
AGRICULTURAL INSTITUTE OF MARIN

ROLLIN' ROOT EVALUATION REPORT 2022



Prepared by Perales and Associates Evaluation Services

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Acknowledgements

Collaborating with the Agricultural Institute of Marin and Rollin' Root staff to develop an evaluation plan that reflects the project's evaluation goals was an exciting collective endeavor. This report is the culmination of the methods used to measure the processes and outcomes of the mobile Rollin' Root farmers' market.

The authors sincerely thank Andy Naja-Riese, AIM Chief Executive Officer, for involving us in this project and for his vision and dedication to serving low-income communities. Thanks also to the following people for their commitment to AIM and for generously giving us their time as we observed the project and conducted customer interviews.

Karimah Hay: Rollin' Root Manager

Ariel Vaughn: Market Manager

Ally Gonzalez: Assistant Market Manager/Rollin' Root Assistant

Alanna DeSalvo: Nutrition Educator

BACKGROUND

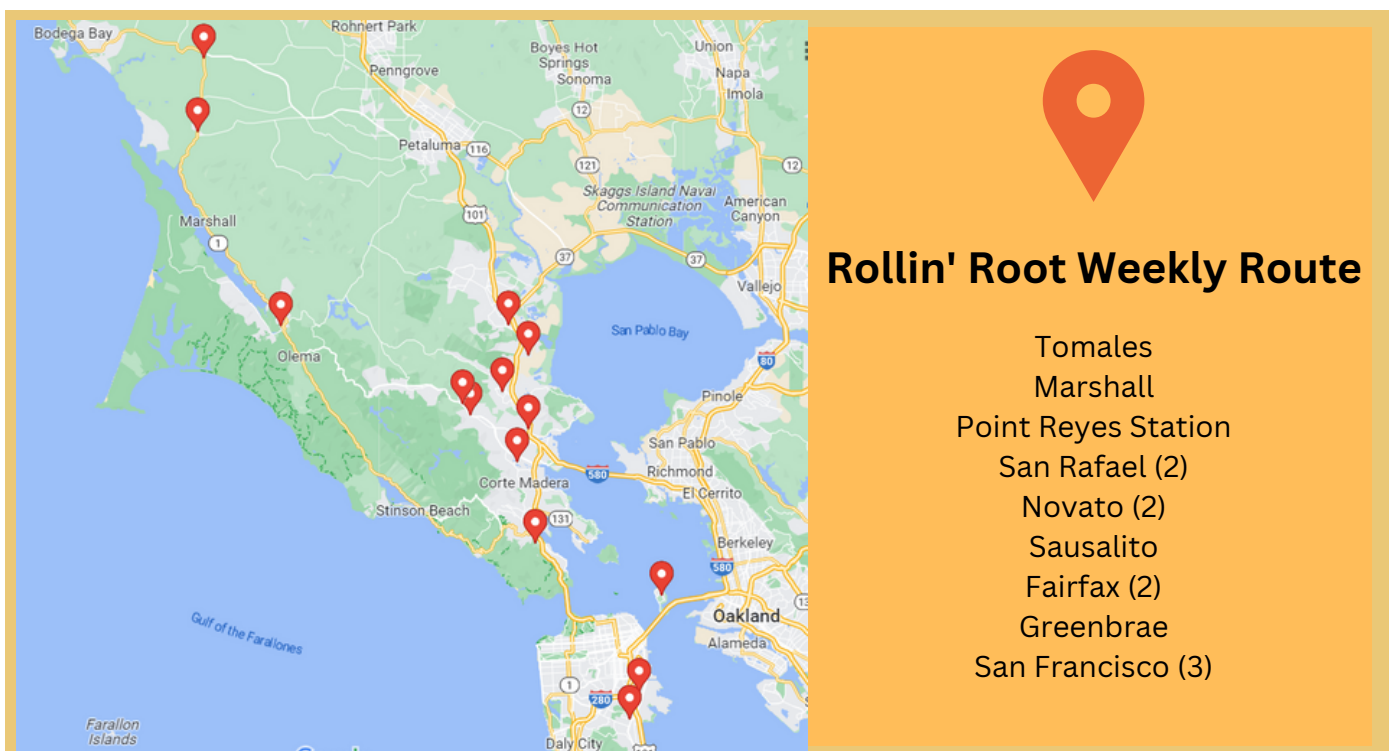
Agricultural Institute of Marin

The Agricultural Institute of Marin (AIM) is a not-for-profit organization headquartered in Marin County and dedicated to connecting communities and local farmers. AIM also educates youth and adults about the connection between agriculture, the environment, and health. AIM manages nine Certified Farmers Markets in the Bay Area and operates the Rollin' Root mobile farmers' market.

Rollin' Root

The Rollin' Root (RR) mobile farmers' market provides farm-fresh food access and community engagement for low-income older adults. The RR operates a refrigerated food truck that offers access to affordable healthy foods including organic produce, eggs, cheese, and yogurt to CalFresh participants, older adults ages 60+ who participate in the Senior Farmers' Market Nutrition Program, and other low-income people. By taking the food truck directly to the community, the RR addresses economic and transportation challenges faced by the mostly elderly population they serve.

