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Community relationships and sustainable university food procurement: The University of North Carolina at Chapel Hill and the Real Food Challenge

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Abstract

Many universities are working toward more sustainable campus dining food systems. Third-party standards that offer definitions of sustainable food and outline procurement goals are one tool universities can use to drive food system transformations. We seek to understand how campus community stakeholders influence campus sustainability commitments and what effects third-party certifications have on food purchasing and the campus dining community. We explore these questions by examining the circumstances surrounding, and outcomes of The University of North Carolina at Chapel Hill

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Katelyn Cline was a Real Food Challenge intern for Carolina Dining Services in Spring 2020 and a member of the research team from which this data originated.

Alexandria Huber-Disla was a member of student group Fair, Local, Organic (FLO) from 2013 to 2017, as well as a Real Food Challenge intern for Carolina Dining Services in spring 2014.

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(UNC)'s 2010 engagement with the Real Food Calculator/Real Food Challenge (RFC), a third-party standard for sustainable campus dining. Our analysis is based on reports from the past 10 years that document UNC's progress with RFC, along with participant observations, stakeholder interviews, and a student survey. Our findings reveal that new and developing relationships emerge as third-party goals become institutionalized: at UNC, a small, vocal group of student stakeholders pushing campus administrators for third-party certification evolved into a sustained collaboration between students and campus dining administrators centered on maintaining and advancing purchasing toward more sustainable options. Over time, the RFC commitment was formalized into the foodservice contract at UNC. These findings suggest that community relationships at universities are central in sustainable food transitions: the relationships shape, and are shaped by, efforts to move toward more sustainable campus procurement practices.

Keywords
Institutional Food Procurement, University, Certifications, Real Food, Farm to Institution, Sustainable Purchasing, Accountability, Foodservice Companies, Relationships

Introduction

Large universities feed thousands of students, faculty, staff, and visitors on campus daily and are part of a broader institutional food system that, globally, "accounts for 35% of the total foodservice market, second only to cafes and restaurants at 46%" (Martin & Andrée, 2012). To do so, universities frequently enter into time-bound contracts with large foodservice companies to coordinate food procurement and preparation, and to hire and manage dining staff, among other functions. Many universities are incorporating food into their broader university sustainability goals both because members of their campus communities demand it and in recognition that universities can play a role in driving change toward social and environmental sustainability (Grech et al., 2020). For universities feeding thousands of people per day, a move to spend 20% of a total food budget on "sustainable" food products—the metric outlined by the Real Food Challenge (RFC), one of few options for a third party standard for university food systems—stands to drive change throughout the agrifood systems in which universities engage.

The literature on university efforts to make campus food more sustainable focuses on the following topics: barriers to local food procurement (Dunning, 2016; Janssen, 2014; Martin et al., 2012); willingness to pay for sustainable food options (Porter et al., 2017); behavioral economics strategies to shape student behavior, including placement of items and signage (Chan & Ramsing, 2018; Kurz, 2018; Schindler-Ruwisch & Gordon, 2020); and university wide sustainability plans that include some discussion of dining (Grech et al., 2020; Swearingen White, 2014; University of Michigan President's Commission on Carbon Neutrality, 2021). We expand on these topics by focusing on how sustainable, third-party food commitments shape and are shaped by food system stakeholders in a large university setting (about 20,000 undergraduate students). The communities involved in a university food system are expansive. They include students, faculty, and staff who are daily consumers of food on campus; foodservice corporations that enter into supply contracts with the university; food providers and farmers; third-party certification organizations; campus dining services; university administrators; and others. We examine the experiences of community stakeholders at the University of North Carolina at Chapel Hill (UNC), which in 2016 committed to RFC (see Box 1) and agreed to purchase 20% "real food" by 2020. We use UNC's experience to explore the following questions:

1. What roles do stakeholders and stakeholder relationships play in driving campus sustainable food commitments?
2. What effects does reliance on third-party certifications have on campus food purchasing and community relationships?

First, we review literature on the roles of institutional procurement, community pressure, and third-party certifications in efforts to drive sustainable transformations in food systems, situating our focus on their community and stakeholder rela-

tions. Then we explore our methods, which include a review of over 10 years of reporting on dining at UNC, 13 in-depth semi-structured interviews, a survey, and participant observation. We then introduce our historical analysis of the case and the community relationships that led UNC to commit to RFC and examine how stakeholders and stakeholder relationships shaped and were shaped by the RFC commitment. In the conclusion, we reflect on the implications of this analysis for a broader understanding of how community relations intersect with universities' sustainability efforts.

Institutional Purchasing with a Focus on Universities

Institutional foodservice refers to establishments that offer prepared foods for consumers to eat onsite (away from home) and includes, but is not limited to, private and public hospitals, university dining halls, correctional facilities, nursing homes, government agencies, corporate cafeterias, and school meal programs at K-12 schools (Thottathil & Goger, 2018). Large institutions such as hospitals and universities commonly purchase food from industrial food systems typified by long supply chains and production systems that have negative environmental and social impacts, including increased emissions of greenhouse gases compared to ecologically based methods used on small-scale farms (Fuchs et al., 2009; Lin et al., 2011). Some institutions handle dining internally, but the focus in this article is on institutions (universities, specifically) that contract dining services to foodservice companies, such as Compass Group, Aramark, and Sodexo.

In recent years, institutions, activists, and nonprofit organizations have begun to conceptualize large institutions as potential drivers of change toward a more sustainable food system. A sustainable food system is broadly thought to be a "food system that delivers food and nutrition security for all in such a way that the economic, social, and environmental bases to generate food security and nutrition for future generations are not compromised" (Food and Agriculture Organization of the United Nations [FAO], 2018, p. 1). Given that large institutions have considerable food budgets in buyer-driven value chains, a theory of change has emerged that suggests that when institutions implement values-based procurement, they can generate more ethical and sustainable models for food purchasing (Goger, 2019; Klein, 2015; Louie, 2019). From this perspective, institutions can use their purchasing power to drive sustainable procurement through food value chains: they can require and incentivize their suppliers to meet sustainability goals, and, in turn, suppliers seek out producers who utilize sustainable and socially responsible production practices.

Literature on these transformations has examined the role of institutions in food systems change in a variety of ways. For instance, Jones, Pfeifer, and Castillo (2019) examined the roles of stakeholders like health professionals, food and agriculture businesses, activists, and policymakers in addressing food systems challenges. They found that alternative food initiatives led by nonprofits, public and private institutions, and consumers are changing how people eat and think about food in relation to social issues like climate change and social justice. Goger (2019) examined how institutional foodservice bodies can employ third-party certifications and standards to address food systems' threats to environmental degradation, dangers to livelihoods, and malnutrition. In this context, attention is growing to the role that universities, as institutions, are beginning to play in driving sustainability transformations (see, e.g., Middleton & Littler, 2019).

