Why farmers’ markets may not improve dietary disparities in urban communities

Sean C Lucan, MD, MPH, MS1, Omar Sanon2, Rafael Frias, BA3, Andrew Maroko, PhD4, Clyde B. Schechter, MD1

1 Dept of Family & Social Medicine, Albert Einstein College of Medicine | Montefiore Medical Center, Bronx, NY, 2 College of Arts & Sciences: New York University, New York, NY, 3 Albert Einstein College of Medicine, Bronx, NY, 4 Department of Health Sciences, Lehman College, City University of New York, Bronx, NY

Background
- Obesity and diet-related diseases disproportionately affect urban, low-income, minority communities.
- Low consumption of fruits and vegetables, partly due to poor access, may contribute to the problem.
- Farmers’ markets may offer a partial solution.
- Researchers and government agencies have proposed farmers’ markets as mechanisms to bring fresh produce into poor urban communities.
- Unfortunately, there has been little research on farmers’ markets; how farmers’ markets might contribute to urban food environments is unknown.

Methods
- Investigators compiled a comprehensive list of all Bronx farmers markets through community groups, government agencies, and private institutions.
- Two researchers visited all 26 farmers’ markets, June - July 2011, recording all food and beverage items offered and details about quality and price.
- Researchers also assessed all produce items offered in the two nearest produce-selling stores within a ½-mile walk of each farmers’ market.

Results/Discussion
- Most farmers’ markets were open July-Nov, one weekday, for 4-9 hours (mostly during business hours), vs. stores open year-round, 7 days, >100 mean hrs/wk.
- All farmers’ markets were within a ½ mile of a supermarket and/or other store that sold greater than twice as many varieties of produce on average.
- Produce at farmers’ markets was more “local” than at stores (98% vs. 0.5%), but generally more expensive and not meaningfully more “organic” (9% vs. 2%).
- The Table shows examples of price differences; the Figure explores issues around availability.

Objectives
- To assess all farmers’ markets in the Bronx (i.e., market accessibility; and availability, quality, & price of produce).
- To compare produce at farmers’ markets & nearby stores (i.e., nearest stores selling produce within a ½-mile walk).

Funding
- NIH grants UL1RR025750, KL2RR025749, TL1RR025748, and P60MD000514.

Table. Sample food prices: farm markets vs. stores

<table>
<thead>
<tr>
<th>Example Item (for each ‘type of quantity’)</th>
<th>Price at Farm Markets: Mean (Range)</th>
<th>Best price at nearby stores: Mean (Range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(per bunch)</td>
<td>$1.66 ($1.00 - $2.00)</td>
<td>$0.99 ($0.50 - $1.50)</td>
</tr>
<tr>
<td>(per lb)</td>
<td>$1.62 ($0.99 - $3.00)</td>
<td>$1.48 ($0.89 - $2.49)</td>
</tr>
<tr>
<td>(per pint)</td>
<td>$3.25 ($2.00 - $5.50)</td>
<td>$2.89 ($1.00 - $5.59)</td>
</tr>
</tbody>
</table>

Conclusion
- Farmers’ markets sell (and promote) items non-ideal for good nutrition and health, and carry more expensive, less-varied produce in low-income neighborhoods that already have stores with better hours.

Next Steps
- To analyze customer data and do economic analyses, considering payment methods and assistance programs.

50% of all products at some markets were cakes, jams, pies, muffins, cookies, donuts, ciders, etc.
30% of stands had ≥1 of these non-produce items as a “best seller”; 15% pushed these items

Figure. Food items available at the 26 Farmers’ Markets in the Bronx.