

## **Implementation and Evaluation of Farm-to-YOUTH! A Fruit and Vegetable Produce Education Program**

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### **ABSTRACT**

#### **Purpose/Objectives**

To describe: 1) the implementation of a fruit and vegetable education program developed to improve produce intake among youth and their families in a rural Mississippi school district; and 2) satisfaction data for the program.

#### **Methods**

A six-week produce education program was implemented in the cafeterias of three (two control and one treatment) elementary schools in a rural, Appalachian Mississippi school district. A twice-weekly cafeteria tasting station was utilized. The first weekly tasting was the fruit or vegetable without any additional seasonings or flavorings, and the second was a mixed dish prepared from a recipe that included the fruit or vegetable as the primary ingredient. All students self-selected to taste the samples, whether or not they participated in the school meal program. On the last day of the week, students enrolled in the treatment school received all ingredients, along with a recipe and kitchen tools, to take home for preparation of the mixed dish. Take-home pre- and post-cross-sectional surveys of parents/caretakers were utilized to evaluate the program.

#### **Results**

Overall, 1,144 participated in the program, with 781 students (68.3%) being from the control schools and 363 students (31.7%) from the treatment school. Parents/caretakers of participating students responding to the pre-survey (n=465/1144, 41% response rate) were 34±8 years of age and primarily Caucasian (n=264/465, 57%) and female (n=425/461, 92%). Students associated with parents/caretakers (n=464) were 6.9±2.0 years of age, predominantly Caucasian (n=246/459, 49%), and in first grade (n=125/459, 25%). For the post-survey, 146 parents/caretakers (12.8%) participated. All educational information, including a fruit and vegetable cookbook, and kitchen gadgets to assist in preparation of the fruits and vegetables were rated as desirable by both parents/caregivers and students with the majority indicating materials were “good”, “very good”, or “excellent”. Provision of produce was also reported as useful.

#### **Applications To Child Nutrition Professionals**

A fruit and vegetable produce education program can be implemented in a rural elementary school and be favorably received by both parents/caregivers and elementary school students. Educational information, such as a fruit and vegetable cookbook and kitchen gadgets to assist in the preparation of the fruit and vegetable items, and provision of produce are desirable for families.

**Keywords:** Cafeteria Tastings, Fruit and Vegetable Intervention, Elementary School

## INTRODUCTION

Most children in the United States do not eat the recommended amounts of fruit and vegetables, with about 60 and 93 percent of children consuming less than the recommended amounts of fruit and vegetables, respectively (Kim et al., 2014). Fruits and vegetable are key dietary components for health promotion and longevity (Van Duyn & Pivonka, 2000; Wang et al., 2014), with their consumption associated with lower risk of mortality from a chronic disease, particularly cardiovascular disease (Wang et al., 2014). Fruit and vegetable intake may even positively affect weight control and adiposity (Ledoux, Hingle, & Baranowski, 2011).

While attention to improved intake in the home environment is needed, school, early care, and education policies focused on improving intake are warranted (Kim et al., 2014). Federal legislation (Healthy, Hunger-Free Kids Act of 2010, 2010) and associated nutrition standards have been implemented for National School Lunch and School Breakfast programs to foster improved fruit and vegetable intakes among children in the school environment (U. S. Department of Agriculture, 2012). Kim and colleagues (Kim et al., 2014, page 675) asserted that “School districts, schools, and early care and education providers can help increase children’s fruit and vegetable consumption by implementing nutrition standards that meet or exceed federal regulations for meals and snacks”. Other recommendations included increased visibility of fruit and vegetables in cafeterias and provision of nutrition education (Kim et al., 2014). Exposure-based interventions with repeated exposures to nutrient-rich foods, such as tastings, can be effective avenues for schools to utilize to improve dietary intakes of produce among elementary school children in preschool through sixth grade (Kaiser, Schneider, Mendoza, George, Neelon, Roche, & Ginsburg, 2012; Wardle, Herrera, Cook, & Gibson, 2003). Tastings coupled with informal nutrition education have been particularly effective (Cirignano, Fitzgerald, Hughes, Savoca, Morgan, & Greci, 2014). In summary, it appears that a multipronged approach to improving fruit and vegetable intake in children is needed.

This manuscript describes: 1) the implementation of a fruit and vegetable education program developed to improve produce intake among youth and their families in a rural Mississippi school district; and 2) satisfaction data for the program.

