Friends of WNC Farmer's Markets Membership and Farming Class Programs: A Social Business

Hillary Murphy
Health and Wellness Promotion
The University of North Carolina at Asheville
One University Heights
Asheville, North Carolina 28804 USA

Faculty Advisor: Dr. Ameena Batada

Abstract

In 2009 the Behavioral Risk Factor Surveillance System issued results on fruit and vegetable intake in North Carolina, reporting that 30% of individuals in Buncombe County consumed less than three servings of fruits and vegetables per day, with only 32% meeting the Recommended Daily Intake of five or more. Despite the major role Buncombe County's farms and markets play in food production for the United States, there are still barriers to accessing healthy, unprocessed foods for local individuals and there is a need for creative solutions for supporting farm-to-table programs. The current research project posed the question "What type of social business model may reduce economic barriers to access to healthy foods, specifically at local tailgate markets?" As of June 2012, in Buncombe County North Carolina, 39,454 individuals participated in the Food and Nutrition Services (FNS), established to help eligible low-income household families purchase the foods they need for a nutritionally adequate diet. Despite assistance from FNS, access to local food options like farmer's markets is limited when markets are not equipped to accept Electronic Benefits Transfer (EBT) provided by the FNS program. Access to these local food sources has potential to increase fruit and vegetable intake of Buncombe county individuals participating in FNS, but first a sustainable advantageous model of EBT use at farmer's markets is needed. In order to determine a viable model, this project utilized a literature review and social and market analyses to determine an appropriate solution. The research results suggest that implementation of a Friends of Western North Carolina Markets Membership and Farming Class Programs would provide financial support for EBT programs at farmers markets throughout the Asheville area. Memberships are purchased in return for benefits such as program bumper stickers, recognition in the local paper, and handouts about local farmers. Farming classes, tailored directly toward planting in Western North Carolina, would be available online with an associated downloading fee or one-time cost for full access to the video library. The profits from both of these programs would be used to support the implementation of EBT systems.

1. Introduction

In the United States, chronic heart disease is the leading cause of death, with 597,689 deaths in 2010 ². Studies show there is a strong association between low vegetable and fruit consumption and higher risk of chronic heart disease. The Health Professionals' Follow-up Study and Nurses' Health Study found that participants who consumed eight or more servings of fruits and vegetables daily had a "risk of developing chronic heart disease over the next 8-14 years that was 20% lower than those who consumed less than three servings daily" ³. The World Health Organization also found that low intake of fruits and vegetables is estimated to cause about 31% of ischemic heart disease worldwide ⁴. With greater access to fresh fruits and vegetables, individuals have a greater opportunity to increase their fruit and vegetable consumption and thus lower their risk for chronic disease.

Although Western North Carolina plays a major role in food production in the United States ⁵, in 2011 the Food Security Council found that one in six individuals in the area experienced food insecurity ⁶. Despite the wealth of organizations dedicated to food security in the Buncombe County area, factors such as high prices for healthy food, limited public awareness of the necessity and accessibility of affordable healthy food, and availability of local foods continue to negatively impact the nutritional health of low-income families ⁶. Furthermore, currently there are over 40 Farmers' Markets in the Asheville area, offering fresh, local fruits and vegetables. At a surface level, Buncombe County would appear to support a healthy food environment, yet 68% of residents still do not receive the Recommended Daily Intake of 5 or more fruits and vegetables per day ¹.

In 1969 the Food and Nutrition Services (FNS) agency was established to help combat factors preventing individuals from obtaining adequate nutrition ⁷, and as of June 2012, 39,454 individuals in Buncombe County participated in FNS ⁸. Individuals participating in FNS are given credit on an Electronic Benefits Transfer (EBT) card that can be used to purchase food items at retail locations equipped to accept EBT. Addressing food environment changes that would benefit low-income individuals using EBT would positively impact a population already at high risk for chronic health conditions.

