

Local Food to Early Care Solutions Initiative: Farm to ECE Supply Chains Report

Co-Authored by: Carrie Furman, PhD, Research Scientist, UGA

Faidra Papavasiliou, PhD, Principal Senior Lecturer, GSU

Research project conducted in partnership with Georgia Organics.

Kimberly Della Donna, Farm to School Director, Georgia Organics





This project was generously funded by the James M. Cox Foundation

Table of Contents

Introduction

| | 1.1 - Problem Statement 1.2 - Research Summary 1.3 - Report Outline 1.4 - Broader Impacts of this Research | |
|----|---|----|
| - | | |
| 2. | Methods 2.1 - Phase 1: Data from Food Suppliers and Distributors | 5 |
| | 2.2 - Phase 2: Initial Steps and COVID-19 Pandemic Modifications | 5 |
| 3. | Phase 1 - Distributor Research | |
| | 3.1 - Definition of Local and its Impacts on Sourcing, Distribution and Identification | 7 |
| | 3.2 - Target Clients and Ordering | |
| | 3.3 - Range of Services to Clients | |
| | 3.4 - Range of Services to Farmers | |
| | 3.5 - Preliminary Summary of Obstacles to Working with ECEs 3.6 - Areas of Recommendations for Best Practices | |
| | 3.7 - Producers and Distributors Identified in This Study | |
| 4. | Phase 2 - ECE Research | |
| | 4.1 - ECE Case Studies | |
| | 4.2 - Results | |
| | 4.3 - ECE Expansion of Farm to ECE Activities | 12 |
| | 4.4 - COVID-19 and Changes in Distribution | |
| | 4.5 - Farm to ECE Sourcing Lessons | |
| | 4.6 - Inventory of Key Lessons | |
| | 4.7 - Inventory of Key Identified Barriers | |
| | 4.8 - Creating a Supportive Farm to ECE Community | 15 |
| 5. | Recommendations and Conclusions | |
| | 5.1 - Potential Solutions to Sourcing Problems | |
| | 5.2 - Considering Food Quality and Packaging | |
| | 5.3 - Financial Resources | 19 |
| 6. | Work Cited | |
| | A.1 - Phase 1: Distributors interviewed or identified | 20 |
| | A.2 - Interview Questions for Distributors | 20 |
| | A.3 - Interview Questions for the ECE | 20 |
| Ap | opendix | 21 |



1. Introduction

1.1 Problem Statement

The current food supply chains traditionally accessed by Early Care and Education Providers (ECEs) in Georgia, US are lacking in their ability to easily and affordably provide fresh, local foods. This greatly impacts the young children who attend ECEs, as nutritiously dense food has shown to increase a child's readiness to learn. Exploring a variety of fresh produce and associated activities, such as hands-on food preparation and gardening, seamlessly integrate with the learning style of young children, meet educational standards, improve the learning environment, and promote health. Identifying and increasing opportunities for ECEs to source healthy, local foods can expand food access for our most vulnerable children, encourage family engagement, and provide market opportunities for local farmers. Currently, opportunities exist to put local, healthy food into the little hands of the children filling the rooms of metro Atlanta's ECEs, but barriers for centers to source healthy food from local, organic farmers are prevalent.

Our goal with this project is to connect local/organic food from Georgia farms to Georgia families by way of ECEs. This project joins stakeholders in early care, local farming, and nutrition to identify and remove barriers to local food and farmers and to create opportunities to feed children nutritious meals at early care centers across metro Atlanta.

1.2 Research Summary

This report details findings of the Local Food to Early Care Solutions Initiative, a study to facilitate Farm to ECE sourcing in Georgia. The project was conducted in two phases.

The first phase of the project identified Georgia based distributors that incorporate local produce into their sales and also have experience with or an interest in supplying ECEs. Once identified, distributors were interviewed for the purpose of understanding opportunities and cataloguing challenges and barriers. The results of phase one include: a directory of potential distributors that ECEs can access to help them connect to local food distributors; and selection of candidates for four supply chain case studies consisting of a distributor and an ECE in phase 2. The intent of these case studies is to inform replicable local food supply models, which ECEs can adopt to increase their access to local food and improve children's nutrition. The second phase of the project had to be modified from the original plan, in response to the COVID-19 pandemic. The pandemic disrupted the planned supply chain case studies and necessitated a shift of focus to the experiences, barriers, opportunities and lessons of 4 Learning Collaborative ECEs,¹ which employed several

strategies to increase their local food offerings, even as they contended with the major disruptions of the COVID pandemic. The report also documents the COVID-related changes implemented by one distributor from the Phase 1 of the project, to contextualize Phase 2 changes and frame the experiences and lessons of the ECEs during this extraordinary time.

1.3 Report Outline

The following document details findings from the two phases of the research study into the farm to ECE supply chain. Following a methods section in which we describe the recruitment of participants and interviewing strategies, the paper outlines findings from each phase of the project to support the incorporation of ECEs in the local food supply chain.

The first phase focused on distributors in Georgia, describing how distributor size correlates with how far and wide they will travel to source local food. As such, a larger distributor will source and sell in a wider radius than does a smaller distributor. Subsequent report sections provide a discussion of the services they provide to both sides of the supply chain: producers and clients. This is followed by a section detailing obstacles they have identified regarding sales to ECEs.

The second phase analyzes research from four Learning Collaborative ECE centers outside the Metro Atlanta Area and focuses on their key successes, barriers and lessons with local food sourcing. The section begins with a description of each case study to provide background on the scope of the project. It is followed by a discussion of the three main types of local food interventions the ECEs implemented; sourcing, education and community involvement. Additionally, a Farm to ECE Sourcing Lessons section organizes lessons across specific elements and concerns for Farm to ECE. It is divided into a number of categories that range across community building, infrastructure needs, and sourcing barriers and opportunities. A bulleted list of these lessons can be found at the beginning of Section 3.4 : ECE Sourcing Lessons.

The outcomes of phase 2 research indicate that ECEs have the potential to be significant participants in the local food system as they link children and their families to the local food system. While the biggest barrier is supply, ECEs can utilize multiple points of entry and flexible strategies to develop Farm to ECE in a way that fits their specific needs and interests.

1.4 Broader Impacts of this Research

According to DECAL, there are currently 6,200 operating ECEs in the state of Georgia. While at times overlooked as purchasers, ECEs have the potential to positively impact Georgia's local food economy, even during COVID. ECEs are direct markets for local food, as they are points where food is bought, consumed, and distributed. They also incubate local food consumers by educating children and their families about the ecological and health benefits, as well as tastes of fresh, local products. While we offer key strategies, lessons, and illuminate barriers to sourcing local food from the ECE side, the need for greater structural support cannot be overlooked. Especially with regard to the current food insecurity crisis caused by the COVID-19 Pandemic, this research sheds light on how challenges in food procurement were exacerbated based on a lack of sustainable, efficient infrastructure and policies related to food sourcing. Structural support could include: creating ECE buying cooperatives to help ECEs reach minimum order thresholds, working with CACFP to refine purchasing guidelines that better empower ECEs to develop relationships with local farms, and technical support or business development for interested farmers to help facilitate business relationships with ECEs. Farm to ECE has significant potential to benefit all entities along the supply chain. We assert that the lessons of the ECEs described in this study, along with greater structural support, can generate interest and demand from other ECEs in the state with positive effects for the local food system at large.



2. Methods

2.1 Phase 1: Data from Food Suppliers and Distributors

The first phase of the project consisted of identifying local food suppliers, understanding their missions, business models and capacities, assessing the opportunities they present, challenges they face, and possibilities for supplying different kinds of institutions, including ECEs. We were specifically interested in learning from their past experiences and assessing interest and needs, to facilitate these relationships. Georgia Organics' institutional knowledge was used to identify study participants and recruitment was done through telephone, online, or in-person contact.

Data were collected through an online survey, and the follow-up consisted of semi-structured, open-ended interviews with supplier company representatives. 14 interviews were audio-recorded and transcribed. They represent different business sizes, models, and missions:

- One participant specialized in ECE supply including food items;
- One focused primarily on organic CSA boxes;
- One provided snack- meal kits to promote local food education;
- One had flash freezing and other processing capabilities;
- Two were farms or farmer cooperatives; and
- Eight represent different types of distributors.