Two important components of the Rollin' Root are its nutrition education and senior ambassador programs. These programs are described in this report.



EVALUATION DESIGN & FOCUS

In May 2022, the Agricultural Institute of Marin contracted with public health evaluation consultants, Perales & Associates Evaluation Services (PAES), to develop a comprehensive plan to evaluate the impact of the Rollin' Root mobile farmers' market on the populations they serve.

Evaluation Questions

To guide this evaluation, we partnered with AIM to determine what they wanted to learn from the evaluation results. This approach led to the development of an evaluation plan that could answer the following evaluation questions:

1

Do customers who frequent the Rollin' Root mobile farmers market increase their consumption of fruits and vegetables as a result of access to affordable produce available in the community where they live?

2

Are customers tasting the recipe of the month and preparing it at home as a result of interaction with the Rollin' Root nutrition educator?

3

Are customers recalling the nutrition messaging from the nutrition educator and incorporating and using that messaging to guide their eating behaviors?

4

How are the project's Ambassadors contributing to customers' accessing fruits and vegetables and how is the RR helping ambassadors eat healthy?

Evaluation Design

The evaluation design incorporated the gathering of formative and summative data to provide the evaluation consultants with information to guide the evaluation and measure its outcomes. Formative evaluations are conducted during program development and implementation and are useful in determining how to best achieve your goals or improve your program. Summative evaluations should be completed once your programs are established and will tell you to what extent the program is achieving its goals and objectives.¹

Formative evaluation included assessing the processes by conducting interviews with project staff and initial observations of the Rollin' Root mobile market to gain a better understanding of the interaction of customers with staff and the nutrition educator. It also helped the evaluators develop the final customer survey questions. Summative outcome data were gathered from RR customers and RR Ambassadors to answer the evaluation questions listed above.

¹Source: CDC. Building Our Understanding: Key Concepts of Evaluation. What is it and how do you do it? https://www.cdc.gov/nccdphp/dch/programs/healthycommunitiesprogram/tools/pdf/eval_planning.pdf

Evaluation Methods

The evaluation design used multiple evaluation methods to assess the project’s impact. Table 1 provides an overview of how the evaluation activities supported the evaluation. Evaluation instruments were developed by PAES unless otherwise noted.

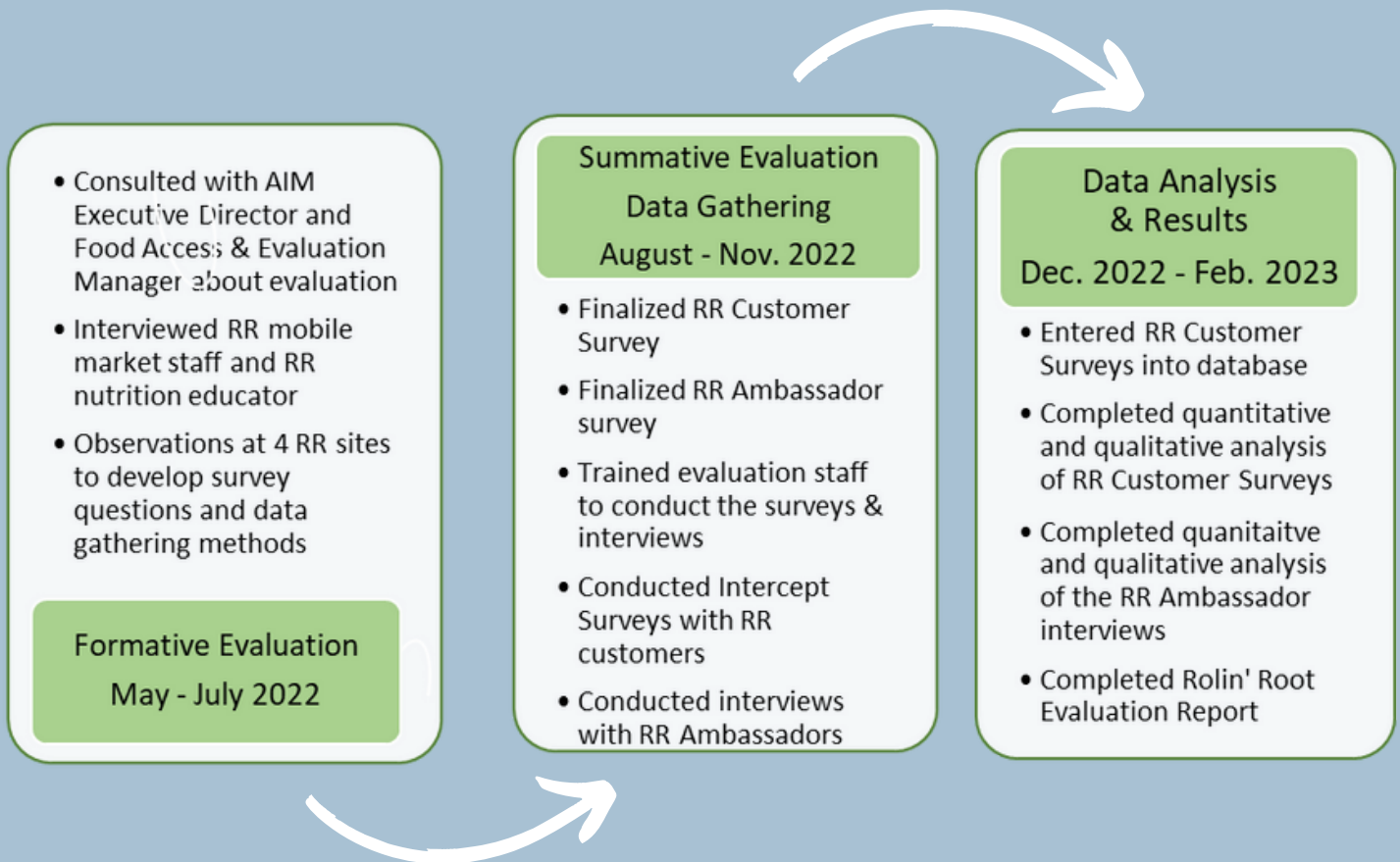
Table 1: Process and Outcome Evaluation Activities