## METHODS

### **Ethics Approval**

This program and its evaluation protocols were approved by the University of Mississippi Institutional Review Board prior to implementation. The school district also reviewed and approved the program.

### **Setting**

The program was implemented in three elementary schools in Calhoun County School District, located in Calhoun County, a rural, Appalachian county in the state of Mississippi. The population of Calhoun County is 14,610, and the largest racial/ethnic groups are White (69.8%), African-American (28.5%) and Hispanic (5.6%) (U. S. Census Bureau, 2016). Calhoun County is assigned a Rural-Urban Continuum Code 9 (completely rural and not adjacent to a metro area) (U. S. Department of Agriculture, 2013) and is designated as a distressed county by the Appalachian Regional Commission based upon three economic indicators, unemployment rate, per capita market income and poverty rate (Appalachian Regional Commission, 2017).

## **Participants**

Three elementary schools serving students in pre-kindergarten (age four) through grade six participated in the project. To keep within programmatic budgetary constraints, two schools were randomly selected as control schools, with the third selected as the treatment school. According to the Summer Food Mapper (Food Research and Action Council, 2018), 60-80% of students in Calhoun County are eligible for free- or reduced price school meals. According to the National Center for Educational Statistics (NCES) (2018), all three schools are rural. Enrollments statistics by gender for control school A (401 students, pre-kindergarten through grade 4), control school B (378 students, pre-kindergarten through grade 6), and the treatment school (384 students, pre-kindergarten through grade 3) were 48.2%, 47.1%, and 45.2% female, respectively (NCES, 2018). Enrollment by race/ethnicity were: control school A (American Indian/Alaska Native, 0.2%; Asian, 0.7%; Black, 47.9%; Hispanic, 3.0%; Native Hawaiian/Pacific Islander, 0%; White, 41.6%; Two or more races, 6.5%); control school B (American Indian/Alaska Native, 0.5%; Asian, 0%; Black, 7.7%; Hispanic, 47.6%; Native Hawaiian/Pacific Islander, 0%; White, 43.1%; Two or more races, 1.1%); and treatment school (American Indian/Alaska Native, 0%; Asian, 0.3%; Black, 34.9%; Hispanic, 4.4%; Native Hawaiian/Pacific Islander, 0%; White, 60.2%; Two or more races, 0.3%) (NCES, 2018). Finally, enrollment by free- and reduced-price meal eligibility was: control school A (free, 82.5%; reduced, 7.5%); control school B (free, 70.6%; reduced, 10.1%); and treatment school (free, 70.6%; reduced, 8.1%) (NCES, 2018).

Prior to implementation of the program, all students in the schools and their parents/caretakers were informed about the program by an information sheet, which was sent home with a produce cookbook, *From Asparagus to Zucchini: A Guide to Cooking Farm-Fresh Seasonal Produce* (Madison Area Community Supported Agriculture Coalition, 2004).

## **Fruit and Vegetable Education Program and Intervention**

A six-week produce education program entitled, “*Farm-to-YOUth!*”, was implemented in the cafeterias of all three elementary schools. Table 1 summarizes the program. It included nutrition education handouts (English) sent home with children and produce tastings in all three school cafeterias during lunch meals. A tasting station staffed by a nutrition graduate student was in the cafeteria twice weekly. During the first tasting of the week, the fruit or vegetable was given to students without any additional seasonings or flavorings. The second tasting of the week was a mixed dish prepared from a recipe that included the fruit or vegetable as the primary ingredient. Most recipes were taken from the cookbook that was given to each student prior to the start of the program. All students were invited to taste the samples and self-selected to participate, whether or not they ate the school meal or brought their own lunch.

As noted above, all schools (control school A, control school B, and treatment school) received nutrition education handouts and had a tasting station twice weekly. In addition to the education and tastings, all students enrolled in the treatment school received fresh produce to take home to prepare the mixed dish sampled that week. Students took home the produce, other recipe ingredients, kitchen gadgets to aid in preparation, and the recipe in a tote or bag with the program logo. Generally, the produce was whole, unprocessed produce. However, some packaged items (e.g., bag of Brussels sprouts) were utilized. Students absent from school when items were distributed on the last day of the school week did not receive the take-home produce.

All produce tastings were prepared and delivered to the school by a community partner (supermarket) with facilities approved by the public health department. The take-home produce was also secured from that community partner.

