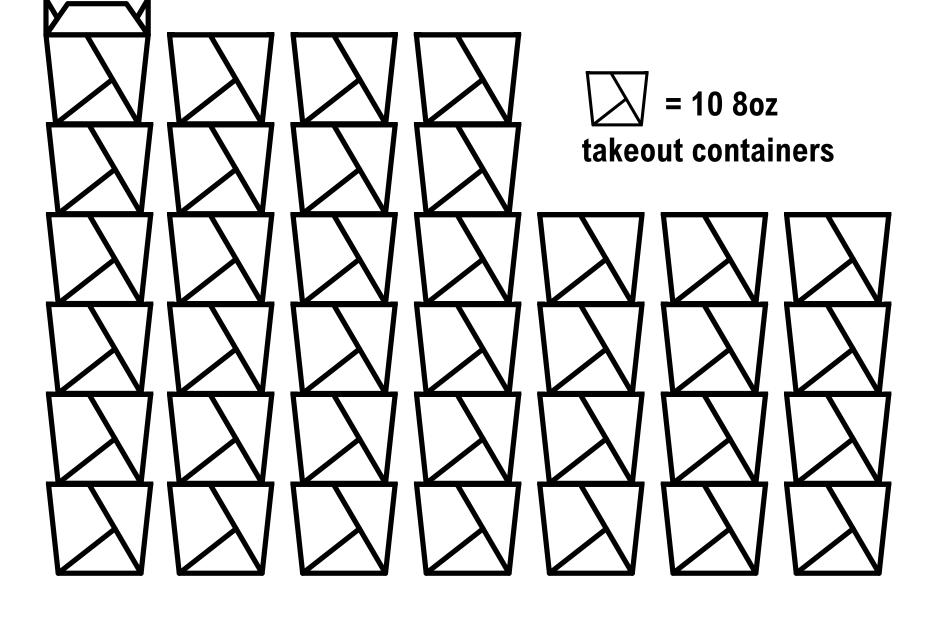


Source: From farm to kitchen: The environmental impacts of U.S. food waste | US EPA. (2022, November 28). US EPA.

## **Takeout the Trash**

Food waste from each American household could fill nearly 360 takeout containers every year



# How Much Is Almost 40 Billion Cups?

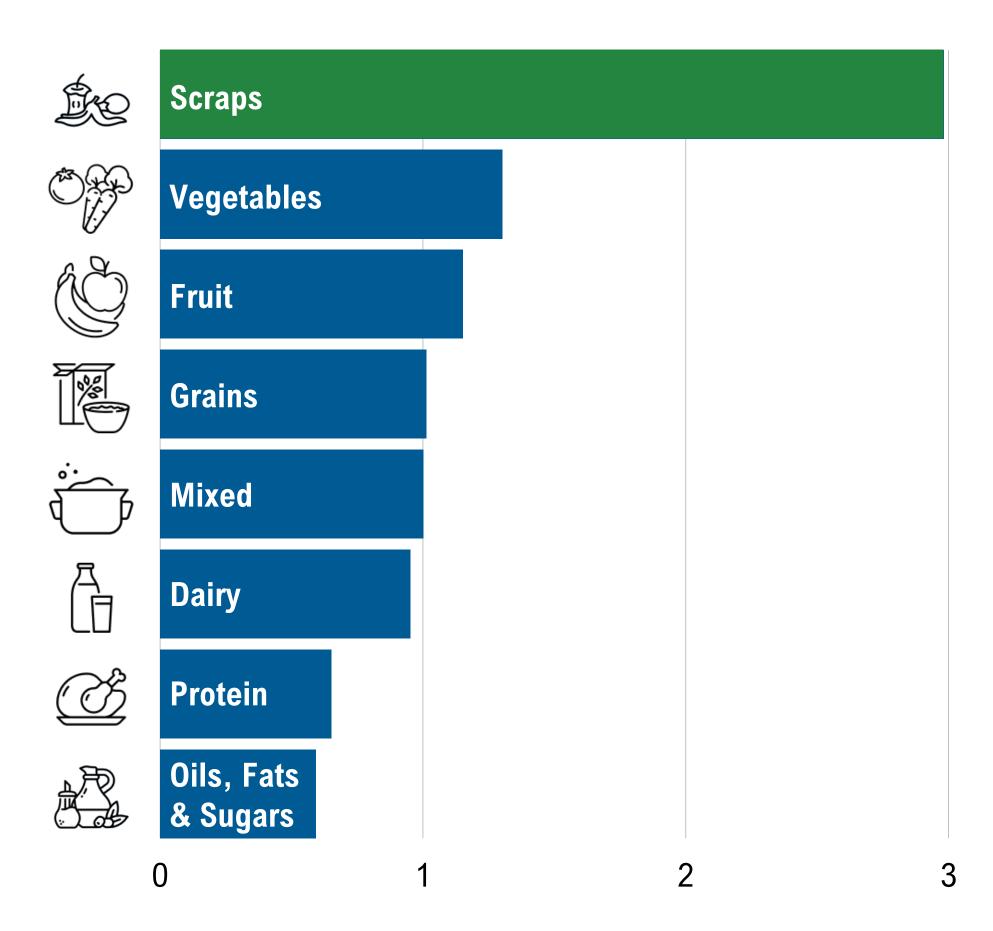
If stacked in a tower of one foot blocks of waste, annual American food waste across all households would stretch to the upper limits of our atmosphere: about 6,200 miles high.

