



SAR 2022

FOOD

RECOVERY TEAM

Simon Dionson, Ying Xuan Chua
Kierstin Blatzheim, Rachel Minden,
Racquel Fox, Taylor Cason



RESEARCH CONTEXT

- Continuation of food waste audits after COVID-19 restrictions
- Revitalizing educational initiatives targeted toward students
- Recording food waste trends at boutique restaurant locations

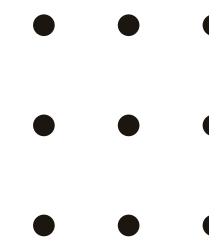
RESEARCH QUESTIONS

- What is the current food waste and food recovery landscape at UCLA?
- What is the optimal way for UCLA Dining and students on the Hill to reduce food waste and promote food recovery?





#UCLA Dining



HYPOTHESIS

Our team believes that the **current food waste and food recovery landscape at UCLA** has not **changed drastically**, and that **student education** is the best way to **reduce food waste and promote food recovery across the Hill**.

PURPOSE

Help UCLA Dining **reduce food waste appearance in waste stream** and assist in target **reduction of organic waste by 75%** at UCLA.

PRIMARY VARIABLES

Dining preferences & demographics of students with meal plans on the Hill



METHODOLOGY

Three main initiatives targeted at assessing food waste habits on dining locations across the Hill and the dorming student body.



#UCLA Dining

1

MASS SURVEY

One-time general survey
for all dining locations

2

DIARY STUDY

Week-long survey for
boutique locations

3

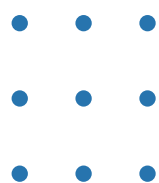
FOOD WASTE AUDITS

Three audits at BPlate,
Epicuria, & De Neve in Spring



MASS SURVEY METHODOLOGY

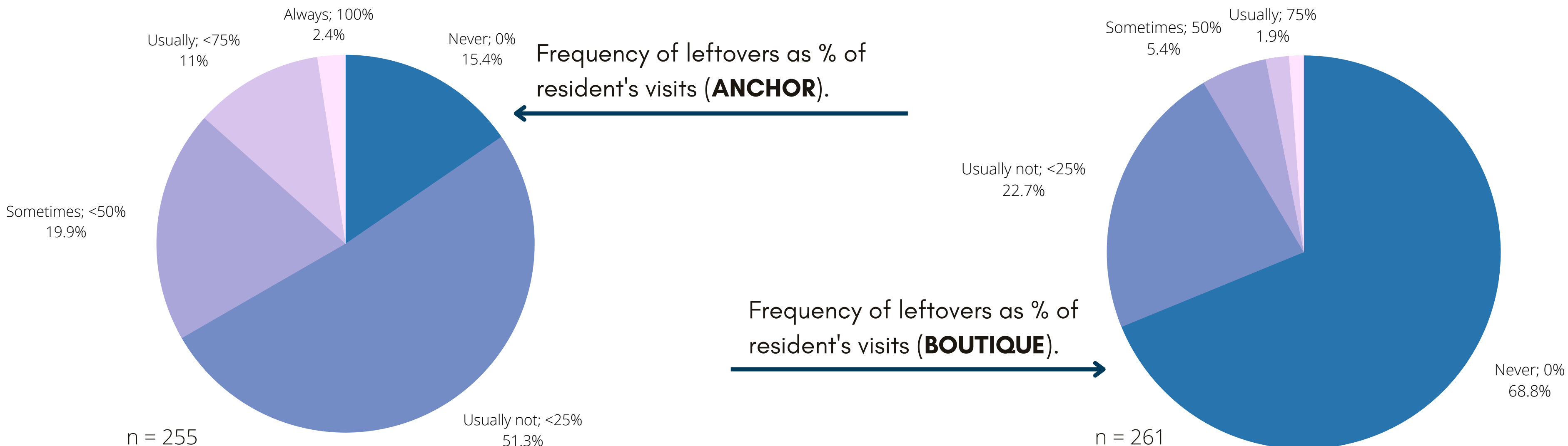
- **What:** A cross-sectional survey asking questions about food waste, habits, and marketing communications
- **Why:** Analyze overall dining trends & student behavior
- **When:** 6:00 AM April 4 – 11:59 PM April 22 (19 days)
- **How:** 3-section survey on Google Forms
- **Who:** Advertised in dining locations and taken by students with meal plans (11R – 19P)
- **EDI:** Space provided to share dietary preferences, meal plans & demographics to reduce bias or skewed data



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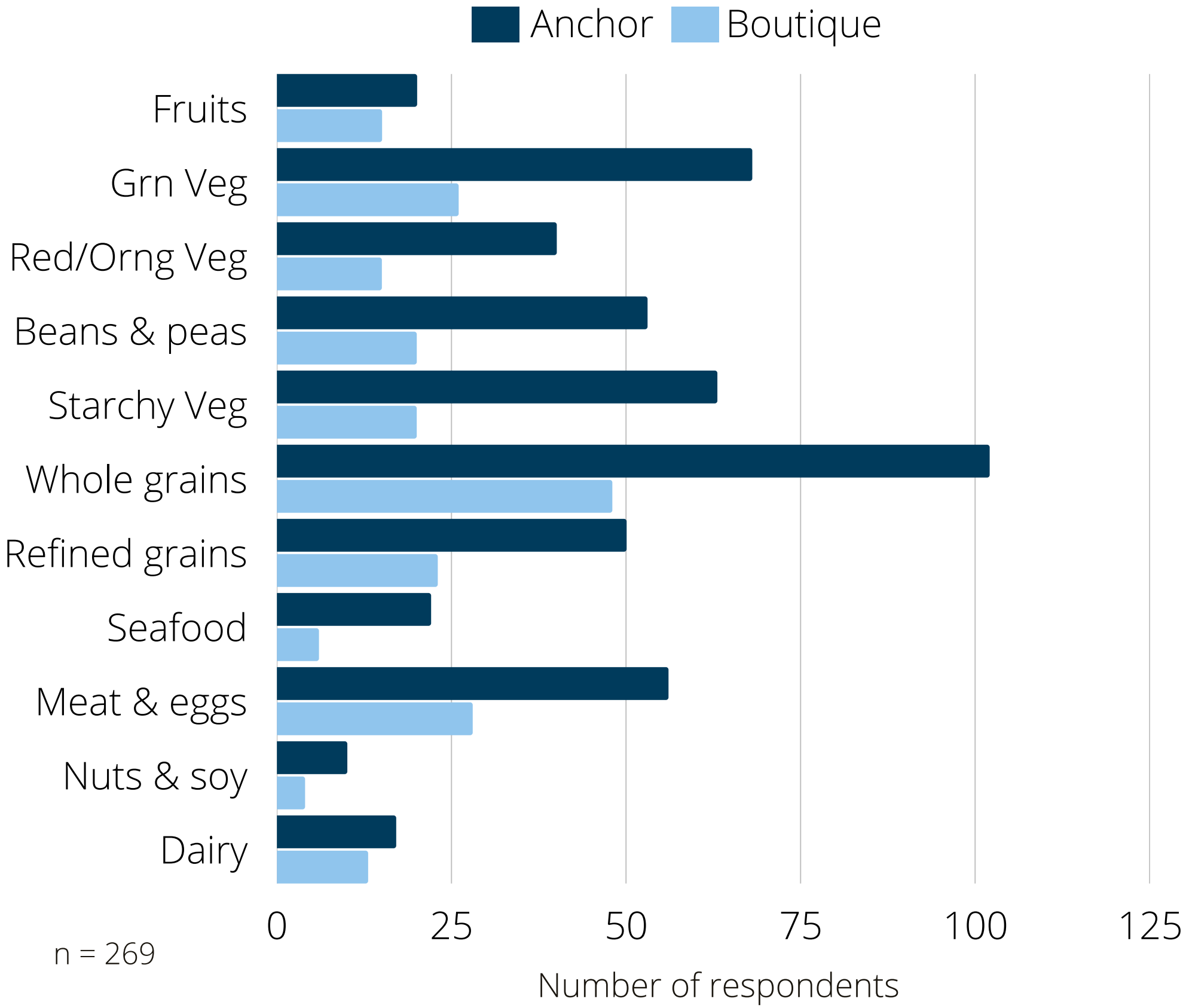
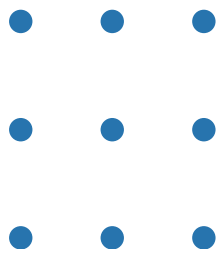
MORE LIKELY TO HAVE LEFTOVERS AT ANCHOR LOCATIONS THAN BOUTIQUE LOCATIONS.