<i>Formative: Process</i>			
Evaluation Activity	Purpose	Sample	Data Analysis Method
Staff Interviews	To gain an understanding of how the project operates and what staff wanted to learn from the evaluation To learn about the roles and responsibilities of RR Ambassadors	Purposive Sample	Content analysis
Nutrition Educator Interview	To learn how the nutrition educator conducts education with customers and to help develop survey questions	One nutrition educator	Content analysis
Observations at RR Sites	To assess interactions of customers with RR staff and the nutrition educator, also to help develop survey questions and decide data gathering methods	4 Rollin’ Root sites	Content analysis
<i>Summative: Outcome</i>			
Evaluation Activity	Purpose	Sample	Data Analysis Method
Retrospective Post-test interviews with Rollin'Root customers	To measure customer shopping frequency, changes in fruit and vegetable consumption, recall of nutrition messaging, recipes used or modified, and reasons for shopping at Rollin’ Root	Convenience sample Intercept survey of 100 customers	Descriptive statistics and content analysis
Retrospective Post-test Interviews with Ambassadors	To assess training experience, outreach to customers, and changes in healthy eating	Census sample of all Rollin' Root Ambassadors	Descriptive statistics and content analysis

Overview of Evaluation Activities

Figure 1 below shows the progression of the evaluation activities conducted from May 2022 to February 2023.

Figure 1: Key Evaluation Activities in Chronological Order



EVALUATION INSTRUMENTS AND DATA COLLECTION METHODS

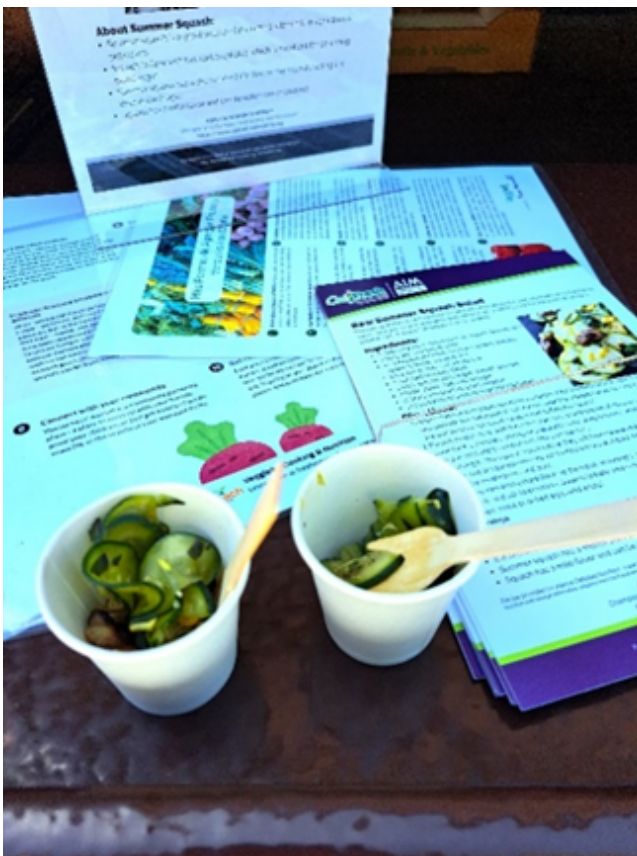
Formative Evaluation

Interviews with Project Staff

During the formative stage of the evaluation, to help guide the evaluation, we conducted interviews with project staff, including the CEO, the AIM market manager, the RR manager, the RR market staff, and a RR nutrition educator. From these interviews, we learned the project's objectives, how RR staff provide weekly access to fresh produce to 14 sites in Marin and San Francisco Counties, the role of the RR Ambassadors, and what the CEO and staff wanted to learn from the evaluation.

