Review of Analysis of Farmers Market Operation and Impacts for the City of Pittsburgh
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Undertaking analysis of an area's farmers markets is greatly aided by zooming in to view regional and historical data on farming and farmers markets and by also using a wide lens to view and gauge other regions' efforts. By examining the best practices of other markets across the U.S., as well as the stages of development in regional food and farming in Southwestern Pennsylvania, market advocates in the City of Pittsburgh can be better equipped for the future. Available literature on farmers markets in and around the City of Pittsburgh and reports on regional food and farming efforts were reviewed for this paper, focusing on studies of farmers markets in the City of Pittsburgh or production analysis across the region. Relevant research on farmers markets and market networks from across the U.S. was also examined to uncover best practices and operational solutions for a wide variety of markets.

A region's agricultural history, including land ownership, production, and marketing trends have profound implications for region's local food system. Those with a history of diversified, owner-operated small and mid-sized farms and ranches have met with success fostering farmers markets and other direct-to-consumer agricultural marketing systems. These trends hold true in Southwestern Pennsylvania. According to the Pennsylvania Agricultural History Project "diversity" was the defining feature of the state's agricultural production from the settlement period through the Second World War. In a state already characterized by its agricultural diversity, Pennsylvania's five southwestern counties (Greene, Washington, Allegheny, Beaver, and Lawrence) were the state's most diverse. Southwestern Pennsylvania steep, well-irrigated hillsides and numerous rivers and draws gave the region a comparative advantage in the cultivation of fruit and vegetables as well as small-scale animal husbandry and proved ill-suited to the type of large-scale commodity grain and cereal cultivation that came to predominate in the trans-Appalachian Midwest. This type of agriculture—small-scale and focused on producing fresh food for people—necessitated the creation of a system of public markets where the region's farmers could sell their goods to the settlements emerging along the Ohio, Allegheny and Monongahela rivers.

During the nineteenth century, Pittsburgh's markets were well regulated by market bylaws, professional guilds, and city ordinances (Conway et al., 2001). Then as now, markets sough to ensure a safe food supply and transparency for the benefit of both vendors and markets. Dogs, alcohol, and salted meats were prohibited from the market, as was "huckstering" (the reselling of goods by non-farmers) and "forestalling" (a farmer buying and reselling produce grown by other farmers). To modern eyes, Pittsburgh's nineteenth century markets would have resembled a hybrid between today's farmers markets and grocery stores. By the 1830s, many of Pittsburgh public markets had secured permanent indoor space and were populated by individual farmers and butchers who sold from stalls arrayed in aisles spanning a large atrium. Farmers markets in the nineteenth century "served not only as places to buy groceries, but also as cultural and social meeting grounds. Producers and consumers came into frequent contact with one another and markets served as a tangible reminder of city-rural connections." In 1947, 60% of the fruits and 50% of the vegetables grown in Allegheny County were marketed through farmers markets. Farmers traveled an average of only 12 miles from farm to market.

The rich history of farmers selling directly to Pittsburghers has essentially been an unbroken one, although by the latter half of the 20th century only a few of these outlets remained. One such

market was (and is) the Farmers' Cooperative Market of East Liberty (FCMEL). The FCMEL has been in existence since 1941 and is still in their original location, due to the foresight of purchasing their building in the early days. By studying the development and market attributes of the FCMEL (Danko+Day, 2012), those same characteristics can now be used as the basis of analysis for the city-managed and independent markets, using some combination of the collected forty-eight qualities for successful markets which fall into four categories; location, farmer/vendor/product, customers, and planning and management.
Since collecting and analyzing shopper behavior data is key to market measurement, especially metrics of zip code origin among shoppers and amount of purchase, the baseline data collected at FCMEL offers a marker with which to begin to collect that same data at other markets. At FCMEL, the majority of respondents traveled to East Liberty from more affluent neighborhoods bordering it or nearby, and most had been attending the market for more than 10 years and many for up to 30 years. Danko+Day also noted that the addition of direct-trade coffee and ready-to-eat foods have created a more sociable atmosphere on Saturday mornings in recent years but also that the addition of non-local items in less bountiful months of the year frustrated some shoppers of FCMEL. The recommendations for FCMEL are also suitable for other markets: the addition of a centralized EBT and credit card processing station at the market, the creation of a strategic plan for both short- and long-term growth, and hiring a full-time market manager.