- Not shown: For anchor locations, De Neve has the highest proportion of visits with leftovers; BPlate has the least.
- Not shown: For boutique locations, The Spice Kitchen at Feast has the highest proportion of visits with leftovers; BCafe has the least.



GRAINS & GREENS MOST WASTED AT BOTH ANCHOR AND BOUTIQUE RESTAURANTS.



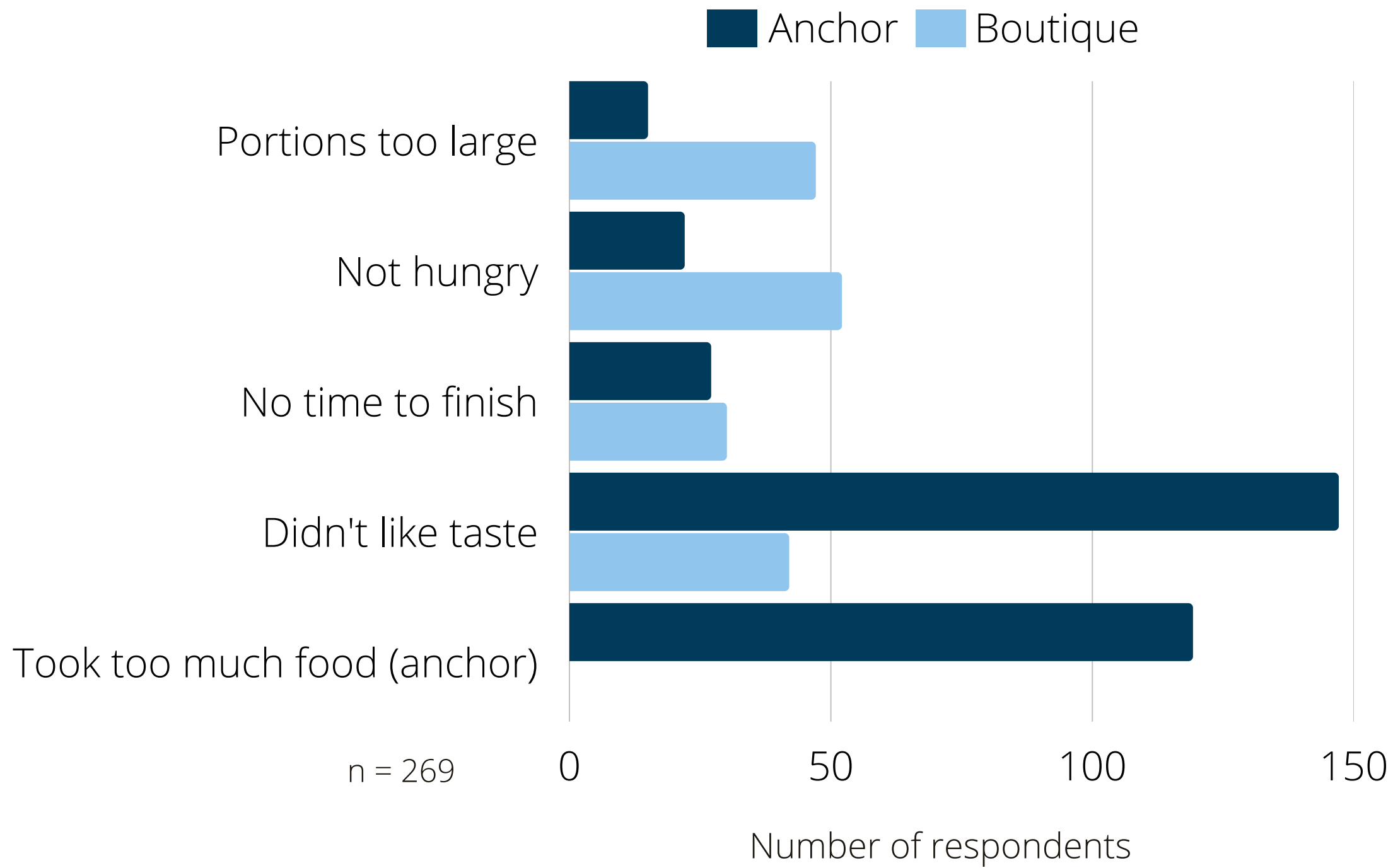
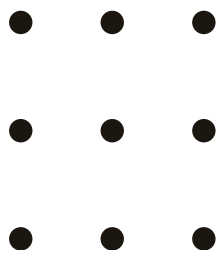
"What is the food group you toss out the most?"



- Overall, less food tossed at boutique locations.
- In both anchor & boutique locations, the top food groups thrown away are:
 - Whole grains (rice, wheat bread)
 - Green vegetables (broccoli, spinach)
 - Meat/poultry and eggs (especially at De Neve)
 - Refined grains (tortillas, pastas, muffins)
- Similar distributions in both types of locations.



FOOD MOSTLY WASTED DUE TO TASTE PREFERENCES OR TAKING TOO MUCH.



"What are the main reasons you throw away food?"



- Overall, less food tossed at boutique locations.
- In anchor locations, people toss food mostly due to:
 - taste preferences
 - taking too much food
- In boutique locations, numerous reasons contribute equally to people's decision to toss food.



EXAMPLE MARKETING MATERIAL BY STRATEGY

Anecdote/Story

How long does it take
for your salad to decompose
in the landfill?

