

Introduction

Farmers markets are critical elements of healthy, sustainable food systems (Gillespie et al., 2007; Lyson et al., 1995). They serve as prime access points for fresh and healthy local foods, encouraging increases in fruit and vegetable consumption (George et al., 2011), while also supporting local agriculture and economies. They can also address disparities in healthy food access for Supplemental Nutrition Assistance Program (SNAP) participants. Unfortunately, SNAP redemption remains low at farmers markets nationally (United States Department of Agriculture [USDA], 2020).

The Supplemental Nutrition Assistance Program – Education (SNAP-Ed) program has emerged as a key supporter for increasing awareness and purchases at farmers markets among SNAP shoppers (Savoie-Roskos et al., 2016). Although direct education and community engagement efforts have successfully increased fruit and vegetable purchases among consumers already redeeming benefits at farmers markets, these strategies do not address the various dimensions of access that could further increase SNAP redemption and create repeat customers. User friendly tools that assess markets' operational practices against dimensions of consumer accessibility can help with attraction and retention of SNAP shoppers.

The Virginia SNAP-Ed program developed the SNAP at Farmers Market Environmental Assessment to assess the physical, social, and cultural environment of the farmers market. The tool identifies strategies to establish best practices within farmers markets to be inclusive of all consumers, engage stakeholders and community members for support, and expand the reach of farmers markets as healthy food destinations. The underlying hypothesis is that farmers markets must consistently convey a welcoming experience for SNAP redemption efforts to be successful.

The purpose of this manuscript is to describe the design and formative testing of the SNAP at Farmers Market Environmental Assessment tool for initial site-level assessment, annual reassessment, and feasibility testing in the farmers market setting.

SNAP at Farmers Market Environmental Assessment

The assessment contains a total of 41 questions broken into time interval sections, with responses being “yes” or “no.” The assessment was created to be completed with a Family and Consumer Science SNAP-Ed Extension Agent, or another Extension Agent, field volunteers, or by a market manager independently.

Development

The tool was designed to: be comprehensive yet concise, mutually identify strategies while minimizing respondent burden; and be sensitive enough to detect improvements made over time. Question content was informed by existing research on low-income participants' experiences with farmers markets (Usher, 2015; Freedman et al., 2016), the SNAP-Ed Evaluation Framework (USDA, 2016) to ensure alignment with SNAP-Ed evaluative goals, and Virginia SNAP-Ed staff's experiences. The five dimensions of

access (Table 1) pertaining to food acquisition served as the conceptual framework for the development of the assessment tool (Usher, 2015).

Table 1.
Farmers Market Access Dimensions Addressed on the SNAP at Farmers Market Environmental Assessment

Dimension of Access	Concepts Addressed	Correlating Questions
Acceptability	Have you created a market environment that is inclusive to all customers, including those who receive SNAP benefits?	<ol style="list-style-type: none"> 1. Is your market’s commitment to welcoming all shoppers included in your market’s mission statement? 2. Is it included on your website, advertising and training manuals? 3. Have you considered the “Market Champions” outreach mode, which uses local volunteers to talk about your program to their neighbors and around their communities? 4. Do you have seating available for customers to have a place to relax and/or socialize? 5. Do you offer family-friendly, educational programming that fits the culture of your market, such as: <ol style="list-style-type: none"> 1. Nutrition or gardening classes offered through VCE? 2. Market tours? 3. New customer welcome/orientation? 4. Cooking demos, free samples, recipes reflective of your community? 5. Music/entertainment that reflects the culture(s) of your community? 6. Have you partnered with local organizations to provide outings for groups, such as day trips for seniors, moms from the local WIC program, Family Nutrition Program nutrition education groups, etc.? 7. Have you shared sales information and market success stories with your board, vendors, local politicians, and the media to celebrate what your SNAP program does for your community?
Accessibility	What measures are the market and the individual vendors	<ol style="list-style-type: none"> 1. Do vendors understand SNAP regulations and what purchases are allowed using SNAP?