2.2 Phase 2: Initial Steps and COVID-19 Pandemic Modifications

COVID 19 coincided with the implementation of Phase 2, which began at the end of February 2020. Impediments including ECE closures and food system disruptions rendered the initial conceptualization of this phase of research untenable and required a reorientation of the project.

The second phase of the project, planned in January 2020, initially called for utilizing findings from Phase 1 to connect local food distributors representing different kinds of supply and distribution types with appropriate ECEs. These relationships would be monitored through the Fall of 2020 to document successes, barriers and best practices and serve as pilot case studies to develop replicable supply chain models and recommendations for use by other ECEs and distributors across the state. The Phase 2 ECEs were selected from the 2019-2020 cohort of the Georgia Farm to Early Care and Education Learning Collaborative to represent diverse types of institutions in the state. The Learning Collaborative is a multi-year initiative formed by the Georgia Farm to Early Care and Education Partners, with the goal of increasing ECE access to local food. Interested ECEs apply to the program, and if accepted, receive training, technical assistance, educational resources and grant support to serve local fruits and vegetables to their students.¹ The research team would conduct initial interviews and site visits with the selected ECEs to describe the context and range of planned interventions, and document the progression of their Farm to ECE plan through periodic check-ins. On the other side of the supply chain, initial site visits, interviews and periodic check-ins would be conducted with the local food producers or distributors matched with each ECE. The approach of looking at both sides of the supply chain was intended to monitor challenges, lessons and successes for both the ECEs and the suppliers, while also documenting how the ECEs utilize technical support and implement their overall local food plan.

COVID-19 and pandemic response delayed the start of Phase 2 to August 2020, as all parties gradually adapted to the "new normal." ECEs negotiated changes in enrollment, sourcing, and general administrative organization, Producers and distributors also experienced multiple disruptions and had to shift their practices. While many attempts were made to successfully connect ECEs with local suppliers, these efforts were either one-time connections of purchaser and supplier that did not result in purchases, or dead-ends as the distributors and farms were busy with pandemic response activities. Site visits were impossible throughout the project period, and research was restricted to phone calls and emails with ECE directors and one in-depth interview with a Phase 1 distributor.

Thus, due to the restrictions resulting from the pandemic, the second phase of the project focused on the experiences and lessons of four Learning Collaborative ECE providers outside Metro Atlanta, which continued pursuing their Farm to ECE plan. These ECEs were either already working with or had expressed interest in working with a distributor identified in Phase 1 and agreed to participate in periodic interviews about their activities and experiences. ECEs were interviewed 1-3 times, depending on their ability to dedicate their time to this project. The initial interviews were the most extensive and followed a set protocol (see Appendix 1.2). Follow-up interviews were designed to track changes in experiences and abilities with sourcing food and other local food interventions in 2020. All interviews were recorded and transcribed.

The 4 ECEs represented different sizes of schools and experiences with Farm to ECE programing:

- ECE 1 is a "Family Child Care Learning Home" with 6 children (interviewed 10/20)
- ECE 2 is a small "Child Care Learning Center" with ~75 children (interviewed 4/20, 10/20, 11/20)
- ECE 3 is a mid-sized "Child Care Learning Center" with ~106 children (interviewed 9/20, 12/20)
- ECE 4 is a mid-sized "Child Care Learning Center" with ~206 children (interviewed 2/20, 9/20, 1/21)

Most producers and distributors became equally unavailable during this period. However, the research team was able to follow up with one distributor from Phase 1, who had already worked with some of the ECEs in the Learning Collaborative, including ECEs 2 & 4 in this study. We also contacted a dairy operation that ECE 2 identified and sourced from. Lastly, this information was complemented and contextualized by three specialized interviews: a farmer and former ECE teacher who had experience selling to ECEs, and also acted as an ECE food procurement specialist for a mid-sized metro Atlanta ECE; a Learning Collaborative technical assistance expert working with these 4 ECEs; and a support organization specialist. As with the other interviews, conversations followed an interview protocol and were recorded and transcribed.



3. Phase 1 - Distributor Research

3.1 Definition of Local and its Impacts on Sourcing, Distribution and Identification

Both the definition of local and the importance placed on local food varied significantly. Definitions of local were largely geographical. However, several distributors emphasized Georgia's state boundaries while others defined it based on a distance radius. This radius was defined much more strictly for some (75 miles from the business), and more broadly for others. In some cases, "local" was expanded to "regional," to include bordering counties in other states or the entirety of the bordering states. One distributor held an expansive definition of local based on social justice. They considered the southern or southeastern region for the purpose of supporting smallscale and minority-owned farmers. Equally diverse was the importance of local for each distributor. Most often cited were client demand, the need for extended seasonal availability, sourcing availability, and diversity of offerings.

The sourcing range and distribution of distributors often mirrored their conceptualization of local. Primarily larger distributors had the widest range of sourcing and could include both national and international markets. They also had a wider range of delivery, however the radius of delivery tended not to expand beyond the South or Southeastern US. Mid-sized and smaller distributors tend to source and distribute within a day's drive of their business headquarters. Those with the strongest farmer/community connections had the smallest ranges as their values coincide with a more localized ethic.

The majority of distributors identified the farm from which the products are sourced on their availability lists or sales platforms, and in some cases farm identification may also appear on the packaging. Farm identification practices are inconsistent, not standardized in the industry, and most distributors do not use a uniform identification practice for their suppliers. Aggregate labels demarcating locally sourced products such as Georgia Grown may be used instead of the farm name in some cases. However, the majority of suppliers stated they were ready to share identification information on demand.

3.2 Target Clients and Ordering

Only one of the distributors interviewed focused solely on ECE clients. This distributor, while providing fresh product though not directly from producers, also focused on non-food or more processed food options. The other distributors had a more diversified clientele that included restaurants, small to larger school systems, hospitals and other institutions, and direct sales. Distributors handle minimum order requirements differently. While there was not a standard the distributors noted that their main concern was that deliveries needed to justify transportation costs. Some estimated minimum orders can be found in the "Good Food Guide."

3.3 Range of Services to Clients

All distributors deliver, however, a small number also allow on-site pick-up, waving the minimum or discounting the price. The majority provides only unprocessed products. Larger distributors have access to processing. Some distributors also offer non-produce or non-food items that can be bundled in an order, which can be helpful to achieve order minimums. All distributors offer more than one way to place orders and will provide assistance for direct ordering and with their sales platforms.

3.4 Range of Services to Farmers

There is significant variation among distributors in terms of the support and assistance they provide to farmers. The larger, more conventional or established distributors, particularly those fitting under the "High Convenience" category outlined below, tend to have set production requirements and work with farmers who are ready to meet them. This includes volume, packaging and food safety and growing practices certifications. Smaller distributors may have closer and more hands-on relationships with farmers. Several provide assistance to help farmers scale-up across food quality, production planning, wholesale preparedness, packaging and certifications. Distributors with a "High Values" orientation in particular will be concerned with fair pricing and place greater emphasis on farmer identification and labeling. They may also provide programming and educational resources or work to connect farmers with such resources.

3.5 Preliminary Summary of Obstacles to Working with ECEs

Distributors interviewed were optimistic about working with early care centers and other institutional clients. However, as ECEs are a new and emerging market, distributors had limited experience with these clients, with the exception of the one participant who specializes in ECE supply. Therefore, the concerns and obstacles cited tended to be more general. Primary among them are pricing, production planning, consistency and quality on the supply side, and pricing and education/knowledge on the sales side. As intermediaries, furthermore, distributors have to negotiate between the needs and demands of their suppliers and their clients, which can be at odds with each other.

Local food can command higher prices, especially when it is organic. Most of the distributors stated that they use market pricing and the USDA pricing index to set purchase prices, though some negotiate with individual suppliers. Clients, however, especially those with more restricted budgets, as many ECEs can be, may find it harder to sustain premium pricing.

As many distributors follow a high volume business model, consistency, quantity and quality were equally important concerns when working with ECE providers. Most distributors stated that they do not have enough supply of local food to meet demand and are interested in expanding. The larger distributors, however, require larger and more consistent supply and need to work with larger or more intensive producers. Smaller distributors are also concerned with farmer training, maintaining licenses and certifications, as well as developing ways to work with growers on consistent packaging.