While farmer's markets offer a great option for fresh healthy foods, access for low-income individuals is limited when markets are not equipped to accept EBT. For EBT to be available at markets, professionally trained staff, site-specific equipment, and general administration are required. Without funding, there is an unfulfilled need within Western North Carolina Farmer's markets to create a sustainable, advantageous model of EBT use. A new model/system for supporting EBT machine availability at markets would yield an increase in healthy food options to under-resourced populations and thereby contribute toward increases in fruit and vegetable consumption and to achieving overall health parity.

Thus, researchers posed the current research question: How can a social business model reduce economic barriers to access to healthy foods, specifically at local tailgate markets? Since Nobel Peace Prize winner, Muhammad Yunus coined the term in his books Creating a world without poverty—Social Business and the future of capitalism and Building Social Business and The new kind of capitalism that serves humanity's most pressing needs, using a social business to address social issues has shown to be a sustainable option of intervention. Unlike a nonprofit, a social business does acquire revenue, but that revenue is reinvested into the business to further social benefit 9. Revenue is generated through offering a good or service, the stakeholders and employees often being those directly affected by the social issue. The overall goal is to promote social welfare in a sustainable manner.

2. Methods

The research methods for this study involved a multi-step process that took place from May to September 2012, and included a preliminary literature review on approaches for sustaining EBT at markets and innovative social business models. Analysis involved selecting a social business model and then additional research, reviewing secondary data and conducting analyses to support the social business model were undertaken. The following sections describe these steps in more detail.

2.1 Literature Review

To begin, a literature review on current approaches for sustaining EBT at markets was undertaken. Farmer's market EBT programs were researched in cities such as Seattle, Missoula, Portland, and New York City where there are growing local food movements, similar to the Asheville area. The advantages and disadvantages of each program were assessed to establish the most effective way to support market EBT programs. Social businesses and other means to financially support community initiatives outside of farmer's markets were also researched. Local food access and trends in Buncombe County were researched using state and federal statistics, as well as local organization studies. Gathering this information from local sources allowed for a more in-depth understanding of local issues regarding health, as these organizations are highly involved in the Buncombe community. Health issues involved with low fruit and vegetable intake were also researched to better understand the possible implications of limited food access.

2.2 Analysis and Program Development

A partnership with the Appalachian Sustainable Agriculture Project (ASAP) of Asheville was established, due to their strong involvement in the community and thus insight into pertinent social issues to promoting health in Buncombe County. ASAP's mission is to promote local food, strong farms, and healthy communities through farmer's markets, promotional programs such as their annual farm tours, and bringing local food knowledge to schools in Buncombe County with their growing minds program. Currently at three of Buncombe County's farmer's markets, ASAP has been supporting an EBT program reliant on grants and volunteer help. With their records, the cost for an EBT program that replaces volunteers with a specific market manager, hired from the community, was ascertained. Since ASAP runs one of the few local markets with access to EBT, the issue of a financially sustainable model of EBT use at farmer's markets was discussed as a central focus, especially since this is an area with which the organization could use assistance.

After speaking with ASAP, discussions were held with market attendees and two vendors from local farms. These key informants, knowledge of social business models, and the literature review exploration in to strategies utilized to generate financial support for an initiative led to the idea for a two-part social business model. To identify the most important intervention, an impact changeability analysis was used, weighing what is most feasible with what is most important. Factors for implementation such as resources and time required were compared with the number of people possibly benefiting from the program and the positive social impacts to measure whether the intervention would be effective.

2.3 Program Feasibility

Once a possible model was identified, the researcher conducted research to estimate the potential costs and the revenue generated by the program. To estimate the number of program participants, ASAP research on market attendance over seven markets was consulted. The initial target audience was weekly attendees, as they would be most aware of the programs through on-site promotional materials. Weekly attendees have also shown commitment to the markets through their ability to attend consistently that expresses an investment in the local food movement and success of the markets. While EBT programs would most certainly benefit individuals on EBT, they would also benefit the longevity of markets, bringing in new customers and tapping a market that currently faces barriers to participation.

