ABSTRACT

RUTZ, JACOB C. Farm to Child Care: An Analysis of Social and Economic Values in Local Food Systems. (Under the direction of Dr. Dara Bloom and Dr. Michelle Schroeder-Moreno).

Local food systems are positioned as opposing the dominant global, industrialized order of food and agricultural production. Globalized food systems are often framed as damaging to human and environmental health through the over production of high-calorie/low-nutrient foods, long distance supply chains and destructive production practices. Local food systems are production and consumption systems framed as providing authenticity, regional identity and sustainable livelihoods. Farm to institution is a continuation of the local food movement, representing the growing link between local producers and organizations like schools, prisons and hospitals that have concentrated buying power and thus a sizable influence on the food supply chain. Farm to Child Care represents a next step in farm to institution with the intended goal of serving young children at the apex of their habit formation and biological development as well as providing economic opportunities for local, family-owned farms.

North Carolina Cooperative Extension in partnership with two regional public health non-profits organized a Farm to Child Care Program in one urban county in North Carolina in order to link child care centers with sources of fresh local foods. This program provided a cohort of fifteen child care centers with a small subsidy to purchase local foods and educational workshops about local foods. Local farmers and regional distributors were engaged through technical assistance and occasional workshops in the program. The first study (Chapter Two) of this thesis uses a qualitative case study methodology to explore how farm to child care supply chain actors negotiate the tensions between socially embedded values and market-
instrumentalism. Data for the case study was conducted using participant observation, semi-structured interviews and content analysis. Eleven child care centers, eleven farmers and four distributors ultimately participated in the case study research. Analyzing child care centers’, farmers’ and distributors’ perceptions of participation in the local food economy shows parallel values for children’s health and small farmer wellbeing actualized in the relationships and purchase of local foods. To foster social relationships and meet basic needs under financial limitations, child care centers participated in multiple markets, often subsidizing the increased costs associated with local and fresh foods with patronage from lower-cost, but less socially embedded markets like warehouse clubs and conventional distributors. Farms experienced a fragility in the market in an attempts to serve low-income customers but retain a level of business solvency in the low-volume market of child care. Distributors likewise balanced social connectivity to consumers and producers that depended on either grant funding (in the case of non-profit food hubs) or the existence of higher-income customers (in the case of for profit distributors) to drive local demand. Concluding with a community food security framework encapsulates the diverse social values participants displayed, providing more explanatory power for local food actor’s actions than framing farm to child care as a market-based intervention alone.

The third chapter of this thesis is structured as a Cooperative Extension publication about the Farm to Child Care Program itself. In this chapter, barriers, benefits and strategies to conducting a farm to child care project and the function of the overall supply chain are described in-depth. Data and analysis that informed this chapter are the same as that for Chapter Two. This chapter helps to inform Cooperative Extension and other service providers how child care centers, farmers and distributors actually participate in a local food supply chain and
what challenges they face. Likewise, this chapter presents best practices for helping child care centers self-assess their own capacities to purchase, use and serve fresh local foods. Reflections on farm to child care as a form of social equity are presented in this chapter’s final section.
Farm to Child Care: An Analysis of Social and Economic Values in Local Food Systems

by

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DEDICATION

This thesis is dedicated to my wife, Jacquelyn Vorndran, who has been a consistent and loving support throughout my entire master’s degree experience. Thank you for always encouraging me to be truthful, engaged and open to other’s experience.
BIOGRAPHY

After attending NC State and receiving a B.S. in Plant and Soil Sciences, I was enthused to begin working on farms in order to actualize my education and help grow healthy food for other people. I continued my education learning about both farming practices and the social systems that inhibit people’s ability to afford, access and utilize nutritious foods. I returned to NC State in order to understand the systemic barriers I encountered while farming in sustaining environmentally conscious farms and affordable food for all. My master’s experience has contained both research and work on a Farm to Child Care project to explore the boundaries of local food systems and their ability to address structural inequalities. I complete my studies as Farm to Child Care expands into a statewide initiative, energized to continue working at the intersection of sustainable agriculture and social equity.
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Chapter I. Introduction
Local food economies are framed as a countervailing effort to globalized, industrial food production and consumption systems by many food systems activists and practitioners. The industrial, conventional food system is often described as inherently negative for consumers, harming individuals and groups through the mass production of cheap, low-nutrient and toxic foods (Guthman, 2011; Nestle, 2002; Winter, 2003). Small and mid-sized farmers also lose out in a globalized economy that rewards externalizing environmental degradation and over-production of homogenous commodities (Hines, 2000; Nabhan, 2001; Pollan, 2006). Local food systems have become a counterpoint to the global food system, providing opportunities for community investment, healthy foods and authentic relationships through alternative markets like farmers markets and community supported agriculture (CSA) (DuPuis & Goodman, 2005; Hinrichs, 2003). Focus on local food also resides in its potential to be a means of sustainable business development that accounts for social, economic and environmental costs in food production (Allen & Guthman, 2006, Morgan & Sonnino, 2008). Farm to institution is an example of embedding these social and environmental values into economic transactions around food for organizations like schools, prisons and hospitals that have concentrated buying power and thus a sizable influence on the food supply chain (Campbell, Carlisle-Cummins & Feenstra, 2013; Morgan & Sonnino, 2008). Farm to school is a major and ongoing project under the banner of farm to institution, utilizing public procurement to leverage healthier options for children as well as compensate regional farmers growing nutrient dense foods (often assumed to be in a socially and environmentally equitable way).
Farm to child care (F2CC) is an offshoot of farm to school, largely falling into the category of public procurement since many child care centers use the Child and Adult Care Food Program (CACFP) to receive federal funding as a reimbursement to cover the costs of food for families that are low-income. Farm to child care frequently refers to a broad set of activities that “enhance the health and education of young children by developing systems and experiential learning that connects children and their families with local food and farms,” but this thesis focuses primarily on the component of food procurement (North Carolina Farm to Preschool Network, 2016). Procurement refers to sourcing, distributing and processing food through supply chains that link producers, distributors and child care centers. Although similar to farm to school, F2CC offers two distinct advantages over farm to school; greater procurement flexibility and engaging younger children. Child care centers have lower barriers to entry for partnering with farms and are open year round. Centers have more frequent contact with parents than do schools, influencing the entire family unit’s eating habits through their enrollment of a child in daycare (Hoffman et al., 2012). Learned dietary habits develop at a very young age, coming from the environment that includes the family unit as well as child care settings (Ammerman et al., 2007; O’Dea, 2003; Sandstrom & Chaudry, 2012; Williams et al., 2014). Children are also spending more time in child care centers, consuming a large percent (50% to 100% by some estimates) of their daily meals in a center as opposed to the home setting (Ammerman et al., 2007; Benjamin et al., 2009; O’Dea, 2003). Research is beginning to correlate procuring local food and educating about local food with positive outcomes in children’s eating behaviors (Izumi, Eckhart, Hallman, Herro & Barberis, 2015; Williams et al., 2014). Clearly, interest for understanding the
influence F2CC can have on the whole supply chain follows from empirical and anecdotal evidence of successful interventions.

However, far less research reflexively examines the benefit of farm to child care for farmers and distributors, in the context of localness, instead assuming that localization ensures benefits to all involved actors. A handful of pilot programs have documented on-site farmers markets and CSA-style programs, earning the dual benefit of reaching child care families and providing farmers unique new markets (Carroll et al., 2011; Hoffman et al., 2012). Despite such opportunities, research has shown that farmers’ participation in farm to child care (and school) relationships in particular is often less about business opportunities and more about generating social benefits that transcend economic decision making (Izumi, Wright & Hamm, 2010; Thornburg, 2014). Many F2CC activists (like the Farm to Preschool Network) fail to cite specific benefits to farms or local food distributors, instead focusing on the general good of improving the local food economy through this market relationship. There is a need in critical scholarship of systemic change to (local) food economies to better understand benefits and challenges to all actors involved.

More broadly, local food and the extent of change it can engender is contested (Allen & Guthman, 2006; Born & Purcell, 2006). Local as a scale of production and consumption does not translate inherently into environmentally friendly farming practices or equitable access to nutritious foods for people who are low-income (Born & Purcell, 2006). Global and large scale production systems are also not intrinsically unethical; both global and local food systems must commit explicitly to ethical practices like fair wages and environmentally
friendly production to create sustainable futures (Morgan & Sonnino, 2008). The convoluted nature of local food system interventions requires further examination to understand how they dismantle oppressive production and consumption systems or act to reproduce them.

Food system scholars have acknowledged that the interconnectedness of all members of the food supply chain require frameworks in economic sociology to analyze the “context, process and outcomes of exchange” (Hinrichs, 2000 p. 296). Social relationships are embedded in market exchanges at every level, but seem particularly present in local food systems (DuPuis & Goodman, 2005; Hinrichs, 2000). Social embeddedness is a framework to illustrate the human elements of trust, reciprocity and good will present in economic transactions; local markets are often framed as highly embedded in social values as a component of their commitment to communities and sustainable farming practices (Hinrichs, 2000). Local food systems also exhibit levels of more business-oriented activity conceptualized as marketness, or the degree to which profit motivates an interaction in the economy (Hinrichs, 2000; Kirwan, 2004). Hinrichs critiques the understood embeddedness of local food systems, like farmers markets and CSAs, as spaces that privilege social connectivity to purposefully decommodify food, but still favor and depend on wealthy, privileged customer bases to exist (Hinrichs, 2000). Economic longevity for farmers instead may require a healthy but constrained dose of instrumentalism and marketness to survive in these self-proclaimed alternative markets (Hinrichs, 2000). Likewise, representing conventional food system exchanges as purely market oriented obscures the level to which mainstream food markets are also embedded in complex webs of long-term relationships and community concern. Both local systems and more conventional food systems display
qualitatively assessable extents of embeddedness and market-instrumentalism as axiomatic components of their basal existence (Bloom & Hinrichs, 2010; Izumi et al., 2010).

The gap between affordable price points of nutritious foods for low-income customers and profitability for local farms that ensure sustainably grown and equitably harvested products poses an exceptional challenge to researchers and activists alike (Campbell et al., 2013). With impressive goals to address not only food system localization but also childhood wellbeing, F2CC attempts to bridge multiple social needs through a market-based intervention. Exploring the plausibility of achieving F2CC goals necessitates further examination of the tensions between socially embedded values and market-based actions.

Chapters Two and Three in this thesis derive from a Farm to Child Care Project conducted in one urban county in central North Carolina. This F2CC project actualized the socially embedded values in local food systems through engaging cohorts of fifteen child care centers by providing them a small subsidy (in order to transition into local food usage) and educational workshops around the benefits of buying local food. The F2CC Project is ongoing, continuing to engage new cohorts of CCCs to encourage their use of fresh, local produce. This case study is based on the first year of the F2CC Project spanning May 2015 through May 2016, providing a snapshot of this nascent local food supply chain. Educational workshops for CCC’s focused on cooking with local foods, marketing to parents, procuring local items and teaching children about nutrition. The F2CC Project also pursued
partnerships with local farmers and distributors to improve relationships within the supply chain and provide business opportunities for farms in the region.

Chapter Two focuses on the analysis of the tensions between social embeddedness and market-instrumentalism between the three supply chain actors studied: farmers, distributors and child care centers. Child care centers valued social connections with local farmers as a means to provide education to children, nutritious food and connection to agricultural narratives. Localness, however, presented food cost and processing challenges for many child care centers that necessitated the existence of inexpensive, processed foods to subsidize the local, value-laden foods. The localization of the child care food supply chain was not an improvement in the center’s capacity or convenience to provide quality food, but instead required an explicit and extra commitment to procure, process and serve this food. Farmers, similar to results from other studies, valued the child care market for the social good of feeding hungry children and educating families about how food is grown. Yet farmers openly committed to marketness when working with child care became so uneconomic as to be harmful to their bottom line. Farm entities, instead of aligning themselves with a market that prioritizes social values over economic profitability instead focused on socially beneficial activities, like land stewardship and donating surpluses to charity, that were compatible with their profit-oriented market. Finally, distributors’ (divided by the two types in this study, for profit and non-profit) embeddedness was organized by their central mission. Non-profit distributors aimed to serve both the low-income consumer and smaller producer, creating opportunities for connection and sales that the market was
unable to accommodate but was also dependent on grant funding (which some producers saw as ultimately unsustainable). For-profit food distributors displayed embeddedness as a commitment to local procurement, focusing on pursuing customers who could perpetually afford it, often leaving out low-income customers like child care centers. Like other participants in this study, distributors’ necessity to operate as financially solvent resulted in market oriented activity like using local as a marketing tool or absorbing losses through grants.

Local food systems are a lens to identify and analyze larger economic struggles for sustainable and fair market relationships. For many, local food was a strategy to fulfilling embedded social values for primary stakeholders or marketness for ensuring profitability. Institutionalizing an equitable food system through farm to child care activities remained elusive as attempting to improve the economic conditions of historically disadvantaged groups, like small farmers and low-income children, remained central to the function of this food supply chain. While this thesis focuses on the economic values expressed through the microcosm of the food system, the central ideas presented here reflect deeper tensions in market-based solutions as a theory of change, especially in food. As a system subsumed by the larger economy, the critical issue of poverty is illuminated as well through the challenges of this market solution to ameliorate issues based in a failure of the market.

Identifying and discussing challenges and strategies to operationalize the complexities of embedded food economies is critical to advance both theory and solutions for practitioners. Chapter Three focuses on the specifics of this F2CC case study, reporting the
observed activities primarily from child care and farmer participants. This chapter is intended for Cooperative Extension and other food system organizers to catalyze the institutionalization of farm to child care relationships in an equitable way. Cooperative Extension is a primary stakeholder in translating scholarly knowledge into pragmatic strategies for addressing complicated problems, which was a central goal of the F2CC Project.

As a consistent entity in both rural and urban communities, Cooperative Extension can provide education and organization around F2CC topics that is collaborative, empowering and equitable. Bringing together experts in the field, like child care cooks or small farmers to convene around a topic, Cooperative Extension can help grow communities of practice and networks of learners that are trustworthy and embedded in the communities they serve. Cooperative Extension can build power on the margins of society and the economy by directing state, federal or grant money specifically to marginalized groups like families that are low-income or minority farmers to achieve their own self-defined goals. Finally, as community members themselves, Cooperative Extension can help maintain the knowledge and collective experiences from programs like F2CC, through publications, continued workshops and technical assistance, helping house the lessons learned but still elevating the lived experience of those most intimately involved with F2CC. Chapter Three is a demonstration of the role Cooperative Extension can play in cataloguing F2CC practitioner’s experiences and critically reflecting on individual as well as collective challenges and strategies for program success. Incorporating an outreach component of this
thesis respects the time and expertise the research participants shared in hopes of improving the well-being of children and livelihoods of responsible farmers and distributors. Because of the rapidly evolving nature of the F2CC supply chain, further studies are necessary as business relationship maturation leads to deeper lessons learned about both the individual strategies for sustainable F2CC supply chains as well as how community food security is advanced in this work.
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Chapter II. Farm to Child Care: Negotiating Tensions Between Social and Economic Values in a Local Food Supply Chain
Abstract
Local food systems are positioned as opposing the dominant global, industrialized order of food and agricultural production. Farm to school is an ongoing project of the local food movement, bringing quality-laden foods to children from regional farmers. Farm to child care represents a next step in food system localization proceeding from farm to school, with the intended goal of reaching young children (at the apex of their habit formation and biological development) and sourcing fresh produce from sustainable producers. Using a qualitative case study methodology, this paper explores how farm to child care supply chain actors negotiate the tensions between socially embedded values and market-instrumentalism. Analyzing child care centers’, farmers’ and distributors’ perceptions of participation in the local food economy shows parallel values for children’s health and community connection to farmers actualized in the relationships and purchase of local foods. However, child care center’s embedded values for local agriculture was partially subsidized by inexpensive foods procured through the conventional food supply chain. Producer and distributor participation focused less on a market that prioritized social embeddedness over marketness, instead expressing social values through other activities, like donating surpluses and land stewardship, that could be conducted in tandem with their existing operations. More market driven values and actions continued to dominate the supply chain when business solvency seemed to be in opposition to central social commitments. Concluding with a community food security framework encapsulates the diverse social values most participants display, providing more explanatory power for local food actor’s actions than framing farm to childcare as a market-based intervention alone. A community food security ethic informed by
social embeddedness and market-instrumentalism helps inform how local food systems that engage public procurement schemes may positively influence sustainability of farm to child care programs.

Keywords: embeddedness, local food systems, child care, case study, North Carolina
Introduction

Local food economies have emerged as a countervailing effort to globalized, industrial food production and consumption systems. Global food systems have been described as a negative force, concentrating economic wealth, degrading the environment and disempowering social groups (Hines, 2000; Lappé, 1991; Nabhan, 2001; Pollan, 2006; Schlosser, 2001). Individuals may experience the effects of the global food system through dangers to personal health (both waist-lines and food-borne illness), environmental toxins and ethical concerns for other humans or animals (Allen & Guthman, 2006; Nestle, 2002; Winter, 2003). Children in poverty particularly experience the detrimental effects of a food system that provides inexpensive and low-nutrient, high calorie foods in tandem with inaccessible and expensive healthy foods, resulting in both obesity and hunger (Food Research & Action Center, 2015).

Local food systems, in opposition, have been socially constructed as providing consumers authenticity, health, tradition and taste, social and material values of quality clearly discernable from globalized systems (Goodman & DuPuis, 2002; Hinrichs, 2003; Winter, 2003). These values are socially embedded in alternative forms of food production and exchange, like farmers markets and Community Supported Agriculture (CSA), that challenge the dominant, global food production system (Allen, 1999; Feenstra, 1997). However, these social values of local food systems are not necessarily inherent in the scale, organizations, or theory of change often attributed to them (Allen, 1999; Goodman & DuPuis, 2002; Guthman, 2008; Hinrichs, 2003; Winter, 2003). As an economic system, scholars warn that positing social change through individual purchasing habits favors those
with wealth (and privilege), leaving behind low-income people (Allen, 1999; Born & Purcell, 2006; Guthman, 2011; Starr, 2010). Likewise, local food values are not the “friendly antithesis to the market” but instead a multi-faceted and often contradictory value system that may uphold unequal social systems and environmental practices in tandem with the development of local food solutions (Allen, 1999; DuPuis & Goodman, 2005; Hinrichs, 2000, p. 296). Different degrees of market-driven activity in the local food system color the reality of how producers sell their crops and how consumers purchase this food (Hinrichs, 2000). The messy nature of local food system values requires further empirical exploration to explain the tensions between social and economic values.

Farm to institution, including hospitals, schools and child care centers (CCCs), has garnered major attention as a next step to address systemic challenges in equitable food systems (Campbell, Carlisle-Cummins & Feenstra, 2013; Feenstra, Allen, Hardesty, Ohmart & Perez, 2011; Vogt & Kaiser, 2007). Farm to child care is one example that attempts to bridge low-income children and local farms through a mutually beneficial market relationship. Farm to child care (F2CC) in this paper is defined as “Any activity that enhances the health and education of young children by developing systems and experiential learning that connects children and their families with local food and farms” (North Carolina Farm to Preschool Network, 2016). In comparison to the farm to school (F2S) programs, F2CC has lower barriers to entry and more flexibility in food use, suggesting new and viable

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1 It should be noted that “child care centers” are a specific type of care setting under the more broad definition of early care and education settings for children, which include child care centers, licensed and unlicensed family child care, private preschools, Head Start/Early Head Start, state preschools, and programs through K-12 districts (Stephens & Oberholtzer, 2016). This paper specifically observed and analyzed child care centers in the local food system.
farm connections and holistic nutrition programs. Child care centers are open year round, purchasing food through multiple local food options, making them more flexible consumers (Hoffman et al., 2016). Likewise, CCCs don’t require Good Agricultural Practices (GAP) certification, a private food safety measure that can be a barrier to small farms entering institutional markets. The organization of meal times tends to be inclusive, utilizing family-style meals and having adults (teachers) and children eating together, encouraging greater diversity in the choices of food consumed, even beyond what is reported in children’s homes (Hoffman et al., 2016; Lynch & Batal, 2011). Centers have frequent contact with parents, influencing the entire family unit’s eating habits through their enrollment of a child in daycare (Hoffman et al., 2016). The Child and Adult Care Food Program (CACFP) provides federal funding as a reimbursement to CCCs to cover the costs of food for low-income families. This reimbursement can be used to help pay for foods and labor associated with programs like F2CC that centers nationwide struggle to afford (Stephens & Oberholtzer, 2016).

