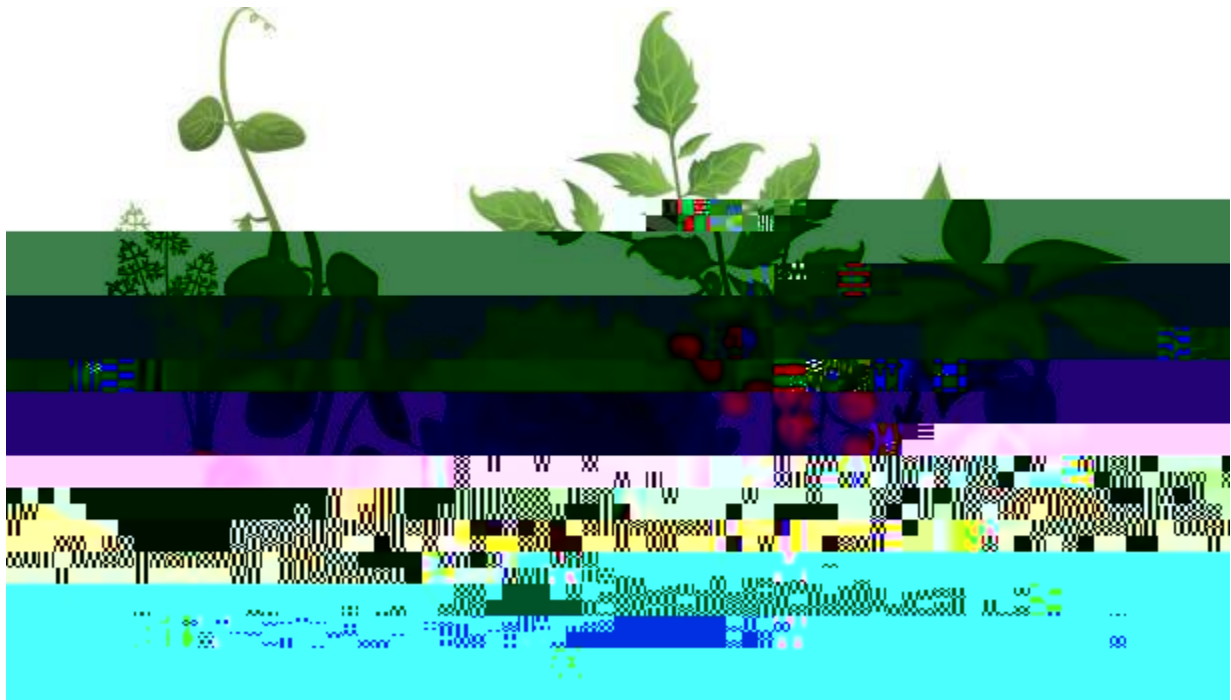


Off Campus Food Waste vs On Campus Food Waste

Which one produces more food waste?



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Abstract

This project sets out to see if students who live off-campus produce more food waste than students who live on-campus. We believe that this is plausible as off-campus students have to juggle groceries, cooking, cleaning, and waste management for the first time while also completing school work and maintaining social ties. In order to conduct this research, on-campus data was sent over by the Sustainability Director at BC Dining, Julianne Stelmaszyk. Off-campus data was collected through a 15 question survey on Google Forms that asked them questions about shopping and eating habits. The survey had 52 individuals respond. A case study was also conducted that had 6 individuals participate. 80% of off-campus students do no compost while the averaged perceived consumption rate for off-campus students was 86.5%. We were unable to draw a conclusion for the question, but we were able to shed some light on off-campus food habits. We have come out with some recommendations for BC to implement.

INTRODUCTION

Project

been a focus on what dining facilities has done and the strides that they are making to shift towards a more sustainable model. However, these efforts have not taken into account what students off-campus do and how this compares to students on-campus. By not looking into off campus food waste, BC is missing an opportunity to help reduce their

This project seeks to rectify that and

provide potential solutions for BC to implement.

We believe that students who live off-campus waste more food because they are on their own for the first time, and consequently, this is the first time that many students are responsible for cooking their own meals. We hypothesize that this inexperience with cooking coupled with heavy workloads and packed social schedules leads to higher amounts of food going to waste as

swaths of nearshore ecosystems as a result of their toxins. Alongside food waste there is also the issue of increased trash when containers that food and drinks come in are not recycled.

