Exploring the Impact of the COVID-19 Pandemic on Food Production and Waste Sustainability within Boston College Dining Services

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Introduction

In order to open its campus during the global coronavirus pandemic (COVID-19), Boston College was faced with the challenge of protecting the health and safety of all students, faculty, and staff. Boston College Dining Services (BCDS) is an integral campus facility that previously provided upwards of 23,000 daily meals to students as well as employed over 200 individuals. Because BCDS is such a necessary part of campus operation, it was imperative that new safety precautions be administered in order to maintain food service while protecting the community it serves. This study intends to determine the impact of COVID-19 and subsequent safety protocols on sustainability within Boston College Dining Services. We set out to understand the effect of COVID-19 on sustainability within BCDS. We discussed our research objectives with representatives from BCDS as well as Student Sustainability Manager, Molly Funk, in order to obtain data and informational resources from them. From BCDS, we received data reports documenting the amounts of food purchased, location produced, and food sales at dining halls from 2019 and 2020. From this data, we were able to analyze shifts in food procurement and costs from pre-pandemic and current practices. We also received waste and recycling audits across campus from 2017-2020, as well as a statement titled “Impact of COVID-19 on BC Dining sustainability.” We used the audits to analyze various waste output trends from before and during the pandemic, and the statement to guide our analysis. We interviewed several dining staff members regarding changes in staff and dining revenues to inform our observations on economic changes. We also conducted a student survey with over 50 BC students to gauge how COVID-19 has affected their thoughts and behaviors in regards to their dining habits. We asked them a series of over 30 questions in multiple choice, ranking, and open-ended formats.

Results and Discussion

Food Sources

Across all the data sets analyzed, the found percent decreases during the Fall 2020 semester are less steep than the Spring 2020 semester furthering the conclusion that, while a huge decrease in food purchasing occurred during the months of March, April, and May of the Spring 2020 semester, the Fall 2020 semester is increasing its food purchasing, though at a slower rate that reflects the estimation that BC Dining Services are currently operating at 70% of their usual capacity. Overall, these trends suggest that there has been an understandable decrease in Boston College Dining Services’ food sourcing, and therefore, the amount of food being distributed has decreased as well.

Waste and Recycling

In response to COVID-19, BCDS switched from serving ~40% of meals on reusable dishwasher to 100% in disposable containers. While the majority of containers are World Centric 100% compostable containers, BCDS reports that they have noticed more frequent disposal of plastic bags, clamshell containers, and cutlery; many items must be wrapped in plastic now too. To combat this, BCDS also implemented several sustainable programs including a reintroduction Green2Go reusable container program and the addition of new composting bins in more convenient locations outside dining halls.

Economics

The pandemic has financially impacted BC dining operations by decreasing revenues and increasing costs. Costs have increased due to increased staffing needs to meet COVID safety, April, a 15% increase in packaging expenses (as only disposable containers are used), a policy which requires preserved food be thrown out at the end of the meal period, and macronutrient and macroeconomic factors which have led to an increase in cost of meat/dairy products. Revenues have decreased because students are choosing to eat elsewhere; BC dining is operating at 50-70% capacity as compared to a “normal year.”

Recommendations

Continue to encourage students to use reusables:

In order to encourage reusable container opportunities among students during the pandemic, we believe that BCDS should expand its Green2Go Program to accommodate all dining locations, and increase transparency regarding the sanitization process reusable so that students feel safe using them. BCDS and BC more generally should clearly advertise where outdoor composting bins are placed so students know where to find them. They should also increase monitoring and emptying of MSW, recycling, and compost bins within dining halls to limit overflow.

Post-pandemic operations:

When it is safe to do so, BCDS should transition to normal protocols, as students have indicated many protocols currently in place negatively affect their dining experience. Because of this, they eat at dining halls far less (Fig. 3). Similarly, many students report that they feel less comfortable eating in dining halls (Fig. 4) which in turn, affects revenue.

BCDS should safely reintroduce pre-pandemic staff numbers. They should phase out the 100% disposable guidelines; reusable containers and dishwasher should be placed in prominent, easily accessible locations across all dining halls. Discount programs that benefit students who opt for reusables should be reintroduced. Overall, further research should be conducted on the pandemics effects on sustainability at Boston College and in local, global, and international spheres.

References


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Figure 1. Amount of sum sales of food purchased from Fall 199 through Fall 2020.

Figure 2. Total waste output trends across BC campus from 2017-2020.

Figure 3. Student survey response regarding frequency of BC dining visits.

Figure 4. Student survey response regarding comfortability of eating in dining halls.