a variety of stakeholders to shift the food environment in their schools in order to encourage healthy eating.
- **Changing access and availability to favor healthy foods and beverages:** Offering a salad bar as an alternative or addition to school lunch everyday increased the access and availability to fresh fruits and vegetables for everyone in the school, not just for the students.
- **Increasing purchasing and use of foods from local farms:** Farm to School helps facilitate the acquisition and integration of foods from local farms into RUSD's daily menu.
- **Social support for healthy eating:** Programs such as Harvest of the Month and Cooking Carts encourage collaboration around healthy eating.
- **Food and beverage marketing to favor healthy foods and beverages:** Promotion activities, such as components of Harvest of the Month and the Monthly Family Newsletter market healthy food and beverage choices.

Research Findings or Evaluation Outcomes: The RUSD Farm to School Program was developed and evaluated in the field as a practice-based intervention.

¹ A full description of the intervention strategies used can be found on www.centertrt.org with references to the sources of evidence to support the strategies.

The program has been evaluated in two separate studies. The Center for Food and Justice, in collaboration with RUSD's Nutrition Services, conducted an evaluation in 2005. Using data collected from one school, this evaluation tracked the number of students (pre- and post-salad bar implementation) who chose a hot meal versus the salad bar and the number of students and teachers who bought lunch. The evaluation also tracked the amount of fruits and vegetables consumed by those who chose a hot meal versus those who chose the salad bar (data collected only at post-salad bar implementation). During that same year (2005), this evaluation collected data from two additional schools that assessed the program's effects on knowledge, awareness, and preference for specific fruits and vegetables.

In 2008-2009, the Center for Health Promotion and Disease Prevention at the University of North Carolina at Chapel Hill conducted an evaluation of the salad bar component of the program. Data were collected from four schools that received the salad bar during the 2008-2009 school year and were compared to data collected from two comparison schools that were to receive the salad bar during the following school year. Data were collected directly from students on the amount of fruits and vegetables consumed at lunch at the beginning and end of the school year. This evaluation also looked at school food service revenue and costs both before and after the program's implementation.

In the 2005 evaluation, students eating at the salad bar ate an average of 2.36 servings of fruits and vegetables for lunch compared to 1.49 servings for those students who ate from the hot bar. This evaluation also found modest increases in students' knowledge, awareness, and preferences for a variety of locally grown fruits and vegetables.

The 2008-2009 evaluation found no increase in fruit and vegetable consumption overall among students in schools that received the salad bar during that school year compared to students in comparison schools. However, the evaluation results showed that children who chose the salad bar significantly increased consumption of fruits and vegetables at lunch by half a serving. The 2008-2009 evaluation also found that food costs were no greater in the salad bar schools compared to the comparison schools. The evaluation found a slight increase in labor hours per meal for schools implementing the salad bar. Both evaluations found that the program generates revenue for small farmers.

POTENTIAL PUBLIC HEALTH IMPACT

Over time, the Riverside United School District (RUSD) Farm to School Program has potential for broad reach, adoption, implementation, and maintenance.

- **Reach:** Interventions in public schools have the potential to reach many children. Since 2005, this intervention has spread from one to 29 elementary schools in the district and currently reaches 24,077 students. The district's student population is 53% Latino and 60% of all students are eligible for free or reduced lunch.
- **Effectiveness:** The intervention is effective at changing the food environment by providing greater access to fresh fruits and vegetables. It is less clear that the program changes students' eating behaviors. In a 2005 study, students who chose the salad bar consumed more servings of fruits and vegetables than those who chose the hot meal option (2.46 servings vs. 1.49 servings). However, a 2009 study did not find that fruit and vegetable consumption increased on average in the overall student population when data were collected before and one school year after the introduction of a salad bar when compared to students in schools that did not get a

salad bar. Yet, the same evaluation results showed that children who chose the salad bar significantly increased consumption of fruits and vegetables at lunch by half a serving compared to children who chose the hot meal. The intervention does not increase food service revenues and costs; and it provides additional revenue for local farmers.

- **Adoption:** 29 of the district's schools have now adopted the program. An average of 26% of students choose the salad bar on any given day. RUSD has a centralized food service. The intervention may not be as readily adopted by school districts with non-centralized food services.
- **Implementation:** Interviews with students, cafeteria workers, teachers, and farmers demonstrate a positive response to the program. Cafeteria workers report that while it takes them more time and work to manage the salad bar, they think it is worth it. The program has not been found to increase food costs.
- **Maintenance:** The program has been sustained since 2005. Grant funding supported its start-up, but the district is now funding the program within its existing resources. The program has resulted in positive relationships between school food service staff members and students as well as school food service staff members and administrators and teachers.

INTERVENTION MATERIALS

Intervention materials can be found on the [Center TRT website](#):

Farmers' Market Salad Bar Program Guide — Riverside Unified School District's (RUSD) Nutrition Services created this guide to assist school food service directors in implementing their own salad bar program. It is a detailed "How-to" guide that includes a step-by-step tutorial on how to start a program, example menus, ordering forms, maintenance protocols, and more.