Interview with Marin County Nutrition Educator

Rollin' Root nutrition educators provide one-on-one interaction once a month to each of their respective RR sites. We were only able to interview the Marin County educator and observe her interacting with customers as they wait to purchase their produce and engage them for 2-3 minutes by offering a tasting of the month's recipe and a recipe card. Recipes are developed by the educators or adapted from healthy eating websites such as myplate.gov and eatfresh.org and highlight seasonal produce available on the RR food truck. To make them appropriate for low-income seniors the educators focus on simple, budget-friendly recipes with easy-to-find ingredients. Along with the recipe tasting, the educator distributes the corresponding 6"x9" colorful recipe card in English and Spanish that also offers nutritional and food storage information about the produce featured in the recipe of the month. A QR code on the recipe card takes them to the educator's blog where the customer can find more healthy recipes.






Pasta Salad with Asparagus & Mushrooms

Spring pasta salad with a lemony parsley dressing. Simple and delicious!

Ingredients:

- 8 ounces pasta
- 1-2 Tbsp olive oil
- 1 onion finely chopped
- 6 oz mushrooms of any kind
- 1 bunch asparagus cut into 1 inch pieces
- salt & pepper
- 1 bunch Italian parsley chopped
- 3-4 scallions chopped

For the dressing:

- Zest of one small lemon, plus 1-2 tbsp juice
- 4 tbsp olive oil
- 1 garlic minced, salt and pepper

Directions:

1. Place salted pasta water to boil on the stove, cook pasta according to directions.
2. Finely chop the onion and prep the mushrooms.
3. Heat 1-2 tbsp oil in a skillet over medium heat, add onions and cook 3 minutes, until fragrant. Add mushrooms, season with salt and stir occasionally until lightly cooked, about 5 minutes. Set aside and sauté asparagus, seasoning again with salt, and cook just until tender and bright green.
4. Drain the pasta and place in a bowl. Top with the mushrooms, asparagus, the chopped parsley and scallions. Add the lemon zest and one tablespoon lemon juice. Add garlic, olive oil, salt and pepper and toss well to combine. Taste, adding more lemon juice or salt if you like.
5. Add parmesan cheese if you like.

Serving: 4-6

About Asparagus:

- Asparagus is a good source of vitamin K, A, C and folate.
- Look for asparagus that is firm with tightly closed tips.
- To store, trim the bottoms and stand the spears up in a jar with about an inch of water.

Recipe adapted from Feasting at Home <https://www.feastingathome.com/spring-pasta-salad-with-asparagus-morels/> (or scan the QR code).

Nutrition and storage information adapted from the FoodHero.org web site: <https://www.foodhero.org/sites/foodhero-prod/files/monthly-magazines/Winter%20asparagus%20ENG%202%20Monthly%201%201%2019.pdf>





Agricultural Institute of Marin
Champions for Farmers, Food Access, and Education
<https://www.agriculturalinstitute.org>

Funded by USDA SNAP, an equal opportunity provider and employer.
Visit CalFreshHealthyLiving.org for healthy tips.



I invite them to try a recipe sample with the produce that's spotlighted that day. I try to expand their nutrition by encouraging them to try new produce, so I incorporate simple recipe preparation techniques that people might not be familiar with, or I use an ingredient in a new way. I also share fun facts about a spotlight ingredient.



Rollin' Root Observations

During the formative evaluation stage, PAES conducted observations at four Rollin' Root farmers' market locations in Marin County. The purpose was:

- to observe the interaction between the RR staff and customers, as the staff answers customers questions about the locally grown produce and explains the seasonality of various fruits and vegetables,
- to observe the interaction between the Rollin' Root nutrition educator and customers as she provides healthy food tastings, corresponding recipe cards, and answers nutrition-related questions,
- to allow the evaluators an opportunity to assess where and how evaluation data could be gathered during the Rollin' Root stops, and finally.
- to speak with Rollin' Root Senior Ambassadors about their role as community members who are trained to promote the Rollin' Root in local media and encourage customers to buy and eat more fresh produce.

Outcome Evaluation

Rollin' Root Customer Survey

Development of the Rollin' Root Customer Survey questions evolved from what we learned during four site visits in May and July 2022. After the initial observations, we determined that conducting a matched pre/post-test would not be the best evaluation approach because of the uncertainties of matching customers from month to month. We changed the evaluation design and planned to conduct a self-administered survey with customers after they purchased their produce at the RR by handing them a clipboard with a survey and pen. We quickly found that approach was not going to work because shoppers were occupied with their groceries. Moreover, most of the RR customers were 65+ and seemed to prefer to be interviewed. Therefore, we decided to use a pen-to-paper intercept survey interview approach with customers who were in line to make purchases.

The final survey was grounded in the Evaluation Questions developed with AIM to assess the impact of the Rollin' Root and contained eight customer questions related to increased consumption of fruits and vegetables, how often they shop at the RR, why they shop there, and recall of speaking with the nutrition educator and trying a healthy recipe. Customers also had the opportunity to make final comments about the Rollin' Root. Demographic information was also collected.



