

Farm Stops: A New Way to Enhance Local and Regional Food Systems

by

Kathryn Barr

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Professor Raymond De Young

Abstract

Farm Stops are year-round, every-day markets that support small-scale farmers and strengthen local and regional food systems. They do so most often by operating on a consignment model, in which the Farm Stop gives the local producers they work with 70-80 percent of the retail price, while taking a small percentage to maintain operations. This gives producers a fair price for their goods, flexibility with their personal time and product offerings, and ensures they sell *through* Farm Stop locations, instead of directly *to* them.

The purpose of this research is to understand the ways in which Farm Stops help to generate or strengthen resilient, local and regional food systems, specifically via the cultural and social values they instill. To do so, this project surveyed the customer base of four existing Farm Stops across the United States, and conducted informal interviews of each of the four Farm Stop managers and owners. Results indicate that Farm Stops have a strong presence in the communities they serve, that they help individuals feel they are contributing to the development of a local food economy, and that they increase the long-term resilience of communities. Resilience refers to a community's ability to sustain themselves during and after crisis events, such as national economic downturns or global pandemics (U.S. Department of Health and Human Services, 2015). This data outlines the ways in which Farm Stops support the generation, or maintenance, of resilient, local and regional food systems by encouraging individual participation and by providing a reliable, year-round sales outlet for small to mid-size producers. This research highlights the need for Farm Stops, and serves as an introduction to a guidebook on how to develop Farm Stops in any locale. Future iterations of this research may include analyzing over 40 interviews collected from the four Farm Stop locations that participated in the surveys for this project.

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Farm Stop Owners/Managers:

Kathy Sample - Argus Farm Stop

Adam Schweiterman and Jessica Eikelberry - Local Roots Market and Café

Ruth VanBogelen - Acorn Farmer's Market and Café

Hillary Melville and Robin Mullaney - Random Harvest

Emily Watson - Boone Street Market

Shelly Keeney - The Wild Ramp

Editors and Contributors:

Raymond De Young - Academic Advisor, SEA

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Introduction

In the United States, more than 2.02 million farms operate nation-wide (USDA, 2022a). 89 percent of these farms are small-scale family farms grossing less than \$350,000 annually, and account for only 20 percent of total food production. By contrast, large-scale farms exceeding one million dollars annually account for 3 percent of farms, yet produce over 45 percent of total food production (USDA, 2022a). These large-scale farms typically use highly industrialized and conventional agricultural methods to produce raw materials for further processing, or produce large quantities of meat and dairy products. These raw materials include corn, soy, cotton, and other grain products and are typically processed into feed for livestock, biofuels such as ethanol, or sweeteners and preservatives found in packaged foods. As small-scale family farms continue to decline, the average farm size increases (USDA, 2017; USDA, 2022a). Furthermore, 95 percent of farmers are older males who are quickly retiring (Reiley and Van Dam, 2019), leaving large gaps in agricultural knowledge and practice for upcoming generations. Lastly, economic and weather-related challenges, including drought and hurricanes, have kept production costs high for vegetable, livestock, and dairy farmers, making it increasingly difficult for them to make a living (Johansson, 2020). These statistics reveal the current climate of our national food system: decades of consolidation of large-scale farms and increasing homogeneity. This homogenized system has increased large-scale conventional farmers' reliance on middle-men supply chains.

Within our current industrial food system, farmers on average only receive approximately 16 cents for every dollar of goods sold through wholesale or retail channels, leaving the majority of their profits and hard work supporting those middle-men supply chains (USDA, 2022b). Additionally, small-scale farmers make the majority of their profits through direct-to-consumer sales through farmer's markets and Community Supported Agriculture (CSA) programs, which account for 8 percent of food purchases in the country. This leaves 92 percent of food purchased indirectly from middle-men supply chains, which further accelerates the decline of small-scale farms (USDA, 2022a).

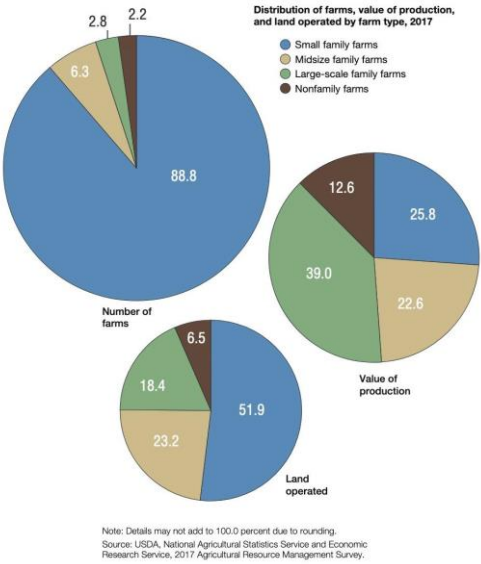
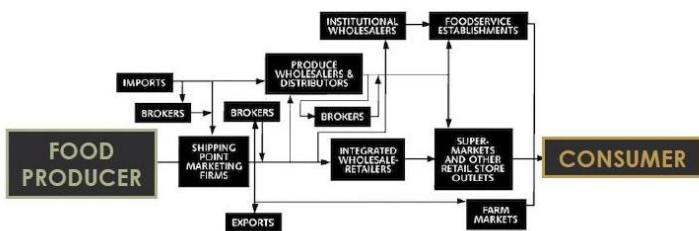


Figure 1: Distribution of Farms, Value of Production, and Land Operated by Farm Type, 2017.

We are **vulnerable** in this industrial food system.



- Travels long distances – on average 1500 miles
- Dependent on fossil fuels
- Vulnerable to climate change, oil shortages, aquifers, and other disruptions (like COVID-19).

Source: USDA Census of Agriculture, 2017



- Direct connection between producer and consumer
- Producers make more money, because no middlemen or distributors
- Limited availability due to weather, seasonality, and lack of convenient locations to purchase

Figure 2: Graphic representation of middle-men supply chains vs. direct-to-consumer sales provided by the Argus Farm Stop 3-Day Online Course.

When the COVID-19 pandemic hit the United States in March of 2020, it sparked a wave of national and state government shutdowns and stay-at-home orders that altogether halted the economy, and left this homogenized system scrambling. While many businesses and economic sectors floundered during this time, the agricultural sector was forced to continue operating as it was, and still is, necessary and essential. During this period, farms of all sizes experienced a number of challenges and changes that created mixed results in their efficiency at feeding the nation. These challenges included severe labor shortages, increased demand for fresh food, lack of viable economic outlets, and large quantities of food waste (Borman et al., 2020; Clapp, 2020; Lush, 2020; Lakhani, 2020; Poppick, 2020; Yaffe-Bellany and Corkery, 2020). The COVID-19 pandemic has, if anything else, highlighted the fragility of our current food system, and has forced us to explore alternative, more sustainable systems for future generations.

Alternative Sustainable Food Systems: Farm Stops

One such system is a regional or local food economy developed through the lens of civic agriculture. Civic agriculture is defined by sociologist Thomas Lyson as, “the emergence and growth of community-based agriculture and food production activities that not only meet consumer demands for fresh, safe, and locally produced foods but [also] create jobs, encourage entrepreneurship, and strengthen community identity” (Lyson, 2004). Civic agriculture enterprises are often characterized by farmer’s markets, community and school gardens, CSA programs, grower or member-owned co-operatives, community kitchens, and small-scale local on and off-farm processors of products that don’t have a mass market (e.g., goat or sheep milk or cheese)

(Lyson, 2004). Civic agriculture enterprises thus serve as a solid foundation for the development and maintenance of regional and local food economies. These regional or local food economies can support small-scale local farmers implementing sustainable agricultural practices that use fewer fossil fuels (USDA, 2017), reduce carbon emissions associated with food transportation by sourcing food within a smaller geographic range, and most importantly, minimize reliance on long-distance national and international supply chains. All of these factors enhance community resilience to crisis events such as national economic recessions and pandemics, and allow the resurgence of, and support for, small-scale producers.

To strengthen regional and local food economies through civic agriculture, this study turned to a relatively new enterprise not included in Lysons' initial explanation: small-farm supporting grocery stores, known in this study as Farm Stops. These stores are mission-driven and prioritize supporting small-scale farmers by sourcing directly within a specified local radius. They further perpetuate this mission of supporting small-scale farmers by implementing a specific business model based on consignment, which ensures that farmers get the real value of their products. Most people, when they hear the word, 'consignment,' think of clothing or antique stores. However, this notion has important implications for supporting small-scale farmers and strengthening local food systems. For example, Argus Farm Stop in Ann Arbor, Michigan is a year-round small-farm supporting grocery store that works with over 200 local farmers and producers. They give their vendors 70 percent of the retail price, and take a 30 percent commission of those sales to maintain their operations.

According to the USDA 2022 Food Dollar Series (USDA, 2022b), on average, American farmers make 16 cents of the customer dollar spent in a retail operation. With stores like the Argus Farm Stop, farmers and producers set their own prices, own their products until they are sold, and make more money than an average retail sale. This not only gives small-scale farmers a fair wage year-round, but it also allows the farmers to manage their own inventories, and save time and labor from participating in farmer's markets that are only open for part of the year. Thus far, in only eight years of operation, Argus Farm Stop has put over \$10 million back into the hands of the small-scale farmers and producers they work with.

In addition to strengthening the local food economy, stores like Argus Farm Stop foster closer relationships with the producers they work with, and educate others about the benefits of eating locally and seasonally. Because these stores operate on consignment, they often rely on additional diversified revenue streams, which allows for greater flexibility, adaptability and stability to meet the needs of their community and provide further support for small-scale farmers, food producers, and businesses in their area. For example, most Farm Stops have a café and a commercial kitchen to sell value-added products made from items taken from the store, or directly from other small-scale producers. These cafés often serve as third places for cultural and social creativity and expression in a community, including via educational classes and community events. Third places are defined as, "places that foster community and communication among people outside of home and work, [which are] the first and second places of daily life" (Jeffres, 2009; Oldenburg, 1989). These places include coffee shops, recreation centers, and other public places where people meet, congregate, and communicate. They act as part of the "constructed environment" that contributes to the quality of life a person experiences in that environment (Jeffres, 2009).

Other diversified revenue streams include adding incubator kitchens or spaces which helps to provide production space and entrepreneurial support to small-scale producers and businesses in the community that lack their own production space. In addition, Farm Stops are flexible in their business structure, which allows them to incorporate as non-profits or co-operatives where they can reap additional benefits of increased funding opportunities via grants and awards. For example, Local Roots in Wooster, Ohio, and Random Harvest in Craryville, New York are both co-operatives that offer cafés, incubator kitchens, and rentable community spaces. In this way, Farm Stops help to strengthen local food economies, educate consumers about the benefits of local food, and build community, thus meeting all the salient features of a civic agriculture enterprise.

Currently, the small-farm supporting grocery store is a new concept, with little research on its features. For the sake of this project, the name 'Farm Stop' was chosen to refer to small-farm supporting grocery stores because this particular model is at once a farmer's market, a food hub, and a regular retail operation. It combines elements from each to provide a supportive place for local, small-scale farmers and producers to stop and sell their goods, and for customers to stop and engage in a localized food system.

It is worth mentioning that there are many civic agriculture enterprises that bear similarities to Farm Stops, but should not be confused with them. These include farmer's markets, food co-operatives, and especially the recently popularized, food hub. The USDA defines farmer's markets as, "A common area where several farmers gather on a recurring basis to sell a variety of fresh fruits, vegetables, and other farm products directly to consumers." (USDA, 2014). While a Farm Stop is a year-round market that sells a variety of fresh fruits, vegetables and other farm products directly to consumers, farmers are not gathering on a recurring basis in one specific area on specific days of the week or month. Rather, farmers and producers simply drop off their products at a Farm Stop, but do not have to be present for the sale of their products. Farmers and producers participating in the Farm Stop model have the option of making their own schedule, and determining when is best for them to drop off their products. However, Farm Stops do often work in concert with, and are directly connected to, farmer's markets, like at The Wild Ramp in Huntington, West Virginia and Boone Street Market in Jonesborough, Tennessee. Working with local farmer's markets allows Farm Stops to serve as veritable outlets for producers to drop off excess goods that did not sell at the farmer's market, thus helping to cut back on potential food waste, and saving producers time, money and labor in sourcing additional storage or disposal. In addition, Farm Stops are a great resource for producers to advertise and bolster support for the local farmer's market to other producers and consumers, and vice versa, which further strengthens the local food economy.

