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Elizabeth Tierney Beling April 9, 2021

Coping with Crisis: COVID-19's Impact on Metro-Atlanta Alternative Farmers

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Abstract

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In 2020, COVID-19 disrupted all spheres of human activity— including the food system. This paper discusses how alternative farmers in the Metro-Atlanta area were impacted by and forced to adapt to the COVID-19 pandemic. Overall, these farmers demonstrated resilience in the face of this disruption because of farmers' ability to pivot markets, an influx in consumer demand, and an existing network of support systems made up of individuals and organizations in the Atlanta area. These findings suggest that there is resilience built into the Metro-Atlanta alternative food system that may be unique compared to the conventional food system. However, these findings also demonstrate major weak points in the resilience of these alternative farmers which may suggest that there are long-term concerns for alternative farmers' ability to recover from future crises.

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Introduction

In March 2020, the World Health Organization declared COVID-19 to be a pandemic. COVID-19 disrupted many areas of life, including people's access and relationship to food. Given the recent and ongoing nature of the pandemic, there is a wealth of informal observations, journal articles, news articles, and commentary on how COVID-19 has impacted food systems — particularly conventional food systems. The link between COVID-19 and food insecurity on the consumer side is well established. Sudden and wide-scale job losses pushed many people who would not otherwise experience hunger over the edge into food insecurity. Furthermore, according to the World Food Program, an additional 130 million people worldwide are expected to experience famine as a result of the pandemic (Danish Institute for International Studies 2020).

Across the world, food banks were forced to cut services or shut down entirely in response to disruptions in global supply chains that were exacerbated by border control measures and individual hoarding behaviors (Rothmüller 2020). These challenges have been amplified in many places by coexisting disasters, such as in East Africa where a locust plague and deadly flooding combined with COVID-19 to create a "triple threat" (Danish Institute for International Studies 2020). Within the alternative food system, as well, there is evidence that organizations were forced to adapt and innovate to meet the dramatically elevated demand associated with the pandemic (Ollove and Hamdi 2020; Blacher and Fields-Kyle 2021; Honan 2021).

COVID-19's impact on producers, however, is less clear. As of June 2020, 22 countries had imposed export restrictions on food, particularly commodity crops. These restrictions, along with other logistical challenges associated with the pandemic, led to elevated prices for some

staple crops such as rice throughout mid-2020 (Hepburn et al. 2020). Across the world, there were also many highly publicized instances of farmers and producers being forced to dispose of their products because of issues within supply chains (Yaffe-Bellany and Corkey 2020; Severson 2020; Perez, Hirtzer, and Shanker 2020). In April 2020, the American Dairy Farmers association estimated that milk producers were dumping about 3.7 million gallons of milk a day. Much of this food waste was because of a loss of institutional buyers such as hotels and restaurants which bought, prior to the pandemic, in quantities unsuitable for the average consumer (Yaffe-Bellany and Corkey 2020). These items could often not be redirected in time to food banks or other sources of charitable food aid because of logistical challenges such as a lack of refrigerated storage. In response to these supply chain disruptions, the United States Department of Agriculture launched its Fresh Food Box program on April 17th, 2020. This program allowed the United States government to purchase from farmers and producers and distribute these agricultural products through distributors to families in need (USDA 2021). While these disruptions were jarring, it is unclear the magnitude of food waste that occurred during this period and the lasting impact on farms that were affected.

In particular, there is a gap in academic research that explores how alternative food systems have been impacted by COVID-19. Some evidence suggests that there have been increases in certain sales outlets in particular including CSA and co-op sales (Kolodinsky 2020; Schmidt et al. 2020). Additionally, while there are some reports that farmers market sales have been elevated in response to the pandemic, there are also many farmers who have been unable to capitalize on this increased demand because of labor shortages or health concerns (Schmidt et al. 2020). There is also a lack of research that reveals whether these changes have been sustained.

This study seeks to examine specifically how farmers responded to the pandemic in the Metro-Atlanta area. This study provides a unique approach because it seeks to place the context of the pandemic into a broader body of literature examining the work of alternative farmers across the United States. As discussed in more detail in the literature review, alternative food systems have emerged as a source of ideological opposition to conventional, industrial agriculture. This emergence has raised many questions about the long-term viability of alternative food systems in the face of increasingly industrialized agriculture. While there are many manifestations of alternative food systems, I look to the producer side and primarily discuss alternative farmers. In short, showing how (or if) alternative farmers were able to respond to the pandemic may have broader implications for the resilience of alternative agriculture in the face of other crises.

To examine this topic, I conducted 22 semi-structured interviews of alternative farmers involved in selling in the Metro-Atlanta area. To triangulate this information, I also interviewed 12 people involved in organizations supporting farmers in the Metro-Atlanta area. This provided not only an external perspective of how alternative farmers were managing living and working through the pandemic, but also insights into the kinds of supports available for farmers that may have impacted their ability to weather the pandemic. I found that the alternative farmers I spoke with generally were able to manage the impact of the pandemic without major losses in sales--demonstrating their resilience throughout the pandemic. I argue that this resilience was supported by three major trends: alternative farmer's unique ability to pivot markets, rise in consumer demand, and support systems that provided knowledge, resources, and funding to alternative farmers. My findings on resilience fit into a growing body of food systems resilience literature and provide a more component-based analysis of potential sources of resilience. While I discuss

the resilience of these alternative farmers, my second major conclusion is that the pandemic exposed vulnerabilities. These vulnerabilities were both inherent to the alternative food system as well as more broad concerns about food systems resilience.

Research Questions

This study's primary research question is, "How has COVID-19 impacted the alternative food system in the Metro-Atlanta area?" There are several secondary research questions including, what adaptations have farmers had to make to remain viable and how have those adaptations fared for farmers? Another supplementary inquiry is how have organizations and groups that serve farmers assisted in responding to the needs of farmers in the face of COVID-19?

Literature Review

Trends Towards Industrial Agriculture and Challenges Within Agriculture

In order to understand alternative farming, it is important to contextualize it within the larger system of agriculture both in the United States and globally. The landscape of agriculture has drastically changed in the recent past. Throughout the 20th century and into the 21st century, farming became increasingly concentrated in the hands of multinational corporations and more capital and technologically-intensive rather than labor-intensive. Alongside these changes, farms have begun to use hired labor and vertically integrate more often (Lyson and Welsh 2005). The number of farms in the United States decreased from roughly 6.5 million in the 1920s to 2.04 million in 2017 (Carlisle et al. 2019). Similarly, the number of farmers per capita decreased

drastically during this time, from around 25% of Americans in 1933 to 2% of Americans in 2015 (Evans 2019). Corporate farms are still a small percent of farms compared to family-owned farms, however, they represent a large share of all United States farm sales (Lyson and Welsh 2005).

These changes have had several positive impacts on peoples' lives. A decrease in the number of farmers has allowed many people to pursue different careers. Additionally, even while the total number of farms in the United States has declined, the total farm output tripled between 1948 and 2017 (USDA 2020). According to the USDA (2020), the percentage of disposable income that Americans spend on food has declined from 17 percent to about 9.9 percent since 1960. However, this shift towards large-scale, industrial agriculture has raised many challenges. The primary four challenges that have been academically explored are the trend of industrial agriculture towards concentration, the negative effects of industrial agriculture on community life, the impact of industrial agriculture on the environment, and the impact of industrial agriculture on the global south.

One of the most pressing concerns regarding industrial agriculture is the trend toward monopolization. The top four companies in beef packing, flour milling, turkey production, and pork packing all owned over 50 percent of the total market shares in their respective industries by the early 21st century (Patel 2007). For context, if over 20% of shares are owned by the top four firms, an industry is considered concentrated. If over 40% of shares are owned by the top four firms, an industry is considered "highly concentrated". Several prominent agricultural sectors have above the 60% threshold to be considered "distorted": beef slaughter (82%), cane sugar refining (95%), rice milling (85%), and wet corn milling (87%) (Carolan 2016:34). Concentration within the food system not only impacts producers, but also the "middlemen"

between producers and consumers. The food system is shaped much like an hourglass, with very few wholesalers, distributors, and grocers compared to farmers. This shortage of options, alongside the often-perishable nature of agricultural products, means that farmers are often squeezed by a lack of options within this monopsony which limits their ability to advocate for higher prices (Carolan 2016:37). Simultaneously, farmers have experienced increased pressure to adopt the latest agricultural technologies, including seeds, pesticides, and machinery inputs. This continual pressure, known as an agricultural treadmill, to invest high levels of capital into farm inputs has put a strain on small farmers and made it difficult for them to compete with large-scale producers (Carolan 2016:11). This disparity is made especially difficult for smaller farmers to compete because the majority of agricultural subsidies in the United States support large-scale farmers. Between 1995 and 2012, 75% of agricultural subsidies went to 10% of farms (Carolan 2016:11).

There is also evidence that suggests that industrial agriculture may have negative impacts on a variety of community life indicators for those close to industrial farms and processing plants. The body of research that explores this first emerged from the work of Walter Goldschmidt who published a report that found “large-scale, absentee-owned, economically concentrated” farm enterprises had “a dampening effect on community welfare” (Lyson et al. 2001:313; Carolan 2015). Recent studies have expanded on this tradition. Concerning the economic health of communities, industrial agriculture is correlated with poorer metrics in several areas including higher rates of poverty (Durrenberg and Thu 1996; Harris and Craig 1982). There is evidence that industrial farming is associated with higher rates of poverty, and that anti-corporate legislation may mitigate some of these impacts (Welsh and Lyson 2005). Additionally, there is evidence of high unemployment in areas surrounding industrial farms

(Welsh and Lyson 2001). Goldschmidt studies also address how industrialized agriculture may have negative impacts on the social fabric of communities surrounding industrialized farms. This includes the correlation between industrial farms and teen fertility rates, decreases in civic engagement, and decreases in populations surrounding industrial farms (Lobao 1990; Lyson et al. 2001; Swanson 1980).

There is also a body of literature that discusses the detrimental impacts of industrial agriculture on the environment because of its connection to a loss of biodiversity, pollution, fossil fuel use, climate change, and resource use. Industrial agriculture relies heavily on fossil fuels, namely petroleum, and often involves shipping products over long distances for sale or processing. This results in agriculture contributing to between 17% and 32% of all greenhouse gas emissions (Young 2010). Confined Animal Feeding Operations (CAFOs), which are a type of industrial agriculture categorized by highly dense animal production, are particularly resource-intensive and have been extensively studied as a source of environmental concerns. CAFOs contribute to groundwater and surface water pollution, as well as air pollution. They are also often sources of dangerous antimicrobial resistance because animals are frequently given large preventative doses of antibiotics to compensate for unsanitary and overcrowded conditions which weaken animal immune systems (Gurian-Sherman 2008; McKenna 2017). Hog CAFOs have been studied as a source of pollution and a root of health problems such as asthma and mental health conditions such as depression and anxiety (Guidry et al. 2018; Wilson and Serre 2007).

Additionally, industrial agriculture has had some detrimental impacts for farmers in the Global South. Industrial agriculture has reached across the globe in conjunction with neoliberal policy, which is the philosophy that political-economic practices should encourage individual

freedom by reducing trade regulations (Carolan 2016:332). Free trade agreements such as NAFTA have forced farmers in the Global South to lower their prices to compete with artificially low prices resulting from subsidies in the Global North (Mittal 2004). These resulting low prices are often born out of a "race to the bottom" between countries in the Global South which produces artificially low prices at the expense of externalities to surrounding communities (Carolan 2016:120). This trend of increasingly concentrated agriculture has resulted in "a grim harvest of alcoholism, suicides, and a loss of community" (Mittal 2004:71). Some social movements have begun to push back against these trends and advocate for the empowerment of farmers in the Global South, such as La Via Campesina and the Landless Workers Movement.

Overall, there are significant barriers to succeeding as a farmer within this increasingly inhospitable industrial food system, especially for farmers that do not have a large amount of capital or land access. On top of these food system barriers, farmers may lack adequate knowledge or specialized training needed to succeed. Sociocultural barriers may exacerbate these challenges (Calo and Teigen De Master 2016). Even farmers that may be considered "profitable" face significant challenges including burnout, difficulties with personal relationships, and challenges associated with agricultural life (Rissing 2019).

The Emergence and Characteristics of Alternative Food Systems

Alternative food systems are made up of a broad set of philosophies and institutions that oppose the conventions of industrial agriculture. There are a variety of ethics and values that encompass alternative food systems. Table 1 refers to the kinds of institutions that produce and sell alternative foods. Table 2 refers to the ideologies associated with the alternative food movement. Often, alternative food systems are based on the idea that the consumption of food

cannot be sequestered from the political and economic realities of the rest of social life (Grey 2000). They are often marketed with attention to concerns such as the locality of food production and the sustainability of production practices (King 2017). Alternative food began entering the mainstream consciousness throughout the 1970s and 1980s, especially with the popularity of alternative food advocates and celebrities such as Michael Pollan and Alice Waters, as well as academics, activists, and philosophers such as Vandana Shiva and Wendell Berry (Wartman 2012). However, alternative food systems practices have existed long before this emergence of a movement. Despite the rise of this movement, alternative food systems remain much smaller than industrial agriculture in part due to the often higher prices associated with alternative agriculture. In 2010, for example, only two percent of Americans shopped at farmers markets (Wartman 2012).

This is not to conflate these different alternative food system strategies but rather to show the breadth of forms that alternative food systems can occupy, as well as to demonstrate how I have conceived alternative food systems for this research project. I conceptualize alternative food systems as a countering force to conventional, industrial agriculture rather than a cohesive movement. There are some limitations to this framing. There are significant disagreements within the world of alternative food about the extent to which the food system needs to be reformed and the strategies necessary to achieve this change. Some alternative food advocates conceive change as consumer-led, for example, while others argue that it is necessary for there to be widespread policy changes for alternative food systems to compete against the artificially-low prices of industrial agriculture (Wartman 2012). Despite the diversity within the alternative food system, it is not an uncommon distinction to separate the entire food system into two broad streams (Grey 2000).