Presently, there is a gap in the literature around how F2CC supply chain actors negotiate the tensions between social and economic values. This paper uses a case study method to explore this tension between three local food supply chain actors; farmers, distributors and child care centers. I begin by demonstrating that child care is an ideal space for local food-based interventions in children’s health due to the development and behavioral growth that occurs in this life stage. Then I tie in the precedent of the National School Lunch Program and F2S as precursors to the emergence of local foods in child care settings. Social embeddedness theories are utilized to frame the relationships in the F2CC supply chain case
study at an interpersonal and institutional exchange level. This lens helps to provide interpretation to the actualization of the market relationships and the resulting dissonance observed between social and economic values. F2CC actors framed their actions and perceptions around socially embedded values for local food community cohesion and children’s wellbeing. Friction arose when achieving social goals seemed outside the potential for a financially viable market. In the conclusion section I will situate F2CC programs in a community food security frame in order to explore public procurement schemes that may demonstrate strategies to encapsulate both social and economic values.

**Literature Review and Background**

**Childhood Nutrition and Local Food**

Addressing hunger and obesity issues, two faces of the same coin of a broken food system, with preschool-aged children focuses resources on a critical life stage of a vulnerable population. Nationally, about one in ten preschool-aged children are obese, while at the same time one in five are also at risk of hunger; yet these seemingly separate conditions are mutually reinforcing (Food Research & Action Center, 2016; Food Research & Action Center, 2015; Ogden, Carroll, Fryar & Flegal, 2015). Children in socioeconomically disadvantaged households are particularly at risk for a poor diet that may lead to obesity and other diet-related diseases (Just, Lund & Price, 2012; Lioret et al., 2014; Story, Kaphingst & French, 2006). Learned dietary habits develop at a young age, coming from the environment that includes the family unit as well as child care settings (Ammerman et al., 2007; O'Dea,
Child care environments influence children’s eating habits and development through direct and indirect educational experiences and the frequency of serving nutritious foods (Izumi, Eckhart, Hallman, Herro & Barberis, 2015; Izumi, Wright & Hamm, 2010a; Story et al., 2006). Children are spending more time in child care centers as well, consuming a large percent (50% to 100%) of their daily meals in a center as opposed to the home setting (Ammerman et al., 2007; Benjamin et al., 2009; O'Dea, 2003).

Enrollment in child care centers is growing due to the rise in dual-income earning parents and low-incomes, necessitating children be cared for by centers or child care homes (Ammerman et al., 2007; Schulte et al., 2016). In North Carolina, where the current study took place, over 6,600 early care and education settings were in operation in 2016, serving nearly 250,000 children throughout the state (Division of Child Development and Early Education, 2016). Nearly 125,000 child care attendees were enrolled in subsidized food programs in North Carolina in 2016, providing free and discounted meals to children in low-income households (Division of Child Development and Early Education, 2016). For these children, meals from a public institution like a school or child care setting are “a safeguard against hunger” (Story et al., 2006 p. 113).

Funding for CCC’s through the CACFP mirrors the historical recognition of childhood hunger that led to the National School Lunch Program in the mid-20th century (many other authors provide insightful histories of school lunch, such as Feenstra & Ohmart, 2012, Levine, 2008 and Poppendieck, 2010). Both the CACFP’s and National School Lunch
Program’s 2010 reauthorization helped fund national initiatives to focus school meals on children’s nutritional needs and re-center federal spending on producers through F2S projects (Feenstra & Ohmart, 2012; Gordon, Kaestner, Korenman & Abner, 2011; Levine, 2008; Poppendieck, 2010; USDA-FNS, 2016). From its inception in the mid 1990’s to this day, F2S (through the work of partnerships headed by the National F2S Network) has experienced expansive success connecting children to sources of local food in 40,000 school districts in all 50 states (National Farm to School Network, 2016). For farmers, F2S represents a small but growing market for regional fresh produce growers and, to some extent, producers of legumes, animal products and value-added products (Low et al., 2015). Institutions that serve children in early care and education settings remained disconnected from local food system reform until more recent activities in the 2010’s when the National F2S Network branched off to include a Farm to Preschool Subcommittee to help coordinate independent state programs occurring across the country (UEPI, 2017). Child care centers are now encouraged through their participation in the CACFP to purchase food locally as well as utilize these funds in creative provisioning programs (like purchasing seeds and paying for labor to grow fresh produce on site for children) (Kline, 2015).

Present analyses of F2CC focus on the nutritional and educational gains for children as a central outcome of these relationships (Hoffman et al., 2016; Williams et al., 2014). Farm to child care meals have been found to be more nutritious than non-local meal service, especially in fruits and vegetables (Gibson et al., 2014). Exposure to more fruits and vegetables, as part of an educational F2CC program, has also been demonstrated to influence
low-income children towards improved eating behaviors (Izumi et al., 2015; Williams et al., 2014). Because children do not eat in a vacuum, focusing on the whole system of children’s eating influences, including teachers, parents and peers, is most effective in producing positive behavioral outcomes (Izumi et al., 2015; Williams et al., 2014).

However, far less research examines the role or benefit to the whole supply chain in these farm to child care projects. A handful of pilot programs have documented on-site farmers markets and CSA-style programs, earning the dual benefit of providing child care families with fresh produce and providing farmers unique new markets (Carroll et al., 2011; Hoffman et al., 2016). Despite such opportunities, research has shown that farmers’ participation in farm to institution relationships in particular is often less about business opportunities and more about generating social benefits that transcend economic decision making (Izumi et al., 2010b; Thornburg, 2014). Many F2CC activists (like the Farm to Preschool Network) fail to cite specific benefits to farms or local food distributors, instead focusing on the general good of improving the local food economy through this market relationship. Buying local food, as either institutions or individual consumers, ideally improves the health of rural economies, diversifies land ownership and provides nutritious food for consumers (Allen & Guthman, 2006; Chen, Clayton & Palmer, 2015; Dunning, Bloom & Creamer, 2015; Low et al., 2015; Vogt & Kaiser, 2007). A USDA report from King and colleagues shows that producers that retail products locally receive up to seven times the revenue than producers who sell food nationally or globally (King et al., 2010). Scant literature assesses the comparable revenue to farmers through farm to school or child
care. While present understanding of local food systems assumes that farmers and other supply chain businesses are benefitting, few studies have analyzed all perspectives of farm to child care supply chain actors, contributing to a lopsided focus on the benefits and challenges to consumers (Conner et al., 2012; Izumi, et al., 2010b). The friction between ensuring long term business solvency and achieving broad social goals has precedent in social economic thinking around local food systems (Allen, 1999; Campbell et al., 2013).

Embeddedness and Market-Instrumentalism in Local Food Systems

The relationships that form the F2CC supply chain can be organized into a system of interrelated values using the theoretical frameworks of embeddedness, marketness and instrumentalism. Social scholars have adapted these economic theories of behavior through the work of Polanyi and Granovetter into a critique of food system actors’ perceptions and motivations (Block, 1990; Hinrichs, 2000). Social embeddedness captures the idea that economic interactions are more than a simple set of rational choices but instead part of complex social relationships (Granovetter, 1985; Hinrichs, 2000). Borrowing from the work of Block (1990), Hinrichs utilizes the dual concepts of marketness and instrumentalism to further enrich the description of the tensions between economic and social values in direct agricultural markets (Hinrichs, 2000). Marketness describes a polarization of values that juxtaposes non-price considerations (like degree of social connectivity) against price-only values (Hinrichs, 2000; Kirwan, 2004). Marketness in food system literature is often correlated with globalized production systems, systems that value economic profits, large scale production/efficiency and industrial models of food production (Hinrichs, 2003). In
mirror opposite, the moral economy of local and alternative food is framed to favor community well-being, small scale production and “natural” models of food production (Hinrichs, 2003). Instrumentalism explains to what extent rational self-interest places individualistic goals like economic opportunism ahead of “friendship, family ties, spiritual considerations, or morality” in an economic transaction (Block, 1990 p. 54). These exchanges can be visualized as a matrix (Fig 2.1) of conflicting behaviors in market-instrumentalism and social embeddedness, existing in parallel and expressed by all actors in the food system.

Local food systems are often times the modus operandi of these alternative food systems, purposefully incorporating social, cultural and ecological factors into their operations in opposition to more conventional food systems that favor price and efficiency (Izumi et al., 2010a; Kirwan, 2004). Farm to school (and child care) is often predicated on “pure, conflict-free local values and local knowledges,” positive values assumed to be inherent to the local forms of market exchange (DuPuis & Goodman, 2005 p. 359). However, “local” and alternative markets cannot always be equated with fair wages or internalization of ecological costs without explicit dedication to socially just causes (Allen & Guthman, 2006; Born & Purcell, 2006; DuPuis & Goodman, 2005; Izumi et al., 2010a). Hinrichs critiques the understood embeddedness of local food systems, like farmers markets and CSAs, as spaces that privilege social connectivity to purposefully decommodify food, but still favor and depend on wealthy, privileged customer bases to exist (Hinrichs, 2000). Economic longevity for farmers instead may require a healthy but constrained dose of
instrumentalism and marketness to thrive in these self-proclaimed alternative markets (Hinrichs, 2000). Likewise, representing “conventional” as purely market oriented obscures the level to which all food systems are socially embedded in long-term relationships, varying degrees of regional affinities and value for serving those in need (like children) (Bloom & Hinrichs, 2010; Izumi et al., 2010a). Alternative food systems are increasingly “hybridized,” or draw upon the practices and resources of conventional mechanisms of food distribution and sales in order to exist at all, further complicating legitimate differences between the two (Bloom & Hinrichs, 2011).

The gap between affordable price points of nutritious foods for low-income customers and profitability for farms that ensure sustainably grown and equitably harvested products poses an exceptional challenge to researchers and activists alike (Campbell et al., 2013). With impressive goals to address not only food system localization but also childhood wellbeing, F2CC attempts to bridge multiple social needs through a market-based intervention. Exploring the plausibility of achieving F2CC goals necessitates further examination of the tensions between socially embedded values and market-based actions.

Methods

Case Study Characteristics

Despite North Carolina’s expansive and diverse agricultural sector, the state is tied for 12th in the nation for most food insecure families with children (22.4%) (Food Research & Action Center, 2016). Given the large young child population and unyielding poverty statistics, interest from regional public health non-profits for an intervention that addressed
both farms and children resulted in a F2CC Project in one urban county in central North Carolina. In order to incorporate a farming component and contribute to county-wide institutionalization of the program, North Carolina Cooperative Extension was pursued as a partner in the project. In the project, a cohort of fifteen child care centers received a small subsidy (based on child enrollment) and participated in educational workshops hosted by North Carolina Cooperative Extension. As of 2016, the F2CC Project is ongoing, continuing to engage new cohorts of CCCs to encourage their use of fresh, local produce. This case study is based on the first year of the F2CC Project from May 2015 through May 2016.

Educational workshops for CCC’s focused on cooking with local foods, marketing to parents, procuring local items and teaching children about nutrition. The F2CC Project also pursued partnerships with local farmers and distributors to improve relationships within the supply chain and provide business opportunities for farms in the region. Farmers and distributors were canvassed to determine their resource and technical assistance needs in order to engage with child care centers throughout the year. Technical assistance included help in grant writing for produce cold-storage equipment, pursuing additional child care markets and fostering relationships between local farms and distributors.

Research Participants

Eleven child care centers out of the 15 involved in the first year of the F2CC Project participated in this case study. Child care centers from around the county applied to participate in this project, and were selected from a pool of applicants based on percent of children eligible for CACFP funding and quality of the center, determined with the state star-
rating system. Once a child care center’s procurement options were identified, the farm or distributor they partnered with was approached to be involved in the research as well. In total, 11 farmers/farm sales representatives and four distributors ultimately agreed to participate in this case study.

General participant information are described in Table 2.1, Table 2.2 and Table 2.3, though some descriptive observations stand out. Child care centers all utilized more than one source of local food, averaging more than two options for each center to provide local food for an average of 100 children. Farmer operation sizes were bimodal in distribution, with one group ranging from less than one to 10 acres and the other comprising larger farms ranging from 750 to over 10,000 acres. All farms focused on a central profitable market (like direct to consumer or through a distributor) but all farmers also utilized many different market channels. Participating distribution companies also exhibited a polarization by operational sizes. Two were small, with less than three employees operating as non-profit food hubs with specific social missions to serve low-income customers. Food hubs are defined as centrally located enterprises focusing on aggregating, distributing and marketing specific region’s agricultural output (produce) to reach a variety of wholesale, retail and institutional customers (Barham et al., 2012). The other two distributors (one was national, one was regional) were considered “broadliners,” providing produce (both local and not), paper products and other non-food supplies, meeting the criterion for being hybrid distributors according to the definition explained prior.
Case Study Methodology

A case study methodology was chosen to capture the complexity and exploratory nature of this emerging F2CC supply chain. A case study is a detailed examination of events, the organization of which preserves the unitary character of the social object of study in order to exhibit the operation of a general theoretical principle (Creswell, 2013; Guest, Namey & Mitchell, 2013). Case studies are best suited for “how and why” questions, when minimal control over the research subjects necessitates obtaining multiple sources of information (Yin, 1989). This case study was divided into three data collection steps in order to build rapport, develop credibility and validity and encourage participants to fully represent their diverse and often conflicting perspectives (Guest et al., 2013; Mack, Woodsong, MacQueen Guest & Namey, 2005). The steps were; 1) participant observation on all sites accessible, 2) semi-structured interviews with critical informants and 3) content analysis of online and offline content.

The author conducted participant observation over single or multiple days (up to three) on 26 sites for each child care center, farm and distributor, including working in the kitchens, dining areas and in the field. Observations on-site helped ground the work in understanding the daily interactions between research participants, such as when farmers deliver produce to CCCs. Observations in off-site activities, such as during F2CC educational events, immersed the author in the language and terminology of the research participants and informed what questions were relevant to ask through interviews (Guest et al., 2013; Mack et al., 2005). Garnering the experience from members of these institutions who ordinarily do
not have a voice in knowledge production (including cooks, farm workers and truck drivers) but are integral to the function of the case being studied, provided multiple touchstones for validating results (Guest et al., 2013, Mack et al., 2005). Participant observation guides are included in Appendix A.

Semi-structured interviews with all 26 sites followed observations, which allowed the researcher to utilize a common interview guide but also incorporate prior interactions and follow emerging and unexpected themes (Creswell, 2013). Directors from each center were interviewed about barriers and opportunities in the local food supply chain and how they addressed serving low-income families. Farmers and distributors were questioned about their experiences and perceptions partnering with CCCs to provide local produce. All interviews were recorded and transcribed verbatim. Transcriptions were thematically coded using Nvivo 10 qualitative data analysis software in order to attach and assign meaning to strings of text to organize and develop themes from the data (Coffey & Atkinson, 1996; Saldaña, 2009). Interview guides are included in Appendix B.

All content generated by participants throughout the timeline of the case study, including printed documents, web pages and social media, was analyzed as well. Documents and other textual content provided another avenue to interpret values and beliefs put forth by research participants in a non-intrusive data gathering method (Marshall & Rossman, 2011). Content was coded using the same themes generated from interviews in order to further triangulate findings (Creswell, 2013; Merriam, 1995). This research was approved by the North Carolina State University IRB under protocol #6038.
Methodological validity was upheld throughout the length of the research as well as in data analysis. Prolonged engagement with research participants through observations in multiple settings built trust that helped to avoid misinformation through distortions in the data due to the presence of the researcher (Creswell, 2013; Mack et al., 2005). Observations, interviews and content were gathered as means to triangulate authenticity and credibility in the data (Creswell, 2013). Triangulation is the process of collecting two or more sources of similar data in order to further ensure accuracy of content gathered and researcher interpretation (Merriam, 1995, Oleinik, 2010). Data analysis and presentation in qualitative case studies also follow a canon of validity measures. Using methods outlined by Eisner (1991), consensual validation from F2CC practitioners (“competent others”) throughout the lifetime of the research provided insight into the reality of the descriptions, interpretation, evaluation and thematics of the analyzed data (as cited in Creswell, 2013 p. 246). Reporting findings using illustrative descriptions (for example, using descriptive quotes) that allow readers to understand the case at hand contributes to clarity and interpretability (Merriam, 1995).

Results and Discussion

This case study explores the dual nature of social embeddedness and market-instrumentalism in the local food supply chain between child care centers, farmers and distributors. Child care centers established local food values that emphasized children’s health and supporting small farms, operationalized by patronizing different forms of local
food distribution channels. Likewise, most farmers and distributors shared similar perspectives in general for the importance of working with low-income children to improve health outcomes. However, the whole supply chain was tempered with an economic reality that required different strategies to maintain a level of marketness in order to operate at a basic level. All actors ultimately utilized the efficiency and price-competitiveness of the mainstream food market in order to scaffold their participation in the alternative, local food system. Likewise, the F2CC Project was part of a larger trend to temporarily subsidize local food purchase, creating an ephemeral supply chain that was the embodiment of the social values of many supply chain participants. Many of the socially embedded values desired as outcomes of this local food supply chain were partially addressed using a market-based intervention. Through the often conflicting socially embedded and more price driven markets, the F2CC supply chain fluctuated between addressing equity in the food system and being challenged to ensure financial viability for those involved.

Child Care Center’s Values in Local Food Systems

Child care centers participated in local food supply chains as both consumers receiving products and institutions asserting strong value systems. Tending for children is a “heart and mission” choice as one center director attested, informing the social ethic of CCC’s work with low-income children and their families. Their participation in the F2CC supply chain is an actionable result of their embedded values related to improving children’s eating behaviors and improving communities writ large. Centers also expressed strong
positive perceptions of the social network they formed using local food to be in relationship with farmers, improving local economies and supporting like-minded entrepreneurs along the way. However, daily and structural barriers inhibited their expression of social values through local food partnerships. Frequently, strategies to overcome barriers related to cooking inexperience, proximity to markets, and funding required more market-based solutions. The F2CC local food supply chain was strained to express embedded social values while market pressures loomed. Child care centers in this case study preferred a personal relationship with the food provider (either farmer or third party distributor). Personable and care-based relationships guide CCC’s values for working with children, emanating from within the center to exterior relationships. One director, who purchased from both a farmer and a food hub, commented on her desire for a personable relationship with a farmer, saying, “I was able to hear about all the options in the area and chose [Farmer’s name] because he was polite and had a down home feeling.” Individual relationships allowed for an educational experience through face to face interaction when farmers participated in the center’s garden activities, story times and special events. Food in this way could perform the double function of nourishment and educational opportunity. Other centers framed farmers as civil servants, one director stating, “We had a community helpers week. So we had farmers, firefighters, policemen, all the people come out.” This center related farmers to policemen or firefighters as a form of public service, which communicated the perspective that food, through local agriculture, is a social good.
Relationships informed by degrees of social embeddedness guided CCC’s choice of food providers and contributed to a perception of the binary between conventional and local foods. Despite the massive growth of communicating technologies, certifications and government legislation to institutionalize trust in the food system, favor for personal experience remained the primary tool to generate trust between food businesses and CCCs. Similar to Hinrichs’s findings in regards to social embeddedness in direct to consumer markets, the direct, relationship marketing to CCCs communicated deeper values associated with localness (Hinrichs, 2000). Child care directors connected a string of values for local food generating from this direct relationship; because trusting relationships are favored, local food is pursued and local is perceived as fresher, which is tastier, which kids will eat, which will make them healthier. Thus their basic social values for improving childhood nutrition are intimately bound up in being local food consumers. One director of a larger center buying from a food hub clarified her interest in buying local food by saying, “Because it is better food, less preservatives, you know none of the additives are in it, it is just healthier for the kids and we are going to keep supporting local.” Other product specifications were secondary or nonexistent because local was perceptibly the proxy for any other interest. While many CCC interviewees discussed the benefits of knowing the growing practices or seeing them firsthand on a farm, no respondents indicated they had in fact utilized this opportunity. The same director quoted above, responding to a question about taking children to an educational farm, went on to say, “nope, not yet, I hardly get a lunch break!” Her perception of the discrete benefits of a socially embedded market was not able to be actualized because of the daily busyness of running a CCC. Food hubs to some extent were able to represent this
socially embedded market by facilitating “the ideology of local and fresh” as one non-profit food hub manager noted, but could not fully translate the range of values embodied in the direct to farmer relationship to their child care customers. The construction of local as trustworthy and healthy, in opposition to foods with “preservatives” and “additives,” developed further opposition to food from conventional providers and built favor for local providers.