The distinction between Farm Stops and food co-operatives is a bit trickier. The term food co-operative refers to a specific business structure that can be adopted by any food-related business, including Farm Stops. It is more clearly defined by the USDA as, "Producer- and user-owned businesses that are controlled by -- and operate for the benefit of -- their members, rather than outside investors" (USDA, n.d). In other words, a food co-operative is a jointly owned, democratically-controlled business structure that aims to serve the economic, social and/or cultural needs of a community (Neighboring Food Co-op Association, n.d). Food cooperatives are still retail operations that are either owned by the members of a community, by the producers that serve the store, or by the workers who maintain the operations of the store. They typically ask for

a yearly membership fee that helps to maintain operations, and often have missions similar to that of Farm Stops in which they seek to support, enhance, and maintain local food economies. The key difference to highlight here is that a Farm Stop operates on consignment, while a food cooperative operates as a typical retail operation. As a typical retail operation, a food cooperative may have more flexibility in carrying mainstream brands via wholesale agreements with regional or national distributors, and has additional flexibility in sourcing non-local, non-food staple products such as household cleaning supplies, and other dry goods staples. The confusion arises when these two elements are combined into one. For example, because food cooperatives are a business structure, and Farm Stops merely define their sales transactions via consignment, Farm Stops can consolidate their business structure as member, worker or producer-owned food cooperatives and still operate on consignment. This essentially means that the Farm Stop will be beholden to workers or members who thus have a more democratic role in determining larger decisions about the daily operations of a Farm Stop, but that the Farm Stop can still provide the producers they source from with a larger percentage of the retail price. For example, of the existing Farm Stops studied for this project, two are consolidated as food cooperatives. Local Roots Market and Café in Wooster, Ohio is a member-owned cooperative that requires all producers they work with to pay a \$50 yearly membership fee. Their consolidation as a food cooperative has allowed them to branch out from the more localized mission of a typical Farm Stop to offer more nationally known, yet still environmentally oriented household cleaning and laundry supplies, as well as paper goods such as toilet paper and paper towels. It has also allowed them to develop a board of directors that then coordinate and facilitate member participation in larger decisions about the store's operations.

Random Harvest is another Farm Stop in Craryville, New York, which is legally consolidated as a worker-owned cooperative. Random Harvest has strictly adhered to their Farm Stop mission of sourcing goods primarily within a specified local radius, and does not currently offer many household staples and supplies. They do, however, work with regional food distributors via wholesale agreements to fill gaps in demand for specific products they cannot find locally. As a worker-owned cooperative operating primarily on consignment, workers have a more democratic say in large changes and decisions to the overall operations of the store, and the producers they source from still receive 75 percent of the retail price.

The last civic agriculture enterprise that may be confused with Farm Stops is the food hub. In recent years, food hubs have gained immense popularity as a method for developing and strengthening local food systems. The USDA Agricultural Marketing Service defines food hubs as, "businesses or organizations that actively manage the aggregation, distribution, and marketing of source-identified food products to multiple buyers from multiple producers, primarily local and regional producers, to strengthen the ability of these producers to satisfy local and regional wholesale, retail, and institutional demand" (USDA, National Agricultural Library, n.d). By definition alone, food hubs bear many similarities to Farm Stops. For example, both entities are, "social enterprises that include economic benefits, altruistic goals, social recognition, autonomy, and satisfaction of personal needs" within a community (Saul et al., 2021). They also, "integrate long-term social goals, and short-term business goals to generate social change, meet social needs, and offer financial opportunity for producers and other private businesses" (Saul et al., 2021). The main difference to note between these two entities is that Farm Stops focus solely on direct to consumer marketing, as opposed to food hubs, which focus on a variety of purchasing

methods including wholesale, direct-to-consumer retail, and institutional purchasing. Other similarities between food hubs and Farm Stops include the fact that food hubs also have flexibility in their legal business structure. For example, as of 2019, 17 percent of food hubs in the US were co-operatives, 40 percent were nonprofits, and 36 percent were for-profit organizations (Bielaczyc et al., 2020). In addition, food hubs support a similar mission to Farm Stops of “developing the capacity of the producers they support and creating infrastructure that supports and maintains market access for them” (Matson et. al., 2013). As a result of the flexibility in their business structure, both food hubs and Farm Stops also have flexibility in their diversified revenue streams, which are often necessary for maintaining their operations over time. Ultimately, food hubs and Farm Stops both require, “flexibility and rapid adaptation rather than a [simple] common start-up strategy, base of resources, or business model” (Saul et al., 2021). Thus, food hubs and Farm Stops can offer multiple ways to support local food businesses and producers.

This study reported here explores some of the key similarities and differences between Farm Stops and other currently popular methods of enhancing local food systems. The purpose of this study is to understand the ways in which Farm Stops help to generate or strengthen resilient, local and regional food systems.

Methods

For the purpose of this study, survey responses (N=278) were collected from four identical surveys distributed to four existing Farm Stop locations around the country: Argus Farm Stop in Ann Arbor, Michigan; Local Roots Market and Café in Wooster, Ohio; Random Harvest in Craryville, New York; and Boone Street Market in Jonesborough, Tennessee. The purpose of this survey was to measure three main constructs: (1) Reasons people visit Farm Stops, (2) people’s Attitudes about Farm Stops, and (3) the perceived Importance of Operational Features of Farm Stops. Additional informal interviews were conducted with the managers of two other Farm Stop

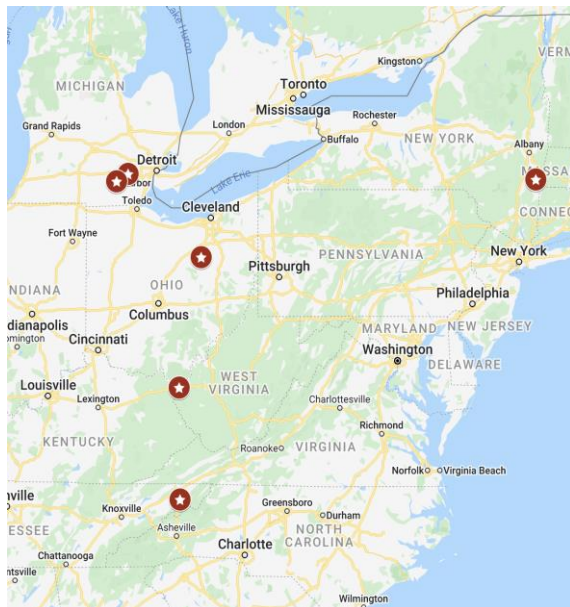


Figure 3: Farm Stop Locations used in this study.

locations that did not participate in the survey: The Wild Ramp in Huntington, West Virginia and Acorn Farmer’s Market and Café in Manchester, Michigan (Figure 3).

Farm Stop Selection and Profiles

Many other Farm Stop-type entities currently exist across the United States. These Farm Stop locations were chosen because they have been in operation for the longest amount of time relative to other existing Farm Stops, represent a diverse demographic distribution, and have a varied array of business structures. The following are brief profiles for each of the six Farm Stops analyzed for this study. Key features of each location are summarized in Table 1.

Local Roots Market and Café (Wooster, Ohio)

Local Roots Market and Café is one of, if not the, oldest iterations of a Farm Stop. It was founded as a member-owned co-operative in 2009 by Jessica Eikelberry and a number of local farmers. A former engineer and a farmer herself, Jessica wanted to figure out a way for the people in her community to purchase local foods without having to travel to multiple farms or locations, which was often costly and time consuming. The idea of operating on consignment actually came about as a necessity. At the time of its inception, the original board members could not afford to pay the producers they were sourcing from, and thus presented the idea of producers selling *through* the store, and not *to* it. They asked the producers they were working with to provide a small percentage of their profits to help kickstart and maintain operations. The idea was received well enough by the community that they kept it, and it soon became the primary feature of their business model.

Currently, Local Roots is a year-round market open seven days a week. They work with over 150 local producers, and offer a three-tiered commission system depending on the types of products sold. Producers who make highly perishable products, such as produce, baked goods and milk, receive 82 percent of the retail price. Producers who make shelf-stable food such as frozen foods, eggs, dairy (with over seven day shelf life), jams, syrups, grains, granolas, pet treats and artisan goods such as candles, cards, soaps, lotions and cleaning products receive 75 percent of the retail price. Producers who create non-consumable artisanal products such as pottery, jewelry, fiber arts, wood products, books, and baskets receive 70 percent of the retail price. As a member-owned co-operative, all producers are required to purchase a \$50 annual membership.

In addition to their year-round market, Local Roots has a commercial kitchen available for rent to other food producers in the community who do not have their own production space. Products made by these food producers in the commercial kitchen are then sold at Local Roots. They also have a weekly food box subscription service known as the, *Seasonal Eats Community Supported Food Program*, and recently launched *FoodSphere: the Entrepreneurial Center at Local Roots* to provide further business and development support to small farmers and food producers in the community. Lastly, they collaborate with students from The College of Wooster to educate others about their food distribution model and local food systems.

Wooster is a small-scale semi-urban city in northeast Ohio with a population of 26,394 and a median household income of \$47,944. Wooster is a college town centered around The College of Wooster. The average age of residents is 37.

Argus Farm Stop (Ann Arbor, Michigan)

Kathy Sample and Bill Brinkerhoff opened Argus Farm Stop as a low-profit limited liability company (L3C) in 2014 after visiting Local Roots Market and Café while on a trip to drop their son off at The College of Wooster. They were inspired by the idea of creating an every-day, year-round farmer's market that would specifically serve as a supportive sales outlet for small, local farms and enhance Ann Arbor's local food economy.

Argus Farm Stop is a year-round market open seven days a week that works with over 200 producers throughout the state of Michigan. All producers receive 70 percent of the retail price, regardless of the type of product sold. They now have three locations in Ann Arbor, some

of which have cafés, taverns, and serve ready-made meals from local restaurants and food producers. They offer community and educational events at each of these locations, and collaborate with students at the University of Michigan to educate others about their model. In addition, during the height of the Covid-19 pandemic, they began offering weekly Produce Box subscriptions, and created an online store to address the heightened demand for local food. Due to their success in transforming the local food economy of the Ann Arbor community, Argus Farm Stop now offers educational classes and consulting services for those interested in starting a Farm Stop in their own community.

According to the 2019 United States Census, Ann Arbor is a city of approximately 119,980 people, with a median household income level of \$65,745 located west of Detroit. Like Wooster, Ohio, Ann Arbor is a college town centered on the University of Michigan. The average age of the population is about 27 years.

Random Harvest (Crayville, New York)

Random Harvest is a worker owned and operated co-operative that was started in 2018 by Hillary Melville and Robin Mullaney after visiting the Argus Farm Stop. They were inspired by Argus' business model and the relative success they experienced, and wanted to recreate the consignment, small-farm-supporting grocery store in rural upstate New York.

Currently, Random Harvest is a year-round market open six days a week that works with over 100 local producers. All producers receive 75 percent of the retail price regardless of the type of goods sold. In addition, they have a café, and a commercial kitchen that is also available for rent to local food producers who do not have access to their own production space. Lastly, they offer educational classes, community events, and a rentable events space.

While Random Harvest has been in operation for less than five years, this Farm Stop was chosen because it is located in a different demographic area than that of the other Farm Stops included in this study. Crayville is a rural community in upstate New York with a population of 5,630. The median household income is \$59,343 and the average age of residents is 44.

The Wild Ramp (Huntington, West Virginia)

The Wild Ramp is a registered 501(c)(3) nonprofit organization that opened in 2012 as a result of a community-wide demand for enhanced, year-round access to fresh, local foods. The effort was spearheaded by Shelley Keeney who helped the store incorporate as a non-profit after learning about Local Roots in Ohio. They currently operate with an 11 member board of directors.

Currently, The Wild Ramp works with over 100 local producers, and gives each producer 80 percent of the retail price. They also have a commercial kitchen that produces ready-made meals and value-added products, educational programs for producers and consumers, and hosts yearly community festivals.

Huntington, West Virginia is a semi-urban city with a population of 45,110, and a median household income of \$31,162. The average age of residents is 35.