Seasonality creates several issues. Some distributors state that they can supply local year-round and many mentioned Georgia's extended growing season as an advantage. However, production planning and contingency plans were commonly cited as problems on the supply side. On the sales side, distributors indicated that clients sometimes lack the knowledge and ability to accommodate seasonality in product availability, and the preparation to accommodate contingencies, like production disruptions or shortfalls due to weather or other events.

Pricing and production planning were issues faced by many of the distributors. As middle-men challenges concerning pricing are felt on both sides of the supply chain. Producers would like to see more value placed on their product while ECEs are

struggling to manage their own budgets when considering food costs. However, responses tended to focus more on the need to educate customers on the benefits of incorporating social/environmental impacts of local sourcing into their budgets. On the supplier side, the distributors struggle more with product supply. Some are interested in initiating or expanding production planning with growers, including offering advice on what is grown based on clients' needs. They argue this could help increase capacity and variety, both of which are greatly needed in the local food market. Others are content with simply developing a better line of communication with growers about their production decisions, which would help forecast product availability and improve client services. Distributors are also concerned with farmer training, maintaining licenses and certifications, as well as developing ways to work with growers on consistent packaging. Finally, distributors with processing capabilities have found that many centers could benefit from buying items preprocessed- as they could cut down on labor costs and unit prices per plate. This means ECEs would like portioned, cleaned, or cut produce to help with prep time.

The distributor who specializes in working with ECEs noted that ECEs are very diverse in size as well as cooking and processing capabilities, with some of them having minimal setup for meal preparation. Therefore, pre-cut, pre-portioned and otherwise processed and packaged products that can cut down on cost, time and labor are often highly desired.

3.6 Areas of Recommendations for Best Practices

General Relationships/Transparency

Farmer best practices:

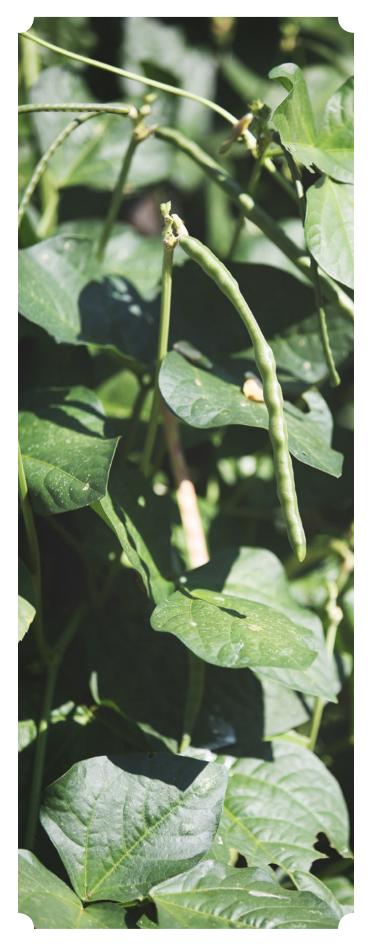
Contingency planning Forecasting and communicating expected harvests in the coming weeks/month Maintaining a relationship with distributor/client Reliability with delivery dates and times Consistency of quality Prompt communication **Clients** Understanding seasonality Level of flexibility

Distributor

Reliable with delivery dates and times Consistency of quality

3.7 Producers and Distributors Identified in This Study

A list of producers and distributors identified in Phase 1 of this study can be found in the Local Food Sourcing Directory. Distributor classifications and additional producers identified in Phase 2 can be found in the Appendix.



4. Phase 2 - ECE Research

4.1 ECE Case Studies

Each ECE in this study had different reasons for and paths to farm to ECE programing. All however echoed similar general motivations for beginning or expanding Farm to ECE activities, which are also found in other cases in Georgia. Motivations include, teaching about where food comes from or how it is grown, improving children's and communities' health and nutrition, and providing children with experiential learning opportunities.²

ECE 1 is a "Family Child Care Learning Home" with 6 children ranging from 7 months to 3 years. The owner and sole caregiver runs her childcare center out of her home. She has had over 25 years' experience working in childcare with 11 years' experience in Georgia. She focuses her attention on play and discovery, which work well with her desire to incorporate farm to early care learning in her school. Her small size and home-based school give her a great deal of flexibility in terms of activities and curriculum, purchasing, and food preparation. For this care center, growing food and preparing meals are part of the daily lessons. Her garden is a key part of her success and services as both food procurement and learning center. She harvests food for her meals, but also uses the garden as a key focus for learning. She plants a wide variety of products to demonstrate how each plant grows and what the edible parts look like. A key activity every morning is watering, which gives even the youngest children a role in garden management. She also allows the small children to pick choice produce as "snacks" while they run and play in the yard. Tomatoes are a popular snack for her students, as she explains, "My tomato is very popular...Number one in my garden. ...[When they see] the tomatoes starting to have an orange or red, they will ask, 'can I have just one?' [And I say], 'Come on! Let's eat!'

To augment her garden harvests, she purchases whole, organic, locally sourced products. While she will purchase from "big box" stores when there is no other option or to get meat and dairy, she prefers purchasing directly from a local farmer. Purchasing occurs weekly, and she prefers to pick her produce out personally to ensure that it is the best quality for the students. Inquiring about the future availability of products helps her plan menus, which are therefore closely tied to Georgia's seasonal round. Fresh food, she says, is key since food preparation is often done with the help of the children. This helps the children connect the dots between growing food and eating it. **ECE 2** is a small "Child Care Learning Center" with ~75-100 children ranging in age from 6 months to 12 years. The owner of this ECE came to early childcare after retiring from a corporate position. Her goal was to create a Christianbased child care center that catered specifically to low-income families. Personal health problems and observing the health issues of her teachers and assistants prompted her focus on nutrition and the incorporation of fresh or frozen produce. Whenever possible she tries to source her produce locally, meaning in Georgia or surrounding states.

Finding reliable distributors to meet her food needs is challenging. Especially when it comes to quantities and deliveries, "having someone to deliver here has been a struggle because all the farmers that I've been in contact with, not many of them are in this area or the quantities they want me to order are too large for us at this time." Because of this she ends up purchasing mostly from a local grocery store, where she appreciates signage that indicates where the product is grown. Even with the convenience of the grocery store she still goes out of her way to find and establish relationships with farmers or small businesses that sell locally produced food. She was even able to purchase (as long as a receipt was provided) food from parents who had small plots of land, which helped her school and the parents as well. With all of her purchases she prefers to receive the product on Thursdays or Fridays, which provides her a cushion of time if substitutions to the following week's menu need to be made.

Adjusting her kitchen staff was a necessary and positive result of her desire to serve more fresh product. Initially she ran the kitchen on her own, ordering the food and preparing the meals on top of running the ECE. She hired two women from different culinary and cultural backgrounds to add variety to the menu and help share the burden of kitchen duties. The three of them are on a three-week rotation, as one person each week plans the menu, orders the food, and cooks the food. When the seasonal offerings get repetitive, this arrangement inherently adds variety to the menus. She explains, "you know, even though it's the same food, [we each] cook it differently because we all have different styles and [use] different seasonings."

A garden is also an important learning center for this ECE. Her two master gardener parents and others have helped create an interactive outdoor space. The garden space, funded with a grant, includes raised beds, painted tree stumps that serve as seating for an outdoor classroom, and a greenhouse (which is getting rebuilt after a terrible storm damaged it). The garden serves as a focal point for learning and trying new fruits and vegetables.

ECE 3 is a mid-sized "Child Care Learning Center" that has been in operation for more than 25 years. They have ~160 children ages 6 weeks to 8 years with programming that includes a private kindergarten and first grade. They also have an afterschool program that includes pre-K to second grade. After finishing the Quality Rated Initiative they discovered that they had room to grow in the area of nutrition. Some of the signs of nutritional difficulties were showing up among the children, which pointed to a more systemic problem that reached outside the ECE. They decided to tackle the problem with the same holistic approach that guides their school, an approach that centered on home-based learning for parents and a farm to ECE overhaul of the school curriculum and menus. They started in stages with menu revisions, snack substitutes, and the inclusion of a small garden and associated classroom activities. Today they have ramped up to two substantial gardens, vegetable and pollinator focused, that entice the children to try fruits and vegetables.