Centers expressed an interest in supporting local businesses financially through purchasing products in order to support the person and social values behind the product, as one director commented, “That [F2CC] wasn’t something I even thought about, but once I did, and I had rapport with [farmer], I spread his name around because he is a local entrepreneur like myself.” Not only was the director weaving a relationship between the center and the farmer, but also further integrating the farmer into the larger child care community and opening the door for a larger market opportunity. In this way, the value for local food transcended simply buying a quality product and became more about relating to the farmer. Buying local food from a farmer fit into a selective patronage that favored small, new and minority owned farms and their narratives. Elevating these stories in the local food system became an extension of CCC’s social interests. One director linked African American heritage to her center’s food procurement strategy, explaining,

One thing for me is that the farmer we had was African American and the majority of the children we serve are African American too. I thought that it was very important for them to see someone that looks like them that is doing something with food.
As a market exchange for this center, F2CC represented a means to infuse social justice, authenticity and community into the lives of both the children in the center and their larger community of partners. Partnering with a local food provider provided a real emotional and social benefit to the children in the CCC (and presumably the farmer and director) beyond what they had derived from previous procurement sources. The ideological counterparts to these highly embedded social markets are more conventional or hybrid distributors, yet CCC’s participation in local food systems is dependent in part on their maintained patronage of mainstream vendors. When CCCs expressed their most idealized versions of local food, mainstream food products were often portrayed as less trustworthy, too homogenous and full of “additives”. Large corporations reflected their products, representing the global, industrialized food system to a point of being challenged to align with local food values. One child care director of a non-profit center commented, “I know they're in business to make money, but larger corporations are in the business to make a lot of money. So they charge what the market demands, and you know we have to pay it.” The interest to pair with organizations that shared similar values (health oriented, local focused) and operated at a similar level (small size) encouraged partnering with small and non-profit food suppliers or charitable farmers. While the scope of this case study focused on fruit and vegetable procurement, it is important to note that the means of provisioning the majority of food items, like milk, proteins and grains, was still primarily through conventional broadline food providers. Because fruits and vegetables only make up a portion of the food budgets in CCCs, the ability to financially express embedded social values for local food was predicated on a relationship with the conventional market. In this way, local foods were subsidized by
cheaper, industrial products and social values that were expressed verbally were balanced by
the marketness displayed through actions and budget sheets. One center director hinted at the
reality of investing more time and energy in local fruits and vegetables compared to the rest
of the meal by saying, “So I may spend a little more on fresh fruits and vegetables here but I
know how to go out and find a sale on rice and toys and other things.” Observations in the
kitchen at this center likewise confirmed the coexistence of local produce and store-brand
canned vegetables on the same shelf. The complex value system CCC’s held for food and the
resulting markets they pursued were deeply enmeshed in both idealized forms of business
transactions and their daily monetary realities.

Actualizing embedded social values in CCCs became tenuous when financial and
educational realities inhibited procurement and use of fresh local foods. To begin with,
transitioning into just fresh, regardless of the localness of the product, challenged many
centers financially. Centers frequently reported lack of funding for the labor of preparation of
fresh foods as well as the fresh, local foods themselves. One director addressed her challenge
to increase fresh foods saying, “When you go to all fresh you have to have an extra cook.
You have to have two people full time, because it's a lot of preparation, and that's what
people fail to realize.” Many centers coped by utilizing the flexibility in funding from the
CACFP in order to cover the increased expenses due to the cost of the local food itself or
increased processing time of fresh, raw ingredients. Once new local items were available to
centers, cooks learning how to purchase and prepare in quantities and styles appropriate for
children was an impediment to using local foods. One cook commented on her challenging
experience, saying “The first time we ordered a bushel of collards, I was like I have no idea
how much a bushel of collards is! Like is it 3 leaves?...Is that enough to serve 120 kids?”

Approaching local food procurement as a strategy for obtaining healthier and socially embedded foods compounded challenges in transitioning into more laborious raw products and frequently more expensive local items.

Picky eating behavior in CCCs was often already normalized by the dominant, industrial food system, inhibiting center’s ability to express social values like supporting local farms. Children were often so accustomed to processed fruits and vegetables that shifts to fresh products resulted in confusion and hesitation about the edibility of certain foods. For instance, one center was challenged to switch from applesauce to fresh apples because children refused to eat slices that had turned brown. In response, the CCC purchased non-local “Opal” apples because they are bred to not turn brown when cut. While this strategy helped fulfill the value of supporting childhood nutrition, the social value of supporting local farms and businesses became unworkable. Food waste was also a danger when integrating new foods led to decreased consumption and thus lost resources. Despite these financial and cultural barriers, many centers were dedicated to exposing children to new foods that they may not get at home, as one director stated, “People just don’t want to waste their money getting something they may or may not like. And so we let the kids try it [new foods].” Influencing children’s eating behaviors was an embedded social value that superseded more risk-averse meal budgets and market driven decision making.
Farmers’ Values in Partnering with Child Care Centers

The local food supply chain from farmer to CCC in this case study was complex yet nascent, spanning multiple avenues for product and financial exchange. Farmers expressed a spectrum of values that motivated their interest in supplying food to CCCs (through direct or intermediated means) from market based incentives to more socially embedded rationale, not divided into a polarized dichotomy but varying in degrees in relationship to their size and primary focus to achieve their own basic goals.

Farmers placed their businesses somewhere between being profit motivated and embedded in social values through local partnerships. Smaller farms with direct connections to end consumers used their time to be educators and their farms as an educational space, inviting customers to experience the farm to build trust and transparency in their food buying experience. Some farmers specifically hoped to help children, as one medium-sized farmer who sold to CCCs through a food hub said, “It’s important to me for kids to be able to see me as a farmer and also be able to have produce that’s fresh, that’s right next door to them.” For those farmers that were directly or nearly directly connected to their end customers, developing a relationship was also a competitive advantage to encourage agritourism or visits to the local farmers market by parents and staff from the CCCs. Those farmers farther from end consumers (often on the larger end of the scale spectrum as well) expressed a desire to “stay grounded” in their community by engaging with individual consumers through selling small boxes of product (while their profitable market was based on tractor-trailer loads of product being moved). Connecting through the personable mechanisms referenced by CCCs (like coming in to help garden or tell farm stories) was simply outside the business model and
reasonable proximity for most large farmers. Farmers did not simply set aside instrumental tendencies in pursuit of purely embedded market relationships. One small farmer who partnered with a food hub grappled with the dual expectations of providing an embedded market experience for customers and maintaining some amount of economic viability saying,

> When you're running any business, you got to stay true to your focus so that you can be profitable and be sustainable, right? There are a lot of people that are passionate about getting good food to children, schools, and daycares and whatnot. It's not something that I would be good at. It's not something that I have a passion about. I have a passion about farming.

The “focus” this farmer referenced was pursuing values for growing high quality products at a reasonable price while respecting the environment. The “passion about farming” manifested for some farmers as an opportunity to court a new, socially embedded market with CCCs through a connection via visits to the farm “that’s right next door to them”. However this farmer’s means for success depended more on a seemingly instrumental decision to maintain a level of marketness despite the reality that other organizations around her actively pursued a more social agenda. She directed her energy towards higher volume markets through food hubs and higher margin sales directly to restaurants, limiting the reciprocity with low-income consumers in order to maintain a level of market success. Tangential goals in children’s food security issues were peripheral and relegated to others that were passionate (and often far more equipped, such as non-profit food hubs) for helping children in schools and child care. While low-income institutions (like CCCs) were not
customers, low-income individuals could access these farm’s product through charity networks. Larger and more business oriented farmer’s social embeddedness often manifested as donated surplus to charity. Gleaning the fields or donating excess boxes of sweet potatoes to a food bank allowed farms to provide for low-income people using the food system and their own infrastructure in place while maintaining a clear and efficient line between business and charity (CCCs were outside of these charitable networks that primarily served individuals and families). In this way, large scale farmer actors who are part of the globalized food system, demonstrated socially embedded activity without disrupting their main market channels. While they were a necessary component of the supply chain feeding CCCs, farmer respondents often identified that their own success in their essential work dominated other extra corollary goals, which included sales to low return customers like CCCs.

The transactional distance between larger farmers and CCCs in this study inhibited a level of community connection and trust understood as hallmarks of the local food system, yet provided for an affordable and convenient local food option. All local-based farmers that sold through a nationally operating wholesaler or grocery (7500 average acre farms in Table 2.2) were unaware that their products were consumed in child care. No special types, sizes or packaging for products was provided for CCC clients in this chain, being part of the hybrid supply chain. Local products via wholesale hybrid avenues became undifferentiated commodities to the farmer while still maintaining a degree of local product value to CCCs. In North Carolina, the biggest sweet potato producing state in the country, this commodity is abundant. One child care director (purchasing her center’s produce entirely through a hybrid distributor) who regularly purchased sweet potatoes, said “One major change that we did
make is we have sweet potatoes—baked sweet potatoes—every week now. Because they’re local all the time.” The ease of this local item was a benefit to centers and part of business-as-usual for larger farms and distributors. The farm that sold these always-local sweet potatoes via distributor networks was asked “Do you know your product is used in a child care center?” and the sales representative for this farm responded,

No to be quite honest with you. They only reason we would know that is if they were buying from us direct and at a larger volume, and typically a child care facility is not going to use the type of volume that would have us ship directly there.

Farmers of all sizes prioritized their customers first, meaning larger farms prioritized brokers, distributors and retailers. Communication about farm values in websites and handouts focused on issues central to larger distributors like product tracking services or international food safety certifications. The social values for community and trust, despite the greater institutionalized mechanisms to maintain customer trust in food safety certifications and transparency larger farms communicated, were not provided in frameworks that were meant to directly influence end customers like CCCs.

Between CCCs and large local farms, despite the relative proximity in geography, the transactional distance maintained a high level of marketness but a notable convenience compared to other more clearly embedded market relationships. Short supply chain links like direct from farmer and through a food hub were more responsive to CCC’s product needs but still low volume in overall market exchange. All but one farmer participant who sold directly
experienced a trickle of business; partnering with only two or three centers and receiving also just two or three orders a month resulted in one mid-sized farmer saying, “Well my experience with trying to sell directly was just not feasible because they wouldn't buy anything of consequence.” Margins on sales were also a barrier for many small and medium farms that found a niche in selling high-end or unique vegetables to restaurant clients. Farmers that attempted to sell direct to CCCs were reluctant to take on many centers at a time in order to get to a sales “of consequence” because of the challenge to professionally service many different orders, deliveries and schedules. While some farm respondents integrated logistics into their business models, focus on the primary task of raising crops remained the guiding force when deciding on how to pursue market channels.

*Distributors’ Values in Partnering With Child Care Centers*

Distributors were the medium of contact for many relationships in the F2CC supply chain in this case study. Distributors acted as both creators and mediators of social values, communicating with both ends of the supply chain to preserve these highly marketable values. For-profit distributors focused on the common mantra of “the customer comes first,” providing low prices for food sold. Some larger farmers were specifically pursued by large-scale distributors in an attempt to provide more local produce, giving them a chance to compete with larger, West Coast farms. More social values based distributors, like non-profit food hubs, committed to social agendas by focusing on sourcing products from small and minority owned farms in tandem with providing low-income institutions with local foods. However, attending to the individual needs of those incapable of participating in the market
economy perpetuated an unsustainable dependence on grant based funding for food provisioning through these food hubs. The challenge to serve both farmers and CCCs as partners manifested across these different scales, missions and values held by distribution businesses.

Large, nationally operating distributors (again referred to as hybrids because they handle both local and non-local produce) approached local food procurement similarly to CCCs; as a singular, but embedded component of their overall food procurement strategy. These distributors sourced local food when it was possible, and sometimes less than ideal, as the regional hybrid distributor put it, “Buying local does not help our bottom line; but we do it because we think it's the right thing to do.” The embedded social value for supporting local farmers was part of a “culture” at this one distributor, yet they also did not “just eat the price of local produce because it's local.” Instead, market sensibilities guided their supply base to include local first and national and international to fill in the supply gaps. Similar to many farms, this distributor negotiated tensions between necessary market-instrumentalism in order to operate and translate socially embedded values for supporting local agriculture into everyday business transactions. Integrating local and non-local items in fact helped distributors maintain patronage from CCCs who valued both local qualities and low prices while partially investing in local farms.

Indeed, socially embedded markets were reported to facilitate improved community connectivity as well as support individual business interests. Both types of distribution chains focused not just on the social side of their supply base but also on the more market driven
component of coordinating their suppliers’ output. Distributors of all scales described
cultivating long term relationships with farmers as a priority, working them into flexible
contracts or production planning to ensure their sustained commitment to that particular
distributor. This indicates that both conventional and local food systems are influenced by
socially embedded relationships that elevate trust and reciprocity over pure market-
instrumentalism. One food hub used the concept of “value-chains” derived from the work of
Stevenson & Pirog (2008) to emphasize the necessity of connectivity in the whole food
system, saying, “I don't think it's impossible to serve both the farmer and the eater in one
value chain…an ideal system is one where farmers are making a living, and eaters are eating
fresh local food.” As a food hub, mediating the value for local food between supplier and
consumer fulfilled CCCs’ value for personable relationships and farmers’ need for
committed customers. One larger farmer who sold through broadliners explained a similar
benefit from his point of view of educating end-customers (the “buyers”) on the other end of
the supply chain (through their distributor, the “customers”), saying,

A lot of these buyers know nothing about agriculture. They’ve not had the
experience out in the field. We have, over the years, built relationships with
the customers. The customer is willing to bring their buyers to educate them
about our farm, and we feel it’s very beneficial.

Other farmers described events distributors (from both ends of the spectrum) put on where
they got to interact with a chef, restaurant group or institutional cook to discuss the
intricacies of agriculture. These events demonstrated to one farmer that distributors were
“giving local farmers a chance” to be a part of a produce supply chain often dominated by large, year-round farm operations on the West Coast. Although distributors enhanced their bottom line through supply chain transparency, benefits to farmers were produced through these profit-oriented decisions.

Food hubs in this case study embodied both embedded social values surrounding local foods in their central goals and communicating to CCCs the value of the farmer relationship. These non-profit distributors defined their goals to include serving minority, young or new farmers as well as the end customer. Customers included non-profit or low-margin/low-volume businesses (like child care) who frequently framed their missions in a similar way, embedding social values into the fabric of their goals and activities. Focusing on a dual social mission of addressing food security for low-income customers and providing stable pay for small and minority farmers challenged their capacity to provide a sustainable food distribution model in the larger economy. The food hub director who framed their work as a “values-based” supply chain continued to ruminate on the friction of serving both ends of the chain, saying,

If we changed our markup a little bit and increased it, we could break even at 1.5 million but that would mean charging more for food, which a lot of the programs that we're currently working with may not be able to afford. It also takes away more dollars from the farmer….can we do everything we want to do; is it impossible to serve both farmers and eaters at the same time?
Operationally, food hubs were more challenged than the hybrid distributors to maintain a fiscally viable relationship due to the smaller order sizes from CCCs. One center was able to taste-test with small quantities of novel local produce, as the director reported, “We’ve tried a few things, we’ve added some kohlrabi to our stir fry, we’ve added radishes to salads….most of the kids didn’t like it. But it was a thing of, let’s just try it.” Exposing children to culturally and nutritionally diverse options that they were unfamiliar with through small ordering sizes and new products was now a part of CCC’s procurement options. This service was infrequently charged for, but rather was wrapped into the food hub’s central mission (and subsidized through grants non-profit food hubs qualified for) to provide access and exposure to new foods. While food hubs achieved a gilded status as bearers of local food value, the capacity to provide these services was not perpetuated by the financial investment from their CCC customers. The trade-off between making steps towards a local food system and a consumer base that pays for the costs of that food was a challenge to viable strategies to support farmers and low-income consumers. One farmer that worked with food hubs put it plainly, saying,

So how does the [food hub] advocate for the small farmer when they have a huge mix of conventional and organic small guys? I know they do pad the pricing…They have grant money for that. But that is certainly not sustainable, you know what I mean? You’re just facilitating this idea that food is cheap instead of necessarily costing.
Socially embedded food systems at the individual actor level facilitate the intended good of these markets; keeping food dollars locally, investing in small farms and supporting sustainable production. Taking a more protracted look, marketness in local food systems becomes more necessary to ensure business solvency since the embedded systems in fact do not solve the issues facing small farmers but instead perpetuate an illusion “that food is cheap.” However, CCCs and food hubs operating as non-profits explicitly aim to improve childhood health and local farm viability, values outside a market solution. Tension arises when social needs are addressed using market-based fixes when in reality, the problem to begin with is a failure of the market.

Local food can be a strategy for marketing and developing a customer base, removing the socially embedded components of reciprocity and access in order to pursue profit. Privileging local food in the market requires customers both demand and pay for it. Market-oriented distributors and producers of all sizes focused on meeting the needs of the consumer. CCCs participate in a tenuous role as a consumer because serving low-income children left little budget flexibility, making their purchasing power fairly small. Some distributors associated greater purchasing power with greater demand for healthy, local food and the associated educational and experiential components therein. One larger distributor explained by saying,

I don’t know on the lower [class] end, if it [local and healthy food demand] is moving in the right direction, I think it is kind of stagnant, but if you are upper
class or middle class, and have a little bit more spending power, I think they are looking more and more into the healthier items.

Similar to how some farmers framed their experiences, the level of marketness guiding business pursuits for this distributor precluded low-income customers. This distributor is describing the rational for the development of alternative markets (like non-profit food hubs) that make a discrete effort to serve low-income people and institutions despite the tenuous profit outlooks. The grants and non-profits that distort the unfettered market (mentioned prior), through investing in food system initiatives, are how many low-income customers gain access to similar nutritious products available to the well-resourced, and thus actively pursued, customer base. Food systems that fail to provide access for low-income customers, both in terms of products and information, establish a disconnect in the market’s capacity to address issues in food security. When local food and the educational components of it are inaccessible to low-income consumers, like many CCCs, then the local value becomes more a tool for marketing for distributors than addressing changes in the food system.