Table 1. Alternative Food Institutions (AFIs)

AFIs	**Definition**
Community Gardens	Most broadly defined as a “piece of land gardened by a group of people”. Community gardens are found in a variety of places including neighborhoods, hospitals, schools, vacant lots, and parks. Proponents of community gardens attribute a variety of benefits to them including their ability to reduce grocery bills, promote community cohesion, and increase human-environmental connections − especially in urban areas. In the United States, community gardens first emerged after a period of economic depression at the end of the 19th century in Detroit and were notably popular as “Victory Gardens” during World War Iand World War II (Milburn and Vail 2020).
Community Supported Agriculture	According to the USDA, Community Supported Agriculture “consists of a community of individuals who pledge support to a farm operation so that the farmland becomes, either legally or spiritually, the community's farm, with the growers and consumers providing mutual support and sharing the risks and benefits of food

	production" (2019). A typical CSA model involves consumers signing up for a period of time and paying in advance, usually a season, to purchase a CSA share in return for which they receive products. The first CSA in the United States was created in 1985, but the practice has roots in late 19th century biodynamic farming philosophy (Robinson and Farmer 2017).
Co-operatives or Co-ops	Co-ops or co-operatives are "independent businesses jointly owned by their members that come together to meet a common social and economic need and run the business in a democratic and voluntary basis" (Paarlberg 2018). Co-operatives include a wide variety of businesses and are not exclusive to food and agriculture.
Food Hubs	A food hub "is a business or organization that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand" (Barham et al. 2012:4). Food hubs are usually local or regional and may include a social mission objective (Holcomb et al. 2018).

Farmers Markets	The USDA defines farmers markets as "two or more farm vendors selling agricultural products directly to customers at a common, recurrent physical location" (2021). Farmers markets have increased in popularity in the United States since the 1970s, growing from just 340 farmers markets in 1970 to 3000 in 2001 (Brown 2002:167).
Alternative Farms	Farms operating outside of the realm of conventional agriculture. Alternative farms are often guided by the philosophies outlined in Table 2. They may operate alongside different alternative food institutions or incorporate alternative food institutions into their business model. Often, alternative farmers sell directly to consumers (Grey 2000). However, this is not the case for all alternative farmers. For the purpose of this research project, I was deliberately open to the variety of forms that alternative farms occupy.

Table 2. Alternative Food Philosophies

Alternative Food Philosophy	**Definition**
Food Justice	Food justice is a philosophy that seeks to address inequalities in the food chain that result from racism and other forms of oppression, as well as address these issues at their root cause (Alkon 2014).
Local Food Movement	An informal movement that advocates for the consumption of locally grown foods. The definition of what constitutes local varies and is contested (Holcomb et al. 2018).
Food Sovereignty	Food Sovereignty was first coined by Via Campesina, a peasant farming movement, in 1996 (Via Campesina 2003). Food Sovereignty "is the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their food and agriculture systems" (Guerrero 2018:41).
Organic	The IFOAM defines organic agriculture as a

	"production system that sustains the health of soils, ecosystems, and people" (2008). Specific standards for the definition of Organic agriculture are officially delegated by governmental regulations in over 160 countries, including the National Organic Program in the United States (Diekmann and Polacek 2013). There is also a movement of farmers marketing their products as lowercase "organic" without Organic Certification, sometimes referred to as "alternative organic" (Reid 2018).
Sustainable Agriculture	Sustainable agriculture is a system of agriculture that seeks to ensure human needs are met for the future by "enhancing environmental and natural resources and integrating biological processes to sustain economic viability and enhance quality of life" (King 2017).
Slow Food	An organization founded by Carlo Petrini in the 1980s that advocates for "good, clean, and fair food". Slow food hosts a variety of

	programs including its “ark of taste” which identifies regional food products that Slow Food aims to promote and protect from disappearing (Schneider 2008). While Slow Food refers to the organization, it is also used to refer to a set of values.
Food Democracy	Food democracy is a movement that is centered around the idea that humans have the right to safe and nutritious foods and to be active participants in the food system. Food democracy emphasizes promoting environmental sustainability and is critical of corporate control of the global food system (Norwood 2015). Food democracy and food sovereignty were founded with similar goals and desires and are often used concurrently.
Agroecology	Agroecology is defined as “the integration of ecological principles into agricultural systems” (Meek 2014:47). It is often conceived as a kind of sustainable agriculture. Agroecology also plays an important role in guiding many social movements, including

	the Brazilian Landless Workers Movement (Meek 2014).

Alternative Farming

"Alternative" farming emerged out of a desire to move away from some of the common practices in industrial conventional agriculture including monocropping, high level of capital investment and technological inputs, reliance on heavy tillage, and use of synthetic pesticides and fertilizers (Barlett 1987; Batie and Taylor 1989). It also emerged out of an awareness of some of the negative community impacts associated with certain kinds of industrial agriculture such as exploitative labor conditions, loss of biodiversity, risk of disease outbreaks, lack of long-term sustainability, and pollution (Gurian-Sherman 2008; Cramer, Iles, and Bacon 2012). Throughout the 1980s in particular, there was an increase in the number of farms practicing alternative agriculture in opposition to the trend of industrialized agriculture (Bird and Ikerd 1993). I am operationalizing alternative farming as farming practices that are rooted in or utilize one of the alternative farming philosophies or institutions described in Table 1 and Table 2.

Alternative Farmer Strategies for Success

Existing literature demonstrates how alternative farmers often have to engage in creative strategies to remain viable and successful. For example, farmers may hire interns or rely on volunteer labor in order to circumvent costs associated with paid employees (Jansen 2013). Additionally, farmers may engage in bartering and technology sharing with other farmers (Rissing 2016; Siladi et al. 2018). Farmers may also rely upon social networks to obtain resources and knowledge (Siladi et. 2018). Many beginning farmers have to supplement their

farm income with external income from off-farm jobs to remain viable (Bruce 2019). One of the most common alternative agricultural practices, Community Supported Agriculture (CSA), emerged as a risk-management strategy to limit the uncertainty of agriculture (Johnson, Armstrong, and Endres 2013). My research expands on this investigation of alternative farmer strategies.

Methods

Data for this analysis were collected as a part of a larger, ongoing study on the impact of COVID-19 on Metro-Atlanta food systems. At the end of initial data collection, there were a total of 34 interviews collected − 22 farmer interviews and 12 organizational interviews between June 2020 and February of 2021. Out of these interviews, I led 23 of them and co-led 7 of them. Four of the organizational interviews were conducted before I joined the project. Farmers were compensated 50 dollars for their participation in the study from a grant from the Emory Scholars Program and a grant from the Office of Sustainability Initiatives at Emory University.

These data were collected by semi-structured interviews that ranged from 45 to 90 minutes. Largely, these interviews took on a narrative structure. The interviews focused on exploring three broad categories of participant experience: their work before the pandemic and how their work changed as a result of the pandemic; broader observations they had of changes to the food system outside of their own experiences; and their perception about what the food system may look like in a post-COVID world. In conducting interviews, I was guided by the principle that pursuing this kind of data would provide thick description, as well as allow me to access emotional dimensions and meaning-making of the experiences that my participants had (Geertz 1973; Lamont and Swindler 2014).

I initially began this project without a preconceived research question. I had the intention of documenting the impacts of COVID-19 on the alternative food system rather than exploring a specific more theoretically grounded inquiry. As themes of interest began to emerge, I developed my interview guides inductively, drawing upon the experiences and issues that participants chose to highlight as significant to them to flesh out my questioning. I focused on asking open-ended questions to allow my participants to highlight the experiences most valuable to them (Seidman 2019). The interview guides are located in Appendix C (organizational interviews) and Appendix D (farmer interviews). The interviews were conducted via Zoom and recorded to generate transcripts for data analysis.

I conducted data analysis using Dedoose, a qualitative data analysis software. I developed a codebook after reading over the interviews that I had conducted several times to pull out themes. Ryan and Beard (2003) provided useful guidance on how to identify themes and I particularly focused on repetition and indigenous typologies as indicators in emerging themes within my data. I continued to adapt my codebook several times throughout the research process, taking a grounded theory-inspired approach. While I did not follow a strictly systematic coding approach, I drew upon the constructionist aspects of grounded theory throughout this process, focusing on an exploratory methodology (Shim 2014). I particularly focused on retaining the participant narrative throughout my research process, as well as assuming that my role as a researcher impacted the results of my data (Mills et al. 2006). I also drew upon the constructivist idea that social and temporal contexts shape the discovery of a contextual reality within research (Charmaz 2000). The final iteration of my codebook is in Appendix E.

Sampling

Participants in this study were largely selected by word of mouth and solicited for interviews via email or via text message. I chose to engage in snowball sampling because my results are not intended to be generalizable, but rather to provide an insight into a specific alternative food context of Metro-Atlanta. I was able to access a large network of alternative food system participants in part because I had the support and backing of a prominent non-profit in the Atlanta area. I also was able to leverage the connections and expertise of Dr. Hilary King, who personally knew many of the participants. I included in communications my ties to both Dr. Hilary King and the nonprofit, which I believe increased my response rate. I particularly focused on sampling participants who were repeatedly mentioned by their peers as providing a particularly useful perspective, especially those who diverged from the characteristics of other participants. This theoretical sampling is another feature of grounded theory that I incorporated into my research (Mills et al. 2008).

The sample for organizational representatives was limited to non-profits and businesses focused on bolstering the work of local farmers in the Metro-Atlanta area. These organizations included produce aggregators and distributors, farmer advocacy groups, a restaurant that focused on purchasing from local farmers, and a non-profit that manages a network of farmers markets based in Atlanta. I chose sample organizational representatives to better understand how alternative farmers fared alongside the alternative food system more broadly.

Farmers that sold in the Metro-Atlanta area were chosen based on an informal network of those considered “alternative farmers”. I have outlined some of the characteristics and activities of alternative farmers in my literature review. One farmer was located in Alabama, but the rest of the farmer participants were based in Georgia. Farms of a variety of sizes were sampled with the

smallest being under an acre of land in active production and the largest being 3,200 acres of pasture. The majority of the farmers that I interviewed were considered small farmers and had under ten acres of land in production. Farmers from a variety of enterprises were selected; however, all participants grew or produced at least some food. Most of the farmers sampled exclusively produce vegetables; however, there were 6 farmers interviewed who produced meat. Eight of the farmers that I interviewed were Organic certified; however, there were a variety of farms that advertised alternatives to Organic certification such as Certified Naturally Grown or other self-described sustainable practices such as not using chemical fertilizers or focusing on regenerative agriculture. Almost all of the farmers that I interviewed ran their businesses; however several were employed by a primary farmer or business owner. Two of the participants that I interviewed were not intensely involved in day-to-day farming operations but were involved in managing farm sales in some capacity.

Appendix E provides a more detailed description of my participant information. Table 3 describes some of the demographic characteristics of the farmers that I interviewed including their size, if they were Organic certified, and their sales outlets before the pandemic. Table 4 includes a brief description of the goals of their organizations. Table 6 includes a description of the racial demographic characteristics of both the farmers that I interviewed as well as the organizational representatives. Table 7 includes percentages of the gender distribution of the farmers and organizational representatives.

Results

My thematic analysis revealed two broad streams of observations: the resilience of alternative farmers and potential weaknesses in the resilience of alternative farmers. Firstly, the

pandemic highlighted the resilience of alternative farmers. This resilience allowed the farmers to whom I spoke with to weather the pandemic. There are three main trends that I argue enabled this resilience in the face of the pandemic. Firstly, the size and scale of the operations allowed them to shift their sales strategies. Secondly, elevated consumer demand softened the blow of the pandemic. Finally, a variety of supports bolstered farmers throughout the pandemic. These supports came from some of the organizations that I spoke to, as well as from governmental sources, other farmers, and community members. In this section, I define supports broadly: these included tangible resources and funding, but also included more ephemeral supports in the form of knowledge and advocacy. While many of these supports came from existing relationships, I found that the urgency of the pandemic facilitated more deep connections as well as new relationships.

While these points of resilience were prominent, the pandemic also highlighted some weaknesses. These weaknesses included vulnerabilities specific to the alternative food system and alternative farming. However, I also discuss more general vulnerabilities and the ways that my interviews demonstrated a sense of anxiety around uncertainty for the future.

Resilience Among Alternative Farmer

Resilience is a concept that draws from ecology. I define resilience "as a function of that system's ability to absorb external shocks while maintaining core functions" (Rotz and Frasser 2015). Resilience can be conceptualized as a complementary component to sustainability, which focuses on a capacity of a system to function well over a long time (Tendall et al. 2015). There are three core aspects to resilience: adaptability, diversity, and solidarity (Tarra et al. 2021). I found through my research that the alternative farmers I interviewed demonstrated resilience in

that they were able to absorb the shocks of the pandemic while continuing their work. Most literature on food systems resilience is focused on a whole food systems and food security perspectives with less emphasis on the resilience of certain aspects of the food system (Rotz and Frasser 2015; Pingali et al. 2005).

Since food systems are inherently complex with many intertwined pieces, there is a risk for ripple effects from a singular disruption in the food system (Tarra et al. 2021). Similarly, recent works discussing the impacts of COVID-19 largely approach food systems resilience with regards to food security and global supply chains (Garnett et al. 2020; Fan et al. 2021; Moran et al. 2020). Existing literature has made the connection between industrialization and decreases in food system resilience, particularly resulting in the loss of autonomy for small farmers as well as a loss of protective biodiversity (Tendall et al. 2015; Carolan 2016:266). There is some evidence that small-scale agroecological farms have fared better in the face of disasters than their industrial counterparts. In the aftermath of Hurricane Mitch in Nicaragua, Holt-Gimenez found that small farmers experienced less erosion as well as less economic losses than large-scale farms (2002). Similarly, in the aftermath of Hurricane Ike small-scale peasant farmers experienced far fewer crop losses compared to large industrial farms because of the multi-story farm systems that they used (Rosset et al. 2011).