Fresh Access

Between 1994-2004, the USDA Food and Nutrition Services (FNS) began an ambitious plan to offer food stamp benefits (now called SNAP[1]) on an electronic benefit card (EBT) to reduce fraud and delay in receiving payments. This lengthy state-by-state transition meant that during the time period with one of the largest increases in the number of markets across the U.S., (Briggs, S., Fisher, L. M., Miller, S., & Tessman, N., 2012), any market without a permanent phone line and electricity instantly became unable to process those benefits, landing on the lonely side of the "digital divide." To illustrate that point, between 1994 and 2008 the value of SNAP benefits redeemed at farmers markets dropped by 71% in constant 1994 dollars, after topping $9,000,000 in 1993 with less than 2,000 markets in operation. With the new technology in wide use and programs to incentivize shopping now widely available, SNAP spending at farmers markets grew to $22.4 million in 2017, continuing its climb in total dollars, in the number of transactions and in the rise of return shoppers using SNAP benefits (FNS 2018).
Since the adoption of these programs, diversifying the farmers market shopping base to include those with limited means has been a major goal for thousands of markets across the U.S. It has also been a focus for Pittsburgh anti-hunger advocacy organization, Just Harvest for good reason: among cities with populations of 250,000-500,000, Pittsburgh has the largest percentage of people residing in communities with "low-supermarket access" (LSA). Approximately 47% or 145, 245 Pittsburgh residents experience low access and 71% of city LSA residents are low-income. In the metro area, including all of Allegheny County, 18% of residents or 422,513 people reside in LSA communities. Of the metro's LSA area residents, 57% are low income. The high percentage of low-supermarket access areas in the Pittsburgh metro corresponds with the fourth-highest rate of obesity (29.3%) among US metro areas. The statistics provided depict a

[1] Supplemental Nutrition Assistance Program

region in which “access to healthy food appears to be more of a privilege than a right of all citizens” (Murray, 2013).
In 2010 a team from the Heinz College at Carnegie Mellon University completed a four-month research project on behalf of Just Harvest to determine how to integrate SNAP into area farmers’ markets (Bergman-Bock, K, et al 2010). Their recommendation was that Just Harvest “implement a central cashier system at each Citiparks farmers’ market, utilizing a token-based scrip system. This system requires that Citiparks farmers’ markets users of SNAP, credit, and debit cards first go to the central cashier; the central cashier runs the user’s card in exchange for market tokens; the card users purchase produce with market tokens; and farmers exchange tokens for cash reimbursement after the market. We recommend that Citiparks employees currently assigned to each market serve as the central cashier for each market and that Just Harvest manage the training and accounting activities necessary to operate the system at each market, and the marketing and evaluation tasks of the project. Resources required for this project include personnel time from Citiparks farmers’ market staff and Just Harvest management and staff, point of sale machines, token supplies, marketing expenses, and evaluation expenses. The research team recommends that Citiparks market staff operate the central cashier station as a part of their regular market management activities, and that Just Harvest seek local and federal funds to support operating procedures.”

This initiative named Fresh Access, is unusual among markets in the U.S. since it is managed by a partner of the market organizations and not by individual markets. By having a social justice entity overseeing the program at multiple markets, the reach and impact of the program including vendor feedback, can be more easily tracked and partnerships such as those with the Pittsburgh Food Policy Council and neighborhood leaders, more easily sustained (Just Harvest, 2015).
In the first year, the program which allows Pittsburgh residents the ability to use SNAP benefits as well as credit and debit cards to buy local foods, was launched at the two largest Citiparks markets in East Liberty and the Northside in May 2013. The program added four more markets in the Southside, Carrick, Bloomfield, and Beechview areas in August 2013 (Schless-Meier Emerson 2014).

<u>Data Collection</u>
After the program completed its pilot year the program boosted consumption of fresh produce among participants with 96% of EBT and 68% of credit/debit users rated Fresh Access as “very important” or “important” for buying produce. 80 percent of EBT and 59% of credit/debit users surveyed reported eating more fruits and vegetables since they started using Fresh Access (Schless-Meier Emerson, 2014). In the 2015 season, Just Harvest expanded Fresh Access to fifteen markets.
As indicated above, since the data from Fresh Access also includes credit and debit shoppers, Just Harvest and the participating individual market operators can also collect data on common characteristics of a wide variety of shoppers (Byker, Shanks, Misyak, & Serrano, 2012, see also Wolf, M. M., Spittler, A., & Ahern, J. 2005). which can help to expand the use of Fresh Access and situate new markets in future years. Improving access for SNAP shoppers with programs like Fresh Access requires a constant calibration of outreach strategies and sensitivity to the barriers that at-risk families face in seeking out healthy food. Recent case studies of markets that shared strategies and best practices in convening focus groups to uncover perceptions and remaining barriers about using farmers markets should result in more of this type of data collection among markets (Farmers Market Coalition, 2017). The Pittsburgh Food Policy

Council (PFPC) also contributed data on area markets (Lindsey, Olivia, and Gretchen Sneegas, 2013), conducting two complete Rapid Market Assessments[2] at the East Liberty and North Side markets, Dot Surveys and visitor counts at four other markets (South Side, Carrick, Bloomfield and Beechview). The survey questions used also offer a solid framework of the type of data for other markets to begin to collect the same data, and closely mirror the survey questions offered with the Farmers Market Metrics[3] program, a national online evaluation tool for market operators.