 **1 WEEK** 

 **13 YEARS** 

 **25 YEARS** 

Humor

Imagine this...



"Good evening, folks. Tonight we have the food
you didn't finish last time you were here."

Don't let this be you!
Finish your food!

Happy

If we stopped wasting food,
we would reduce annual
greenhouse gas emissions by

**170 MILLION
METRIC TONS**

That's equivalent to the annual
CO2 emissions of **42 coal-fired
power plants!**

EPA

REDUCE YOUR FOOD WASTE!

Sad

**Food waste is killing
the Earth**

Food waste is the
single largest component
of municipal solid waste and creates the **potent**
greenhouse gas methane that accelerates
global warming.

 **CH₄** = 

**Take only what you need; our
futures depend on it.**

Endorsement

Photo courtesy of @powellcatofficial Instagram

Powell Cat
wants you to help reduce food waste at UCLA

74% of post-
consumer food
wasted at UCLA dining
halls **is still edible.***

Take only what you
will eat & ask to
customize your plate.



*According to the most recent food waste
audit data from BPlate 03/01/2022

Inspirational

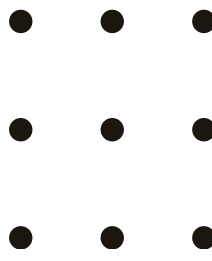


YOU CAN HELP SAVE WATER!

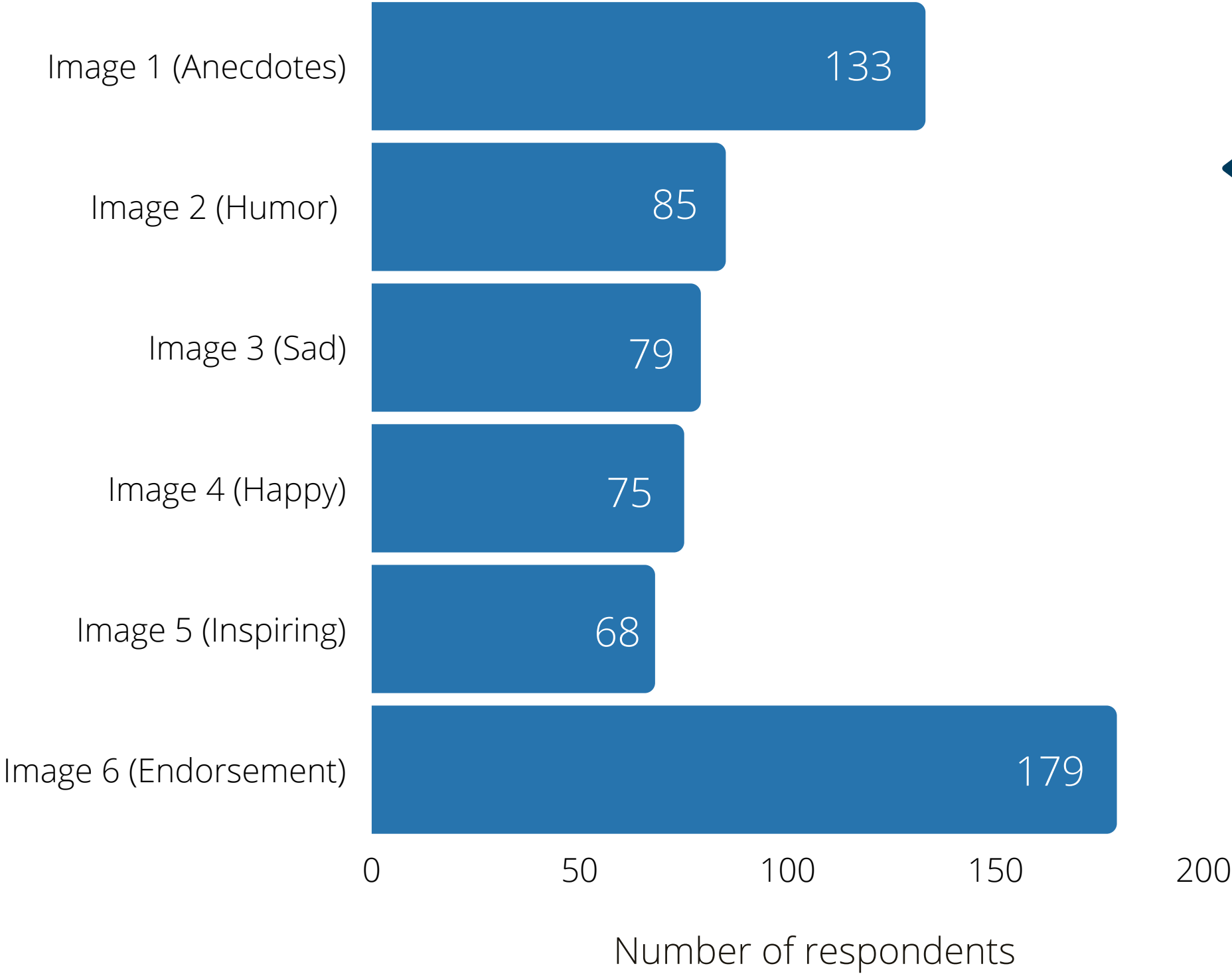
**If everyone were to
finish their food, we
would help farmers
save 25% of water
used for agriculture!**

SOURCE: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0007640>

Help save water by doing your part
and finishing your food!



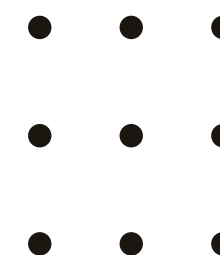
ENDORSEMENTS & ANECDOTES APPEALED MOST TO STUDENTS.