Solving the issue of food waste, even on a small scale also provides a economic incentive for the individual because it can translate to financial savings. This could mean that instead of spending \$100 and only eating \$70 worth of food while wasting \$30 a week, the individual can just spend \$70. This equates to an annual savings of \$1560 off of just \$30 a week. The question comes down to a

reuse value, management of food, body, and schedule, personal values, portions, disconnection with cost or preparer, sharing, prioritization and newness, and finally concerns about food safety and expiration dates (Nikolaus et al 2018). This study concluded that low awareness was a major reason for waste and suggest off campus students receive practical suggestions for food shopping and meal planning but nothing is mentioned about the inevitable reality of food that goes uneaten; and the feasibility of and opportunity for composting (Nikolaus et al 2018).

wareness Leads to Abundance in Food Waste Among Young Adults

Lack of awareness leads to abundance in food waste among young adults by Samantha Boyle continues on the same theme of young adults living on their own and the food waste associated with it. People tend to underestimate how much they waste which is why awareness can be so powerful in changing habits. The University of Illinois article references EPA data that claims the average person throws out 20 pounds of food every month and the average American family spends over \$1000 on wasted food each year (EPA 2019). An interesting point this study brings up as well is the levels there are to food waste. Beyond just wasting of food, in turn the money and all the labor associated with it becomes wasted as well (Boyle 2019). This article addresses buffet style on campus dining which BC does not have because students are charged for every item but the system is still somewhat the same. Beyond BC, buffet dining is at the root of much of the on35.05 356.88 Tm25 356.88

was relevant to us because we saw the angle of food insecurity as a potential obstacle to our research. People can be self-conscious about what they eat or what they spend and may not want to reveal that information despite the anonymity of our research. Yet again this research was done in a dining hall, providing questionnaire to participants before and after they ate. Nothing significant was found in this study except for about a 10% increase in awareness for the amount of food waste on-campus per customer (King et al 2018). From our sources we concluded that awareness is a recurring theme that starts the conversation and leads to action.

METHODS

The project was conducted in two parts. For this project, the parameter for food waste

For the off-campus portion, a survey was made on Google Forms and was posted on campus. Anyone who was at least 18 and had lived off campus for at least a semester were allowed to take the survey. The survey was not just restricted to students who currently live off campus because many of the current seniors still live in housing that has a full kitchen and it was believed that they would retain their habits from off-campus.

Survey

In total, the survey had 15 questions (Table 1) that took 3-5 minutes to complete. The surveys were completed at the sole discretion of the surveyee on their own time with their own devices. The questions were modeled and inspired by questions from the Natural Resources (Mugica and Rose 2019).

The informed consent procedure was a disclaimer at the beginning of the survey which stated that the purpose of the survey was to collect demographic data and that the responses will be analyzed for the purpose of answering the question about food waste off-campus. There was no physical risk to completing the survey and only a potential minor risk to emotional health through stress. Some participants may be hesitant or sensitive about revealing their dietary habits but the purpose of this project was waste associated with food, not analyzing how much or little individuals eat. The only benefit for the participants was that students will be able to reflect on their spending and eating habits and potentially discover how well they are budgeting, where they can save on groceries, and whether or not they are producing a large amount of waste. There will also be a general benefit to the Boston College population by providing evidence for where

Frequency of usage
of take out/food
delivery services
(Q13)

Percentage of
takeout food eaten
(Q14)

Occurrence of
recycling after a
party (Q15)

How often they go
grocery shopping
(Q9)

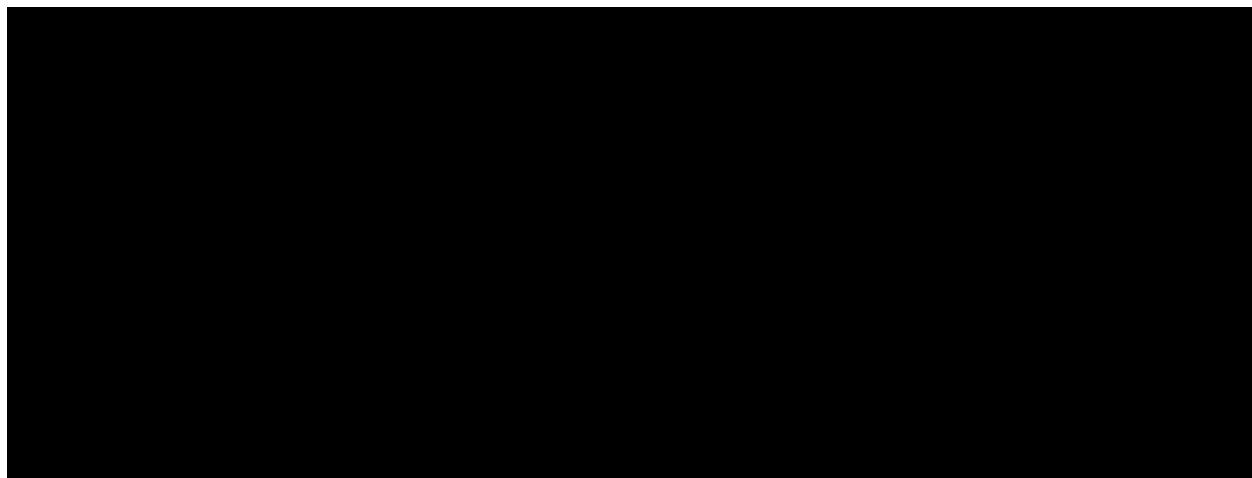
Amount spent on
monthly groceries
(Q10)

repeated for the upper limit of the question. The lower and upper limits of Q11 and the common percentages of Q12 were then compared to the NRDC and UNFAO food consumption numbers.