Examining the more granular aspect of alternative farming resilience within the food system is a valuable expansion of existing literature. Understanding which aspects of alternative farming have allowed shocks from the pandemic to be absorbed may provide valuable insights into what changes could be made to make food systems as a whole more resilient—especially in the face of more chronic crises as opposed to acute crises such as hurricanes. Overall, I found three broad areas which supported the resilience of alternative farmers: the ability of farmers to

quickly pivot business operations, the influx of consumer demand accompanying the pandemic, and the supports which bolstered farmers. These trends demonstrate that the alternative farmers I spoke with show the three aspects of resilience: adaptability, diversity, and solidarity. Farmers were able to be adaptable in that they were able to adjust their operations without major issues, largely in part due to the diversity of their pre-pandemic operations. Additionally, an existing culture of solidarity among farmers and within the broader alternative food community was able to support farmers through this time of crisis.

Ability of Alternative Farmers to Pivot Markets

> *"Like, I hope that there's lessons we can carry over from this so that we actually make a better, more sustainable more resilient food system. I think that this also really demonstrated that our food system is fairly resilient. I think that is one thing that I felt was like, you know, there were a lot of farms that struggled a lot of businesses that struggled. My business was able to like figure it out and navigate it and be successful and actually have a good year. And I think that's because we were not too big to make changes like we're small enough that we could adapt. And we're small enough that we could make changes and pivot really fast, even though it was difficult. And that maybe that's a model that's important that we can't- bigger is not always better. That we need a diversity of types of business and models for it so that when unexpected things happen not everything hits the fan like some things are able to- like I feel like there was a business mass extinction. And we were like, we survived it because we were small. We weren't one of the like apex species. Although it's sad that there's so much mass extinctions." - Participant 17*

One of the most prominent themes that emerged throughout my interviews was how the pandemic forced farmers to pivot their operations. For some farmers, these pivots meant entering an entirely new market altogether such as starting a CSA. For others, these shifts meant adapting

some part of their operations that they had prior to the pandemic. This included activities such as increasing social media marketing, expanding the number of sales that they had for a certain market, or beginning to offer pick-up or delivery. For the most part, I found that the farmers did not have to significantly change their production plans, rather shifts occurred with methods of selling or marketing products. A few farmers made last-minute changes to the kinds of crops they were growing including offering more or less variety of crops, as well as pivoting to more consumer-friendly crops compared to specialty crops. This, however, was unusual. Only one farmer I interviewed reported having to waste crops or turn them back into the soil, and that instance was in anticipation of the impacts of the pandemic, not an inability to sell. Table 5 contains a description of what market shifts farmers had to make. For the most part, shifts meant moving to some sort of online ordering system, at least for the first few months of the pandemic.

I found that several trends facilitated these shifts to new markets or allowed farmers to modify sales strategies within farmers' existing markets. Firstly, some of the traits of the farmers that I spoke to allowed them to transition their business practices. These traits included the smaller-scale nature of the alternative farmers I interviewed, as well as the sense of adaptability inherent to being a farmer that primed participants to be flexible in the face of crisis.

Business Partnerships Facilitating Market Shifts

Farmers markets were the largest source of market shifts among farmers that I interviewed. Many large farmers markets in the Metro-Atlanta transitioned to pick-up only models during the first few weeks of the pandemic. This allowed farmers to continue to reach what for many was an incredibly large share of their business. Farmers markets provided spacing guidelines, signage, and safety protocols for their patrons as well as for vendors. For the most part, farmers that I spoke to were satisfied with the work that farmers markets were able to do to

accommodate the pandemic. Only one farmer I spoke with chose to leave a farmers market because of concerns of inadequate social distancing. Another farmer chose not to expand into a new farmers market because the employee that would sell at that location was vulnerable to COVID. Farmers markets managers and leaders also served as crucial advocates for keeping markets open during the first few weeks of the pandemic.

Certain wholesale organizations were able to facilitate this shift to new business avenues. For example, one of the organizations that I interviewed, Organization 5, is a home delivery service that sells organic local and regional meat, milk, eggs, and produce to people in the Atlanta area. Before the pandemic, this organization had about 45 to 50 new customers per week. However, after COVID-19 hit, demand exploded. In the first week of the pandemic, the organization had 650 new sign-ups. In the second and third weeks of the pandemic, they reported 730 and 870 new customers, respectively. To meet this demand they had to double their walk-in cooler space and operating space. They have also expanded their relationships with local farmers, especially with farmers that had previously relied on restaurant sales. I spoke with several farmers that had either existing or new partnerships with Organization 5. They generally had positive feedback about their experiences working with the organization. A few farmers mentioned that Organization 5's online delivery model was sometimes difficult to work with. The farmers often had to predict how much produce they would have ready to sell to Organization 5 in advance, which was difficult to calculate given that their harvests were often irregular.

Another organization, Organization 31, also reported expanding its relationships with farmers as a result of the pandemic. This organization is a wholesale distributor that purchases from sustainable farms. Before the pandemic, they had primarily relied on large-scale

institutional buyers. However, as a result of the pandemic, many of these buyers were no longer able to continue to purchase from Organization 31. To continue their operations, Organization 31 was able to secure a grant from the USDA's Farmers to Families Food Box program. This allowed them to box and distribute the produce to community partner organizations serving food aid. The representative from the organization I interviewed expressed that this grant allowed them to scale up the number of farmers that they partnered with, as well as partner with several large farms. These new partnerships allowed Organization 31 to continue to competitively price for small-scale farmers.

Characteristics of Alternative Farmers that Permitted Shifts

> *"You know, what COVID reveals was really how like the fragility of the commodity food production system and those of us who have been in the food business have been saying that since the beginning, you know. Ever since we kind of focused on marketing grass-fed beef to the end consumer, and how we can do it in a way that is not trying to out Tyson Tyson and out Cargill Cargill. You know, because I can't do Tyson better than Tyson I can't do Cargill better than Cargill. It calls us to think through the fact that while they are incredibly efficient, they are not resilient and they are really affected when one part of the process is not performing. And for us, it's just not like that we have not sacrificed resiliency for efficiency, in fact, we look for ways to build resiliency in place of efficiency and that's the way farms operated prior to World War Two. You know, if pop a harvest the crop and he falls and breaks his leg, you know you better believe they have platinum insurance versus you know today's food production system where it is completely dependent on everything working just exactly as planned and when it doesn't work as plans and it doesn't work at all and. That has been I think a wake-up call for consumers. And you know, a real while it put a really bright spotlight on commodity food it put a really big spotlight on own smaller and more resilient production systems too." - Participant 29*

While there needs to be more research done to compare how alternative farmers fared compared to conventional farmers, there was a common perception among the farmers that some of the characteristics unique to their style of production facilitated resilience that may have not been present within the conventional food system. There are several characteristics unique to alternative farmers which strengthened resilience. Firstly, the scale of production that the farmers I spoke to engaged with enabled quick pivots to different markets. Except for one farmer, most of the farmers that I interviewed were operating at a small scale of production. This meant that it was less logistically challenging to reroute products, for example from restaurant sales to farmers market sales. Secondly, the farmers that I interviewed were already engaged in diverse business models before the start of the pandemic. All of the farmers that I spoke to had at least two distinct sales avenues which they used prior to the pandemic. As Participant 29 stated, "because we had a lot of different irons in the fire with regard to types of customers, we knew how to pivot". The support systems unique to alternative farmers, which I discuss later in my results section are also intertwined with these trends. Finally, farmers spoke about how the lifestyle of being a farmer contributed to their ability to bear the pandemic. Farmers mentioned that the turbulence of farming and the adaptability that the profession necessitates prepared them to adapt to the uncertainty of the pandemic. Since they had to previously deal with uncertainty or unexpected challenges surrounding weather patterns and other events, they considered the pandemic to be less jarring for them than for perhaps other professions. Participant 34.2 pointed out, "we're used to not having a job with health benefits and stability. So, just being like in this weird limbo, where you have to do that for yourself". Additionally, some farmers mentioned how they felt prepared for isolation and social distancing because their work was already fairly solitary and socially distanced. As Participant 13 stated, "it wasn't like we had a whole big social

structure that we were cut off from we were already kind of accustomed to, you know, being out here on our own."

Consumer Demand

> *"I think momentum wise and it made a lot more people aware of how they get their food, and the kind of the fragility of the food system, and kind of the supply chain, and what that looks like. And it made people much more aware of the importance and all the factors that go into how food gets on your table or in your grocery bag, which I think is probably a great first step and getting to a more equitable food system when you look at everyone that's involved along the way, even from farmers that we talked about. You know. people like us to work in warehouses, or you know people that work in grocery stores stocking shelves and cashiers and things like that the other everyone that's involved in touching your food." - Participant 31*

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> *"You know, honestly, if we could have learned to package ear lobes and toenails and whatever else we could have sell them. Yeah, it did not matter what we had available, that was what people bought." - Participant 29*

All of the farmers that I interviewed speculated about some increase in consumer demand during the pandemic. These observations are well-founded. There is evidence that COVID-19 caused people to spend more time at home and to cook more. These changes may be sustained after the pandemic as well, with consumers finding enjoyment in cooking and choosing to make cooking a regular habit (Hunter 2021). Additionally, there is emerging evidence that COVID-19 may have prompted consumers to seek out alternative food sources more frequently (Tarra et al. 2021).

Farmers speculated as to why these changes might have occurred. Many of them thought that people felt unsafe in grocery store settings and preferred more low-contact settings such as farmers markets or on-site pickup, or no-contact options such as delivery. Several farmers I spoke to reported that they had new customers come to them and express that they felt unsafe purchasing from traditional grocery stores. Additionally, exposure to the vulnerabilities of global supply chains was also cited as a potential cause for this shift. People may have been exposed to more of the complexity of the food supply chain through media coverage of food shortages.

> *"I think it at least made the average consumer like more aware of, "oh, okay, my food doesn't come from a grocery store. It comes from farm. It comes from the earth." And it's not an iPhone, you can't just produce more of it like in seconds, like with the flower example. It's like our guys- yeah, we've got four more farms that are going to grow flowers, but flowers take weeks. Like we can't just next week have more flowers, unless we can find another grower, you know, that can sell them to us"- Participant 5*

It is unclear whether the elevated consumer demand will be sustained post-pandemic or the extent to which it has been sustained throughout the pandemic. For many farmers, there has already been stagnation or decline in sales as the pandemic has gone on. This stagnation may have occurred for a variety of reasons, and participants varied in their speculations. Firstly, the most marked and frequently mentioned increase was the surge in panic buying that occurred at the start of the pandemic. Consumers may have pulled back their shopping habits or stopped shopping as frequently after initially stockpiling food. Secondly, it could be because of the re-opening of certain spaces. Consumers may feel safer going into restaurants and grocery stores as the pandemic has progressed, and these spaces have begun to loosen restrictions as well. Additionally, it may have been concurrent with existing lulls in farm sales that occur seasonally.

Most of the farmers I interviewed were hopeful that this shift of interest in alternative food would continue in the future; however, many were cynical about the likelihood of that.

> *"I feel like I know a lot of our customers, but a lot of the new ones when it was crazy. It was so hard to really learn those people and so they might be coming back. I would imagine some of them stuck with me because the sales overall have increased. Plus, if they tried our chicken compared to normal chicken. I mean, sometimes that alone keeps people coming back. But, um, yeah, probably just based on the numbers. Some have stuck with it. But people aren't talking about it like they were in the beginning."- Participant 22*
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> *"Obviously more people cooking at home has been huge, and that bodes well for groups like ours when people are doing more cooking. Cooking at home and are getting, you know, I think early on, you know, there's some initial excitement about trying new things and you know the sourdough breads, right, like how many people's sourdough starters are still alive. Like, not many. You know, like that's the analogy to make. And I think the same goes for, you know, some people kind of going hard in one direction and then you land really back where you started. You know, once you kind of fizzle out. So I think, you know, it's going to be up to you know folks like yourself, studying this issue to really follow those trends and more carefully and looking at the data, but that would be my like what I- what I see. From my perspective, is like, you know, we've witnessed these ebbs and flows in the past and we're kind of back in the midst of that without real certainty on will this ebb back to where we were, or is are these permanent changes? I think for us, I would speculate that for a small percentage of consumers with our have that who made radical changes will continue those changes. Most people will probably end up somewhere in between. And other people I think will go into full retreat back to their place of comfort."- Participant 16*

While these increases in consumer demand were pronounced, it is also unclear whether this translated to increases in sales overall or a net increase in farmer profits. Many of the farmers that I interviewed had not had the time to calculate their yearly sales. Additionally, many confounding factors made it difficult to determine how much of an impact the pandemic had on sales. Some farmers had already planned to scale up their business model and found that the pandemic had accelerated that change. I also interviewed several new farmers who did not have a point of comparison from previous years. Some of the business shifts that the farmers I spoke to made were also more labor-intensive, requiring them to hire new employees which impacted yearly profits. Additionally, costs for packaging, sanitization, and PPE have added strains on farmers.

Losses in certain markets cut into what increased sales farmers may have had. Many farmers reported increased sales in certain avenues, namely farmers markets, CSA sales, and online direct-to-consumer sales. However, for many of these farmers, this increase made up for the loss in demand elsewhere. The restaurant industry was the market most strongly impacted. Institutional buyers such as schools, hospitals, and universities also had to pull back sales. While these avenues have returned for some farmers throughout the pandemic, most of the farmers that I spoke with stated that this was only a partial return. Even as restaurants have begun to reopen, for example, many do not have the income to invest in the premium prices that alternative farmers often have. Since most of the farmers that I spoke to already relied on less impacted sales outlets, this may have skewed their perceptions of consumer demand as well as the demonstration that alternative farmers in Metro-Atlanta were generally not devastated by the impact of the pandemic.