Food Waste



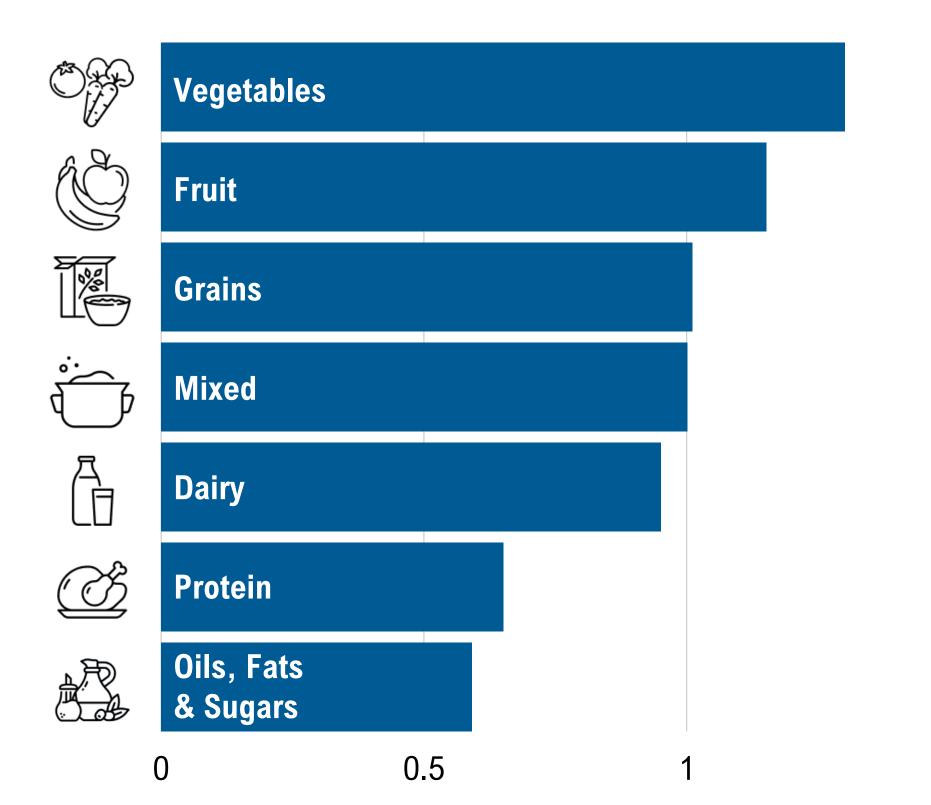
## Food Waste by Food Type

Average cups wasted per household over one week

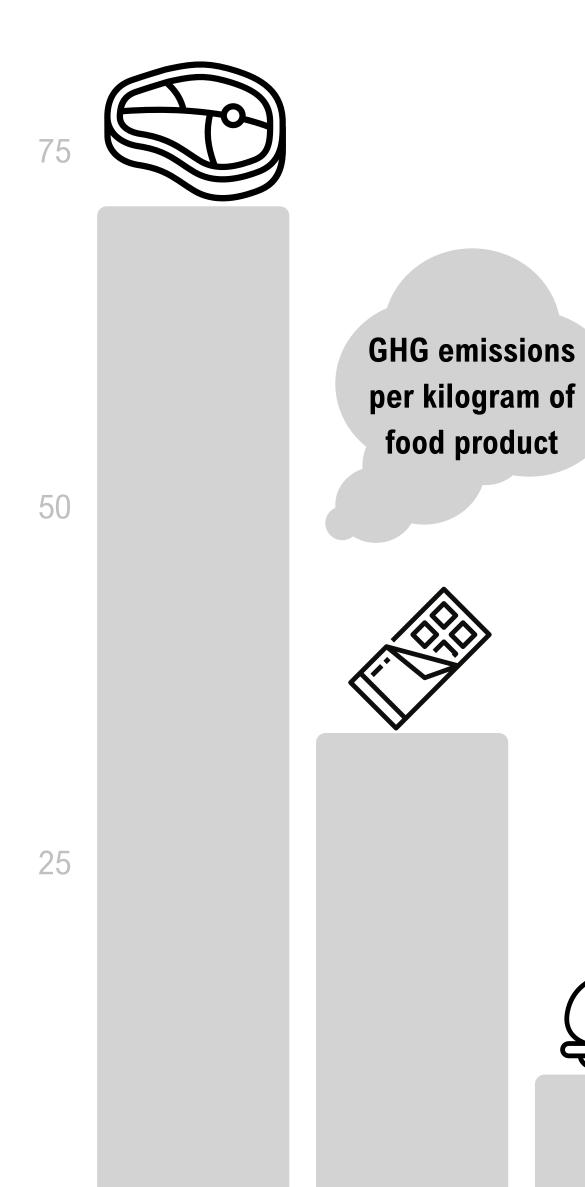


## Food Waste by Food Type

Average cups wasted per household over one week







0

**Beef** 

## Not All Waste is Equal

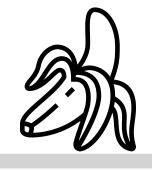
Wasting some foods impacts the environment more than others when evaluated at each stage of the supply chain, from farm to fork. Take for example, the vast difference in greenhouse gas emissions per kilogram of beef compared to bananas.

Not to mention, some foods take significantly more resources-water, land, fertilizer, feed-- to produce than others.

This makes the categorization of wasted food a key step in research efforts.



**Tomatoes** 



Bananas

Source: Poore & Nemecek (2018). Reducing food's environmental impacts through producers and consumers. Science.

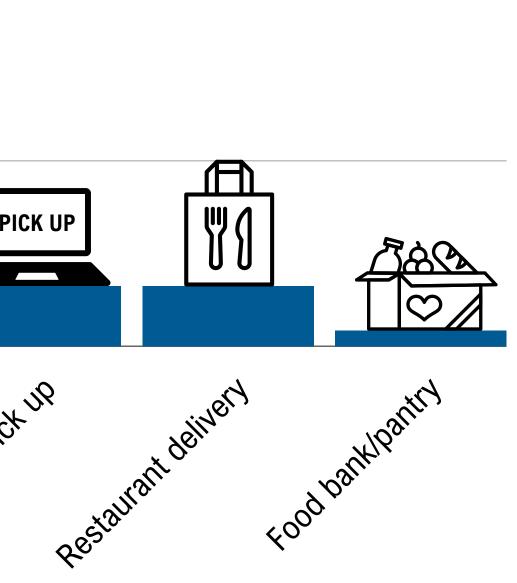
Chicken

**Chocolate** 

555

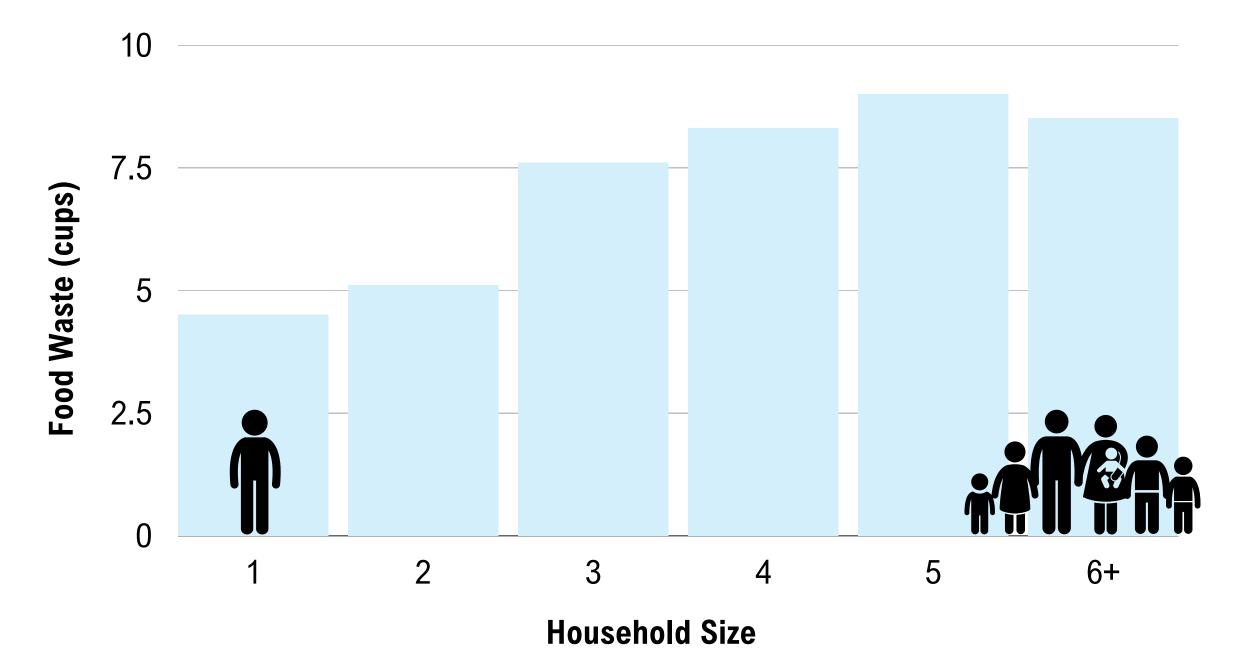
### Percent of households who obtain food using the following places at least once a week 75% 50% X TAKE Ð OUT (::)25% DELIVERY **PICK UP** 0% out at restaurant Restaurant deinery Online grocentpick up In-person grocery Online grocery delivery 7 akerout restaurant In-person market