Conclusions

This case study provides insight into the tensions inherent in socially embedded food systems as they operate in a highly market-oriented world. The bounds of this one case in a F2CC supply chain limits broad generalization to all local food systems or farm to child care projects more generally, but highlights patterns of how projects negotiate values and needs between different actors. Social embeddedness theories illustrate the motivations actors
express throughout the F2CC supply chain, painting a picture of community investment through commitment to seemingly altruistic missions that cannot be explained through rational self-interest alone. Market-instrumentalism concepts help explain the extent to which business-oriented decision making remains central to the actualized value system of these actors. Farm to child care projects are seemingly organized around providing social benefits to actors yet the realities of making them sustainable requires a stronger dedication and understanding of the financial needs of those involved. The small subsidy CCCs received as well as the education and technical assistance provided (in the F2CC Project) in order to overcome market barriers did not resolve outstanding challenges to connect both low-income consumers and small farms. From the lens of a market based exchange, this supply chain was challenged to exist at a basic level. Local food systems, without structural reforms that account for social responsibility to both farmers and consumers, can reproduce unequitable food systems. Local, social-driven food strategies, without a thorough understanding of financial and business efficiencies, can reproduce unsustainable market relationships.

The idealized social goals for serving “both farmers and eaters at the same time” in F2CC reflects core concepts of community food security. Community food security unites the separate tracks of sustainable agriculture and anti-hunger work with more recent iterations utilizing local food systems as the means to this end (Chen et al., 2015; Guthman, 2011). Community food security as a conceptual framework helps to encapsulate concluding thoughts on the public good of F2CC type interventions. Bellows and Hamm provide a current working definition of community food security as a condition in which “all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through
a sustainable food system that maximizes community self-reliance, social justice, and democratic decision-making” (Bellows & Hamm, 2002, p. 35).

Community food security as a conceptual framework for whole system change in food production, distribution and consumption has just begun to theorize the role of child care as a site and means of influencing family units, children and farmers (Chen et al., 2015; Hoffman et al., 2012). Centers in particular aligned their participation in this food supply chain towards fundamental missions around child wellness, including access to healthy food, education about local agriculture and using the food system to address social inequalities. Farmers and distributors were challenged to consistently pursue similar social values while also producing a financially sustainable food system. Pursuing strategies that move the entire F2CC local food system, one that provides children quality, nutritious food and farmers a fair price, into the auspices of a public good under a community food security framework engages public funding to be used in the more sustainable, equitable ways.

Using systems already in place that affect CCCs may guide the local food supply chain towards a praxis of community food security. In North Carolina, CCCs receive financial reimbursement for low-income families’ enrollment based on a star rating system and relative costs associated with the county. Administered by the Department of Health and Human Services, the star rating system is based on the Early Childhood Environment Rating Scale, which includes the safety of the child care environment and education of the staff (Harms, Clifford & Cryer, 2014). Some child care reformers advocate for an amendment to star ratings to include components of local food procurement and service (North Carolina
Incorporating geographic preference and family education as components to holistically improve child health outcomes could be financially compensated under this change. Further utilization of the CACFP funding to purchase food from equitable supply chain partners could pull sustainable products from farmer through distributor to child care, in an institutionalized yet flexible fashion. This public funding at a state and national level may be necessary to ensure quality food is accessible to all children, regardless of family income. Guthman points to the role of the state to protect low-income individuals from the detriments of food insecurity, saying, “commodified alternatives to regulatory failure tend to accentuate class inequality rather than ameliorate it” (Guthman, 2011, pg. 152). When markets fail to provide basic needs, like nutritious food for children, public intervention may help catalyze the development of more sustainable systems. Echoing the principles outlined by Morgan and Sonnino (2008) for using public procurement to invest in sustainable development, F2CC local food supply chains can have cascading effects in improving childhood nutrition, supporting local agriculture and providing resources for families in need. They argue that values conducive to a more equitable and green economy will not occur intrinsically, but have to be “fashioned and mobilized” through existing supply chain linkages and public policy (Morgan & Sonnino, 2008 p. 192).

Future research could move beyond an initial snapshot of the function and values central to a F2CC local food supply chain. Drawing on longitudinal health and nutrition studies, tracing children’s eating habits and diet related health would potentially quantify the effects due to F2CC style interventions. Focusing more specifically on the viability of a market for local farms is also a necessary step towards a sustainable local food supply chain.
Policy research that aims to probe the larger undercurrents of poverty, such as assessing the viability of a universal basic income, may prove illuminating for the whole of the child care industry (Schulte et al., 2016). Focusing on poverty in the food system is a necessary next step to address structural inequality that manifests in each sector of the supply chain. Consumers’ inability to purchase nutritious foods, farmers’ inability to raise food sustainably (both in terms of the environment and worker compensation) and distributors’ needs to maintain profitable sales are all deeply influenced by an unequal economy that concentrates wealth and externalizes degradation of human bodies and the environment. With the growth in F2CC programs nationwide, a thorough and intersectional research agenda may provide new perspectives in local food practice and theory.
Bibliography


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Figure 2.1 Visualization of tensions between embeddedness, marketness and instrumentalism. The framework for understanding local food system actor’s economic interests can be illustrated through a three dimensional juxtaposition of these three frameworks. Values compose the dimensions and each actor’s perceptions and actions fall within or between quadrants.
Table 2.1 Child care research participants and significant identifiers of the child population for centers.

<table>
<thead>
<tr>
<th>Child Care Centers by Range of Enrollment (n)</th>
<th>Average % Children on CACFP Subsidy</th>
<th>Average # of Procurement Options Reported for All Food Purchases</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-59 (3)</td>
<td>57%</td>
<td>2.67</td>
</tr>
<tr>
<td>60-100 (3)</td>
<td>83%</td>
<td>3.67</td>
</tr>
<tr>
<td>101-185 (5)</td>
<td>33%</td>
<td>2.6</td>
</tr>
</tbody>
</table>

Table 2.2 Farmer research participants and significant identifiers of farm operation and scale.

<table>
<thead>
<tr>
<th>Farmers by Primary Market (n)</th>
<th>Range of Acreage</th>
<th>Product Focus in General</th>
<th>Average Years in Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct to Consumer (2)</td>
<td>&lt;1 – 4</td>
<td>Diverse mix of fruits and vegetables</td>
<td>3</td>
</tr>
<tr>
<td>Mixed (6)</td>
<td>3 - 515</td>
<td>Diverse mix of fruits and vegetables; small livestock; perennial fruits</td>
<td>10.75</td>
</tr>
<tr>
<td>Distributor (3)</td>
<td>750 – 15,000</td>
<td>Sweet potatoes, vegetables, some annual fruits</td>
<td>50+ (“lifetime”)</td>
</tr>
</tbody>
</table>

Table 2.3 Distributor research participants and significant identifiers of operation and scale.

<table>
<thead>
<tr>
<th>Distributor by Primary Market (n)</th>
<th>Average Number of Employees</th>
<th>Average Years in Operation</th>
<th>Product Extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local (3)</td>
<td>5</td>
<td>25</td>
<td>Produce</td>
</tr>
<tr>
<td>National (1)</td>
<td>100+</td>
<td>46</td>
<td>Range of food and non-food products, including produce</td>
</tr>
</tbody>
</table>
Chapter III. Farm to Child Care – Benefits, Barriers & Strategies for Local Food Procurement
Introduction

What is Farm to Child Care?

Farm to Child Care brings the best of children’s nutrition education, parent engagement and menu options together to form a single program. Farm to Child Care\(^2\) (F2CC) not only includes educational activities in the garden or taste-tests with parents and children but also the food purchasing side with local farmers and distributors. In this guide, you will find an overview of local food “procurement,” which is, in general, the bringing together of farmers, distributors and child care centers (CCCs) through the purchase of food, sharing of information around food and the expectations for services and relationships between all groups involved.

Farm to Child Care can be viewed as a three part system; Farm – to – child care. “Farms” throughout a local area growing a diversity of fruits and vegetables according to the seasons represent the food production side. “To” comprises the less visible but equally important relationships that bring food to customers, sometimes by the farmers themselves and frequently by a chain of partners like distributors, grocery stores and farmers markets. “Child care” is the consumer, including not just the children who eat the food but also the parents, teachers, directors and even the larger community as it supports local agriculture.

While F2CC also comprises other activities like garden education, food policies and

\(^2\)Farm to child care is fully defined by the NC Farm to Preschool Network as any program to “enhance the health and education of young children by developing systems and experiential learning that connects children and their families with local food and farms. Farm to Preschool/Child Care includes any type of childcare that incorporates local foods through: meals and snacks, taste tests, lessons, farmer visits, cooking, growing food, and/or community and parent involvement” (North Carolina Farm to Preschool Network, 2016).
community involvement, this Extension publication will primarily focus on procurement and issues that affect local food purchase.

Why Focus on Farm to Childcare in North Carolina?

Right here in North Carolina, nearly one in four children are in households where food is insufficient at one or more points during the year (Food Research & Action Center, 2016). In 2016, over 6,500 CCCs were in operation, serving nearly 250,000 children throughout the state (Division of Child Development and Early Education, 2016). Of the nearly quarter million children in child care, about 50% (125,000) child care attendees were enrolled in food programs, providing free or discounted meals to children in low-income household (Division of Child Development and Early Education, 2016). Children from these households are particularly at risk for a poor diet that may lead to obesity and other diet-related diseases (Just, Lund & Price 2012; Lioret et al., 2014; Story, Kaphingst & French, 2006). As children continue to consume a greater percent of their weekly meals in centers (some estimate up to 100% of weekday meals), CCCs are an important place for supporting these children through nutrition education, positive role modeling of eating habits and providing quality food for them to eat (Ammerman et al., 2007; Izumi, Eckhart, Hallman, Herro & Barberis, 2015; Izumi, Wright & Hamm, 2010; Story et al., 2006). Farm to Child Care is an innovative way to bring new, healthy foods to children (and their families) while also supporting local farms.

Connecting CCCs to farms provides benefits to farms and the greater community. Farmer direct sales to CCCs can help form positive connections, increasing farm sales to more customers and building an educational relationship between farmers and children.
Purchasing food through a distributor that is dedicated to working with local producers may provide for growth and expansion of farms in our communities (Barham et al., 2012). Buying local food ideally improves the health of rural economies, helps farmers stay on the land and provides highly nutritious food for consumers (Allen & Guthman, 2006; Chen, Clayton & Palmer, 2015; Dunning, Bloom & Creamer, 2015; Vogt & Kaiser, 2007). A recent USDA study reports that farmers that sell direct retail locally receive up to seven times the net revenue than other farmers who sell food nationally or globally (King et al., 2010).

Farm to child care research is beginning to show positive results in children’s nutrition, healthy behaviors and positive family influence. Meals in centers that focus on serving local food have been found to be more nutritious than non-local meal service, especially in fruits and vegetables (Gibson et al., 2014). Exposure to a diversity of fruits and vegetables has also been demonstrated to influence children towards improved eating behaviors (Izumi et al, 2015; Williams et al., 2014). Creative ways to engage with farmers have been successful in some states, linking families to local food through on-site farmers markets and farm delivery services (Carroll et al., 2011; Hoffman et al., 2012). Farm to Child Care in North Carolina is part of a national effort to bring good food to children and support local farms, connecting people in need across our rural and urban communities.

How to Use this Guide

This guide is compiled into seven sections to describe various topics around procurement within F2CC. County Extension agents, child care service providers and others working in local foods will find this guide helpful in organizing an effective F2CC
procurement program (these organizations, in general, will be referred to as service-providers from here onward). The information presented here is not intended to serve as a standalone guide on how to conduct a F2CC program; instead, perspectives on benefits, barriers and strategies to local food purchasing are presented to help F2CC organizers develop a thorough, approachable and successful procurement program. Because farmers and distributors did not need to extensively change their post-harvest handling, marketing and distribution practices to meet the needs of the CCC market, this publication focuses primarily on the challenges and strategies for CCCs as new local food customers. Sections are noted in their introductions to whom the information is oriented. An example of distilling key components of this guide into a useful Extension publication is included in the Appendix C.

The “Introduction” and “Getting Started” chapters are useful for all readers to understand why a F2CC program is an important community investment and how information for this Guide was compiled. The “Choosing the Right Local Food Option for Child Care Facilities” chapter is an overview of the options for CCCs to procure local foods. The “For Childcare” chapter outlines the challenges and opportunities for CCCs working with local food providers. The “For Farmers” chapter is similar, helping farmers and farm service providers understand the barriers and benefits to working with CCCs. The “Maintaining the Market” chapter discusses challenges parents and teachers may pose to maintaining a viable F2CC program. Finally, “Beyond the Market” identifies how F2CC impacts farms, CCCs and distributors to work towards a fairer and more equitable food system.
Research that Supported this Guide

To understand the benefits and barriers to successfully partner CCCs with local farms and distributors, North Carolina State University collaborated with North Carolina Cooperative Extension (NCCE) and local non-profit partners in one county to host a F2CC program. This program had three distinct parts: 1) Present educational workshops for child care staff on topics ranging from marketing to using seasonal produce, 2) Link child care centers to sources of fresh local foods and 3) Provide a small subsidy for the purchase of local foods for six months.

This guide reports findings from a research study that focused on procurement components, conducted with F2CC participants from May 2015 through May 2016. The research sought to understand the motivations, challenges and strategies of CCCs, farmers and distributors in a F2CC supply chain. Using a case study methodology, this study included interviews, observations and online data collection from these three F2CC participants.

In total, 11 child care centers participated in this study, whose enrollment ranged from 30 to 185 children with an average of 100 children per center. For this report, “small” CCCs enrolled 50 or less children, “medium” enrolled 50 to 100 children and “large” enrolled over 100 children. All received Child and Adult Care Food Program (CACFP) reimbursements as a component of serving low-income families. Eleven farms participated in this study, ranging in sizes from small farms under 10 acres to large farms over 500 acres. Four distributors participated in this study ranging from a one man operation to a multi-million dollar multinational corporation.
Many examples and all quotes in this guide are derived from the research that was conducted (unless specific authors are cited). All names used in examples and quotes are pseudonyms to protect participant’s identities.

**Getting Started in Farm to Child Care – A Motivating Example**

When Wendy took a look at what she saw children eating as they came and went from the CCC she directs, she was worried. Her young families “were not as open to cooking at home,” favoring fast food meals or other unhealthy and convenient options at home. She thought that a major cause, other than cooking was “because usually fresh and healthy items at the grocery store are the most expensive,” and many of her families are low-income. Getting children to eat healthy foods in the CCC was hard enough without daily reinforcement of fast foods and items with minimal nutritional value at home. Not only that, but taking a closer look at the food in the center’s kitchen revealed a pattern of ‘can-centric’ fruits and vegetables that didn’t really grab children’s attention or inspire the teachers to entice children to try these foods. Wendy decided to make a change, but instead of simply getting different foods or instructing parents how to feed children better, she began to make a wholesale change by calling a farmer.

Wendy hoped to bring fresh, tasty fruits and vegetables to her center, partnering with a farmer to support the local economy in the process. Despite her optimism, when she called up local farmers, there came a point when “it didn’t look like I would get anybody.” Finally,
after a few months and a number of calls, a farmer, James, came one time to deliver a handful of local items like sweet potatoes, collard greens and onions. “He was the only farmer that I didn’t have to guarantee he would make a certain amount of money,” she said, admitting that James did not make a lot of money on that first sale, but a partnership had been made. She found that “it was a savings” buying local, and that “the health benefit that we received outweighed, for me, the cost” in extra kitchen labor or coordinating time. In turn, James was able to not only sell products to Wendy’s center but also to the parents of the children at the center and neighboring businesses around the CCC. With each delivery, Farmer James became better known by the child care community and he began to see parents occasionally stopping by his stand at the nearby farmers market he attended on Saturday mornings. Wendy was able to support James’ small but growing farming business while also determining strategies for providing healthy foods at reasonable costs for children from low-income families.

Wendy and James are champions of childhood health and local foods, making (g)astronomic leaps into a world of unknown food offerings and potentials. By starting small, Wendy was able to understand what did and did not work without investing too much time or money. James also took on the opportunity incrementally, which helped to ensure this market was a right fit for him. Farm to Child Care programs can be the means to start small and introduce CCCs, farmers and distributors to an exciting and fulfilling relationship. Child care and farmer service providers can be the link necessary to initiate a new way of feeding children and incorporating local foods into institutions in their towns, counties and states.
Choosing the Right Local Food Option for Child Care Centers

This section is an overview of the local food options for CCCs to choose from, organized as challenges, benefits, and then strategies (always in bold) for CCCs. Identifying the route of participating in F2CC will help a CCC maintain interest and use their resources wisely. Centers can explore the various opportunities to purchase, starting by self-assessing their interests and learning more in-depth about each route food can take from farm to CCC. The Procurement Self-Assessment (Fig. 3.1) can help CCCs walk through a number of questions about their interests and limitations to identify how they will buy local food. Extension agents and child care service providers will find this section useful for determining which local food options best match to CCC’s needs and interests, leading to best practices for CCCs in local food purchasing. A summarized version of this section is provided in Table 3.1 to improve utilization of this guide. While a robust description of benefits and barriers to each market channel for farmers themselves is beyond the scope of this publication, helpful resources for farmers are listed in Table 3.8.

Wholesale

Child care centers frequently purchase fresh local foods through companies that connect them directly or indirectly to a farm. Companies include large national distributors most large centers (over 100 children) are familiar with, medium distributors that have one or a few regions they service and smaller distributors like food hubs. Many smaller centers also procure fresh local foods through grocery stores to match the size of their needs.
Large/Medium Distributor Challenges

Child care centers frequently felt that large and medium distributors were removed from the local farms they wished to connect with. Products from these distributors often did not reflect the diversity of items perceived to be available from more localized markets (like a farmers market). Despite these distributors providing convenient, one-stop shopping, the lack of personable connection to the producer was unattractive as a local foods option.

Large/Medium Distributor Strategies

Large/Medium distributors are beginning to respond to customers’ demand for fresh local foods. Numerous centers in our project utilized their preexisting distributor, adding fresh vegetables to their order of canned goods, milk and paper products. This is the easiest option for many centers, retaining a single account for all consumable products and receiving consistent services through a familiar provider. CCCs should leverage their purchasing power as customers to encourage distributor partners to carry more local food options in this convenient option. Centers can express their demand in letters to distributors (see Appendix C for an example), verbal asks or working with F2CC project partners to creatively apply pressure to distributors.

Food Hub Challenges

Many centers were introduced to food hubs (all of which were non-profits in this project) through this F2CC Program. Food hubs are a business or organization that actively manages the buying, selling and marketing of food products primarily from local and regional producers in order to reach institutional customers (like CCCs) or retail customers.
Centers struggled to incorporate a new delivery into their already busy days, especially since the scope of products offered by food hubs was limited to fruits, vegetables and some other local items. Prices and volumes also became a point of tension for some centers, opting out of using a food hub because they could not afford the difference in price (often the difference from canned or frozen to fresh) or utilize enough fresh product at a time without wasting food.

**Food Hub Strategies**

**Food hubs combine components of convenient delivery and local products child care centers favor.** Where they exist (food hubs are yet to be a national, or even statewide service), food hubs helped CCCs feel connected to farms through online stories and choices of foods that were locally unique or carried social and environmental values (like listing “no-spray”). Centers that used food hubs embraced the change in costs by utilizing food as a teaching resource, finding ways to pay extra by using different budgets (like educational supplies) and integrating food preparation into daily activities. Other CCCs found local food to be only marginally more expensive when they closely tracked costs per serving, taking into account less food being thrown away when children liked and consumed fresh, local foods more compared to canned foods. Food hubs can be found online (see Table 3.6) or through getting in contact with your local North Carolina Cooperative Extension office.
Grocery Store Challenges

Grocery stores are also a consistent source of food items, but an inconsistent source of local food. Not all grocery stores carry local food, requiring multiple trips for centers that choose this option.