Farmers may also not have been comfortable sharing with me transparently their finances because of my position as a researcher and an outsider, so the observations I have accumulated may be missing the full story. While farmers may be making more money than before the pandemic, that change alone may not be enough to make farming lucrative or livable as a career. For example, there was one participant I interviewed who extensively discussed the way that the pandemic had accelerated their business and increased their sales. However, later on in the interview they also revealed that they had to go on EBT during the pandemic. This evidence raises several questions that should be explored in further inquiries. To what extent has this increase in consumer demand brought in customers who were not previously involved in the alternative food system? How, or if, have these trends been sustained?

Supports: Organizational, Farmer Support, Governmental

A broad range of supports contributed to the resilience of alternative farmers. These supports came from other farmers, organizations, and the government. Many supports were done collaboratively with multiple actors and organizations across sectors contributing to these projects. Support systems were able to offer tangible resources but also informational support and advocacy. Overall, these supports primarily came out of existing relationships. However, the necessity of the pandemic facilitated an expansion of partnerships for many and a deepening of relationships.

*Support Between Farmer*s

> *"Especially in the farming community it's kind of just everyone understands like the nature of the job. You know a little bit more of a unique perspective until you farmed yourself, you don't really you know kind of understand just the strain of what it means when sweet potatoes are here and*

it's time to harvest them and it's raining so you got to get them in, So you call in help kind of thing. So that's always been there, but I never imagined that I'd be like going to my neighbor's doors and leaving like a note saying hey if this thing gets really bad and you need food we're here like that was definitely a little bit different. the uncertainty of everything." - Participant 28

Support and solidarity between farmers was a factor that contributed to the resilience of alternative farmers throughout the pandemic. The most common supportive activity was farmers offering to sell products of fellow farmers if they had an increase in demand. There were several instances in which farmers agreed to sell other farmer's products when another farmer lost a significant amount of sales, such as because of the closure of a prominent restaurant customer. However, there was a broad range of activities that farmers engaged in that fall under the category of farmer-to-farmer support including offering to share labor, sharing knowledge or information, delivering products for other farmers, and intentionally purchasing from other farmers. For most of the people that I interviewed, these relationships had been formed prior to the pandemic. However, the pandemic offered opportunities to change the nature of the relationship between farmers. This finding fits into the idea that solidarity is a component of resilience and can enhance resilience within communities (Tarra et al. 2021). Additionally, this finding builds upon literature that suggests that alternative farmers and others engaging in alternative food production use supportive behaviors as a success strategy (Rissing 2016; Rosol and Schweizer 2012).

Organizational Support

There is an established network of businesses and nonprofits operating out of the Metro-Atlanta area that works at least in part to support farmers. These organizations engage in a broad range of activities from running a network of farmers markets, to offering training to

farmers, to offering programs that "match" farmers market dollars for Supplemental Nutrition Assistance Program (SNAP) customers. This landscape of organizations stepped up to a crisis management role in response to the pandemic. Both organizational leaders and farmers that I spoke to echoed the sentiment that these organizations, which had previously worked closely together before, increased communication and collaboration as a result of the pandemic. Organizational leaders that I interviewed described that for the first few months of the pandemic there would be a weekly food systems Zoom call that was intended to deliver news about the pandemic and current events.

> *"The mayor has deemed us as an essential service, but the parks department is not allowing activities. And so, there are two conflicting mayoral orders about whether or not we can exist in Grant Park. So, the parks department denied us to be able to move back into the park, which is disheartening. But, you know, we found alternative solutions. And you know, I would say that overall, I feel like I could pick up the phone and call any local food leader in Atlanta and talk through like what we're going through either on a personal or professional level. So I would say that, you know, definitely. Overall, I feel like there's been a lot of strengthening of connections." - Participant 8*

The Farmer Fund

One particularly notable example that I heard about during this project from a variety of contributors was the Farmer Fund to provide emergency aid to farmers. Georgia Organics first launched the Farmer Fund in 2018 to provide support to farmers for natural disasters such as tornadoes, floods, storms, and droughts. In response to COVID-19, the fund was expanded to cover an influx of need among farmers by offering $1,000 mini-grants. While the farmer fund was marketed under Georgia Organics, this effort was done in collaboration with several of the other organizations that I spoke to. As of July 2020, they had distributed these grants to 59

farmers. Of the farmers that I spoke to, the majority of them had taken advantage of this funding. Everyone that I interviewed who had applied was accepted and people were generally very happy about the ease of the process. Those that did not choose to apply for this funding cited that they felt that it was not necessary and that they would prefer that it go to another farmer who was more in need of subsidy.

Farmers Markets as a Source of Support

> *"Lily[1] really went to bat for us and made sure that we're following all the rules and made sure everybody was on board. And, you know, if it weren't for her. I think that a lot of the local farmers earlier, the ones at our farmers market would really have taken a big hit. I think for us, I would say that probably the market is about 30% of our weekly income. And so, there would have been a big, big problem, especially because we are on our online market help those in a lot of the gap. But for other farmers, it would have been a real problem. If we had to take a month or two months off of the farmers market."- Participant 13*

Farmers markets were mentioned previously as a partnership which enabled farmers to pivot their sales strategies. Another valuable support from the farmers market included advocacy and informational support. Managers and leaders of farmers markets were instrumental in advocating for farmers markets to be considered essential services during the first few weeks of the pandemic. Additionally, farmers market leaders also had to manage logistical challenges such as moving locations of markets, such as when the Metro-Atlanta parks department did not allow farmers markets to be present. Organizations managing farmers markets that moved to pickup only models during the first few weeks of the pandemic also offered an elevated level of support. These farmers markets had to quickly work with farmers to set up an ordering system. This task

[1] Anonymized identity

was logistically challenging and for one organization required quickly acquiring additional cold storage which was obtained from both another organization and a local restaurant.

Gaps in Organizational Support

For the most part, organizational supports were well received among farmers. However, there was some discontent around the type of supports offered to farmers. One organizational representative who ran a restaurant described an experience where she volunteered to process a large quantity of produce for a farmer who had overproduced a crop during the summer of 2020. While she was able to step in and assist this farmer, she felt that it was a situation that should have been handled by an organization that explicitly was meant to offer support to farmers. Another farmer expressed discontent that prominent farmer support organizations were underpaying farmers on projects for the value of their labor, stating "$15 according to the market is pretty good, but that's a really terrible market to begin with. And it's not a standard we should use when we're talking about creating a regional food system". Similarly, some farmers expressed discontent that prominent organizations were undersupporting certain farmers, especially black farmers as well as those that were not willing to engage with organizational politics.

> *"And I'm willing to say what I really believe those kinds of spaces are desperately needed because a lot of the young people coming into this work are also on unapologetically black or unapologetically revolutionary in they are growing food humbly. They're not going to just participate in the niceties of you know, placating boards and, you know, writing grants that never are ever going to be funded because the, you know, the committee has already decided that you're not- you're a persona non grata. You know, so all these kind of things are messy and problematic and efficient handicaps to Atlanta's food system growth." - Participant 17*

Governmental Support

Primarily, governmental support came in the way of monetary support for farmers both as individuals and as business owners. Many of the farmers that I spoke with were able to access the Coronavirus Food Assistance Program (CFAP) and the Coronavirus Food Assistance Program 2 (CFAP2). Loan programs, such as the Economical Injury and Disaster Loans (EIDL) and Paycheck Protection Program (PPP) also offered monetary support for farmers. As individuals, farmers were able to access the two rounds of stimulus checks that were sent out in March 2020 and January 2021. Additionally, some of the farmers that I spoke to were able to access unemployment because they lost an off-farm job as a result of the pandemic.

Overall, the farmers that I spoke with were satisfied with the level of monetary governmental support that was offered to them during the pandemic. However, there were some gaps in this support. Some farmers that I spoke to expressed that there were gaps in publication for these funding streams, which were particularly detrimental to farmers that were not internet savvy or were members of marginalized groups. Primarily, there was a lack of informational support offered by the government. This was in large part because of conflicting messages about the federal level around COVID-19 safety and the nature of the pandemic. In many cases, other organizations or groups had to step in and offer support that the government was unable or unwilling to provide.

> *"And I want to say that I think part of what made it all feel like a crisis that we were kind of alone and managing was the fact that it was novel and that no one had experience with it. But maybe, more importantly, the fact that we did not have clear reliable trustworthy leadership at a national level. You really just felt it felt like, all bets are off. And we're on our own. And we have to figure this out for ourselves." - Participant 14*
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> *"The beginning was just like chaos and panic and not knowing what to do. We were really just had no idea like about protocols and our government was not helping us. And then I realized that we didn't know everything, but here is just there are no guidelines for farming it is almost impossible to find any guidelines. What we do like the gloves- do we need to wear masks? And do we need to spray off everything with bleach? So, we started. Luckily, I mean, we were- my partner, not my business partner, but my life partner is in public health. And she has a friend who was working on the pandemic and was a great resource. Like, I was literally able to ask this epidemiologist working on this that I shouldn't have had access to like some questions like, what do we need to do? And got some guidance from her that I don't think that most people could have gotten and that was helpful for us." - Participant 18*

Weak Points

While these interviews revealed many instances of resilience built into Metro-Atlanta's alternative food system, the pandemic also exacerbated existing issues in both the alternative food system and the food system more broadly. There is a growing body of literature that examines how COVID-19 has exposed insecurity within the food system in general (Garnett et al. 2020). However, there is a gap in writing that examines the alternative food system specifically in relation to COVID-19. This work provides an initial insight into some weaknesses in the alternative food system specifically derived from the experiences of these alternative farmers. My interviews also revealed stressors of the industrial food system which impacted the alternative farmers that I interviewed. This finding demonstrates how while alternative farmers may be sequestered from the conventional food system, this division is not enough to shield them from some of the detrimental impacts of the dominant industrial food system.

Insecurity within the Alternative Food System

One vulnerability that my research revealed was the small size of alternative farmers' operations. While this proved to be an asset in some regards, it was an issue in others. The workload of the pandemic was very taxing mentally and emotionally for farmers, especially since most of the farmers that I spoke with had no or very few additional staff to support them. Some farmers that I spoke with expressed a desire to bring on more staff; however, they knew that they did not have the capital to support expanding their operation. Additionally, many of those that I spoke to worried if they were to become ill with COVID-19 or needed to quarantine, there would be no one else to take over their business operations. For some farmers, this led them to change their social behavior to be as cautious as possible. Becoming ill was not an option for many people because that would mean at least two weeks, potentially more, of their livelihood being out of commission.

"Part of it, though, is been a real sense of- I wouldn't say fear, but very deep concern because it is just my husband and I primarily running the business, we had to make sure right from the very beginning, you know, we had to be very, very careful if one of us got sick. Or both, both got sick. That would be bad. And we don't have, you know, we don't have like a bunch of people we could just call. We can't take sick time really or anything. And if we don't- if we're not delivering that we're not, you know, getting a paycheck. So, and also the other farms who are depending on us, you know, to do to make sales and do the deliveries for their businesses. So, that's been a real very serious thing that we've taken extra precautions." - Participant 13

Healthcare and childcare were also frequently mentioned by participants as issues. The closure of in-person schooling increased the stressor of a lack of affordable childcare options. Additionally, the fear of getting sick made the lack of affordable and quality health insurance options available to farmers more apparent. This was especially true for farmers who had relied

on off-farm employment for healthcare before the pandemic. One of the organizations that I spoke to offered a year of health insurance for farmers, which proved useful for some of the farmers that I spoke to. While this gap did not end up direly impacting the lives or health of the farmers that I spoke to during the pandemic, health insurance was consistently mentioned as a necessity for farmers that was not being met.

> *"Healthcare is an issue for farmers. He gets his healthcare free through the VA and I had my health care through my employment, I'm on an Affordable Care Act plan now, but it's not as good as my old health care plan and the hoops that I have to jump through to continue to qualify for the subsidies are tedious. Yeah, so, you know, some sort of acknowledgment that this is an unprecedented time from the federal government or even better, some sort of farmer-based health care plan so that I never had to worry about it again would be. That would be nice." - Participant 24.2*
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> *"One of our biggest challenges was childcare, we have two little boys. And like with us both working full time that was very challenging and I don't really know if I have an answer for who should have been providing that just because of the nature of the virus in back in April, May, even now the thought of like having them into a group with adults outside of our like little circle here on the farm. We've experienced COVID twice and both times we've just had to completely shut down. It's been very challenging because we don't have anyone to pass the work on to like my husband is the miller, he runs the mill. So, if he goes down then we have to shut down just out of consideration for others have not spreading it, but we don't have someone else to step in and mill it- or if one of the kids get sick."- Participant 28*

One of the most frequently cited concerns among the alternative farmers that I spoke to was the lack of accessible small-scale animal processing in the area surrounding Metro-Atlanta. Currently, the USDA requires all meat that is sold across state lines to be processed at

USDA-approved and inspected plants. Georgia allows meat that is sold within state lines to be processed at USDA-approved state-inspected facilities. Since it is often expensive to maintain this certification, there are very few meat processing plants in the Metro-Atlanta areas, especially small meat processing plants. All of the animal producers that I spoke to mentioned that this was a barrier for the alternative food system. This was a barrier before the pandemic, however, the pandemic exacerbated this shortage and led to increased wait times for meat processing because many USDA-approved slaughterhouses closed as a result of the pandemic. One farmer that I spoke to ended up losing a significant amount of animals because they were unable to take them in for processing. Another farmer, for example, had to entirely pull out of farmers markets because they lost access to a processor. All of the meat producers that I talked to were adversely impacted by this shortage except for one farmer who was able to offer on-farm processing. Farmers mentioned that a possible solution to this problem would be to make on-farm processing more accessible. They also suggested that the passage of the Processing Revival and Intrastate Meat Exemption (PRIME) Act would relieve some of this stress.