Senior Ambassador Survey

Senior Ambassadors play a crucial role in promoting the Rollin' Root and interacting with customers about the importance of healthy eating and consumption of fresh produce. They are recruited from within the community, and most are either CalFresh recipients or CalFresh eligible. Similar to the RR Customer Survey, the evaluators used the Evaluation Questions as a guide for developing the Ambassador Survey interview questions. During Zoom meetings with the AIM staff, we also gathered information on what the leadership wanted to learn about the success of the Ambassador Program. The Ambassador Survey questions asked about their job responsibilities, the training they received from AIM, interaction with customers, and if they had increased their consumption of fruits and vegetables since becoming a RR Ambassador. Ambassador interviews were conducted in-person at the RR sites.

Survey Collection and Analysis

Completed intercept surveys conducted with customers and ambassadors were entered into an online database. Scaled survey responses were analyzed for descriptive statistics using the Statistical Package for the Social Sciences (SPSS) and open-ended questions were analyzed for common themes.



RESULTS

Customer Intercept Survey N=81

We planned to conduct the Customer Survey at 11 Rollin' Root stops in Marin County from May through August 2022. However, when the RR added three new sites (two in San Francisco and one in Treasure Island) we extended the survey collection period through November so we could capture the opinions of RR customers at the new locations. Our goal was to collect 100 Customer Surveys across the 14 RR sites. Ultimately, we were able to gather responses from 81 Rollin' Root customers. The following pages provide an overview of the Customer Survey results and respondents' comments about the Rollin' Root.

Why Customers Shop at the Rollin' Root

The most common reason customers told us they shop at the Rollin' Root is the convenient access to fresh organic produce. One customer said they like the personal service they get at the Rollin' Root and that the RR staff are friendly and energetic! Others said they keep coming back because the RR market comes to their doorstep, they like supporting local farmers, they can use their EBT card, they also enjoy socializing with fellow shoppers, and as one person said, "*the prices are outstanding!*"

How Often Customers Shop at the Rollin' Root

Customer shopping habits at the RR varied from weekly buyers to first-timers. Indeed, 68% of customers said they shop at the Rollin' Root weekly and 24% said they shop 2 to 3 times a month. The remaining 8% were shopping at RR for the first time. Some customers who shopped less frequently said their neighbors shopped for them at the RR and others said they would shop more often if the RR frequented their neighborhood twice a week.

Amount of Produce Purchased at the Rollin' Root

Overall, among the 66 customers who answered this question, 44% said that they buy at least half of their fruits and vegetables from Rollin' Root. Customers providing comments said their purchases varied from 50% to 80% and others said their produce purchases varied depending on what the RR had in stock that week.

Increased Consumption of Fruits and Vegetables

Among the 55 respondents who answered the consumption question, 30 said that fruits and vegetables were half or less of their daily food consumption. Of those, two-thirds (67%) said that after shopping at the Rollin' Root they were now eating more or somewhat more fruits and vegetables. Among the 25 higher consuming customers who said that fruits and vegetables comprised three-fourths or nearly all of their daily food consumption, 48% said that they were now eating more or somewhat more fruits and vegetables while 52% said they were eating the same high level as before. One customer said, "*we think Rollin' Root can increase our veggies and fruit consumption especially since the prices are affordable and have easy accessibility.*" Another participant told us she became vegan since shopping at the Rollin' Root.

