

Carbon Neutrality and Climate Friendly Menus at the University of North Carolina-  
Chapel Hill

University of North Carolina-Chapel Hill

Essay:

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Please see attachments for essay sources.

1. Introduction

Carolina Dining Services (CDS) realizes the important role we play in creating a sustainable food system on campus, starting with our menus. Food systems account for about a third of global greenhouse gas (GHG) emissions.<sup>1</sup> They make a significant climate impact at each step of the supply chain, starting from how the food is produced to its transportation, consumption, and eventual disposal. According to the United Nations, impacts of climate change include increased temperatures, extreme weather events, biodiversity loss, environmental health hazards, food scarcity, and poverty.<sup>2</sup> While we're already starting to witness the effects of climate change in the US with recent disasters like Hurricane Helene and the LA wildfires, we have a responsibility to do our part in reducing our impact to prevent future disasters.

As a University food service provider, we lie at the intersection of the food industry, and our decisions can have significant climate impacts regarding both the food we serve and how we dispose of it. CDS's Sustainability Team implements multiple carbon reduction strategies to reduce internal GHG emissions, including offering climate-friendly menus and student

engagement opportunities. These initiatives directly contribute to climate commitments set by Aramark and the University of North Carolina-Chapel Hill on the path to net zero carbon emissions.

This mission also aligns with recent student acceptance of flexitarian and plant-forward eating trends.<sup>3,4</sup> Meat and dairy production are large contributors to global GHG emissions, amounting to 14.5% of total GHG emissions.<sup>5</sup> The World Resources Institute suggests diet shifting as a solution to climate stress caused by meat and dairy consumption.<sup>6</sup> One 2018 study found that Flexitarian Flip™ meals (i.e., low meat, mixed vegetable, and legume options) performed similarly in terms of appeal to control meat-centric meals in a university dining environment.<sup>3</sup> Additionally, evidence suggests that environmental education may improve university students' willingness to participate in plant-based eating.<sup>4</sup>

## 2. Climate Friendly Menus

### 2A. Climate Commitments

CDS and Aramark strive to reduce our environmental footprint through a number of sustainability commitments owned by the Be Well. Do Well. environmental, social, & governance platform formed in 2019. The two main goals of Be Well. Do Well. are enabling equity and well-being for millions while promoting planetary health on the path to net zero. The University of North Carolina-Chapel Hill is also striving towards net zero GHG emissions by 2040 according to their 2021 Climate Action Plan.

### 2B. Coolfood Pledge

In 2022, Aramark became the first contract foodservice company in the U.S. to sign the World Resources Institute's (WRI) Cool Food Pledge to reduce food-related GHG emissions in the U.S. 25 percent by 2030. The WRI analyzed thousands of Aramark recipes to identify low carbon offerings, which are advertised as certified Coolfood Meals. Coolfood Meals have an associated carbon footprint that is at least 38% lower than the average diet in 2015. This is in line with climate scientists' recommendations for the amount we need to shift our diets to prevent the worst impacts of climate change by 2050. There are currently over 3,000 certified Coolfood Meals available through Aramark.

CDS introduced Coolfood Meals in Spring 2024, featuring 67 recipes between the two dining halls. By Fall 2024, that number increased to 83, a 23.9% growth. We are continuing to add new Coolfood recipes each semester. The CDS Sustainability Manager is also the project lead for Aramark's new Collegiate Hospitality Sustainability Council's Food Emissions Workstream, which was formed to find solutions to meet Aramark's climate commitments. This includes spreading awareness and utilization of the Coolfood program across all Collegiate Hospitality accounts, among other strategies like introducing blended burgers into residential dining halls.

### 2C. Menu Analysis Project

In addition to the Coolfood Pledge, Aramark has also committed that by 2025, 44% of its residential dining menu offerings at more than 250 colleges and universities will be plant-based, in partnership with the Humane Society of the United States. To ensure our account was meeting this goal, our Sustainability Interns developed a new spreadsheet tool to analyze our residential menus for the percentage of vegan and vegetarian menu items and entrees in Spring 2024.