Foodservice Companies

Institutions can face many barriers when attempting to prioritize local food and support local agricultural sectors and producers. For instance, supply variability and price can make it impossible for large institutions to commit to local producers (Dunning, 2016; Janssen, 2014). Despite the difficulty of acquiring local food, sustainability stakeholders often pressure foodservice companies continuously to seek local food. The sustainability goals of universities and the profit-motivated goals of large foodservice companies might be in conflict with each other and thus prohibit the flexibility required for large institutions to work with smaller or local suppliers (Martin & Andrée, 2012).

Large institutions—in our case, universities—often enter into contracts with foodservice companies to facilitate the task of consistently feeding large numbers of students, staff, and faculty (see also Goger, 2019; Jones et al., 2019). The main three international foodservice companies (Compass Group, Aramark, and Sodexo) are characterized by centralized supply chains, centralized management structures, and a dependence on prepared food. The central characteristics of contemporary foodservice companies emerged in the 1970s alongside policies that created the internationalized agri-industrial food economy typified by the expansion and consolidation in agribusiness sectors, a reduced role of the state to monitor and implement environmental regulations, and a highly competitive food system centered on high production volumes at low costs (Clapp & Fuchs, 2009; Goodman & Watts, 1997; Howard, 2016; Martin & Andrée, 2012). The alternative to foodservice company contracts is for an institution to handle food procurement and preparation in-house, a topic we do not cover in this paper but that is important in the broader discussion of institutionalized food purchasing.

In recent years, however, many institutions and consumers have expanded from a singular focus on low cost to a vision of food systems that incorporate sustainability (for broader context on this transition, see Friedmann, 2005). As institutional buyers and customers have expressed interest in shifting toward procurement that prioritizes sustainability, foodservice companies have adapted to client social pressures (Thottathil & Goger, 2018), including in university settings (see e.g. Middleton & Littler, 2019). The typically progressive spaces of colleges and universities create an opportunity to utilize campus procurement to shift foodservice companies toward sustainable purchasing. If a university (the buyer) requires more sustainable purchasing, foodservice companies will compete for the contract, and over time, contracts may begin to routinize sustainability targets. An example of this occurred at the University of Toronto (U of T) in Canada. U of T developed a sustainability policy that states that its foodservice outlets must provide a minimum quantity of sustainably produced foods grown within 250 km (155 miles) of the university. When the university's contract was up for renewal, each of the three major foodservice companies bidding for the contract worked with a sustainable food provider to meet the criteria. This shows that the foodservice companies were willing to change their purchasing practices to secure competitive contracts with the university (Friedmann, 2007; Martin & Andrée, 2012).[1]

Community Stakeholders

We define community stakeholders as any member of the institution's community who has direct or secondary influence on purchasing decisions, including consumers, institution administration, influential community leaders, and customers (e.g., students and faculty), among others. On university campuses, community stakeholders—particularly students—have had an influence on institutional procurement practices. For instance, students in the late 1990s demanded that universities eliminate contracts for athletic apparel made in sweatshops in favor of developing contractual relations with companies that offer better conditions and livelihoods for workers (see, e.g., Cravey, 2004; Silvey, 2004).

In the case of universities' food purchasing, pressure from the community is often a key factor in driving large institutions toward what are often more costly sustainability goals. Pullman and Wikoff (2017) found in a number of Northwestern institutions that pressure from students and parents led to increased sustainable food purchases. Students, particularly those organized in groups or clubs, can educate their peers and generate interest in sustainable food to create momentum before approaching dining administrators (Burley et al., 2016). Researchers studying two universities in Canada found that "students are by far the largest

[1] In 2016, U of T ended its dining contract in order to retain even further control of its food purchases. This example still highlights that foodservice companies are responsive to contractual demands from large institutions while bidding. The extent to which food services companies maintain their contractual obligation to more sustainable purchasing is outside the scope of this paper, but should be considered in future work.

group within any campus community and often generate the greatest degree of change when they mobilize to make their demand and their voices heard" (Bohunicky et al., 2019, p. 62). Several studies have found that students are willing to pay more for food that is local, organic, non-GMO, or sustainably produced (Bruno & Campbell, 2016; Feenstra et al., 2011; Porter et al., 2017). Thus, the role of community stakeholders, particularly those purchasing meal plans, is essential to understanding institutional food purchasing decisions in the university setting. Our research complements these findings and broadens them to include stakeholders beyond students and parents. While consumers (usually students) and purchasers (usually foodservice companies or dining administrators) have different goals in the food system, in our analysis we consider them—as well as faculty and administrators—as stakeholders in the community because all play a role in shaping the food system.

Third-Party Certifications

In this context, third-party certifications have emerged as a key tool that "buyers," such as universities, can use to formalize a commitment toward more sustainable purchasing, monitor progress toward that commitment, publicize their progress to stakeholders, and learn from other universities through the networks that develop from these certification systems (see e.g., Auld et al., 2009). Broadly, third-party certification tools are premised on the notion that goals defined by neutral, expert third-party bodies, and independently audited, can be a tool for institutions to transform their own purchasing, and, in the process, place collective pressure on suppliers to shift to sustainable practices (Auld & Gulbrandsen, 2010).

Scholars have examined if and how third-party certifications enhance accountability for stakeholders aiming to make gains toward a particular goal (see, e.g., Cashore, 2002). They have also explored how relationships within a food system are transformed as stakeholders engage with third-party certification processes (see, e.g., Foley, 2012; Lyall & Havice, 2019). Researchers have found that universities, specifically, can struggle to meet a goal that is set and monitored only via internal mechanisms, especially when it is a nonbinding declaration (Bekessy et al., 2007). In some cases, universities have turned to third-party certifications and purchasing audits that develop defined metrics and include consistent monitoring to provide accountability and transparency for maintaining progress toward goals (Bartlett, 2011). Furthermore, community members can propose a commitment to a third-party certification through grassroots movements, which, according to Bartlett (2011), may be the best way to hold universities accountable, initiate institutional contracts, and achieve sustainability goals such as supporting local farmers. However, there is little attention to how stakeholder relationships unfold from, and through, commitments to third-party certification schemes aimed at enhancing campus dining sustainability.