Boone Street Market (Jonesborough, Tennessee)

Run by 501(c)(3) non-profit, Jonesborough Locally Grown (JLG), Boone Street Market (BSM) is a local foods store focusing on direct-to-consumer (DTC) sales of produce originating 100 miles first from Jonesborough, then from Central Appalachia, and Tennessee. BSM was developed in 2014 from heightened demand and community support for a year-round farmers market and enhanced access to fresh local foods.

Currently, BSM works with over 150 local producers and provides them with approximately 75 percent of the retail price. They have a commercial kitchen where they produce ready-made meals and value-added products, and also host community events and educational classes. Lastly, they have an online store to enhance the ease of purchasing local foods.

Jonesborough, Tennessee is a town with a population of 5,611 and a median household income of \$56,550. The average age of residents is 45.

Acorn Farmers Market and Café (Manchester, Michigan)

Acorn Farmer's Market and Café is a registered 501(c)(3) non-profit organization located in Manchester, Michigan that started in 2019. Acorn is one of the newest Farm Stops included in this project. They were instrumental in transforming the availability of fresh, local foods in their community when Manchester lost access to their only grocery store in 2019.

Currently, Acorn works with over 75 producers and provides them with 75 percent of the retail price. They recently opened in a new location in Manchester that boasts a café, and they hope to engage in educational programming for producers as well as community events in the near future.

Table 1: Farm Stops included in this study

Farm Stop	Business Structure	Location	Diversified Revenue	Years in Operation
Acorn Farmer's Market and Café	Registered 501(c)(3) non-profit with a Board of Directors	Manchester, Michigan	<ul style="list-style-type: none"> ● Café at new location ● Outdoor Farmers Market ● Educational classes 	2019-2022
Argus Farm Stop	Low-profit Limited Liability Corporation (L3C)	Ann Arbor, Michigan	<ul style="list-style-type: none"> ● Café ● Subscription service Food Boxes ● Educational classes ● Community Events ● Trainings 	2014-2022
Boone Street Market	Registered 501(c)(3) non-profit with a Board of Directors	Jonesborough, Tennessee	<ul style="list-style-type: none"> ● Café ● Grants ● Community Events ● Commercial kitchen 	2014-2022
Local Roots Market and Café	Member-owned Co-operative with a board of directors	Wooster, Ohio	<ul style="list-style-type: none"> ● Café ● Commercial Kitchen ● Incubator Kitchen ● Outdoor Farmers Market ● Merchandise ● Community Events ● Subscription service Food Boxes 	2009-2022
Random Harvest	Worker-owned Co-operative	Craryville, New York	<ul style="list-style-type: none"> ● Community Events ● Educational classes ● Incubator kitchen + community space ● Café ● Commercial Kitchen 	2018-2022
The Wild Ramp	Registered 501(c)(3) non-profit with a Board of Directors	Huntington, West Virginia	<ul style="list-style-type: none"> ● Commercial Kitchen ● Incubator Kitchen ● Mobile Market ● Community Events ● Educational classes ● Outdoor Farmer's Market 	2012-2022

Survey Methodology

The survey for this study was distributed online via Qualtrics. Participants accessed the survey using QR codes or links embedded in participating Farm Stop e-newsletters and social media posts, or via QR code posters placed around each store. The survey instrument consisted of 30 questions in four question categories: Food Purchasing, Community Values, Accessibility, and Demographics.

Food Purchasing questions refer to how Farm Stops may influence people’s purchasing decisions and contribute to the construct of Reasons people Visit Farm Stops.

Community Values questions refer to how Farm Stops may add additional value to people’s communities, and contribute to the construct of Attitudes about Farm Stops.

Accessibility questions refer to whether respondents felt that the store in their neighborhood is easy to access via personal or public transportation, has reliable hours and availability, and enhances resilience and food access.

Demographics questions asked respondents about their race and ethnicity, annual income, age, highest level of education, and the number of people living in their household. Demographic questions were optional and used primarily in descriptive statistical analysis and as controls for a series of linear stepwise regressions.

To best understand how respondents perceive the value of Farm Stops in their communities, exploratory factor analysis was used to examine the structure of the data in three separate question banks (i.e., Question banks 3, 9, and 10). All question banks used a 5-point Likert rating scale (Likert, 1932). Factors were extracted using principal component analysis, Varimax rotation, and Kaiser normalization in SPSS Statistics software.

Kaplan (1974) has suggested three criteria useful in interpreting the output from factor analysis. The criteria stipulate that any particular questionnaire item should be included in no more than one category, each category should “hang together” statistically as indicated by Cronbach’s coefficient of internal consistency (Cronbach, 1951; Nunnally, 1978), and the category should make sense, having face validity (Harbo and De Young, 2018).

The factor analysis was based on item loadings of at least .45, Eigenvalues greater than 1.0 and alpha coefficients of at least .70. Items loading on more than one factor above the .45 level were excluded.

Once the categories were identified, each was given a short descriptive name and a mean score was calculated based on the average rating of items within each category, across all respondents. This resulted in a single score on each category for each respondent. These categories then were used in exploring the differences among survey respondents.

All nine factor analysis categories that were extracted from the respondents data were then used to determine patterns in the data through a total of nine stepwise linear regressions using the following stem questions from the survey instrument (Table 2).

Table 2: Survey questions used in stepwise linear regressions.

Survey Question	
Q1	What percentage of your monthly groceries do you purchase at (site name)?
Q2	How willing are you to pay more for your food at a place like (site name)?
Q3	Do you feel (site name) has a strong presence in the community?
Q4	Do you enjoy spending time at (site name)?
Q5	On average, approximately how much time do you spend at (site name)?

Q6	Do you feel you are helping to grow a local food economy by purchasing food at (site name)
Q7	As a result of the Covid-19 pandemic, and increasing pressures of climate change, there is heightened concern for the resilience of local food economies. Do you believe this form of food distribution (i.e. consignment-based grocery stores) increases the long-term resilience of the neighborhood to crisis events (e.g., economic downturns, Covid-19, climate-related disasters)?
Q8	To what extent do you agree with the following statement: (site name) provided an essential service to the community during the height of the Covid-19 pandemic lockdowns.
Q9	To what extent do you agree with the following statement: (site name) offers additional food access options to ensure all populations can shop there.

Results

Descriptive Statistics

Descriptive statistics were performed for the questions highlighted in Table 2, as well as for four demographic parameters: age, education, income, and household size. Data was analyzed across all four Farm Stop sites.

On average, respondents spend 25 percent of their monthly groceries at Farm Stops. 82 percent of respondents stated they would be very willing or somewhat willing to pay more for their food if it came from a Farm Stop (Figure 4). 91 percent of respondents felt that Farm Stops have a strong presence in the community (52 percent Definitely, yes and 39 percent Somewhat, yes, respectively; Figure 5). 90 percent of respondents stated they, Definitely or Somewhat enjoy spending time at Farm Stops (68 percent and 22 percent, respectively, Figure 6). 89 percent of respondents stated they spend up to 30 minutes during one visit to Farm Stops (Figure 7). 95 percent of respondents stated they, Definitely or Somewhat feel they are helping to grow a local food economy by purchasing food at Farm Stops (75 percent and 20 percent, respectively, Figure 8). 92 percent of respondents Definitely or Somewhat believe Farm Stops increase the long-term resilience of the neighborhood to crisis events (67 percent and 25 percent, respectively, Figure 9). 56 percent and 20 percent of respondents strongly agreed or somewhat agreed, respectively, that Farm Stops provided an essential service during the height of the Covid-19 Pandemic lockdowns (Figure 10). 30 percent of respondents somewhat believe that Farm Stops enhance food access in communities, while 27 percent strongly believe Farm Stops enhance food access (Figure 11). 49 percent of respondents reported being over the age of 60 (Figure 12). Income levels were somewhat distributed among the eight categories provided with a majority of respondents reporting they earn over \$150K annually (Figure 13). 56 percent of respondents reported they have advanced degrees, and 30 percent reported having Bachelor's degrees (Figure 14). Lastly, 48 percent of respondents stated they live in 1-2 person households, while 38 percent of respondents stated they live in 3-4 person households (Figure 15). All subsequent tables that show 0% represent numbers that have been rounded down.

Q.8 Willingness to Pay More for Food at Farm Stops

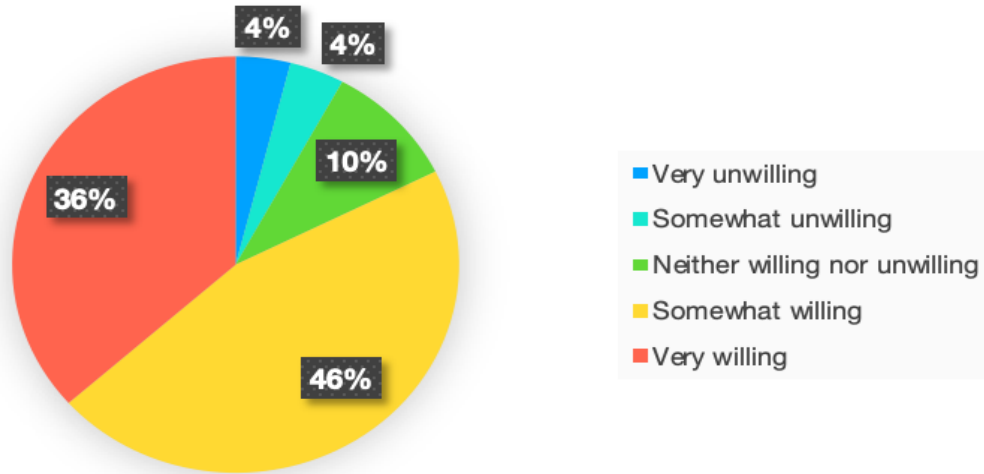


Figure 4: The stem question was: (Q.8) How willing are you to pay more for your food at a place like (site name)? N=278. 5-point scale ranged from; 1=Very unwilling; 5=Very willing.

Q.13 Do Farm Stops Have a Strong Presence in the Community?

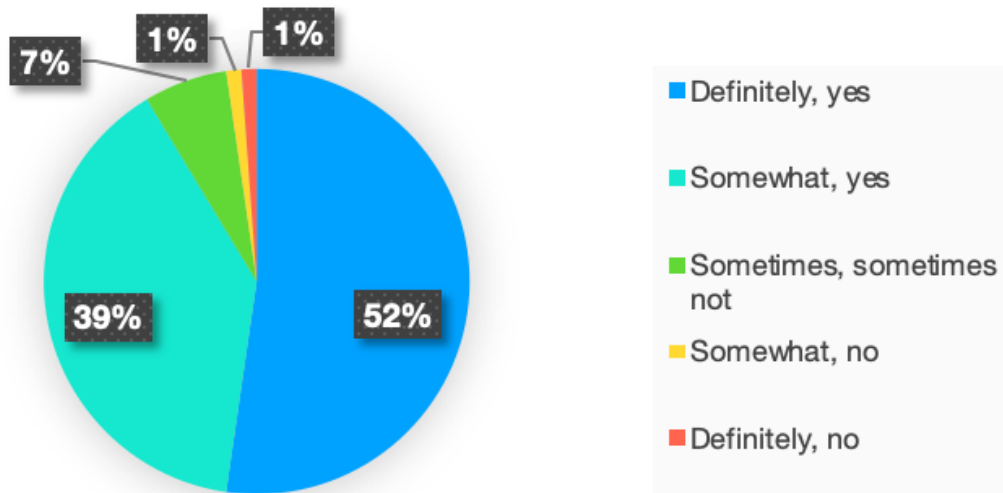


Figure 5: The stem question was: (Q.13) Do you feel that (site name) has a strong presence in the Ann Arbor community? N=278. 5-point scale ranged from: 1=Definitely, yes; 5=Definitely, no.

Q.15 Do You Enjoy Spending Time at Farm Stops?