**Program Evaluation**

A cross-sectional survey, that is, a survey administered at a particular point in time to a group, was conducted with parents/caretakers of the students. The survey, approved by the Institutional Review Board of University of Mississippi and the Superintendent of the Calhoun County School District, was utilized to evaluate the program. Both pre- and post-program surveys were used. The survey was sent home with children, as noted in Table 1, and included demographic and program satisfaction-related questions using responses of “poor”, “fair”, “good”, “very good” and “excellent”. Other food and nutrition-related questions were also included.

**Table 1. Farm-to-YOuth! Program Activities and Evaluation Methods**

<b>Timeframe (Location)</b>	<b>Cafeteria Tasting Station Food Item</b>	<b>Recipe Utilized or Produce Sent Home</b>	<b>Educational Information Sent Home</b>	<b>Evaluation Strategy</b>
<u>Pre-Survey</u> (Control and treatment schools)	Pre-Study Survey		<u>Education:</u> <ul style="list-style-type: none"> <li>• Program Information Sheet</li> </ul> <u>Bag for Transporting Evaluation and Education Home:</u> <ul style="list-style-type: none"> <li>• Reusable Insulated Snack/Lunch Bag with Program Logo</li> </ul>	<u>Evaluation:</u> Survey (Pre)
<u>Week 1, Day 2</u> (Control and treatment schools)	Fresh Cucumber Slices <ul style="list-style-type: none"> <li>• ¼ cup of sliced cucumbers per student</li> </ul>			
<u>Week 1, Day 4</u> (Control and treatment schools)	Marinated Cucumber Tomato Salad <ul style="list-style-type: none"> <li>• ¼ cup of salad per student</li> </ul>	Cookbook Recipe, Page 69 <sup>a</sup>		
<u>Week 1, Day 5</u> (Treatment school only)		Fresh Cucumber Salad Produce Pack <ul style="list-style-type: none"> <li>• 4 slicing cucumbers</li> <li>• 2 cherry tomato packs</li> <li>• 1 large red onion</li> <li>• 1 small basil pack</li> </ul>	<u>Education:</u> <ul style="list-style-type: none"> <li>• Marinated Cucumber Salad Recipe (Cookbook Recipe, Page 69<sup>a</sup>)</li> </ul> <u>Bag for Transporting Education and Produce Home:</u> <ul style="list-style-type: none"> <li>• Reusable Drawstring Backpack with Program Logo</li> </ul>	
<u>Week 2, Day 2</u> (Control and treatment schools)	Fresh Pineapple Spears <ul style="list-style-type: none"> <li>• 1 spear per student</li> </ul>	-	-	

<b>Timeframe (Location)</b>	<b>Cafeteria Tasting Station Food Item</b>	<b>Recipe Utilized or Produce Sent Home</b>	<b>Educational Information Sent Home</b>	<b>Evaluation Strategy</b>
<u>Week 2, Day 4</u> (Control and treatment schools) <sup>b</sup>	Seasonal Fruit with Fresh Mint <ul style="list-style-type: none"> <li>• ¼ cup of salad per student</li> </ul>	Internet Recipe, www.epicurus.com	-	
<u>Week 2, Day 5</u> (Treatment school only)	-	Fresh Fruit Salad Produce Pack <ul style="list-style-type: none"> <li>• 1 pineapple</li> <li>• 3 navel oranges</li> <li>• 3 # bag of apples</li> <li>• 1 small mint pack</li> </ul>	<u>Education:</u> <ul style="list-style-type: none"> <li>• Cutting a Pineapple Handout</li> <li>• Seasonal Fruit with Fresh Mint Recipe (www.epicurus.com)</li> </ul> <u>Bag for Transporting Education and Produce Home:</u> <ul style="list-style-type: none"> <li>• Reusable Striped Cotton Tote Bag with Program Logo</li> </ul>	
<u>Week 3, Day 2</u> (Control and treatment schools)	Fresh, Lightly Steamed Brussels Sprouts <ul style="list-style-type: none"> <li>• ¼ cup per student</li> </ul>	-	-	
<u>Week 3, Day 4</u> (Control and treatment schools)	Brussels Sprouts with Cherry Tomato Salad <ul style="list-style-type: none"> <li>• ¼ cup of salad per student</li> </ul>	Cookbook Recipe, Page 37 <sup>a</sup>	-	