1. How did you get to the market today?
2. How did you learn about the market?
3. How much money did/will you spend here today?
4. At which other farmers markets did you shop?

In addition, we asked respondents to show us where they live by placing a pin on a map of Pittsburgh.

Just Harvest annually surveys the vendors who participate in the Fresh Access program to find the impact on sales, new customers and production. The data indicates that vendors see merit in the program: of the 21 vendors who responded to "I sell more produce", 76.2% agreed or strongly agreed that they sell more produce because of the Fresh Access program (Hwang, 2018). The survey offers rich data as to characteristics of market vending in Pittsburgh:
"37% of vendors surveyed have been selling at farmers markets for more than 10 years. Out of the total sales this past season, 65.4% of EBT dollars were spent on fruits, vegetables, and herbs (43.7% spent on vegetables and herbs; 21.6% spent on fruits[4]).
This annual survey, done in late fall, could be expanded in future years to be used across all markets in area and to ask for more data on market vendors, including vendor demographics, the number and type of sales channels used, production methods used and.

<u>Market Operation</u>

One drawback to focusing analysis only on programmatic outcomes is the current lack of research conducted on the management of markets. Creating such strategies to increase the capacity of key market organizations can be aided by building data collection, operational and marketing collaboratives across organizations.The plan devised by the Minneapolis Farmers Market Collaborative (2016) concluded their planning with these recommendations:

• Explore feasibility and need for a shared organizational infrastructure for all markets in Minneapolis (e.g. St. Paul Farmers Market)
• Create and formalize a Minneapolis farmers market backbone organization/association
• Develop accompanying budget and recommended staffing plan to present for funding.
• Develop shared technology and accounting for 'market bucks,' EBT, and credit cards at

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[2] The three pieces of the RMA included an attendance count, a 4 question Dot Survey, and a qualitative worksheet outlining the Constructive Comments and Observations.
[3] Farmers Market Metrics is an online data collection, management and reporting resource offered through a subscription by Farmers Market Coalition.
[4] Totals do not include partner markets which are markets that Just Harvest does not staff including Bloomfield, Green Tree, Peters Township, Moon Township, and Lawrenceville.

all markets
• Provide regular communication, training, and technical assistance opportunities to market managers and vendors, as appropriate
• Conduct staffing needs audit to determine what positions can be shared cross-market. Assess which jobs, duties, and skills require professional expertise and which are suitable for market volunteers. Develop budget and recommended staffing plan to support all markets in the city
• Conduct operational needs audit of all markets, identifying systems and processes with potential for sharing costs and services (e.g. accounting, technology, evaluation, insurance, communication/public relations, data analysis, vendor support, etc.). Create and execute plan to share costs and services
• Develop integrated scheduling and siting process, so markets can act in the best interests of vendors and communities
• Explore options for most effective system for financial transactions at markets. Support operationalizing this system at interested markets.

In 2013, New Orleans-based market organization Market Umbrella began to develop recommendations for the City of New Orleans to address issues and challenges concerning farmers markets. Those recommendations included adding a definition for public markets, revising and updated the definition of farmers markets, revising and updating the Farmers Markets Use Standards, and requesting that farmers markets be allowed in a variety of zoning districts with the appropriate site and use standards. The recommendations also included the creation of a Farmers Market Policy Advisory Board to assist market operators address the concerns and issues mentioned in the report, help create opportunities for promotion of farmers markets in New Orleans, and help to develop a framework for farmers markets that contain concise, simple rules for market operators and vendors.

In addition to building shared tasks across market operators, creating the "right management" (PPS 2014) for the type of governance and goals that markets choose is vital. Markets with paid managers reported average sales of $56,375 per month and median sales of $22,641 per month (Wolnik, 2012). Markets without paid managers reported average market sales of $11,059 and median sales of $4,000 per month. Both average and median sales of all markets with paid managers were five times that of markets without paid managers. In addition, lower numbers of regular market vendors and a high turnover of managers have also been shown to contribute to markets closing down entirely (Stephenson, Garry, 2008).