	<p>taking to increase physical access and visibility of their acceptance of SNAP benefits and how are these measures being promoted to the community at large?</p>	<ol style="list-style-type: none"> 2. Do your board, city council and/or market administrator understand the benefit of accepting SNAP to the market and the community? 3. Is your board aware of your market's SNAP program? 4. Is your city/town council aware of your market's SNAP program? 5. Do they have quick talking points to explain the program and its benefits to many types of audiences, such as market shoppers, potential funders, etc.? 6. Have you formed partnerships with community organizations and government agencies to help you get the word out about your SNAP program? 7. Have you tapped their know-how of how to reach the SNAP population and how to make your market more welcoming to SNAP shoppers? 8. Do you have a SNAP marketing plan or strategy? 9. Do you use simple illustrations on advertising materials to explain your SNAP program? This can help low literacy readers or those for whom English is their second language. 10. Do you have a simple "Frequently Asked Questions" poster or a section of your website about your SNAP program? 11. Do vendors have quick talking points to educate shoppers about how to shop with SNAP at the farmers market? 12. Do you have easily recognizable market staff/volunteers (example: wearing a bright colored or market-specific shirt)? 13. Do you have well-trained staff or volunteers to run the EBT machine? 14. Do you provide basic information to staff, volunteers and vendors on how SNAP benefits are given out? 15. Do the volunteers/staff running your EBT machine know how to process paper vouchers in case of machine malfunction?
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		<p>16. Are you aware of the public transportation routes to get to your market? Is this information on your website/advertising materials?</p> <p>17. Do you have clear signs at the market entrance and throughout the market saying you gladly accept SNAP?</p> <p>18. Is the EBT machine clearly visible or do signs point customers to the EBT machine?</p>
Accommodation	Has your market considered the ways in which they meet the needs of the community they serve?	<ol style="list-style-type: none"> 1. Do you have your accounting system for SNAP vendor reimbursements set up? 2. Have you surveyed your community to understand how your market is regarded by both current shoppers and those who have never come to your market? 3. Are your advertising materials translated into all of the languages in your community? 4. Are your volunteers or staff fluent in the languages spoken in your community? 5. Do you offer your staff and volunteers cultural competency training to help them communicate with a variety of customers? 6. Do the staff or volunteers running your EBT machine have quick talking points to explain your SNAP program and how to shop in the market with SNAP benefits? 7. Have you taken steps to improve your SNAP program based on ideas from shoppers, vendors, community partners, funders, etc.?
Affordability	Does your market make it convenient for all consumers to exercise food resource management skills and/or offer promotions that “stretch” the methods of payment?	<ol style="list-style-type: none"> 1. Do vendors clearly display all prices? 2. Have you set aside a budget for SNAP marketing tools? 3. Do you have funds or a plan for raising funds for a SNAP incentive program? 4. Do all of your market vendors who sell SNAP approved foods have to accept SNAP?

		<ol style="list-style-type: none"> 5. Have you created a map or list of all vendors, what they sell, and who accepts SNAP? 6. Have you compiled SNAP sales information?
Availability	Does the market consider the types of vendors they recruit to sell and are vendors cognizant of the food they are selling? Are you keeping your community aware?	<ol style="list-style-type: none"> 1. Do vendors have information about SNAP shopper habits at farmers markets? 2. Have you and your vendors been trained in “Enhancing the Safety of Locally Grown Produce”? 3. Do you have a sign, newsletter, or social media message alerting SNAP customers to the foods available at the market each day so they can plan a shopping list or meals on a tight budget?

Content Review

Twelve food access experts and stakeholders, including agri-business organizations, farmers market managers, and Cooperative Extension and SNAP-Ed professionals, assessed content validity. Each reviewer was asked to comment on the tool's ability to address and provide remedies for the dimensions of access, its potential to be adopted by various farmers market partners, tool structure, and question clarity.

Feasibility Testing

The SNAP at Farmers Market Environmental Assessment was tested at a convenience sample of ten Virginia farmers markets in 2017 with market managers completing the assessment independently. The tool was tested again at a convenience sample of nine Virginia farmers markets in 2020 with assistance from a trained, SNAP-Ed summer intern. Managers were asked to provide suggested improvements, including opinions on length, content, and proposed solutions. The research team reviewed results to develop further improvement strategies.

Results and Discussion

Feasibility testing revealed that 17 of the 19 market managers found the tool to be feasible for other markets to use to assess the market environment. All (19 of 19) market managers deemed the tool to be helpful for identifying areas of growth and for providing direction on how to incorporate solutions for current gaps in offerings or practices.

Administration of the SNAP at Farmers Market Environmental Assessment Tool

Four logistical concerns were outlined during the feasibility testing: lack of availability of the tool in .pdf format; hyperlinks not functioning properly; additional space requested for comments; and breaking the assessment into different parts. All recommended changes were implemented. For example, the assessment questions were grouped and ordered according to the flow of market season (pre-market season, market season, and post-market season).