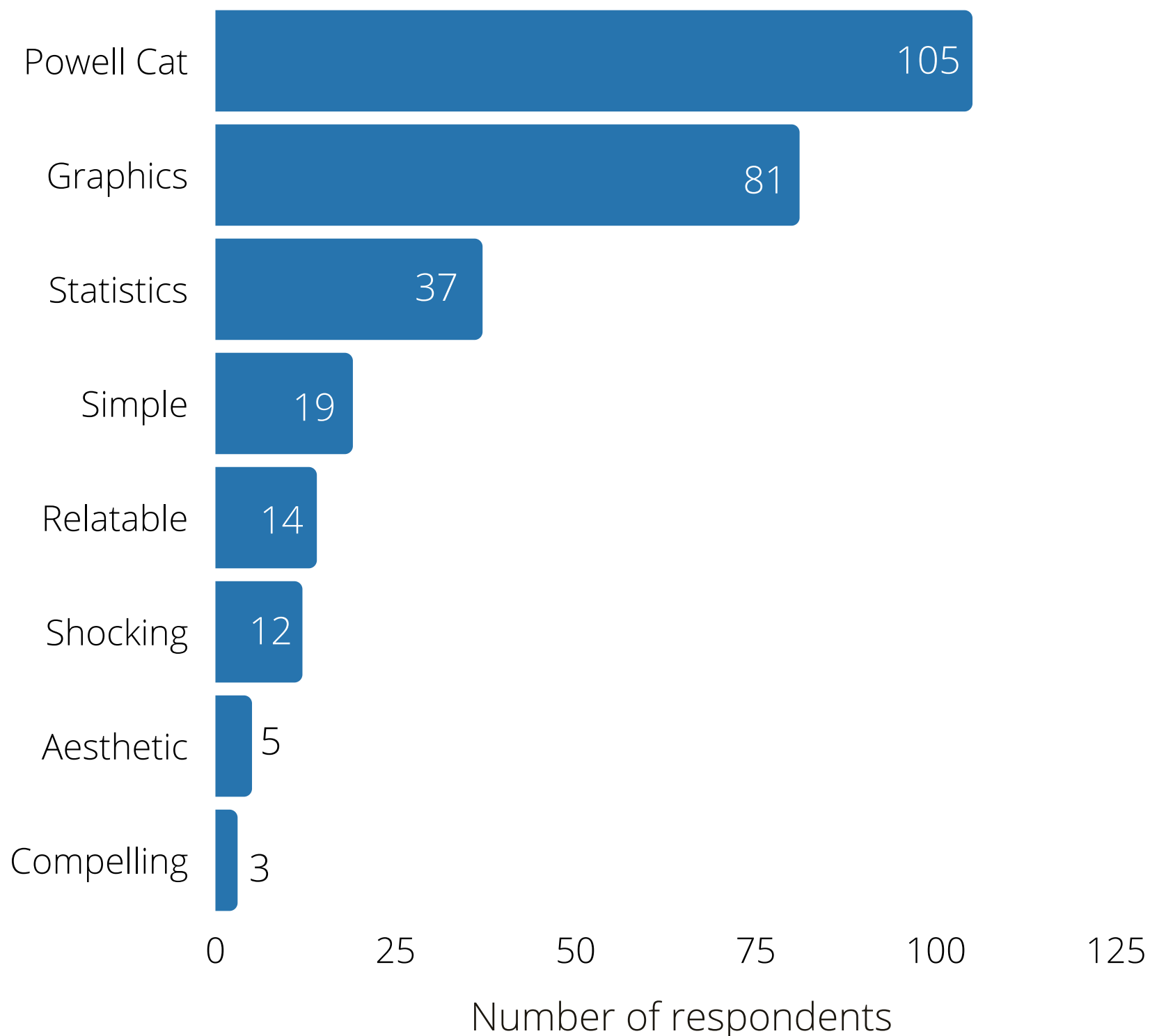
"Choose 2-3 images that stand out to you."



- Endorsements and anecdotal marketing material was the most appealing to students.
- Should use these marketing strategies in future campaigns.



EVERYONE LOVED POWELL CAT, FOLLOWED BY GRAPHICS & STATISTICS.



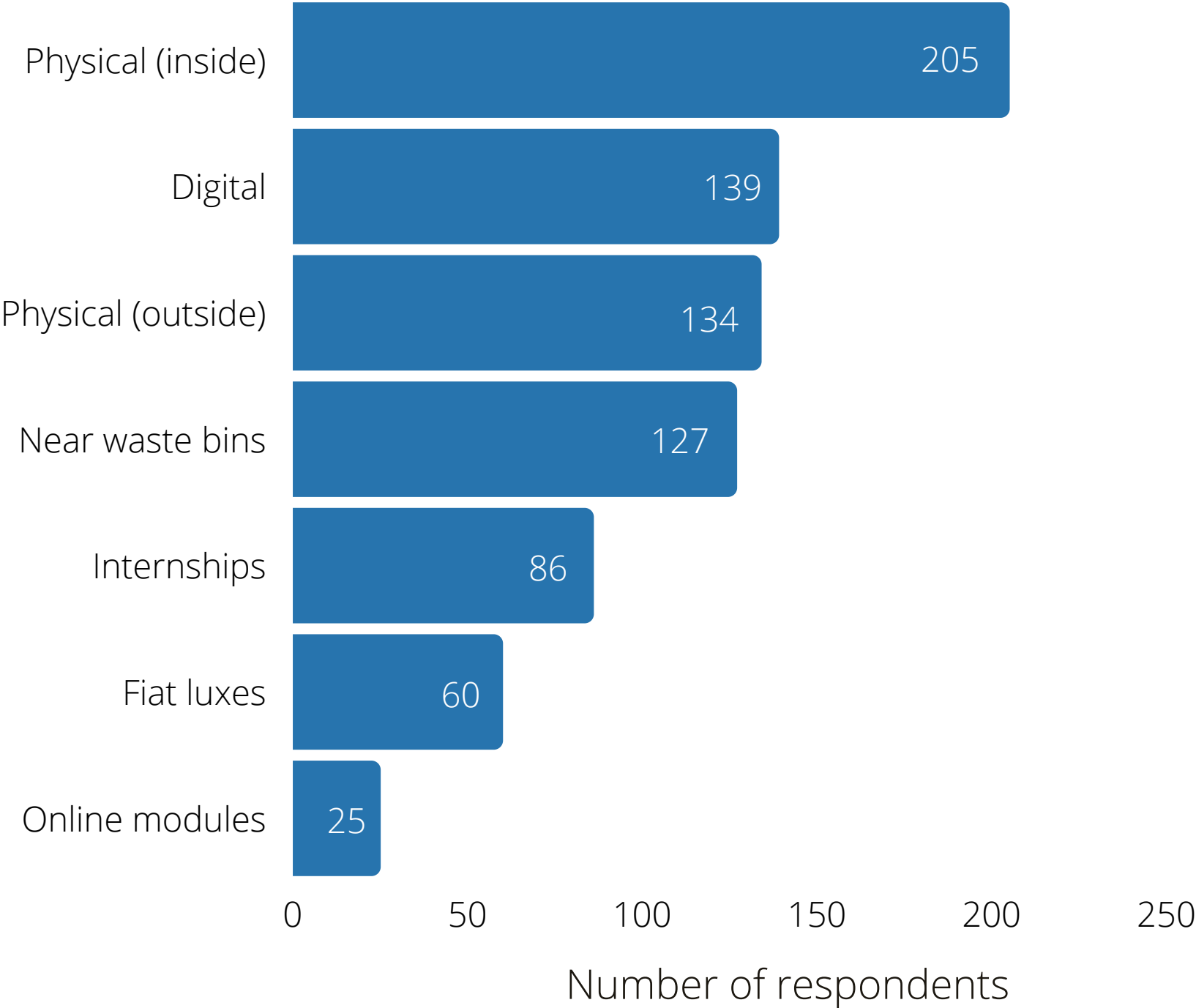
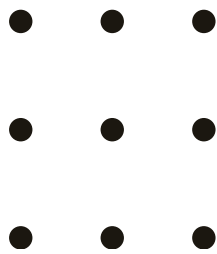
"What stood out about the marketing material?"