## Where Does our Food Come From?



## Food Waste by Household Size

Average cups wasted per household over one week

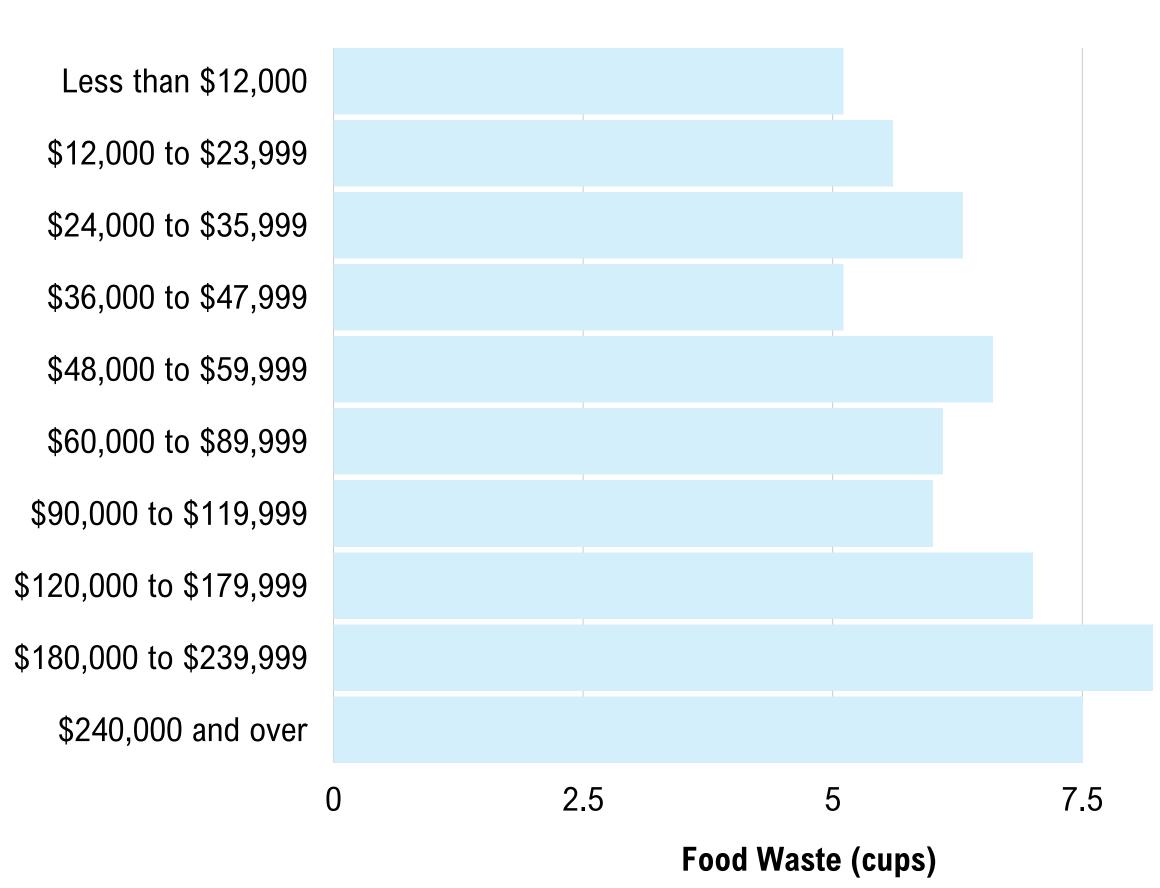


## Food Waste by Household Income



10

Average cups wasted per household over one week



## **Food Waste by Highest Education**

Average cups wasted per household over one week

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Less than high school

High school

Technical, trade, vocational, or business program

Some college

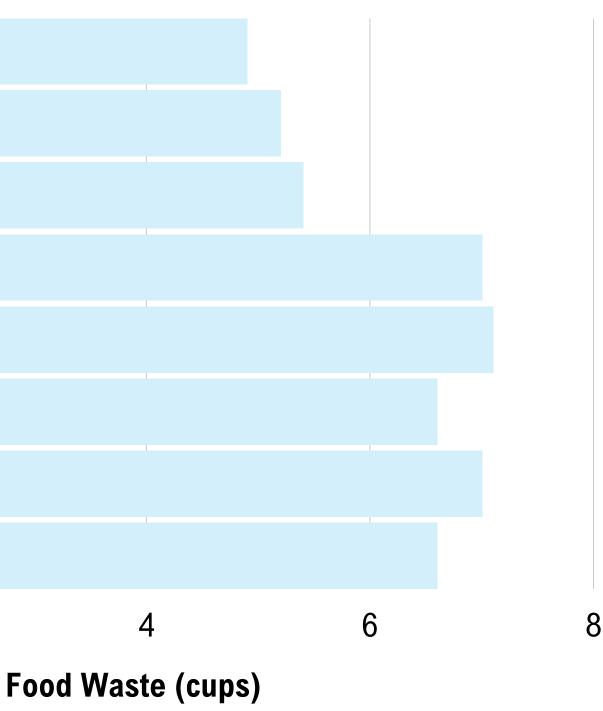
Two-year associate degree

Four-year bachelor's degree

Some postgraduate or professional schooling

Postgraduate or professional degree





## Is "Best By" the Best Measure?

Did you know date labels can indicate the safety OR quality of food, and are only federally regulated on infant formula? The language on date labels is unstandardized and misinterpreted by many, resulting in prematurely discarded food. For your safety, follow package date recommendations on high risk foods such as ready-to-eat deli meats that are typically consumed without being cooked; however, for most food, trust your senses when deciding if something is safe to buy or eat!



**31%** of Americans **dispose of food** that has passed its date label

59% of Americans arefrequently influenced by datelabels when deciding topurchase a food item

18% of Americans worry about eating food past its "use by" date, and 15% past its "best if used by date" even with no signs of spoilage INSTEAD...



**LOOK** for discoloration, mold, or signs of spoilage



SMELL anything unusual? Check for rancid or unexpected odors



**FEEL** for bruising, sliminess, or staleness



**TASTE** a bite if it seems safe, to make sure the flavor is as expected

# The second secon

## 



### 81% Food prices

### **56%** The healthiness of food in my diet

### 34% Food waste

31% Hormones, steroids, or antibiotics in food

- 29% Being able to afford to buy enough food for myself/my family
- 28% The use of pesticides to grow food

### **26%** Food poisoning (e.g., Salmonella and E. Coli)

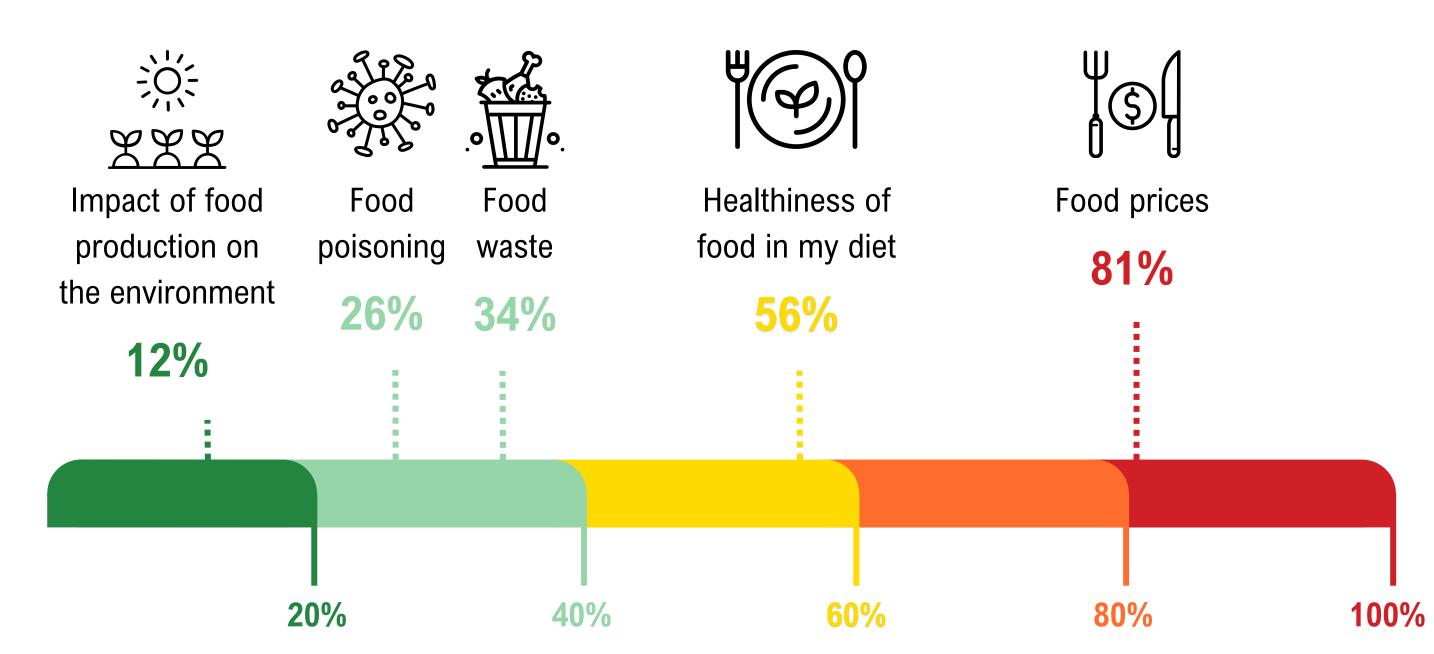
- 23% Genetically modified food
- **19%** Availability of food in stores

17% How food producers and farmers are treated

- **16%** The amount of food packaging
- **15%** The impact of food production and waste on climate change
- 14% Animal welfare
- **12%** Difficulty recycling food packaging
- 12% The impact of food production on the environment

## What Worries Us?

Percentage of respondents who identified the food issue among their top five concerns



## **Top Food-Saving Motivators**

Percentage of respondents who indicate the issue motivates them "a fair amount" or "a great deal" to reduce their food waste





saving **money** 

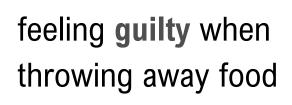














considering global or national food shortages

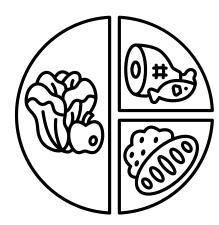




reducing impact on the <mark>environment</mark>

## When Abundance Becomes Excess

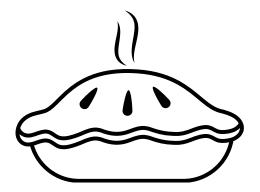
For many households, holidays are a time for enjoying good food in good company. Serving platters are heaped with a variety of options, and we pile our plates with the plentiful spread. While there's nothing wrong with enjoying an indulgent meal as part of your holiday celebration, keep these things in mind as you host or attend food-filled festivities:



**59% of Americans** prepare portion sizes they know will be eaten

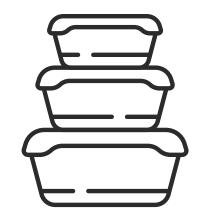
## **PARE DOWN PORTIONS**

While eating: Don't let your eyes be bigger than your stomach. Be realistic with the serving you take, and remember it's easier to go back for more than to un-cut that extra slice of turkey!