RESULTS

On-Campus

For the on-campus waste data, we were unable to break the waste



We estimate that a four-week study where food waste is collected at the end of each week would be the best strategy for this study. Beyond the pounds of food waste collected in house per

campus for), the Office of Residential Life should include information on composting and recycling in any standard email blast or pamphlet.

Immediate: A virtual informational pamphlet attached to off-campus email blast from ResLife at the beginning of each semester that outlines the basics of composting to bring

For now, the pamphlet could just be in the form of bullet points somewhere on the email message but eventually we hope that it links to a more specific and significant platform that will be addressed in future steps. Some bullet points could be information on the benefits of composting and the basics of actually composting. For example, the EPA states that raps

materials out of landfills will reduce the space they unnecessarily take up and the release of

A page run by BC would be a better for Boston College s dining and overall school s green initiatives.

80.8% of the students surveyed believe they eat 80% or more of the food that they purchase (Figure 4). Although 80% is reasonable estimation, we believe if students actually tracked their waste it would more closely resemble the 10/52 people who estimated they only eat 70% or less of the food they buy. With 80% of the pool not composting there needs to be a program in place that makes composting off campus more accessible.

- ◁ **Short Term:** The BC community can draw inspiration from a student led initiative between the student government and the office of sustainability at Temple University (Houck 2019). Students there volunteer to bike to the common neighborhoods of off campus residences and collect compost to transport and tow the a community garden. Getting buckets with lids into apartments and houses will increase the likelihood that students compost.
- ◁ To enter into the off campus composting program students would pay a \$5 deposit and receive a bucket and be included on the route for weekly pickups which could be done on foot, bike, or in a vehicle.

An initiative like this would be inexpensive and relatively simple to put into motion. Any volunteering, or environmentally conscious student clubs composting initiative, these efforts have only been focusing on dorms, excluding students off-campus. This collection initiative will help close the gap. The program could also be implemented into and extension of the off campus community cleanups.

Although there is already a community garden at BC, it would benefit the off-campus

become more effective. A live page with outside links could also be more extensive and informative as well as easier to actively update than a PDF.

CONCLUSION

At the beginning of this project, we set out to see answer the questions of whether living on-campus or off-campus produces more food waste. This was going to be done through analysis of BC Dining data and off-campus surveys. Ultimately, we were unable to answer this question. We did find that every transaction at Corcoran Commons is associated with 2.27lbs of solid food waste. It is difficult to say if each transaction directly contributes 2.27lbs of food waste. We found that there is certainly room for improvement among the Boston College community to increase off campus student involvement in environmental initiatives as 80% of students do not compost regularly (Figure 2). The case study showed that the six students studied produced around 4lbs.-5lbs. of food waste a week (Table 4).

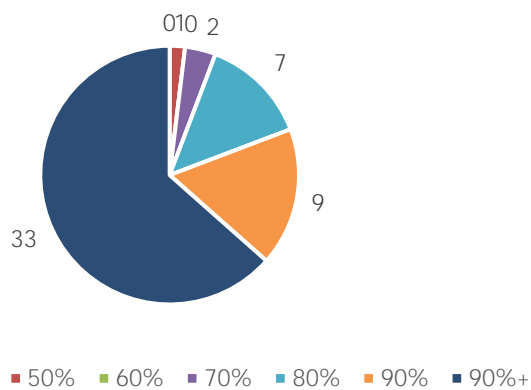
Our hope is that the office of sustainability or the office of environmental studies incorporates new programs based off our recommendations and some if not all our ideas are used to some extent. The students we surveyed were generally inactive as composters and unaware of how much food they waste. As we addressed in our discussion this made it difficult for us to assume with much certainty that the numbers reported to us via our survey were accurate. If we had been able to collect weekly food waste, we would have had better data to analyze in comparison to national waste averages. Going forward awareness will be the catalyst to set student composting in motion. The off campus 5-gallon bucket and volunteer pick up system is an inexpensive and active way to reduce the amount of food waste going to landfills. Once an off campus garden is established the system will be complete and rewarding for those who elect to opt in.

REFERENCES

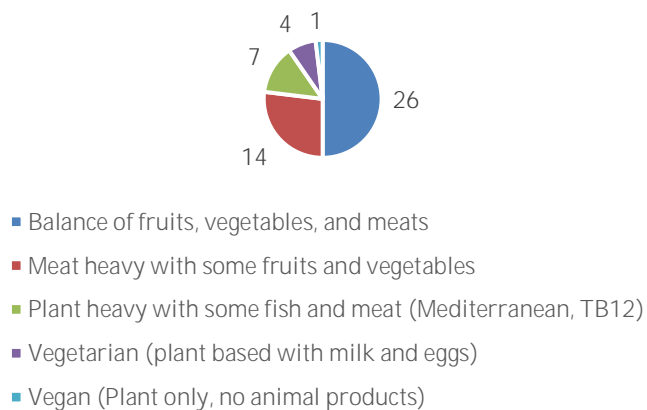
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APPENDIX

Of the food you order, how often do you finish the food?



How would you describe your diet?



How often do you use a food delivery service?