3. Results

3.1 Literature Review

Many studies have shown a connection between chronic illnesses, especially Cardiovascular Disease, and fruit and vegetable intake. In a study from the Oxford Journal's European Heart Journal, researchers found that individuals who consume at least eight servings of fruits and vegetables each day had a 22% lower risk of fatal heart disease ²⁴. While the United States as a whole has increasingly high rates of chronic illness like heart disease, low-income populations have a "disproportionate burden of death and disability from cardiovascular disease ²⁵." For these populations at high risk for chronic illness, access to fruits and vegetables is even more essential. Creating an environment in which EBT benefits can be used at any local farmer's market would allow for low-income individuals to purchase fresh, local fruits and vegetables and thus potentially increase intake and decrease risk of chronic illness.

In an essential study conducted by ASAP, barriers to participation of low-income individuals in local farmer's markets were explored. The most common included convenience of markets, pricing concerns, cultural barriers, low consumer awareness, and market inability to accept FNS benefits or EBT ²². A successful intervention was one that would aid in removing multiple of these barriers with the involved programs. While effective means of addressing the first four barriers were identified in the study, the components of implementing EBT programs at markets were outlined, yet options for funding were not. Funding was clearly a factor that needed further development.

For each of the cities researched, there were strong EBT market programs offering support for clients, models and resources for other markets to start EBT programs, and effective promotion with advertising and other programs to bring in EBT participants. These programs clearly benefit the community and individuals' access to local foods; yet funding resources to sustain the programs are limited. Many EBT programs, markets cover costs using grants, volunteer help, fees associated with using the terminals, or farmer fees for participating in the program. In cities including Seattle ¹², Portland ¹³, Missoula ¹⁴, New York City ¹⁵, and parts of California ¹⁶ and Vermont ¹⁷, funding for EBT systems at markets rely on grants, donations or governmental assistance, including that of city councils and local Health Department sectors. While this is effective when funding is available, it is important to explore more sustainable options rather than utilizing less reliable sources of funding or putting the burden on the farmers and those using the terminals.

One means of creating sustainable funding is through a social business. Social business concepts were explored through Muhammad Yunus's revolutionary Grameen Bank. The purpose of the organization is to bring healthy nutrition to a nutritionally deprived population in Bangladesh, India and also to alleviate poverty by employing women in Bangladesh to produce the product. The business offers a product that provides needed nutrition and jobs for individuals experiencing poverty, meanwhile generating revenue to support the business through sale of the nutritional product, a yoghurt called Shokti Doi, containing essential nutrients. The yoghurt is sold for around the equivalent of \$0.07, as no profit beyond covering costs to maintain the business is sought ¹⁸. In this business model there is no reliance on grants or funding that are only allotted for a specific period of time and all benefits go toward addressing the social issue. It is a model that shows ethical responsibility and harnesses the inherent desire of individuals to improve their lives and strength of a community to work against the ills of poverty¹⁹.

The community toolbox created by the University of Kansas outlined an interesting membership model ²⁰. This tool provides details of a market membership program, what one looks like, how to target members, and how to establish and maintain memberships. As explained, membership programs offer an "insider" status ²⁰, as well as incentives such as products, privileges, or advantageous not available for non-members. Unlike typical memberships, rather than creating a sense of insiders and outsiders, the market membership utilized a payment plan for members that allowed any individual, despite income level, to participate. This was aimed at creating a sense of a collective conscious community, rather than promoting the idea of more financially privileged market clients having the opportunity of participating in a program others could not afford. This sense of community was a main motivating factor in using a market membership as a means for generating revenue. The local food culture is one that relies heavily on supporting one another, the client supporting the farmers in making their living, and the farmers supporting the clients' health and relationship to food. Promoting this sense of togetherness and inviting all community members to participate is an essential part of breaking down barriers that prevent certain individuals from participating in farmer's markets

Farm School NYC also involves interesting farming classes. Farm School's mission is to train NYC residents to urban agriculture to build self-reliance and inspire positive local action around food access and social and racial justice ²¹. Students learn urban agriculture growing techniques and receive a food-based education while attending a certificate or individual enrollment program offered for a sliding scale fee based on household income and size. While the classroom interaction offered with Farm School NYC has many benefits, the factor of accessibility in more rural Western North Carolina needed to be addressed. As this is already the barrier many cited to local foods, brining farming classes to the participants was essential. While not every household has computer access, the ability to get to a community center, public library, or school is much more likely than one central classroom location. Scheduling regular time for class meetings would also create a barrier for individuals who work long hours and/or have dependents in the home. The option to download recorded farming lessons would allow for convenience with accessing the information as well as time. The important factor in this program was the empowerment it has the capacity to instill in those learning planting techniques. A social business has the responsibility to not only supply resources to help address a social issue but also to empower those affected to address the issue with their own knowledge, skill, and new opportunities.