<b>Timeframe (Location)</b>	<b>Cafeteria Tasting Station Food Item</b>	<b>Recipe Utilized or Produce Sent Home</b>	<b>Educational Information Sent Home</b>	<b>Evaluation Strategy</b>
<u>Week 3, Day 5</u> (Treatment school only)	-	Fresh Brussels Sprouts Salad Produce Pack <ul style="list-style-type: none"> <li>• 1 bag of Brussels sprouts</li> <li>• 1 cherry tomato pack</li> <li>• 1 garlic bulb</li> <li>• 1 small basil pack</li> </ul>	<u>Education:</u> <ul style="list-style-type: none"> <li>• Brussels Sprouts with Cherry Tomato Salad Recipe (Cookbook Recipe, Page 37<sup>a</sup>)</li> </ul> <u>Bag for Transporting Education and Produce Home:</u> <ul style="list-style-type: none"> <li>• Reusable Striped Cotton Tote Bag with Program Logo</li> </ul>	
<u>Week 4, Day 2</u> (Control and treatment schools)	Fresh Baby Kale <ul style="list-style-type: none"> <li>• ¼ cup per student</li> </ul> Kale Chips <ul style="list-style-type: none"> <li>• 2 chips per student</li> </ul>	-	-	
<u>Week 4, Day 4</u> (Control and treatment schools)	Easy Kale and Tomatoes <ul style="list-style-type: none"> <li>• ¼ cup per student</li> </ul>	Cookbook Recipe, Page 95 <sup>a</sup>	<u>Education:</u> <ul style="list-style-type: none"> <li>• Produce Storage Handout</li> </ul> <u>Kitchen Gadget Sent Home to Assist with Produce Preparation/Storage:</u> <ul style="list-style-type: none"> <li>• Reusable Mesh Produce Storage Bags</li> </ul> <u>Bag for Transporting Education and Gadget Home:</u> <ul style="list-style-type: none"> <li>• Reusable Cotton Corded Drawstring Bag with Program Logo</li> </ul>	

<b>Timeframe (Location)</b>	<b>Cafeteria Tasting Station Food Item</b>	<b>Recipe Utilized or Produce Sent Home</b>	<b>Educational Information Sent Home</b>	<b>Evaluation Strategy</b>
<u>Week 4, Day 5</u> (Treatment school only)		Fresh Easy Kale and Tomatoes Salad Produce Pack <ul style="list-style-type: none"> <li>• 2 bags kale</li> <li>• 2 cherry tomato packs</li> <li>• 2 large sweet onions</li> </ul>	<u>Education:</u> <ul style="list-style-type: none"> <li>• Easy Kale and Tomatoes Recipe (Cookbook Recipe, Page 95a)</li> </ul> <u>Bag for Transporting Education and Produce Home:</u> <ul style="list-style-type: none"> <li>• Reusable Striped Cotton Tote Bag with Program Logo</li> </ul>	
<u>Week 5, Day 2</u> (Control and treatment schools)	Fresh Mango Chunks <ul style="list-style-type: none"> <li>• ¼ cup per student</li> </ul>			
<u>Week 5, Day 4</u> (Control and treatment schools)	Mango Cilantro Salsa <ul style="list-style-type: none"> <li>• ¼ cup per student</li> <li>• 2 tortilla chips (small round) per student</li> </ul>	Cookbook Recipe, Page 63 <sup>a</sup>		
<u>Week 5, Day 5</u> (Treatment school only)		Fresh Mango Cilantro Salsa Produce Pack <ul style="list-style-type: none"> <li>• 4 mangos</li> <li>• 2 avocados</li> <li>• 1 lime</li> <li>• 1 small red onion</li> <li>• 1 garlic bulb</li> <li>• 1 small cilantro pack</li> </ul>	<u>Education:</u> <ul style="list-style-type: none"> <li>• Cutting a Mango Handout</li> <li>• Mango Cilantro Salsa Recipe (Cookbook Recipe, Page 63<sup>a</sup>)</li> </ul> <u>Bag for Transporting Education and Produce Home:</u> <ul style="list-style-type: none"> <li>• Reusable Striped Cotton Tote Bag with Program Logo</li> </ul>	