Eat it up! 71% of **Americans feel guilty** throwing food away

**\_UNCH ON LEFTOVERS** While eating: Just because the holiday is over doesn't mean the good food has to end! Pack up tasty extras and enjoy them for days to come. Make them last by freezing them, or mix things up by incorporating them into new dishes!



49% of Americans eat leftovers as a meal by themselves more than once a week

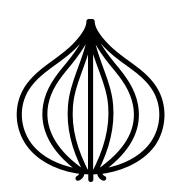


## **OPTIMIZE OPTIONS**

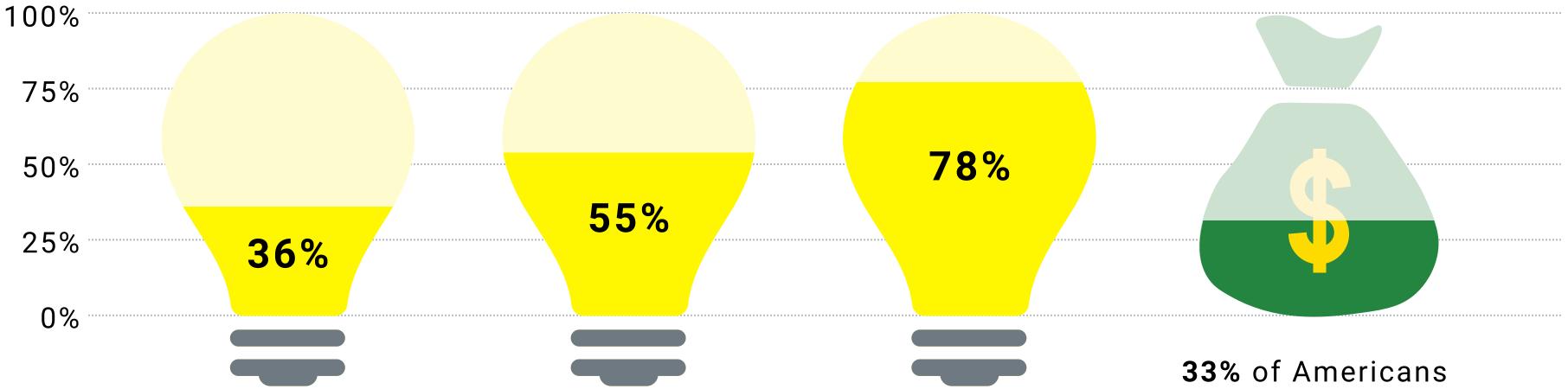
While cooking: Is that 5th variety of pie going to make or break the dessert spread? Offer a mix of dishes without overwhelming your guests with options so more food is enjoyed fresh!

## **INTEGRATE INGREDIENTS**

While cooking: Does your menu play nice together? Rather than having a shopping list a mile long and tossing out halffinished ingredients, choose dishes which use similar ingredients, or ingredients you already have on hand. Consider how excess ingredients can be used in your next recipe!