The role of farming in Western North Carolina was also explored. In 2002 North Carolina was ranked 8th nationally in farm income, with a total of 53,390 farms across the state ²³. Despite difficulties associated with farming mountainous lands, Western North Carolina has a long history of farming, with close to a quarter of North Carolina's farms. The Western North Carolina climate supports a long growing season and despite the struggles that today's farmers face with making a living in a globalized food economy, there is great support from non-profits, university-based organizations, and local residents for the local food movement ²³. In 2004, Asheville area residents participating in an ASAP survey reported spending 27% of their monthly expenditures on locally grown food ²³. It was also found that of individuals surveyed, 75% of consumer respondents preferred to purchase locally grown food, the motivation to support local farmers and economy and promote individual and environmental health ²³.

3.2 Analysis and Program Development

After reviewing the literature on existing and possible models for sustaining EBT programs and assessing the situation in Western North Carolina, options were prioritized according to which models aligned with local goals and met the definition of a social business that would not only generate revenue but would support connections between people, food, and the land. Different options were discussed with stakeholders and a two-pronged model was ultimately identified. Table 1 contains a breakdown of the main components of the program.

3.2.1 membership program

The WNC Farmer's Market Membership program involves paying a seasonal fee for benefits such as a Friend's of WNC Markets bumper sticker, get-to-know your farmer fact sheets, and member names in an advertisement in the local paper, the Mountain Xpress. The benefits were developed to promote a sense of community and recognition among members. The bumper sticker logo was developed by a local artist and printed in color on specialized sticker paper. The logo can be seen in figure 1. The farmer fact sheets would feature different farms throughout the season, conveying information about the farm and the farmers themselves. Memberships would be offered on a sliding scale based on what clients are able to pay. Unlike some sliding scale programs, there will not be an evaluation of what an individual is able to pay, instead relying on what the client feels necessary. As more revenue is generated by the social business the benefits would be expanded to include events like farm tours and seasonal membership dinners. The membership program would pilot the first year at the seven markets involved in ASAP's research; North Asheville Tailgate Market, French Broad Food Co-op Saturday Market, French Broad Food Co-op Wednesday Market, Tailgate Market at La Catarina Restaurant, West Asheville Tailgate Market, Madison County Tailgate Market, and Black Mountain Tailgate Market ¹⁰ Details for the membership benefits were discussed in a focus group of student with a wide range in age, experience, and connection to local food systems. The desire for recognition and sense of community where emphasized as most important factors for benefits. A breakdown of market membership benefits can be seen in table 1.



Figure 1. friends of WNC markets logo

3.2.2 farming class video program

The Farming Class Video program would offer downloadable farming classes taught by local WNC farmers. These videos would cater directly to individuals planting in Western North Carolina and lessons would include information about issues commonly seen when planting in Western North Carolina, when and what to plant for local soil and weather patterns, and how to complete tasks like picking and pruning. Each video would address one topic and discuss the tools necessary and skills for success. Videos would be offered on Amazon for \$2.00 per download or to Buncombe County schools for \$100 for complete library access. Downloads would be available for any interested individuals, whether associated with local markets or not. Discussions with farming vendors at the North Asheville Tailgate Market established that farming classes would be taught by local farmers on a volunteer basis.

Table 1. program components

Market Memberships	Farming Class Videos	
Market-goers join a community interested in	Local farmers record short videos on	
supporting the market and each other	gardening/farming that may be downloaded by	
Members receive:	individuals and groups	
 "Friends of WNC Markets" bumper sticker 	• \$2.00/download videos addressing planting in WNC	
 "Get-to-Know Your Farmer fact sheet 	• \$100 for school subscription to full library access	
 mention in Mountain Xpress advertisement 		

Revenue from both of these programs would make them self sustaining and provide support for EBT programs at Buncombe county markets. Details for both programs were discussed in a focus group of students with a wide range in age, experience, and connection to local food systems.