Grocery Store Strategies

Grocery store procurement is an opportunity to learn about and request local products. Centers that found grocery stores carrying local saw clear labels indicating the source, and sometimes the specific farm where the food came from. In the absence of labeling, asking produce managers about local food options may serve as positive customer feedback to encourage stores to offer more local products.

Direct from Farm

Farmer direct is when a farmer works directly with the center, communicating with CCC staff and supplying produce straight from the farm. CCCs can contact a farmer directly to receive products or access their products through farmers markets, farm stands and “Community Supported Agriculture” (CSA) models.

Farmer Direct Challenges

Farm direct was a challenge for CCCs for a number of reasons. Small and medium CCCs can have too small of orders to receive farm deliveries, while large centers may require more product than a (small) farm can handle. A short window of availability for a given crop (tomato season only lasts so long) may also make acquainting children with new local foods challenging. Frequently, CCCs requested farmers to check out their garden or teach about
food in the center. While advising on gardens and conducting education was a phenomenal opportunity for children to learn from agricultural leaders, some farmers focused exclusively on growing food and were unable to spend considerable time away from the farm.

**Farmer Direct Strategies**

Purchasing food directly from a farmer is an experiential process that works best with support from multiple CCCs and service providers. In our research project, most CCCs favored purchasing directly from a farmer (though just as many utilized another distribution method to get food). For small and medium centers, purchasing enough to meet delivery thresholds through partnering with multiple, nearby centers or filling out orders with long-lasting crops (like potatoes and onions) in addition to weekly fresh items can help ensure good business partnerships.

Farm and child care service providers can help connect farms and CCCs. Organizations like Appalachian Sustainable Agriculture Project (ASAP) have a “Local Food Guide” that is a curated list of southern Appalachia farmers, with specifications on how they sell food to customers (this, and other farmer directories are in Table 3.6). This is one good example of how service providers can provide or help CCCs connect with resources to procure fresh local foods.

**Farmers Market/Farm Stand Challenges**

CCC directors that have tried using the farmers market observed, “sometimes it just costs a little bit more, and then there’s the labor of preparing the food.” Farmers market’s schedules can be poorly correlated with CCC’s shopping schedule as well as have a
difference in cost. Produce stands can also be out of the way for many CCCs to utilize consistently.

**Farmers Market/Farm Stand Strategies**

Connecting to local foods through a farmers market or produce stand gives centers control of their weekly food options but can be labor intensive. One director who does all the food shopping said about purchasing from the closest farmers market, “*I felt like I could be in control of the delivery...I'm the shopper it's easier for me...and then I have to think about my cook in consideration.*” This option fit into the routine of grocery shopping well, giving her the ability to focus on particular items each week, purchasing just enough for her relatively small center and establishing relationships with growers that may provide education further down the line. Child care centers can search for these produce options with tools like NC Farm Fresh (link in Table 3.6) in order to integrate local food purchases into routine shopping trips.

**CSA Challenges**

In general, CSA services are subscriptions to a single-family sized box of fresh, in-season produce. There are two major types of “community supported agriculture” or CSA services; seasonal and year-long. Seasonal CSAs come directly from a farmer or farmer group, providing whatever is seasonally available in set quantities, requiring customers to pay for a box of food (either upfront or week to week) that is then delivered on a weekly basis. Year-long CSAs are operated by businesses or other partner organizations, delivering
produce year round using many regional farmers and often allowing for more flexible payment methods.

**CSA Strategies**

**The CSA model can work for both the center and for families to receive fresh local foods.** Farmers often use central locations like CCCs to drop off multiple boxes for customers in an area, turning that spot into a community gathering point or even an on-site farm stand. In addition to CSA purchases, hosting a farmer can turn into a real event with agricultural education in the center, inviting neighbors to visit and informing parents of this opportunity. One farmer in this study helped make fresh local food available to all families by providing an on-site farm stand after dropping off CSA boxes, as one director noted, “they’re [the farmer] EBT approved... for some of our parents who are on Food Stamps, which... made it easy for people to grab a few things.” Procurement and community engagement in the same program has the potential to improve healthy food access and farmer profitability.

**Making Farm to Child Care Work for Child Care Centers**

Once centers have chosen their procurement option, changing their culture and infrastructure to make purchasing and using local food most successful may be challenging. The following section is a presentation of the case study results focusing primarily on
strategies to overcome business, communication and organizational barriers. The results are organized as challenges and then actionable strategies for CCCs to utilize, summarized in Table 3.2. The Department of Health and Human Services, NC Partnership for Children and NC Cooperative Extension will find this chapter most useful to understand the barriers, benefits and strategies for CCCs purchasing fresh, local foods.

Business Functions

*Consistent Purchasing Challenges*

Irregular purchasing patterns caused tensions between CCCs who desired local foods and farmers willing to sell local foods. In a number of instances in this case study, farmers reported that a center would order sporadically as they trialed new items. Other times when a CCC was a consistent partner one season, the farmer did not get return business starting up the next spring when local produce became available again.

*Consistent Purchasing Strategies*

Consistent purchasing helps establish a strong farm to child care relationship. Child care centers do not need to purchase massive quantities at a time, but should purchase something on a regular basis. Changing from week to week or month to month does not give farmer partners a sense of future product demand. Because farms do produce differently all year round, staying on board for at least one full season (generally spring through fall) helps both the CCC and the farmer see the diversity of products throughout the year.
Charity Perceptions Challenges

CCC's in our research occasionally expected farms to act charitably towards them in terms of receiving free or discounted produce. As one CCC commented, “Building a relationship with somebody [farmer] where they will actually give you some free stuff from time to time, that's kinda where you end up saving [money].” While many farmers would like to help CCCs out as much as possible, focusing on their business is key, as one farmer commented, “I have a passion about farming. And, yeah, I love children and I want to make sure as many children can eat healthy as possible, but, I would just be too far stretched to be good at anything if I try to take on those kinds of things.” These kind of things, which included donating free or reduced price produce and spending many hours at the center can be a challenge to farmer partner’s needing profitable sales to maintain and grow their businesses. Local food providers and CCCs do want to work together, but need to do so in mutually beneficial and financially sustainable ways.

Charity Perceptions Strategies

Don’t expect free products or service, but work towards mutual solutions and values. Because most farms and distributors want to help children, but also want to make a living, partnering as a full paying customer is expected. Working to identify constructive activities may however help bridge gaps in product affordability or service. For example, one center began an on-site farm market in order to have more interaction with the farmer; in return, the farmer had more opportunity for sales and building a customer base with families.
CACFP and Local Foods Challenges

Local food purchasing can be a challenge when CACFP requirements for tracking are not met by food providers or restrictions are placed on how funds are used (ex. how a sponsoring agency may utilize these funds). Integrating local food purchases into the CACFP can seem beyond the scope of a busy CCC.

CACFP Strategies

Use CACFP money for multiple needs within the CCC. Child care centers can use CACFP money to purchase garden supplies like seeds, fertilizers and equipment as long as the food is used during meals and snacks at centers. Because the uses of CACFP money are so flexible, centers can express their own unique interests in local food or related activities. For further clarification of the regulations and opportunities through the CACFP, see Table 3.7 or contact your regional Department of Health and Human Services.

Succinct Communication

Marketing Challenges

Child care centers in this study did not always recognize their own hard work to make F2CC programming a success. Marketing to parents was largely absent even though CCCs recognized the potential competitive advantage for engaging new families F2CC gave their centers.
Marketing Strategies

Farm to child care can be a novel marketing opportunity for child care centers to distinguish themselves in the marketplace. Some centers quoted their use of F2CC during tours to highlight deep commitment to children’s well-being. One center said it “helped kind of set us apart from other places,” because the change in food served and emphasis on healthy eating was different enough to prompt parent compliments. Child care centers can also use social media to share recipes, show-off what is in season or market big events. Highlighting the farm or distribution partner may in turn help their businesses as well. Communicating about programming, skills and community relationships through F2CC-centric food and feeding at a CCC can pay dividends in enrollment and parent engagement.

Communication Challenges

“The communication has to be perfect,” said one farmer as she described her “perfect customer.” To be a good customer, there had to be a strong commitment to communicating before, during and after each transaction. Developing trust also required an element of planning CCCs were not accustomed to, such as envisioning a future farm season’s produce offerings.

Communication Strategies

Commit to short and long term communication methods between CCC, distributor and farm. Short term communication requires consistent and agreed upon interactions. Many farmers prefer texts or emails these days because they can respond to
them later; no one has to hop off their tractor to answer an email, but call after call can really throw off a good days planting. When farms and CCCs successfully partner across time, farms can begin to “production plan” with their new market partners. Production planning is the process of determining which, when and how many crops are grown on the farm. This amount of planning takes serious trust, but can allow CCCs to give input into what foods kids will eat or new things they would like to try. CCCs that have an understanding of the foods their children like and dislike, and the energy to explore new items, can open a world of produce possibilities through a steady relationship with a local food provider.

It is challenging for a CCC to understand the extent of economic influence they have as a consumer on produce distributors. One life-long farmer observed, “That local movement has helped ensure that those buyers [distributors] buy local if possible. Where before the movement really started, they would if it was easy for them. Now the consumers are kind of demanding that it come locally; that definitely helps.” Child care centers participate in the food supply chain as a customer, arguably the most influential position when used to encourage suppliers to provide more local foods. Directors can specifically request local from distribution companies they use, even if it is not listed. Asking the produce providers that sell local items about specific interests like no-spray produce, organically certified and fair labor practices informs distributors that these are important values for a center.
**Internal Structures**

**Infrastructure and Kitchen Organization Challenges**

Lack of infrastructure and tools can limit a cook’s capacity to handle fresh produce efficiently. Refrigeration space can be limited and improperly filled (produce keeps differently throughout a refrigerator) in centers that are traditionally geared towards canned fruits and vegetables. Improper storage of fresh fruits and vegetables, as well as over-ordering, can lead to unnecessary spoilage and lost money.

**Kitchen Infrastructure Strategies**

Child care centers can inquire with their produce provider or NC Cooperative Extension office about proper storage of fresh produce. Resources for produce storage and handling can be found Table 3.7. Simple techniques, such as avoiding storing certain sensitive products next to one another, like keeping apples and broccoli separate in the refrigerator, can help improve produce shelf life. Also, cooks and directors can use the Food Cost Calculator link in Table 3.7 to help determine appropriate quantities to purchase of fresh, unprocessed foods. This tool allows the user to input servings needed of cooked produce items (like stewed collard greens) and will output necessary quantities of that product to purchase (like bushels of fresh collard greens).

**Cook Culture Challenges**

The relationship between cook and director can heavily influence the quality of food service in the CCC. Many CCCs found a strong balance between cook creativity and director
oversight to be challenging to achieve. In addition, cooks sometimes felt overwhelmed by the extra labor required to cook fresh fruits and vegetables compared to canned goods.

**Cook Culture Strategies**

*Cooks are often champions of nutritious foods as much as a director or teacher may be. Getting them involved directly in decision making or menu planning builds a good food community.* When cooks become part of the educational process, they take more ownership of the meal-time process. Time and again, we found that cooks preferred greater control in their own kitchens, wanting to help design menus, order food and even being interested in using new herbs and spices. Many centers have also reduced their cook’s labor time by finding creative ways to engage children, like making a morning activity out of shucking corn and using the husks for crafts later in the day. Other centers have found their older children prefer food with more crunch, which means less cooking time overall to retain texture. Food-based projects can be another educational opportunity to combine teaching activities and eating, sharing budget line-items in order to purchase dual purpose items. Because children require many exposures to new foods before they will eat them, cook buy-in increases their capacity to be persistent and patient food preparers.

**Making Farm to Child Care Work for Farmers**

The following section is a presentation of the case study results focusing primarily on the challenges and opportunities for local food sales to CCCs. Understanding how the child care industry approaches communication and business values will help avoid initial
challenges to developing a local food market. The results are oriented as challenges and then actionable strategies for farmers, Cooperative Extension and other farm service providers to aid in the development of a robust F2CC program. A summary of this section is provided in Table 3.3.

Price Challenges

Child care centers frequently perceived of the cost of local food as too expensive to incorporate into their meal budgets. CCCs that primarily purchased through grocery stores struggled to understand how much to purchase when sales units came in bushels or boxes. One director made this dilemma clear, stating, “That was the hardest thing in the beginning, when you order, like the first time we ordered a bushel of collards, I was like I have no idea how much a bushel of collards is! Like is it 3 leaves? When I'm figuring a bushel it is a little basket like this. Is that enough to serve 120 kids?” Child care centers balanced a tight budget but invested in what was important to them.

Price Strategies

Farms and distributors offering diverse items to CCCs can initiate strong sales through selling off-grade produce or seconds and educating CCCs. Connecting CCCs with seconds or produce that wouldn’t usually make it to market due entirely to visual or size defects (but not diminished quality or food safety), is one sales strategy. For example, one farmer found a market for very small sweet potatoes, perfect for CCC portions but not for his other markets. One center explained how they balanced child care and farmer needs buying seconds, saying, “So I worked with one farmer and paid less to buy the things he couldn’t
really sell to the public or wherever he sells them because I knew we were still getting a high quality food. It just didn’t look pretty on the outside.” Offering these services can help both move more produce and save centers’ money.

Educating CCCs about the value of local food is critical to helping build interest and a sustainable market. Being a good personal ambassador for your farm through discussing how you grow crops, deal with natural challenges (like bad weather) and provide tips for cooking your products helps strengthen CCC’s interest. One center stated “they’ll help with tips on how to prepare and clean them [vegetables],” later discussing how she learned to wash sandy greens using salt water instead of fresh water to rapidly remove the grit. Helping centers understand the conversion from purchased quantities to cooked servings (and the related cost per serving) also improves communication (See link in Table 3.7). CCCs can also be directed to Cooperative Extension’s Family and Consumer Sciences departments to learn skills in fresh food preparation, serving sizes and cost comparisons.

Volume Challenges

Volumes of purchased fruits and vegetables in CCCs vary widely according to the center’s enrollment and infrastructure. Some centers choose to provide nearly three square meals a day while others only provide a snack and milk, with families feeding breakfast and sending lunch with their children. Small sales volume can strain a F2CC supply chain; farmers and distributors simply may not be able to provide small quantities and make a profit on those sales. Table 3.4 shows an example of the relatively small quantities even a center of
200 children might purchase, given the rate of four local food servings per week\(^3\) (USDA, 2016).

**Volume Strategies**

**Produce suppliers should try to tailor their quantities to the needs of smaller centers.** Personable, flexible service helps CCCs slowly enter the local food market. Farms can help by selling partial cases of produce or through creative distribution practices. For example, shared group drop sites with other neighboring CCCs can help raise appropriate volumes for delivery. Centers can also meet farmers where they already distribute, like a farmers market, produce terminal or on farm as part of their weekly grocery purchases. Finally, selling through a distributor may be a farm's best bet. Information relevant for small and mid-sized farmers attempting to access wholesale markets in North Carolina can be found in Table 3.8. Discussing these options with CCCs helps initiate new strategies for centers who also have to deal with constantly fluctuating food needs.

Other issues centers can struggle with are too many vendors, reducing their interest in adding a new one for just produce or local items. Farmers would do well to present a consistent and straightforward ordering process, including a standard system to manage invoicing, receipts and other basic business transactions to accommodate CCC’s purchasing traceability needs for participation in the CACFP. Record keeping and invoicing tools like

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\(^3\) In the first year of instituting a F2CC program, CCCs in this study on average swapped four fruit and vegetable items a week from non-local to local. This example table demonstrates the amount of produce (using apples) a farmer would sell, and CCCs would consume, in one week if local was purchased for four fruit servings.
AgSquared, Quickbooks and Excel are options for managing a streamlined and professional looking record system with CCC customers.

_Cyclical Menu Challenges_

Seasonal produce availability was challenging because most centers have menus that repeat, or “cycle,” every week or every month. Seasonal produce frequently did not match what was being served that week according to these cycles.

_Cyclical Menus Strategies_

**Emphasizing seasonal produce provides a strategy to expose and encourage children to consume a wide variety of fresh foods.** Centers will frequently have a “six tries” policy, offering children a food item six times or more before they discontinue the item. Farms and local distributors can capitalize on this as a marketing tool, framing the seasonally abundant produce as a benefit to exposing children to new foods, not a burden of repetitive or narrow choices. One director cheerfully noted, “I have told owners at other centers if you choose what’s in season you may have to get repetitive in your menu that week—serve the same thing a couple of times. But there’s no harm done in that. It’s still a great fresh quality food.”
**Farmer Relationship Challenges**

Child care centers envision their relationship with farms as personal, bringing the farmer or even distributor (if they themselves are directly connected to farms they purchase from) into the folds of the extended child care community. Child care centers often hold farmers in a high place, as one director commented “We had a community helpers week, so we had farmers, firefighters, policemen, all the people come out.” This amount of respect came with an expectation of public service to the community that can be challenging for individual farmers to manage.

**Farmer Relationship Strategies**

Connecting with centers through agricultural education helps develop trust and improves a farm’s image and marketing in the community. Developing a relationship with a center as both service to them and as marketing tool to the wider community can be a win-win. Farms and distributors need to focus on telling their unique story in their locality and with their own exciting experiences in agriculture. Over time, strong relationships can lead to production planning and other means to help solidify the link between farms and CCCs.

Farms can tell their story in many different ways as a means of marketing through their child care partners. Agritourism, through farm tours and educational excursions can raise farm’s public profile and diversify markets. Social media can even be a way to connect with new and unintended (but beneficial) audiences, as one farmer commented, “Well, on Facebook you don’t have to know me for it to pop up. And it pops up, and you’re like, hmm,
let me click on that. And then you click on it and it’s like, wow.” Many CCCs and farmers in particular use pictures to share recipes, show-off what is in season or market big events (Pinterest™ or Instagram™ are examples of visual social media). Traditional websites are still a major tool for farmers to reach customers, getting double viewership when shared with both the CCC and parents (which farmers can encourage their CCC partners to do).

Introductory resources for best practices using social media can be found in Table 3.8. Partnering with groups like Master Gardeners, Cooperative Extension or other agricultural educators is another strategy to fulfill CCC’s desires for gardening education that can avoid overwhelming a farmer focused on production.

Maintaining and Expanding the Farm to Child Care Market

Farm to child care programs focus on children and farmers, but parents, guardians, teachers and the surrounding community are critical stakeholders as well. This section shows how engaging parents and teachers with new local foods is important for initiating a culture change at CCCs. The results are oriented as challenges and then actionable strategies that CCC directors and their service providers will find helpful to expanding the F2CC market beyond children. Summarized challenges and strategies are provided in Table 3.5.
**Indirect Parent Engagement Challenges**

Child care centers influence food choices in the home through educating and exposing children to healthy fresh foods. Directors in this project were concerned that if they did not send information home about healthy eating, the improvements children made in trying new foods would be lost. However, children, when engaged in thoughtful food-based education, did the taking-home themselves.

**Indirect Parent Engagement Strategies**

Educating children about healthy cooking, food items and sociable meal times translates into the home, as one director commented, “We’re offering these children...nutritious meals, lots of fruits and vegetables and what happens when they get home is they ask their parents...Can you give me this?...It’s sparks conversation for them at home.” Directors and cooks alike frequently reported that parents and guardians would ask for recipes after children began to eat a fruit or vegetable regularly refused at home. Activities where children take home the learning helps positively influence the home culture.