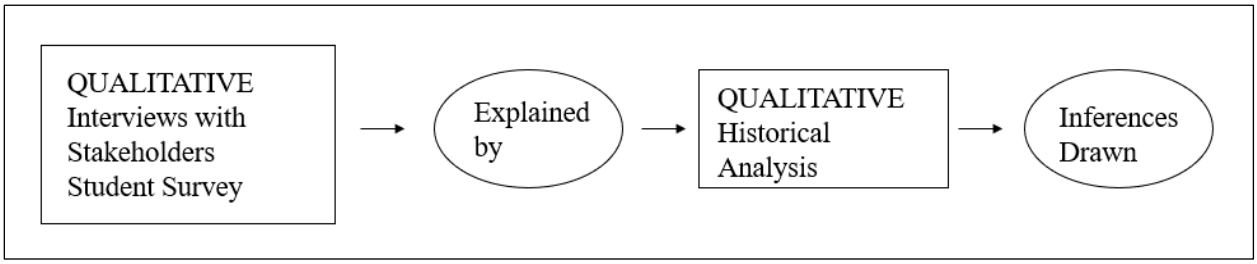
Our research brings together these three areas of analysis through a case study of UNC's efforts over a 10-year period to enhance sustainability in its campus dining system. We explore how UNC's Carolina Dining Services (CDS) has engaged with foodservice companies, community stakeholders, and a third-party certification body to establish and monitor sustainability goals. Our analysis provides an empirical example of how one university navigates the competing pressures and interests among stakeholders, enriching the literature on institutional commitments to sustainability in the university setting.

Methods

We employed a mixed-methods approach that included document review, semi-structured interviews, a survey, and participant observation. Our interview and survey methods were approved by the Institutional Review Board (IRB#19-2557) and were undertaken and completed by an undergraduate research team. The project culminated in the report entitled "Sustainability in the UNC Food System, 10 Years On" (Alanis et al., 2020). Three of the authors on this paper were involved in the research team that produced the Alanis et al. report, and this article builds from and expands on that research.

We utilized a convergent study design (Creswell, 2015) that combined mixed qualitative methods with historical analysis to contextualize the results (Figure 1).

Figure 1. The Mixed-Methods Approach Utilized in this Study



We conducted 13 in-depth, semi-structured interviews with stakeholders internal to the UNC food system as well as external to UNC but with direct experience in university efforts for sustainable food. We began with interviews of internal stakeholders active in CDS's work with RFC and used snowball sampling to identify actors involved in initial engagements between UNC and RFC in 2008 and to identify additional community stakeholders. We interviewed personnel at CDS, in senior administration at UNC, and staff working on sustainability initiatives at UNC (see Appendix A). Interviewees are cited with SX, X being a number that coincides with their information in Appendix A. To analyze the interviews, we created a codebook of keywords, themes, and actors that we highlighted in the interview transcripts using both keyword coding and emotion coding (Saladaña & Omasta, 2018). Keywords included "local," "cost/price," and "standards"; themes include "exasperation," "perceived success," and "student action"; and actors include "Aramark," "students," and "farmers/producers." These keywords were decided deductively and then we noted where certain words appeared close to each other and how keywords and actors appeared in relation to themes. We used this data to analyze the change in relationships over time with regard to sustainable food at UNC (Dunn, 2010).

Concurrently, we surveyed a subset of the UNC student community to gain an understanding of student values related to campus dining and current knowledge and attitudes toward RFC. These surveys were a convenience sample and were distributed through department listservs at UNC, primarily within the departments of geography and environmental studies, because our faculty advisors had direct access to them. The most represented majors on the survey were biology, business, environmental science, environmental studies, geography, global studies, and political science. We received 238 responses in total, and of those, 234 identified as UNC students and four identified as faculty. No responses were removed in order to maintain a wide perspective. With the rapid turnaround time for the survey, we could not achieve a representative sample of the entire UNC student body, and we did not collect typical demographic information; however, students sampled were equally distributed across the four-year average graduation timeline and 88.4% of the sample either currently had a meal plan or previously had a meal plan, making the sample a general indicator of student opinions. Therefore, while the sample is not fully representative, it does provide a snapshot of UNC students who currently or previously had a relationship with dining at UNC.

Following analysis of these two elements, we analyzed 10 years of reports covering CDS purchasing and progress toward reaching defined RFC sustainability goals; the reports enabled us to track changes to procurement practices as well as the elements of the RFC definition of sustainability.

UNC-CH Carolina Dining Services and RFC History

Under usual (nonpandemic) circumstances, UNC's CDS serves more than 16,000 meals per day during the fall and spring semesters. CDS entered a contract with the foodservice corporation Aramark in August 2001; it is renewed every 10 years, and UNC renewed in 2011 and 2021. The push for CDS to make explicit commitments regarding sustainability emerged in 2008, when undergraduate students involved with the student-led campus food group Fair, Local, Organic (FLO) turned their

attention to the sustainability of UNC's institutional food purchasing (Hannapel, 2016). FLO members were concerned particularly with the environmental sustainability of food in the dining hall and were interested in using UNC's institutional purchasing power to support the community of sustainable farmers in North Carolina (NC). NC is one of the top 10 agriculture-producing states in the United States (U.S. Department of Agriculture Economic Research Service [USDA ERS]), and in 2016, NC had 14, 217 certified organic farms (USDA National Agricultural Statistics Service, 2017). Sparko and Kneece (2019) found that organic farms in NC were growing in both quantity and revenue. Students saw sourcing from local NC farms as an attainable goal given the significant number of farms.

Members of FLO began interacting with founding members of RFC (see Box 1) in 2008. From this relationship, UNC FLO members partnered with CDS in fall 2010 as one of a few campuses to pilot the RFC calculator; this partnership was facilitated as an internship through (what is now) UNC's Environment, Ecology, and Energy (E3P) Department (Fleishman & Skelton, 2010). Beginning in 2011, RFC began to develop its Real Food Challenge campaign, which aimed to develop a formal standard that could be used by campuses across the U.S. Meanwhile, on UNC's campus, FLO began to develop a broader political consortium to encourage the university to commit and formally sign onto RFC, which would require the university to buy 20% "real food" (Box 1) by 2020 (Fleishman, 2012; Gontaruk, 2011). UNC administration did not commit to RFC in 2011 or 2012, stating that criteria for "real food" were not fully developed (Quine, 2012). However, UNC administration and CDS personnel began to put the audit practice in place, and these events sparked a dialog among students, CDS, Aramark representatives to UNC, and administration (Atkinson et al., 2012; Balderas et al., 2011; Hannapel, 2016).

