Plate it Up Kentucky Proud: Statewide Social Marketing Campaign to Increase Consumer Purchase and Consumption of Locally Grown Fruits and Vegetables

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The authors have no financial relationships with commercial interests relevant to the content of the educational activity.

Background

The majority of Americans fail to consume the recommended five to nine servings of fruits and vegetables per day for optimal health. According to the CDC State Indicator Report (2009) only 14% of adults in the United States eat two or more servings of fruits and vegetables per day. An important step to affect change in these appalling dietary patterns is to purchase more fruits and vegetables for daily consumption. Providing recipes and menu ideas for the purchase and preparation of simple and appetizing meals that feature fruits and vegetables is one strategy to encourage a healthier diet.

To promote positive change in fruit and vegetable intake and health it is important to increase the access, affordability, and quality of produce available for purchase. There is potential to use farmer’s markets as an affordable and locally accessible option for low income families to purchase fruits and vegetables, particularly in areas that have few sources of produce (Jilcott, Keyserling, Crawford, McGuirt, & Ammerman, 2011). To enhance the producer/consumer connection, the Kentucky Department of Agriculture created a branded promotion of local commodities through the Kentucky Proud label. Each producer can market their farm commodities under this broad marketing effort. Groceries and markets use the Kentucky Proud label to indicate products originating in Kentucky. Kentucky consumers recognize the logo and slogan as an indicator of food that has originated from the local food systems (Futamura, 2007).

Based upon these factors the need to motivate Kentuckians to increase purchase and preparation of fruits and vegetables and promote local food system access through a social marketing campaign was identified by Cooperative Extension agents and University of Kentucky Nutrition and Food Sciences faculty. The primary audience was identified as head of households who purchase and prepare meals for themselves and their families. The secondary audience was identified as the producer who markets their produce to the consumer at local venues. A social marketing process was chosen to provide the framework for the project through systemic, sequential development using data to develop a marketing mix strategy designed to resonate with the target audience and guide program decisions (Kotler & Lee, 2008).

Purpose

The purpose of the project was to:

1. Develop a social marketing campaign message to encourage increased fruit and vegetable consumption in the context of local food systems.
2. Develop a data-base of recipes featuring Kentucky specialty crops through testing and
development procedures in NFS 304, Experimental Foods, a required upper level course for
human nutrition and dietetics students.
3. Engage Cooperative Extension agents, consumers and producers to taste test culturally
appropriate recipes to Kentucky and make recipe decisions for database inclusion and
dissemination via direct, media and web-based programming.

**Overview of Plate it Up! Kentucky Proud Project**

One aspect of the University of Kentucky Cooperative Extension Service mission is to educate
local consumers about the benefits of a diet high in fruits and vegetables as a lifestyle practice that
promotes optimum health. In order to market Kentucky crops as a staple to a healthy lifestyle,
consumers must take advantage of access and availability of local specialty crops and adopt best
practices for selection, storage and food preparation. A social marketing campaign, *Plate it Up!*
*Kentucky Proud*, was designed using USDA specialty crop funds that integrated consumers,
educators, producers and agricultural marketing experts to leverage the Kentucky Proud brand and
focus on fruit and vegetable servings of the nationwide MyPlate campaign.

Consumers and extension agents collectively submit recipes featuring Kentucky specialty
crops two times annually to the *Plate it Up! Kentucky Proud* advisory committee. These recipes are
used as the starting point for students to adapt for nutrient density, taste and appeal. Adapted recipes
are tested using various food science-based tests and are evaluated by a taste panel of agents and
consumers. Recipes that are rated highly on the criteria of taste, appeal, ease of preparation,
reasonable cost and nutrient density are developed into recipe cards. The recipe cards include the
recipe, with nutrition information as well as guidelines for selection, storage, preparation and
preservation of the featured commodity(ies). Family and Consumer Sciences Extension agents
disseminate the recipe cards via farmer’s market demonstrations, cooking schools, health fairs and
other locations. Media scripts and demonstration outlines are developed for each recipe to market the
fruits and vegetables under the *Plate it Up! Kentucky Proud* graphic using social media, newspapers,
newsletters, radio and television.