> *"So one of the reasons, it was only three months or- three or four months was that our butcher shop the guy that we take our beef to get processed that got shut down at the end of- sometime in April. I forget the exact date so before that happened we were just going along with whatever Grant Park was deciding to do. At that point, because at some point they canceled the physical markets and we had an online listing there and then, once our butcher got shut down we basically had to pull out of everything that we were selling at except for the farm stand. Because, along with him getting shut down there were so many people that were trying to take animals like purchasing them as quarters, halves, wholes from other farmers that the butcher shops were just slam packed and booked out upwards of a year at some point. So when we lost ours, we did a lot*

scrambling to try and find something, but we didn't couldn't find anyone that was willing to do it, the way we needed to be at the markets, so we shut everything down except the farm stand."- Participant 25

Pandemic Highlighting Uncertainty for the Future and Broader Food Systems Concerns

"My heart breaks for those people. You know, to have the rug snatched out from under you. In a way, you know, it could happen any of us."- Participant 29

While my findings demonstrate that the pandemic was not as bad as many farmers feared it would be, the pandemic overall was incredibly difficult for those that I interviewed. My findings on resilience do not diminish how, for many, the pandemic was traumatic. A large portion of the stress that came from the pandemic was the anxiety that it provoked. Those that I interviewed recounted reading about or watching certain insecurities within the food system, such as how restaurants were forced to close or lay off their employees or how large-scale farms in the midwest had to destroy tons of potatoes. While many were unsure of the scale or the longevity of these disruptions, these events elicited a sense of worry for many that the food system overall was vulnerable. Additionally, many felt that the pandemic shined a light on broader societal problems such as class division and institutionalized racism.

"Yeah, I mean, as money gets tighter the inefficiencies that we have within our regional food system are getting squeezed. And then I don't- And then also, when you talk about inequality in the food system it, you know, we've got to consider that from the foundation, the country we've built off of devalued, exploited labor. And that has continued from and that's continued into the industrialization agriculture" - Participant 6

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> *"And frankly understanding that this is not the last global pandemic that we're going to see in our lifetimes, probably. That was really for me when I descended into despair in July that part of what happened was this, you know, I'm sure I don't know if you read that the last fully intact ice shelf in Canada had collapsed. I was just like, oh, this is like this is our new reality is crisis management, probably for the rest of my life. I'm sorry, I feel like are you- am I depressing you?" - Participant 14*

While overall the farmers that I interviewed were able to weather the pandemic and remain viable, the experience did raise concerns about the long-term viability of their careers for some of the participants. There was a sense among some of the participants that while they had been able to circumvent a disaster, this experience was jarring and reminded them of vulnerability. Climate change, in particular, was mentioned as a source of future insecurity, so much so that several participants expressed how they were actively beginning to combat the impacts of climate change on their farms through mitigation measures such as using high tunnels to protect crops from abnormally warm summers.

These fears of climate change and environmental degradation are well-founded. Since the 1950s, carbon emissions, methane emissions, species extinction, world population, ocean acidification, and stratospheric ozone depletion have all skyrocketed as a result of human activity (Angus 2016). The current rate of species extinction is 1,000 times the base rate of species extinction (Pimm et al. 2014). Although it is difficult to predict the extent of global warming, the planet is expected to warm 4 to 5 degrees Celsius by 2100 if we do not make major changes to carbon emissions (Thiele 2016). This has in large part to do with industrial agriculture, as well as fossil capitalism. This demonstrates that while alternative farmers may have built-in resilience, this is not enough for them to continue to be resilient. If future shocks to the alternative food

system are more severe, alternative farmers and their livelihoods could be in much more pressing danger.

> *"So we are already starting to think about it, but it's hard to- there's the interplay between high-level fixes and policy changes and like what we can do on an individual farm level. I mean, we want this to be our career but if global warming drives us out of it in 10 years there's not a backup plan for us." - Participant 24.2*

Discussion and Conclusion

Overall, COVID-19 has put tremendous stress on the food system. Many academics and activists have used the opportunity of the pandemic to call for reflections on the state of the food system (Worstell 2020; Petetetin 2020; Loker and Francis 2020; Henderickson 2020). Some academics have argued that the consolidation of the industrial food system contributes to vulnerability to disaster and that there must be large-scale changes to make food systems more resilient (Henderickson 2020). Given the degradative impacts of industrial agriculture on the environment, community health, small-scale farmers, and the Global South, this inquiry into reform is warranted.

My discussion with alternative farmers in the Metro-Atlanta area revealed a remarkable resilience and adaptability to the pandemic. All of the farmers that I interviewed were able to continue their business operations despite a significant disruption because of their ability to adapt business strategy, the influx of consumer demand, and the support systems for alternative farmers built into the Metro-Atlanta area. COVID-19 may be unique in some regards, however, this finding could provide evidence of a broader sense of resilience to disaster among alternative farmers. While this is only a specific community of alternative farmers, this research warrants further inquiry into the practices of alternative farmers more broadly. A better understanding of

the state of alternative agriculture may provide the groundwork to make general claims about the resilience of alternative agriculture.

This sense of resilience among alternative farmers was, however, often overshadowed by a sense of worry among the farmers. These fears included issues within the alternative food system such as a lack of adequate meat processing plants, underrepresentation of black farmers among prominent local organizations, and limitations related to the small size of the farmers. However, alongside these specific issues with the alternative food system, there was also a sense of anxiety around alternative farmers coexisting and competing with the industrial food system. Additionally, farmers expressed broad concerns about their ability to work through future disasters, notably those caused by climate change. These findings indicate that while alternative farmers have intentionally separated themselves from the industrial food system, they are not entirely protected from its impacts.

My findings could provide insight into some prescriptive measures that could improve alternative food systems' resilience and sustainability. Since being able to pivot markets was useful for the alternative farmers I interviewed, increasing access to training and resources for farmers on business strategies and management tools could be useful. Additionally, since consumer demand was such an instrumental part of alternative farmers' resilience, finding ways to bring more consumers to purchase alternative food consistently could provide a sense of security for farmers. This could take the form of subsidies for smaller farmers to allow them to compete with the prices of industrial farming. Additionally, there could be an expansion of governmental and organizational support to reduce some of the pressures associated with farming such as providing healthcare, childcare, access to land, and access to technical training.

More resource and technology support for alternative farmers such as cold storage, meat processing, and equipment could be beneficial as well.

Finally, my research demonstrated a hope among many participants that this moment would inform an assessment and reevaluation of food systems and our relationship to food. COVID-19 has revealed and laid bare many existing inequalities and disparities. This provides an opportunity to reflect on what characteristics of our food systems, alternative or otherwise, are vulnerable, inequitable, or otherwise undesirable. COVID-19 will likely not be the last or the most severe disruption that food systems face in the near future. This research warrants further investigation into normative questions of how food systems can and should be improved to be more resilient, sustainable, and equitable.

References

Alkon, Alison Hope. 2014. "Food Justice and the Challenge to Neoliberalism." Gastronomica 14(2):27–40. doi: 10.1525/gfc.2014.14.2.27.

Angus, Ian. 2016. Facing the Anthropocene: Fossil Capitalism and the Crisis of the Earth System. NYU Press.

Batie, Sandra S, and Daniel B. Taylor. 1989. "Widespread Adoption of Non-Conventional Agriculture: Profitability and Impacts." American Journal of Alternative Agriculture 4(3/4):128–34.

Barlett, Peggy F. 1987. "Industrial Agriculture in Evolutionary Perspective." Cultural Anthropology 2(1):137–54. doi: https://doi.org/10.1525/can.1987.2.1.02a00110.

Béné, Christophe. 2020. "Resilience of Local Food Systems and Links to Food Security – A Review of Some Important Concepts in the Context of COVID-19 and Other Shocks." Food Security 12(4):805–22. doi: 10.1007/s12571-020-01076-1.

Bird, G. W., and John Ikerd. 1993. "Sustainable Agriculture: A Twenty-First-Century System." The Annals of the American Academy of Political and Social Science 529:92–102.

Blacher, Rachel, and Nichole Fields-Kyle. 2021. "Nimble in a Pandemic: Lessons Learned from Concrete Jungle's Grocery Delivery Program." Journal of Agriculture, Food Systems, and Community Development 10(2):1-4-1–4. doi: 10.5304/jafscd.2021.102.011.

Barham, James, Debra Tropp, Kathleen Enterline, Jeff Farbman, John Fisk, and Stacia Kiraly. 2012. Regional Food Hub Resource Guide: Food Hub Impacts on Regional Food Systems, and the Resources to Support Their Growth and Development.

Brown, Allison. 2002. “Farmers’ Market Research 1940–2000: An Inventory and Review.” American Journal of Alternative Agriculture 17(4):167–76.

Bruce, Analena B. 2019. “Farm Entry and Persistence: Three Pathways into Alternative Agriculture in Southern Ohio.” Journal of Rural Studies 69:30–40. doi: 10.1016/j.jrurstud.2019.04.007.

Reid, Rita-Marie Cain. 2018. “Alternative Organic: Legal Issues in Marketing Uncertified Organic Products.” Food and Drug Law Journal 73(4):570–600.

Calo, Adam, and Kathryn Teigen De Master. 2016. “After the Incubator: Factors Impeding Land Access Along the Path from Farmworker to Proprietor.” Journal of Agriculture, Food Systems, and Community Development 6(2):111–27. doi: 10.5304/jafscd.2016.062.018.

Carlisle, Liz, Maywa Montenegro de Wit, Marcia S. DeLonge, Adam Calo, Christy Getz, Joanna Ory, Katherine Munden-Dixon, Ryan Galt, Brett Melone, Reggie Knox, Alastair Iles, and Daniel Press. 2019. “Securing the Future of US Agriculture: The Case for Investing in New Entry Sustainable Farmers” edited by A. R. Kapuscinski and E. Méndez. Elementa: Science of the Anthropocene 7(17). doi: 10.1525/elementa.356.

Cartmell-Thorp, Susanna. 2016. “THE CONNECTED FARMER: A New Opportunity for the Agricultural System.” *Spore* (180):13–17.

Carolan, Michael. 2016. The Sociology of Food and Agriculture. London: Routledge.

Charmaz, Kathy. 2008. “Constructionism and the Grounded Theory Method.” Pp. 397–412 in Handbook of Constructionist Research. New York: The Guilford Press.

Cavalli, Suzi Barletto, Panmela Soares, Suellen Secchi Martinelli, Sergio Schneider, Suzi

Barletto Cavalli, Panmela Soares, Suellen Secchi Martinelli, and Sergio Schneider. 2020. "Family Farming in Times of Covid-19." Revista de Nutrição 33. doi: 10.1590/1678-9865202033e200180.

Danish Institute for International Studies. 2020. COVID-19: IMPACT AND INNOVATIVE RESPONSES. Danish Institute for International Studies.

Diekmann, Florian, and Kelly Myer Polacek. 2013. "Organic Farming: A Research Guide." Reference & User Services Quarterly 52(3):197–204.

Durrenberger, E., and K. Thu. 1996. "The Expansion of Large Scale Hog Farming in Iowa: The Applicability of Goldschmidt's Findings Fifty Years Later." doi: 10.17730/HUMO.55.4.WTN74681U08T882V.

Evans, Sterling. 2019. "The 'Age of Agricultural Ignorance': Trends and Concerns for Agriculture Knee-Deep into the Twenty-First Century." Agricultural History 93(1):4–34. doi: 10.3098/ah.2019.093.1.004.

Fan, Shenggen, Paul Teng, Ping Chew, Geoffry Smith, and Les Copeland. 2021. "Food System Resilience and COVID-19 – Lessons from the Asian Experience." Global Food Security 28:100501. doi: 10.1016/j.gfs.2021.100501.

Garnett, Philip, Bob Doherty, and Tony Heron. 2020. "Vulnerability of the United Kingdom's Food Supply Chains Exposed by COVID-19." Nature Food 1(6):315–18. doi: 10.1038/s43016-020-0097-7.

Geertz, Clifford. 1973. The Interpretation of Cultures. New York: Basic Books.

Glesne, Corrine and Alan Peshkin. 1992. Becoming Qualitative Researchers: an Introduction. White Plains, NY: Longman.

Grey, Mark A. 2000. "The Industrial Food Stream and Its Alternatives in the United States: An

Introduction." Human Organization 59(2):143–50.

Guerrero, Dorothy Grace. 2018. "The Limits of Capitalist Solutions to the Climate Crisis." Pp. 30–46 in The Climate Crisis, South African and Global Democratic Eco-Socialist Alternatives, edited by V. Satgar. Wits University Press.

Guidry, Virginia T., Sarah M. Rhodes, Courtney G. Woods, Devon J. Hall, and Jessica L. Rinsky. 2018. "Connecting Environmental Justice and Community Health: Effects of Hog Production in North Carolina." North Carolina Medical Journal 79(5):324–28. doi: 10.18043/ncm.79.5.324.

Gurian-Sherman, Doug. 2008. "CAFOs Uncovered: The Untold Costs of Confined Animal Feeding Operations". Union of Concerned Scientists, 41-66.

Harris, Craig K., and Jess Gilbert. 1982. "Large-Scale Farming, Rural Income, and Goldschmidt's Agrarian Thesis." Rural Sociology 47(3):449–58.

Hendrickson, Mary K. 2020. "Covid Lays Bare the Brittleness of a Concentrated and Consolidated Food System." Agriculture and Human Values 37(3):579–80. doi: 10.1007/s10460-020-10092-y.

Hepburn, Jonathan, David Laborde, Marie Parent, and Carin Smaller. 2020. COVID-19 and Food Export Restrictions:: Comparing Today's Situation to the 2007/08 Price Spikes. International Institute for Sustainable Development (IISD).