<b>Timeframe (Location)</b>	<b>Cafeteria Tasting Station Food Item</b>	<b>Recipe Utilized or Produce Sent Home</b>	<b>Educational Information Sent Home</b>	<b>Evaluation Strategy</b>
<u>Week 6, Day 2</u> (Control and treatment schools)	Roasted Sweet Potato Chunks <ul style="list-style-type: none"> <li>• Lightly roasted with olive oil and salt</li> <li>• ¼ cup per student</li> </ul>	-	-	
<u>Week 6, Day 4</u> (Control and treatment schools)	Apple-roasted Sweet Potatoes and Winter Squash <ul style="list-style-type: none"> <li>• ¼ cup per student</li> </ul>	Cookbook Recipe, Page 148 <sup>a</sup>	<u>Education:</u> <ul style="list-style-type: none"> <li>• Kid-friendly Veggies and Fruits 10 Tips Handout</li> </ul> <u>Kitchen Gadget Sent Home to Assist with Produce Preparation/Storage:</u> <ul style="list-style-type: none"> <li>• Vegetable Steamer</li> </ul> <u>Bag for Transporting Evaluation, Education, and Gadget Home:</u> <ul style="list-style-type: none"> <li>• Reusable Cotton Corded Drawstring Bag with Program Logo</li> </ul>	Survey (Post)
<u>Week 6, Day 5</u> (Treatment school only)		Fresh Apple-roasted Sweet Potatoes and Winter Squash Produce Pack <ul style="list-style-type: none"> <li>• 5 # bag of sweet potatoes</li> <li>• 1 small acorn or butternut squash</li> <li>• 1 small rosemary pack</li> </ul>	<u>Education:</u> <ul style="list-style-type: none"> <li>• Apple-roasted Sweet Potatoes and Winter Squash Recipe (Cookbook Recipe, Page 148<sup>a</sup>)</li> </ul> <u>Bag for Transporting Education and Produce Home:</u> <ul style="list-style-type: none"> <li>• Reusable Striped Cotton Tote Bag with Program Logo</li> </ul>	

<sup>a</sup>Madison Area Community Supported Agriculture Coalition. (2004). *From Asparagus to Zucchini – A Guide to Cooking Farm-Fresh Seasonal Produce. Third edition.* Madison, Wisconsin: Jones Books.

<sup>b</sup>Due to a cancelled school day, this Cafeteria Tasting Station activity was omitted.

## RESULTS

Overall, 1,144 students participated in the program, with 781 students (68.3%) being from the control schools and 363 students (31.7%) being from the treatment school. Parents/caretakers of participating students responding to the pre-survey (n=465/1144, 41% response rate) were 34±8 years of age, primarily Caucasian (n=264/465, 57%), and female (n=425/461, 92%). Students associated with the responding parents/caretakers (n=464) were 6.9±2.0 years of age, predominantly Caucasian (n=246/459, 49%), and enrolled in first grade (n=125/459, 25%).

For the post-survey, 146 parents/caretakers (12.8%) participated. Table 2 summarizes the satisfaction data for the program. Overall, almost 94% of parents/caretakers responding rated the cookbook (Madison Area Community Supported Agriculture Coalition, 2004) as “good” to “excellent”, with almost 78% reporting that they had used the cookbook. Similarly, almost 95% of parents/caretakers responding rated the nutrition information received as “good” to “excellent”, with almost 84% reporting to have used the information. Parents/caretakers reported that almost 98% of children rated the nutrition information as “good” to “excellent”.

Over 97% of parents/caretakers reported that the kitchen gadgets were “good” to “excellent”, with almost 94% reporting that they had used the gadgets. Of the responding parent/caregivers receiving take-home produce (n=111), only 2 (1.8%) rated the quality of the produce received as “fair” or “poor”.

Over 70% of the children of responding parents/caregivers had told them about the cafeteria tasting station, with more than 91% of the parents reporting that their child rated the tasting station as “good” to “excellent”.