3.3 Program Feasibility

Research and analysis was carried out to determine the program's feasibility, including the costs and expenses associated with the program, promotion, and EBT at markets. This section of the paper describes the steps and calculations to support the various elements of the program. Table 2. contains a summary of the program costs and revenues.

3.3.1 cost of market ebt

According to ASAP's records, the cost to run EBT at one of the local Farmer's markets for a year is \$5,000 for the first season. The EBT machine and token cost is \$1,600 and transaction fees, tracked by ASAP, are \$522.88. To hire market manager for 9 hours per week for 36 weeks, the cost is \$2,877.12. These costs are currently covered by ASAP, grants and volunteers, thus showing the expressed need for a financially sustainable solution that could be met with social business model approach. In subsequent years, the cost of the EBT at a market is \$3,400 as the equipment is no longer an expense.

3.3.2 membership program

The cost of the membership program was estimated by consulting printing services for the cost of printing bumper stickers and farmer fact sheets, and contacting the local newspaper, the Mountain Xpress for advertisement prices. The number of benefits to prepare was based on the number of weekly attendees, as assessed by ASAP over seven markets. For the farming class program, two local farmers agreed to volunteer their time to teach classes and UNC Asheville committed to donating the required equipment and website development. The cost for downloading services was estimate using Amazon downloadable video fees. The number of downloads expected was based on an ASAP survey that assessed market attendees barriers to local food. The percent of respondents who cited "Access and Accessibility" was applied to the number of weekly attendees. The 40 schools in Buncombe County were also included as a target, with downloading of the entire library available for programs involving keeping students healthy. For both programs promotional materials would be created by ASAP and costs would be covered by the social business.

The total costs of the market membership benefits resulted in \$1,739.30. For the first year, the target audience for this program was weekly market attendees. At the 7 markets in our first year focus, ASAP found that in 2004, 2,000 individuals attended in one week with 46.1% attending on a weekly basis ¹⁰. This means that our target audience consisted of 922 potential members.

For the revenue from the membership program, research from ASAP on the amount of money market weekly market attendees spent per week was examined. The survey, completed by ASAP in 2004, categorized weekly market attendees into groups spending on average \$0-5 per week, \$6-\$10, and so on. The percentages found were applied to the amount one could pay per season, thus if an individual could afford to spend on average \$6-\$10 per week, it was assumed they could afford this per season for a membership.

For the first season, the number membership benefits to prepare was based on the 922 weekly attendees. To print 1,000 bumper stickers and farmer fact sheets and pay for an ad in the local paper, the Mountain Xpress, the cost was \$1,499.30. These costs were assessed using an online print program and consulting the local paper, the Mountain Xpress. For advertising, \$240.00 would be dedicated to ASAP for printing and design costs.

To ascertain the market membership revenue ASAP's 2004 survey was used. Conducted with 666 people, findings showed that 14.9% spent on average \$0-5, 27.9% spent \$6-10, 17.0% spent \$11-15, 18.5% spent \$16-20, 15.8 spent \$21-30, 3.0% spent \$31-40, and finally 3.0% spent greater than \$40¹⁰. These percentages were applied to the 922 individuals in our year one target group, believing that the 27.9% of individuals who spent \$0-\$5 could spend \$0-\$5 for a seasonal membership and so on. The estimated market membership revenue was \$16,346.

3.3.3 farming classes

Revenue for the farming class program was calculated based on weekly market attendees who cited "Access and Accessibility" as a primary barrier to local foods in a survey conducted by ASAP. We assumed that these individuals would be most likely to download videos, as backyard farming could be a solution to the accessibility barrier. Participation of the 40 public schools in Buncombe County was also considered in the farming class revenue, due to availability of funds for programs promoting this type of knowledge. For the year 2012, Buncombe county school directed 11% of the yearly budget to keeping the students healthy, active and culturally aware, which includes knowledge of local foods and local food systems ¹¹.