*Plate it Up! Kentucky Proud Project’s Social Marketing Mix Strategy*

The four p’s of social marketing were considered as the *Plate it Up! Kentucky Proud* marketing
mix strategy was developed and implemented (Kotler & Lee, 2008). Project, price, place and
promotion decisions were based on formative evaluation of Extension agents’ interaction with and
reflection of local consumers’ preferences and Kentucky specialty crop availability. Each of these
aspects was carefully considered and re-evaluated through the formative evaluation stages of the
project.

*Product.* The product focus of this campaign was twofold: The purchase of locally grown
specialty crops and fresh fruit and vegetable consumption. The augmented products were the recipes
developed featuring Kentucky specialty crops and the recipe cards designed to engage the consumer
in considering potential positive food preparation/taste experiences.

*Price:* The cost of the product to our primary target group was the potential loss of
convenience due to the perception of increased time to prepare fresh produce and the perceived
price of access to locally grown products (i.e. gas to travel to farmers market, time involved in multiple shopping stops).

**Place:** The social marketing campaign venues evolved through Extension agents use of Facebook, newspapers, newsletters and face to face nutrition and food preparation programs and demonstrations at farmers markets. In many cases the agents incorporated taste-testing of recipe samples with the recipe card dissemination. Kentucky Department of Agriculture prominently featured the *Plate it Up! Kentucky Proud* recipes via their website and Facebook posts. Local magazines, such as *Kentucky Monthly*, have begun to regularly feature the recipes.

**Promotion:** The promotion has built upon the incorporation of the *Kentucky Proud* brand as a recognizable graphic to Kentuckians as a reminder to the consumer that the farm product has been locally grown. For the project message the Kentucky Proud graphic is centered in a plate with the reminder to “Plate it Up!” with local produce. The recipe cards, displays, incentives (i.e. Potholders, cloth grocery bags, basting brushes) have been designed with the *Plate it Up! Kentucky Proud* graphic. Recipes have been solicited, adapted and created that feature Kentucky specialty crops with specific attention to culturally relevant tastes, local availability, cost and ease of preparation. Recipe cards have been designed to attractively feature the focused Kentucky specialty product, recipe instructions, selection, storage and nutrition information.

**Evaluation Methods**

Evaluation of the social marketing campaign thus far has focused on the number of Kentucky specialty crop recipes tested and developed into recipe cards, reach of the recipe cards within the state and the impact of the recipe cards on consumer purchase, awareness and consumption of Kentucky specialty crops. Consumers (n=1048) were surveyed at farmers markets in ten Kentucky counties via a paper survey in Fall 2010 and Summer 2011. The consumers were offered one seasonal sample of a *Plate it Up! Kentucky Proud* recipe and then asked to participate in the study. The three recipes that were offered as samples were Apples and Sweet Potatoes, Asian Asparagus Salad and Cucumber, Corn and Bean Salsa. The survey questions asked about the shopper’s opinion of the sample/recipe, likelihood to purchase Kentucky Proud produce after trying the sample and receiving the recipe card, and the likelihood of making the recipe at home. Questions used a 10 point Likert-type scale.

**Results**

NFS 304 students have tested 100 recipes with 34 of those recipes fully developed and disseminated via recipe cards and web-based access (http://www.kyproud.com/recipes/). To date 121 FCS agents have disseminated approximately 617,100 recipe cards to consumers across the state. They report that the majority of this dissemination is via health fairs, nutrition displays, farmer’s market/grocery demonstrations and cooking schools within their local community.

Results of the consumer survey questions were:

<table>
<thead>
<tr>
<th>How likely were farmers market patrons to buy asparagus/cucumbers today or at a later date after receiving the recipe card and sample?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Today</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Asparagus</td>
</tr>
<tr>
<td>Cucumber</td>
</tr>
</tbody>
</table>

How likely were farmers’ market patrons to buy sweet potato/apples overall after
### Table 1

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweet Potato</td>
<td>2.45</td>
<td>(1.8)</td>
<td></td>
</tr>
<tr>
<td>Apple</td>
<td>2.34</td>
<td>(2.0)</td>
<td></td>
</tr>
</tbody>
</table>