**Table 2. Evaluation of the Farm-to-YOuth! Program by Parents (n = 146)<sup>a</sup>**

Program Characteristic (number responding to question)	n	Percent
How would you rate the cookbook <sup>b</sup> that you received? (n=146) <sup>a</sup>		
• Excellent	53	36.3
• Very good	45	30.8
• Good	39	26.7
• Fair	8	5.5
• Poor	1	0.7
Since receiving the cookbook, <sup>b</sup> have you used it? (n=142) <sup>c</sup>		
• Yes, almost every week.	20	14.1
• Yes, some weeks, but not every week.	56	39.4
• Yes, only one or two weeks.	34	23.9
• No.	32	22.5
How would <u>you</u> rate the nutrition information that you received? (n=146) <sup>a</sup>		
• Excellent	49	33.6
• Very good	44	30.1
• Good	45	30.8
• Fair	8	5.5
• Poor	0	0.0

<b>Program Characteristic (number responding to question)</b>	<b>n</b>	<b>Percent</b>
How would <u>your child</u> rate the nutrition information that you received? <sup>a</sup> (n=146)		
• Excellent	32	22.1
• Very good	49	33.8
• Good	61	42.1
• Fair	3	2.1
• Poor	0	0.0
Since receiving the nutrition information, have you any? (n=142) <sup>d</sup>		
• Yes, almost every week.	30	21.1
• Yes, some weeks, but not every week.	59	41.5
• Yes, only one or two weeks.	30	21.1
• No.	23	16.2
How would you rate the kitchen gadgets that you received? (n=146) <sup>a</sup>		
• Excellent	49	33.6
• Very good	51	34.9
• Good	42	28.8
• Fair	3	2.1
• Poor	1	0.7
Since receiving the kitchen gadgets, have you any? (n=144) <sup>c</sup>		
• Yes, almost every week.	52	36.1
• Yes, some weeks, but not every week.	62	43.1
• Yes, only one or two weeks.	21	14.6
• No.	9	6.3
How would you rate the produce that you received? (n=146) <sup>a</sup>		
• Excellent	53	36.3
• Very good	36	24.7
• Good	20	13.7
• Fair	2	1.4
• Poor	0	0.0
• My child did not bring home produce.	35	24.0
Since the beginning of the program, did your child tell you about the “tasting station” in the cafeteria? (n=146) <sup>e</sup>		
• Yes, almost every week.	45	30.8
• Yes, some weeks, but not every week.	35	24.0
• Yes, only one or two weeks.	23	15.8
• No.	43	29.5

Program Characteristic (number responding to question)	n	Percent
How would <u>your child</u> rate the “tasting station” in the cafeteria? (n=138) <sup>a</sup>		
• Excellent	28	20.3
• Very good	36	26.1
• Good	62	44.9
• Fair	10	7.2
• Poor	2	1.4

<sup>a</sup>Data for all schools were merged, since ratings did not significantly differ between control and treatment schools (Independent samples t-test,  $p > .05$ ).

<sup>b</sup>Madison Area Community Supported Agriculture Coalition. (2004). *From Asparagus to Zucchini – A Guide to Cooking Farm-Fresh Seasonal Produce. Third edition.* Madison, Wisconsin: Jones Books.

<sup>c</sup>Data for all schools were merged, since ratings did not significantly differ between control and treatment schools (Pearson Chi-Square,  $p > .05$ ).

<sup>d</sup>Data for all schools were merged. However, a significantly greater proportion of those in the treatment school (76%), compared to the control schools (24%), used the nutrition information “almost every week” (Pearson Chi-Square,  $p = .02$ ).

<sup>e</sup>Data for all schools were merged. However, a significantly greater proportion of children in the treatment school (72%), compared to the control schools (28%), told parents about the tasting station “almost every week” (Pearson Chi-Square,  $p = .02$ ).

## APPLICATIONS TO CHILD NUTRITION PROFESSIONALS

A fruit and vegetable produce education program can be implemented in a rural elementary school and be favorably received by both parents/caregivers and students. Our results support those of previous studies related to increased visibility of fruit and vegetables in cafeterias, provision of nutrition education (Kim et al., 2014), exposure-based interventions with repeated exposures to nutrient-rich foods such as tastings (Kaiser, Schneider, Mendoza, George, Neelon, Roche, & Ginsburg, 2012; Wardle, Herrera, Cook, & Gibson, 2003), and tastings coupled with nutrition education (Cirignano, et al., 2014).

Our results support that educational information, including a fruit and vegetable cookbook, and kitchen gadgets to assist in the preparation of the fruit and vegetable items are desirable for families. Provision of take-home produce facilitated communication between children and parents about cafeteria activities (e.g., tasting station) and promoted usage of nutrition education materials sent home. Additional evaluation should be conducted to assess the effect of the program on produce selection and waste in the cafeteria. Other household characteristics, such as household food security status, should also be evaluated to assess the impact of program.

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