The total cost of the farming class program resulted in \$1,056.24. With filming and equipment, website creation, and class materials being donated by UNC Asheville and local farmers the two costs associated were advertising and downloading service fees. Again, \$240.00 would be directed to ASAP for advertising, and for the use of Amazon downloading services the cost was 2.9% of total earnings, plus \$0.30 per download, resulting in a cost of \$816.24. To estimate the farming class revenue ASAP's survey on primary barriers to local food was used. Of 247 respondents, 24.7% cited access and accessibility as their main barrier ¹⁰. These numbers were applied to the 922 weekly attendees, resulting in 228 individuals in the target audience, with 10 available videos for \$2.00 a piece. The resulting revenue would be \$4,560.

With videos offered to the 40 Buncombe county public schools, at \$100 per school for access to the total video library. The resulting revenue was estimated as \$4,000, with the overall revenue for the farming class program estimated at \$8,560.

3.3.4 Start-Up Costs

Start up costs for the programs would be covered by the community transformation grant offered by the Centers for Disease Control and Prevention to non-profit organizations that align with objectives of the health initiative "Healthy North Carolina 2020". The market EBT program is directly in line with the goal of encouraging healthy eating and increasing the availability of Farmer's Market foods.

The overall expense for the market membership and farming class programs and EBT programs in the first year was \$27,795.54. The total revenue from the market membership, farming class downloads and Community Transformation grant was estimated as \$29,905.76. After expenses were covered there would be a net revenue of \$2,110.22, which would be put back in the program to support more EBT programs and expand the market membership benefits.

Table 2. Program Expenses And Revenues

	Amount in \$
EXPENSES	
EBT Program	
Machine and tokens- Start-up	1,600.00
Market Manager -\$8.88/hour, 9 hours per week, 36 weeks	2,877.12
Transaction Fees	522.88
Total EBT Program across 5 markets (\$5,000x5)	25,000.00
Market Membership Program	
Advertising and database management – Some support from ASAP	240.00
Bumper Sticker, Mountain Xpress ad, "Get to Know Your Farmers" fact sheet	1,499.30
Total Market Membership Program	1,739.30
Farming Classes Program	
Marketing materials – Some support from ASAP	240.00
Film equipment, filming/editing videos, online materials/video website	
creation -Donated by UNC Asheville and ASAP	0.00
Class materials, farmer time - Donated by farmers	0.00
Download service fee (2.9% + \$0.30 per download)	816.24
Total Farming Classes Program	1,056.24
TOTAL EXPENSES	27,795.54
REVENUES	
Market Membership Program – calculation based on sliding scale and	16,346.00
distribution of customers	
Farming Classes Program	
School access memberships and individual downloads	8,560.00
Possible Community Transformation Grant – Seed money	5,000.00
Total REVENUES	29,906.00
NET REVENUE	2,110.46

4. Conclusion

The Market Membership/Farming Classes social business model would sustainably support the current EBT programs in Asheville and provide funds to expand the programs in the Asheville area. With this financing for EBT, access to local fruits and vegetables will be increased for individuals enrolled in the EBT program. With greater access, there is a greater ability for individuals to increase their fruit and vegetable intake and thus reduce their risk for chronic diseases. Using a social business model to support financially sustainable EBT programs at farmer's markets will help increase health parity in Buncombe County.

5. Discussion

It is possible to apply a social business model to reduce economic barriers to access to healthy foods, specifically at local tailgate markets. With the two part model including a market membership and downloadable farming class program, revenue in the first year has the capacity to support EBT programs at 7 tailgate farmer's markets with

\$2,110.22 net revenue after covering the costs of the membership and farming class programs. This money could be used to expand the EBT program to more markets in following years or expand the membership program benefits. After the first year, EBT programs cost \$3,400 to run, as tokens and machines have already been purchased, and thus the net revenue put back into the program would increase, again creating support for more EBT programs and expansion of the membership program. With an increase in the availability of EBT programs at markets, there would be an increase in access to local, healthy foods for individuals enrolled in EBT.