Holcomb, Rodney B., Clinton L. Neill, Joanna Lelekacs, Margarita Velandia, Timothy A. Woods, H. L. Goodwin, and Ronald L. Rainey. 2018. "A Local Food System Glossary: A Rose by Any Other Name." Choices 33(3):1–8.

Holstein, James A. 2008. Handbook of Constructionist Research. New York: Guilford Press.

Holt-Giménez, Eric. 2002. "Measuring Farmers' Agroecological Resistance after Hurricane

Mitch in Nicaragua: A Case Study in Participatory, Sustainable Land Management Impact Monitoring." Agriculture, Ecosystems & Environment 93(1):87–105. doi: 10.1016/S0167-8809(02)00006-3.

Honan, Caitlin. 2021. "A Food Nonprofit's Response to COVID-19:" Journal of Agriculture, Food Systems, and Community Development 10(2):1-4-1–4. doi: 10.5304/jafscd.2021.102.009.

Hunter. 2021. "America Keeps On Cooking." Retrieved March 8, 2021 (https://www.prnewswire.com/news-releases/america-keeps-on-cooking-301208005.html).

IFOAM. 2008. "Definition of Organic Agriculture." Retrieved March 10, 2021 (https://ifoam.bio/why-organic/organic-landmarks/definition-organic).

Janssen, Brandi. 2013. "Herd Management: Labor Strategies in Local Food Production." *Anthropology of Work Review* 34(2):68–79. Doi: https://doi.org/10.1111/awr.12011.

Johnson, Nicholas R., Rachel Armstrong, and A. Bryan Endres. 2013. "Community Supported Agriculture: An Exploration of Legal Issues and Risk-Management Strategies." Natural Resources & Environment 28(2):26–29.

King, Hilary. 2017. "The Meshwork of Alternative Food Systems: Negotiating Sustainability in Chiapas, Mexico." Retrieved March 14, 2021 (https://etd.library.emory.edu/concern/etds/d217qq32v?locale=en).

Kolodinsky, Jane, Marilyn Sitaker, Lisa Chase, Diane Smith, and Weiwei Wang. 2020. "Food Systems Disruptions:" Journal of Agriculture, Food Systems, and Community Development 9(3):5–8. doi: 10.5304/jafscd.2020.093.013.

Kremen, Claire, Alastair Iles, and Christopher Bacon. 2012. "Diversified Farming

Systems: An Agroecological, Systems-Based Alternative to Modern Industrial Agriculture." Ecology and Society 17(4).

Lamont, Michèle and Ann Swidler. 2014. "Methodological Pluralism and the Possibilities and Limits of Interviewing." Qualitative Sociology 37(2):153–71.

Lobao, Linda M. 1990. Locality and Inequality: Farm and Industry Structure and Socioeconomic Conditions. SUNY Press.

Loker, Ali, and Charles Francis. 2020. "Urban Food Sovereignty: Urgent Need for Agroecology and Systems Thinking in a Post-COVID-19 Future." Agroecology and Sustainable Food Systems 44(9):1118–23. doi: 10.1080/21683565.2020.1775752.

Lyson, Thomas, and Rick Welsh. 2005. "Agricultural Industrialization, Anticorporate Farming Laws, and Rural Community Welfare." Environment and Planning A 37:1479–91. doi: 10.1068/a37142.

Lyson, Thomas, Robert Torres, and Rick Welsh. 2001. "Scale of Agricultural Production, Civic Engagement, and Community Welfare." Social Forces 80:311–27. doi: 10.1353/sof.2001.0079.

McKenna, Maryn. 2017. Big Chicken: The Incredible Story of How Antibiotics Created Modern Agriculture and Changed the Way the World Eats. National Geographic Books.

Meek, David. 2014. "Agroecology and Radical Grassroots Movements' Evolving Moral Economies." Environment & Society 5:47–65.

Milburn, Lee-Anne S., and Brooke Adams Vail. 2010. "Sowing the Seeds of Success: Cultivating a Future for Community Gardens." Landscape Journal 29(1):71–89.

Mills, Jane, Ann Bonner, and Karen Francis. 2006. "The Development of Constructivist

Grounded Theory." *International Journal of Qualitative Methods* 5(1):25–35. doi: 10.1177/160940690600500103.

Mittal, Anuradha. 2004. "The New Face of Agriculture: Alternative Models to Corporate Agribusiness." Race, Poverty & the Environment 11(1):71–73.

Moran, Dominic, Frances Cossar, Magnus Merkle, and Peter Alexander. 2020. "UK Food System Resilience Tested by COVID-19." Nature Food 1(5):242–242. doi: 10.1038/s43016-020-0082-1.

Norwood, F. Bailey. 2015. "Understanding the Food Democracy Movement." Choices 30(4):1–5.

Ollove, Andy, and Samiha Hamdi. 2021. "Activating the Local Food System in Emergency Food Response." Journal of Agriculture, Food Systems, and Community Development 10(2):1-3-1–3. doi: 10.5304/jafscd.2021.102.006

Patel, Raj. 2007. Stuffed and Starved: Markets, Powers and the Hidden Battle for the World Food System. Melbourne: Schwartz Pub.

Petetin, Ludivine. 2020. "The COVID-19 Crisis: An Opportunity to Integrate Food Democracy into Post-Pandemic Food Systems." European Journal of Risk Regulation 11(2):326–36. doi: 10.1017/err.2020.40.

Reid, Rita-Marie Cain. 2018. "Alternative Organic: Legal Issues in Marketing Uncertified Organic Products." Food and Drug Law Journal 73(4):570–600.

Rissing, Andrea. 2016. "Alternative Economic Strategies and the Technology Treadmill: Beginning Vegetable Farmers in Iowa." Economic Anthropology 3(2):304–14. doi: https://doi.org/10.1002/sea2.12061.

Rissing, Andrea. 2019. "'Profitability' vs. 'Making It:' Causes and Consequences of

Disembedding Beginning Farms' Finances." Culture, Agriculture, Food and Environment 41(2):149–57. doi: https://doi.org/10.1111/cuag.12234.

Robinson, Jennifer Meta, and James Robert Farmer. 2017. "Understanding Community Supported Agriculture." Pp. 55–80 in Selling Local, Why Local Food Movements Matter. Indiana University Press.

Rosset, Peter Michael, Braulio Machín Sosa, Adilén María Roque Jaime, and Dana Rocío Ávila Lozano. 2011. "The Campesino-to-Campesino Agroecology Movement of ANAP in Cuba: Social Process Methodology in the Construction of Sustainable Peasant Agriculture and Food Sovereignty." The Journal of Peasant Studies 38(1):161–91. doi: 10.1080/03066150.2010.538584.

Rosol, Marit, and Paul Schweizer. 2012. "Ortoloco Zurich: Urban Agriculture as an Economy of Solidarity." City 16(6):713–24. doi: 10.1080/13604813.2012.709370

Rothmüller, Ninette. 2020. "Food Insecurity and COVID-19." Pp. 87–98 in Social Problems in the Age of COVID-19 Vol 2, Volume 2: Global Perspectives, edited by G. W. Muschert, K. M. Budd, D. C. Lane, and J. A. Smith. Bristol University Press.

Rotz, Sarah, and Evan D. G. Fraser. 2015. "Resilience and the Industrial Food System: Analyzing the Impacts of Agricultural Industrialization on Food System Vulnerability." Journal of Environmental Studies and Sciences 5(3):459–73. doi: 10.1007/s13412-015-0277-1.

Ryan, Gery W. and H. Russell Bernard. 2003. "Techniques to Identify Themes." Field Methods 15(1):85–109

Paarlberg, Michael A. 2018. Agricultural Co-Ops:: An Alternative Vision. Institute for Policy Studies.

Perez, Marvin, Michael Hirtzer, and Deena Shanker. 2020. “Smashing Eggs, Dumping Milk: Farmers Waste More Food Than Ever.” Bloomberg.Com, May 18

Pimm, S. L., C. N. Jenkins, R. Abell, T. M. Brooks, J. L. Gittleman, L. N. Joppa, P. H. Raven, C. M. Roberts, and J. O. Sexton. 2014. “The Biodiversity of Species and Their Rates of Extinction, Distribution, and Protection.” Science 344(6187). doi: 10.1126/science.1246752.

Pingali, Prabhu, Luca Alinovi, and Jacky Sutton. 2005. “Food Security in Complex Emergencies: Enhancing Food System Resilience.” Disasters 29(s1):S5–24. doi: https://doi.org/10.1111/j.0361-3666.2005.00282.x.

Schneider, Stephen. 2008. “Good, Clean, Fair: The Rhetoric of the Slow Food Movement.” College English 70(4):384–402. doi: 10.2307/25472277.

Seidman, Irving. 2019. Interviewing as Qualitative Research: a Guide for Researchers in Education and the Social Sciences. New York, NY: Teachers College Press.

Severson, Kim. 2020. “The Farm-to-Table Connection Comes Undone.” The New York Times, April 9.

Shim, Janet K. 2014. Heart-Sick: the Politics of Risk, Inequality, and Heart Disease. New York: New York University Press.

Siladi, Syke, Cynthia Isenhour, Jessica Leahy, Sara Velardi, Melissa Ladenheim, Kourtney Collum, and Julia McGuire. 2018.“Sustainability in the Maine Maple Sugaring Industry.”

Swanson, Larry. 1980. “A Study in Socioeconomic Development: Changing Farm Structure and Rural Community Decline in the Context of the Technological Transformation of American Agriculture.” ETD Collection for University of Nebraska - Lincoln 1–325.

Tarra, Simona, Giampiero Mazzocchi, and Davide Marino. 2021. “Food System Resilience

during COVID-19 Pandemic: The Case of Roman Solidarity Purchasing Groups." Agriculture 11(2):156. doi: 10.3390/agriculture11020156.

Tendall, D. M., J. Joerin, B. Kopainsky, P. Edwards, A. Shreck, Q. B. Le, P. Kruetli, M. Grant, and J. Six. 2015. "Food System Resilience: Defining the Concept." Global Food Security 6:17–23. doi: 10.1016/j.gfs.2015.08.001.

Thiele, Leslie Paul. 2016. Sustainability. Cambridge, UK: Polity Press.

USDA. "USDA Farmers to Families Food Box | Agricultural Marketing Service." Retrieved March 3, 2021 (https://www.ams.usda.gov/selling-food-to-usda/farmers-to-families-food-box).

USDA. "USDA ERS - Farming and Farm Income." Retrieved March 4, 2021 (https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/farming-and-farm-income/).

USDA. "Average Share of Income Spent on Food in the United States Remained Relatively Steady From 2000 to 2019." Retrieved March 4, 2021 (https://www.ers.usda.gov/amber-waves/2020/november/average-share-of-income-spent-on-food-in-the-united-states-remained-relatively-steady-from-2000-to-2019/).

USDA. 2019. "Community Supported Agriculture | Alternative Farming Systems Information Center| NAL | USDA." Retrieved March 10, 2021 (https://www.nal.usda.gov/afsic/community-supported-agriculture).

USDA. 2021. "Local Food Directories: National Farmers Market Directory | Agricultural Marketing Service." Retrieved March 10, 2021 (https://www.ams.usda.gov/local-food-directories/farmersmarkets).

Via Campesina. 2003. "Food Sovereignty : Via Campesina." Retrieved March 10, 2021

(https://viacampesina.org/en/food-sovereignty/).

Wartman, Kristin. 2012. “FOOD FIGHT: The Politics of the Food Industry.” New Labor Forum 21(3):74–79.

Wilson, Sacoby M., and Marc L. Serre. 2007. “Examination of Atmospheric Ammonia Levels near Hog CAFOs, Homes, and Schools in Eastern North Carolina.” Atmospheric Environment 41(23):4977–87. doi: 10.1016/j.atmosenv.2006.12.055.

Worstell, James. 2020. “Ecological Resilience of Food Systems in Response to the COVID-19 Crisis.” Journal of Agriculture, Food Systems, and Community Development 9(3):23–30. doi: 10.5304/jafscd.2020.093.015.

Yaffe-Bellany, David, and Michael Corkery. 2020. “Dumped Milk, Smashed Eggs, Plowed Vegetables: Food Waste of the Pandemic.” The New York Times, April 11.

Young, E. M. 2010. “Deadly Diets: Geographical Reflections on the Global Food System.” Geography 95(2):60–69.

Appendices:

Appendix A: Initial Contact Email

Hello,

I hope this message finds you safe and well. My name is Elizabeth Beling, and I am an Emory student working on a research project about local Atlanta food systems and COVID's impacts on these systems, in partnership with CFM. Hilary King, the lead investigator on this project, gave me your contact information and suggested that I reach out.

Given the important work that farmers like you are doing to provide food during this time of great disruption, my colleagues and I would love to interview you about how your operations have been impacted and how you have adapted in response to the pandemic. We understand that there are many competing demands on your time but want to include your voice and perspective in this study. We are also planning on offering 50 dollars as compensation for participating in this project. Is there a time next week that you may be available to speak with us, or is there another representative from your farm who we should reach out to instead? You can use this link here to schedule an interview: https://calendly.com/ebeling/60min

Here is a brief summary of the goals of our project:

> The COVID-19 pandemic has highlighted once more the inequities, fragilities, and supply issues within Atlanta's food systems. Many organizations, companies, and communities have taken the opportunity to fill great need amidst these food-system shocks by reorganizing and adapting to our current circumstances, potentially to forge a better future. We seek to examine how provisioners and consumers of local food have interacted with this outbreak, especially as this pertains to new structural reorganizations

and with an interest in how these responses and their effects differ across social and economic boundaries. In order to better address these lines of inquiry, we are seeking conversation from 'alternative' food organizers, charitable food aid organizations, mutual aid networks, consumers, sustainable/local farmers, and other key actors in the Atlanta food ecosystem.