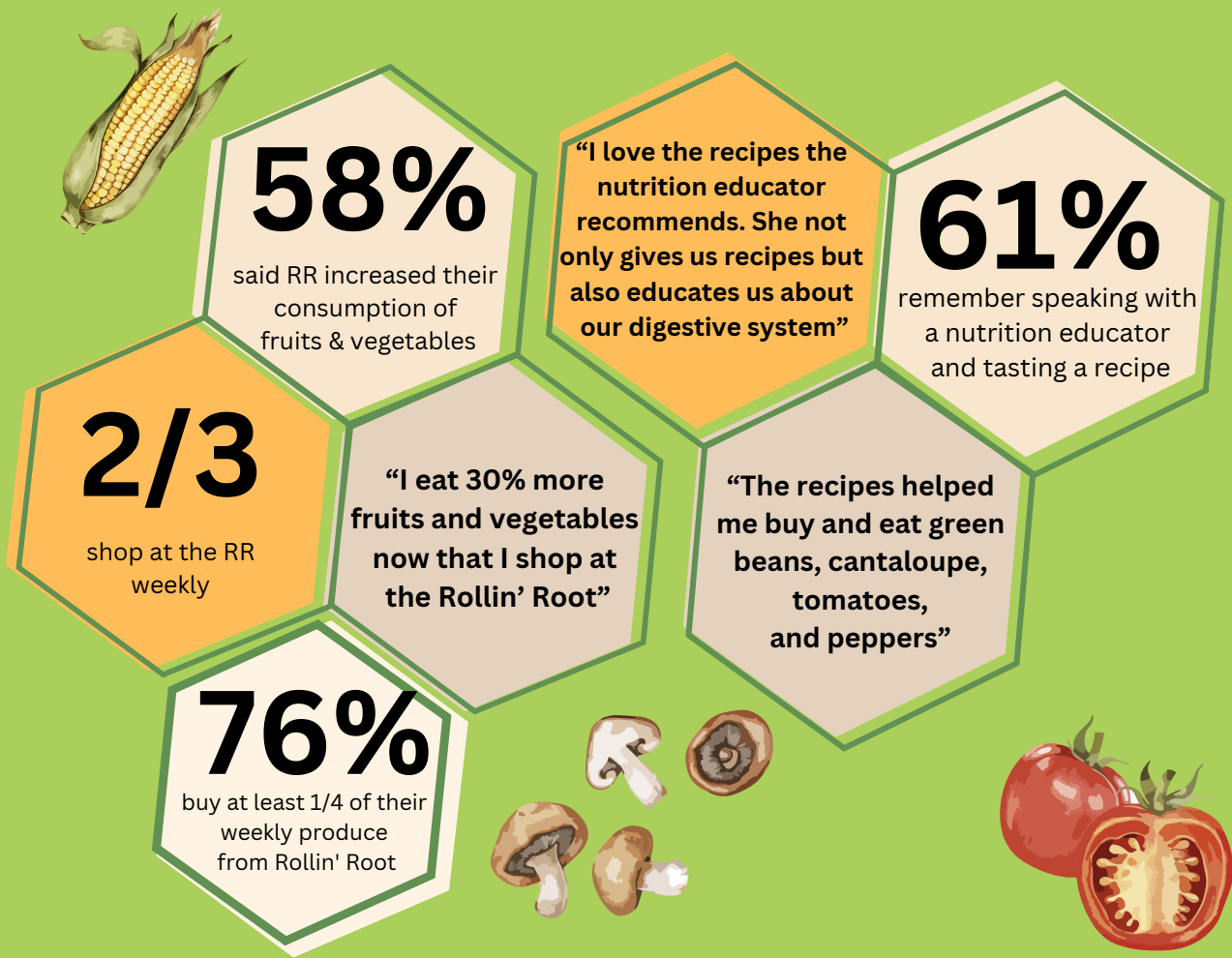
Interaction with Nutrition Educator




Among the 62 respondents who answered this question 61% remember talking to the nutrition educator and tasting a recipe. The customers who remembered tasting a healthy recipe and prepared the recipe at home said they tried the Brussels sprouts, potato salad, and squash recipes. A crowd pleaser was the watermelon basil salad. Several customers said that they tried it and it was delicious! One customer said she has made every single recipe and that they helped her buy and eat more fruits and vegetables. Another said there is a need for more education on fruits and vegetables, how to buy different varieties, and how to cook them.

Media coverage and marketing

Rollin' Root customers shared how they heard about the mobile market and cited the West Marin Feed, a local electronic newsletter, apartment complex announcements, word of mouth, and emails. Other respondents heard about the RR from local champions at the West Marin County Marshall Store and the Mission Blue Coffee Shop owners in Visitacion Valley, San Francisco.

Results of Customer Intercept Survey



 Demographics	 Gender	 Age
8% Asian 9% Black 10% Latinx 64% White 9% Multiracial	64% Female 34% Male 2% Other	12% 18-34 Years Old 13% 35-44 Years Old 23% 45-64 Years Old 52% 65+ Years Old

TOP 5 REASONS FOR BUYING FROM ROLLIN' ROOT

Customers enthusiastically shared their opinions about the Rollin' Root when we interviewed them. Their comments fell into 5 common themes, as noted below:



Convenient accessibility to fresh fruits and vegetables

Several people said they shop at Rollin' Root because it is convenient, and they don't have to drive many miles to access produce.



Support for Rollin' Root and Local Farmers

Customers told us that they enjoy interacting with the Rollin' Root staff because the staffs are friendly and energetic. They feel they are purchasing farm fresh organic produce and like supporting local farmers.

Availability of fresh fruits and vegetables

Participants said they like the variety of fresh and organic fruits and vegetables as opposed to produce wrapped in plastic.



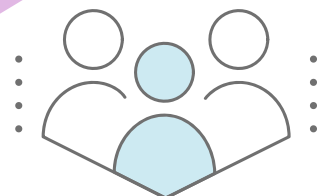
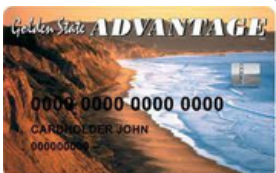
Sense of Community

Several people said that shopping at Rollin' Root gave them a sense of community with others who also value the truck's healthy offerings.



Affordability of fresh fruits and vegetables

Respondents said that the produce prices at Rollin' Root are less than local stores and that they can use their EBT card.