Although UNC had not made a formal commitment to RFC, CDS continued to work with Aramark to shift procurement and worked with student interns to conduct regular audits to assess progress toward "real food" purchasing and develop an accountability mechanism. Despite not having signed the Real Food Challenge, each semester a team of student interns audited one month of all dining purchases in the two large dining halls (Lenoir and Chase) using the Real Food criteria (Aspell et al., 2015; Corrigan et al., 2013; Green et al., 2015; Huber et al., 2014). Through this process, a relationship among students, CDS, Aramark, and RFC was established and maintained. The audit process was (and continues to be) completed each semester by a team of three to four student interns in exchange for course credit. Students work closely with Aramark and CDS personnel to conduct the audit and share information on findings and potential new vendors. Students receive purchasing data from two main CDS dining halls from the previous semester for the month of February or September. For example, interns in the fall of 2018 received purchasing data for February 2018.

In 2016, students involved in FLO again asserted that the time was right to formally commit to RFC, and UNC's senior administration officially signed the Real Food Commitment (Bieltz, 2016; Wakeman, 2016). By signing on, UNC agreed that 20% of dining hall purchases would meet RFC's definition of "real food" per 1.1 standards by 2020. Figure 2 visually illustrates the relationships this article has discussed so far that play important roles in institutional purchasing.

UNC's audited "real food" percentage has fluctuated over time (Figure 3). The overall increase from September 2010 to February 2015 occurred because CDS shifted purchasing practices to meet RFC standards. CDS's "real food" percentage doubled between September 2011 and September 2012 as CDS shifted its purchasing to American Humane–certified liquid eggs, organic chicken, fair-trade coffee, and some local cheeses (Atkinson et al., 2012). The increase from September 2012 to September 2013 can be attributed to the decision to purchase dairy from Maola, which at the time, met RFC's "local" criteria (Corrigan et al., 2013). The increase from September 2013 to February 2015 was due to an increase in purchasing of organic poultry, fair tea and coffee, and ecologically sound and local fish (Aspell et al., 2015). These shifts are evidence of CDS's efforts to transform purchasing practices to increase its "real food" percentage.

Box 1. The Real Food Challenge and its 2.0 Standards

The Real Food Challenge (RFC) is a national organization of student activists and institutional food sustainability professionals seeking to shift 20% of institutional food purchasing toward what they define as "real food." They defined "real food" as local and community-based, fair, ecologically sound, and/or using humane practices in production (Abramovich et al., 2016). RFC converted these requirements into its Real Food Calculator, to which institutions can submit their food procurement data to determine what percentage of their total food purchases qualify as "real food." Today, 274 institutions utilize RFC in 45 of 50 U.S. states.

RFC was formed in 2006, and thus the original development of the standards was over 10 years ago. The scope of this article examines the effect of the existing standards at UNC.

RFC's standards differentiate "green light" and "yellow light" "real food." Green light "real food" qualifies as real and best represents the standards. Yellow light "real food" does not represent "the fullest expression" of the standard, but it still counts toward an institution's "real food" goal. The definitions of RFC's standards below describe the green light "real food" standards.

RFC's 2.0 definition of local food states that…

- The food producer must be privately or cooperatively owned.
- For produce, the farm must gross less than US$5 million/year; for baked goods, beverages, dairy, eggs, grocery, meat, poultry, and seafood, the company or cooperative must gross less than US$50 million/year.
- All production, processing, and distribution facilities must be within 250 miles of the institution.
- For multi-ingredient products, the company and at least 75% of the ingredients by volume must meet the criteria stated above.

To be considered fair, it must be certified by…

- Ecocert Fair Trade Certified
- Fairtrade America
- FairWild
- Hand in Hand
- Equitable Food Initiative.

To be considered ecologically sound, it must be certified by…

- Biodynamic Certified
- Food Alliance Certified
- Rainforest Alliance Certified
- Regenerative Organic Certified
- Salmon Safe
- USDA Organic

To be considered humane, it must be certified by…

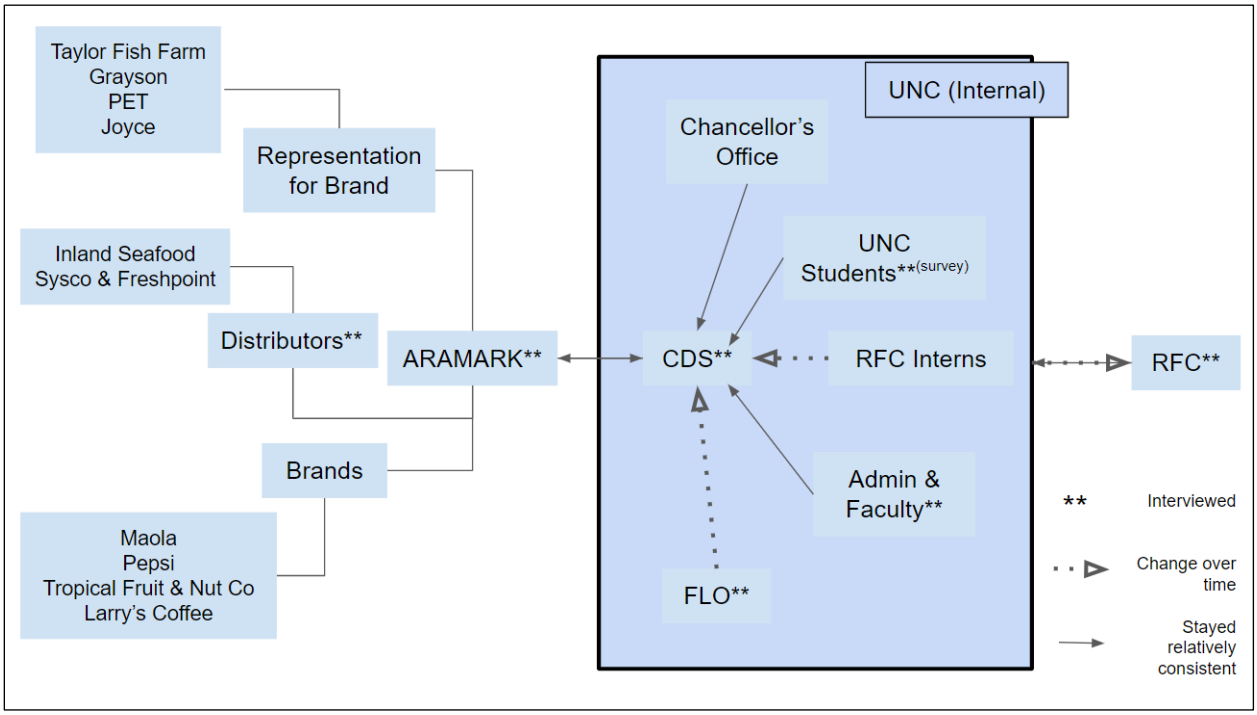
- Animal Welfare Approved (AWA)/Certified
- AWA Grassfed
- Biodynamic Certified
- Global Animal Partnership Steps 4-5+.