<u>Vendors/Production</u>
Once the goals are set and the operational structure of a market created, the chief work for the organizers and stakeholders is to build the right support for the family farms that will serve those outlets and programs. The unique topography of Western Pennsylvania continues to supply small farms both the space and the proximity to the city's residents which may account for the large number of farmers markets currently available in the city. Still, the struggle for profit remains a problem among those farms and so improving channels for marketing their goods requires analysis including general consumer feedback (NOFA-VT, 2017) and awareness of the effect and of other Direct-to-Consumer (DTC) channels such as Community Supported Agriculture

(Small Farms Central, 2015). This remains important especially, according to the Southwest Pennsylvania Commission (2013), the region "does not have a mechanism in place to connect the many small food producers to markets within the region or to major markets within 275 miles of Southwestern Pennsylvania."

Some food and farming activities noted by the Commission:

175 farmers markets operate throughout the area.

Pittsburgh has a Food Policy Council to look at "a food system that benefits the community, the economy and the environment in ways that are equitable and sustainable".

In Fayette County, an effort is underway to open a grocery store featuring local foods and products.
In Beaver County, Giant Eagle opened a processing plant for fresh produce.
A brewery is in the works in northern Butler County.
Local restaurants in several counties feature locally produced meats and vegetables.
A private non-profit is operating a "farm-to-fork" service serving several counties in the region.
A local group in Indiana is working to establish a food hub and farmers market.

The Commission also outlined many of the barriers that remain for farmers:
Regulations at the state and federal level frustrate growers and value-added producers.
Challenging labor markets and immigration uncertainties affect many of the producers in the region.
There are numerous organizations across the ten counties that focus on serving parts of the local food value chain or organizations representing a statewide trade group. However, there are no efforts to build regional businesses or groups directed towards value-added processing.
Some specialty producers have a difficult time reaching customers. Some of these producers need specialized production facilities.
The smaller size of farms in the region makes it difficult for producers to generate enough quantities to meet the needs of institutional buyers and larger product distributors.
The shorter growing season in Pennsylvania limits produce sales and produces large seasonal variations in income.
There is a declining number and a perceived lack of livestock processing facilities in Southwestern Pennsylvania.
The lack of data for and about Southwestern Pennsylvania food processing establishments hinders the growth of regional industry sectors and clusters.
The Food and Drug Administration is in charge of promulgating regulations for the enactment of the new Food Safety and Modernization Act. Depending on the regulations, the Act could have far-reaching impacts on how local food systems operate.
The lack of local networking groups and regional support for businesses in the local food value chain is a deterrent to growth and innovation.
Local companies are not connected to the research in technology that is being undertaken at regional universities.

There is no viable market for produce that does not meet the highest grade requirements even when the produce is healthy and sound.

To better understand current production and marketing issues faced by farmers, Pittsburgh Food Policy Council also conducted data collection among vendors for the Citiparks markets (Lindsey, Olivia, and Gretchen Sneegas, 2013):
"Out of the 27 vendors surveyed, 15 have been at the EL and/or NS markets for four years or less, representing over 50% of the vendors. However, six vendors reported being at the markets for over twenty years—several responded that they had been involved with the market since it first began. Two additional vendors reported attendance of 15-19 years. Although there is a sizable group of relatively new vendors between the markets, the number of vendors who have attended 10 years or more represent 30% of the group. Of that, vendors attending 20+ years represent a little more than 1 in 5 vendors, indicating a high level of market stability."
Vendor respondents had several recommendations for improving Citiparks Farmers Markets in the future:
-Increase marketing and advertising for the markets, including social media.
-Increase number of trash cans and bathrooms accessible to vendors.
-Increase community involvement through special events, such as cooking/chef demos and live music.
-Enforce market rules equally for all vendors, e.g. start/stop times, stop vendors from "huckstering," etc.
-Keep an eye on what different vendors are selling—don't bring too many vendors selling the same products into the market. This decreases sales.
-Enforce "Producer Only" rules for vendors.
-At smaller markets, bring in additional vendors to fill all the spaces.
Just Harvest surveys market vendors at those locations with Fresh Access annually, using the data to better understand how to refine the program and serve their vendor stakeholders.

Summary

The analysis of the literature finds that current programmatic interventions on food access issues at farmers markets have been well analyzed, possibly due to their management by a regional anti-hunger organization rather than being directly overseen by individual market organizations with little capacity or encouragement for data collection at this point. Many of the recommendations about the Pittsburgh farmers markets by various stakeholders from past reports still need to be implemented. To accomplish that, the same dynamic loop of pilots and impact measurement used for the Fresh Access program should be employed by market organizations and other stakeholders on production side issues, overall market operations, and regional impacts of direct marketing channels in order for market organizations to define and measure their development through future research. For Southwestern Pennsylvania, the data indicates that the proud lineage of small and mid-sized farms is deeply ingrained even though the lack of infrastructure and low-capacity of most market management continues to stymie food and farming stakeholders. If Pittsburgh area markets are to anchor a true revival of regional production, it will require a deep knowledge of recent and past efforts and an honest accounting of what is left to accomplish.

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