The change in the childrens' perceptions of food has been significant, "before if you served them salad, they would turn their nose up and say, Eww! Gross! And would lick the "Ranch" off of it. Now our kids will pick spinach leaves out of our garden and eat them raw. So it really is a big difference [...] opening their eyes and getting them excited about different foods and encouraging them to branch out." The garden is also becoming an important source of food for their snacks and meals, and therefore they are beginning to focus on growing higher volumes vs higher variety, focusing on those foods that are easy to harvest.

Outside the garden, purchasing local fresh food is difficult. "A lot of the vendors that [sell fresh, local product] are located either in South Georgia or [...] around the Atlanta area. None of them reached out to our area." They have tried a number of options including buying Georgia Grown from local grocery stores, seeking out farm stands and farmers markets, and partnering with local colleges that have garden programs. None of these options address the entire food needs of the school, yet, they exemplify the ECEs prioritization of serving fresh produce. "We do fresh fruit for all breakfasts and [...] at snack two to three times a week...On Fridays we do a Fresh Food Friday trying to hit our lunch and our snack." If they are unable to completely use local products on Fridays, they at least incorporate a taste test or use the time to introduce a new food. In this way they are able to make the fresh food an event, something special for the children to look forward to.

ECE 4 is also a mid-sized "Child Care Learning Center" that has been in operation for more than 20 years. They have 206 children ranging in ages from 6 weeks to 12 years old and serve a lower-income demographic with a number of foster children in the program. They began the farm to ECE program around 2019 with support from their 41 person staff. The idea to focus on a farm to ECE program came from family connections of the owner, a daughter studying public health at UGA and a history diabetes in the family. They started with a garden and began incorporating garden activities and taste

tests into the daily activities. Key to their success has been their ability to hire a garden educator to come once a week as well as a trained chef. Having a chef allowed the ECE to move away from "heat and eat" meals to those that are composed of whole, locally sourced products. This also meant working to update their kitchen to one that can handle the bigger workload. An extra refrigerator and commercial oven has dramatically helped their ability to cook for so many children.

Whenever possible they source directly from their own county, working at times with farmers to coordinate planting with the needs and preferences of the ECE. When their needs cannot be met within the county, they prioritize farms from Georgia or those that live in surrounding states. While local farms contribute to this ECE's meals, they also source weekly from a number of locations that include: a commonly used High Value Distributor, a shifting number of local farmer's markets that aggregate products like fresh fruits, vegetables, and meats from a number of local farmers, and most recently milk from a local dairy. Menus are created once availability lists are checked and orders made. "If you're trying to buy local, that's the only way you're going to be able to do it," she reported. Since not all of the growers she buys from can deliver, she greatly relies on her large staff to help pick-up food during the week.

Successes are often best felt with the children and family of the ECE. When asked if the parents notice the changes in the center's focus, she stated, "my parents are trying to keep the lights on honestly. But they do value it. Like we have chickens here and [...] I give the eggs away to the parents. [...] We have a lot of stuff [at harvest times], I have a big basket out front and we give all of our fresh fruit away to the families." Creating this tangible link with the family solidifies the family engagement and promotes the nutrition lessons the children are learning in the care center.

4.2 Results

The findings presented in this report are derived from interviews with directors implementing Farm to ECE programming. Research details lessons and challenges faced by these ECEs as they navigated the complicated terrane of sourcing local products during the COVID-19 pandemic. The 4 ECEs profiled in this study demonstrate that there are multiple entry points to begin a Farm to ECE program, which can accommodate diverse motivations and philosophies, budgets and socioeconomic and geographic locations. Nevertheless, the full manifestation of the potential for Farm to ECE depends on a holistic approach, which is driven by student excitement and can benefit from both technical and structural support.

4.3 ECE Expansion of Farm to ECE Activities

Below, we summarize primary findings from the ECEs' experiences expanding farm to ECE activities across 3 areas:

- A. Serving local food
- **B.** Education
- C. Community engagement

Additionally, to frame ECE procurement strategies and challenges, we report on the sole distributor who remained engaged with us through Phase 2, yet pivoted away from wholesale to other forms of distribution in response to the COVID-19 pandemic. These new forms of distribution limited options for ECE procurement.

A. Serving Local Food

The following results contextualize the barriers to serving local foods in an ECE environment and the strategies used to overcome these difficulties. All four ECEs in this study successfully increased their local food offerings during their involvement with the collaborative.

a. **Procurement:** The number 1 barrier all ECEs identified was sourcing, which was significantly aggravated by the COVID-19 pandemic. Major challenges included geographical distance from metropolitan areas and order minimums, which impacted relationship building with food providers. This was often due to inconsistent communication on the supply end. ECEs spent a lot of time trying to communicate with identified suppliers, finding new suppliers and when unsuccessful procuring local food from disparate and suboptimal sources, such as the occasional local produce appearing in the local grocery store. Nevertheless, they also had some notable successes forging relationships with local producers. Food quality was important to all ECEs, who reported that they were more satisfied with the overall quality of locally sourced products. Interestingly, cost was not identified as a primary barrier, while prices for key foods like milk remained consistent for local products even as they may have fluctuated in the conventional market. All ECEs in this study had gardens as part of their local food interventions, though the garden was a main source of food only for some. For others, the garden took on a bigger role in education and community engagement.

- **b.** Serving: The holistic potential of Farm to ECE hinges on student excitement for local, fresh foods. Though the amount and frequency of local food offerings varied, ECEs reported significant successes with serving both fresh/whole and prepared foods. Elements identified as crucial to sustained and sustainable success were taste tests with staff and students, streamlined menus which allow for flexibility and account for seasonality, and staff training for food purchasingand preparation. Additionally, sufficient kitchen infrastructure or improvements to kitchen facilities to support food preparation, preservation and storage was key.
- **c. Funding:** The ECEs in this study had access to funding, including small grants but also CACFP funding, which is broadly available to ECEs in the state. This assisted their local food purchasing. Findings from this project, including the opportunities but also complexity of navigating CACFP rules for sourcing, suggest the importance of assisting ECEs in accessing and using the range of available financial support, and also training ECEs in best purchasing practices to extend their food budgets and minimize time spent shopping.

B. Education

In addition to serving more local food, all four ECEs in this study connected local food with their educational mission, using their curriculum and other activities, such as taste tests and gardening to teach about food and nutrition as well as to educate their students' palates.

- a. Gardens: ECEs incorporated gardens in their local food plan and one also raised chickens. Produce from gardens was in some cases used in the ECE, or given away to families. Mostly, however, gardens served as teaching tools, getting students involved in learning where food comes from and understanding seasonal cycles, and allowing them to taste fresh picked produce that they helped to grow. Invariably, ECEs reported that students were very interested and excited about the garden and were much more likely to try-and like-the produce from it. Student excitement translated to both teacher and parent excitement and involvement.
- **b. Curriculum:** ECEs incorporated local food into the classroom utilizing resources for hands-on food focused lesson plans shared though the Learning Collaborative, or identified independently. This was a helpful and popular resource for teachers and helped foster students' interest and excitement for fresh, local food.

C. Community Engagement

The local food plan of the four ECEs during this period also entailed community engagement. This is particularly notable considering the COVID pandemic, which introduced restrictions to who can enter the ECE, reduced the number of students attending the ECEs, and introduced a host of other complications, including the effect of health and economic hardship to communities.

- a. Gardens: In addition to students bringing their excitement about local food and new eating preferences to their families, ECE gardens provided opportunities for parents to get involved with the ECE in an outdoor setting. Some ECEs also distributed produce from the garden to families in the form of take-home snacks or produce bags.
- **b.** Food distribution: One ECE received a grant to purchase CSA type local food boxes in bulk from a distributor to give to center staff and enrolled families during the pandemic.

4.4 COVID-19 and Changes in Distribution

Availability and accessibility of local food across the state is a known challenge, especially outside the Atlanta metro area. This project aimed to address supply chain challenges for ECEs in order to build Georgia's Farm to ECE program. The COVID pandemic exacerbated access and procurement issues, as it disrupted established supply chains and led to the reorganization of local food distribution to accommodate new needs. The trajectory of the sole distributor whom we were able to track through the end of Phase 2 is indicative of these transformations.