- Powell Cat, graphics, and statistics are the most eye-catching
 - Consistent with which posters stand out the most.
- Enables us to give good recommendations to Dining based on educational marketing material we know will catch students' eyes.



PHYSICAL & DIGITAL SIGNAGE NEAR WASTE BINS DEEMED MOST EFFECTIVE.



"What communication methods/mediums do you think would be most effective at publicizing food waste at UCLA?"



- Physical signage, both inside and outside, digital signage, and signage near waste bins were all deemed effective at promoting food waste.
- Methods/mediums and what marketing material is appealing will both be included in our recommendations to Dining.



DIARY STUDY METHODOLOGY

- **What:** A longitudinal survey taken after each boutique location meal with questions about the amount and types of food wasted
- **Why:** To gather food waste data specific to boutique locations that can verify self-reported data in mass survey
- **When:** 1 week (4/16 - 4/22), all meal periods
- **How:** Google Forms survey with answer options specific to each order/boutique location; funding from TGIF
- **Who:** 30 students with meal plans who expressed interest on the Mass Survey or via a QR code posted in dining locations on the Hill
- **EDI:** Representative sampling, dietary inclusivity

Do you live on the Hill and primarily eat take-out?

**EARN \$25
BRUINCARD CREDIT BY
EATING TAKE-OUT!**

 **PARTICIPATE IN
OUR FOOD WASTE
DIARY STUDY**

Scan QR code or visit tinyurl.com/sarfoodwastediary2022 to join a week-long diary study to track food waste.

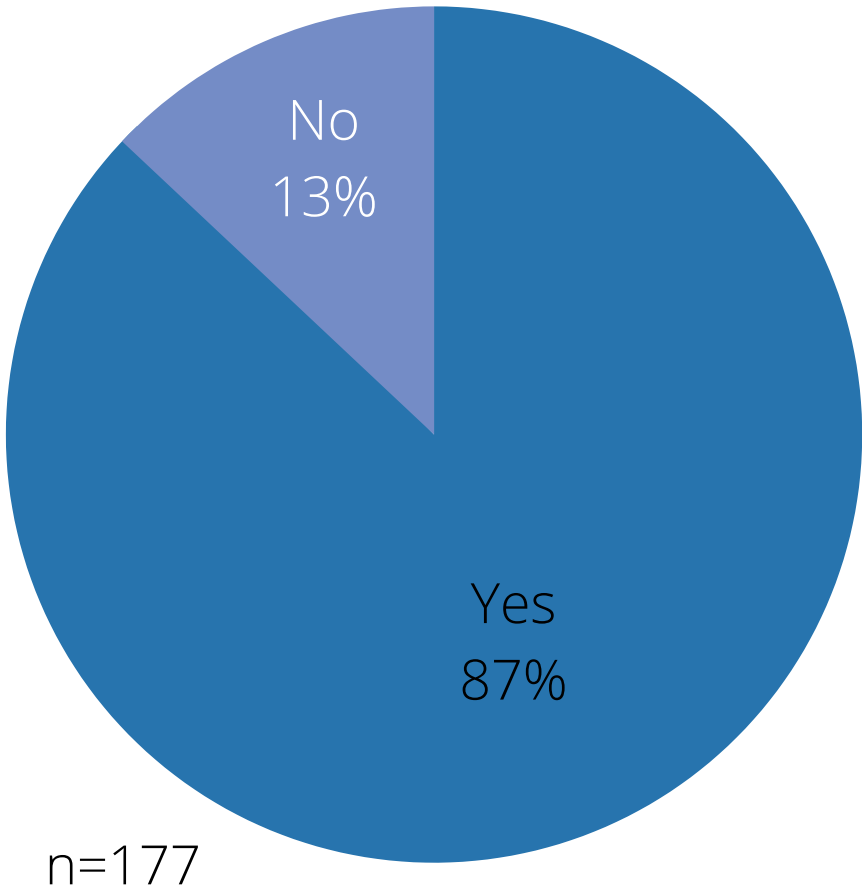
More details in the sign-up form.
All participants will receive **financial compensation** from The Green Initiative Fund.



UCLA SAR FOOD RECOVERY TEAM 2022 



MAJORITY OF BOUTIQUE MEALS WERE FINISHED.



"Were you able to finish your food?"



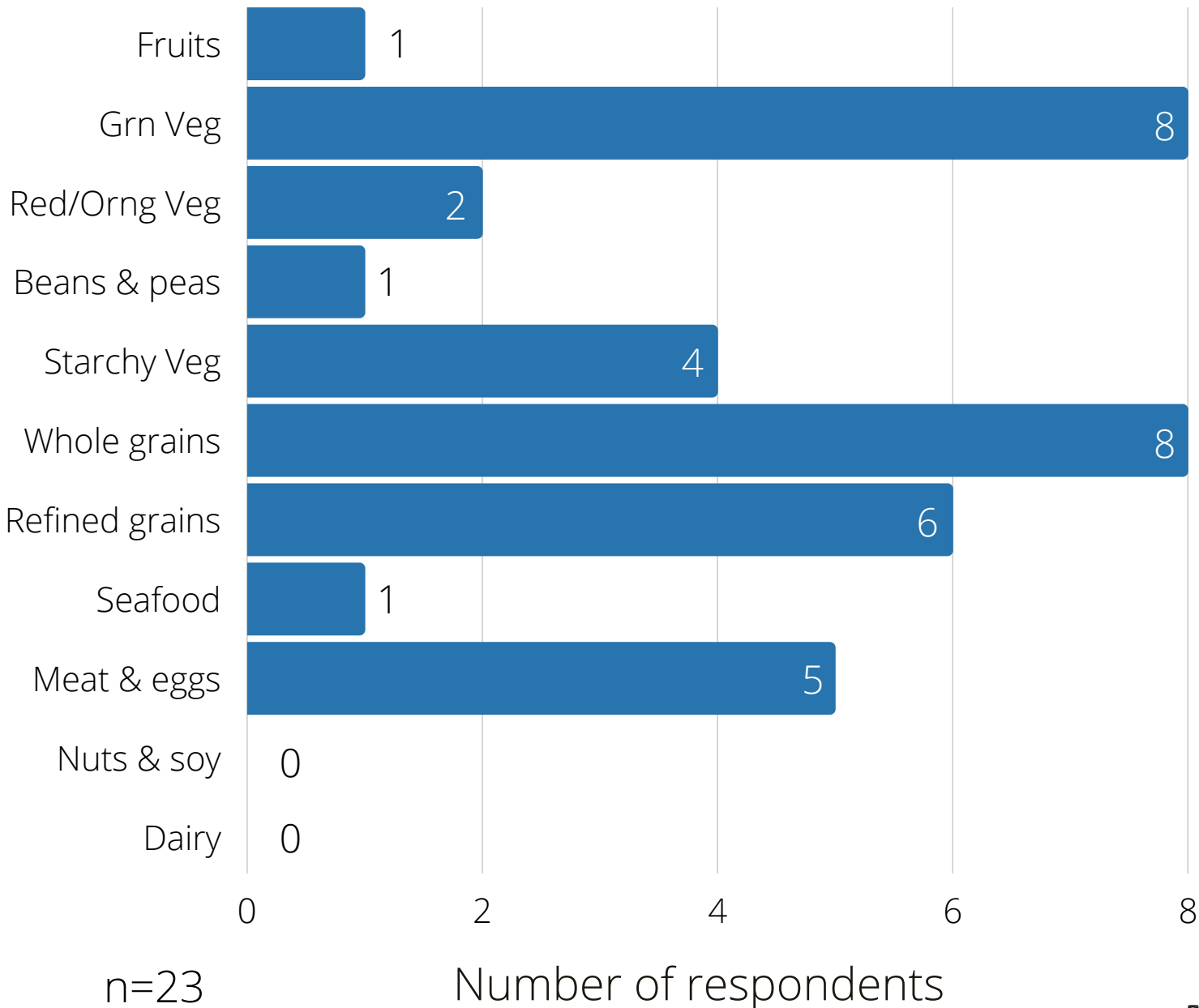
- Overall, 87% of meals were finished, consistent with self-report in mass survey