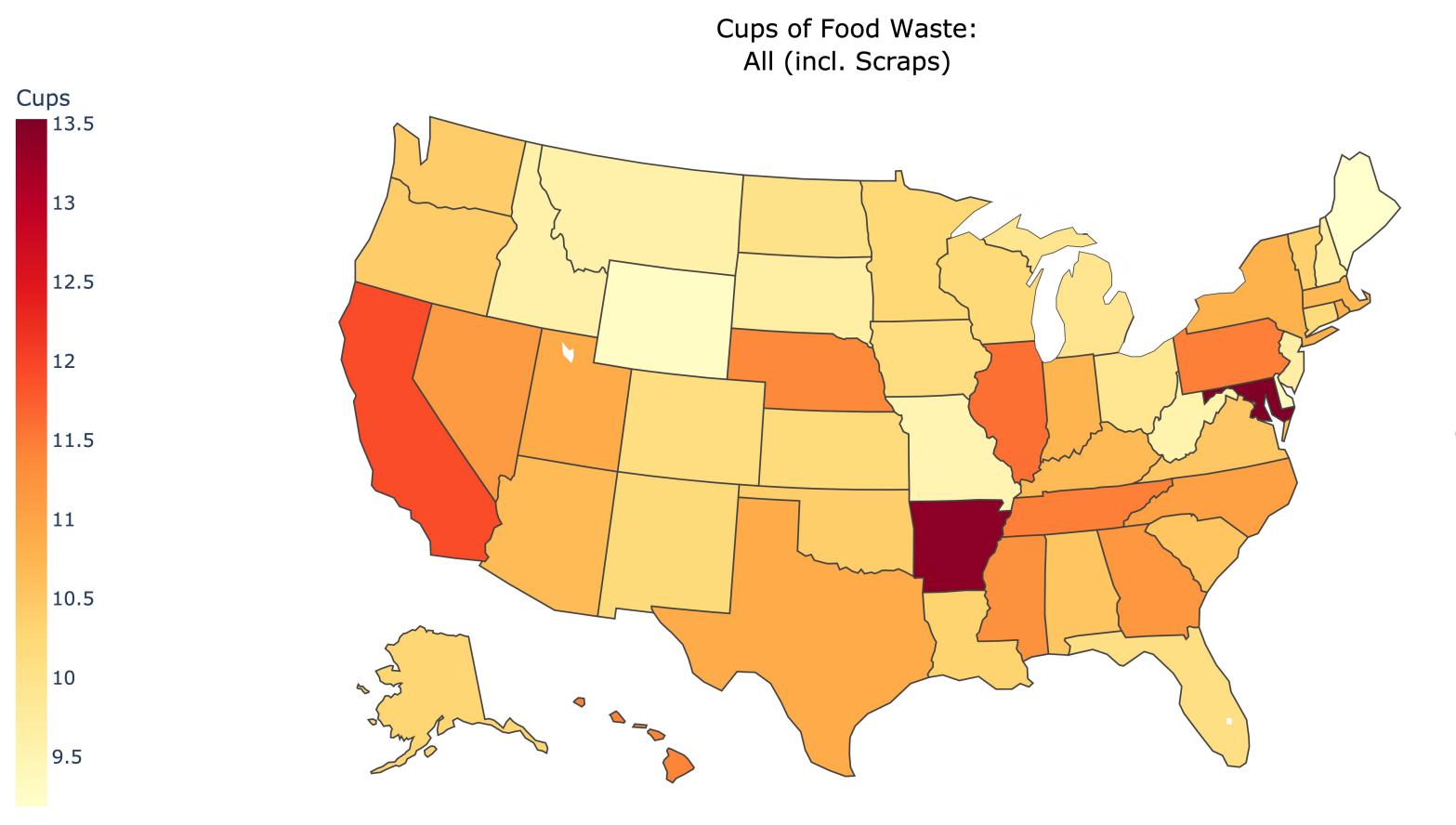


**Only 26% of Americans** regularly use leftovers or partially used food as ingredients in future meals

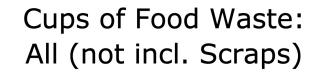


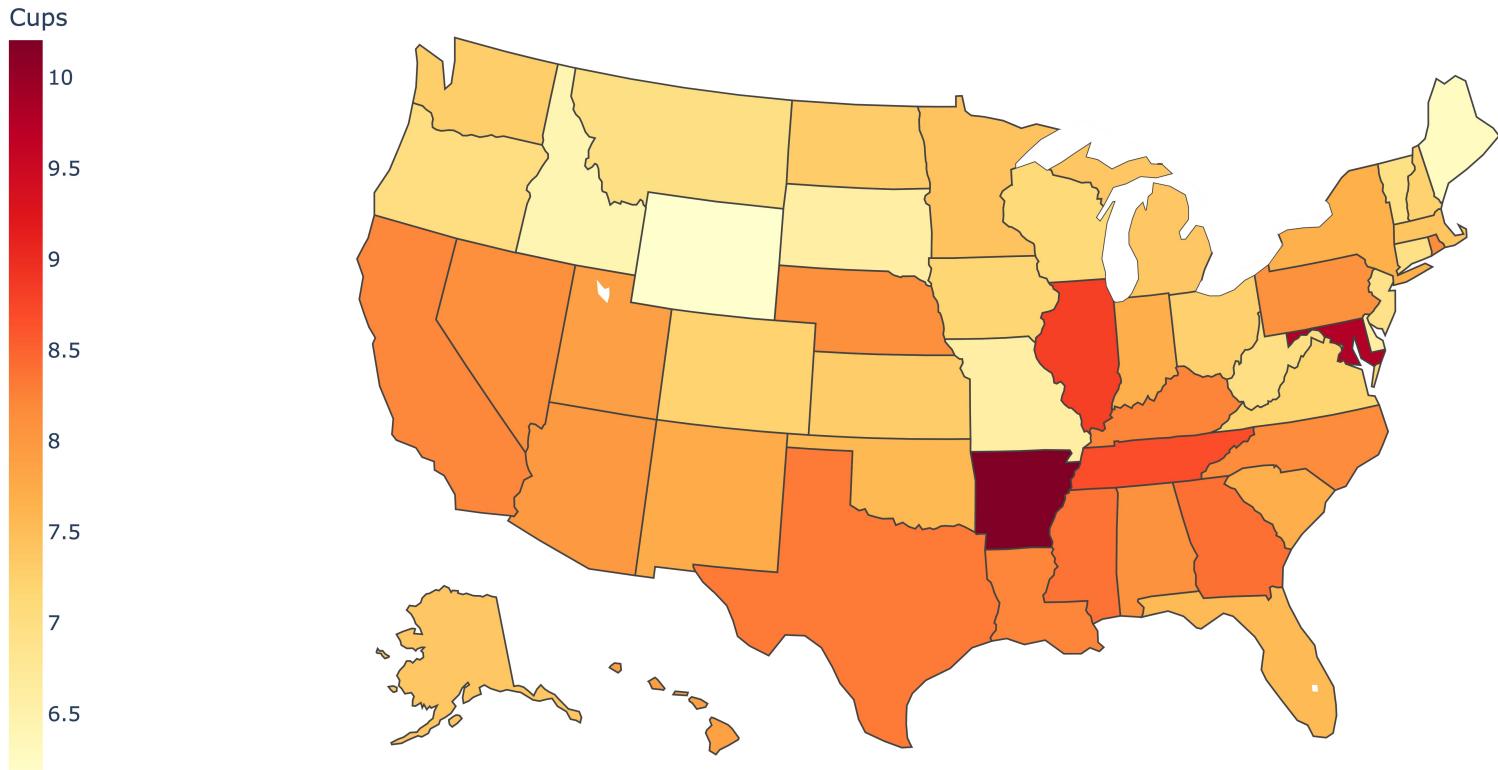
**36%** of Americans strongly agree more food is wasted in the U.S. than in most countries

**55%** of Americans believe that climate change is a consequence of food waste **78%** of Americans believe the waste of water, energy, or natural resources is a consequence of food waste 33% of Americans know a typical household could save \$101 - \$300 each month, which equates to about \$1,500 of savings each year



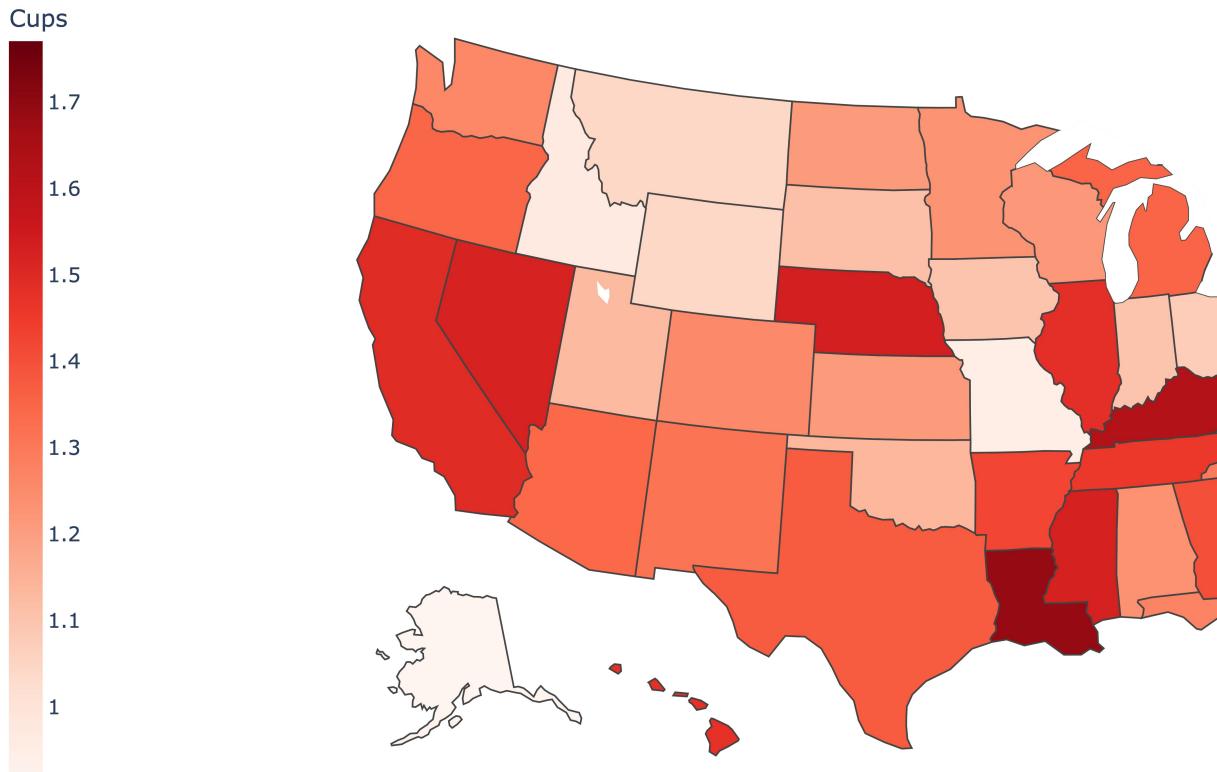
- Maryland: 13.5 Arkansas: 13.4 California: 11.9
- • Delaware: 9.4
- Wyoming: 9.3 Maine: 9.2





- Arkansas: 10.2 Maryland: 9.8 Illinois: 8.8
  - Idaho: 6.4 Maine: 6.3
- Wyoming: 6.1