RFC has a list of disqualifiers that immediately prevent a product from being counted as "real food." The disqualifiers include "egregious human rights violations," which include forced and prison labor, labor violations, concentrated animal feeding operations (CAFOs), genetically modified organisms (GMOs), and ultraprocessed foods.

In October 2016, RFC modified its 1.1 Standards and created an updated version of "real food" criteria that it referred to as 2.0 Standards. The interns conducted the audit using an online tool designed by RFC that was automatically updated to 2.0 Standards, although UNC had only committed to the 1.1 Standards.

RFC did not share its plans to update its standard with CDS or UNC students in advance, and the new standard made several changes that affected CDS's "real food" percentage. This shift contributed to a decrease in CDS's "real food" percentage from September 2015 to February 2016. Instead of the new standard, Averbook et al. (2016) attribute the decrease to a difficulty in finding specific vendor data. The subsequent intern reports at-

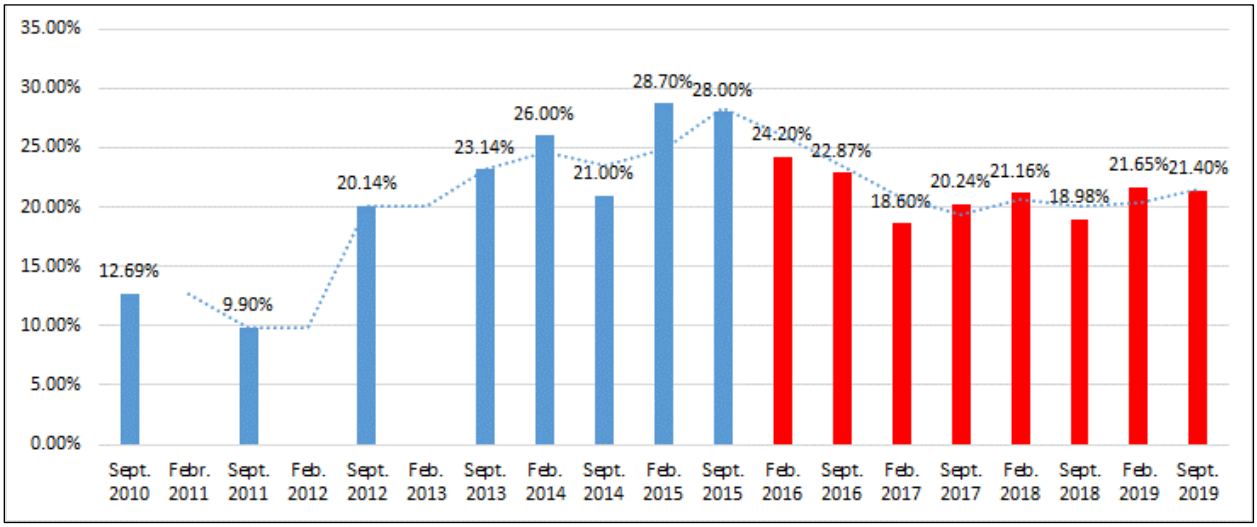
Figure 2. Visual Depiction of the Interrelationships Explored in this Study
At the left side are external food producers. UNC sources from the producers listed (among others) via Aramark, which holds the contract with UNC to run the dining halls. The middle of the graphic, in the blue square, shows groups internal to UNC. The dotted arrows indicate that we noted considerable change over time in the nature of those relationships. The far right side of the graphic shows RFC: the double-sided arrow represents that from RFC's perspective, the relationship with UNC has stayed consistent. From UNC's perspective, the relationship with RFC has evolved.



tribute the "real food" decline to details like changing vendors, misunderstandings on verifying with RFC whether brands counted as "real" or not, and the inability to find certain data that could verify "real food" status. During this time, interns and CDS also discussed the implications of one of the changes in the shift from 1.1 to 2.0 standards: the new standard specified an income cap on farms to qualify as local, meaning if they exceeded a certain income, they were not considered local. This disqualified many potential local vendors from "counting" toward CDS's commitment. In sum, several factors influenced the decline in 2016: the shift from 1.1 to 2.0 Standards disqualified certain vendors; CDS purchased a select quantity of "sustainable" foods that met certain standards (e.g., produced by a B Corp) but did not comply with RFC's standards, and potential local vendors were disqualified for having too much income; and, as with all semesters, the variable nature of vendors, food availability, and distribution options.

As CDS sought to meet its commitment to sustainable purchasing, RFC's shift from the 1.1 to 2.0 Standards created significant frustration at UNC. UNC signed onto the RFC 1.1 Standards and made procurement changes to meet its commitment, only to have RFC change the standards without prior notification or consultation. Food systems are constantly evolving spaces; standards also evolve as standard-setting bodies such as RFC aim to meet new goals, achieve ongoing progress, and/or respond to new challenges in food systems. In our interviews, CDS personnel acknowledged this dynamic—as well as their own desire to continuously improve and innovate sustainability options—but expressed frustration that their hard work was undermined without at least being notified, if not consulted, in creating the new standards (S1 & S2, 2019). For example, CDS administrators lamented that RFC is "constantly changing the criteria" (S2, 2019) for "real food," based on decisions that seemed to be made "in a vacuum with-

Figure 3. UNC's "Real Food" Percentage Since the Beginning of the Auditing Process
Prior to February 2014, the audit was only conducted for the month of September. Percentages correspond to the Real Food Challenge 1.1 Standards up until February 2016 (blue bars). February 2016 and forward correspond with RFC 2.0 Standards (red bars).



out a whole lot of institutional knowledge" (S2, 2019).

Early in the RFC process, tensions also emerged between FLO members and CDS when CDS cut contracts with a smaller-scale "real food A" producer abruptly in 2015. Students had negotiated a partnership between this producer and CDS starting in 2013 and were happy to offer the producer consistent purchasing (Hannapel, 2016). Students were frustrated when the contract was abruptly ended, because it denied the producer a consistent source of purchasing. CDS countered that given changes in prices and competitive pressures, they needed to be able to renegotiate, because sustainable purchasing progress had to function within their limited budget. To students, this highlighted an important limitation of the current third-party standards: CDS found another "real food B" vendor to replace the former vendor, keeping their overall "real food" percentage the same, though the original vendor was dismissed with an abrupt end to their contract.