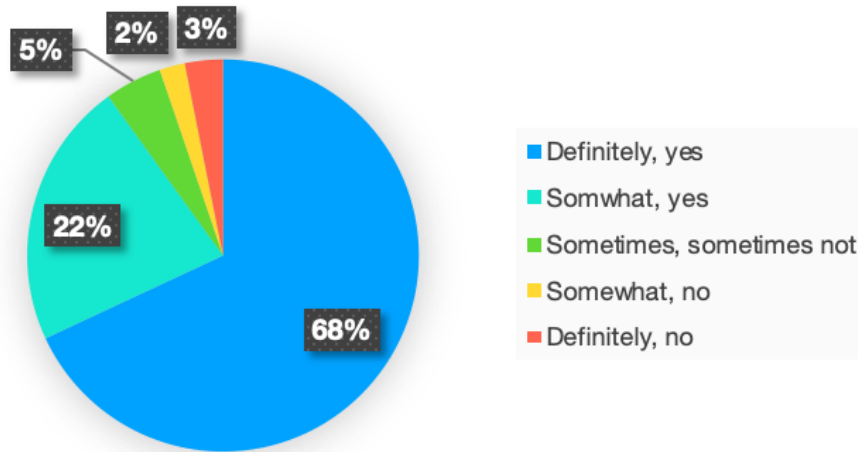


Figure 6: The stem question was: (Q. 15) Do you enjoy spending time at (site name)? N=278. 5-point scale ranged from: 1=Definitely, yes; 5=Definitely, no.

Q.16 Average Time Spent During One Farm Stop Visit

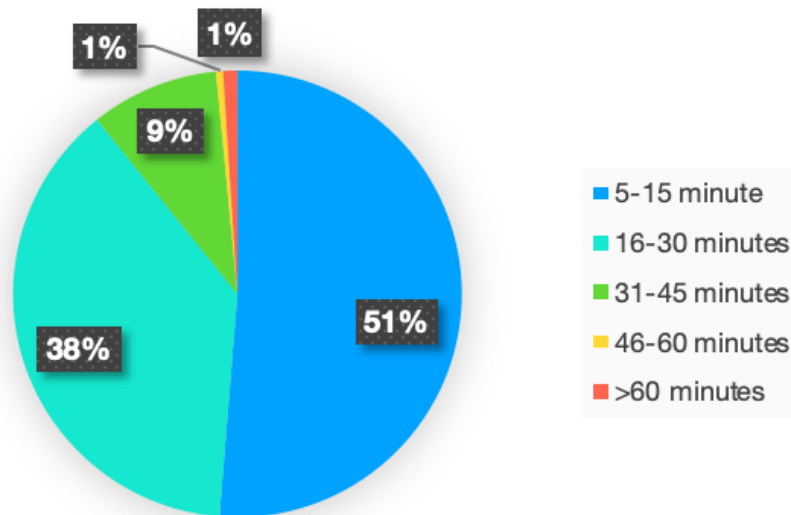


Figure 7: The stem question was: (Q. 16) On average, approximately how much time do you spend during one visit to (site name)? N=278. 5-point scale ranged from: 1=5-15 minutes; 5=>60 minutes.

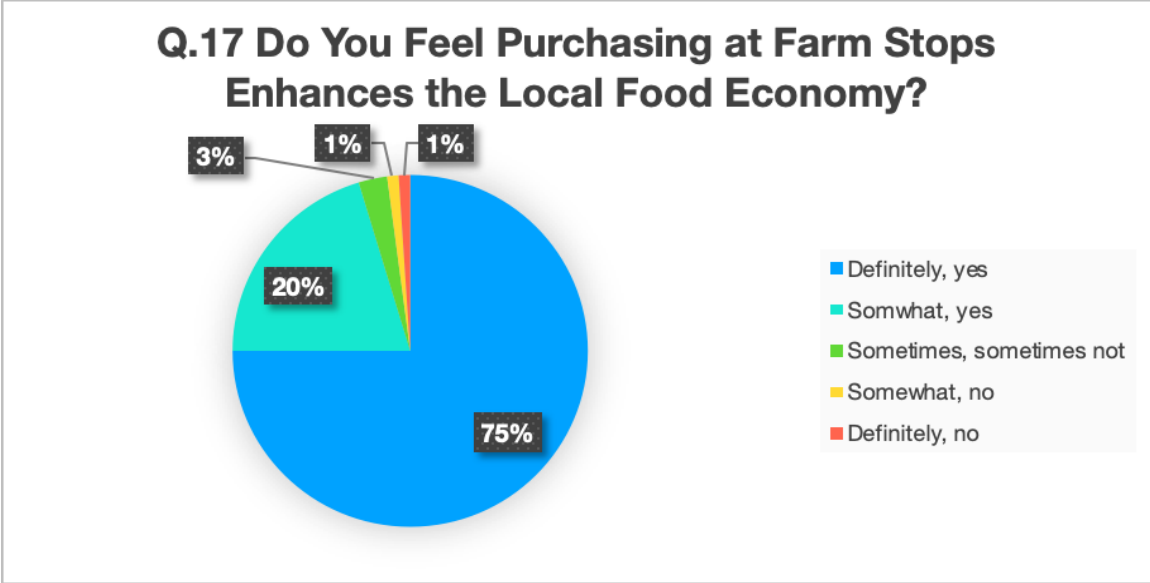


Figure 8: The stem question was: (Q.17) Do you feel you are helping to grow a local food economy by purchasing food at (site name)? N=278. 5-point scale ranged from: 1=Definitely, yes; 5=Definitely, no.

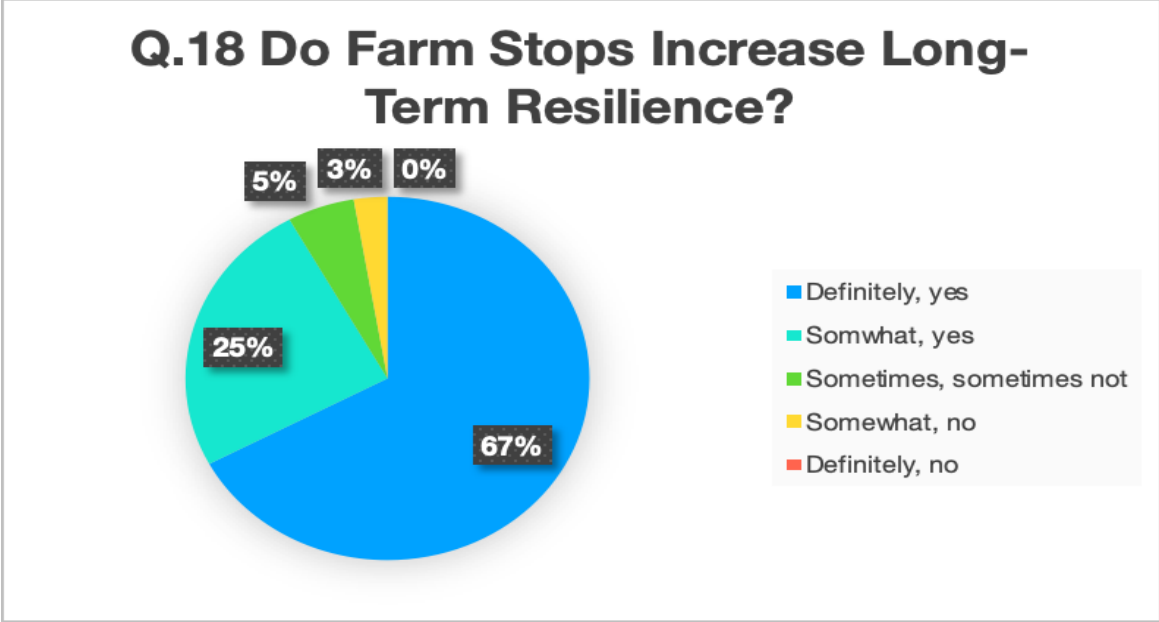


Figure 9: The stem question was: (Q.18) As a result of the Covid-19 pandemic, and increasing pressures of climate change, there is heightened concern for the resilience of local food economies. Do you believe this form of food distribution (i.e. consignment-based grocery stores) increases the long-term resilience of the neighborhood to crisis events (ex. economic downturns, Covid-19, climate-related disasters)? N=278. 5-point scale ranged from: 1=Definitely, yes; 5=Definitely, no.

Q.24 Did Farm Stops Provide Essential Services during the Pandemic?

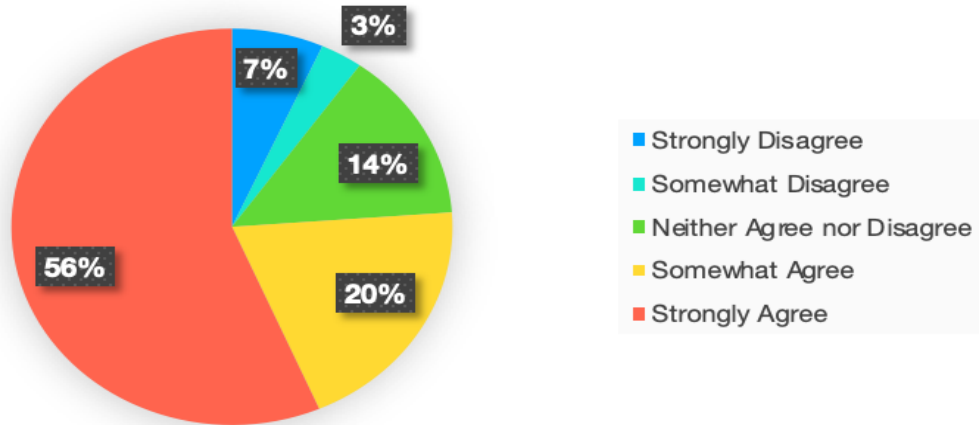


Figure 10: The stem question was: (Q.24) To what extent do you agree with the following statement: (site name) provided an essential service to the community during the height of the Covid-19 pandemic lock-downs. N=278. 5-point scale ranged from: 1=Strongly Disagree; 5=Strongly Agree.

Q.25 Do Farm Stops Enhance Food Access in Communities?

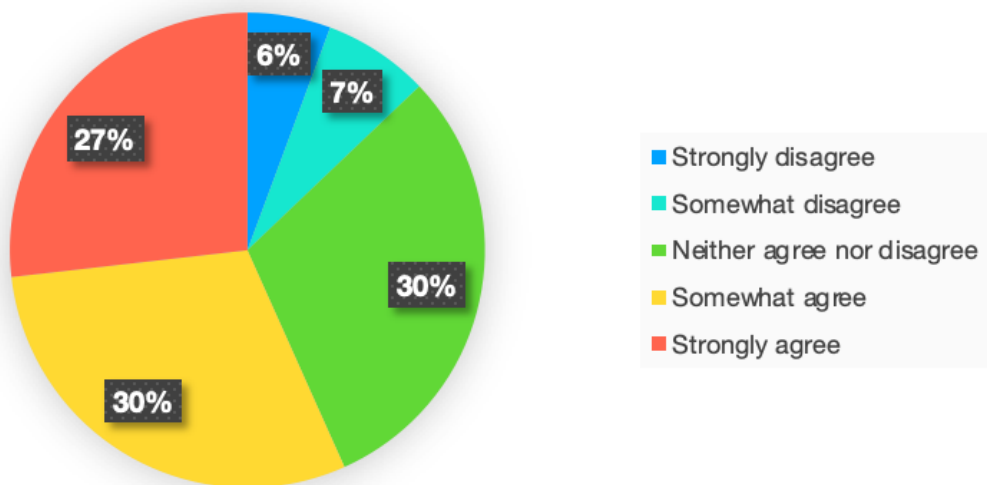


Figure 11: The stem question was: (Q.25) To what extent do you agree with the following statement: (site name) offers additional food access options to ensure all populations can shop there. N=278. 5-point scale ranged from: 1=Strongly disagree; 5=Strongly agree.

Q.26 Respondents' Age

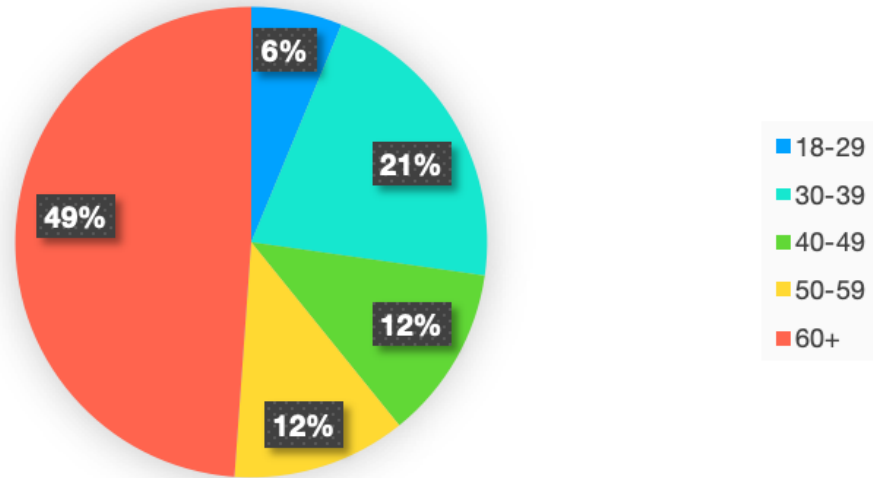


Figure 12: The stem question was: (Q.26) What is your age? N=278. 5-point scale ranged from: 1=18-29 years; 5=60+ years.

