

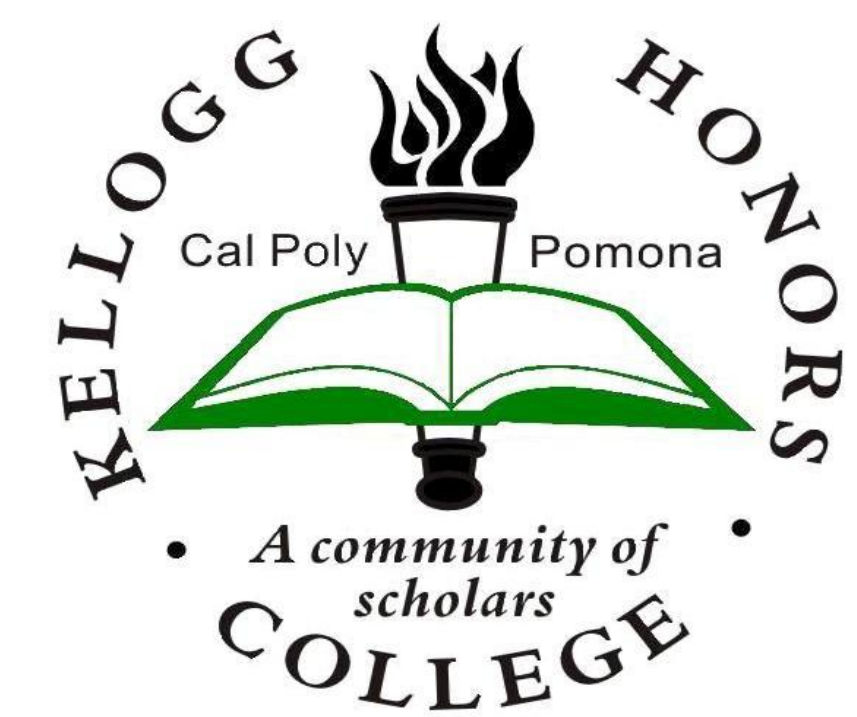
Food Waste in America Fueled by Date Label Confusion and Other Contributing Factors



Jonathan Rangel, Industrial Engineering

Mentor: Dr. Kamran Abedini

Kellogg Honors College Capstone Project



What factors contribute to food waste in America?

- Household Size
- Monthly Income
- Age & Gender
- Product Type: Dairy, Meats, Bread, etc.
- Date Labels: Best by, Sell by, Use by, etc.

Data Collection:

A survey was conducted on 50 participants responsible for throwing out food from their household. The survey demonstrated that 88% of the participants were aware they were throwing out a significant amount of food.