With this increased access, there is a strong probability of increased individual fruit and vegetable consumption and thus reducing risk for chronic heart disease. In a study published in the *Oxford Journal*, researchers found that leafy green vegetables, which are one of the most abundant vegetables offered almost year-round at Buncombe County farmer's markets, are "most strongly associated with a reduction in risk of cardiovascular disease, an increment of one serving associated with an 11% lower risk of cardiovascular disease" ²⁶. The foods supplied by farmer's markets also have the benefit of being whole and not traveling long distances to the consumer. With longer travel, farms must pick fruits and vegetables earlier to prevent over ripening and spoilage, and are often processed to promote longer shelf lives ²⁷. Local farmer's markets provide food that is picked within a day or two and remain unprocessed, which, as studies have found, contributes to greater cardio-protective effects of components such as vitamin C, folate, potassium, fiber, and other phytochemicals. While these micronutrients can be supplemented, in this form they are not seen to significantly decrease cardiovascular disease risk like studies have shown with whole fruits and vegetables. ³

One factor that requires more exploration for the EBT programs at local tailgate markets is effective advertising. For the market membership and farming class programs, the first year focuses on involving weekly market attendees, as they are most likely to be exposed to marketing materials. But, as tailgate markets are currently not a common venue in which individuals can use EBT, individuals on EBT do not frequently participate. Marketing outside of the tailgate markets needs to be created, using factors such as language and visuals that are appropriate to the audience.

The Ecology Center of California offers a handbook outlining strategies for implementing EBT at local farmer's markets. In the section on Promotion Outside the Market, they suggest coupon giveaways to encourage participation, flyers, posters, a market website, radio and television advertisements, newspaper articles, and print ads ¹⁶. The No Kid Hungry program also suggests advertising on local buses and at transportation stations, at food banks, food pantries, and soup kitchens, schools and child care centers, and public aid offices and WIC clinics ²⁸. It is important that these materials reach the areas of Buncombe County, such as Section 8 housing neighborhoods, in which individuals with lower market access may be less aware of EBT programs at local markets. To do this, effective assessment of media consumption is extremely important.

Offering incentives such as the Health Bucks program, modeled at NYC Farmer's Market programs is another avenue for increasing participation of individuals using EBT at markets. For every \$5 spent using EBT at local farmer's markets, the individual receives one \$2 Health Buck coupon, to be used at the market ¹⁵. This program helps to offset the possible higher cost of produce at markets in comparison to large chain grocery stores and break the financial barriers many individuals perceive to local foods. EBT programs are only successful in increasing healthy food access if individuals on EBT are actually aware and inclined to participate in markets.

At the time of writing this paper, relevant stakeholders are discussing the options for implementing this social business locally. With implementation and piloting, the market membership and farming class programs could be a model to support EBT programs at other markets around the state and nation.

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7. References

1. North Carolina State Center for Health Statistics ,"2009 BRFSS Survey Results: Buncombe County Fruits and Vegetables: Fruit and Vegetable Consumption per day", http://www.schs.state.nc.us/schs/brfss/2009/bunc/_frtindx. html.