At the beginning of 2020, this Atlanta-based High Values distributor was geared to meaningfully expand its range of distribution and wholesale relationships with institutions. It offered resources and training programming to farmers and clients, and ran a program that allowed sales of local food at-cost to eligible non-profit organizations. The distributor had experience working with ECEs including some of the Learning Collaborative ECEs, and was targeted as a supplier for one of the pilot supply chain models. However, as its director explained, the moment pandemic restrictions went in place, "business really dried up." In particular "there was no business to speak of" with institutions such as schools and hospitals, and the director described this period as "pretty scary." As a response, the distributor pivoted away from wholesale and toward its farm box program, which almost immediately flourished. Demand skyrocketed as this form of food procurement was very well suited to the new pandemic reality. Additionally, state agencies, NGOs and other community agents responding to food insecurity exacerbated by COVID-19 also "jumped on that. And so it became a game changer." The distributor's business volume during the first months of the pandemic eclipsed the whole of previous years and this explosive growth also benefited its producers. The director described this as a "real win for a lot of our smaller and mid-sized farmers." To address community

needs, the distributor was able to reach out to additional, but mostly larger, local farmers, who were in alignment with the distributor's values and mission. However, the wholesale arm of distribution shrunk while the range of distribution contracted rather than expanded. Thus, sourcing options for ECEs, especially those geographically distant from the MetroAtlanta area, were further limited. While the future is uncertain, it is likely that the distributor will continue pursuing its box program based on its previous success in sustaining local economies and providing viable local food options for ECE providers..

4.5 Farm to ECE Sourcing Lessons

This research focused on the question of sourcing local fruit and vegetables. It became clear, however, that success in this venture is predicated on internally building local food demand by fostering children's excitement about local fresh fruits, vegetables, and other products. ECEs that develop pathways to encourage children to try and eat fresh fruits and vegetables have higher purchasing potential and less food waste. Generating this demand requires a holistic approach. For the ECE this means: Creating a farm to ECE supportive community across staff, parents, and students, developing ECE infrastructure to support the new programs and menu options, identifying sources of funding to support purchases of product and educational materials, and determining which sourcing options work best for particular ECE needs. The following section outlines how the four ECE case studies navigated these challenges and points to both the successes and obstacles they faced.

4.6 Inventory of Key Lessons

The following list indicates the section numbers where lessons about these particular topics can be found.

4.6.1. Creating a farm to ECE community among staff, parents, and students

- · ECEs should start small and expand activities as the children and staff increase their interest.
- Motivate staff through classroom competitions and reward those that show specific
- interests through continuing education in gardening, cooking, or nutrition.
 Host "Garden Days" to recruit parent volunteers for garden maintenance. Parent Garden
- workdays not only build gardens, they also build parent engagement.
- Share farm to ECE experiences with parents and caregivers in newsletters and on social media. Features could include local producer spotlights, local food recipes and taste test results.
- Distribute garden grown produce to families in the form of take-home snacks or produce bags so students can bring excitement about local food and new eating preferences to their families.
- Offer Taste tests to introduce children to new flavors and textures, which limits the financial risk of trying new foods. Once foods are deemed tasty, then ECEs can purchase more for snacks and meals.

4.6.2. Expanding infrastructure through gardens, kitchens, and staff

- · Gardens help grow local food eaters and can supplement fruits and vegetables for snacks and meals.
- Gardens support can be provided by formally training staff interested in gardening and/ pr having parent volunteers helps with the work of garden maintenance.
- Ample kitchen storage and refrigerator space helps the ECE increase local food purchases and therefore meet local distributors minimum ordering requirements
- Chef or dedicated food prep staff member is key. They can:
 - · Save money by breaking down whole fruits and vegetables versus having to pay for partially processed product
 - Take over ordering and menu planning
 - · Preserve fruits and vegetables during abundant seasons for use later

4.6.3. Sourcing and Purchasing Local Food

- ECE buying clubs might be a solution to low volume purchases. However, external help is needed to coordinate such efforts.
- Diversified buying options helps ensure some local food is incorporated into ECE menus or snacks.
- Finding a farm to buy from on a regular basis could help solve some barriers to local purchasing.
- Iterative menu planning saves time. This means consulting availability lists or buying items before menus are finalized.
- Delivery of local products is a key benefit ECEs search for when considering distributors or farmers to buy from.
- Communicate with farmers or distributors about packaging and quality expectations before orders to avoid surprises.
- Consider kitchen infrastructure and staffing when considering purchasing packaged and minimally processed foods.

4.6.4 Financial Resources

CACFP can help offset costs of local purchases.

4.7 Inventory of Key Identified Barriers

The following list indicates the section numbers where discussion of key barriers can be found.

4.7.1 Sourcing and Purchasing Local Food

- · ECE often cannot meet distributor minimum order requirements
- ECE are often outside the delivery range of distributors or farmers that consistently sell local product
- Limited geographical range of delivery for distributors forces ECEs to diversify
- their buying outlets, which takes a great deal of time to coordinate.
- Availability list can at times not be accurate and leave the ECE to scramble to either incorporate extra food or make up for lesser amounts.
- It is difficult to find local dairies that can provide 1% or Non-Fat milk that complies with the USDA guidelines. Finding local bread companies that also deliver is also difficult.
- Fruit and vegetables that are cut and ready to cook are always appreciated, however, ECEs report that these products are not often fresh or of high quality. Therefore, ECEs often buy whole product and take extra time to cut and process it.

4.7.2 Financial Resources

 CACFP is a program that can help offset the costs of local purchases. However, ECEs have reported that strict guidelines concerning buying direct from farmers greatly impacts farm to ECE success.

4.8 Creating a Supportive Farm to ECE Community

The ECEs in this study discussed a number of ways that they worked to build a community of teachers/staff, parents, and children, that supported farm to ECE activities. Teachers and staff need to feel comfortable with new lesson plan materials and be excited about new menu offerings to ensure enthusiasm is transferred to the students. Parent involvement among ECEs is varied, but even minimal support is helpful. Parents that show interest in these new activities and culinary explorations model an adventurous spirit that children will emulate. Key, however, in the success of farm to ECE is of course the students themselves. The children's enthusiasm can be infectious, their excitement about the curriculum and new food offerings increase demand for local foods and encourage the growth of the program.

A. Teachers:

Teacher and staff buy-in to the farm to ECE program is important for the overall success of the program. It is not uncommon to get pushback when adding new content and responsibilities to the daily activities. Some successful strategies for increasing interest in farm to ECE center around increasing opportunities for education and the incorporation of friendly competition. Education can come in a number of forms. One ECE sent interested teachers to the Master Gardener program and gave these trained teachers freedom to design interactive garden spaces for the school. Another ECE director, when she noticed some health issues among faculty and staff, started a group weight-loss competition. This was reported to be a successful way to encourage the incorporation of nutritional guidelines and increase the consumption of fruits and vegetables at home and at the school. Class seedling growing competitions get everyone involved with growing plant starts for the school garden. Finally, preparing a new curriculum can be a daunting task for educators, therefore it is key to search out and assemble a diverse array of lessons and activities. These can include providing taste test kits, instructional videos, and interactive games as well as connecting Farm to ECE topics with national or state mandated curriculum standards.

B. Parents:

Parent engagement is arguably less important for the success of implementing in-school activities, however, parents can greatly enhance or impede a child's interest in trying new foods.3 One way to engage parents is to tap into activities parents already have an affinity for. One ECE discovered that two parents were Certified Master Gardeners. These parents are now active in designing the gardens, building compost, and thinking of ways to engage teachers and students. Having this level of expertise is a rarity, therefore other ECEs coordinated parent garden work-days utilizing other parents' skills in carpentry and design as well as employing greatly appreciated "sweat equity." ECEs also encourage parents to try local, fresh fruits and vegetables in a number of ways. Sharing food from the garden or local farm is a great way to engage parents, either by having a loaded basket at the front counter that parents can partake in, sending packages of fresh food home each week, organizing a small farmer's market, or including parents in taste tests. If these aren't viable options, ECEs can also simply share recipes and news about local farmers in emails or newsletters.