**Direct Parent Engagement Challenges**

Educational information sent home through newsletters, texts and websites were not always effective means of influencing parents and guardians. Standalone handouts and emails required more points of communication to educate parents and guardians.
Direct Parent Engagement Strategies

Directly involving parents in activities with children at the centers makes new experiences around food that further help to emphasize positive meal time behaviors. Taste testing menu items with parents after children have tried it, especially fresh and less popular items like beets or brussel sprouts, is another strategy to generate dialogue between CCC, guardian and child. Some centers have made full family-oriented games and activities through food, challenging families to guess odd looking vegetables (like ginger) and then using them to talk about healthy qualities of these items alongside a taste test.

Teacher Culture Challenges

Teachers are expected to be daily leaders and role models in living out healthy lifestyles and positive attitudes towards fresh local foods. Influencing teacher culture however was not a straightforward or immediate process. Frequently in our case study, teachers were being exposed to new fresh foods alongside children. Both adults and children were challenged to be receptive to changing eating patterns and available foods at the CCC.

Teacher Culture Strategies

Centers that invested in teachers directly, as part of the overall F2CC program, developed an improved culture of well-being for all. One center purchased a high-quality blender that teachers could borrow personally to take home along with a few garden items to make nutritious smoothies. In turn, this director observed teachers themselves eating better
and starting their own small gardens. CCCs can make positive impacts on the health of both the children and the staff; yet expecting wholesale changes in life habits beyond the scope of the job requirements, while admirable at a public health level, can overreach the bounds of reasonable workplace expectations. This research encourages service providers or grant makers to include resources, like adult education around cooking and nutrition from Cooperative Extension, for engaging teachers as stakeholders independent from children in CCCs.

Expanded Communities of Practice Challenge

Communities of practice are groups of people pursuing a similar task or involved in the same profession. They develop between similar businesses or organizations, forming networks that share experiences, expertise and resources. While this case study was a snapshot of the early formations of a community of practice, directors and farmers were concerned about making F2CC permanent over the long term. How to make the lessons learned institutionalized in their CCCs or farm businesses remained a question for all those involved.

Community of Practice Strategies

A community of practice developed through informal leadership and knowledge sharing. Child care directors within our program preferred learning from experienced peers over outside experts. Interesting ideas backed up by actual experience, for example dehydrating left-over fruits for breakfast the next day, were well received by other practicing
directors. Farmers similarly found a group approach to problem solving superior to individual efforts; by “talking to farmers all over the country” one farmer said, she “thinks there is a sharing climate within small growers.” While online connectivity is easier than ever, a local relationship also allows sharing tools and on-site visits, an important component of communities of practice for many small farmers and CCCs alike. The North Carolina Farm to Preschool Network is an example of a local community of practice while the National Farm to Preschool Network works primarily as a virtual community.

**Beyond the Market: Farm to Child Care as a Social Intervention**

**Food in Child Care: Race, Poverty and Professionalism**

Child care centers reflect society and the modern world, presenting both challenges and opportunities for making the world a better place for everyone. Farm to child care activities have the potential to enhance the quality of life for the staff, children and business partners (like farmers) in ways beyond a basic economic transaction. This section will highlight the role F2CC programs can play in addressing issues of equity across lines of race and class, returning to the central issues of poverty outlined in the introduction that have guided the question of “why farm to child care?” This section will be useful for Cooperative Extension, child care service providers and non-profit partners to visualize how CCCs influence these issues every day. This publication is limited in its ability to trace the complicated and intersecting histories of poverty, race and agriculture, instead focusing on
small anecdotes that place F2CC in the larger trajectory of social justice work. More resources that address the concepts introduced in this section can be found in table 3.9.

Race – Farmers of All Colors

For people of color, agriculture can embody a conflicting sense of connection, revulsion and apathy. The complex relationship African American people have with a history of slavery and sharecropping in agriculture influenced participant’s perceptions in this study. In general, child care directors worked to craft a narrative of empowerment for African American people through agriculture as a modern day profession with dignity and respect. One director laid it plain in her vision of why she chose to participate in F2CC, saying, “One thing for me is that the farmer we had was African American and the majority of the children we serve are African American too. I thought that it was very important for them to see someone that looks like them that is doing something with food.” Her goal in exposing children to an African American farmer is, “so they can know that there’s another side of it. This can be a profession.” The portrayal of primarily white farmers and farm owners was a dominant narrative that this director was challenging, attempting to undo what is both untrue and may reduce how children interpret their own capabilities. Through this F2CC partnership, this director empowered children and gave a farmer the opportunity to be a real role model. Embracing the complicated history of agriculture through direct engagement and celebration with people of all colors, genders, races and abilities helps advance understanding and cohesion within the next generation of eaters and farmers.
Child care centers also play a critical role in addressing symptoms of poverty amongst the children they serve. Centers that actively acknowledged the low-income households their children came from made slight changes to their meal schedule in order to ensure that children had filling meals at the beginning and end of the day in case it was the only meal of substance they would receive that day. One director found that, “the kids are hungry when they come in ...so if we can add more components of a quality meal” more children are able to successfully participate in the day.

Meals and supplies sent home also help to ensure nights or weekends aren’t absent of food. One director made a strong effort, saying, “to send things home with and maybe pack some stuff in a bag that they know how to prepare,” helps address food insecurity even when the CCC was not watching the child. Providing a filling and nutritious meal isn’t just a philanthropic action, but also a highly practical one to meet disciplinary and education goals, as the prior director went on to say, “if they're full then they're focused...so we give them a blown out, full supper...and based on what we're giving them it's quality.” Child care centers acting as a safeguard against hunger and poverty for children are part of a larger effort for improving food security for all.

Farmers frequently acknowledged the complicated relationship they have with low-income consumers. While farmers always recognized themselves as a business, they
frequently worked in caring and equitable ways to “stay grounded” in their communities and address issues related to poverty. One farmer told a personal story of why he goes out of his way to accommodate low-income customers in his area, saying, “I grew up lower-class, in a single-parent household, and so it’s important to me for kids to be able to see me as a farmer and also be able to have produce that’s fresh, that’s right next door to them.” While still operating as a business, this farmer makes special effort to share time with CCCs in order to build a more inclusive and agriculture-aware community. A larger farmer discussed selling small quantities of his very affordable product (ten pound boxes of sweet potatoes) to individuals out of his office in addition to maintaining his actual profit-making market in wholesale distribution. These farmer actions demonstrate a small but discrete commitment to improving nutritious food access to all. Strategies that help farmers remain accessible to the community contribute to developing an equitable food system while also staying financially viable.

Distributors Addressing Poverty from Many Angles

Non-profit organizations focused on food and poverty issues are recently becoming involved in food distribution. The two food hubs in this study were non-profits focused on linking local farms with low-income people, building a food system based on serving those in need first. One food hub discussed this spread of focus saying, “we’re kind of working with the hardest customers to work with… it would be much easier to just serve a restaurant or a chef. But we’re really working on getting people in the door with fresh and with local, and
that takes a lot of capacity building, a lot of relationships and trust.” As a non-profit, working outside of a strict financially viable relationship helped to get CCCs “in the door” in ways that a company could not afford. While larger distributors did not share a focus on working with low-income customers, increased investment in local agriculture by distributors was reported by a handful of (larger) farms.

Professional Development for Cooks

Cooks in child care are highly valued in the center for their work, turning raw ingredients into food made with care and good health in mind. However, wage growth and professional advancement are absent in the larger structures of the child care industry. Quality Rating and Improvement Systems (the primary measure of quality in child care), while helping to move a majority of child care measures in a positive direction, leaves cooks behind. Teachers and directors have opportunity for advancement that is integrated into improved ratings; more educated staff translates into a higher rating and thus possibility to raise rates and access programs. Provider to student ratios also influence the rating centers receive, with lower ratios yielding higher ratings. No similar rating exists for cooks. Efforts to incorporate indicators pertaining to cook education and performance can begin to build value for, and ultimately improve, cooks as child care staff members who traditionally have lower wages and less professional advancement opportunity.

Professional development for cooks directly is also absent from the structure of child care quality improvement on a national level. Directors in our study acknowledged this
phenomenon within the larger child care education and promotions world. One director observed the lack of educational workshops for cooks, saying, “it [educational workshops] patterned itself towards the teachers, administrators, and assistant teachers, and then you don’t have a lot that’s out there for the cooks.” Within the farm to child care program, workshops explicitly for cooks’ skill building made a unique effort to advance the professionalization of the cook’s job. For instance, advanced knife training focusing on processing seasonal products like watermelon, kale and winter squash improved cook’s versatility. North Carolina Cooperative Extension and child care service providers can provide educational workshops for cooks to further professionalize and bring dignity to the important role of the cook in the child care industry.
Glossary of Terms and Acronyms

**Agritourism** – An agriculture based business that aims to bring visitors to the farm to engage in activities on or around a farm or ranch.

**Child and Adult Care Food Program (CACFP)** - The Child and Adult Care Food Program is a federally funded program that provides aid to child and adult care institutions and family or group day care homes for the provision of nutritious foods that contribute to the wellness, healthy growth, and development of young children.

**Child Care Center; Center; CCC** – A business that cares for children in a facility outside the home that is regulated at the state level, has 12 or more children, and cares for children ages 6 weeks to 12 years old.

**Child Care Home** – A business that cares for children within an individual’s home that is regulated at the state level, has less than 12 children, and cares for children ages 6 weeks to 12 years old. (This type of care is outside the scope of this publication).

**Farm to Child Care (F2CC)** – The general relationship between farms, distributors and child care facilities through distribution of local food and shared values for improving rural areas and children’s health. Other publications and programs use the term “Farm to Early Care and Education Settings” (ECES) or “Farm to Preschool,” but F2CC is used in this publication.
Farm/Child Care Service Providers – Organizations whose function is to support the success, regulation and education of farm or child care businesses. These groups include, but are not limited to, NCCE, Smart Start, Head Start, the USDA and the DHHS.

Food Hub - A business or organization that actively manages the buying, selling and marketing of food products primarily from local and regional producers in order to satisfy wholesale, retail, and institutional demand.

Good Agricultural Practices (GAPs) - Good Agricultural Practices are voluntary audits for farmers that verify that fruits and vegetables are produced, packed, handled, and stored as safely as possible to minimize risks of microbial food safety hazards. Certain businesses require this certification for farms to sell food to them (but child care centers do not, though food safety measures are still followed).

Large Farms – Farms with over 500 acres of productive land in use. This definition is for the purpose of this guide and is not the definition used by the USDA.

Local Food Supply Chain – The organization of businesses that grow, process, distribute and sell food at the county, regional or state level. For this report, this term refers frequently to the common ways customers purchase local food, like through farmers markets, CSAs and specialty distributors.

Local Food; Regional Food – Food that is grown in the county, city, state or region where it was grown. Local food means something different to each person, but will refer to food grown in the state of North Carolina in this publication.
Mainstream Food Supply Chain - In general, the organization of businesses that grow, process, distribute and sell food for the majority of the population. Refers to how most of the population purchases food, like through grocery stores, large distribution companies and restaurants.

North Carolina Cooperative Extension (NCCE) - North Carolina Cooperative Extension is a partnership at the county, state and federal level operating in land grant universities and within all 100 North Carolina counties and the Eastern Band of Cherokees. NCCE helps translate research and best practices for a variety of problems in agriculture, industry and society to the people of North Carolina.

Procurement – The act of purchasing and receiving food items through any assortment of business relationships, including but not limited to wholesale distributors, grocery stores and farmers.

Quality Rating and Improvement Systems (QRIS) - A systemic approach to assess, improve and communicate the level of quality in early and school-age care and education programs.

Small Farms – Farms ranging in productive acreage from less than an acre to ten acres. This definition is for the purpose of this guide and is not the definition used by the USDA.

Small, medium and large child care centers – The NC Division of Health and Human Services does not divide child care centers by size, but for the sake of this publication in regards to food demand, “small” child care centers refers to those that enroll 50 or less children, “medium” enroll 50 to 100 children and “large” enroll over 100 children.
United States Department of Agriculture (USDA) – The United States Department of Agriculture is the U.S. federal executive department responsible for developing and executing federal laws related to farming, agriculture, forestry and food.

Wholesale Distributor; Mainstream Distributor; Multinational Distributor, Broadline Distributor – A business that distributes and sells a variety of food and non-food products to customers across the country through delivery services.
Bibliography


Figure 3.1 The child care center local food options self-assessment can help centers decide what local food source will work best for them to start with. Read through each choice and work your way down until you arrive at a procurement option. Some centers may find that more than one local option works best.
Table 3.1 Summary of child care center’s procurement benefits, challenges and strategies.

<table>
<thead>
<tr>
<th>Procurement Option</th>
<th>Challenge</th>
<th>Benefit</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholesale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large National Distributor/Medium Distributor</td>
<td>Lack of farmer connection; Lack of diverse products</td>
<td>Most convenient option</td>
<td>Ask about availability of local; Encourage distributors to carry local options</td>
</tr>
<tr>
<td>Food Hubs</td>
<td>New accounts; Limited options; Potentially expensive</td>
<td>Convenient delivery; Flexible quantities; Strong story about the food and farm</td>
<td>Combine food and education budgets; Track cost and waste changes switching from canned to fresh</td>
</tr>
<tr>
<td>Grocery</td>
<td>Local not frequently offered or unclear</td>
<td>Always available</td>
<td>Close attention to labels; Encourage grocery to carry local options</td>
</tr>
<tr>
<td>Centralized Kitchen/Catering Service</td>
<td>See footnote below⁴</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farmer Direct</td>
<td>Short window of availability; Small quantities; Small time commitment available to CCCs</td>
<td>Personable, good communication ; Potentially affordable</td>
<td>Purchase a sizable variety of products; Pair with small and new farmer; Organize order with multiple centers; Work with NCCE to find farms</td>
</tr>
<tr>
<td>Farmers market/Farm Stand</td>
<td>High cost perceptions; Time to shop challenging</td>
<td>Control of exact product and quantities</td>
<td>Fit into shopping routine; Develop farmer relationships</td>
</tr>
<tr>
<td>CSA</td>
<td>Too small; Payment upfront potentially challenging</td>
<td>Convenient delivery</td>
<td>Pair farmer relationship and community</td>
</tr>
</tbody>
</table>

⁴ One strategy some centers take is outsourcing cooking entirely to third party providers that deliver hot meals and snacks. These services eliminate the need for maintaining a full kitchen space, cooking staff and food purchasing. Centers that choose this route may be limited in options since this service is not active in all counties. If available, CCCs can ask for and encourage the service provider to begin or expand local food options.
Table 3.2 Summary of child care center challenges and strategies in the local food system

<table>
<thead>
<tr>
<th>Topic</th>
<th>Challenge</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Functions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consistent Purchasing</td>
<td>CCCs purchase irregular and inconsistent quantities from local growers</td>
<td>Dedicated purchasing beyond a single season; Frequent, small orders to maintain a farmer relationship</td>
</tr>
<tr>
<td>Charity Perceptions</td>
<td>CCCs expect free or reduced-price products</td>
<td>Pursue business partnerships with organizations that have similar missions and goals</td>
</tr>
<tr>
<td>CACFP</td>
<td>CCCs are unclear about how the CACFP can be used for purchasing local foods and related expenses</td>
<td>Utilize CACFP to buy local foods, garden supplies and related items; Consult with NCCE or other service providers</td>
</tr>
<tr>
<td>Communication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marketing and Social Media</td>
<td>Child care centers don’t promote F2CC activities or partnerships</td>
<td>Use F2CC programs as a marketing tool; Use social media to connect with families and farmers</td>
</tr>
<tr>
<td>Communication</td>
<td>CCCs and farms have no consistent communication method; CCCs and farms poorly forecast future demand</td>
<td>Clear communication methods established immediately; Commit to production planning; Leverage consumer influence to encourage local foods</td>
</tr>
<tr>
<td>Internal Structures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kitchen Infrastructure</td>
<td>Limited refrigeration and tools, which reduces food’s shelf-life; Unfamiliarity with fresh produce storage strategies</td>
<td>Work with produce supplier or NCCE agents on specific guidelines to store and handle perishable foods</td>
</tr>
<tr>
<td>Cooking Culture</td>
<td>Cooks in CCCs lack independence and decision making power; Lack of kitchen labor and finance</td>
<td>Give more management responsibilities to cooks; Involve children in the preparation process; Utilize food as educational material</td>
</tr>
</tbody>
</table>
Table 3.3 Summary of local farmer challenges and strategies working with child care centers

<table>
<thead>
<tr>
<th>Topic</th>
<th>Challenge</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>Local food is perceived as too expensive for CCCs; CCCs are unfamiliar with wholesale produce units</td>
<td>Sell seconds; Partner with NCCE to educate on how to cook, store and purchase seasonal produce</td>
</tr>
<tr>
<td>Volume</td>
<td>Volume of produce purchased too small for delivery or consistent sales</td>
<td>Multiple CCCs partner on a single purchase; Flexible quantities/broken cases as a sales option; Utilize a straightforward ordering system</td>
</tr>
<tr>
<td>Cyclical Menus</td>
<td>Local produce does not match what the CCC is interested in purchasing.</td>
<td>Emphasize unique options through local and in season purchases</td>
</tr>
<tr>
<td>Local Farmer Time Expectations</td>
<td>CCCs want a time intensive relationship with a real-life farmer</td>
<td>Focus on educating and storytelling; Explore opportunities in agritourism</td>
</tr>
</tbody>
</table>

Table 3.4 Serving size to quantities purchased example for fruits servings using apples

<table>
<thead>
<tr>
<th>Number of Kids Ages</th>
<th>Breakfast/Snack Fruit or Veggie Serving – ½ cup*</th>
<th>Lunch/Supper Fruit &amp; Veggie Serving – ½ cup</th>
<th>Fruit served 4x/week for snack</th>
<th>Ex. Apples – 1 apple = 1 cup</th>
<th>Apples in Bushels</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>25 cups</td>
<td>25 cups</td>
<td>100 cups</td>
<td>100 apples</td>
<td>1 bushel</td>
</tr>
<tr>
<td>100</td>
<td>50 cups</td>
<td>50 cups</td>
<td>200 cups</td>
<td>200 apples</td>
<td>2 bushels</td>
</tr>
<tr>
<td>200</td>
<td>100 cups</td>
<td>100 cups</td>
<td>400 cups</td>
<td>400 apples</td>
<td>4 bushels</td>
</tr>
</tbody>
</table>

*Serving sizes for children ages three to five years old reflect 2016 updated CACFP meal patterns (USDA, 2016)
Table 3.5 Summary for expanding the farm to child care market to parent, teacher and community stakeholders

<table>
<thead>
<tr>
<th>Topic</th>
<th>Challenges</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents &amp; Guardians</td>
<td>Lack of influence on parents; Children unlearn positive eating habits at home</td>
<td>Engaging education for children prompts conversation at home</td>
</tr>
<tr>
<td>Indirect Engagement</td>
<td>Educational materials sent home are not fully effective forms of communication</td>
<td>Food and nutrition activities occurring when guardian and child interact at the CCC</td>
</tr>
<tr>
<td>Direct Engagement</td>
<td>Expectations to embrace and shift center culture towards healthier foods and behaviors</td>
<td>Investing resources and time as part of the F2CC program in teacher engagement and professional development</td>
</tr>
<tr>
<td>At the Center</td>
<td>F2CC programs do not establish organizing body for sharing knowledge across time</td>
<td>Inclusive educational opportunities for all to learn from both experts and peers in the field</td>
</tr>
<tr>
<td>Teacher Culture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community of Practice</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3.6 Resources for developing local food connections for child care centers