SIMILARLY, GRAINS & GREENS WERE MOST WASTED.

"What food groups did you find yourself throwing away the most?"

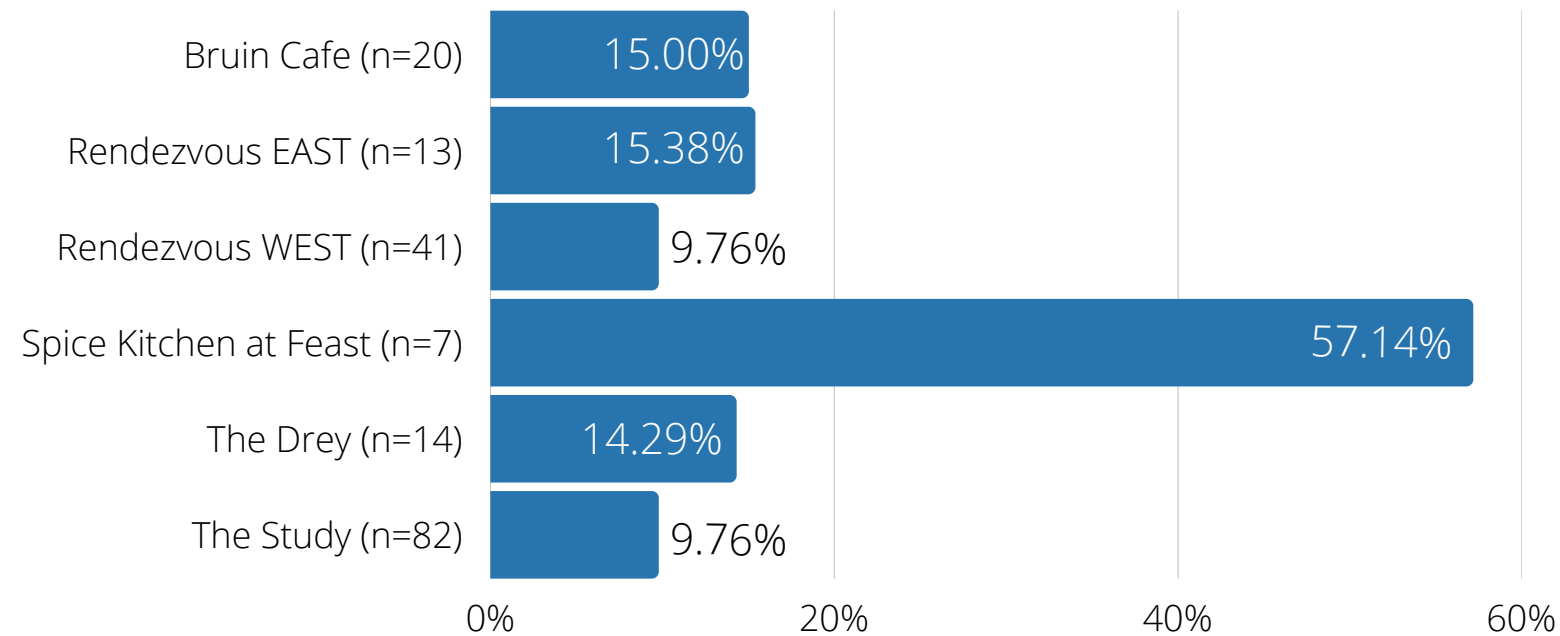


- Whole grains & green vegetables were tied for most wasted (22.2%)
- Followed by refined grains (16.7%)
- Allow students to customize amounts: Less, Regular, More



SPICE KITCHEN & RENDE EAST HAD HIGHEST % OF MEALS WITH LEFTOVERS.

By location Were you able to finish your food?



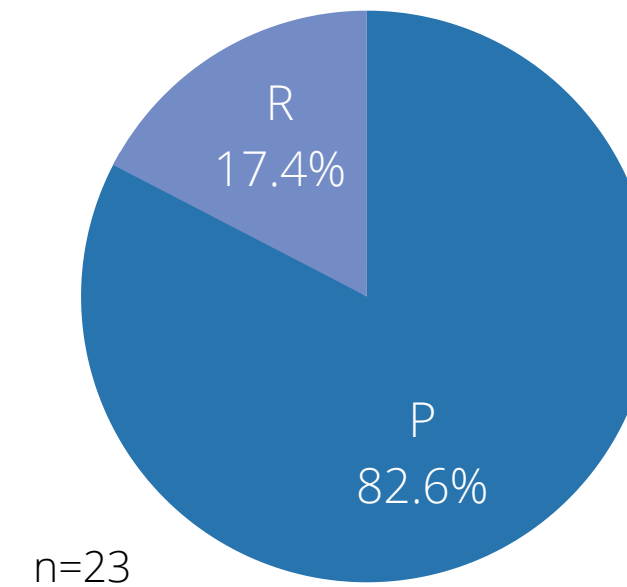
- Spice Kitchen had highest percentage of people reporting having leftovers (57.1%), followed by Rendezvous EAST (15.4%).
- But these were also the two least visited locations.

Note small sample size.

- Spread between numerous boutique restaurants
- Not that many people wasted food

STUDENTS WITH REGULAR MEAL PLANS HAD HIGHER PROPORTIONS OF LEFTOVERS.

By meal plan Were you able to finish your food?



- Where respondents did not finish their food, 82.6% came from students with Regular meal plans.
- Only 17.4% came from students with Premium meal plans.
- Encourage students to save leftover takeout food for later (via signage, easily resealable packaging, etc.). Some respondents mentioned already doing this.