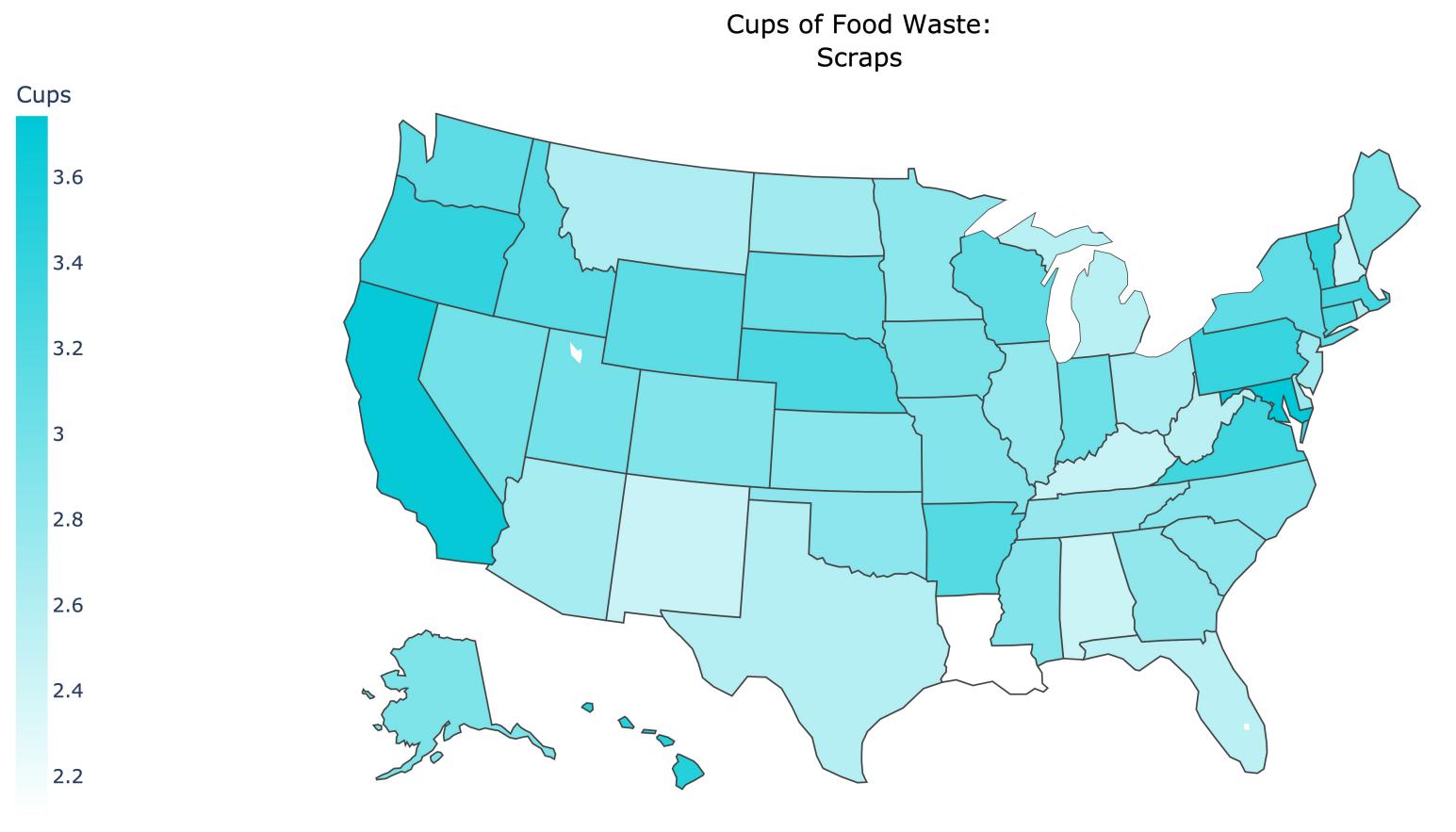


- Maryland: 1.8 Louisiana: 1.7 D.C.: 1.6

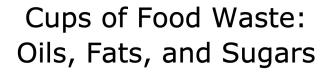
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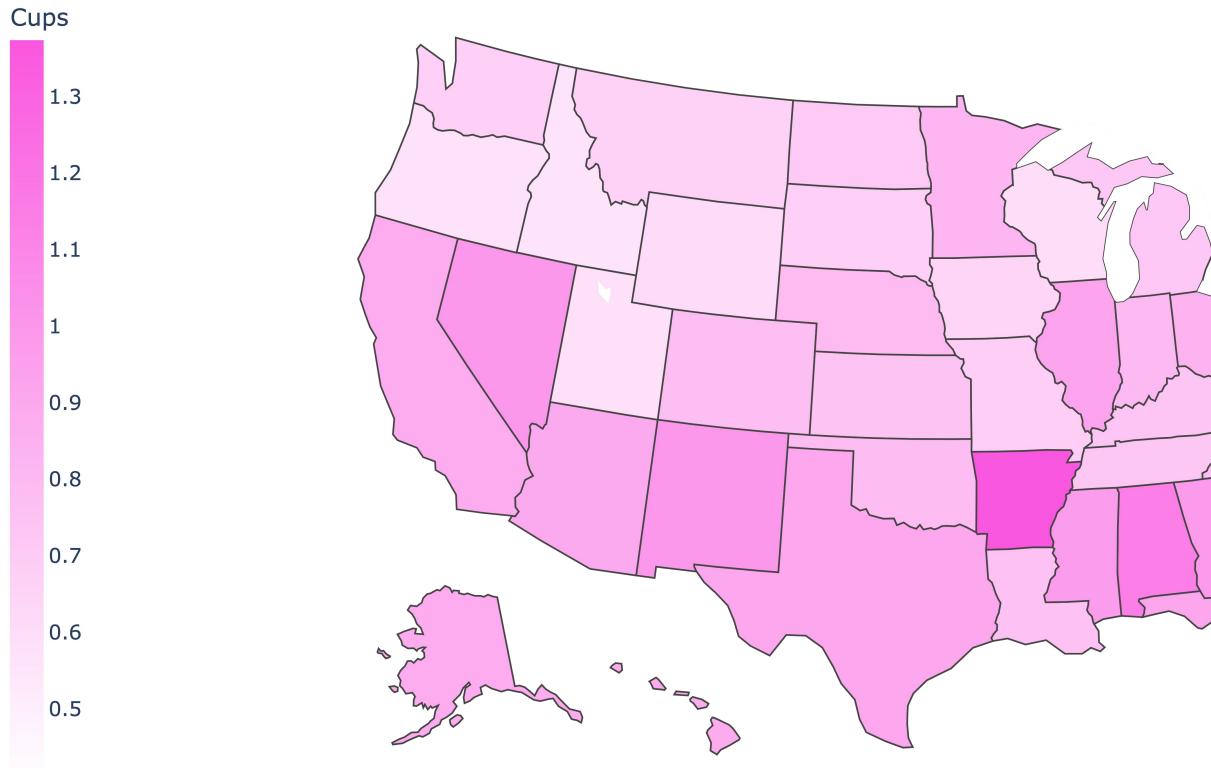
- West Virginia: 1.0

  - Missouri: 1.0 Alaska: 0.9

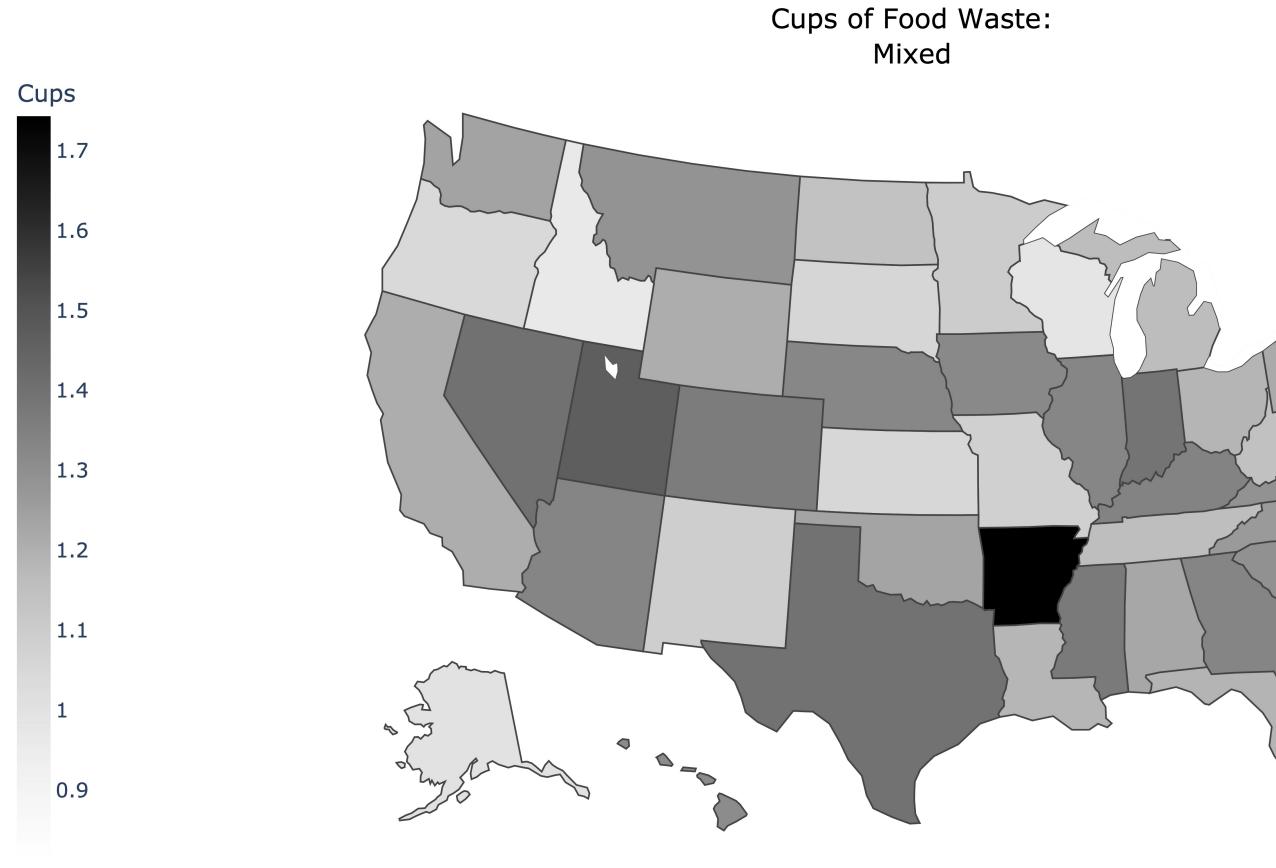


- Maryland: 3.7
- California: 3.7
  - Hawaii: 3.5
    - •••
- New Mexico: 2.5
  - Alabama: 2.5
  - Louisiana: 2.1