Thanks so much and hope you are keeping well!

Best wishes,

Elizabeth Beling

Appendix B: Interview Protocol and Informed Consent Discussion

Thanks so much for taking the time to complete this interview on the impacts of this pandemic on your work and your livelihood.

Before we get into questions, we wanted to give you a quick summary of our project, followed by some discussions about how we will use the information from this interview.

COVID-19 has caused major disruption throughout the way people access, create, and distribute food in Atlanta. We seek to understand how the food systems in Atlanta have been affected by and are adapting to this moment. In order to meet these research goals, we have created a study program based on the following considerations.

We focus our scope on food system disruptions, realignments, and adaptations observed and participated in by our participants, their organizations, and their communities. We will be collecting data through surveys and interviews like this one. Our study population will be adults within the Metro Atlanta area and associated nearby local farms.

Informed Consent Discussion:

Thank you for your interest in our COVID-19 and food systems research study. We would like to tell you everything you need to think about before you decide whether or not to join the study. It is entirely your choice. If you decide to take part, you can change your mind later on and withdraw from the research study.

The purpose of this study is to understand how food systems have been disrupted by and adapted to the COVID pandemic. This study will take about 30-60 minutes to complete.

This study is not intended to benefit you directly, but we hope this research will benefit communities and practitioners in the future. You will not be compensated for your participation in this study.

You have a choice of whether you would like your person or project identified by name. At the bottom of this form, we ask you to indicate if and how you would like you or your organization to appear in study results. You can also change your mind at any point of the study as well by contacting the PI (contact information listed below).

De-identified data from this study (data that has been stripped of all information that can identify you), may be placed into public databases where, in addition to having no direct identifiers, researchers will need to sign data use agreements before accessing the data. We will remove or code any personal information that could identify you before your information is shared. This will ensure that, by current scientific standards and known methods, it is extremely unlikely that anyone would be able to identify you from the information we share. Despite these measures, we cannot guarantee the anonymity of your personal data.

If you agree, we will record this Zoom call and use the call transcript for data analysis. Call recordings will be deleted as soon as transcripts are generated and de-identified.

A study number rather than your name will be used on study records wherever possible. Your name and other facts that might point to you will not appear when we present this study or publish its results (unless we are directed otherwise by you). You should be aware, though, that study records can be opened by court order. They also may be provided in response to a subpoena or a request for the production of documents. Certain offices and people other than the researchers may look at study records. Government agencies and Emory employees overseeing proper study conduct may look at your study records. These offices include the Office for Human Research Protections, the Emory Institutional Review Board, the Emory Office of Research Compliance. Should future research be funded by an outside donor, funders may also look at study records. Emory will keep private any research records we create to the extent we are required to do so by law. We will disclose your information when required to do so by law in the case of reporting child abuse or elder abuse, in addition to subpoenas or court orders.

Your data from this study may be useful for other research being done by investigators at Emory or elsewhere. To help further science, we may provide your de-identified data to other researchers. If we do, we will not include any information that could identify you. If your data are labeled with your study ID, we will not allow the other investigators to link that ID to your identifiable information.

Once the study has been completed, we will prepare summaries of the results. Should you wish to read a summary, we are happy to provide it. We will not send you your individual results from this study.

Contact Information

If you have questions about this study, your part in it, your rights as a research participant, or if you have questions, concerns or complaints about the research you may contact the following:

Dr. Hilary B King, Principal Investigator: 404-712-0101 or by email at hbking@emory.edu

Emory Institutional Review Board: 404-712-0720 or toll-free at 877-503-9797 or by email at irb@emory.edu

Consent Questions

Do you have any questions about anything I just said? Were there any parts that seemed unclear?

Do you agree to take part in the study?

Do you agree that we can record this call?

How would you like to be identified (or not) in this study (e.g. your name and title, organization but not your name, “an alternative food vendor”, etc.)?

Participant agrees to participate: Yes No

If Yes:

Name of Participant _____

Participant agrees to call recording: Yes or No

Signature of Person Conducting Informed Consent:

Appendix C: Interview Questions for Farmers

1. We understand your activities revolve around…. Can you give me a quick overview of what you were doing/growing/selling before the COVID crisis?
2. What did you think would happen to your farm at the start of the pandemic?
3. What actually happened?
4. How has COVID-19 and related impacts affected you and your farm?
    a. Sales strategies changes?
    b. Sales outcomes - What sort of changes have you observed in overall sales, sign-ups, or participant bases? Can you share some data on this? Did any specific items sell more or less?
    c. Organizations or partnerships - are you selling at or working with different groups than before
    d. Have you had access to or accessed any external supports, like the Farmer Fund, or received unexpected support from other sources?
    e. How has COVID affected your staff? Your internal operations?
    f. Are there supports that you wish that you were getting through the pandemic? Where/who do you think those should come from?
    g. Have you felt like there were distinct phases of coming to some sort of "new normal" since the start of the pandemic? If so, what are they? If not, how so?
5. When it comes to the Metro Atlanta food system, what major changes has COVID brought about in your experience? (local food is important)
    a. Pre-COVID, race, location, income, etc are factors that shape the food system in Atlanta and people's access to different kinds of food. In your experience, how has the pandemic affected these differences? Do you have any examples of how the pandemic has shaped how our local food system interacts with these differences?
    b. In addition to the pandemic, this summer's uprisings for racial justice were pronounced in Atlanta. Did this have any impact on you and your farm business?
    c. Who are the hidden leaders from this period of time that have observed?
    d. What has been inspiring to you?

6. How might this pandemic provide momentum towards a more sustainable and equitable food future?
    a. Is there anything currently happening that needs to continue or cease in your opinion?
7. Is there a question we did not ask that you wish we had asked? And how would you answer it?

Appendix D: Interview questions for organizational leaders

1. We understand your activities revolve around…. Can you give me a quick overview of what you were doing before the COVID crisis?
2. How has COVID-19 and related impacts affected this work?
    a. What sort of changes have you observed in overall sales, sign-ups, or participant bases? Can you share some data on this?
    b. How has this changed your partnerships and programming?
3. How has COVID affected your staff? Your internal operations?
4. When it comes to the larger local food community, what major changes have you seen?
    a. What organizations are you working with? Have these changed?
    b. Can you describe how the COVID crisis is interacting with already existing food inequalities in Atlanta? Has this crisis shifted the inequalities that you deal with?
    c. Who are the hidden leaders from this period of time that have observed?
    d. What has been inspiring to you?
5. Is there anything that stands out for you during this time? Startling? Exceptional?
6. Overall, how has this adaptation gone? Are there other sectors of the food system that have had a different experience?
7. What do you think might change from all this in the future?
    a. How might this pandemic provide momentum towards a more sustainable and equitable food future?
8. Is there a question we did not ask that you wish we had asked? And how would you answer it?

Appendix E: Participant Information

Table 3. Farm Characteristics

Participant #	Approximate Farm Size (in production)	Primary products sold	Organic	Pre-pandemic sales outlets	Additional Notes
6	Less than one acre	No	No	Farmers Markets	
9	11 acres	Vegetables, honey	Yes	Institutional markets, CSA, Farmers markets	
10	10 acres	Vegetables, Fruits, herbs, flowers, mushrooms	Yes	Restaurant, Farmers markets, Institutional markets, Events, Grocery	
11	2.5 acres	Vegetables and herbs	No	Farmers markets, Sales for pick up on-site	
12	3 acres	Vegetables and flowers	Yes	Farmers markets, restaurant sales, wholesale, Sales for pick up on-site	

13	60 acres	Vegetables, Meat, Herbs, Prepared foods	No, but Certified Naturally Grown	A cooperative model with other farms, Online market for produce box delivery, Farmers Market	Products refers to all co-operative products, not just those specific to the farm
14	4 acres	Vegetables	Yes	CSAs, Restaurants, Wholesale, Plant Sale	
15	1.75 acres	Vegetables	No	Restaurant sales, online sales	
18	1.5 acres	Vegetables, fruits, flowers	Yes	CSA, Restaurants, Sales for pick up on-site, Grocery	
21	1 acre	Vegetables	Yes	CSA, Online sales	
22	62 acres of pasture	Meat (Beef, chicken, lamb, rabbit, turkey)	No	Farmers markets, Wholesale	

23	Unclear, emailed	Vegetables, eggs	No	Farmers markets	
24.1 and 24.2	Less than one acre of vegetable production, 30 acres of pasture	Vegetables, eggs, pork	No	Farmers markets, direct to consumer	
25	345 acres of pasture	Beef, Chicken, Eggs	No	Farmers markets, sales for pick-up on-site	
26	1.5 acres: less than a quarter acre of vegetable production and, 1.25 acres of pasture	Vegetables, chicken	Yes	Farmers markets, CSA	
27	One-third of an acre	Vegetables	No	Farmers markets, sales for pick-up on-site	Grown in neighborhood gardens

28	55 acres	Grains, Some vegetables	Yes	Restaurants, CSAs, online sales, wholesale	
29	3200 acres in production	Livestock	No	Grocery, wholesale, online sales, on-site sales	
30.1 and 30.2	N/a, hydroponics grown in two shipping containers, the equivalent of 3.5 acres	Vegetables, primarily leafy greens and herbs	No	Farmers markets, online sales, CSA with delivery (called a subscription)	Largely started sales during the pandemic
32	About an acre	Vegetables, seedlings, flowers	No, certified naturally grown	Farmers markets, online sales	Grown in neighborhood gardens
33	300 acres of pasture	Beef	No	Institutional sales, word of mouth, online sales	
34.1 and 34.2	A quarter acre	Primarily flowers and a small number of vegetables	No	Farmers market, CSA, restaurants, florists	

Table 4. Organizational Characteristics

Participant #	Organizational Characteristics	Additional Notes
1	A non-profit organization that promotes urban farming and gardening in the Metro-Atlanta area	
2	A government agency focused on marketing Georgia grown produce	
3	A non-profit organization that works to improve access to healthy food choices for Georgians	
4	A non-profit organization that provides support for small and organic farmers	
5	A produce-box delivery service that focuses on partnering with local and restorative farms	
7	A local non-profit that focuses on access to fresh, healthy, and local food	
8	A local non-profit that focuses on access to fresh, healthy, and local food	Participant 7 and Participant 8 were representatives from the same organization
16	A non-profit that works to share land, resources, and tools with refugee farmers	
17	An organization that offers leadership	

	and technical skills training, networking, and other professional development opportunities for the individuals supporting the development of equitable and sustainable local and regional food systems	
19	A restaurant in Atlanta that purchases heavily from local farmers	
20	A distributor that sells locally grown products at farmers markets in the Metro-Atlanta area	
31	A wholesale distributor that before the pandemic primarily sold food from small and mid-sized farms to institutional buyers in the Southeast	

Table 5. Farmer Sales Changes

Participant #	Pre-pandemic sales outlets	Pandemic Sales Outlet Changes	Sales Changes, Commentary on Consumer Demand	Additional Notes
6	Farmers Markets	Market switched temporarily to online pre-ordering and pickup	Noticed an increased interest in alternative food systems among consumers, but sales changes for themself were inconclusive	

9	Institutional markets, CSA, Farmers markets	Stopped attending both farmers markets because one of them was shutting down and the other did not have social distancing guidelines; reduced sales to institutional buyers; expanded CSA capacity and added more single-purchase CSA box options	Sales increased and consumer demand increased for CSA, however, that increase did not make up for losses in other sales avenues	
10	Restaurant, Farmers markets, Institutional markets, Events, Grocery	Sold to fewer restaurants; events and institutional markets largely dried up	Sales “almost doubled” at farmers markets	Focused on a more diverse set of crops for farmers markets
11	Farmers markets, Sales for pick up on-site	Farmers market sales went online, orders assembled for customers by market staff	Increased sales, difficulty keeping up with demand	
12	Farmers markets, restaurant sales, wholesale,	Transitioned on-site sales to online pre-order online, Created an online ordering platform; one	Increased sales as well as dramatically increased consumer demand	

	Sales for pick up on-site	farmers market closed; started to offer delivery		
13	Cooperative model with other farms, Online market for produce box delivery, Farmers markets	Farmers market started to offer online pre-orders	Increase in online market sales to the point where they had to shut off sign ups	
14	CSAs for pick up on-site, Restaurants, Wholesale, Plant Sale	Switched CSA and plant sale to a no-contact system	Lost most restaurant sales but had more interest in CSA than ever before	
15	Restaurant sales, online sales	Stopped selling to restaurants for about two weeks, started to offer delivery for online sales	Slight decrease in sales that they attributed to changing farm locations concurrently with the pandemic; still found that consumer demand had increased	Thought that consumer demand had increased despite changes in sales
18	CSA, Restaurants, Sales for pick up on-site, Grocery	Restaurant sales decreased from about 30-40% of business to about 10% of the business; added plant sales; started offering online pre-orders	Found that direct-to-consumer demand increased drastically which made up for losses in restaurant sales	

21	CSA, Online sales	Added a gardening business where they would install gardens and consult customers about growing food	Overall, saw a drastic increase in both the gardening program as well as other sales outlets	Exclusively e-commerce before the pandemic
22	Farmers markets, Wholesale	Started an online store; Started selling through a multi-farm CSA	Sales and consumer demand significantly increased during the pandemic	Noted that they were already in the process of expanding but the pandemic likely accelerated that
23	Farmers markets, direct to consumer	Farmers market and direct to consumer sales moved to an online platform, Started selling through a multi-farm CSA and through another organization	Online sales did not decrease, but they said it was unclear if there was an increase in sales; consumer demand for agriculturally sensitive products such as eggs increased	
24.1 and 24.2	Farmers markets	Had to turn down an opportunity to expand into a new farmers market because of social distancing concerns; Some farmers markets did online pickup for 3-4 weeks	There was an increase in consumer demand, however, because of limited inventory that change did not translate into a significant increase in sales- only a slight increase occurred	