Q.27 Respondents' Income

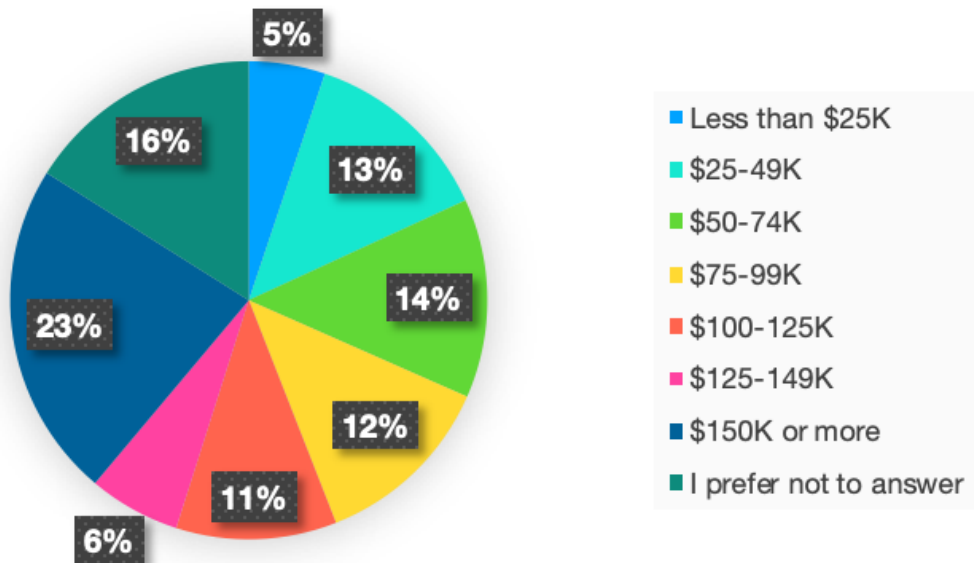


Figure 13: The stem question was: (Q.27) What is your total household income? N=278. 8-point scale ranged from: 1=less than \$25K; 8=I prefer not to answer.

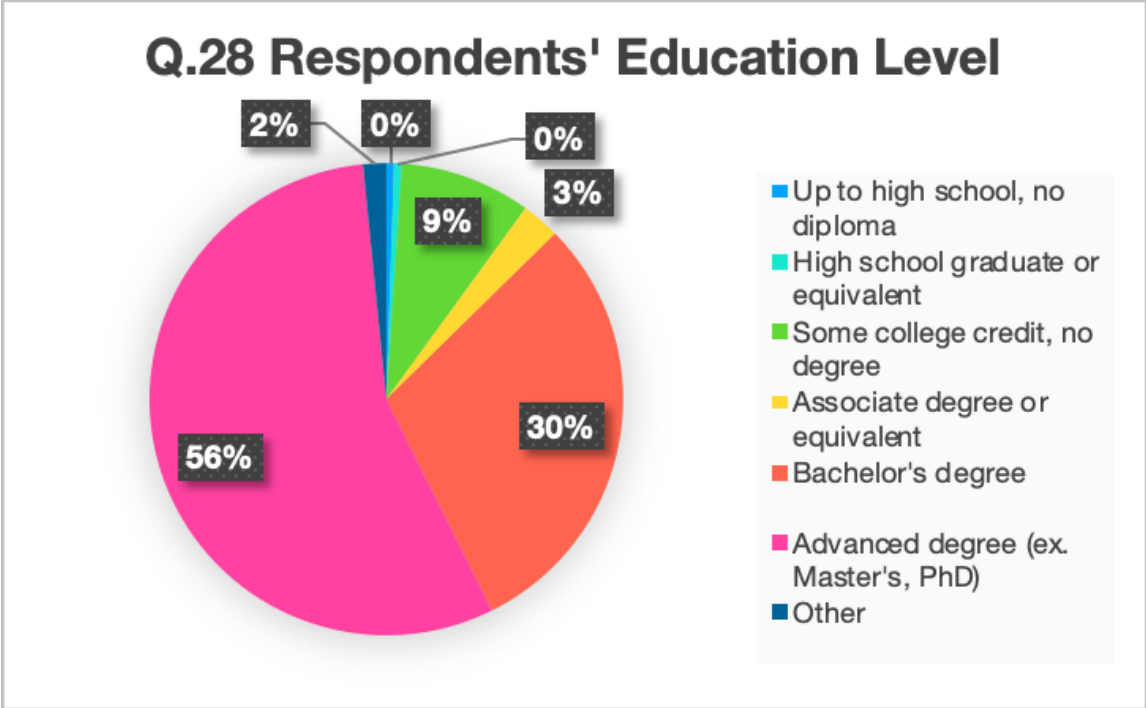


Figure 14: The stem question was: (Q.28) What is your highest level of education? 7-point scale ranged from 1=Up to high school, no diploma to 7=Other.

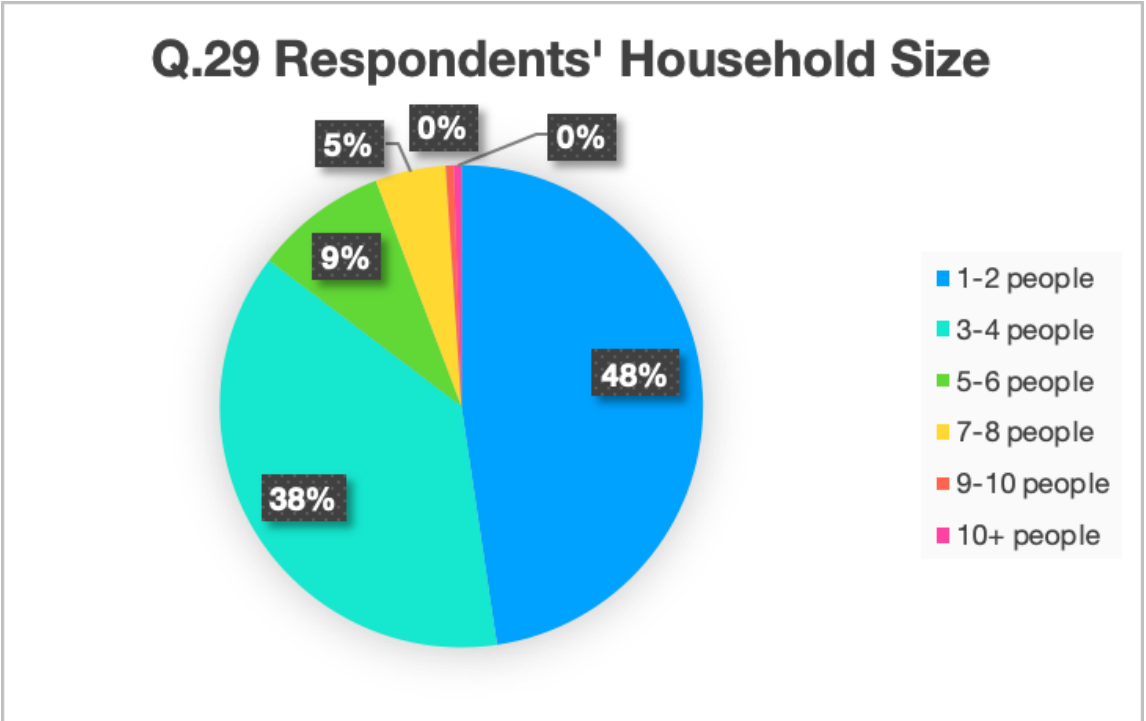


Figure 15: The stem question was: (Q.29) How many people live in your household? 6-point scale ranged from 1=1-2 people; 6=10+ people.

Factor Analysis

Exploratory factor analysis was conducted on three distinct constructs. These analyses extracted two categories within the Reasons for Visiting Farms Stops construct (Table 3), four categories within the Attitudes about Farm Stops construct (Table 4), and three categories within Importance of Operational Features construct (Table 5). Each construct is expanded below.

Reasons for Visiting Farm Stops

The first construct, Reasons for Visiting Farm Stops (Table 3), contains two statistically independent categories: Provisioning (Mean = 2.65) and Events (Mean = 1.68). These categories represent the main reasons why respondents visit Farm Stops. Provisioning included four questionnaire items in descending order of endorsement by the survey respondents: Purchase groceries, Support local farmers and producers, Purchase to-go meals, and Visit the café. Events included two questionnaire items in descending order of endorsement: Participate in community events, and Participate in educational events. Provisioning is the more highly endorsed reason for visiting Farm Stops (Table 3), which suggests that people go to Farm Stops primarily to purchase groceries and support local farmers and producers in their area.

Table 3. Reasons for Visiting Farm Stops

Category names and survey items included *	Mean**	S.D.	Alpha
Provisioning	2.65	.78	.71
Purchase groceries			
Support local farmers and producers			
Purchase to-go meals, if available			
Visit the café			
Events	1.68	.82	.81
Participate in community events			
Participate in educational events			

* The stem question was, "How often do you visit [site] Farm Stop to:" The rating question was, "Please rate the following statements using the scale provided. Please consider your answers in terms of pre-Covid." The 5-point Likert scale ranged from 1=Never to 5=Always.

** Pairwise comparison of means is significantly different at $p \leq 0.001$. N=228

Attitudes about Farm Stops

The second construct, Attitudes about Farm Stops (Table 4), contains four statistically independent categories that comprise respondents' attitudes about the physical and social attributes of Farm Stops: Support of local foods (Mean = 4.81), Positive Facility (Mean = 4.57), Support for local businesses (Mean = 4.45) and Good selection (Mean = 4.13).

The Support of Local Foods category refers to whether respondents felt that Farm Stops support a local food system, and includes three questionnaire items in order of descending endorsement: Supports local farmers and producers, Prioritizes seasonal products, and Is transparent about where they get their products.

The Positive Facility category refers to whether respondents felt that Farm Stops created a positive and supportive shopping experience, and is composed of four questionnaire items in order of descending endorsement: Fosters an inclusive and welcoming space, Has a warm and friendly atmosphere, Hires staff who are passionate and professional, and Is accessible and easy to navigate.

The Support for Local Businesses category refers to whether respondents felt that Farm Stops support local businesses and is composed of five questionnaire items in order of descending endorsement: Collaborates with local businesses, Educates consumers about local food and farmers, Makes an effort to engage with their community, Supports other local businesses, and Helps strengthen a local food economy.

The Good Selection category refers to whether respondents felt that Farm Stops offer a wide selection of products and includes four questionnaire items in order of descending endorsement: Meets the majority of my household's food needs in a typical week, Offers a wide variety of products, Has products that cannot be found elsewhere, and Enhances access to fresh, high quality food.

By a small margin, Support for Local Foods is the more highly endorsed attitude about Farm Stops amongst survey respondents, while having a Good Selection is the least endorsed Attitude about Farm Stops to survey respondents (Table 4). These results suggest that respondents do feel that Farm Stops primarily support local farmers and producers, and also foster an inclusive and welcoming environment in which to shop.

Table 4. Attitudes about Farm Stops

Category names and survey items included *	Mean**	S.D.	Alpha
Support of local foods	4.81	.44	.85
Supports local farmers and producers			
Prioritizes seasonal products			
Is transparent about where they get their products			
Positive facility	4.57	.71	.92
Fosters an inclusive and welcoming space			
Has a warm and friendly atmosphere			
Hires staff who are passionate and professional			
Is accessible and easy to navigate			
Support for local businesses	4.45	.66	.84
Collaborates with local businesses			
Educates consumers about local food and farmers			
Makes an effort to engage with their community (e.g., classes, events)			
Supports other small businesses			
Helps strengthen a local food economy			
Good selection	4.13	.80	.74
Meets the majority of my household's food needs in a typical week			
Offers a wide variety of products			

Has products that cannot be found elsewhere

Enhances access to fresh, high quality food

* The stem question was, "To what degree do the following statements reflect your opinions? The 5-point Likert scale ranged from 1=Strongly Disagree to 5=Strongly Agree.