The tool utilized data from our recipe database in PRIMA, Aramark's tool for planning menus. The recipe database for the Fall 2023 and Spring 2024 menus included 958 recipes. For each recipe, the intern would determine the key protein in the meal or list if it was vegan or vegetarian. They would then utilize the recipe and serving size to calculate the percent weight of the dish that contained meat. This is to identify recipes that are plant-forward, even if they contain small percentages of meat. Other data was collected such as the meal type (entree or side) and calories. The analysis found that between the dining halls in the 2023-2024 academic year, 68.5% of our menu items were vegetarian and 46.7% of items were vegan, excluding beverages and condiments. This exceeds the Aramark goal of 44% plant-based (vegan) menu items by 2025. We can utilize this spreadsheet to identify stations with low percentages of plant-based entrees and find additional opportunities to incorporate Coolfood into our menus. Our interns also put together detailed instructions for the document to ensure easy turnover and future analyses.

### 2D. Food Recovery Programs

While the foods we choose to eat have varying climate costs to produce, their disposal also continues to emit greenhouse gases. Food waste is responsible for at least 6% of global GHG emissions.<sup>7</sup> We have a comprehensive Food Recovery Program modeled after the Environmental Protection Agency's Wasted Food Scale, including surplus food donations multiple times a week and a robust composting program that diverts over 100,000 pounds of food from landfills each month. The UNC Office of Waste Reduction and Recycling (OWRR) compiles annual reports on university-wide waste recovery efforts. In their 2017 report (most recent data available), they did an audit of the dining halls and calculated that Chase and Top of Lenoir had recovery rates of 72.9% and 67%, respectively (compared to the university's overall recovery rate of 44%). In 2022, Culinary Director Chef Michael Gueiss won the Menu Masters Award for his Low Waste Bowl, a recipe featuring traditionally wasted ingredients like pickled watermelon rind and carrot top chimichurri to prevent food waste. We feature this dish in the dining hall occasionally to bring awareness to food upcycling. We also have a page on our website dedicated to sharing ideas for students to upcycle foods at home to prevent waste.

## 2E. Educational Programming

In addition to promoting Coolfood and our daily vegan Plant Forward station, we conduct other educational programming to introduce students to the impacts of food systems regarding climate change. Two events are detailed in the following section, and we do extensive programming around preventing food waste and contamination in our composting and recycling streams. Our sustainability website has over 20 pages with educational content for students to learn more about our program and how they can get involved.

### 3. Campus Engagement & Student Involvement

CDS works to involve students in all of our operations, with a dedicated Student Dining Board who meets biweekly to provide our team feedback on menus, events, and more. Our Sustainability Manager leads a team of 3-5 Sustainability Interns who provide support on various initiatives and events, including the menu analysis project and the events detailed below.

#### 3A. Climate Action Day

Carolina Dining Services participates in UNC's annual Climate Action Day, hosted by the UNC Climate Crisis Committee to raise awareness of climate change and educate students on current efforts in our community. Our Sustainability Team tables with climate friendly eating trivia and sustainable prizes for students like reusable water bottles, utensil kits, and tote bags. Hundreds of students attended the event, and we got to raise awareness of CDS's climate efforts. Our Sustainability Interns created the trivia powerpoint with questions around statistics on GHG emissions and the carbon impact of different foods.

#### 3B. Coolfood Tasting Event

On November 13th, 2024, we hosted a Coolfood Meal Tasting in the Lenoir Lobby to sample the Jerk Chicken, Grits, and Spicy Greens bowl. We sampled about 60 servings and spoke to several more students about the Coolfood program. We now host these events monthly in 2025 alternating between the two dining halls to increase awareness of the program.

