

Effectiveness of a Food Map Tool To Address Food Insecurity Amongst the Senior Population

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ABSTRACT

Objective: To evaluate the effectiveness of a food map tool on increasing knowledge about local sources of food and the information needed on such food map tools to improve the effectiveness.

Design: Qualitative Experiment Design.

Methods: Community members' perception of the usefulness of a food map tool created for Livingston County was evaluated using focus groups. Participants were asked pre- & post-questions about the map. Content analysis was used to identify emerging themes. The themes were used to make improvements to the food map tool.

Setting: Dansville and Mt. Morris congregate meal sites in Livingston County, NY

Participants: In February 2023, 15 community members, who attend the congregate meal sites in Dansville and Mt. Morris, aged 60 years and older were enrolled in this study.

Intervention: In February 2023, the food map tool was introduced to community members in a focus group setting. Prior to being shown the tool, participants were asked pre-questions. After seeing the food map, they were asked a series of post-questions. Their responses were recorded for content analysis.

Results: The use of a food map tool increased community members' knowledge of local food sources. However, identified emerging themes support the need for revisions to the food map to increase the effectiveness of the tool. The food map was generally well-received, and many participants opted to keep a copy of the map for themselves.

Conclusions and Implications: The food map tool, with proper revisions, can be an effective method to increase the knowledge of local food sources and utilization of such a tool. Determining what the residents are looking for and what they want is important when creating an effective food map tool.

INTRODUCTION

- Food insecurity affects more than 34 million people in the United States.¹
- Major causes of food insecurity include poverty, unemployment, lack of access to healthcare, chronic health conditions, systemic racism, and racial discrimination.¹
- Food insecurity is most common in food deserts. A food desert is defined as "an area where populations live more than one mile from a supermarket or large grocery store if in an urban area, or more than ten miles from a supermarket or large grocery store if in a rural area".² Livingston County, the target area for this research is categorized as a food desert.
- Lack of knowledge and awareness of farmers markets is one major barrier to food access. Use of a food map tool may help increase knowledge of local farmers markets and road-side stands.
- The efficacy of a food map tool has not been evaluated.
- The purpose of this study was to evaluate the effectiveness of a food map tool on increasing knowledge about local sources of food and the information needed on such food map tools to improve their effectiveness.

- This study was conducted at the Dansville and Mt. Morris congregate meal sites in Livingston County, NY in February 2023.
- The study had 15 community members, aged 60 and older enrolled February 2023.
- From January to February 2023, information was collected on local farmers markets and road-sed stands. The information was organized into a food map tool.
- In February 2023, following the completion of the food map tool, the 15 participants were shown the food map tool and asked pre- and post-questions about the tool.
- Participant responses to the questions were recorded during focus group interviews.
- Qualitative data (participant responses to questions) were analyzed using content analysis.
- Emerging themes were identified.
- Identified emerging themes were used to revise and improve the food map tool.