25	Farmers markets, sales for pick-up on-site	Farmers markets transitioned to online ordering and pickup for 3-4 weeks, had to pull out of farmers markets and switch to only farm stand sales because of production difficulties	Overall, there was an increase in consumer demand initially. However, that did not translate to increased sales after the first few months because of the inability to get livestock processed	
26	Farmers markets, CSA	Pulled back from restaurant sales; Started a garden subscription program; Farmers market sales went to online preordering for several weeks	Experienced a decrease in sales for the first two quarters of 2020- attributes this decrease in part to personal commitments to other activities	Decided to plant fewer varieties of vegetables; was more lenient with pricing as a pandemic response
27	Farmers markets, sales for pick-up on-site	Shifted to more storage crops to prepare for potential food shortages; created a pre-ordering system and an online marketplace; started selling at a new pop-up market location	Saw sales and consumer demand increase during the beginning of the pandemic followed by a stagnation	Grown in neighborhood gardens
28	Restaurants, CSAs, online sales, wholesale	Opened up on-site pickups for online ordering; scaled back on restaurant sales; had to source product from	Saw a drastic increase in online storefront sales which replaced previous restaurant sales	Offered more lenient pricing as a pandemic response

		other farms to meet online order demands		
29	Grocery, wholesale, online sales, on-site sales	Pulled back in restaurant sales as a result of closures; the reduced amount of sale to grocery outlets to make room for online commerce	Saw a drastic increase in sales as well as in consumer demand	Brought in new staff who had been laid off as a result of the pandemic from other jobs to help manage order fulfillment
30.1 and 30.2	Farmers markets, online sales, CSA with delivery	Farmers markets that they were using went to online ordering and pickup temporarily; decided not to try to work with restaurants as a primary business venture;	Since they started farming right as COVID-19 began, there was not a change in sales	Hydroponics farm; switched crop planning to accommodate shifting markets
32	Farmers markets, online sales	Increased online marketing; farmers markets switched to online pre-ordering temporarily; Joined a group CSA	Noticed a slight uptick in sales as well as in consumer demand	Grown in neighborhood gardens
33	Institutional sales, word of mouth, online sales	Started selling at a farmers market; increased online sales marketing strategies; began creating	Loss of sales from institutional buyers; Noticed an increase in demand from consumers but whether infrastructure sales changed	

		partnerships with restaurants	or not overall was inconclusive	
34.1 and 34.2	Farmers market, CSA, restaurants, florists	Farmers market switched to online pre-ordering temporarily; started offering delivery to CSA members; largely stopped restaurant sales, started selling to a wholesaler; started selling at a new brick and mortar location	Noticed increased sales overall as well as increased consumer demand	

Table 6. Demographic Characteristics (Race)

	White	Black	Latinx	Asian	Total
Farmers	19 (79.16%)	4 (16.66%)	0 (0%)	1 (4.16%)	24 (100%)
Organizational Leaders	10 (83.33%)	1 (8.33%)	1 (8.33%)	0 (0%)	12 (100%)

Table 7. Demographic Characteristics (Gender)

	Male	Female	Total

Farmers	12 (50%)	12 (50%)	24 (100%)
Organizational Leaders	7 (58.3%)	5 (41.6%)	12 (100%)

Appendix F: Codebook

Parent code	Child Code 1	Child Code 2
Pre-COVID		
	Org-Org Partnerships	
		Farmers
		Schools
		Non-profits
		Governmental
		Businesses
		Other
	Market (farmers and distributors)	
		Gardening
		Grocery
		Delivery
		CSA
		Events
		Plant Sales
		Direct to Consumer
		Farmers Markets
		Online Commerce
		Wholesale
		Institutional
		Restaurant
	Background	
COVID Effects		
	Changes to Existing Markets	
		Gardening
		Grocery
		Delivery
		CSA
		Events

		Plant Sales
		Direct to Consumer
		Farmers Markets
		Online Commerce
		Wholesale
		Institutional
		Restaurant
	Food system disruptions	
		Conventional
		Alternative
		Charity
	Sales Changes	
		Increase
		Decrease
		Inconclusive
		Dropping/leveling off of demand
	Changes in consumer demand	
	Impacts on partnerships	
	Effects on others in ATL/GA	
	Effects beyond GA/general societal changes	
COVID Responses		
	Org-Org Partnerships	
		Businesses
		Farmers
		Schools
		Non-profits
		Governmental
		Other
	Expansion into new markets or expansion of	

	existing markets	
		Gardening
		Grocery
		Delivery
		CSA
		Direct to Consumer
		Farmers Markets
		Online Commerce
		Wholesale
		Institutional
		Restaurant
	Supports	
		Farmers Markets
		Between farmers
		Knowledge
		From the Government
		Community supports
		From organizations
		From Individuals
		Labor
		Funding
		Farmers offering supports
		Resources
	Changes in infrastructure	
	Responses by others in ATL/GA	
Resilience		
	Weak spots	
	Points of strength	
Future		
	Hopes/Desires	
	Anxieties	

	Predictions	
	Plans	
Food-system explanations		
Participant suggestions for research		
Quotes		

Appendix G: Thematic Quotes

These quotes were some that I thought were particularly interesting in framing my observations that I did not have space to include in my main body of text. I have included them to provide the opportunity for readers to hear directly to understand the thought processes of my participants and what they considered to be important to them.

Resilience Quotes:

"Participant 32: Once things kind of change, or like once it changed in March like there's going to be some like an adjustment to the way of life so. And then yeah it's just a matter of adjusting and actually just seeing this more of an opportunity than anything else, just a good way to put it. And that'll create I'm guessing that would create a lot of momentum, as far as like new ideas. Once you're in a bind or something you definitely have to try to figure something out so.

Elizabeth Beling: That's super interesting, I think that's an observation that kind of rings true for a lot of the people that we've ended up talking to.

Participant 32: Yeah, it's just going to be a new thing that we have to think about, but I don't think it's a bad so much of a bad thing it's just. I like to think of things as opportunities, rather than you know, something that's just gonna stay with us it's probably going to be- it's going to help us in some way.

Elizabeth Beling: Yeah, I think there's there's definitely like one positive thing out of it has been just the innovation.

Participant 32: That's the silver lining, right."

-

"I have a lot of hope for a longer-term shift in people's buying habits and, you know when all this stuff first happened like the farmers markets sold out immediately like out of meat- out of you know everything. I mean, like a lot of grocery stores did too. But I think people are being so much more mindful about how they're spending their money. I think the pandemic combined with a national racial uprising have really made people think about their intentions and their purpose and shopping- at least I hope so."- Participant 8

--

"A lot of our customers were, you know, have been very concerned about what's been in the news about farmers who had to like turn to crowd funders, destroyed produce. Then there's definitely not been anything that we have had to deal with at all or any of our farmer friends. Everybody that we know who are growing on our level model or smaller. The mid-scale organic farmers who just had more and more demand. So, if nothing else, you know, COVID I think really helped to impress upon people again, you know, that the local food system is really important."- Participant 13

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"One is that, um, once a pandemic started- I'm sure you guys remember at the beginning of the pandemic people like swapping and grocery stores are buying stuff out. So, people worried about, well, can I get access to local food? And people increasingly wanted to know where that came from. I didn't even know there was such a thing as Google business. So we started getting phone calls from folks who just found us on Google. And we could tell because they were ringing my phone. We people just saying, well, you know, I just want to local source to get vegetables and they questioned us about how do we grow and that type of stuff."- Participant 11

--

"We've helped out farmers and we've gotten help from them. So, we've done more buying and selling, buying in and then selling out of produce to support other farmers and to get support from other farmers,

when we needed it. So, when we needed more stuff than we had and we needed an extra things for our CSA we've bought from farmers this year, more than we've ever have. We probably sold a little bit more to other farmers to me ever have as well this year so that they can fill out their CSAs and things like that. We had someone come in and use or fridge a couple of times to share also to store things." - Participant 18

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"I think the vertical integration was really the biggest part of the diversity in business, you know that that that's another one that I hadn't really thought about, but if we had one customer. You know, we would be at their discretion if they weren't able to open and close, then we would not be able to sell that product. But because we had a lot of different irons in the fire with regard to types of customers, we knew how to pivot. We might not have pivoted as quickly as we should have, but at least we knew how to do it. You know, again losing all of our restaurant accounts, if we had just served restaurants, we would have been screwed learning how to do e-commerce in March of 2020. But we had been doing it for a long time, so it took us some time to scale up and hire more people and train them, but we knew how." - Participant 29

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"We had people calling us, day and night wanting us to sign up to get with those programs, but we really felt like I mean more than anything we had, we had more sales and than ever. And so, we didn't really feel like we needed those support programs. I mean, are we consider ourselves to be colleagues with our chefs that we work with in Atlanta. I mean, we knew they were people who are really hurting, and they were, you know, they were themselves just trying to keep their staff, you know, in some kind of emergency, you know, payroll system so that they didn't have to, you know, fire or lay off their own employees. So, we knew that we were not the ones that needed to get that kind of support if anything else."- Participant 13

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"We were also actually coordinating with some other farms like from Birmingham and other areas that we don't normally work with where they had a surplus because their chef accounts kind of stopped ordering. So, we were able to actually really ramp up because we had the infrastructure already with our

online market program were able to ramp up supply, you know, there are many more customers and then many more orders. We had to actually for the first time ever we had to turn off our new members for our online market. And still, at this point, we're not right now- we're not taking new members" - Participant 13

Weakness Quotes:

"Yeah, so I think the biggest like the most glaring inequality is how difficult the government makes the lives of poor people. Like, the people who were meant to be helping the most we make it really hard for. And the way that came to light with the shop CFM retail program is we wanted to be able to serve our SNAP EBT customers, but you can't use your SNAP card on e-commerce sites. And, you know, there's no reason there's just no reason why you shouldn't be able to find a way to make it functional online and they have now and they're rolling it out with these big-box vendors like Amazon and Target where now you can use these pilot SNAP online option, but there's no reason to wait until a pandemic to have that functionality. It should have been done a long time ago. And, um, and it's just an example of how we, as a society, we don't build out social support programs with empathy for human dignity, you know, we make it difficult and burdensome and people who already have this burden of poverty on them. We've been adding these added burdens hoops to have to jump through, right? And it's just it's a constant reminder and a constant assault on dignity." - Participant 7

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"You know, from a land-use perspective we overproduce calories and we under-produce nutrition. If the USDA has nutrition guidelines that recommend a certain amount of fresh fruits and vegetables, but we don't have enough land in production to grow enough fruits and vegetables so that every- you can take this every Georgia and it is in every American every North America. You know, can't- actually like we don't actually have enough food to allow people to meet those dietary guidelines that are being endorsed by our Department of Agriculture than we need to, will have no choice but to shift those subsidies to the types of producers and types of businesses and types of farmers that are growing those things that, to me, we're investing in the wrong areas we have an opportunity to if we do choose to continue to subsidize agriculture, then we can be a lot more intentional and in what we choose to subsidize because at this point. If we're looking at consumers and we're competing on price and convenience. We can't compete on

a price with a subsidized product we're growing something at a true cost and another farmer is getting a direct payment to make it possible for them to sell at below production costs value." - Participant 16

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"You know, truth be told, even though we are starting to see some improvements in sales that are going to small farmers, we still don't know if they're making money. We still don't know if they're making a living wage. My wife retired last year, so she can run the phone full time and she still gets a Social Security checks. But you look at some of these younger farmers that may not be the case, then you may still have some off-farm job. And as we talk about building the- really starting to put an infrastructure stuff like food hubs, and cold storage, and meat processing plants. It's really, really important to know those financial metrics, what's actually happening on the ground." - Participant 11

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"Where we where we really, really see problems happening now is in access to government resources for farmers of color. That's always been an issue USDA has always had problems being equitable with the funding. I'm just gonna leave, leave it at that. But the pandemic has really shone a bright light on that, especially as it came- as it pertains to aid programs. A lot of farmers of color either found out about programs too late to apply for them, or couldn't apply for it because of the whole technology issues, or didn't find out about them at all. I think that's a big issue." - Participant 11

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"So, I and also just the pandemic really highlighted the issues we have with our supply chains and so like we had to- we all had to create new supply chains in cooperation with each other and essentially grassroots supply chains. And so, it just highlighted that like you can't- we can't be against logistics or supply chains. We can be against ones that we don't think are good or that have problems are that are too distant, but the concept of moving things from one place to another is important, and like valuable and relevant and there's nothing inherently wrong with having to work together or having to like have multiple sets of hands working together to get things from point A to point B. Like it just has to happen sometimes. And I think people who had previously been very purist about how local food looks or like how it moves in

the system. They just had to abandon that or like, get over it- like that's not the only way that it works."- Participant 12

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"I don't know, it's been it's been such a whirlwind know this year between March and October just feels like it feels like there were six weeks or something. It just felt like it's been a whirlwind, the tornado, it's been wild. Well, we're ready for a little bit of a break. Again, but I don't know when we're going to get it"- Participant 13

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"You know, we're seeing, and this is somewhat COVID related- is obviously trade policy is huge here, but we're seeing direct farmer payments skyrocket at the USDA. And you can follow that money and you can look at the, you know, overly simplified pie charts of the industries that's going to and what we're subsidizing right now, you know, and we're subsidizing unhealthy foods that tend to also feature exploitative labor situation and extractive environmental issues with them. And so, that's very concerning to me this is to me, like obvious. You know, it's a clear opportunity to we had and we have I learned. I hope I cannot say this in the past tense. I started to say we had, but I want to say we have an opportunity to make a shift towards regional food systems. This year, maybe even next year. Are we going to take it or are we going to go back to the old way of doing business through subsidizing inequitable systems that are, in my opinion, are very much deepening and exacerbating inequalities that we already knew were present prior to the pandemic?" - Participant 16