In more recent semesters (fall 2018–spring 2019), CDS, Aramark, RFC interns, and student groups on campus began to revisit and engage in discussion about campus food sustainability goals. Stakeholder groups individually and collectively revisited the local food emphasis that drove the initial RFC commitment and identified limitations and benefits that the RFC third-party standard presents to a sustainable food vision at UNC. These issues emerged from several frustrations. For example, in the spring of 2019, UNC sought to purchase bread and other baked goods from a small, family-owned bakery outside Raleigh, NC (Cline et al., 2019). The flour used in the baked goods came from King Arthur Flour, a certified B Corp. B Corp is a third-party certification for companies that evaluates their "entire social and environmental performance" (B Lab, n.d.). Despite the bakery itself being local and the largest ingredient by volume, flour, coming from a B Corp certified producer, this bakery did not meet RFC's "real food" criteria because the flour was not grown locally and the B Corp was not an RFC-recognized certification. Since the product line was both offered at a higher price point than conventional baked goods and would not contribute to the RFC commitment, it was deemed too expensive.

CDS and Aramark representatives began to voice frustration and ask RFC for clearer communication and advanced notice regarding potential changes to the standard. In annual check-in calls with RFC, RFC representatives urged student interns and faculty coordinators to begin working toward higher "real food" percentages, but were re-

sistant to discussing the constraints—such as budgetary limits, tradeoffs between "real food" purchases and maintaining worker wages, seasonal variation of local "real food" products in NC, the ways that changes to standards could disqualify vendors that UNC stakeholders were interested in supporting, and the reality that students also desired many non–"real food" products (Participant observation, 2019). Aramark and CDS personnel began to openly question if the RFC tool was the best approach for meeting campus food sustainability goals; some went as far to suggest that perhaps it was time to abandon the RFC commitment in favor of developing and monitoring a standard internally (observation, intern report meeting, spring 2019).

To address these difficulties, students and faculty who had been involved in the RFC audit process formed a research team consisting of undergraduate and graduate students and two faculty members with a goal of taking stock of UNC's food system sustainability approach to inform its future direction. These efforts resulted in a report entitled "Sustainability in the UNC Food System, 10 Years On" (Alanis et al., 2020); the methods and results of that report contribute to this article's conclusions.

Stakeholder Influences on Sustainability Commitments

In this section, we draw on interview and survey data to discuss the perspectives of an RFC staff member, Aramark, CDS, and UNC staff and faculty, and student opinion, to better understand what roles stakeholders and stakeholder relationships play in driving campus sustainable-food commitments and how a reliance on third-party certifications influences university food purchasing. Our analysis of perspectives and transformations reveals that new relationships emerged as a result of UNC's commitment to a third-party certification.

Heterogeneous Expectations and Stakeholder Interests

Real Food Challenge

An interview with a staff member at RFC illustrated that RFC's central concern is the ever-changing nature of the food system. Its aim is to keep the standards focused on the core principles of local and community-based, ecologically sound, fair, and humane agricultural production. RFC envisions continuing to develop its standard through an "iterative process" that focuses on looking "at the food system in a more holistic way" (Personal communication, 2020). RFC recognizes that the food landscape is constantly shifting and third-party standards must change in response.

RFC indicated that in its day-to-day operations, it tends to focus more energy on universities that are just starting out, because they may need more guidance with learning the tools and standards. The representative described UNC as "one of the most active signatory schools" in terms of being engaged and knowledgeable about the audit process. The interviewee also stated that "we see ourselves as the organization that sets the standards, that maintains those standards, so that universities and other institutions can just focus on the food procurement side, they don't have to do the back-end research" to develop the standard. This leaves institutions committing to the standard to complete the research aimed at identifying and verifying vendors that meet RFC standards (2020).

Interviews with community members who pushed for UNC to adopt the RFC standard revealed that in the early 2010s, there was lively collaboration and regular communication about the standards and their application to UNC between the UNC community and RFC. At present, stakeholders outside RFC perceive that communications have become less frequent and more automated. UNC stakeholders now receive form-letter emails and instructions, and they experience the audit as task- and compliance-oriented. However, the RFC interviewee also noted that "collaboration is definitely the type of relationship we want to hold" (2020). The RFC interviewee emphasized that one of the goals of the standard is to have consistent requirements across the board, but that RFC also wants to "encourage schools to think about their own values around food" (2020). RFC indicated an openness to conversations regarding exceptions for certain products or working together to think about metrics for products that may be considered

sustainable but are not within the specifications of the standard.

UNC Faculty and Dining Administration

In committing to RFC's standards, CDS has become accountable to a specific set of procurement commitments for 10 years. In this period, stakeholders including UNC faculty, administrators, and students have formed opinions about what UNC's food sustainability priorities should be and how CDS might achieve them in the future. While each interviewee had a unique opinion, many were united around the goal of purchasing more local food.

A current administrator involved in the origins of the RFC commitment expressed frustration with the lack of transparency and flexibility from RFC. When considering how best to move toward sustainable purchasing, this administrator focused on how purchasing could be "generative" of sustainability goals. To them, a generative process would mean that purchasing pushes individual vendors toward sustainable practices and, in doing so, increases pressure on the whole food system to become more sustainable (S4, 2019).

Another faculty member argued for more community involvement in decision-making about campus sustainability decisions, and emphasized that campus sustainability programs should also include educational elements such as teaching campus community members about waste and nutrition. This person believed that encouraging people to eat a healthier, Mediterranean-style diet would drive purchasing toward more fruits and vegetables and away from meat and processed foods (S14, 2020).

An administrator involved with sustainability felt that the best way to achieve sustainability would be to take all the different stakeholder opinions and from these, designate "sustainability dreams" that would be the basis for creating a concrete set of goals. This stakeholder also stated that carbon footprint will need to be prioritized in any discussion of sustainability because climate change is a major topic of conversation in the present day (S8, 2019).

Many UNC faculty and CDS representatives were of the opinion that local purchasing should be CDS's top priority, with one stating that "North Carolina food should come first" (S2, 2019). Our analysis of interviews showed frequent occurrence of the keywords "local" and "North Carolina," as well as mentions of various NC farmers, producers, and suppliers. Many stakeholders emphasized that the 2.0 Standards placed too many limitations on local purchasing. For instance, one insisted that "restrictions on the size of a farm are just ridiculous" (S2, 2019). But definitions of "local" were controversial among the group members. For instance, one administrator believed that "the university should get credit for buying product from Smithfield" due to the fact that the large meat-processing corporation "employs a lot of North Carolinians and pays a lot of North Carolina taxes" (S2, 2019). This opinion is at direct odds with RFC, which expressly restricts food produced by CAFOs (concentrated animal feeding operations) like Smithfield from achieving "real food" status. Many other stakeholders envisioned using university purchasing to support smaller local producers, rather than large firms like Smithfield. The stakeholders' idea that UNC should use its purchasing power to generate economic activity in the state was shared across stakeholder groups, including UNC administration and faculty and representatives from other similar universities, though the definition of "local" remained contested.