RESULTS

Figure 1. Participant Responses to the Pre-Questions about Food Map Tool

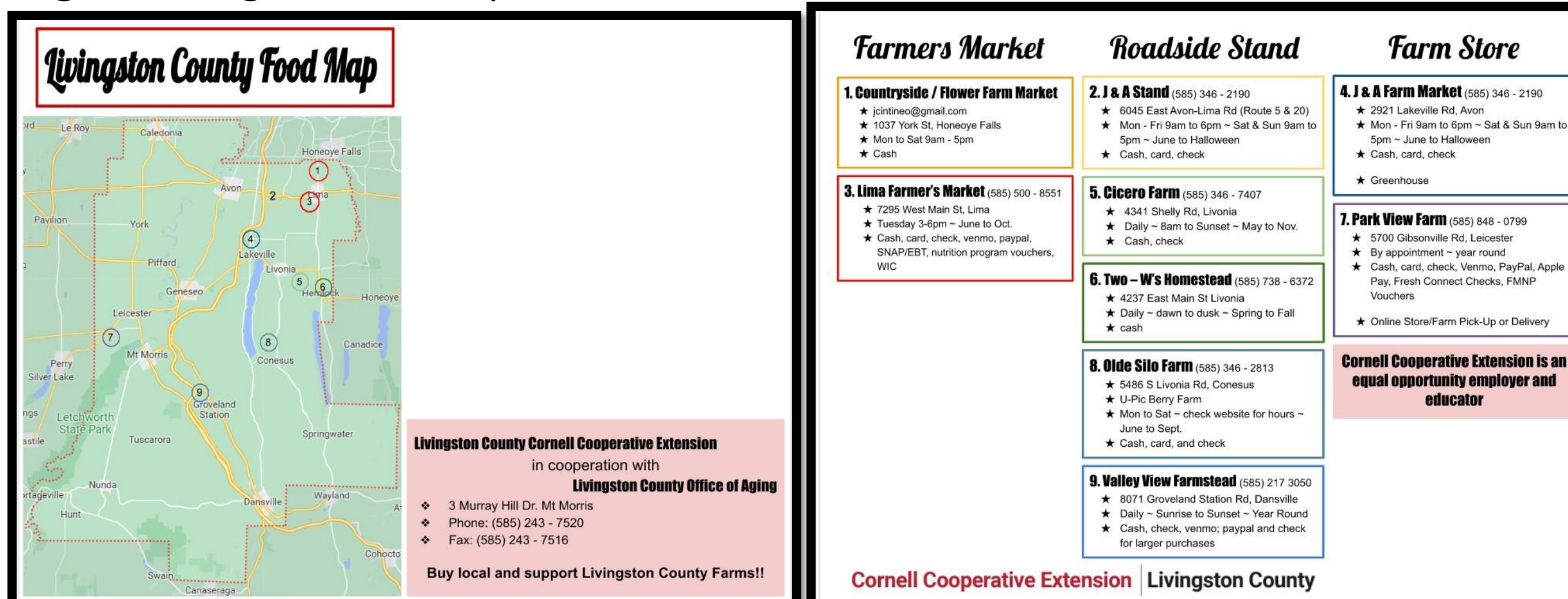
| Pre – Questions / Response | # of Participants Making Reponses (n) |
|---|---------------------------------------|
| <i>Would a food map be useful?</i> | |
| Yes | 15 |
| No | 0 |
| <i>How often do you shop at farmer's markets?</i> | |
| Never | 2 |
| Once per week | 9 |
| Once per month | 3 |
| Everyday | 1 |

Figure 2. Participant Responses to the Post-Questions about Food Map Tool

| Post – Questions / Response | # of Participants Making Reponses (n) |
|--|---------------------------------------|
| <i>After seeing this tool, did you learn anything new?</i> | |
| Yes | 13 (86.7%) |
| No | 2 (13%) |
| <i>In your opinion, how useful is this tool?</i> | |
| Not Useful | 2 (13%) |
| Somewhat Useful | 3 (20%) |
| Useful | 7 (46.7%) |
| Very Useful | 3 (20%) |
| <i>In your opinion, does this tool provide enough information?</i> | |
| Yes | 13 (86.7%) |
| No | 2 (13%) |
| <i>In your opinion, does this tool clearly communicate the necessary information?</i> | |
| Yes | 9 (60%) |
| No | 6 (40%) |
| <i>What would you change about the tool?*</i> | |
| Add more locations | 4 (26.7%) |
| Add what types of products are sold | 4 (26.7%) |
| Format the hours of operations more clearly | 3 (20%) |
| Make numbers on the map larger | 1 (6.8%) |
| <i>What other information would be helpful for understanding where and how to purchase locally available produce?*</i> | |
| None | 8 (53.3%) |
| Add more locations that accept SNAP / FMNP Vouchers | 3 (20%) |
| Add route numbers / more specific directions | 2 (13%) |
| Add what types of products are sold | 2 (13%) |
| <i>During market season, how likely are you to visit the listed farm stands and/or markets?</i> | |
| Not Likely | 5 (30%) |
| Somewhat Likely | 2 (13%) |
| Likely | 8 (53.3%) |
| Very Likely | 0 (0%) |