<table>
<thead>
<tr>
<th>Title</th>
<th>Summary</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Carolina Farm Fresh</td>
<td>A directory of pick-your-own farms, roadside stands and farmers markets throughout North Carolina.</td>
<td>ncfarmfresh.com</td>
</tr>
<tr>
<td>Appalachian Sustainable Agriculture Project's Wholesale Local Food Guide</td>
<td>A farm to business directory for the Western Carolinas that includes a searchable tool to discover farms, distributors and stores that carry a wide variety of local foods.</td>
<td>appalachiangrown.org/wholesale/index</td>
</tr>
<tr>
<td>Localharvest.org</td>
<td>A general local food directory that helps consumers find a wide variety of locally grown fruits, vegetables and much more throughout North Carolina.</td>
<td>localharvest.org/raleigh-nc</td>
</tr>
<tr>
<td>Food Hub Directory</td>
<td>An online directory hosted by the USDA to help consumers find food hubs.</td>
<td>ams.usda.gov/local-food-directories/foodhubs</td>
</tr>
<tr>
<td>Title</td>
<td>Summary</td>
<td>Source</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Local Foods in the CACFP with Questions &amp; Answers</td>
<td>A memo from the USDA outlining how the CACFP can be used for purchasing local foods and materials.</td>
<td>fns.usda.gov/sites/default/files/f2s/CACFP11_2015_Local%20Foods%20in%20CACFP_03%2013%202015.pdf</td>
</tr>
<tr>
<td>Fresh Vegetable Storage for the Homeowner</td>
<td>An overview of produce storage best practices and description of how to obtain the best shelf life.</td>
<td>extension.tennessee.edu/publications/Documents/SP291-L.pdf</td>
</tr>
<tr>
<td>Storing Fresh Produce</td>
<td>Tips and tricks for keeping vegetables fresh and crisp in the refrigerator or pantry.</td>
<td><a href="http://www.extension.umn.edu/rsdp/statewide/rural-grocery-stores/docs/Storing-and-handling-fresh-produce-UMN-Extension-RSDP.pdf">www.extension.umn.edu/rsdp/statewide/rural-grocery-stores/docs/Storing-and-handling-fresh-produce-UMN-Extension-RSDP.pdf</a></td>
</tr>
<tr>
<td>Food Buying Guide/Calculator for Child Nutrition Programs</td>
<td>An interactive tool to calculate quantities to purchase of fresh foods using enrollment numbers and serving sizes.</td>
<td>fbg.nfsmi.org/</td>
</tr>
</tbody>
</table>

Table 3.7 Resources for local produce purchase, storage and processing for child care centers
Table 3.8 Resources for market channel assessment and marketing for farmers

<table>
<thead>
<tr>
<th>Title</th>
<th>Summary</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guide to Marketing Channel Selection: How to Sell Through Wholesale &amp; Direct Marketing Channels</td>
<td>A guide for small and mid-sized fresh produce farms assessing marketing channels, complete with worksheets and further resources.</td>
<td>smallfarms.cornell.edu/files/2014/07/Guide-to-Marketing-Channel-1ib5phn.pdf</td>
</tr>
<tr>
<td>NC Growing Small Farms: Marketing</td>
<td>NCCE webpage offering guidance for wholesale and direct marketing opportunities for small farmers.</td>
<td>growingsmallfarms.ces.ncsu.edu/growingsmallfarms-marketing/</td>
</tr>
<tr>
<td>ATTRA’s Marketing, Business &amp; Risk Management</td>
<td>The National Center for Appropriate Technology’s webpage containing links to extensive market planning tools developed by the USDA and other government groups.</td>
<td>attra.ncat.org/marketing.htm#organic</td>
</tr>
<tr>
<td>Building a Sustainable Business: A Guide to Developing a Business Plan for Farms &amp; Rural Businesses</td>
<td>A SARE publication including marketing advice as well as big picture farm business planning for the beginning farmer.</td>
<td>sare.org/content/download/29729/413968/file/Building_a_Sustainable_Business.pdf</td>
</tr>
<tr>
<td>Wholesale Opportunities for Local Growers; Social Media</td>
<td>Research and tools for helping small and mid-sized growers access wholesale markets in North Carolina. Introductory best practices for using social media for producers.</td>
<td>ncgrowingtogether.org</td>
</tr>
<tr>
<td>Social Media for Farmers 101</td>
<td>Accessible articles for farms approaching social media for the first time.</td>
<td>modernfarmer.com/2016/07/social-media-farmers-101/</td>
</tr>
<tr>
<td>USDA Results</td>
<td>An example of an effective social media campaign by the 2016 USDA administration.</td>
<td>medium.com/usda-results</td>
</tr>
</tbody>
</table>
Table 3.9 Resources for integrating racial equity in the food system

<table>
<thead>
<tr>
<th>Title</th>
<th>Summary</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Center for Good Food Purchasing Resources Page</td>
<td>Resources about equitable food production, public procurement and the whole food system from the Center for Good Food Purchasing.</td>
<td>goodfoodpurchasing.org/resources/</td>
</tr>
<tr>
<td>Committee on Racial Equity in the Food System</td>
<td>The Center for Environmental Farming System’s race and equity in the food system webpage with links to current work on racial equity in North Carolina food systems.</td>
<td>cefs.ncsu.edu/food-system-initiatives/food-system-committee-on-racial-equity/</td>
</tr>
</tbody>
</table>
Chapter IV. Conclusions
This thesis research explored the theoretical and practical implication of the tension between social value systems and profit motivations in economic exchanges in a farm to child care local food supply chain. Chapter Two used a theoretical framework of social embeddedness and market-instrumentalism to identify the limited capacity of local food systems to address inequalities in the food system. Chapter Three explored the actualization of this market relationship in the challenges and strategies farmers, distributors and CCCs experienced over the course of this case study. In sum, these two perspectives shed light on challenges for F2CC initiatives to effect positive social change on the food system when attempting to bridge multiple cavernous needs in food production and consumption.

Farm to child care requires a basis in community food security to ensure all supply chain actors receive necessary resources to engender a sustainable and equitable food system. Farm to child care, as an intervention for improving public health and farmer financial solvency, is still primarily in its infancy as both a project and lived experience. This intervention’s focus, as seen in both literature and in the structure of this F2CC project, was primarily on benefitting low-income children and positively influencing the culture in child care settings. This focus elevates CCC’s needs above that of farmers and distributors, contributing to a lopsided understanding of structural barriers. However, working with CCCs first is indeed necessary to develop demand, often a precursor to supply. Also, it was clear that there was demonstrable inability for CCCs to enter into a local foods-centric supply chain to begin with (for example, lack of kitchen infrastructure or lack of seasonality understanding). Farmers and distributors, in the current model of F2CC, do not need to largely modify their present marketing and distribution activities in order to provide quality
products to CCCs. However, the focus on children and child care needs left little resources for the agricultural production and logistics component, evident in this project providing a subsidy for CCCs, but no direct compensation to participating farmers or distributors. In order to better serve farmers, CCC demand needed to be better organized and centralized in order to “pull” (in the terminology of values-based supply chains) products through the supply chain that are local, fairly produced and nutritionally dense. A community food security focus, bridging sustainable agriculture and anti-hunger/public health work, is necessary for making related F2CC projects equitable, fair and economically viable for farms, distributors and CCCs.

Economic sociology theories help to position market-based relationships in a complex web of social values. This study focused on the values expressed through local food systems primarily communicated by CCCs, including personable connectivity, trust and good health. Social embeddedness illustrates the motivations actors express throughout the F2CC supply chain, painting a picture of community investment through commitment to seemingly altruistic missions that cannot be explained through rational self-interest alone. Farmers and distributors partook in expressing socially embedded values as well, coordinating new market exchanges with CCCs and dedicating explicitly to the wellbeing of their communities, regardless of the size of operation. Market-instrumentalism in this local food supply chain helps explain the extent to which business-oriented decision making remained central to the actualized value system of these actors. All research participants made seemingly opportunistic business decisions like using local as a marketing tactic or quietly relying on the conventional food supply in order to perpetuate other and sometimes separate social
agendas. Local food systems, without an explicit structure that guarantees social responsibility to farmers, consumers and all food system workers, can reproduce inequitable food systems. Cooks receiving educational training contributed to their professionalization, but didn’t go far enough in organizing a structure that compensates them (or the CCC) through improved ratings for centers or funding that is tied to staff education. Farmers likewise require a food system that compensates labor in the field and in the classroom, a challenge for those community-minded farmers that wanted to connect with CCCs but could not afford to operate outside their primary market duties. Local, social-driven food strategies, without a thorough understanding of financial and business needs, can also reproduce unsustainable market relationships. The food hub that used grant money to subsidize the market for consumers who are low-income contributed to perceptions that “food is cheap,” diminishing long term outlooks for small farmers and misleading CCCs about the costs of local foods. Embeddedness and market-instrumentalism theories in this local food system helps to contextualize and explain participant’s motivations and actions in this case study.

The food hub director’s hopeful vision of a more food secure world expressed as one where “farmers are making a living and eaters are eating fresh local food” emphasizes the social goals of the actors in this case study. Community food security is a conceptual framework that defines not just an equitable food system but reflects the structural challenges to creating an economy that works for all. Central tenants of community food security, including fair wages for food system workers, food grown in systems that account for pollution, and accessible, healthy foods are tantamount to a fair economy. Local food
systems can be a means to obtain elements of community food security through socially embedding values into the modes of exchange. In this way, local food reflects an economy built on community, fairness and well-being for all living things, values distinctly different from (but not necessarily opposed to) personal, profit making motivations.

At the economic structural level, social embeddedness privileges non-economic components of community well-being not presently valued (ie non-commodifiable). The larger structure of the economy pushing towards ever-more concentration of wealth reflects in CCC’s kitchens and food procurement in general. Minimal state funding for kitchen infrastructure and labor in low-income serving CCCs has resulted over time in centers being unprepared to feed children nutritious foods. The private market has both accommodated and exacerbated this situation, providing inexpensive foods (that meet USDA standards) that are highly processed, high-calorie and low-nutrient. The combination of inexpensive options for feeding children and the lack of capacity to process and serve healthier foods manifested as central challenges to participation in F2CC where food could cost more, take more time to process and become waste from picky eaters used to unhealthy foods. Child care centers also identified their own influential position in their communities, interfacing with families, food producers and other service providers, as a means to provide beneficial services outside an economic exchange. F2CC was found to be most effective in serving children and engaging with the local food system when a holistic approach was taken that engaged these many community members. Yet these activities, like educating parents about local foods or providing cooking training for teachers, are not part of the cost of child care, nor can they be born by many of the families that are already financially struggling. Because of these
multiple challenges and opportunities, community food security initiatives require public funding to be accessible and just. Chapter Three identifies specific examples of the function of the local food supply chain linking CCCs and farmers, further reflecting the theories identified with nuances unique to this case study.

Chapter Three, as a resource for Cooperative Extension when conducting F2CC-style programs, outlines concise, observed challenges and strategies expressed by the participants themselves. The repercussions of embeddedness and marketness played out in the actualization of the daily local food supply chain as different actors jostled to fulfill their duties in their respective businesses or organizations. Child care centers were challenged to participate in the new market of local foods because of structural barriers internal to their centers like lack of basic kitchen infrastructure and staff knowledge for utilizing fresh foods. Yet small and consistent success stories matched the multitude of barriers facing CCCs participating in the F2CC project. Creative solutions abounded; for example, one center used their educational materials budget to help purchase local foods, in turn having children help prepare the food (relieving the cook of extra labor) and use the waste, corn husks in this example, as an art project later that day. Farmer’s and distributor’s level of marketness and social embeddedness also manifested as a strategic balance in the F2CC supply chain. For example, conducting an on-site farmers market allowed one producer to further develop his bottom line while making local produce available to low-income families and educating children at the same time. It is important to include the strategies for fulfilling social values used by actual participants to more thoroughly contextualize the case study and translate lessons learned to a larger audience. Cooperative Extension can distill best practices from
illustrative case studies such as this to further scale up similar F2CC projects. Chapter Three specifically provides Extension a window into CCC’s motivations and challenges for participating in F2CC, helping inform interventions that match needs and capacity.

Local Extension offices can use this case study to identify best intervention points to improve the relationship between distant entities in F2CC. By knowing how CCCs procure local foods and what major hurdles farmers and distributors may run into, Extension can help smooth out beginning relationships and further engage existing F2CC relationships. Also, this case suggests that future F2CC projects invest more financially and educationally in farms and distributors through building capacity in hybrid food supply chains. Helping farmers get certifications for distribution (like GAP or USDA organic) or helping food hubs partner with larger distributors are examples of tangential, but necessary capacity building efforts for local food economies that would benefit F2CC supply chains.

Securing a feasible future for F2CC requires institutionalizing the partnership with public organizations in order to facilitate the socially embedded economic activities of participants in a highly market-oriented world. A major challenge of this particular F2CC project was the uncertain outlook of maintaining relationships, educational development and the community of practice once grant money ran out. Few outlets in modern American society purposely serve the entire population, rural and urban alike. Cooperative Extension plays a critical role in housing, organizing and disseminating knowledge to the public in an accessible format. This thesis itself is an example of Cooperative Extension housing education through written accounts and dissemination of knowledge through workshops and
technical assistance. As an institution of the state, Cooperative Extension can act according to the needs of communities and groups outside an economic-power structure. This can manifest as providing education on F2CC topics to farmers, distributors and CCCs regardless of a capacity to pay for this service. Providing services universally tends to benefit those in most need, like low-income serving CCCs or small farms. Also, by specifically investing in marginalized community members, Cooperative Extension can make the greatest impact on human well-being and oppose the concentration of wealth that accrues to better resourced or more structurally privileged entities. Cooperative Extension can also be an agent against devolution of knowledge acquisition, providing access to those historically unable to afford or access education. Finally, by incorporating a vision of community food security into F2CC projects, Cooperative Extension can connect the positive impacts on the few to a larger project that is working to ensure fair, nutritious and sustainable food for all.
### Example field guide

*Appendix A. Qualitative Methods Observation Guide*

**Example field guide** used when observing on site at child care centers, farms and distribution centers.

<table>
<thead>
<tr>
<th>Site #</th>
<th>Researcher:</th>
<th>Date:</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
<td>Questions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Appearance</td>
<td>• Clothing&lt;br&gt; • Demographic observation&lt;br&gt; • Patterns?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verbal Behavior</td>
<td>• Conversation – what does the dialogue focus on, what are the values?&lt;br&gt; • What do they say about relationships?&lt;br&gt; - Peers&lt;br&gt; - Project Partners&lt;br&gt; - Service/Aid groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Behavior/Practices</td>
<td>• What occurs in this place?&lt;br&gt; • Actions reflect values?&lt;br&gt; • Interaction between individuals and groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td>• How is the space designed?&lt;br&gt; - Does design reflect values?&lt;br&gt; • Space used as intended or designed?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outliers</td>
<td>• Stand out subjects?&lt;br&gt; • Odd or out of place things?&lt;br&gt; • Observations outside categories?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Appendix B. Qualitative Methods Interview Guides**

**Child care interview guide** used when interviewing child care directors. Specific probes followed from experiences during participant observations.

<table>
<thead>
<tr>
<th>Childcare</th>
<th>Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
<td>Site Number:</td>
</tr>
</tbody>
</table>

Tell me about how you got into the childcare industry.  
How long have you been at the present center?  
Any prior experience?  
How long has this center utilized subsidy money to take on more children?

Walk me through your process of procuring fresh local food.  
Where do you get fresh local food from?  
How often do you get it?  
What is your storage like?  
How do you know (forms of validation) it is local? Do you read labels, told directly, etc?  
How long have you been with this person/group?

How did you decide who you procured fresh local produce from? Why?  
How much should food cost? (as part of your budget?)  
What signals a good partner/source? Any examples?  
What signals a bad partner/source? Any examples?  
What information do they share about their products?  
How does your supplier compare to other suppliers you’ve had?

How has your center (kids, teachers) responded to the fresh local food?  
What specifically is liked and disliked?  
How is your menu set?  
How do you decide on which items to purchase? What factors weigh in?  
Will you continue F2CC activities after the program is over?

Does where food comes from matter?  
Would you/do you pay more for local?  
What does “local” in the context of food mean to you?  
What are the differences between food at different geographic ranges?

Tell me about your experience in the F2CC training events you (and your cooks) participated in. *remind of programs*  
To what extent have you been able to integrate and utilize this information?  
What different information would be useful for your facility? What would you have liked to know starting out?  
Where else/all do you get the information you need to be successful in utilizing fresh local foods?
<table>
<thead>
<tr>
<th>How did you use the cost share you received through the F2CC program? Why?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>What could have made the dispersion process better?</td>
<td></td>
</tr>
<tr>
<td>Was it enough? Was it too much?</td>
<td></td>
</tr>
<tr>
<td>How does receiving CACFP money affect what food is bought/served at the CCF?</td>
<td></td>
</tr>
<tr>
<td>How long have you had children on CACFP?</td>
<td></td>
</tr>
<tr>
<td>Is it enough? Is it just right? Is it too much?</td>
<td></td>
</tr>
<tr>
<td>What is your organization’s written policy about food?</td>
<td></td>
</tr>
<tr>
<td>What is written about health of food beyond required standards?</td>
<td></td>
</tr>
<tr>
<td>What is written about sourcing of food? (both in terms of exact distributors and where it comes from at the source)</td>
<td></td>
</tr>
<tr>
<td>How are parents and the general public informed about your participation in F2CC?</td>
<td></td>
</tr>
<tr>
<td>What information do you share?</td>
<td></td>
</tr>
<tr>
<td>What medium is this information shared through?</td>
<td></td>
</tr>
<tr>
<td>What is your vision for the ideal local food system?</td>
<td></td>
</tr>
<tr>
<td>What arrangement between you and the other members of the supply chain would benefit you most?</td>
<td></td>
</tr>
<tr>
<td>What makes the present supply chain different than your ideal?</td>
<td></td>
</tr>
<tr>
<td>What would you need to get here?</td>
<td></td>
</tr>
<tr>
<td>Does it include a garden? Do you already have one?</td>
<td></td>
</tr>
</tbody>
</table>

**Personal demographic questions**

| What year were you born? |  |
| What is your gender? |  |
| What race do you identify with? |  |
| What is the highest level of education have you attained? |  |
**Farmer interview guide** used when interviewing farmers or farmer sales representatives. Specific probes followed from experiences during participant observations.

<table>
<thead>
<tr>
<th>Farmers</th>
<th>Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
<td>Site number:</td>
</tr>
</tbody>
</table>

1. Tell me about how you got started farming.  
   a. How long have you been at this present farm?  
   b. What is your agricultural background?  
   c. What products do you produce on farm? How many acres do you farm? Do you own or lease this land? Do you offer any other services as well?

2. Can you give me a breakdown of who your customers are and what percent of your production goes to each of them?  
   a. Walk me through the process of how you get food to your main distributor (or main customer).  
   What percent of your sales are to local customers?  
   probes: Does this mean end user or just the next hand? And how do you define local? Is the main distribution different than how it got to CCFs?  
   b. Do your customers throughout the supply chain know the product has come from you? How?  
   c. Do you know your food makes it to CCFs? What sort of knowledge do you have about the end-user of your product?  
   d. Where do you get your seed/slips/starts/outside inputs etc. from? What is that relationship like?

3. How have you decided which customers (both end and middle) to pursue?  
   probe: How did you decide to sell to CCFs?  
   a. What signals a good partner/customer? What characteristics do you look for?  
   b. What are signals that you don’t want to work with someone? Have you ever had to act on those signals?  
   c. What sort of information about your product do you share with your customers? (like variety/cultivar, production method, your location, etc.)  
   d. What requirements do your customers have for the product, accountability (like food safety, liability insurance, etc.) and packaging/labels?  
   e. Do you do production planning with your customers? How do you know what and how much to plant next year?