- Arkansas: 1.4
- Alabama: 1.1
- New Mexico: 1.0
  - ....
  - Oregon: 0.6
  - Idaho: 0.6
  - Vermont: 0.4

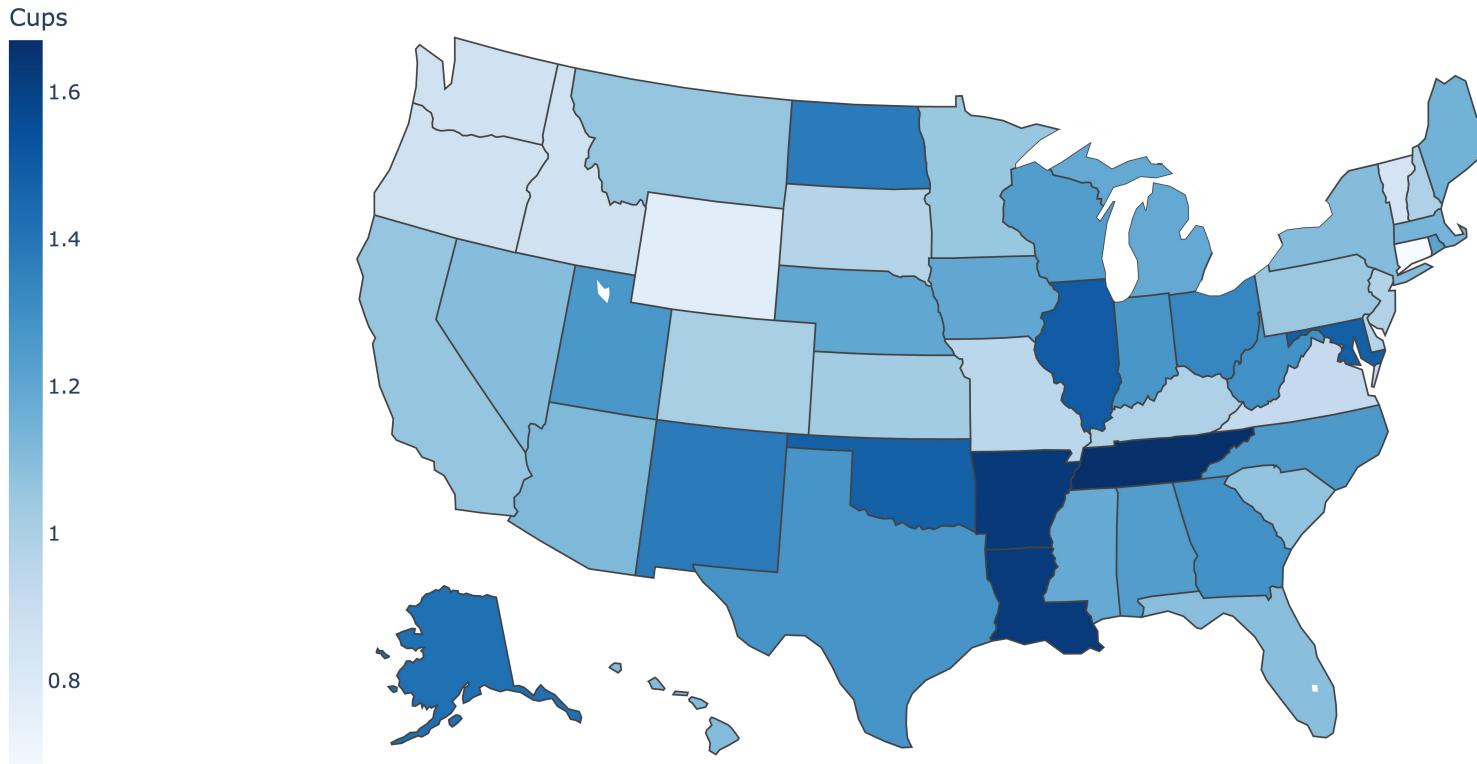


- Arkansas: 1.7
  - Utah: 1.5
- Maryland: 1.4

•••

- Massachusetts: 0.9
- New Hampshire: 0.8
  - Maine: 0.8

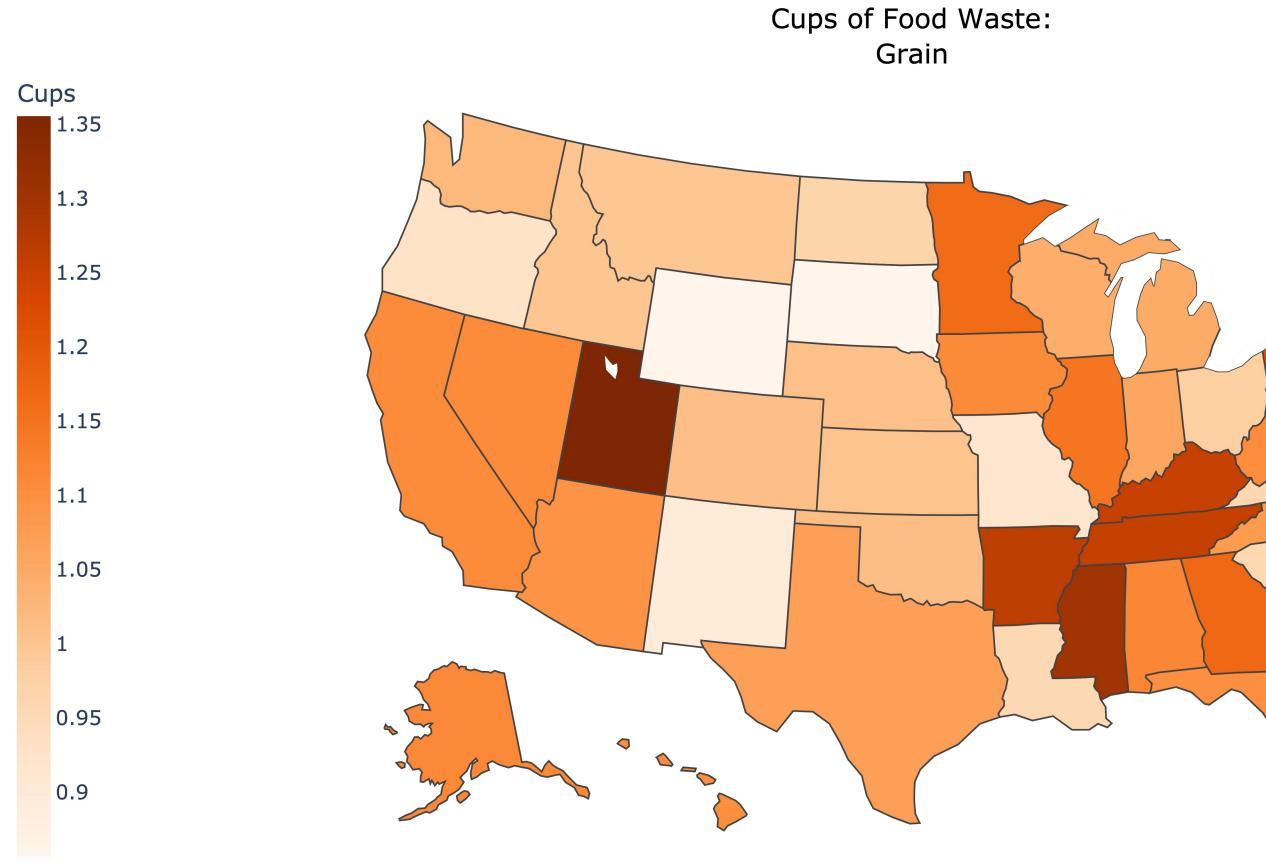




- Tennessee: 1.7
- Arkansas: 1.6
- Louisiana: 1.6

...