C. Students:

According to the ECE Case Studies, students are the easiest group to get excited about farm to ECE activities. These seasoned ECEs have found that kids love garden-based activities and opportunities to taste new recipes that they help to prepare. Whenever possible, ECEs try to incorporate the children into all aspects of garden maintenance. Children grow their plant starts in cups with their classmates, help garden educators weed and water plants, and often work together to harvest fruits and vegetables for meals and snacks. One ECE expanded the concept of the garden and also grew a butterfly or pollinator garden. This ECE director explained, "our butterfly garden is a neat way for us to teach about the animal friends that help make gardening possible, [...] the insects and things that help pollinate. We [also] have herbs planted and it's a really neat opportunity for us to allow our younger children, two and under, to [...] go out and explore in a safe space, explore with their senses."

Finding fun and interactive ways to experience and taste unfamiliar foods is key for expanding students' interest in locally sourced products. However, when kids are presented (without preparation) with a plate full of unfamiliar foods, it's easy for them to turn away. This results in unsatisfied children and frustrated ECE providers that are forced to dispose of meals that took time, money, and ingenuity to prepare. ECE providers and others2 have noted that activities like taste tests create a way for children to "step into" new flavors and textures. Taste tests give kids the opportunity to explore a new food through smell, touch, or taste. Key here is that children are encouraged but never forced to taste the food. Children build mindful eating habits and a predilection for trying new things. For ECEs taste tests can help introduce new foods in an economically low risk way. And when products get the kids "stamp of approval," ECEs can feel more confident making larger purchases for menu items. Purchase of taste test kits or recipe guides can help facilitate these activities and include easy to make snacks, designed to meet curriculum guidelines and get the kids involved. Research has shown that kids are more likely to try and like food that they prepared themselves.3,4 One ECE that was unable to afford taste test boxes for each class stretched their resources by sourcing the ingredients themselves and copying materials to share across all ECE classrooms. They also saved resources they purchased or received and adapted ideas like tasting games or recipes to fit the needs of different student age levels, teacher interests, or growing season.

4.8.1 ECE Infrastructure (Kitchens and Gardens) and Staffing

Successful farm to ECE programs grow slowly, update key infrastructure components (such as building gardens and retrofitting kitchens), and find ways to work creatively with staffing assignments.

Kitchens:

Kitchen needs will differ depending on the size of the ECE. The small "family-care learning home" is able to provide meals and snacks from a typical household kitchen. Also having less children means more opportunities for kids to have hands-on involvement with food preparation. Larger "child-care learning centers," however, require commercial sized kitchens to accommodate needs related to food storage and preparation. Reports from ECE case studies revealed that switching from the "heat-and-eat" food preparation model to prepare and serve meals, meant increasing counter space for processing whole fruit and vegetables. Additionally, the need to store at least a weeks' worth of local product means expanding refrigerator space. One ECE reported having one refrigerator just to store milk and dairy needs for the week. Increased pantry space is also helpful as most ECEs order food weekly to ensure they can meet distributors minimum order requirements. Finally, for larger ECEs, those above 100 students, respondents reported that it is beneficial to have infrastructure like commercial sized stoves and ovens as well as multiple sinks.

Gardens:

Gardens for children to explore and to augment local food purchasing is a key feature of farm to ECEs. Research has found that having a garden, learning where food comes from, and how to grow and prepare food all increase children's desire to eat fruits and vegetables.5 As such, growing a garden is more than growing food. A garden grows ECE fruit and vegetable eaters, which can result in increased demand for local purchasing. These findings correlate with the lessons learned among the ECE providers. Depending on staffing, at the ECE, class size, and parent engagement in the gardens can help the ECE meet a variety of goals. As discussed above, gardens are important centers of engagement; a physical space where teachers, children, and even parents meet to learn and inspire each other. Having children involved with garden maintenance, through weeding, planting, and watering, is great physical activity and has been shown to increase self-esteem and helps with the development of fine motor skills. Gardens are also safe spaces to explore the smells, textures, and flavors of fruits and vegetables. One ECE provider explained, "This morning we had kale. I was watering the kale [...and] picked up two leaves. I said, "Guys, [...]you want to share the kale?" They said YES. So, six of them lined up, I give a little piece of kale [to each]. I said, "Ok hold this one and we will count 1-2-3 and we will [ALL] eat." We did it. Kale from the garden. [...] They loved it. For me [gardening] is part of my curriculum."

Staffing:

The addition of any new component to the ECE requires a new staff member or the coordination of new work responsibilities. Supportive staff is key to the success of farm to ECE. Training gardening specialists, either through a master gardener program or connecting with county extension agents is a great way to get staff members involved. Gardens are also great volunteer activities for parents who can donate supplies, help build raised beds, or share their knowledge about gardening. Sourcing and preparing local fresh fruit and vegetables can be a daunting task, especially for the larger ECEs. Those in this study discussed a number of strategies. Small ECEs can have a teacher or the director managing the food preparation responsibilities. Larger ECEs either hired chefs or alternated the responsibilities among staff members. All promoted the idea of having a dedicated person who could concentrate on the menu planning, ordering, and preparing of food. A dedicated cook or chef is a great help to the ECE. Chefs are trained to break down whole fruits and vegetables, which are more affordable than partially processed products. Respondents also noted that whole products on average are fresher and therefore more palatable for the children. Chefs can also take over the responsibility of sourcing foods and developing new menus based on seasonal offerings. Finally, a dedicated chef will have the skills to harness the abundance of the season and preserve foods for use during winter months.

4.8.2 Sourcing and Purchasing Local Food

The ECEs in the case study characterize the concept of "local" on a sliding scale starting with their county, then broadening this definition to include farms in the state of Georgia, and finally including states surrounding Georgia. While these are broad definitions of what constitutes local, findings from this research show that sourcing local foods is very difficult. Furthermore, it becomes more difficult the farther away the ECE is from Metro-Atlanta. The primary barriers to local sourcing are the ECE's ability to meet the minimum for purchase, distance from the distributor to benefit from deliveries, having to purchase from a number of sources each week, and bureaucratic limitations associated with CACFP.

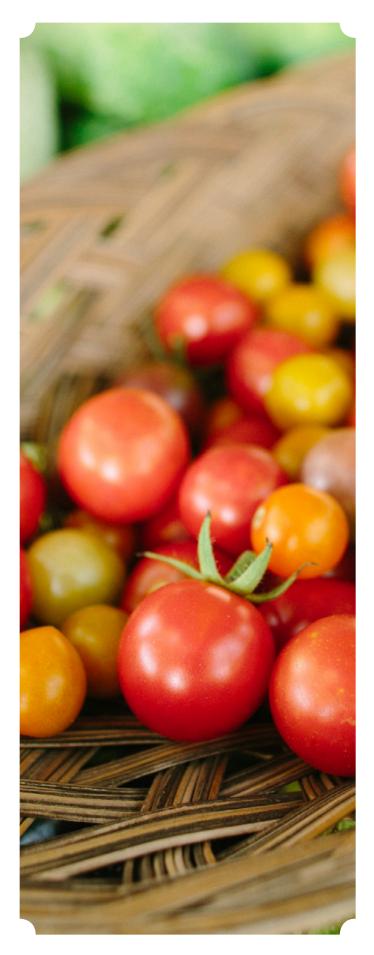
4.8.3 Considerations for local sourcing

ECE directors reported that meeting supplier minimums for orders or to establish delivery is a primary hurdle they must navigate. As reported by one ECE director, "I would love to find a farmer in the area and just say, 'OK, you have potatoes, let me just buy my potatoes from you.' Or even if I just started with one or two ingredients. But having someone to deliver here has been a struggle because all the farmers that I've been in contact with, not many of them are in this area or the quantities they want me to order are too large for us at this time." When asked if the ECE could order less food and pick up the product from the distributor the respondent replied, "I'm already working from 5 in the morning to 8:30 at night, on Saturdays, it's hard for me to go. I would love to go to Atlanta and pick up stuff, but having that time between? I don't have it.." Given the limitations of time, it is not surprising that having someone deliver the food can be more important than finding products at a lower price, as explained by one ECE director, "Milk pricing is probably the most different- but even with the expense having it delivered is worth it. I don't know if you've ever tried to pick up 58 gallons of milk at the store, but I have. [...] That's a lot of milk to put in the buggy, [...take] halfway across the store, check it out, and bring it to your car." Besides delivery, having easy access to a weekly availability list helps the ECE chef or staff person know what will be available, which helps with menu planning.