### 4. Marketing & Applicability

We market our climate commitments through several avenues. We have a Climate Friendly Eating website page with educational information relating to food systems' impacts on climate change, as well as ways that students can adopt climate friendly eating practices in their own lives. Some of these strategies include swapping dairy milk for oat milk or other dairy alternatives, prioritizing local and seasonal ingredients, and reducing personal food waste. We also have a website page dedicated to the Coolfood program to educate students on what Coolfood Meals are and how they can find them on our menus. We have rotating sustainability ads on our digital menu boards, which include information about Coolfood Meals and climate friendly eating. Social media is also utilized to promote events, with our Instagram following reaching over 9,000 accounts.

Our now monthly Coolfood tasting events help bring awareness to the program by defining the logo and offering some context to students on the importance of climate friendly eating. Because we host these events in the dining hall lobbies, it also provides an opportunity to engage with students who may not have a meal plan or who don't normally eat in the dining

halls. These events can be easily recreated, and we put together an Event Guide featured in the attachments that has been shared with our region to encourage other accounts to promote the Coolfood Program.

The annual Climate Impact Day that we participate in can also be easily recreated by networking with campus sustainability groups to host a collaborative event focused on highlighting each group’s work to reduce carbon impacts on campus.

5. Risks/Return on Investment

There are minimal risks involved with the implementation of climate friendly menus and educational programming. All Coolfood Meals, as well as our other menu items, have associated allergen labels on our menus that are reviewed by CDS’s Registered Dietitian. We also post allergen signage at our Coolfood Tasting events to ensure students are aware of the associated risks of consuming the dishes.

Our Sustainability Interns also consulted with our Registered Dietitian on the creation of the Menu Analysis Spreadsheet, and they met regularly to review any missing information and ensure the menu spreadsheets were accurate.

While we don’t have specific information on the return on investment for serving Coolfood Meals, the WRI has found that Coolfood Meals do have cheaper costs compared to the average regional dish that includes animal proteins.

6. Program Impact

Our efforts to educate students on climate-friendly eating have been incredibly impactful. Each semester, CDS conducts a Sustainable Dining Survey to gauge student awareness of our programs. We saw an increase of awareness of the Coolfood program between the Spring 2024 and Fall 2024 semesters. This was impressive to see considering these surveys were taken before and after a university summer break, indicating that students with firm knowledge of the Coolfood Meal program increased despite time away from school and considerable turnover in the meal plan holder population with new incoming students.

Our events focused on promoting climate-friendly eating have reached hundreds of students, and our social media content reaches thousands. As we continue to educate our campus on the impact of their food choices, we hope to see trends towards plant-forward eating and increased participation and awareness of the Coolfood program.

Log in to [nacufs.awardsplatform.com](https://nacufs.awardsplatform.com) to see complete entry attachments.

PDF

CFM Poster(1)... 566 KiB



CFM-header-162... 17 KiB

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Coolfood Meal E... 15 KiB

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Menu Analysis R... 306 KiB

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NACUFS Climate... 826 KiB

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NACUFS Essay S... 8 KiB

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NACUFS Survey... 117 KiB

NACUFS CADsto... 4.6 MiB

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NACUFSCFMtast... 233 KiB


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Menu Meat Anal... 258 KiB



Attachment name Chase Dining Hall Menu
<a href="https://dining.unc.edu/m...">https://dining.unc.edu/m...</a>



Attachment name CDS Climate Friendly Eati...
<a href="https://dining.unc.edu/cli...">https://dining.unc.edu/cli...</a>


Attachment name CDS Coolfood Website
<a href="https://dining.unc.edu/c...">https://dining.unc.edu/c...</a>


Attachment name World Resources Institut...
<a href="https://coolfood.org/">https://coolfood.org/</a>


Attachment name UNC 2021 Climate Action ...
<a href="https://sustainable.unc.e...">https://sustainable.unc.e...</a>


Attachment name Menu Masters Low Wast...
<a href="https://www.nrn.com/m...">https://www.nrn.com/m...</a>


Attachment name Upcycling Foods Website...
<a href="https://dining.unc.edu/u...">https://dining.unc.edu/u...</a>