Food Waste Monitoring and Outreach in Superior Dining

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Superior Dining

- Majority first year students
- Over 4000 meals served daily
- Meal Swipes- All you can eat
- Food Scraps are pulped and composted

Food Waste and Sustainability

Waste Products of Wasted Food:

- Water (irrigation, animals, and processing)
- Fertilizers and Pesticides (water quality, environmental issues)
- Animal Feed (more crops, more fertilizers and pesticides, more runoff and environmental issues)
- GHG emissions (transportation and processing CO_2, animal emissions CH_4, and fertilizer NO_2.)
- Social concerns: exploited labor, food insecurity

Monitoring and Data Collection in Superior Dining

Monthly Food Waste Check in

1. Collect pulped food scraps from dish room
2. Weigh pulp at the loading dock
3. Divide total weight by number of meal swipes used that day
4. Account for water weight lost due to pulping the food scraps
    a. (+20% of total weight)

Results


Monthly Food Waste Check In
2019
600
400
200
0
Weight (lbs)
September
November
December
January
February
March
Month


Average Food Waste Per Meal Swipe
2019
Weight (lbs)
0.2
0.15
0.1
0.05
0
September
November
December
January
February
March
Month

Outreach

Getting information out to students to help spur behavior change

- Two “Food Waste Awareness Day” events per year
    - Beginning of fall and spring semester
- Students scrape plates into compost bins
- Signage is displayed on tables about food waste impacts
- Total food waste weight is updated throughout the day

Questions?

Food Waste Awareness Day: Fall 2018

UMD OFFICE OF SUSTAINABILITY

Overview:

According to the Natural Resources Defence Council, about 40% of food produced in the U.S goes uneaten due to damage, spoilage, or waste during food preparation and meal times. With this in mind, if we were able to close that gap and utilize all of the food we produce for human consumption, we would be able to use 40% less water in the irrigation of our crops, 40% less farmland, 40% fewer pesticides and other harmful chemicals used in agriculture that seep into our surface water and aquifers, and reduce greenhouse gas emissions associated with the growing, processing, and transporting of massive quantities of food by 40%. And while it is very unlikely that we would ever be able to reduce our food waste to zero, the principal remains that the less food we waste, the lower our environmental footprint as a campus and in the interest of Dining Services, the less money that is spent purchasing food that goes uneaten.

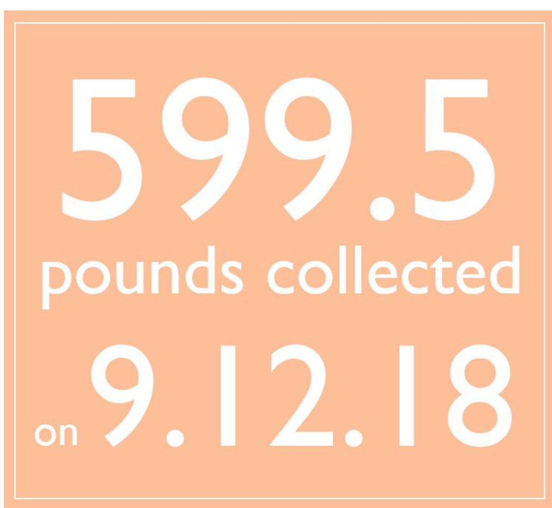
Methods:

I began by taking baseline measurements on Tuesday, September 11th, recording the weight of each bag of pulp coming out of the dishroom. On Wednesday, September 12th, a group of volunteers and I instructed students coming out of Superior Dining to scrape all of the food scraps from their plates into large compost bins. We then weighed the bags at the loading dock as they became full, updating the total weight of food waste on our graphic, and interacting with students, answering their questions about why we were there and the environmental impacts of food waste. After data collection, I normalized our total weights, dividing them by the number of meal swipes each day accounting for the difference in the number of students contributing to each day's food waste total.

Results:

For our baseline on Tuesday September 11th, we measured **453 lbs** of food waste over **4,427** meal swipes, averaging about **1.64 ounces** of food waste per meal swipe. On Wednesday September 12th, the day of the actual event, we measured **599.5 lbs** of food waste over **4,365** meal swipes which comes to about **2.2 ounces** of food waste per meal swipe.

Attached you will find a spreadsheet with our complete numbers



Recommendations:

We at the Office of Sustainability are proud of the partnership we have built with Dining Services and remain committed to reducing food waste in Superior Dining.

Throughout the year and beyond, we would like to continue weighing pulp one day each month to track our progress on this important issue as well as continuing to hold food waste awareness days and share our results with the student body in an effective way (probably one event per semester.)

Sources of Error:

Even with the normalization of our total food scrap and pulp weights by the number of meal swipes, each day had a specific set of circumstances that played a role in the amount of food waste we collected. First, obviously different menus and a slightly different group of students with varying tastes, preferences, and eating habits adds variables to our numbers. Additionally, on Tuesday the pulper was out of commission for much of the day, likely resulting in more water weight than we had on Wednesday.

Once again I would like to thank all Superior Dining administration and staff for your help with this project and your commitment to sustainability as a whole. We, at the Office of Sustainability look forward to our continued partnership and immensely appreciate your support!