Interviews with Local Champions

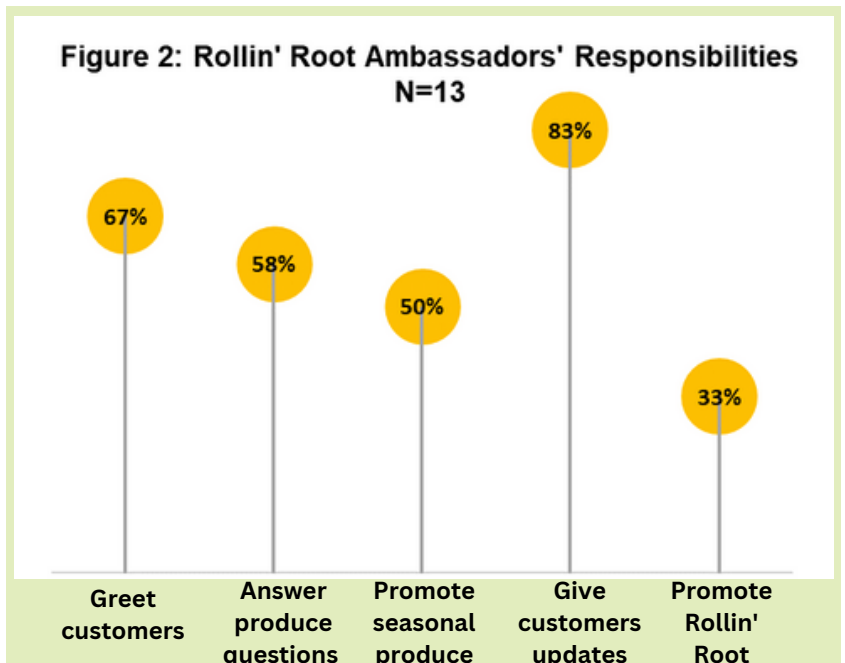
During the site visits, PAES also talked to some of the local champions who helped bring the Rollin' Root to their site by securing from local property owners or city officials permission for a safe space to park the mobile market and sell produce or promoted the RR among their community members. One champion is the owner of the Marshall Store a popular seafood shack serving oysters & other local shellfish on the Tomales Bay shore. He supports Rollin' Root by allowing the truck and its customers to park on his lot. We also talked with the owner of the Mission Blue Coffee Shop in the Visitation Valley neighborhood of San Francisco. Both owners were enthusiastic about the RR and told us their business increases on the days the truck is there. Another champion also serves as a RR Ambassador and was key in securing permission for the RR truck in their senior living mobile home park.

Senior Ambassador Interviews

PAES staff conducted 13 in-person interviews at 10 of the 14 Rollin' Root stops from May through November 2022 (Note: some stops had multiple ambassadors). The results showed that the ambassadors' service ranged from 3 months to 5 years, with an average of 1.7 years. The majority (77%) were white females and three were African Americans. Approximately two-thirds of those interviewed were age 55 and older, and 23% were age 25-44 years of age.

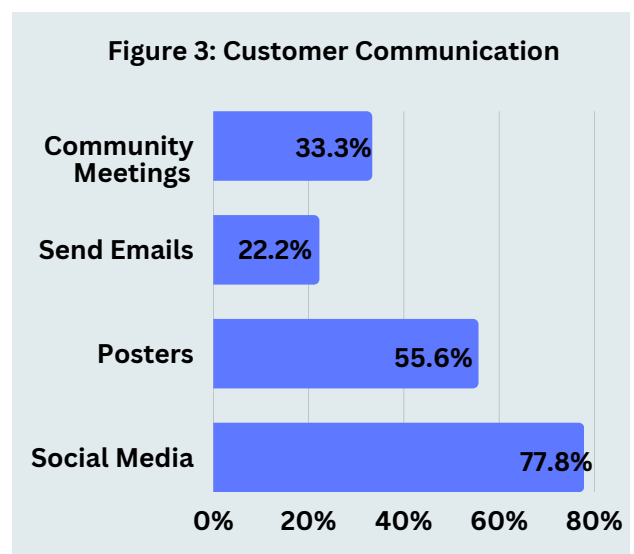
Ambassadors' Responsibilities

Figure 2 shows that the ambassadors' said their responsibilities varied from greeting customers to answering customer questions to promoting the Rollin' Root in their communities.



Reaching Customers

The Rollin' Root Ambassadors told us that they use a variety of means to communicate with customers. The most common avenue was through social media for more than three-fourths of the ambassadors, followed by more than half who said they distributed flyers and posters at community locations such as near libraries to promote the Rollin' Root. Ambassadors most commonly mentioned the social media apps Facebook, Next Door, and Instagram. They also told us they sent out text messages, called their neighbors, connected via word of mouth to reach out to the RR shoppers, and promoted the mobile market at community meetings, in local newsletters, and on their personal YouTube channel.



Ambassadors Increased Fruit and Vegetable Consumption

Before becoming an ambassador, respondents we interviewed said that fruits and vegetables made up half of their diet. The ambassador experience has had an impact on their fruits and vegetable consumption, and they are eating more since serving as a Rollin' Root Ambassador.