### Which impacted trying the recipe at home – sampling or recipe card?

<table>
<thead>
<tr>
<th></th>
<th>Overall: 7.78 (2.51)</th>
<th>Cucumber: 8.07 (2.32)</th>
<th>Asparagus: 7.80 (2.48)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recipe card:</td>
<td>Overall: 7.86 (2.56)</td>
<td>Cucumber: 7.93 (2.51)</td>
<td>Asparagus: 7.74 (2.63)</td>
</tr>
</tbody>
</table>

### Discussion

Initial results of the *Plate it Up! Kentucky Proud* social marketing campaign indicates that the marketing mix strategy has been successful in the development of Kentucky specialty crop recipes for dissemination and distribution via Extension agents to consumers. The recipe cards and Facebook/web posts have had widespread distribution to consumers throughout all 120 counties within the state. Due to consumer interest multiple media outlets including statewide magazines and newspaper food editors have featured the recipes. The formative data results of farmers’ market sampling and recipe card distribution indicate that distributing the recipe cards at point of purchase does positively impact consumer buying of fruits and vegetables.

### References:


Plate It Up Kentucky Proud: Statewide Social Marketing Campaign to Increase Consumer Purchase and Consumption of Locally Grown Fruits and Vegetables

Background

- The majority of Americans fail to consume the recommended five to nine servings of fruits and vegetables per day for optimal health.
- According to the CDC State Indicator Report, only 14% of adults in the United States eat two or more servings of fruits and vegetables per day.
Potential Solution

- Provide recipes and menu ideas for the purchase and preparation of simple and appetizing meals that feature fruits and vegetables.
- Increase access, affordability and quality of produce available for purchase.
- Publicize farmers markets as an affordable and locally accessible option for low-income families in food deserts.

Cooperative Extension Service

Mission to bring research-based knowledge to local communities through local Extension Agents with Family and Consumer Sciences, Agriculture, Youth Development and Community Development expertise.

Program priorities are driven by local needs assessments.

Extension Professionals in each County
Response to Needs Assessment

Engage University of Kentucky Nutrition and Food Science faculty, students and Extension agents in a community-based student experiential learning project to create recipes focused on Kentucky food products to encourage good nutritious meal planning.

Project Purpose

1. Develop a data-base of recipes featuring Kentucky fruit, vegetable and herb crops through testing and development procedures in NFS 304, Experimental Foods
2. Engage Cooperative Extension agents, consumers and producers to taste test culturally appropriate recipes to Kentucky
3. Develop a social marketing campaign message to encourage increased fruit and vegetable consumption in the context of local food systems.

Purpose 1: Recipe Data Base

- Agents submit original recipes focusing on selected seasonal commodities
- NFS 304: Experimental Foods students select recipes for modification from recipe pool
- Modifications done in class to increase nutritional value
- Agent taste test panel critiques and compares each modified recipe to original
- Agents re-test recipe
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NFS 304

From classroom

To KY State Fair

Purpose 2. Recipe Educational Resource Development

Producers, consumers and Extension Agents critiqued recipes for inclusion in databases to be disseminated across the state.

Purpose 3. Social Marketing Campaign

- Identified by Cooperative Extension agents and University of Kentucky Nutrition and Food Sciences faculty as a tool for reaching project goals.

- Primary audience is head of household who purchases and prepares meals for themselves and their families.

- A social marketing process was chosen to provide the framework for the project through systemic, sequential development using data to develop a marketing mix strategy designed to resonate with the target audience and guide program decisions.
Social Marketing Mix Strategy

- Project
- Price
- Place
- Promotion

Kotler & Lee, 2008

Product

Two-fold approach:
1. The purchase of locally grown specialty crops and
2. Fresh fruit and vegetable consumption

Recipes Featuring Kentucky Specialty Crops

Brussel's Pizza

Ingredients:
- 12 whole Brussel sprouts
- Olive oil
- 1 small red onion, diced
- 2 garlic cloves
- 1/2 teaspoon dried oregano
- Salt
- Pepper