4. What does “local food” mean to you? In terms of geographic spread?  
   a. Do you see a benefit in selling locally versus nationally or internationally?  
   b. Has your local market changed any in the last few years, 5 years, decade? How so?  
   c. What are the differences between locally grown food and non-locally grown food?  
   probe: What were the differences between your experience with CCFs and other customers?  
   d. What are the differences between your local customers and your non-local customers?  
   probe: Does selling local improve your bottom line?  
   e. Does selling local improve your bottom line?  
   probe: Does where food comes from matter?

5. Where do you go for information when you have a problem? Any difference between growing problem vs. marketing problem?
a. To what extent do you interact with Cooperative Extension?

6. Are you certified in any particular growing practice?
   a. Does your farm have any written policies about your growing practices? Or where you sell your product to?
   b. Does the distributor/middleman you work with have any policy about (purchasing) local food?

7. Can you tell me a little bit about how you interact with other growers in your area or field?
   a. Is there a community of growers you regularly interact with? How do ya’ll interact?
   b. Does your staff participate in this or other like communities of farmers/ag workers?

8. F2CC was created to help increase the amount of nutritious fruits and vegetables (being fresh, local in this context) kids in need consumed in Wake County. What role do you see farms playing in participating in the F2CC program?
   a. Have you ever sold to a CCF before?
   Variable question: From what you’ve told me in the past, your experience with F2CC was (insert experience from participant research here). Is this still the case? Has the situation changed since we last talked? How so?
   Probe: Please describe barriers and benefits to this market. What specifically worked? What would you need to make this market successful for you?
   b. What non-profit or governmental programs might help you sell to CCFs (or other low-profit institutions)? How should these services be distributed (to farmers, CCFs, non-profits)?
   Probe: What role do you see local agriculture playing in feeding children in CCFs?

9. What is your vision for the ideal local food system?
   a. What arrangement between you and your customers would benefit you most? Would ordering, planning for the future, communication and other interactions occur differently to benefit you most?
   b. What makes the present supply chain different than your ideal?
   c. What would you need to get there?

Personal demographic questions:

1. What year were you born?

2. What is your gender?

3. What race do you identify with?

4. What is the highest level of education you have attained?
**Distributor interview guide** used when interviewing distributor sale representatives. Specific probes followed from experiences during participant observations.

<table>
<thead>
<tr>
<th>Distributors</th>
<th>Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
<td>Site number:</td>
</tr>
</tbody>
</table>

1. Tell me how you got into produce distribution?
   a. How long have you been at the present organization?
   b. What is your work or educational background?
   c. What is the full line of products your company carries generally?

2. Can you give me a breakdown of who (like what businesses in general) your customers of fresh produce are?
   **Clarification:** What percent of your fresh produce sales goes to each of them?
   a. What percent of your sales are to local customers? **Probe:** Does this mean end user or next hand in the supply? Is this distribution different than how it gets to a CCF?
   b. What sort of information do your customer’s want?
      What information about your product do you share with customers?
   **Probe:** What information is conveyed on your packaging about the product? What information do you tend to share in terms of your company’s standards with your customers?
   c. How do your customers express their demand for certain products, attributes, etc?
   d. Can you give me a general outline of the standard of produce your organization requires?

3. How does your organization decide which customers to pursue?
   **Probe:** How did you decide to sell to CCFs?
   a. What signals a good partner/customer?
   **Probe:** What characteristics define an ideal producer to work with?
   b. What signals a customer or partner you have to end a relationship with?

4. Can you give me a general profiling of your farmers?
   Including: Geographic location, general acreage and land in cultivation, and product diversity by farm
   a. What percent of your farmer suppliers are local? **Probe:** Are the local suppliers different than the general farmer you work with?

5. Can you describe the basic requirements for a grower to do business with you?
   a. What certifications or information do you require from your growers? Can you briefly explain what all those entail?
   b. Do you do production planning with your farmers? How do they know what/how much to plant each year for you?
   c. How do you ensure you receive produce of the quality standards you require?

6. Does where food comes from matter?
   a. How does your organization define “local food”?
   b. What are the differences in selling locally versus nationally or internationally sourced foods? Are the customers different?
1. What is your organization's vision for the ideal local food system?
   a. What arrangement between you and the other members of the supply chain would benefit you most?
   b. What makes the present supply chain different than your ideal?
   c. What would you need to get there?

2. Personal Demographic Questions:
   1. What year were you born?
   2. What is your gender?
   3. What race do you identify with?
   4. What is the highest level of education you have obtained?
Appendix C. Farm to Child Care Procurement Resource Guide
Farm to Child Care Procurement Resource Guide

Introduction to Farm to Child Care Local Food Procurement

Farm to Child Care brings the best of children’s nutrition education, parent engagement and menu options together to form a single, exciting program. Farm to Child Care not only includes the fun activities in the garden or taste-tests with parents and children, but also the food purchasing side with local farmers and distributors. In this guide, you will find an overview of local food “procurement,” which is, in general, the bringing together of farmers, distributors and child care centers through the purchase of food, sharing of information around food, and the expectations for services and relationships between all groups involved.

Farm to Child Care can be viewed as a three part system: Farm – to – child care. “Farms” throughout a local area growing a diversity of fruits and vegetables according to the seasons represent the food production side. “To” comprises the less visible but equally important relationships that bring food to customers, sometimes by the farmers themselves and frequently by a chain of partners like distributors, grocery stores and farmers’ markets. “Child care” is the consumer, including not just the children who eat the food, but also the parents, guardians, teachers, directors, and even the larger community as it supports local agriculture.

Why We Focus on Farm to Childcare in North Carolina

Right here in North Carolina, nearly 1 in 4 children are in households where food is insufficient at one or more points during the year (Food Research & Action Center, 2016). Children from these households are particularly at risk for a poor diet that may lead to obesity and other diet-related diseases. Child care centers are an important place for helping these children through nutrition education, positive role modeling of eating habits, and providing quality food for them to eat. Farm to Child Care is an exciting way to bring new, healthy foods to children (and their families) while also supporting local farms. Connecting child care centers to farms provides benefits to farms and the larger community. Sales directly to centers from a farmer can help form positive connections, increasing farms sales to more customers and building an educational relationship between farmer and children. Purchasing food through a distributor that is dedicated to working with local producers may provide for growth and expansion of farms in our communities. Buying local ideally improves the health of rural economies, helps farmers stay on the land, and provides highly nutritious food for consumers. A recent USDA report even shows that farmers that sell locally receive up to seven times the revenue than other farmers who sell food nationally or globally (King et al., 2010).

Farm to Child Care research is beginning to show positive results for children and their families. Meals in centers that focus on serving local food have been found to be more nutritious than non-local meal service, especially in fruits and vegetables (Gibson et al., 2014). Exposure to more fruits and vegetables, through purchasing produce through the different seasons, has also been demonstrated to influence children towards improved eating behaviors (Izumi et al., 2015; Williams et al., 2014). Creative ways to engage with farmers have been successful in other states, linking families to local food through on-site farmers’ markets and farm delivery services. Farm to Child Care in North Carolina is part of a national effort to bring good food to children and support local farms, connecting people in need across our rural and urban communities.

Citations


Step by Step to Local Food Purchasing

Getting started buying local foods takes a few steps to determine what your center can do and then finding the best match for your needs. While there is no wrong way to buy local food for your center, there are many different right ways, as we will see on the next page. Don’t be discouraged if it takes time, switching options or multiple partnerships to get the local foods you want to your center. Remember to start small and follow the steps below to ensure the best results for your center as you work through Farm to Child Care procurement options.

Stage 1. Self-Assessment
- Review how ready your center is to purchase, prepare and serve local foods. Use the “Self-Assessment” on page 4 to help your center determine what method is best for you considering challenges like:
  - Pick-up vs. delivery
  - New vendor and account vs. same vendor and account
  - Preparation time for raw, fresh fruits and vegetables
- Identify the right type of vendor for your local food needs. Take a look at the “Description of Local Food Options” on page 2 to learn about the differences in local food options.
- Complete the “Menu Analysis Worksheet” on page 5 to begin finding easy ways to incorporate North Carolina produce into your daily meals and snacks.

Stage 2. Finding Vendors
- As your center determines its preferred local food vendor type, begin exploring what options exist in your community. Check out some of the websites listed on the “Local Food Resources” on page 7 to find the appropriate vendor near you.
- Work with your Breakthrough Collaborative team and their expertise to find great options for local food. In addition, partnering with North Carolina Cooperative Extension can connect your center to many different agricultural resources across your county.

Stage 3. Preparing to Purchase
- If your center uses the CACFP, be aware of documentation from your local food vendors required to receive reimbursement. Asking for receipts if they are not offered at farmers markets or produce stands is not an uncommon thing to do. Refer also to CACFP rules for local food purchasing (see the link in the Resources section or your ASAP manual).
- “Local” has different meanings to different vendors; for some it is the state, for others it is the Southeast and still others have a different definition. Decide how your center wants to define local and be sure to communicate that with your local food vendor if necessary.

Stage 4. Purchasing Local
- Now you are more than ready to start buying local foods! Keep up the good work and share your stories of success or challenges with others through your Affinity Groups.
- Try using PDSA cycles to work towards your procurement goals as you continue to purchase local food.

Description of Local Food Options

One of the biggest challenges to purchasing locally is knowing all the different ways you can get local food. Here you will find a description of the main ways centers purchase local food. These descriptions, as well as the Self-Assessment on page 4 and Resources list on page 7, will help you determine which of these many options works best for your center.

Broadline Distributors – This is the service most child care centers are familiar with that delivers canned goods, milk, paper supplies and other items. More and more, these companies are offering local food options. It may be up to the director or nutritionist at your center to ask for the weekly list of local options if your distributor presently carries local food. See the “Letter to Vendor” template for details on how to engage with a broadline distributor.

Produce Distributors – Distributors are similar to broadliners, except these companies just deliver produce from around the world. Centers will need to inquire with distributors about which of their products are local and what local means to them.

Food Hubs – Food hubs are produce distributors that have a specific dedication to sourcing and delivering only local foods. Food hubs focus on providing very fresh, minimally processed and regionally identifiable (you know exactly where it is coming from) produce to customers. Many food hubs also have a social mission to buy from traditionally underserved farmers and to make sure healthy food gets to the people who need it most, including childcare centers. Presently, not all counties have food hubs, but those that do can take advantage of the diverse and seasonal options food hubs offer.

Grocery – Many grocery stores are beginning to offer local items that our state produces in great quantities, like sweet potatoes, collard greens and strawberries. Some even carry frozen local food, like the “Seal the Seasons” brand. If your grocery store does not have any food that
is clearly labeled as local, ask the produce manager or shop around with other stores in your area.

**Produce Stand** - During the warmer months of the year, farmers in your area may open roadside stands to sell their local products. These options can be convenient in the summer and when they are near your center or other shopping locations.

**Farmer Direct** - Farmers themselves can partner with your center to either deliver or have you pick up local food from a convenient meeting location (like a farmers’ market). Buying straight from a farmer offers the opportunity for an educational experience if the farmer’s time permits.

**Farmers’ Market** - Weekend or weekday markets that host regional farmers present a great opportunity for centers to pick and choose exactly the local foods they want. Try to find a market that fits your shopping schedule as the hours and days of farmers’ markets can be a challenge for center staff picking up local food (also consider buying farmer direct, using the market as a meetup point).

**Community Supported Agriculture (CSA)** - CSA services are subscriptions to a single-family sized box of fresh, in-season produce. There are two major types of CSA services; seasonal and year-long. Seasonal CSAs come directly from a farmer or farmer group, providing whatever is seasonally available in set quantities, requiring customers to pay for a box of food (either upfront or weekly) that is then delivered on a weekly basis. Year-long CSAs are operated by businesses or other organizations, delivering produce year-round using many regional farmers and often allowing for more flexible ordering and payment methods.

**Centralized Kitchen/Catering Service** - Child care centers who use centralized kitchens/catering services can encourage their service to begin buying local food through one of the previously mentioned options mentioned above.

**Best Practices for Buying Local Food**

Starting out, it can be challenging to make the switch to fresh, foods and still keep your center running smoothly. Don’t worry! It is natural to find it difficult starting out, but will only get easier as your center tries new local food options over the course of the year. Below you will find a few best practices for making Farm to Child Care a success.

**Be a Good Business Partner**

- Once you have chosen a local food option, stick with it for a few months before switching if you need to. Especially for local food, as the seasons change food options and prices will change as well, giving you new products to look forward to each month.

- Be aware of what your local food partner can and cannot do. For instance, working with a farmer can be a great experience for children to learn from, but be aware of requesting a farmer’s time, because time spent away from the farm equals less produce grown!

**Communicate Well**

- Determining the method your center uses to communicate (calls, emails, text, etc.) with your source of local food clearly and right away, especially when it is a single farmer, will help avoid future headaches down the road when it comes to delivery or food pick-up.

- Marketing the fact that you support local farmers is a great way to engage parents and encourage word of mouth interest in your center. Also, the farmer or distributor who supports local can benefit if you share their name online or through other communication methods at your center.

**Use Your Cooking Resources Wisely**

- Cooks can be nervous to start using more local products if they come in an unprocessed form. Having children’s activities, including shucking corn or peeling sweet potatoes, can help reduce work time for the cook while teaching children about food and farming.

- Many cooks do indeed enjoy using more “whole foods” from local suppliers, finding pride in preparing these tasty new items. Giving cooks more control in the kitchen to choose local menu items or even purchase the items for the center has been demonstrated to improve cooks taking ownership of the meal time.

- Smaller, kid-sized fruits and vegetables can be hard for farmers to sell to their normal markets, but may fit perfectly to meet USDA standards for servings. For example, sweet potatoes that are smaller than what you would find in the supermarket could be the perfect size to serve to children, and help farmers sell an otherwise unmarketable product. Ask your produce vendor if purchasing small items could be a benefit to them or even lower prices.

**Celebrate Diversity**

- Some centers have enjoyed working with a farmer that is the same race as the majority of children in their center. Celebrating the diversity of people that work in agriculture with your distributor or farmer partner can be one way to encourage your center to think about the racial equity component of this program, and to start a conversation about race in the food system.
Local Food Self Assessment Tool

This worksheet is designed to help you analyze your current purchasing, and identify opportunities for substituting or adding in local products.
**Menu Analysis Worksheet:**
This worksheet is designed to help you analyze your current purchasing, and identify opportunities for substituting or adding in local products. Use the North Carolina Produce Availability Chart to help guide you through when each vegetable is in season as a fresh, local item.

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>Current Procurement Method</th>
<th>Purchase Frequency</th>
<th>Purchase Quantity</th>
<th>Times served per week/day</th>
<th>When in Season</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Example: green beans</td>
<td>Canned</td>
<td>Broadline distributor</td>
<td>Twice a month</td>
<td>One case</td>
<td>Twice a week</td>
<td>May- September</td>
</tr>
<tr>
<td>Fruits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Example: apples</td>
<td>Fresh</td>
<td>Produce Distributor</td>
<td>Once a month</td>
<td>One bushel</td>
<td>Once a day</td>
<td>August- February</td>
</tr>
</tbody>
</table>
Letter to Vendor Template

For Distributor/Caterer:
Dear [Producer/Vendor]:

[Center Name] is currently participating in a farm-to-childcare program, in collaboration with the Center for Environmental Farming Systems. As part of this program, we are interested in increasing our purchases of locally grown fresh fruits and vegetables for use in meals and snacks.

In order to purchase more local fresh fruits and vegetables, we would like some additional information from you. We would like to have a conversation with you that addresses the following questions:

- Do you currently purchase local produce?
- Where do you purchase local produce from, and what is your definition of “local”?
- What type of information can you provide to us about the local farmers you purchase from?
- What requirements do you have for the local farmers that you purchase from in terms of food safety and liability insurance?
- How do you label and/or track local produce?
- How can I find out about local produce availability, and how can I designate that I want local produce when ordering?

We look forward to working with you to increase our purchases of local produce.

Sincerely,

[Signature]

For Farmer:
Dear [Farmer]:

[Center Name] is currently participating in a farm-to-childcare program, in collaboration with the Center for Environmental Farming Systems. As part of this program, we are interested in increasing our purchases of locally grown fresh fruits and vegetables for use in meals and snacks. We are interested in purchasing produce from you, but first we would like to have a conversation with you that addresses the following questions:

- What type of produce do you grow, and when is each product typically available?
- What is your produce liability coverage?
- What are your payment terms and expectations? (ex. Cash on delivery, etc.)
- Please describe your food safety practices, and any relevant certifications that you have.
- Please explain your credit/return policy for products of unacceptable quality
- Are you available to visit our program and talk to children about farming, or host a farm visit?
- Are you willing to deliver to more than one location?

We look forward to working with you to increase our purchases of local produce.

Sincerely,

[Signature]

1 This document was adapted from the Michigan State University Center for Regional Food System’s “Farm to Early Childcare Programs: A Step by Step Guide”
Local Food Resources

Sources to Find Local
North Carolina Farm Fresh is a directory of pick-your-own farms, roadside stands and farmers’ markets throughout North Carolina. It is designed to help the consumer find the freshest locally grown fruits, vegetables, Christmas trees, ornamental plants, flowers and herbs.
ncfarmfresh.com

ASAP’s Wholesale Guide is a farm to business directory for the Western Carolinas. It provides a quick, searchable tool to discover farms, distributors and stores that carry a wide variety of local foods. Most entries also include detailed information about minimum ordering sizes, certifications and modes of contact.
appalachiangrown.org/wholesale/index

Localharvest.org is another website that helps consumers find a wide variety of locally grown fruits, vegetables and much more throughout the state. Just search your area for products of interest and it will help you find farms, CSAs and other options to purchase local food.
localharvest.org/raleigh-nc

Other Local Food Purchasing Guides
Farm to Early Childhood Program, a Step-by-step Guide
This guide has more tools and worksheets to help child care centers figure out the best ways to procure local food for their centers. While it is specific to Michigan, some of the activities may still be interesting to centers hoping to improve their local food purchasing.

Bringing Local Food to Local Institutions
This publication is a basic introduction to the opportunities in farm to institution. It provides interesting and insightful examples of child care centers in different states who have successfully implemented farm to child care.
farmtopreschool.org/documents/local-foods-to-local-institutions.pdf

General Resources

The NC Cooperative Extension Local Foods Portal
This webpage hosted by NC Cooperative Extension is a resource for all things local. If you’re looking for more information and education about local markets, cooking local foods or connecting with like-minded organizations, this site can help you get the information you need.
localfood.ces.ncsu.edu

Food Buying Guide/Calculator for Child Nutrition Programs
This interactive tool is a calculator that allows the user to input nearly any food item (from raw apples to fresh zucchini), the serving sizes and number of students, and outputs total quantities to purchase using terms distributors and farmers will understand. It is useful for new centers transitioning to fresh and local to understand how much food to purchase.
http://fbg.nfsmi.org/

National Farm to School and Preschool Websites
As the hub for farm to school information and community building, the National Farm to School Network website is full of interesting articles, free curricula and graphics centers can use to promote their farm to child care activities. Both the websites below are useful for finding resources from partners around the country.
farmschool.org/our-work/early-care-and-education and farmtopreschool.org

Local Foods in the CACFP
A short question and answer document concerning reimbursement for local foods and resources using the CACFP (Which can also be found in the ASAP guide given out during the Kickoff).
nutritionnc.com/snp/pdf/cacfp/memos/15-06-LocalFoodsintheCACFPwithQuestionsandAnswers.pdf
The Center for Environmental Farming Systems (CEFS) is a partnership of North Carolina State University, North Carolina Agricultural and Technical State University, and the North Carolina Department of Agriculture and Consumer Services. CEFS develops and promotes just and equitable food and farming systems that conserve natural resources, strengthen communities, improve health outcomes, and provide economic opportunities in North Carolina and beyond.

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College of Agriculture and Life Sciences

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