Students' Opinions

A recent study at two dining halls at University of Wisconsin-Madison found that 50% of student survey respondents ranked sustainability initiatives as important in dining purchases (Silva et al., 2020). The UNC student survey aimed to understand the knowledge and opinions regarding sustainable dining of the larger student body. The survey (N=238) asked respondents, 234 of 238 of whom identified as UNC students, to rate the importance of the following factors in campus dining sustainability priorities: Nutrition, Workers' Rights (farmworkers, foodservice workers, etc.), Affordability, Food Waste, Ecological Sustainability, Quality of Options, Local Food, Student Involvement, and Animal Welfare. Respondents ranked workers' rights, ecological sustainability, and nutrition as their top priorities for campus dining, and they listed local

food and student involvement as moderately important (Figure 4). A large majority of surveyed students believed that CDS has a responsibility to provide sustainable food (95%) and that CDS makes sustainability a priority (58%). However, only 16% of students were aware of the CDS commitment to RFC, with another 13% of students stating they had heard of the commitment but did not know what it was. This shows a disconnect between CDS's sustainability efforts and students' knowledge of them.

"Local" food was a key focus of student activism leading to the RFC commitment and has remained a priority for stakeholders in administrative roles; however, the student survey revealed that the majority of respondents believe that "local food" is only moderately important, especially in comparison to other factors such as workers' rights and ecological sustainability. While a small, focused group of student activists (FLO) oriented CDS toward RFC and a focus on local procurement, at present, the larger student body places more value on other components of sustainable dining. These priorities include nutrition and food waste, neither of which are core components of RFC. The implications of this may be that the university is more responsive to small, focused, committed groups of students and may have difficulty gathering and acting on information from the larger student body.

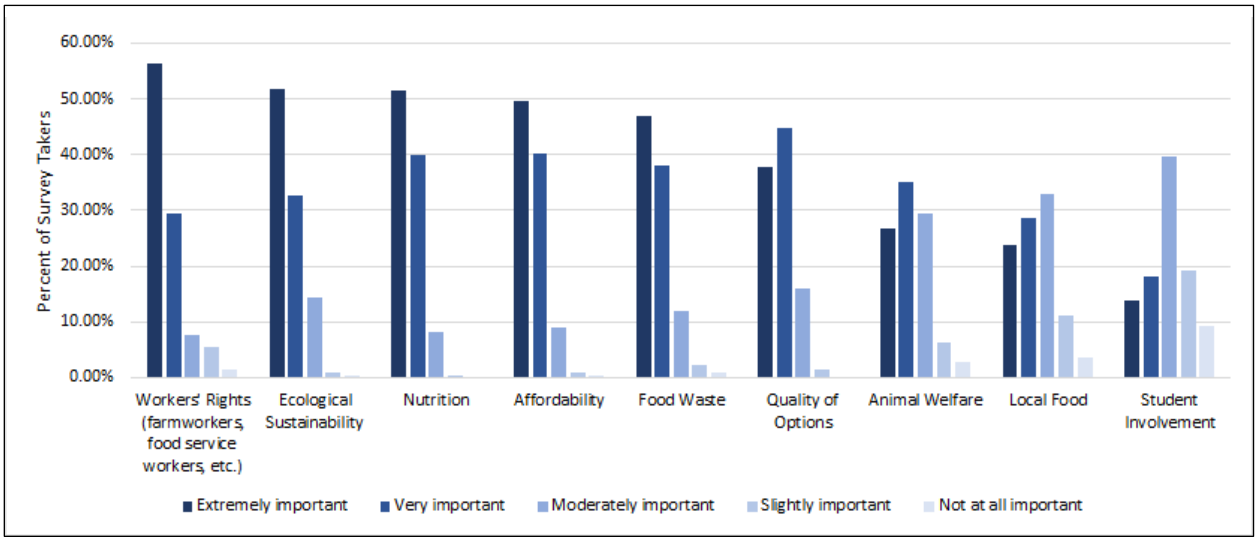
Effects of a Third-Party Certification

Cascade of New Relationships

Analysis of RFC audits and audit reports, as well as interviews and participant observation over 10 years, reveals that new relationships emerged from committing to RFC. The collaboration that formed among CDS, Aramark, and sustainability-focused students is the most significant element of the collaboration because of the positive, continuous communication and strong working relationship that grew over time. This resulted from two factors. The first is the trust and collaboration that built over 10 years as CDS, Aramark, faculty, and undergraduate students worked together to complete the auditing task, troubleshoot data challenges that emerged, and identify potential suppliers that could generate more RFC-eligible purchasing. The second emerged as these stakeholders navigated and addressed the tensions and frustrations associated with the limitations of the RFC standard, the unannounced changes to the standard, and the limited success in nurturing constructive communication between UNC stakeholders and RFC personnel.

Figure 4. Ranking of Students' Values

Students were asked to rank the nine categories by level of importance. Most often, students ranked worker's rights, ecological sustainability, nutrition, affordability, and food waste as extremely important.



As student interns and CDS encountered these challenges, they found themselves united in the goal of collectively advancing food sustainability on campus. One intern described their experience working with CDS as "pleasantly surprising. I expected to come in and have to fight CDS to purchase sustainably, but I found that they were already very focused in their pursuit of sustainable procurement" (Student intern, May 2019). This feeling of surprise shows the evolution of the relationship between students and CDS and Aramark. When FLO was urging CDS and UNC to sign the commitment to RFC, FLO members described a feeling of fighting against CDS and university administration (Hannapel, 2016). By the late 2010s, sustainability-focused students, CDS, and Aramark personnel were aligned, and at times aligned around their frustration toward RFC. This shift transpired as UNC deepened its commitment to RFC.

In spring 2019, CDS stated its interest in finding an approach to sustainable procurement that it could use instead of RFC, and expressed interest in potentially developing an internal standard that could reflect UNC's goals. To help inform this decision, the undergraduate research team (see above) identified and explored available approaches to standards that could serve as alternatives to RFC, such as the Good Food Purchasing program, Aramark's Green Thread, AASHE's STARS, the Cool Food Pledge, and Menus of Change. After examining the primary goals and reporting methods of the alternative standards, RFC emerged as the most robust option. The alternative standards offered less specific requirements and spanned fewer areas of interest (Alanis et al., 2020). Furthermore, the students explored other university systems that had developed internal standards and reported to CDS and Aramark that while this approach could create a standard customized to a particular institution, it is a resource-intensive process, lacks an external audit process, and raises questions about how to ensure the legitimacy of the standard in the long term (S7, 2020). The students presented these conclusions to CDS and Aramark and despite not finding an alternative as requested, the students, CDS, and Aramark learned that RFC is a thorough, well-developed program that creates a common goal for sustainable food stakeholders at UNC. To date, CDS continues to maintain its RFC commitment.