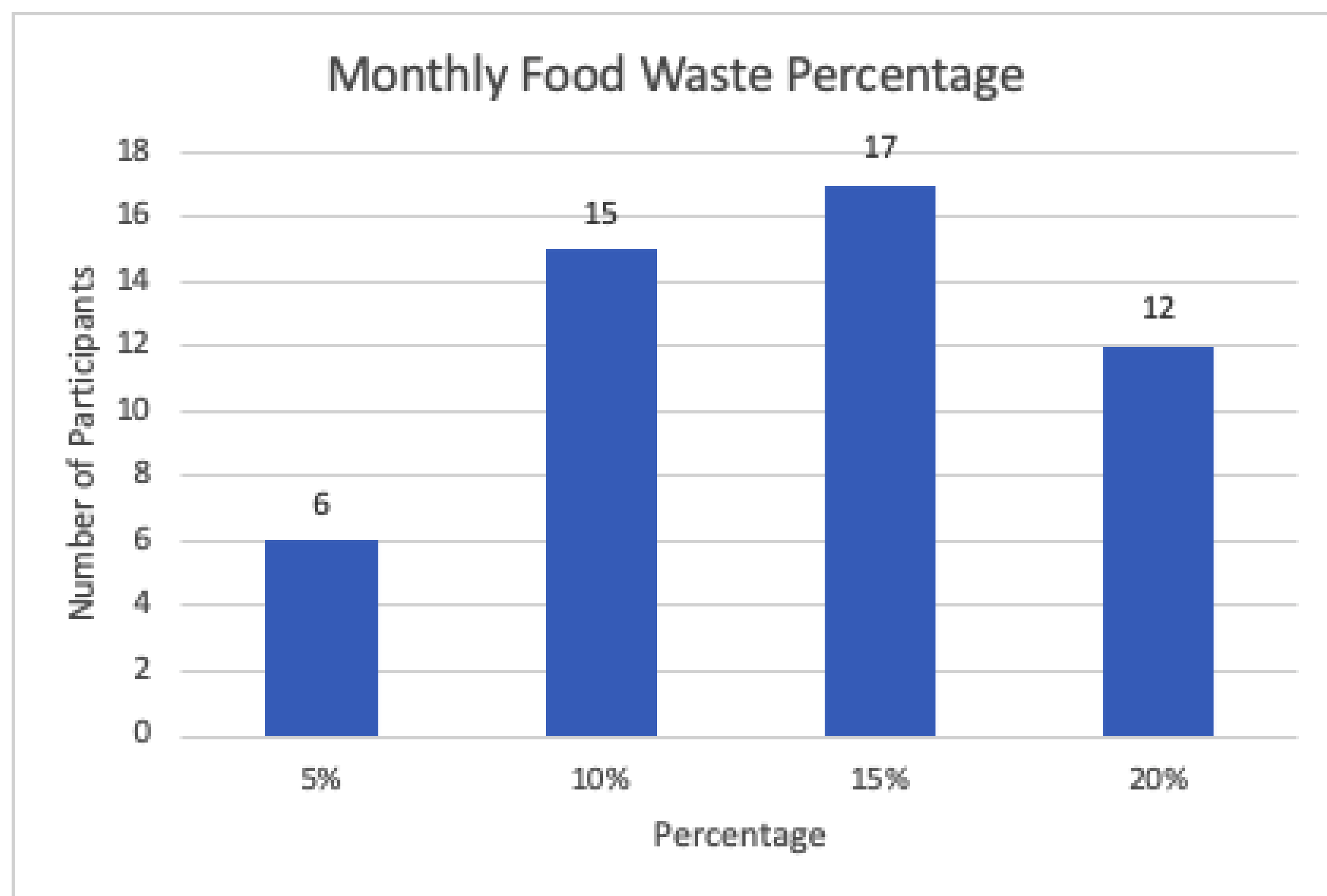
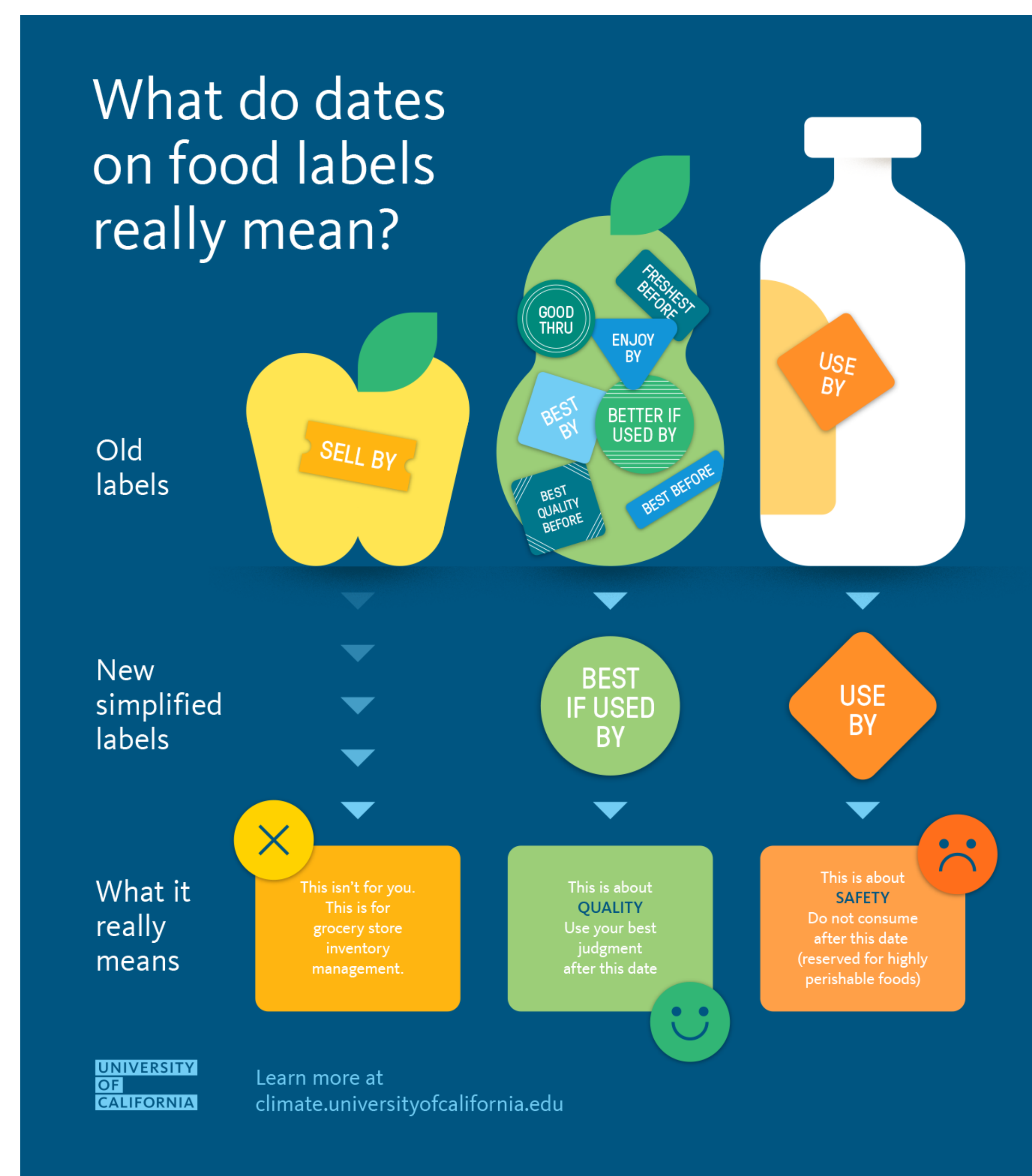


Figure 4: 88% of participants believed that their monthly food waste was at least 10%.

Consumer Perceptions of Date Labels:

- 84% of consumers OCCASIONALLY discard food close to or past the date on the label
- 37% of consumers ALWAYS discard food close to or past the date on the label

Do consumers really know what date labels mean?



Regression Model:

A regression model was determined for consumers to predict their household food waste percentage. Based on the data collected, the significant factors included in the regression model were "Household Size" (HS) and "Best By Yes" (BY).

$$y = 0.009181 * HS + 0.107911 * BY$$

Example: Size 4 household, consumer in charge usually throws out items that have passed the "BEST BY" date label. The food waste percentage for that household is predicted to be 14.5%.

Recommendations:

- Consumers:
 1. Plan meals to buy only necessary food items.
 2. Examine food properly before throwing out.
 3. Research meaning of food date labels.
- Government:
 1. Standardize and regulate date labels for all food products.