**All pairwise comparisons of means are significantly different at $p \leq 0.001$. N=172

Importance of Operational Features

The third construct, Importance of Operational Features (Table 5), contains three statistically significant categories that describe the elements of a Farm Stop respondents felt were most important, according to their values: Supporting local food systems (Mean = 4.21), Unique and Engaging (Mean = 3.68), and Selection of products (Mean = 2.83).

The Supporting Local Food Systems category refers to how important it is to respondents that Farm Stops support the development, or maintenance, of local food systems. It is composed of four questionnaire items in order of descending endorsement: Supports local farmers and producers, Is transparent about where they get their products, Prioritizes seasonal products, Educates consumers about local food and farmers.

The Unique and Engaging category refers to how important it is to respondents that Farm Stops provide a unique shopping experience that piques their interest, and includes six questionnaire items in order of descending endorsement: Delivers a unique shopping experience, Supports other small businesses, Makes an effort to engage with their community, Collaborates with local businesses, Has products that cannot be found elsewhere, and Fosters an inclusive and welcoming space.

The Selection of Products category refers to how important it is to respondents that Farm Stops have a wide variety of products available for purchase, and is comprised of two items in order of descending endorsement: Offers a wide variety of products, and Meets a majority of my household's food needs in a typical week.

Supporting local food systems is the most important operational feature of Farm Stops to the survey respondents, and Selection of products is the least important operational feature of Farm Stops to respondents (Table 5). This result suggests that of the many ways Farm Stops interact with communities, respondents place the most importance on how they help develop, or maintain, local food systems by supporting local farmers and producers.

Table 5. Importance of operational features

Category names and survey items included *	Mean**	S.D.	Alpha
Supporting local food systems	4.21	.74	.86
Supports local farmers and producers			
Is transparent about where they get their products			
Prioritizes seasonal products			
Educates consumers about local food and farmers			
Unique and Engaging	3.68	.85	.87
Delivers a unique shopping experience			
Supports other small businesses			
Makes an effort to engage with their community (ex. classes, events)			
Collaborates with local businesses			
Has products that cannot be found elsewhere			
Fosters an inclusive and welcoming space			
Selection of products	2.83	.96	.70
Offers a wide variety of products			
Meets a majority of my household's food needs in a typical week			

* The stem question was, "How important is it to you that [site] Farm Stop?" The 5-point Likert scale ranged from 1=Not at all important to 5=Extremely important.

** All pairwise comparisons of means are significantly different at $p \leq 0.001$. N=217

Stepwise Linear Regressions

Nine stepwise linear regressions were conducted to assess if any of the nine factor analysis predictors influenced the nine survey questions listed in Table 2. All stepwise linear regressions were statistically significant with values equal to or less than 0.001, except for the dependent variable measuring the approximate time spent during one visit in Farm Stops (Question 5 in Table 2). To clarify interpretation of these results, all dependent variables from the stepwise linear regressions were grouped into four main themes: Economics, Resilience, Community, and Advocacy (Tables 6 and 7). The predictor variables were color coded to identify

them with their associated factor analysis constructs previously presented: Reason for Visiting Farm Stops (red), Attitudes about Farm Stops (green), and Importance of Operational Features (blue) (Table 6). They are listed in the table in the order they were selected by the stepwise linear regression.

Economics

Within the Economics theme, three significant predictors emerged that influenced the percentage of groceries people purchase at Farm Stops (Table 6). These predictors are: Selection of Products, Provisioning, and Good Selection. The predictors come from each of the three separate constructs of Reasons for Visiting Farm Stops, Attitudes about Farm Stops, and Importance of Operational Features, respectively, which increases the robustness of this prediction. Age, and the number of people in respondents' households, were also found to significantly impact the percentage of monthly groceries spent at Farm Stops.

Willingness to pay (WTP) more for groceries at Farm Stops was significantly supported by the predictors: Good Selection, Supporting Local Food Systems, Provisioning, and Support of Local Food (Table 6). This result is also supported by predictors from all three construct groups thereby enhancing the stability of this prediction. This result suggests that respondents feel both that Farm Stops offer a wide variety of products, and also that it is important that they do so. As a result of Farm Stops offering a good selection of products, and supporting local farmers and producers, respondents are willing to pay more for their groceries at these establishments. This strengthens their reason for visiting Farm Stops as they feel their needs are being met, and that Farm Stops offer a certain level of financial support for their communities.

Overall, the most significant predictors of the Economics theme were the Selection of Products and Good Selection.

Resilience

Within the Resilience theme, two significant predictors emerged that influenced respondents' attitudes about whether Farm Stops provide essential services during crisis events, such as the Covid-19 pandemic. These predictors include: Provisioning, and Unique and Engaging, which fall under the constructs of: Reasons for Visiting Farm Stops and Importance of Operational Features (Table 6).

Attitudes about Farm Stops increasing community resilience was significantly supported by the predictors: Unique and Engaging, and Good Selection, which fall under the constructs of: Attitudes about Farm Stops, and Importance of Operational Features, respectively. Level of education was also found to be a significant predictor that influenced respondents' attitudes about whether Farm Stops enhance their community's long-term resilience.

Overall, the most significant predictors of the Resilience theme were Unique and Engaging, and Provisioning. Respondents felt that Farm Stops offer a unique and engaging atmosphere and that it is important that they do so. This enhances their reason for visiting these locations.

Community

Within the Community theme, three significant predictors emerged that influenced whether respondents felt Farm Stops had a strong presence in their communities. These predictors include: Positive Facility, Supporting Local Food Systems, and Support for Local Businesses (Table 6). The predictors come from each of the three separate constructs of Attitudes about Farm Stops, Reasons for Visiting Farm Stops, and Importance of Operational Features, respectively, which increases the robustness of this prediction.

How much time respondents spend in Farm Stops during one visit was not significantly supported by any of the nine predictors; however, Provisioning emerged as the best fit for the statistical model. This result suggests that no predictor variables affect the time respondents spend during one visit at a Farm Stop. Because no statistical significance was found for this predictor, this regression was eliminated from further analysis.

Attitudes towards spending time in Farm Stops was significantly supported by the predictors: Positive Facility, Provisioning, and Supporting Local Food Systems. The predictors come from each of the three separate constructs of Attitudes about Farm Stops, Reasons for Visiting Farm Stops, and Importance of Operational Features, respectively, which increases the robustness of this prediction.

Overall, the most significant predictors of the Community theme were Positive Facility and Provisioning. Respondents therefore felt that Farm Stops create an inclusive and welcoming environment with professional and passionate staff. This enhances respondents' desire to spend time there because of their support for local producers and local food systems.

Advocacy

Within the Advocacy theme, two significant predictors emerged that influenced respondents' attitudes that Farm Stops are accessible to all populations. These predictors include: Positive facility, and Good Selection, which fall under the construct of Attitudes about Farm Stops (Table 6).

Attitudes about whether Farm Stops help others to contribute to a local food economy was significantly supported by the predictors: Good Selection, Unique and Engaging, and Positive Facility. These predictors fall under the constructs of Attitudes about Farm Stops and Importance of Operational Features.

Overall, the most significant predictors of the Advocacy theme were Positive Facility and Good Selection. Respondents felt that Farm Stops offer a wide variety of goods and create an inclusive and welcoming environment, which makes them more accessible to the community. Respondents also felt that having a wide variety of goods and services and a unique and engaging atmosphere allows others to participate directly in enhancing the local food economy.

Table 6. Predicting attitudes towards Farm Stops

DEPENDENT VARIABLE (organized by theme)	PREDICTOR VARIABLES (Categories in bold , shown in stepwise order)	R	Adjusted R ²	F-value	P-value
<u>ECONOMIC THEME:</u>					
Percentage of groceries spent at farm stops	Selection of Products Provisioning Good Selection Age Number of people in household	.64	.40	20.31	<0.001
Willingness to pay more for groceries at farm stops	Good Selection Supporting Local Food Systems Provisioning Support of Local Foods	.56	.29	16.39	<0.001
<u>RESILIENCE THEME:</u>					
Attitudes about farm stops providing an essential service during Covid-19 lockdowns	Provisioning Unique and Engaging	.46	.20	18.88	<0.001
Attitudes about farm stops increasing community resilience	Unique and Engaging Good Selection Level of education	.57	.31	21.47	<0.001
<u>COMMUNITY THEME:</u>					
Attitudes about farm stops having a strong community presence	Positive Facility Supporting Local Food Systems Support for Local Businesses	.61	.36	24.95	<0.001
Approximate time spent during one visit in farm stops	Provisioning	.24	.05	8.95	.003
Attitudes about spending time in farm stops	Positive Facility Provisioning Supporting Local Food Systems	.76	.57	63.51	<0.001
<u>ADVOCACY THEME:</u>					
Attitudes that farm stops are accessible to all populations	Positive Facility Good Selection	.47	.21	20.42	<0.001

Attitudes about farm stops helping others contribute to a local food economy	Good selection Unique and Engaging Positive Facility	.61	.36	27.94	<0.001
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Note predictor construct colors: **Red** = Reasons for visiting Farm Stops; **Green** = Attitudes about Farm Stops; **Blue** = Importance of Operational Features

Constructs and Predictor Patterns

Table 7 offers a visual of the distribution of constructs across the four dependent variable themes, and offers a breakdown of the various patterns that emerged in the analysis of the data that support the utility of Farm Stops as primary generators of both regional food economies and resilient communities. For example, the predictor Unique and Engaging appears twice in the Resilience theme, and once in the Advocacy theme indicating that the unique and engaging elements of Farm Stops, mainly their sales method of consignment, contribute to enhancing the vitality of a local food system.




Positive Facility only appears under the Community and Advocacy constructs, which suggests that there are elements of how a Farm Stop operates, how they foster and maintain relationships, and how they create more personal connections between farmers and community members that increases feelings of cohesiveness and strengthens the community.

Good selection, in combination with Selection of Products, are spread throughout the dependent variable categories, which suggests that the selection offered via Farm Stops is an important element that Farm Stops should continue to pursue to increase and maintain community engagement. This result also indicates that the survey respondents believe that Farm Stops should continue placing emphasis on developing strong relationships with a variety of different farmers and producers for the sake of both bridging the gap between farmers and community members, and also to increase the Farm Stop's holdings.

Other predictors only show up once among the themes. Such predictors include Support for Local Businesses, and Support of Local Foods. This suggests that these particular predictors are not as important when considering the impact of Farm Stops in their communities.

Table 7. Matrix of predictors

	PREDICTOR VARIABLES										
	Categories from factor analysis								Background variables		
DEPENDENT VARIABLES (by theme)	Provisioning	Good Selection	Supporting Local Food Systems	Unique and Engaging	Positive Facility	Selection of Products	Support of Local Foods	Support for Local Businesses	Age	Household size	Education level
Economics: Percentage of groceries spent at farm stops	✓	✓				✓			✓	✓	
Economics: Willingness to pay more for groceries at farm stops	✓	✓	✓				✓				
Resilience: Attitudes about farm stops providing an essential service during Covid lockdowns	✓			✓							
Resilience: Attitudes about farm stops increasing community resilience		✓		✓							✓
Community: Attitudes about farm stops having a strong community presence			✓		✓						
Community: Attitudes about spending time in farm stops			✓		✓			✓			
Advocacy: Attitudes that farm stops are accessible to all populations		✓			✓						

Advocacy: Attitudes about farm stops helping others contribute to a local food economy											
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Red = Reasons for Visiting Farm Stops
Green = Attitudes about Farm Stops
Blue = Importance of Operational Features

Discussion

Almost all mission statements of existing Farm Stops included in this study mention at least one intention of expanding and strengthening the local food economy. For example, the Argus Farm Stop states, “Our mission is to grow our local agricultural economy” within its first sentence (Argus Farm Stop, 2022). The Wild Ramp has a mission to, “grow and support a vibrant economy and community for local food” (The Wild Ramp, 2018). Random Harvest states, “the importance of building a local resilient food system has never been more clear!” (Random Harvest, n.d.). When it comes to understanding how Farm Stops impact communities financially, there is already overwhelmingly positive evidence documenting that they have far exceeded the goals laid out in their mission statements. Consider that Argus Farm Stop has put \$10 million back into the local food economy since they opened in 2014 (Argus Farm Stop, 2022); Local Roots gave \$1 million back to local producers within just one year (Local Roots, 2021); Boone Street Market in Jonesborough, Tennessee has given back approximately \$3 million to the local food economy since they opened in 2014 (Jonesborough Locally Grown, n.d.); and The Wild Ramp has given \$1.7 million back to local farmers and producers (The Wild Ramp, 2018). This money came predominantly from consumer purchases within the community. There is no question that these stores have provided an economic benefit to their local food economies.