Ambassador Training

When asked about the training they received to be an ambassador, respondents experiences varied. Some said they attended an extensive two day in-person training that included site visits to RR stops where they met the staff behind the scenes and learned about their roles, others said due to the COVID-19 pandemic they received virtual training via Zoom, and some said they received informal training. They learned about the RR program and the importance of increasing access and availability to organic fresh fruits and vegetables to low-income communities and that by accepting EBT RR customers are able to stretch their food dollars. They also learned about meeting and greeting customers & promoting the RR in their communities.

Ambassadors were given the opportunity to reflect on the RR training they received and offer suggestions for improvement. One person thought the training was comprehensive, another thought the training was a bit too long. Others thought the training should include guidelines for best practices for ambassadors and orientation to CalFresh EBT. Another suggested that the training should include information on AIM and the periphery of the program such as knowledge of local farmers, supplies, and seasonal produce. It must be noted that the RR Ambassador Training program was being revised during the evaluation which may account for the mixed opinions about the training experiences.

Overall, the ambassadors interviewed had many positive things to say about their experience as a Rollin' Root ambassador, as noted in the bubbles below.

"I love healthy eating and love spreading the word about the Rollin' Root."

"I love the Rollin' Root people: they are always smiling."

"One of the things that I appreciate about the Rollin' Root is that they give unsold food to food pantries. I suffer from food insecurity, and this helps me a lot."

I appreciate the stipend and that I can use my EBT. It's awesome!

"I am proud of my ambassadorship!"

² EBT is the Electronic Benefits Transfer system that allows an individual receiving benefits from the Federal Supplemental Nutrition Assistance Program (SNAP) to pay for food using SNAP benefits. SNAP is known as CalFresh food in California. Source: <https://www.fns.usda.gov/snap/ebt>

CONCLUSIONS

Rollin' Root's mission is to serve communities that experience economic and transportation barriers to healthy food. Many of these communities are located in senior housing sites and some are in food deserts where access to affordable organic produce is limited. In order to assess Rollin' Root's outcomes, the evaluators visited 11 sites in Marin County and 3 in San Francisco between May and November 2022 to observe the interaction between the Rollin' Root staff and their customers. We also conducted intercept surveys with 81 customers, interviewed 13 Rollin' Root ambassadors, and one nutrition educator.

The most significant finding of this evaluation is that the Rollin' Root mobile market creates systems and environmental changes that increase access to affordable fresh fruits and vegetables for its customers. Customers said they shop at the Rollin' Root because they greatly appreciated the weekly convenience of "walking out their front door" and finding the truck nearby with its variety of seasonal and affordable organic produce. Indeed, some customers in West Marin told us that the nearest grocery store was eight miles away and many of those living in senior housing in East Marin said they either could no longer drive to a grocery store or that the closest grocery store did not have affordable high-quality organic fruits and vegetables. Many customers also appreciate that the mobile market allows EBT, Market Match, and Senior Bonus Bucks for purchases. Indeed, this stretching of food dollars is evidenced by the fact that approximately 90% of its customers said they buy produce at least 2 times a month from the Rollin' Root truck. Several customers told us that another reason they shop at the Rollin' Root is that they want to support it and local farmers.

Customers said that not only do they appreciate the easy access to affordable fresh organic produce they also like the sense of community and social connectivity that Rollin' Root creates at their site. The evaluators noticed customers socializing while waiting in line, and even after their purchases gathering in small groups to chat. Indeed, we were told by many customers, especially, the older adults in senior housing, that they liked Rollin' Root's weekly visit because it allows them a chance to "check-in" and "catch-up" with each other. It is also evident from customer comments that they appreciate their local Rollin' Root Ambassador's contribution to the shared experience through their frequent communication with existing and potential customers via newsletters, social media, flyers, and posters, and at community meetings alerting them to the truck's next visit and the featured seasonal produce.

Customers also liked Rollin' Root's unique feature of having a nutrition educator available at least once a month at each site from whom they can taste the featured produce in a healthy recipe and also ask nutrition-related questions. One person noted, *"you're not going to find a nutrition educator in a grocery store and maybe not even in a farmers market, but you will at Rollin' Root."* We also found that some customers took the recipe card offered by the educator and either prepared the recipe or modified it to their taste.



The availability of the Rollin' Root truck had an impact on increasing the consumption of fresh fruits and vegetables. We found that regardless of whether the customers were consuming light to medium or medium to heavy levels of fresh fruits and vegetables before shopping at the Rollin' Root they increased their consumption of fresh fruits and vegetables by two-thirds and at least one-half respectively after shopping at the Rollin' Root.

In sum, as depicted in the following infographic, the Rollin' Root Farmers' Mobile Market is successfully achieving its mission by providing its low-income older adults, and those living in food deserts, with organic fruits and vegetables that are conveniently accessible, have affordable prices, and uniquely also provides access to an on-site nutrition educator.