- 2. Centers for Disease Control, "Leading Causes of Death." Centers for Disease Control and Prevention (2010), http://www.cdc.gov/nchs/fastats/lcod.htm.
- 3. Jane Higdon, "Micronutrient Information Center: Fruits and Vegetables." *Linus Pauling Institute*. Oregon State University, 2005: http://lpi.oregonstate.edu/infocenter/foods/fruitveg/.
 - 4. World Health Oganization, "The World Health Report 2002: Reducing risks, promoting healthy life." Geneva, World Health Organization (2002), http://www.who.int/whr/2002/en/.
- 5."Agri-industry and Food Processing." North Carolina's Southeast, http://www.ncse.org/industry-clusters/agriculture-food-processing.
- 6. "Regional Food Security". Asheville-Buncombe Food Security (2011), http://ashevillefoodsecurity.wordpress.com/about/.
- 7. USDA, "History of FNS." USDA Food and Nutrition Service, http://www.fns.usda.gov/sites/default/files/HISTORY %20OF%20FNS.pdf.
- 8. "FNS Caseload Data." North Carolina Division of Social Services: Program Statistics and Reviews, http://www.ncdhhs.gov/dss/stats/docs/FNSCA/FNSCA06-12.pdf.
 - 9. "About Social Business" Social Business.org, http://www.socialbusiness.org/about-social-business.
- 10.Richard L. Hoffman, "A Market Analysis of the Tailgate Farmers Markets of Buncombe and Madison County," *Appalachian Sustainable Agricultural Project* (2005, Dec.).
- 11. "2011-2012 Buncombe County Schools Annual Report." Buncombe County Schools, http://www.buncombe.k12.nc.us/cms/lib5/NC01000308/Centricity/Domain/4/BCS%202011-12%20Annual%20Report.pdf.
- 12. "EBT, Senior and WIC Farmers Market Nutrition Program Coupons." Neighborhood Farmers Market Alliance. (2012), http://www.seattlefarmersmarkets.org/markets/ebt-senior-and-wic-fmnp-vouchers.
- 13. "Snap to your Farmer's Market" The City of Portland Oregon, http://www.portlandoregon.gov/bps/article/310605.
- 14. "Farmers Market EBT Program." Community Food Agriculture Coalition of Missoula County, http://www.missoulacfac.org/.
 - 15. "Health Bucks and EBT" Grow NYC, http://www.grownyc.org/greenmarket/ebt/healthbucks.
- 16. "Promoting Nutrition to SNAP Participants at California Farmer's markets." Ecology Center (2010, Sept.), http://www.ecologycenter.org/ebt/.
- 17. "Farmers' Market Resources." Northeast Organic Farming Association of Vermont, http://nofavt.org/market-organic-food/farmers-markets/ebt.
- 18. "Grameen Danone- feeding the malnourished" Alphatech.sg, http://www.alphatech.sg/2011/03/creating-asocial-business-to-feed-the-malnourished/.
 - 19. "Who we are" Grameen Foundation, http://www.grameenfoundation.org/who-we-are.
- 20."The Community Tool Box" The University of Kansas,
- http://ctb.ku.edu/en/tablecontents/sub_section_main_1347.aspx.
 - 21. "About" Farm School NYC, http://justfood.org/farmschoolnyc.
- 22. "Farmers Markets for All: Exploring Barriers and Opportunities for Increasing Fresh Food Access by Connecting Low-Income Communities with Farmers Markets" *Appalachian Sustainable Agriculture Project* (2012), http://asapconnections.org/downloads/asap-farmers-markets-for-all-full-report.pdf.
- 23. Laura D. Kirby, Charlie Jackson, and Allison Perrett. "Growing Local: Expanding the Western North Carolina Food and Farm Economy" Appalachian Sustainable Agriculture Project
- (2007), http://as a p connections.org/downloads/growing-local-expanding-the-western-north-carolina-food-and-farm-economy-analysis.pdf.
- 24.Francesca L Crowe, Andrew W. Roddam, et al. Fruit and vegetable intake and mortality from ischaemic heart disease: results from the European Prospective Investigation into Cancer and Nutrition (EPIC)-Heart study. Oxford Journals: European Heart Journal (2011), http://eurheartj.oxfordjournals.org/content/early/2011/01/17/eurheartj.ehq465.full
- 25. CDC, "Eliminating Disparities in Cardiovascular Disease" CDC Office of Minority Health and Health Disparities, http://www.cdc.gov/omhd/amh/factsheets/cardio.htm.
- 26. Hsin-Chia Huang, Kaumudi J. Joshipura, et al. "Fruit and Vegetable Intake and Risk of Major Chronic Disease," *Journal of the National Cancer Institute*. 96.21. (2004): http://jnci.oxfordjournals.org/content/96/21/1577.long.

- 27.Anna Kahkoska, "The Local Food Solution," *Intertext Magazine University of Syracuse*, http://wrt-intertext.syr.edu/XVIII/pdfs/kahkoska.pdf.
 28. "Promote EBT Machines at Farmers' Markets." No Kid Hungry (2011), http://archive.nokidhungry.org/action/
- promote-ebt-machines-farmers-markets.