While these statistics help us to understand the financial benefit of Farm Stops, little research has been conducted on the social and cultural value of Farm Stops. Since many Farm Stop missions also emphasize the importance of supporting, strengthening or enhancing communities, it is worth exploring whether Farm Stops achieve these goals, and how. The results of this study indicate that Farm Stops far exceed their social goals, and are therefore embodying a new and productive form of civic agriculture. They achieve their social goals by demonstrating that developing local and regional food systems is as much about enhancing local food provisioning and resilience to extreme events, as it is about shifting a community’s perspective about, and prioritization of, local food. Beyond aiding in the development of circular regional food systems, Farm Stops represent a powerful method of shifting a community’s behavior towards prioritizing local food provisioning that requires little to no formal behavioral intervention. The latter are often costly, time consuming, and require additional resources and materials, and are often unreliable at causing durable change. In contrast, Farm Stops represent the possibility of a more reliable and immediate way to enhance sustainability by strengthening civic agriculture by means of small community-oriented businesses. Farm Stops also provide an opportunity for taking meaningful action in communities through direct participation in the Farm Stop model.

Economics

As a new method of civic agriculture, Farm Stops represent locally owned businesses that are designed to use local resources sustainably, that employ local residents, and that produce at least enough goods and services to satisfy those residents' needs. These businesses are otherwise defined by economist Michael Shuman as LOIS businesses: locally-owned, and import substituting (Shuman, 2006). These businesses are typically self-sufficient based on the resources available to them locally or regionally, and only import additional resources from outside sources when necessary. Shuman describes LOIS businesses as, "fundamentally more humane, fundamentally more community-friendly" (Shuman 2006), which suggests that LOIS businesses are able to further invest in the health and vibrancy of a community. The results of the Economics construct of this study illustrate how enhancing local food provisioning via small-scale, locally owned Farm Stops increases people's willingness to financially support Farm Stops. This creates a strong, reciprocal bond between Farm Stops and communities. For example, because Farm Stops demonstrate support for local farmers and producers by offering a wide variety of their products year-round, essentially staying true to their mission statements, people report being willing to pay more for their groceries at these institutions. The mission-based philosophy of these enterprises strengthens people's reasons for visiting Farm Stops as they feel their needs are being met, and in return, Farm Stops offer growing financial support for their communities.

Furthermore, since people prioritize purchasing goods at Farm Stops because of the values expressed in their mission statements, Farm Stops are able to offer inclusive and welcoming environments, and collaborate with local businesses while meeting residents' household needs. All of this further strengthens community bonds, and enhances people's attitudes towards Farm Stops as important mainstays in their communities. When asked about whether their lives would be impacted if these stores were to close, some respondents stated, "It would be much harder for me to find locally sourced, organic food. I would be devastated." Another said, "It would be like losing a valuable member of the community," and a last respondent stated, "I would have less access and walkability to a business that I trust with my family's health. Also I would feel as if I'd lost [my] community." This demonstrates how deeply ingrained Farm Stops are becoming within communities. This outcome further establishes their status as LOIS businesses that, "Weave together peer relationships among businesses, and between businesses and others that facilitate communication, discourse, reason, even empathy" (Shuman, 2006), ultimately strengthening the bonds of a local food system.

Shuman argues further that LOIS businesses perpetuate the idea of "the multiplier effect," which states that, "the more times a dollar circulates within a defined geographic area and the faster it circulates without leaving that area, the more income, wealth and jobs it generates" (Shuman, 2006). As a result of this effect, Shuman argues that the more LOIS businesses in a community, the stronger the regional economy.

This is demonstrated via the results of the Economics and Resilience constructs of this study. By enhancing people's willingness to financially support Farm Stops, people are investing more money into the local economy. When shopping at a Farm Stop, not only does an individual's dollar go towards supporting local producers, it also goes towards supporting the living wages of the people working there, the local businesses and community partnerships that provide the raw materials to create and maintain the Farm Stop, and the other local businesses that Farm Stops feature and support. For example, Farm Stops often carry artisanal products made by local artists,

and many provide entrepreneurial and incubator services like that of Foodsphere, a non-profit entrepreneurial incubator developed by Local Roots. As more people financially support a Farm Stop by prioritizing purchasing goods, the more dollars recirculate within the community, and the more they contribute to the circular regional food economy. Ultimately, Farm Stops demonstrate and support Shuman's hypothesis of the ways in which the multiplier effect enhances long-term community resilience.

Resilience

"By being self-reliant, you're far less vulnerable to events outside your control" (Shuman, 2006). As examples of locally owned businesses that increase the multiplier effect and garner support from local residents, Farm Stops also help to ensure the long term economic and cultural resilience of communities, specifically to extreme events such as national recessions and global pandemics. The results of this study indicate that because respondents felt that Farm Stops prioritize sourcing goods from local producers, they are better able to pivot to alternative methods of distribution to support communities during times when national supply chains become compromised. This was most evident during the 2020 Covid-19 lockdowns, in which the homogenized food system quickly crumbled at the seams.

At the height of these lockdowns, the large-scale conventional farms that produce the majority of the country's essential food products, meat, dairy and vegetables, were faced with incredible challenges. They were forced to either shut down, or waste enormous quantities of food, primarily due to labor shortages and their sheer size of operations (Clapp, 2020; Yaffe-Bellany and Corkery, 2020; Lush, 2020). Most fruit and vegetables are picked and packaged manually, which requires a high amount of labor. This labor often comes in the form of seasonal migrant workers since, "only 5% of the [U.S.] population works in agriculture" (Borman et al., 2020; Poppick, 2020). Increased reliance on a seasonal, migrant workforce posed a number of problems for these farmers. First, restrictions on travel and tighter regulations for the procurement of visas made it virtually impossible for many migrant workers to return to their customary jobs (Ingwersen and Weinraub, 2020). Second, those migrant workers who did manage to secure visas were forced to live or work in cramped, unsanitary conditions and were highly reliant on public transportation, which decreased social distancing. Additionally, most migrant workers did not have access to proper personal protection equipment, and were worried about losing their jobs if they received a positive COVID-19 test (Reiley and Reinhard, 2020; National Center for Farmworker Health, 2020). Lastly, because many of these workers are undocumented and/or are severely underpaid, they do not have access to adequate healthcare. As a result, hundreds of migrant laborers contracted COVID-19 (National Center for Farmworker Health, 2020), which resulted in massive layoffs and reduced the efficiency of large-scale farms to harvest and maintain time-sensitive crops such as fruit and vegetables. The outcome was higher prices for these commodities, high levels of food waste, and rising rates of food insecurity across the country as large-scale grocery shelves remained empty (Borman et al., 2020; Yaffe-Bellany and Corkery, 2020; Clapp, 2020; Lush, 2020; Lakhani, 2020).

In addition to severe labor shortages that slowed the processing and harvesting of produce and fruits, large-scale farms were hardest hit by the closure of viable economic outlets such as the hospitality and restaurant industries, as well as schools and universities (Borman et al., 2020). According to the USDA Economic Research Service (USDA ERS) Food Expenditure Series, the

total dollar spent in food service locations (e.g., restaurants, schools, sports venues) “fell from \$68 billion in February, 2020 to \$54 billion in March, 2020 and \$36 billion in April, 2020.” (USDA, 2021). As these outlets closed, many farms did not have the resources available, were tied up in corporate contracts, or were simply too big to shift to alternative sales outlets such as CSA programs, drive-thru farmers markets, or online prepaid ordering systems (Yaffe-Bellany and Corkery, 2020). Therefore, many of these farms had no choice but to dump or compost hundreds of thousands of pounds of fruit and vegetables that otherwise could have addressed the rising rates of national food insecurity (Borman et al., 2020; Yaffe-Bellany and Corkery, 2020; Clapp, 2020; Lush, 2020; Lakhani, 2020).

Conversely, smaller producers did indeed experience financial distress, labor shortages and food waste; but because of their relatively smaller size and higher level of diversification, these effects were not nearly as damaging compared to those experienced by larger operations that were more reliant on national supply chains (Thilmany et al., 2020; Hadavas, 2020). Smaller producers did, however, experience escalated demand and pressure for local produce because of breakdowns in national supply chains (Gao, 2020; Lush, 2021; Danovich, 2020; Hadavas, 2020; Elbein, 2020; Worstell, 2020), and therefore required alternative forms of civic agriculture for distribution.

Enter the local Farm Stop. When many of these smaller, local civic agriculture enterprises became unavailable during the height of the Covid-19 lockdowns, Farm Stops remained open. Furthermore, they were able to pivot quickly to alternative methods of food distribution to keep the community and their staff safe and well fed. These methods included the development of online stores, alternative delivery and pick-up systems, and subscription programs. These allowed Farm Stops to expand their offerings, take on more small-producers and move more goods into the community. Furthermore, while many small-scale businesses across the country were forced to furlough a percentage of their existing staff (Gao, 2020), Farm Stops engaged a steady local labor force. Sometimes this consisted of volunteers believing in and supporting their mission, which enabled them to meet the rising demand for local produce and accommodate the extra producers with which they worked. When asked how they felt Farm Stops impacted their communities, some residents responded with positive experiences of how these stores handled the pandemic. For example, one individual said of Random Harvest, “They were so present for us during the first year [of the] Pandemic, it was incredible. I felt safe there, and it got us through the period when we felt we could not safely visit larger supermarkets.” Another stated, “A big help during lockdown. Safe way to buy good food.” And another said of Argus Farm Stop, “Most remarkable to me was that Argus was there to reliably supply groceries during the pandemic when the big Whole Foods type of stores were not.”

These results indicate that community resilience is not just measured by how well a community can respond to a specific crisis event, it is also measured by the overall life-place culture of the community. The notion here is how well residents are able to relate to, interact with, and form lasting relationships with each other. This is otherwise known as a perceived ‘sense of place’ or, the power of place.

“Sense of place gives us a certain comfort in the past, and a confidence in the future, it also serves as a foil against the economic and cultural homogenization so many of us feel in an increasingly globalized world - a world in which our most common links to food simply

strengthen highly homogenized chain stores and food-chain clusters” (Ackerman-Leist, 2013).

The results of this study indicate that Farm Stops enhance a sense of place by offering a unique experience characterized by a welcoming and inclusive environment, and by their support of local producers and businesses. Additionally, a crucial element of a Farm Stop is diversified revenue. This is because the consignment-based model typically does not generate enough revenue on its own to maintain the daily operations of the store while also providing employees with a living wage. Most Farm Stops make use of such things as on-site cafés, commercial kitchens for the production of value-added products, community events, subscription services or educational classes. While these diversified revenue streams serve to ensure the continued operation of Farm Stops, they also create what is known as a unique and engaging atmosphere. A site is created in which people can interact with the Farm Stop and its values in a number of ways that extend beyond simply purchasing groceries, which is often the case for other methods of civic agriculture such as farmer’s markets. For example, when asked how Farm Stops have influenced their communities, a respondent stated, “It brings neighbors together. It provides a welcoming space right in the neighborhood which livens up the area. It has made it so much easier to get local food! It is all in the store.” Another stated of Boone Street Market, “It imparts a strong communal aspect to Jonesborough that has always tried to have a unique and original marketing to keep Jonesborough thriving, which can be difficult for small towns.”

Ultimately, Farm Stops are both reliable sources to purchase produce, and places in which respondents feel more connected to their communities. As reliable, trusted, and familiar places that respondents are willing to culturally and financially support, Farm Stops thereby enhance the overall resilience of the community, specifically during crisis events, such as the Covid-19 pandemic.