Strengths of the SNAP at Farmers Market Environmental Assessment Tool

Other feedback received during feasibility testing revealed the tool provided workable solutions for common problems within the market setting. For example, one market manager connected with an Extension office to provide budget-friendly cooking demonstrations to strengthen acceptability of the farmers market for their SNAP consumers. Additionally, resources within the tool helped inform market operations and encouraged continuous communication between market managers and vendors to accurately relay information to customers. A consistently noted strength was the glossary and simplified definitions for comprehension of common terms used to describe SNAP at farmers markets.

The data gathered from the nine market managers who completed the assessment in 2020 were analyzed and summarized into a list of suggestions to further support market manager success with offering SNAP and associated programming in their community. Most of the suggestions pertained to improvements on outreach resources for markets.

Suggestions included translating materials into more languages, providing sample designs for market specific apparel, providing “SNAP Accepted Here” signage, and offering social media training and templates for market promotion.

Conclusion

The SNAP at Farmers Market Environmental Assessment is a unique resource for farmers market managers and Extension professionals invested in increasing traffic to farmers markets and benefit redemption by SNAP shoppers. This tool can be used by in-field practitioners to assess the needs of farmers markets while simultaneously being directed to relevant resources for improving the farmers market SNAP consumer food environment. The resources linked within the tool should be customized for the state or locality in which it is being used for the best user experience and correlation of solutions. Conducting the assessment pre and post market season is a best practice for Extension professionals to formulate data-driven, actionable steps for moving forward and to track improvements over time. By using the SNAP at Farmers Market Environmental Assessment, SNAP-Ed practitioners and market managers can measure their ability to foster an inclusive environment for all market customers and identify strategies for creating a more inclusive environment.

The SNAP at Farmers Market Environmental Assessment can be obtained by contacting the Virginia Family Nutrition Program at vafnp@vt.edu or visiting our website. The tool should be adapted for each state or region as appropriate.

References

- Freedman, D. A., Vaudrin, N., Schneider, C., Trapl, E., Ohri-Vachaspati, P., Taggart, M., Ariel Cascio, M., Walsh, C., & Flocke, S. (2016). Systematic review of factors influencing farmers' market use overall and among low-income populations. *Journal of the Academy of Nutrition and Dietetics*, *116*(7), 1136-1155. <https://doi.org/10.1016/j.jand.2016.02.010>
- George, D. R., Kraschnewski, J. L., & Rovniak, L. S. (2011). Public health potential of farmers' markets on Medical Center Campuses: A case study from Penn State Milton S. Hershey Medical Center. *American Journal of Public Health*, *101*(12), 2226-2232. doi:10.2105/ajph.2011.300197
- Gillespie, G., Hilchey, D. L., Hinrichs, C. C., & Feenstra, G. (2008). Farmers' markets as keystones in rebuilding local and regional food systems. In *Remaking the North American Food System: Strategies for Sustainability* (pp. 65-83). University of Nebraska Press.
- Lyson, T., Gillespie, G., & Hilchey, D. (1995). Farmers' markets and the local community: Bridging the formal and informal economy. *American Journal of Alternative Agriculture*, *10*(3), 108-113. doi:10.1017/s0889189300006251
- Savoie-Roskos, M., LeBlanc, H., Coombs, C., Palmer, L., Jewkes, M., & Hunsaker, T. (2016). Effectiveness of a SNAP-Ed nutrition education booth at farmers markets. *Journal of Agriculture, Food Systems, and Community Development*, *7*(1), 11-19. <http://dx.doi.org/10.5304/jafscd.2016.071.003>
- U.S. Department of Agriculture, Food and Nutrition Service. *The Supplemental Nutrition Assistance Program Education (SNAP-Ed) Evaluation Framework: Nutrition, Physical Activity, and Obesity Prevention Indicators: Interpretive Guide to the SNAP-Ed Evaluation Framework*. Arlington, VA: USDA; 2016.
- U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis, "Benefit Redemption Patterns in the Supplemental Nutrition Assistance Program in Fiscal Year 2017," by Laura Castner, Breanna Wakar, Kathy Wroblewska, Carole Truppe & Nancy Cole. Project officer: Jenny Genser, Alexandria, VA: September 2020.
- Usher, K.M. (2015). Valuing all knowledge through an expanded definition of access. *Journal of Agriculture, Food Systems, and Community Development*, *5*(4), 1090114. <http://dx.doi.org/10.5304/jafscd.2015.054.018>