WASTE AUDIT METHODOLOGY

- **What:** A quantitative and qualitative assessment of food waste produced in anchor locations.
- **Why:** To visualize what food groups are being wasted, analyze portion sizing and student behavior, and provide recommendations to Dining and consumers through marketing.
- **When:** 5-9PM (Dinner)
 - B-Plate: 3/1/22
 - Epicuria: 4/21/22
 - De Neve: 4/28/22
- **How:** Stationed in front of dishwashing area, requiring students to sort their waste into 4 bins: edible, non-edible, liquid, and napkins. After bins were weighed, waste was disposed in the compost bin.
- **Who:** Student volunteers & students dining at anchor locations

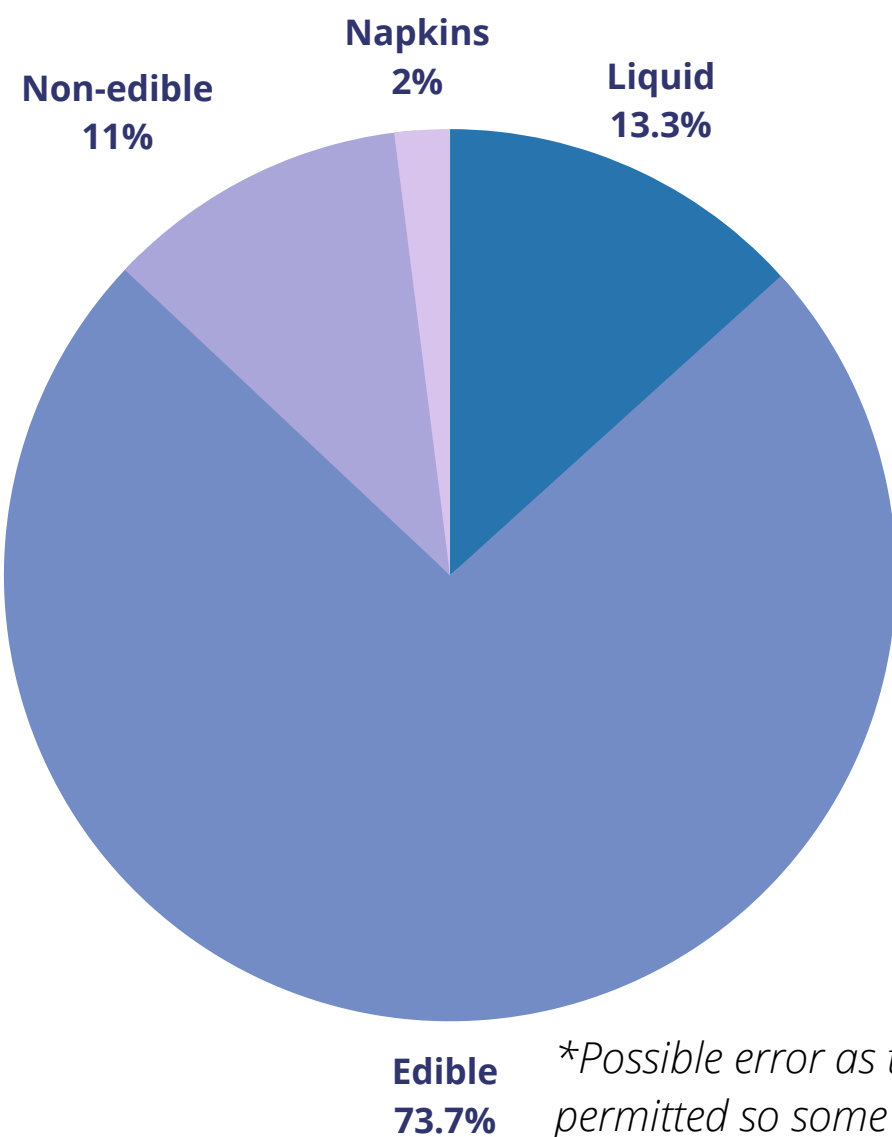




WASTE AUDIT RESULTS

B-PLATE*

Total = 103.48625 lbs;
0.08 lb/person

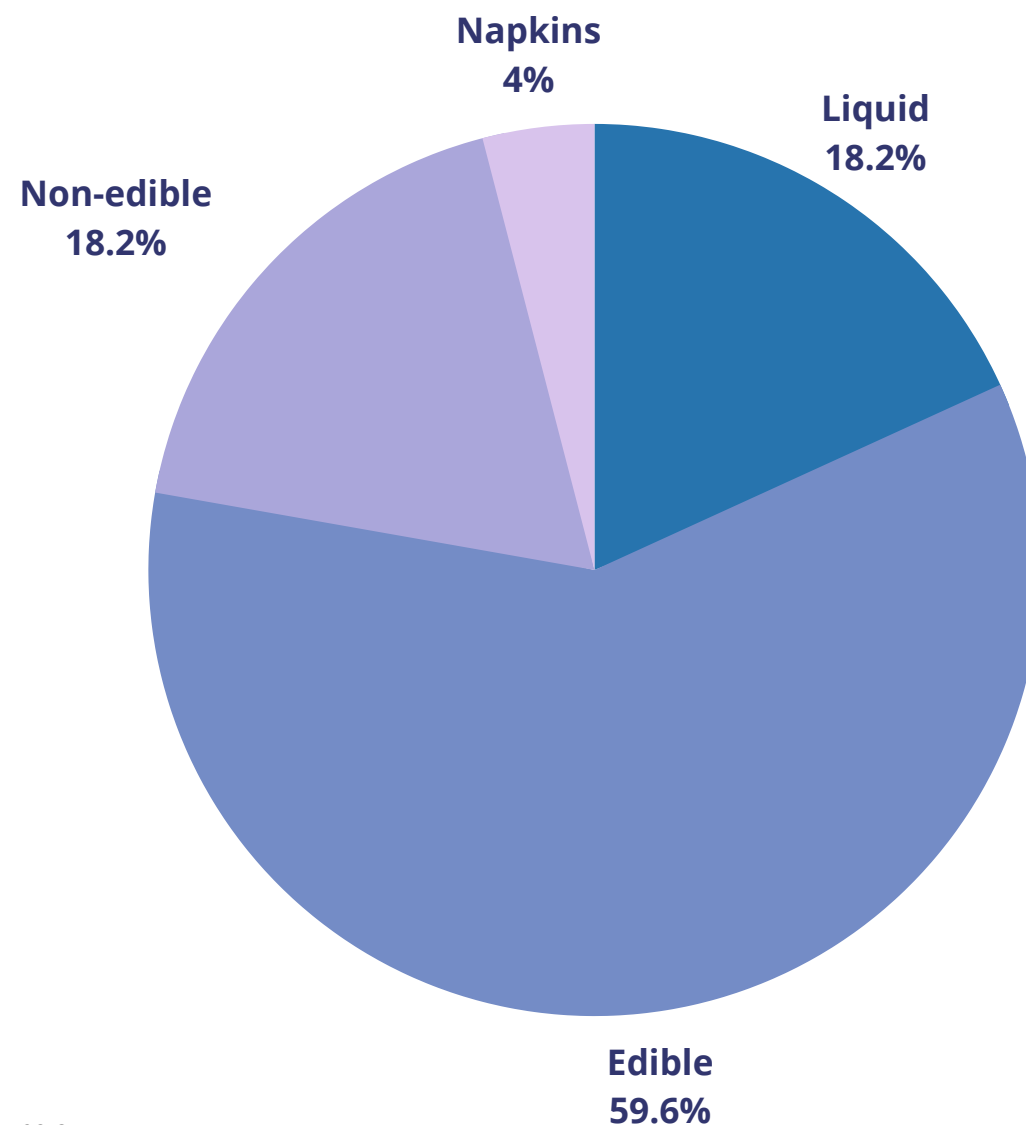


Edible
73.7%

**Possible error as take-out was permitted so some diners' waste may not have been accounted for.*

EPICURIA

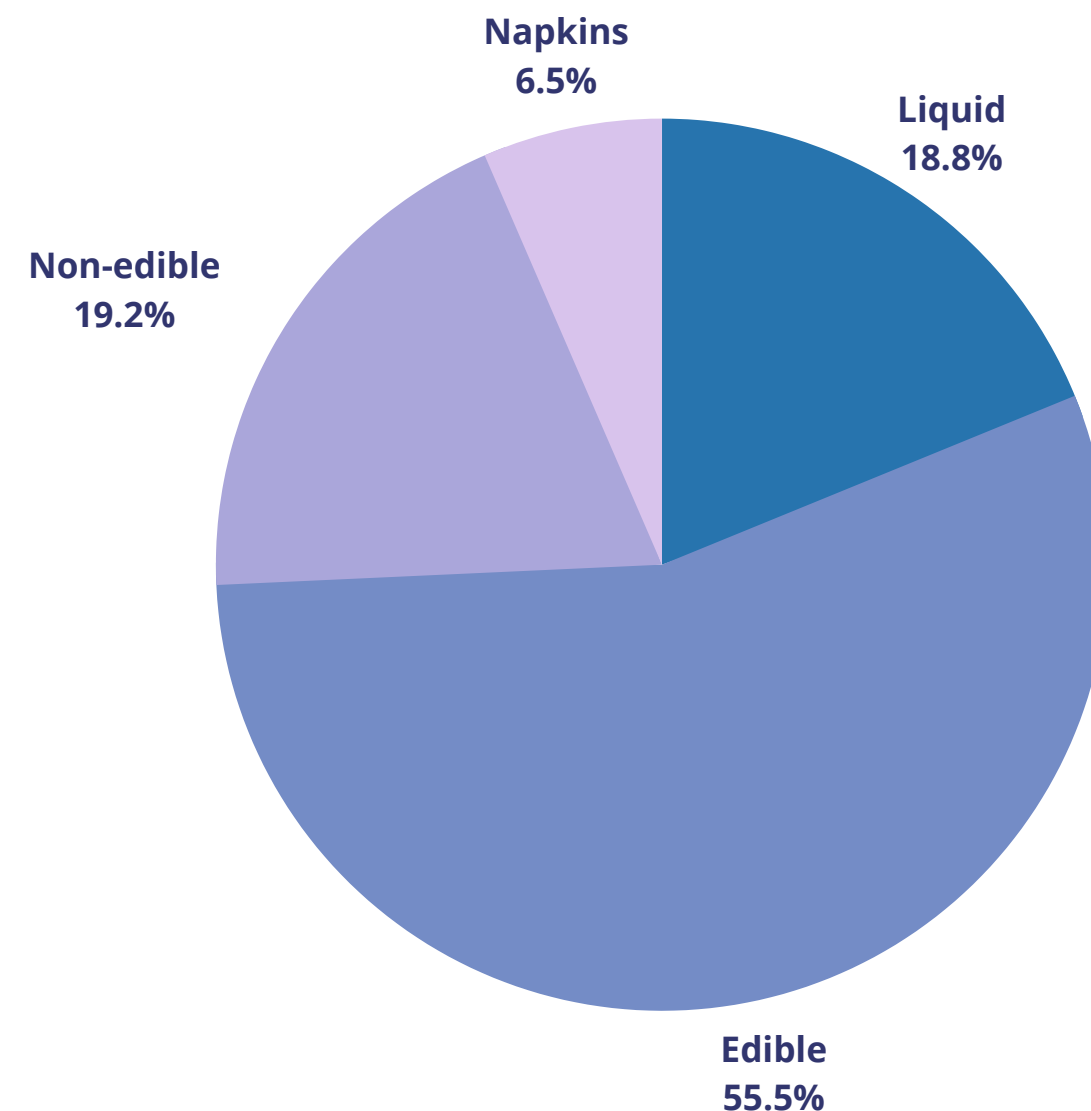
Total = 69.135 lbs;
0.07 lb/person



Edible
59.6%

DE NEVE

Total = 160.34 lbs;
0.16 lb/person



Edible
55.5%

- Over half of the waste is still edible at all dining halls, consistent with pre-COVID proportions.
- De Neve had much higher total weight and a significant amount of weight due to non-edible waste (e.g., chicken bones).
- At all locations, the volume of food waste has decreased drastically (4x) compared to pre-COVID conditions.



FUTURE WASTE AUDIT RECOMMENDATIONS

- Continue waste audits in front of dish room for **educational purposes**.