Farmers' Market Salad Bar Cycle Menu 2012-2013 — This is an updated menu that reflects the new nutrition standards for school meals.

Salad Bar First — In the fall of 2012, RUSD began to implement its Salad Bar First (SB1) program. Students visit the Farmers' Market Salad Bar first where they can choose fresh fruits, vegetables, and proteins for their lunch plate. Then they move on to receive a hot entrée from the serving line if they choose to get one. This document explains the SB1 program and its intent. Because the SB1 program is new as of 2012, it was not part of the Center TRT's reviewed intervention.

Harvest of the Month — Harvest of the Month provides promotional materials and lesson plans that include hands-on activities focused on a specific fruit or vegetable that is in season and highlighted during a particular month of the school-year. The monthly rotation of fruits and vegetables is specific to California's growing season. Harvest of the Month website provides a wealth of educational resources and training. To see the materials described above, click on Monthly Elements at www.harvestofthemonth.com.

Teacher Training — RUSD uses materials developed by California Foundation for Agriculture in the Classroom to train teachers how to incorporate agriculture-themed lessons

into their classes. Training materials can be found at: www.cfaitc.org/index.php. Click on What's Growin' On in the Resources section to download the Teacher's Supplement.

Monthly Education Newsletter — In collaboration with Riverside Department of Public Health, RUSD's Nutrition Services provide schools with a monthly education newsletter that includes hand-on activities such as gardening and physical activities. To see examples of Educator newsletters, visit: www.harvestofthemonth.com/ed-newsletter.asp

Monthly Family Newsletter — RUSD's Nutrition Services sends a monthly newsletter home with every child that includes recipes, healthy eating tips, and tips for selecting, storing and serving featured produce. To see examples of Family newsletters, visit: www.harvestofthemonth.com/family-newsletter.asp

Monthly Calendar Contest — Fourth, fifth and sixth grade students participate in a drawing/coloring contest featuring the fruit or vegetable of the month. Winners are included in a 12-month calendar and the grand prize winner is featured on the cover.

EVALUATION MATERIALS

Center TRT Evaluation Materials:

Center TRT developed an evaluation logic model and evaluation plan for a Farmers' Market Salad Bar such as the one the Riverside Unified School District (RUSD) implemented. The logic model is intended to guide the evaluation process (as opposed to the planning process). This evaluation plan focuses on determining reach, adoption, and the extent of program implementation, as well as the effectiveness of the Farmers' Market Salad Bar Program in addressing targeted outcomes, such as changing the school food environment and student attitudes towards eating fruits and vegetables, both precursors to behavior change. The evaluation is a pre- and post-test design with no control group. The evaluation plan provides guidance on evaluation questions and types and sources of data for both process and outcome evaluation. If you are interested in answering evaluation questions not listed in the evaluation plan, please refer to the list of additional evaluation questions found on the Center TRT website. We suggest a variety of data collection tools throughout the evaluation plan. The Farmers' Market Salad Bar Logic Model, Evaluation Plan and Evaluation Tool Descriptions can be found on the [Center TRT website](#).

Developer Evaluation Materials:

The Riverside United School District Nutrition Services Department and the Center for Food and Justice at Occidental College evaluators created several materials for its evaluation that are also available for your use. Some of these tools have been incorporated into the evaluation plan that Center TRT developed. Please note that Center TRT has not reviewed these tools, which can be found on the [Center TRT website](#).

Please provide credit to the Riverside United School District Nutrition Services Department and the Center for Food and Justice at Occidental College when reproducing materials in the original, or adapted, form:

- Evaluation Tool Descriptions
- Farmer Interview Guide
- Educator Interview Guide
- Food Service Director Interview Guide

- Food Service Staff Interview Guide
- Fruit & Veggie Neophobia
- School Lunch Recall

TRAINING AND TECHNICAL ASSISTANCE

A Center TRT archived webinar presentation is available on the implementation of Riverside Unified School District's (RUSD), Farmers' Market Salad Program, which includes an overview of the intervention, its core elements, summary of evidence and potential for public health impact. You can access the archived webinar from the Center TRT website.

ADDITIONAL INFORMATION

Web link for RUSD Nutrition Services

<http://www.schoolnutritionandfitness.com/index.php?sid=2603080122017891>

Click on Farmers Market Salad Bar Program

Additional Web links:

Farm to School description of RUSD

<http://www.farmtoschool.org/state-programs.php?action=detail&id=4&pid=24>

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Related Resources:

National Farm to School Network www.farmtoschool.org

A Growing Movement: A Decade of Farm to School in California

<http://www.farmtoschool.org/publications.php?pt=eval>

Going Local: Paths to Success for Farm to School Programs

<http://www.farmtoschool.org/search.php?keyword=Going+Local%3A+Paths+to+Success+for+Farm+to+School+Programs&x=0&y=0&action=search>

Stone, Michael K. Smart By Nature: Schooling for Sustainability. Watershed Media, 2009.

Gottlieb, Robert. Environmentalism Unbound: Exploring New Pathways for Change. Boston: The MIT Press, 2001.

Chen, Milton. Education Nation: Six Leading Edges of Innovation in Our Schools. San Francisco: Jossey-Bass, 2010.