Formalizing RFC in Aramark Contract

A theory of change associated with third-party certification is that large institutions can shift institutional practices and drive change throughout supply chains by committing to sustainable procurement. During the first 10 years of the RFC commitment, CDS and Aramark worked collaboratively to meet the RFC commitment. Aramark sought out farmers, suppliers, and distributors that complied with RFC standards so UNC could increase its "real food" percentage. However, the commitment was made by UNC, not Aramark, and in 2021 CDS re-opened its bidding process for a foodservice supplier. UNC eventually renewed its contract with Aramark, and the new contract included an explicit commitment to RFC (see Appendix B for Section 5.13: The Sustainability Plan). This move signals a deepening of the relationship between CDS, Aramark, and RFC, and a formalization of commitments to sustainable purchasing upstream in the university food supply chain. While the commitment was initially made at the "end" of the foodservice chain (UNC/CDS), the formalization moves it up to the institutional node of the chain.

Conclusion

This paper draws on UNC's experience with RFC to explore the roles that stakeholders and stakeholder relationships play in driving campus sustainable-food commitments and the effects that reliance on third-party certifications have on campus food purchasing and community relationships. Our findings suggest that stakeholder relationships drive and are transformed by efforts to shift toward more sustainable food purchasing. Scholarship in the field highlights that understanding institutional food-purchasing decisions in the university setting requires analytical attention to the role community stakeholders play in setting and achieving sustainability goals. This article sought to explore the relationships among the various stakeholder groups and how they developed over time. At UNC, a small, vocal group of students (FLO) was able to generate political will to improve sustaina-

ble dining, in part by identifying a third-party standard that could provide a transparent framework for defining and measuring progress. Our survey found that the sustainability goals of the general student body focus more on nutrition and food waste as opposed to FLO's goals of local food. Other stakeholders, like faculty, have their own ideas about how UNC should proceed with sustainable procurement but can disagree over concepts like the definition of "local." Findings suggest that smaller, focused groups of stakeholders can influence sustainable food commitments, but that the broader community might have a wide range of sustainability concerns that change over time. Finding standards that can capture these distinct interests is challenging.

By committing to a third-party certification, CDS required Aramark to change its own purchasing priorities. This involved working closely not only with student interest groups but also with upstream food-supply companies to identify and source products that complied with both the RFC standard and CDS's budget. It also involved a firm and public commitment to a clear (if changing) definition of "real food" and transparent auditing procedures that involved students and created a stakeholder community committed to working together to meet the standard. Where initially students worked closely with RFC to drive change at the university level, over time these alliances shifted. Once UNC committed to RFC, CDS and Aramark worked together to add the sustainability commitment to their procurement priorities. Even before the formalization of RFC in the Aramark-UNC dining contract, CDS and Aramark personnel collaborated and worked carefully and creatively to meet the commitment. This finding is consistent with other studies that have found that universities can push foodservice companies toward sustainable purchasing (Goger, 2019; Klein, 2015; Louie, 2019), and the case at UNC provides more evidence to support that theory.

One of the key community effects of being committed to RFC is the development of the working relationship among students, CDS, and Aramark personnel. The relationship grew to be constructive, collaborative, and focused on conducting the audit and discussing the strengths and limitations of the RFC standards. Students gained an appreciation for the complexity of sustainability transitions. CDS and Aramark constructively engaged and appreciated student interns' work as researchers and resources for finding new suppliers. Students, CDS, and Aramark personnel became increasingly allied over frustrations with RFC for changing the standards and over the lack of engagement and network-building across universities. At the request of CDS, students evaluated alternative third-party standards and found that RFC emerged as the most comprehensive and robust standard. UNC remains committed to RFC, which is now formalized in the contract with Aramark. The future of the sustainable food movement at UNC may well continue to evolve through the strong communicative relationship among sustainability-focused students, faculty, CDS, and Aramark personnel who work together around the RFC audit.

This analysis offers a detailed case study of a large university's work to shift to sustainable food procurement. It demonstrates the importance of stakeholder relationships in the pursuit of sustainable food purchasing and suggests that community relationships are a key site of investigation for understanding institutional sustainability commitments. Future research in this area might include analysis at different types of institutions, such as hospitals and prisons, to examine the particularities of the stakeholders and community relationships that drive and are transformed by the sustainable food movements in those spaces.

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Appendix A.

Table A1. Interviews by Interviewee Type

Informant	Internal to UNC-CH or External	Admin/Faculty, Student Organization, Community Organization, Similar Institution, Foodservice Company
S1	Internal	Foodservice Company
S2	Internal	Foodservice Company
S3	Internal	Student Organization
S4	Internal	Admin/Faculty
S5	External	Similar Institution
S6	External	Foodservice Company
S7	External	Similar Institution
S8	Internal	Admin/Faculty
S9	External	Similar Institution
S11	External	Similar Institution
S12	External	Community Organization
S13	External	Similar Institution
S14	Internal	Admin/Faculty

Appendix B. Section 5.13 of Contract between UNC and Aramark

Section 5.13. Sustainability Plan: Supplier will establish and maintain a comprehensive and proactive Sustainability Plan for the Program that supports University and University's sustainability objectives. The Sustainability Plan will be developed collaboratively with, and subject to the approval of the Contract Administrator.

A. The Sustainability Plan should consider:

1. Minimization of environmental impact through the effective use of ecologically sustainable growing techniques, integration of seasonally available local foods, and energy efficient transportation from farm to table. Supplier and the Contract Administrator will agree to annual target objectives for the following, with year over year improvement expected:
    a. Use of foods that qualify as Real Food as outlined by the Real Food Commitment.
    b. Supplier will work to identify and bring into its supply chain historically underutilized business, including Black, Indigenous, and People of Color "BIPOC" farmers in North Carolina, through the following initiatives:
        i. Provide a one-time [US]$10,000 grant to third-party non-profit whose work focuses on bringing BIPOC farmers into the larger food supply chains.
        ii. Host roundtable co-facilitated by Center for Environmental Farming Systems (CEFS) focusing on historically underutilized business farmers, including BIPOC farmers, to identify opportunities to collaborate with them.
        iii. Develop training course supported by the North Carolina Extensions' Committee on Racial Equity in the Food System and Soul Fire Farms, two organizations who are leaders in this area.