- Additional **sorting by food groups** (grains, vegetables, meat, etc.) to provide more granular results, but would have to implement on back-end to avoid long lines.
- **Paid waste audit coordinator student position** which could potentially be funded by UCLA Dining or sustainability-oriented grants.
- Conduct a **waste audit during Fall**, when many freshmen might be trying more food at dining halls.



OVERALL RECOMMENDATIONS FOR UCLA DINING

1

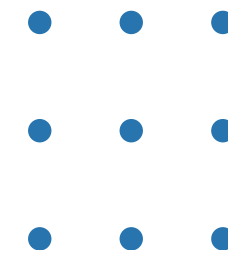
Put up marketing
materials on food
waste

2

Change plating to
offer separate side
and main dishes

3

Educate students &
dining staff on
customization



THREE KEY DELIVERABLES

1

RECOMMENDATIONS

- Entails specific possible portion reductions or changes to dishes more likely to be thrown away
- How to communicate better with students about the impact of their food waste habits

2

MARKETING GUIDE

- Provides examples and key strategies in communicating with students effectively

3

WASTE AUDIT DATA & GUIDE

- Provide a how-to guide for students to conduct waste audits and continue collecting data.
- Pass this how-to guide on to campus clubs or the student waste audit coordinator.



THANK YOU!

- Charles Wilcots
- Magyn Kydd
- Joey Martin
- Michelle Wellington
- TGIF
- UCLA Dining
- Carl & Cully
- SAR Directors
- Student Volunteers



WASTE AUDIT INITIAL RESULTS

(lbs)	B-Plate	Epicuria	De Neve
Liquid	13.7175	12.5	30.19
Edible	76.3125	41.04	88.90625
Non-edible	11.40625	12.595	30.8125
Napkins	2.05	3.0	10.4365
Total	103.48625	69.135	160.34