One ECE director mentioned that adding milk (and bread) to the order can help an ECE reach a distributor's minimum order requirement. However, the milk required by USDA guidelines is not offered by many distributors, which often limits that option. "Milk is generally hard because of USDA guidelines. We have to serve at least 1%. We can't serve whole-milk or 2% to children over the age of one. [Instead] we have to serve fat free or 1%. [For] local milk, there is a lot of dairies, but they all serve whole product or [...] 2%. It's very hard to find [ones that sell] fat free or 1%. If you're trying to serve locally and meet the USDA guidelines, that can be difficult." Two of the ECEs have found dairies that they can source from and who deliver. This has been a way for those ECEs to save the time and physical investment in sourcing milk as well as satisfy their local sourcing goals.

Similarly, ECEs have had a difficult time finding local companies to provide and deliver bread. In many cases distributors are able to offer these services, but the ECE needs to fall within their geographic range for delivery and meet minimum order requirements.

The difficulty of sourcing local food means dedicated ECE directors use all of their creative skills to make it work. When a single distributor is not available, ECEs diversify by purchasing from a number of locations that can include: local farmers markets, university farms, local farms, chain grocery stores that label local produce, small dairies, bread companies, among others. Due to inconsistent availability and CACFP restrictions, ECE local food buyers shift their buying strategies, sometimes weekly, and spend hours in the car picking up products from different vendors. This all means that ECE buyers are spending time finding new outlets, searching for availability lists, and finally visiting numerous vendors weekly to pick-out or pick-up



food. Even when relationships with farms or distributors are established, problems will arise. One ECE director discussed that fact that availability lists don't always reflect availability, "So they can say, [...] we expect to have five to six pounds of green beans in the next two or three weeks. And then they would just call and say, we'll have our green beans ready tomorrow. It was a little bit challenging to plan for that. [To manage these occurrences we] left a meal each week that allowed for that to be incorporated. [Other times only half would be available.] So we end up doing half with the fresh food and then half with our canned food item."

5. Recommendations and Conclusions

5.1 Potential Solutions to Sourcing Problems

To help with inconsistent or limited availability lists, the ECEs in this study noted that weekly menu planning is best done once food has been purchased. An iterative menu planning strategy saves time, as it ensures that the desired food is available before menus are created. Whenever possible, ECEs ask distributors or farmers about their seasonal planting schedules to help them outline menu ideas a few weeks in advance. Some ECEs noted that they are interested in formalizing a relationship with a local farm. If ECEs can navigate the CACFP vendor guidelines, they are interested in establishing consistent buying relationships with farmers to align planting with crops the ECEs desire to use for snacks and meals. One ECE director stated that having a specific farm to buy from would benefit both parties. The ECE would benefit from a partnership where needs and concerns could be communicated. Additionally, by making business connections with a racial equity priority, the ECE director could realize their goal of supporting small, local, minority businesses in the county. Another ECE provider, with fewer students, enjoys having a farm-based produce stand where fresh fruit and vegetables can be hand-picked and questions can be posed directly to the farmer. Developing ECE buying cooperatives is a potential solution to the challenge of meeting distributor minimums. A cooperative or buying club would consist of a number of ECEs. situated near one another, who could connect, coordinate, and collectively buy larger volumes of product. While a great idea in theory, ECE directors indicated that establishing and maintaining these relationships may require external or extra internal staffing to make it a success.

5.2 Considering Food Quality and Packaging

Among the four ECEs that participated in this research, three indicated that the most important factor they take into account when purchasing food is quality and whether it is a local product. The fourth participant reported that quality was first followed by price. While costs are always an important factor for ECEs to consider, these care centers benefited from financial resources (discussed in section 3.2.4) that allotted them some purchasing flexibility. Buying whole produce from individual farmers can also be a challenge, especially when expectations are not communicated. "Buying from a farmer can at times mean needing to wash the product as there may still be dirt on the food. And he brought his produce in a trash bag! In the end it was fine, but it was a little off putting." This ECE provider suggested having a conversation with farmers about how products will be delivered, which can help both educate the farmer on general ECE expectations and also alert the chef about the potential for unexpected preparation, like washing and storage concerns.

The need for specific packaging and processing of foods depends on the number of children and whether the ECE has a designated chef who has the time and capacity to clean and cut fresh product. Even in cases where minimally processed foods would be helpful, ECEs have opted to buy whole produce. One ECE director explains, "When we tried ordering it [from a large distributor] pre-cut [...] like our melons. [...] I didn't like the quality of it once it got here. I don't know if it's part of the processing. It just wasn't very fresh. So we prefer [whole product], even though it takes more time to cut our own. Just because we have found the quality to be better that way." Other ECEs have ordered processed, frozen products from a smaller distributor and found that there wasn't enough variety to warrant weekly purchasing of those products.

5.3 Financial Resources

There are a number of ways that ECEs have used to offset the increased costs that are associated with farm to ECE programs. Local, State, and Federal grants as well as the generous donations and "sweat equity" of parents have helped these ECE build gardens, buy curriculum products, retrofit kitchens, and offset costs for local food. At a state and local level, these ECEs have benefitted from grants and programs offered by Georgia Organics, a specific Kellogg research and outreach grant, and Georgia Department of Early Care and Learning (DECAL). At the federal level ECEs rely on funds from the United States Department of Agriculture (USDA) Child and Adult Care Food Program (CACFP) Food Grant.

The CACFP program offers federal funding to ECEs and other centers that are eligible for paid, reduced-price, and free meal programs, which can be used to purchase local foods. Eligibility is based on the income of families with participating children. Specifics on this program can be found in from various sources, but specifically the document Local Food for Little Eaters in Georgia6 referenced below outlines a number of the criteria. The ECEs ability to leverage this funding has given them additional purchasing power by helping them offset the costs of local food purchase up to \$10,000. While all ECEs noted that Farm to ECE would be very difficult to manage without CACFP funds, they also noted that regulations concerning procurement have greatly impacted their ability to establish purchasing relations with local farmers, a primary goal of Farm to ECE. When asked what the main barriers to farm to ECE, an ECE director explained:

'I think probably one of the biggest roadblocks in serving local food is procurement and the CACFP. [...] It is very difficult to navigate when you're trying to serve [...] local fresh produce. [The USDA is] going to have to make it easier or people [...]. There has been several times that I have wanted to throw my hands up and turn around [...] because that model is made for school systems and big companies that are serving tons and tons of kids. When you've got small child-care centers, you can't put us in that same model. It just doesn't seem to fit. [...] You've got these small day-care centers who are trying to serve the local produce and by definition, they're having to use small purchases [...]. But by using small purchases, you're telling me that I can't buy from Joe the Farmer two weeks in a row? If I have developed a relationship with Joe the Farmer and he is planting tomatoes for me, I need to be able to purchase for him two weeks in a row because he can't just plant enough tomatoes to give me one week. So I buy from him this week and then I [need to] go to [another] one next week. And then I got to go back to [the first one the following] week. It's just crazy. It's insanity."

While CACFP has a way for ECEs to add farmers as vendors, this problem still poses a barrier for many when they try to establish local food purchasing relationships. Our research has shown that the commitment to farm to ECE has been a rewarding endeavor, however, it is incredibly time consuming for the ECE. As such, each additional step an ECE must make on a daily basis creates a very real barrier to the success of their program.



6. Work Cited

¹https://www.qualitycareforchildren. org/farm-to-ece-site-selection

²Croom, E. Mobley, J. Getting Started: Georgia Farm to Early Care and Education Guide. <u>http://</u> <u>www.farmtoschool.org/Resources/Georgia%20</u> <u>F2ECE%20Getting%20Started.pdf</u> (2020)

³Pearson N, Biddle SJ, Gorely T. Family correlates of fruit and vegetable consumption in children and adolescents: a systematic review. Public Health Nutr. 2009;12(2):267–83.

⁴Amuta AO, Jacobs W, Idoko EE, Barry AE, McKyer EL. Influence of the home food environment on Children's fruit and vegetable consumption: a study of rural low-income families. Health Promot Pract. 2015;16(5):689–98.