*open-ended question with most common emerging themes and their frequency

Figure 3. Original Food Map Tool



REFERENCES

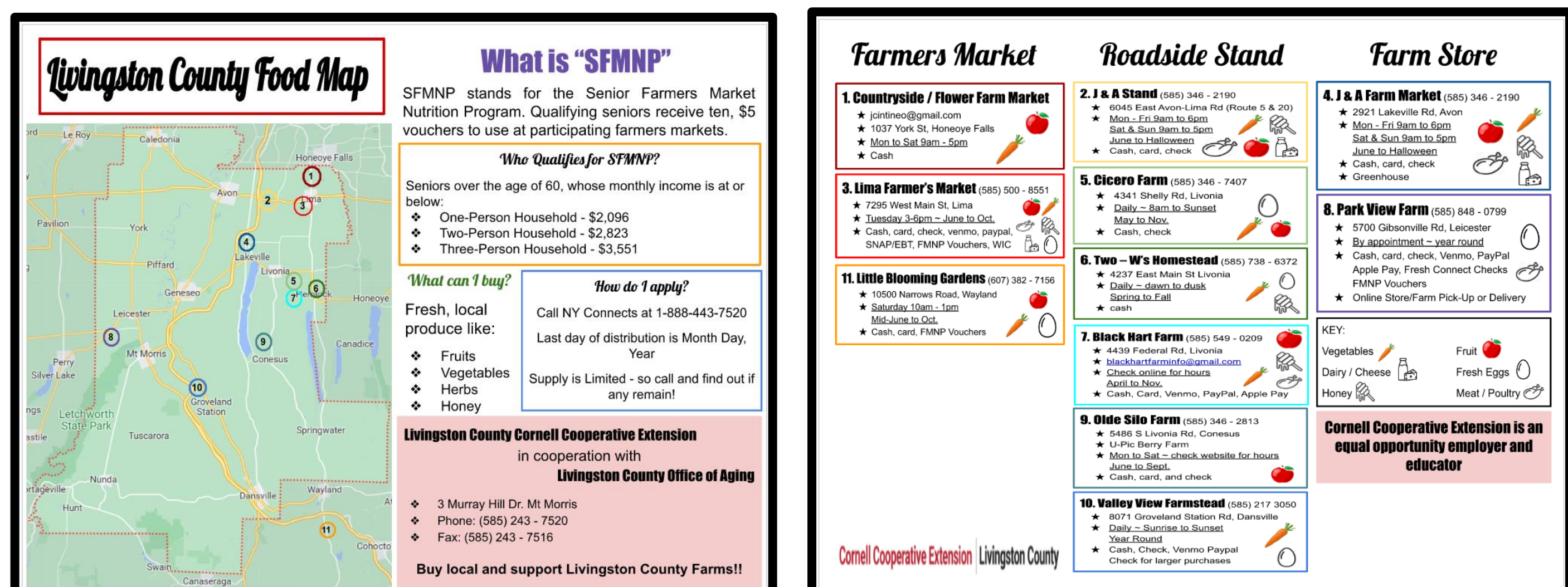
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RESULTS

Figure 4. Emerging Themes and Quotes from Food Map Tool Focus Group Participants

| Emerging Theme | Example Quote(s) |
|---|--|
| Expanding Awareness | <i>Would a food map be useful?</i> "Help open-up options" "Helps people familiarize themselves with the area" "Introduces places that people may not have known existed" |
| Teaching Something New | <i>After seeing this tool, did you learn anything new?</i> "I didn't know there were so many farms and roadside stands" "I learned about new locations" |
| A Useful Tool but May Need Improvements | <i>In your opinion, how useful is this tool?</i> "Not very useful because the locations are too far away" "This will be very helpful because it shows where the locations are" "It's helpful to know what types of payment methods they accept" |
| | <i>In your opinion, does this tool provide enough information?</i> "Yes, it's helpful to know what pay they accept" "I don't know what types of stuff they sell" "Yes, I know the hours of operation, their location, and how to contact them" |
| | <i>In your opinion, does this tool clearly communicate the necessary information?</i> "The directions need to be clearer" "I can't see the hours of operation well" "It's difficult to see the numbers on the map" |
| Ways to Improve the Food Map Tool | <i>What would you change about the tool?</i> "Make the numbers on the map bigger" "Include route numbers" "Add locations outside of Livingston County" "Include what types of products are sold" "Add more locations" "Hard to see the hours of operation, make them clearer" |
| | <i>What other information would be helpful for understanding where and how to purchase locally available produce?</i> "Include route numbers" "I want to know what products are sold" "I want information about the Farmer's Market Nutrition Program Vouchers" "How do I know if they accept the food vouchers or not?" |

Figure 5. Updated Food Map Tool



CONCLUSION

The use of food map tools to increase knowledge of local food sources is a growing practice. This study shows evidence that the food map tool, with revisions, can be an effective tool to increase knowledge of local food sources and increase utilization of the tool. While food map tools are becoming more common and useful, there is still room for much improvement. Determining what the residents are looking for and what they want helps individualize the food map tool and gives researchers a better idea of what the food map tool should look like and provide.