Community and Advocacy

The unique and engaging atmosphere generated by Farm Stops not only enhances community resilience but also respondents’ overall interest in and support of Farm Stops and local food systems. Based on the results of the Community and Advocacy constructs, respondents felt that Farm Stops do have a strong presence in their communities, and stated that they enjoy spending time at Farm Stops. These results strengthen the idea that Farm Stops are important and reliable at increasing the social value and “life-place culture” of communities. For example, by fostering an inclusive and welcoming space, Farm Stops become places in which consumers can not only shop for locally sourced produce and goods, but can also meet with friends, participate in community events, and feel socially supported. Farm Stops thus have the capacity to create stronger community connections to either showcase the products of local producers and other local businesses, or host events and educational classes that further engage people, thereby acting as a social glue connecting different aspects of a community. This is increasingly important for the continued resilience of communities and the growth and maintenance of local food systems. As geographer Robert Feagan explains, we currently live in a globalized society that has ostracized and annihilated our sense of place (Robert Feagan, 2007). Philosopher Edward Casey referred to this as the, “thinning of the life world” (Edward Casey, 2001), which Philip Ackerman-Leist elaborates on by stating, “Our connections and commitment to our

immediate surroundings are diminished due to our transience and geographical obliviousness” (Ackerman-Leist, 2013). Now more than ever, we need places like Farm Stops as a form of civic agriculture to enhance the lifeblood and resilience of a community, and support the mission of strengthening local food systems.

It is fascinating that the results of the Community and Advocacy constructs show that Farm Stops have enhanced people’s prioritization of local foods and the inherent value of supporting a local food system. This adds a new reason for the growing demand for local foods evidenced throughout the U.S. Previously the reasons offered included such factors such as the pandemic, “dietary choices, shopping patterns, trust in conventional institutions and brands, and interest in using household purchasing power to support desired social, economic and environmental goals” (Dumont et al., 2017).

Specifically, the results of the Advocacy construct of this study indicate that most people who shop at Farm Stops are aware that their purchases go towards the social, economic, and environmental goal of supporting local farmers and producers. This awareness of the benefit of their actions further increases their motivation to continue purchasing goods at these locations. Ultimately, this creates a sense of meaningful action, in which individuals feel they are making a difference in their communities by purchasing goods at, and participating in the business model of, Farm Stops. Meaningful action is therefore a powerful motivator for instigating the development and maintenance of local food systems.

Meaningful action is a concept used within the field of environmental psychology. It is a crucial element of the Supportive Environments for Effectiveness behavior change model (SEE; previously known as the Reasonable Person Model) developed by Drs. Stephen and Rachel Kaplan at the University of Michigan. In the context of environmental psychology, the SEE model, “Is a conceptual framework that links environmental factors with human behavior. People are more reasonable, cooperative, helpful, and satisfied when the environment supports their basic informational needs” (Kaplan and Kaplan, 2003; Basu and Kaplan, 2015). Our basic informational needs are defined by three major components within the SEE framework: model building, being capable, and meaningful action. Model building refers to “understanding what is going on around us;” being capable refers to “the capacity to utilize knowledge and skill;” and meaningful action is “the desire to be needed and to make a difference” (Kaplan and Kaplan, 2008). Each of these components serve as a foundation for enhancing how we interact with information on a daily basis. This model understands that we as humans are innately dependent on the information received from the environment. “Information is what we store, trade, hide, and act on. We are overwhelmed by it, yet endlessly seek it. We cannot act without it” (Kaplan and Kaplan, 2008). When we are placed into an environment that allows us to understand and explore it, actively contribute to it in a way that makes a positive difference, and enables us to use our knowledge and skills effectively, we are more likely to pursue environmental stewardship behaviors. Meaningful action is specifically important in this context because it has the power to reduce feelings of helplessness, “enhance one’s sense of competence, and inspire sustained engagement in an activity” (Kaplan and Kaplan, 2008).

In this study, the activity that provides individuals with meaningful action is purchasing goods from Farm Stops. Because shoppers are made aware of the consequences of their actions –developing a local food system– Farm Stops help to fulfill people’s intrinsic motivation, “to be heard, to make a difference, [and] to feel that they are needed” (Kaplan and Kaplan, 2003). By

fulfilling their mission statements of supporting local producers and enhancing community engagement, Farm Stops are generating positive environmental behavior change without having to introduce a new category of behavior or a major shift in how people think. For example, people are already purchasing food and spending time at grocery stores and farmers markets, but when they experience the goods offered by Farm Stops and learn of their mission they begin to prioritize and value regularly purchasing at least some goods at Farm Stops, participating in their events, or simply spending time there. For example, when asked about how Farm Stops impact their communities, one respondent stated, "It does seem to help support an ecosystem of local farm producers beyond what can be done with the farmers markets." Another stated of Local Roots, "[It] adds value to the community by offering fresh locally grown produce and supporting small farmers (and crafters). It's these kinds of small businesses that create charm and demonstrate the progressive attitude of a community. We must never stop working at revitalizing downtown Wooster!" A respondent stated of Boone Street Market (BSM), "BSM's mere presence highlight's the local community's desire for and support of local agriculture. BSM serves as an outlet for local agriculture and creates visibility for its importance, promoting local producers. BSM's events also highlight local food and introduce it to many who might never have considered it. For others, it reaffirms their values." Lastly, one respondent said of Argus Farm Stop:

"Its location and business model have made it so much easier for me to prioritize buying local, in a way that has changed my shopping habits for life...if Argus went out of business, I would have to turn elsewhere for produce and milk...and I would badly miss the greenhouse café. Recently, the produce subscription box has helped me eat healthy plant based food with greater consistency, and I worry my diet could take a downturn without it in times when life gets frantic. Argus means more to me than quality and convenience in values-based healthy food shopping. Argus also helped me feel at home in Ann Arbor. This city would feel less like home to me without it."

In summary, by participating in the Farm Stop model, "community members gain meaning while contributing to their own health and that of their community" (Kaplan and Kaplan, 2003). Ultimately, Farm Stops not only foster the motivation for individuals to directly support a local food system, they also enhance the overall values and priorities of a community as a whole making it much easier to strengthen a local food system.

Limitations

While the results of this study do indicate the utility and benefits of creating Farm Stops in communities, there are limitations to this study that are worth acknowledging. First and foremost, the results of the survey presented in this study represent the opinions and perspectives of regular patrons of Farm Stops. For future iterations of this research, it would be beneficial to target a wider sample population that does not regularly frequent Farm Stops, yet knows of their presence in their community.

Additionally, the demographics of the Farm Stops surveyed represent predominantly Caucasian, upper-middle class populations. For future iterations of this research, it would be beneficial to target Farm Stops within demographics that serve more racially, ethnically, and

economically diverse populations. If none currently exist in such locations, then a feasibility study for whether Farm Stops would benefit such communities may be of use.

Lastly, unreported here, this project also conducted over 40 interviews of farmers and producers across four of the six Farm Stops: Random Harvest, Argus Farm Stop, Local Roots and Boone Street Market to gain a better understanding of how farmers interact with and perceive of the impact of Farm Stops on their daily lives and farm operations. This data needs to be further analyzed as it may serve to further support the ideas presented in this report.

Recommendations

The results of the study reported here suggest that Farm Stops are worthwhile community investments for a number of specific reasons:

1. They keep money circulating within a local community, thereby supporting local producers, residents, and businesses. They do so by enhancing local food provisioning, promoting a mission statement that aims to grow and support local producers and enhance the community's overall vitality, and by creating a welcoming and supportive environment for people to enjoy. As people become more familiar with the Farm Stop's mission and the goods and services they offer, they become more willing to financially support Farm Stops, thereby increasing the economic strength of a community.
2. As small-scale, locally owned enterprises, Farm Stops are better able to enhance the financial and cultural resilience of communities, specifically to extreme events such as global pandemics and national recessions. Their unique, consignment-based, locally oriented business model provides a high level of flexibility to pivot to alternative food procurement and distribution methods that help to alleviate the stress of sudden, and/or drastic national or global crises.
3. They enhance a sense of place in a community by establishing a mission people feel they can support. They further develop a sense of place by creating welcoming and inclusive spaces that enable people to interact with Farm Stops beyond just purchasing groceries. This includes participating in community events, hanging out at community spaces like cafés, or participating in additional programming such as subscription services and educational classes.
4. Crucially, Farm Stops are able to shift the priorities and perspectives of a community towards participating in the development and maintenance of a local food system by generating a sense of meaningful action. They do so simply by promoting their mission statements, which enables people to feel that their money and time are contributing to a greater good that benefits their overall health and wellness, as well as that of their community. This thereby increases the motivation of, and respect for, participating in a local food system, which represents a level of behavior change that requires no formal behavioral intervention.

The primary recommendation from this report is therefore to encourage the growth and development of Farm Stops in communities across the United States. These Farm Stops should prioritize establishing and communicating their mission statements within communities, and

providing supportive and welcoming environments through the use of diversified revenue streams such as cafés, subscription services, and community events and classes.

How to Start a Farm Stop: A Pattern Language for Local Food Systems

Indeed, the results of this study exemplify that Farm Stops enhance the resilience of communities and the strength of local food economies, and that they are a worthy option for communities to pursue to meet these ends. For those interested in the concept of Farm Stops, and who may want to pursue this option for their own community, this research supports a second iteration of this project, which was the development of a pattern language guidebook entitled: *How to Start a Farm Stop: A Pattern Language for Local Food Systems*. This document is a variation of a Pattern Language, which was established by Christopher Alexander in 1977 to highlight the behavioral and psychological interactions in urban and architectural design (Alexander et al., 1977). Pattern Languages consist of a series of patterns that identify a specific element, situation, or challenge of a designed environment and offer suggested tips and solutions to address it. Often, patterns are interrelated.

This guidebook is meant to guide and encourage the creation and development of Farm Stops, similar to that of Argus Farm Stop. For those interested in developing a Farm Stop in their community, this guidebook not only highlights some of the most essential elements, but it also helps map out exactly how to make the store look, feel, and operate. In addition to highlighting the most essential elements, this guidebook offers resources to help achieve your local food system goals.

Within the guidebook, each pattern highlights a specific element involved in developing Farm Stops, and offers suggested solutions and resources gleaned from successful iterations of the existing Farm Stops mentioned in this study. Patterns in the document are organized within sections: Introduction, Getting Started, Financials, Location, Communication, and Operations. At the end of each pattern is a list of related patterns. This allows for a more fluid and interactive experience in which the reader may flip back and forth between the pages to pick and choose the patterns that most pertain to where they are in developing their own store in their own community. All resources within each pattern are included at the end of the guidebook in the Resources and References section.

For those interested in starting their own Farm Stop, the results of the study reported here indicate that it is worth paying special attention to the mission you develop, the variety of products you offer, the relationships you generate between producers, community members, and other local businesses, and the atmosphere your store generates. These elements go towards ensuring that the community financially and culturally supports your presence, which is the key ingredient to generating a strong and resilient local food system.

A copy of the guidebook is accessible via the following link:

- https://issuu.com/katbarr123/docs/how_to_start_a_farm_stop

Conclusion

The purpose of this study was to understand whether Farm Stops enhance the cultural and social value of communities, beyond any financial benefits, for the sake of establishing and strengthening local food systems and enhancing community resilience. Farm Stops are a new method of civic agriculture. They are small-farm supporting grocery stores that operate by primarily selling local products on consignment. Farm stops can take on a number of different business structures including L3Cs, nonprofits, or co-operatives, and often benefit from multiple types of diversified revenue. They are different from other more highly established forms of civic agriculture such as farmer's markets, food co-operatives, and food hubs.

The results of this study demonstrate that Farm Stops do indeed enhance the cultural and social value of communities, and as a result enhance the strength and resilience of local food systems. The results of this study indicated that while providing local producers with an additional sales outlet that honors a fair price for their products is a crucial element towards the establishment of a strong local food system, this system also requires financial and social support from community members. As evidenced in the Economics construct, if people are made aware of who their money is supporting, then they are more willing to pay more for that product. This is particularly true if who they are supporting is a small-scale local producer. Likewise, as demonstrated by the Resilience and Community constructs, when community members feel more connected to a place because they offer services beyond simply purchasing groceries (i.e. a place to hang out, relax, and enjoy the community), then they are more likely to continue supporting the mission of that enterprise. Lastly, by enhancing meaningful action as evidenced by the results of the Advocacy construct, people feel an intrinsic motivation towards purchasing goods at Farm Stops, knowing that their participation contributes to further strengthening a local food system further.

Looking forward, continued research on this topic includes understanding the ways in which farmers and producers interact with and perceive of the impact of Farm Stops on their daily lives and operations; performing feasibility studies on the impact of Farm Stops in more racially, ethnically and economically diverse communities; and ensuring the continued maintenance and dissemination of a pattern language guidebook: *How to Start a Farm Stop; A Pattern Language For Local Food Systems* that provides support for creating a Farm Stop in a new community.

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