⁵Davis, J.N., Pérez, A., Asigbee, F.M. et al. Schoolbased gardening, cooking and nutrition intervention increased vegetable intake but did not reduce BMI: Texas sprouts - a cluster randomized controlled trial. Int J Behav Nutr Phys Act 18, 18 (2021)

⁶"Local food for Little Eaters Georgia" <u>https://</u> www.decal.ga.gov/documents/attachments/ LocalFoodforLittleEatersinGA.pdf

Other Resources

Quality Care for Children, Georgia Farm to ECE website: https://www.qualitycareforchildren.org/farm-to-ece

"Navigating Early Care and Education: A Roadmap for National Farm to School Network State Leads," developed in partnership with Ecotrust (www.ecotrust.org) in 2014.

APPENDIX:

A.1 Phase 1: Distributors interviewed or identified:

A.1.1 We divided the distributors into four categories.

A) High Convenience (HC): (e.g., Royal, Sutherlands, Cisco, Holland Produce, PureFun!)
These businesses have a broad distribution range, offer value added, relatively small minimum orders and a broad range of products that could include non-fresh produce products.
B) High Values (HV): (e.g., Common Market Georgia, Flint River Fresh, Fresh Harvest, Carver's)
Strong relationship with farmers, strong social justice component, may have higher volumes, limited or no value added, tend toward larger orders.
C) High Flexibility: (e.g., NEGA Foodbank, Farm'd)
Direct orders from individual producers, minimum depends on the market place, flexible delivery schedule.
Specialty is convenience; either amount, delivery timing, or access to specialty processing.
D) High farmer connection: (e.g., Mayflor, West GA Cooperative)

Direct face-to-face interaction between ECE and a specific farm or producer. This relationship would be best with a small ECE and potentially one in very close proximity to an available farm. Also an ECE that can be flexible with menus.

A.1.2 Phase 2: Additional ECE Identified local food suppliers

Distributors/Farm Stands

DeKalb Farmers Market Produce Patch- Farm Stand- Gwinnett County, Georgia Farms-Produce Humble Vine Farm, Cleveland, Georgia CJ Orchards- https://www.cjorchards.com/ Blackberry Farmstead- https://www.blackberryfarmstead.com/ Atlanta Harvest- https://www.atlantaharvest.com/

Dairy

Southern Swiss Dairy- https://www.southernswissdairy.com/ Mountain Fresh Creamery- https://mountainfreshcreamery.com/

Meat

Farm View Market- https://farmviewmarket.com Little Springs Cattle Company- Covington Georgia

Bakery/ Bread

Bread Works International: https://www.breadworksintl.com/

Specialty Resources

Small Bites Adventure Club- Taste Test Kits- https://smallbites.club/

A.2 Interview Questions for Distributors

1. Company Background

1.1 Company name

1.2 (have them discuss the mission and business model, clarify if their "local" operations vary from conventional)

- 1.3 Years in operation
- 1.4 Number of employees
- 1.5 Geographical range of sourcing in general, and local sourcing in particular
- 1.6 Geographical range of distribution
- 1.7 Is local food an important aspect of your company? (What does local mean to you?)
- 1.8 What percentage of your business is local products?

2. Working with customers

- 2.1. Who are your primary Customers (Can you break it down by percentages?)
- 2.2. How do you identify customers?
- 2.3. Number of Institutional Customers and types
- 2.4. How many/what percentage of your clients are interested in local food?
 - 2.41. On a scale of one to five- five being the most important- how important is local food to your customers? 1- Not at all important 2- Not important 3- Neutral 4- Somewhat important 5- Very important

- 2.5. What do you think they mean by local?
 - 2.5.1. What local products do you sell to Institutions?
- 2.5.2. Do you have contracts and on average what is the term of those contracts?
- 2.6. What are the biggest challenges you and your company face when working with your customers? 2.6.1. What are you doing that you feel is working well?
- 2.7. Who would you like to be selling to?
- 2.8. What is the main obstacle to this relationship?
- 2.9. How do you identify your product as local to your customers?
- 2.10. Are you able to supply local year round?
- 2.11. For institutional clients, what local products are in the highest demand?
- 2.12. How do you handle the clients' production requirements?
- 2.13. How do you communicate with the farmers and clients?

3. Working with suppliers:

- 3.1. Who are your primary suppliers (Can you break it down by percentages of supplier
- size, locality, and included in your category of "local" offerings?)
- 3.2. How do you identify local food suppliers?
- 3.3. What is the minimum farm size or production capacity you are willing to work with?
- 3.4. Do you have contracts and on average what is the term of those contracts?
- Otherwise, how do you reach agreement with your suppliers?
- 3.5. How do you negotiate prices with local suppliers?
- 3.6. What are the biggest challenges you and your company face when working with your suppliers? 3.6.1. What are you doing that you feel is working well?
- 3.7. Who would you like to be buying from?
- 3.8. What is the main obstacle to this relationship?
- 3.9. Do you have enough suppliers of local to fill the demand you encounter?
- 3.10. What obstacles do you encounter in increasing your local offerings?
- Yes/No: Which of the following would facilitate you to increase your local offerings?
 - 1. Licenses and certifications
 - 2. Production capacity
 - 3. Packaging
 - 4. Specific case sizes/counts/weights
 - 5. Scheduling pickups and drop-offs
 - 6. Specific produce availability
 - 7. Other (explain)
- 3.11. Is it important to facilitate connections or communication between supplies and
- customers? How do you communicate with your farmers and your clients?
- 3.12. Are you able to supply local year round?
- 3.13. For local food suppliers, what products are most easily available?

4. Food Safety and Production Requirements

- 4.1. How do you handle clients' production requirements?
- 4.2. How is packaging and distribution managed?
- 4.3. Does your organization do any processing?
 - If so, how?
 - 1. Washing
 - 2. Cutting
 - 3. Repackaging (e.g. fruit or vegetable mixes)
 - 4. Portioning
 - 5. Freezing
 - 6. Other value added
- 4.4. Please describe your food safety certifications and expectations for suppliers
- 4.5. How do you negotiate food safety issues with suppliers?
- 4.6. How do you handle food safety in your organization?

34

4.7. Food safety questions applicable to early care centers in GA?

5. Closing

5.1. Can you suggest to us other distributors, farmers and customers to speak with about their practices with local food?

A.3 Interview Questions for the ECE

- 1. How often do you serve fresh produce at your ECE?
- 2. Discuss the relationship you have with your produce distributor.
 - a. How did they originally come to your attention?
 - b. Who or how many people do you work with there?
 - c. How often do you interact?
 - i. Is it friendly and casual or a more formal business relationship?
 - d. Have you ever toured their facility?
- 3. Why did you choose this provider? What are the primary reasons you picked them?
- 4. How often do you place produce orders? What percentage of your weekly needs comes from this provider?
- 5. Do you ever purchase directly from farmers? Why or why not?
- 6. Who else do you purchase from?
- 7. How does ordering work? Can you request or even pre-order products for the longer term?
- 8. How is the turn around time from order to delivery? Does this work for you?
 - a. How do you like the way deliveries are made?
 - b. How do you like the packaging?
 - c. How do you like the ordering method
 - d. How do you feel about pricing? Do you negotiate pricing? How?
- 9. Considering your history with distributors, what would you define as best practices?
 - a. What is lacking?

Local

- 10. How do you define local?
- 11. Is your distributor able to tell you where your produce is coming from?
- State, own, farm? If so, how do they report that information?
- 12. Do you know how much produce you purchase is local?
- 13. Do you know the farmers that supply you?
 - a. Do you have, or have you had, direct contact with any farmers who supply your distributor? i. If so, describe the situation and relationship with that farmer.
- 14. Is traceability being able to say what farm your produce is from– important to you?

Customers/Parents

- 15. How do customers/parents define local?
- 16. Is local food important to them?
- a. Do they comment or discuss local produce with you?
- 17. Do you let them know where the food is coming from?

Purchases

- 18. In what type or degree of processing do you prefer to buy products?
 - a. Describe ideal products.
- 19. What local produce do you purchase?
- a. How is it used- prepared?
- 20. What local produce items would you like to purchase that are not available to you?
- 21. What are your company's requirements for purchasing local produce? (i.e. distributor
- must have HACCP Certification or grower must have GAP certification?)
- 22. When purchasing produce, what is most important to you?
 - a. Quality
 - b. Price
 - c. Consistent availability
 - d. Grown in State
 - e. Grown in Region
- 23. What are your future plans to purchase local produce?
- 24. What supports/services are needed to increase the purchasing of local produce?

A.4 Sourcing Directory

Local Food Sourcing Directory for ECE Providers