Instructions:
1. Preheat oven to 400°F.
2. Cut Brussel sprouts in half. Place them on a baking sheet.
3. Drizzle with olive oil, salt, and pepper. Toss well. Bake for 20 minutes or until done.
4. While Brussel sprouts are cooking, heat olive oil in a large skillet over medium heat.
5. Add diced red onion and garlic. Cook until soft.
6. Add dried oregano. Cook for 1 minute or until fragrant.
7. Add Brussel sprouts and onion mixture to a preheated pizza stone.
8. Bake until pie is golden brown, approximately 20 minutes.
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Product
Recipe Cards – Featuring Kentucky Specialty Crops

Product
Bookmark

Product
Display
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Promotion

Kentucky Proud

- Label created by the Kentucky Department of Agriculture to enhance producer/consumer connection.
- Producers can market their farm commodities under this broad marketing effort.
- Kentucky consumers recognize the logo and slogan as an indicator of food that has originated from the local food systems.

Promotion

Plate it up!

Evaluation Methods

- Number of Kentucky specialty crop recipes tested \( n = 107 \)
- Number of tested recipes developed and published as recipe cards \( n = 37 \)
- Number of agents \( n = 121 \) disseminated 617,100 recipe cards to Kentucky consumers
- Agent report dissemination strategies to consumers – health fairs, nutrition displays, farmers’ market/grocery demonstrations and cooking schools
- Survey of consumers at Farmer’s markets \( n = 1048 \) after receiving recipe card and sampling recipe

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Farmers Market Survey

Results of Consumer Survey

\( n=1048 \)

On a scale from 1 to 10, what was the overall impression of the recipes?

- Overall: 8.3 ± 1.9
- Cucumber: 8.4 ± 1.9
- Apple: 8.2 ± 2.1
- Asparagus: 8.2 ± 1.7

\[ \text{Results of Consumer Survey} \quad \text{\( n=1048 \)} \]

• For those who did not plan on purchasing cucumber before arriving at the market, on a scale from 1 to 10 their likelihood to buy cucumber was 5.9 ± 3.0 after trying the sample.

• For those who did plan on purchasing cucumber before arriving at the market, their likelihood to buy cucumber was 7.6 ± 3.2 after trying the sample.
Results of Consumer Survey
n=1048

- Those who had not planned on buying cucumber that day, the likelihood to buy later was 6.8 ± 3.0.

- Those who had planned on buying cucumber that day, the likelihood to buy later was 8.2 ± 2.4.

Results of Consumer Survey
n=1048

Most common reasons given for shopping at farmers market versus grocery store:

70.8% said quality/freshness

57.3% said local produce/supporting local farmers

13.5% said personal interaction with farmers

Results of Consumer Survey
n=1048

On a scale from 1 to 10, which impacted trying the recipe at home—sampling or recipe card?

<table>
<thead>
<tr>
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<th>Overall</th>
<th>Cucumber</th>
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<tbody>
<tr>
<td>Sample:</td>
<td>7.8 ± 2.5</td>
<td>8.1 ± 2.3</td>
<td>7.8 ± 2.5</td>
</tr>
<tr>
<td>Recipe card:</td>
<td>7.9 ± 2.6</td>
<td>7.9 ± 2.5</td>
<td>7.7 ± 2.6</td>
</tr>
</tbody>
</table>

Plate It Up Kentucky Proud: Statewide Social Marketing Campaign to Increase Consumer Purchase and Consumption of Locally Grown Fruits and Vegetables
Discussion

Initial results indicate
1. The marketing mix strategy has been successful in the development of Kentucky specialty crop recipes for dissemination and distribution via Extension agents to consumers.
2. The recipe cards and Facebook/web posts have had widespread distribution to consumers throughout all 120 counties within the state.
3. Due to consumer interest multiple media outlets including statewide magazines and newspaper food editors have featured the recipes.
4. The formative data results of farmers’ market sampling and recipe card distribution indicate that distributing the recipe cards at point of purchase does positively impact consumer buying of fruits and vegetables.

Next Steps

Formative Evaluation of Producers use of cards:
Evaluate producers’ perceptions of use of the recipe card as a marketing strategy to interest consumer in purchase of specialty crops
Evaluate producers’ perception of recipe card effect on consumer purchase of specialty crops

Redefine primary target group:
Focus target group to family friendly and ethnic specific recipe development

Project Co-PI’s

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