- Vermont: 0.8
- Wyoming: 0.8 Connecticut: 0.7

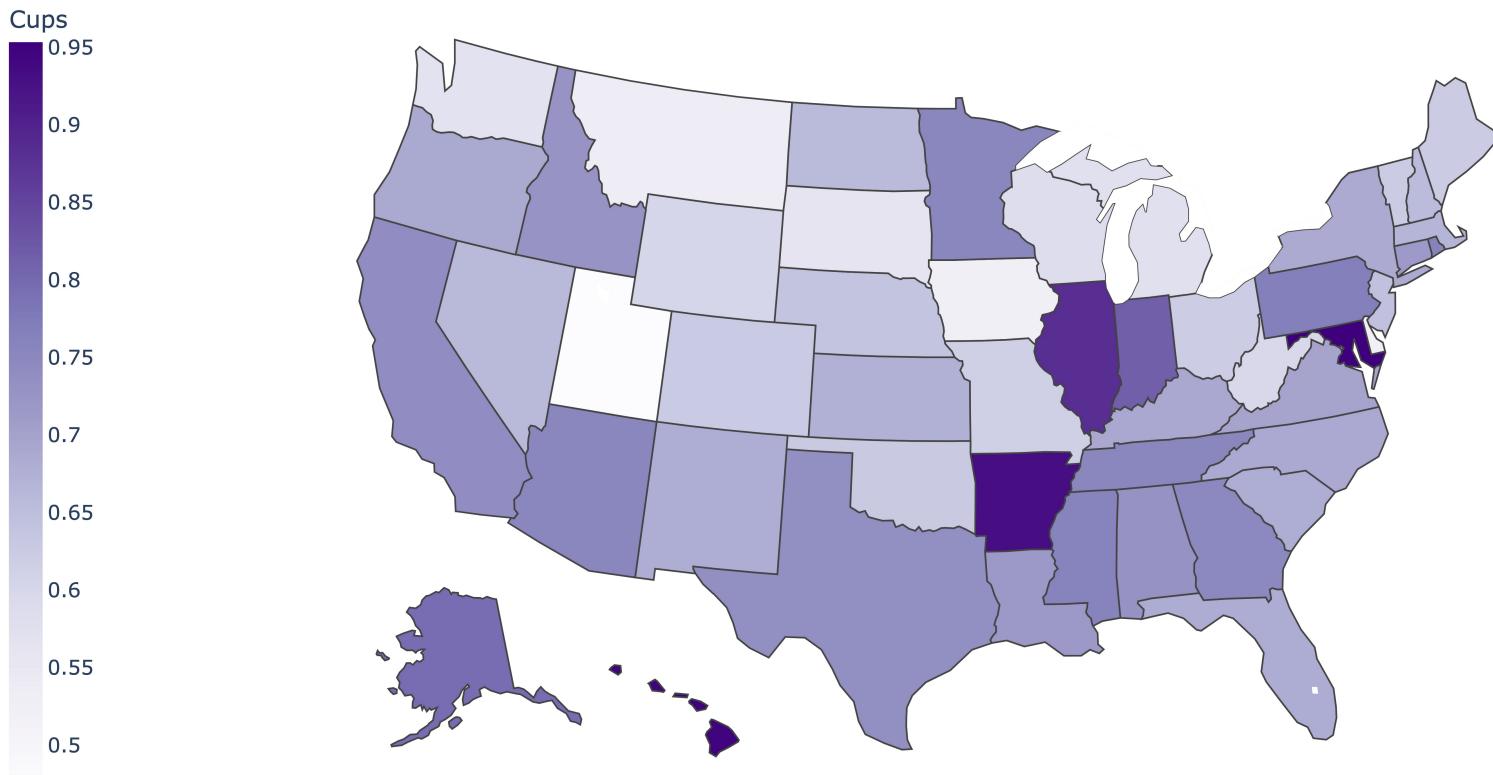


- Utah: 1.4
- Mississippi: 1.3 Arkansas: 1.3

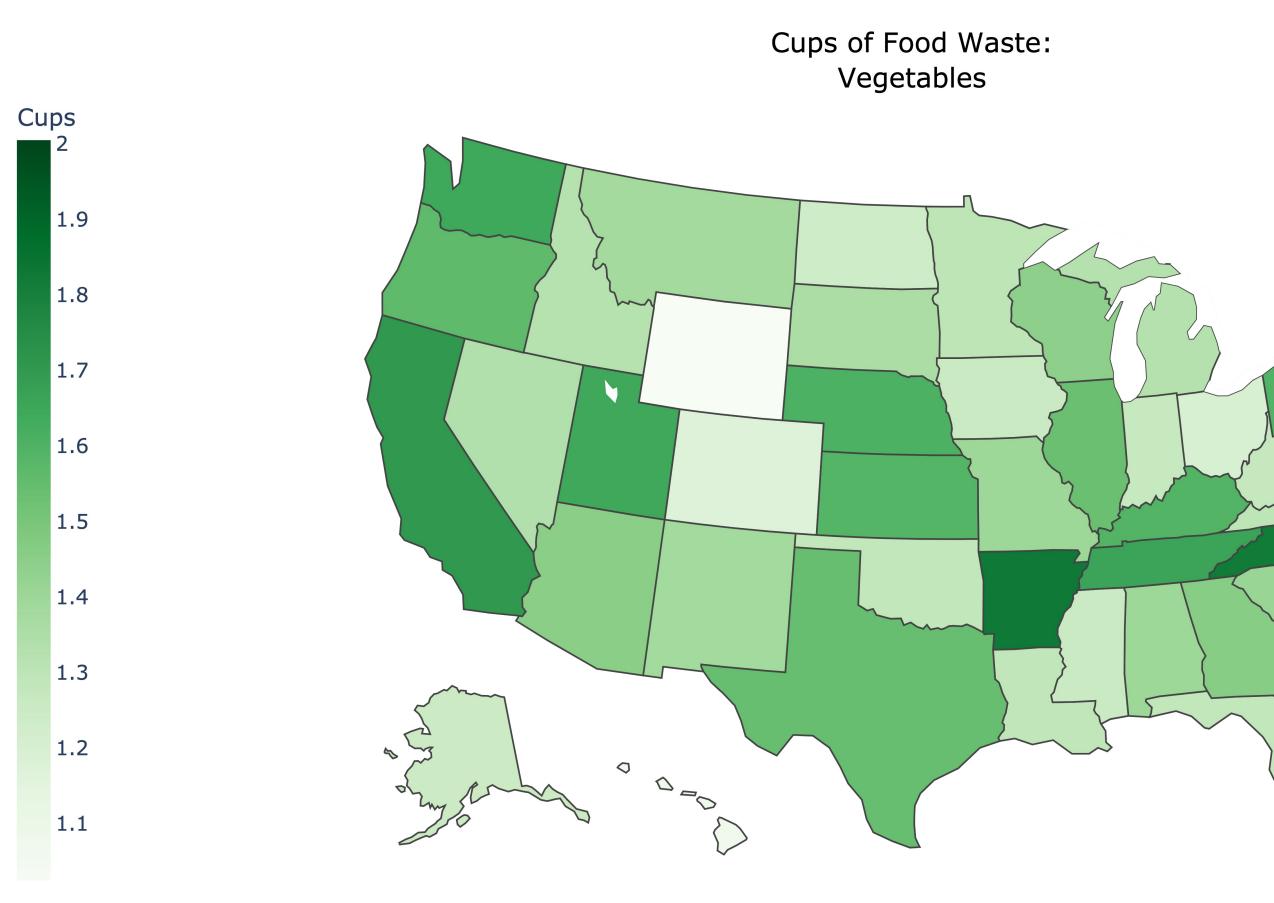
....

- Delaware: 0.9
- South Dakota: 0.9
  - Wyoming: 0.9





- Maryland: 1.0 Hawaii: 0.9 Arkansas: 0.9 ... Iowa: 0.5 Delaware: 0.5
- Delaware: 0.5 Utah: 0.5



- Maryland: 2.0
- Arkansas: 1.8
- North Carolina: 1.8

#### • • •

- Hawaii: 1.1
- Maine: 1.1
- Wyoming: 1.0

## State Rankings: Reported Edible Food Waste

#### LOWEST

- 1 Wyoming
- 2 Maine
- 3 Idaho
- 4 Delaware
- 5 Missouri
- 6 South Dakota
- 7 New Jersey
- 8 Connecticut
- 9 Vermont
- 10 Montana
- **11** West Virginia
- 12 Oregon
- 13 Wisconsin
- 14 Iowa
- 15 Virginia
- 16 Colorado
- 17 New Hampshire

- 18 Ohio
- 19 Washington
- 20 North Dakota
- 21 Kansas
- 22 Michigan
- 23 Alaska
- 24 Massachusetts
- 25 Minnesota
- 26 District of Columbia
- 27 Florida
- 28 Oklahoma
- 29 New York
- 30 South Carolina
- 31 Indiana
- 32 New Mexico
- 33 Hawaii
- 34 Utah

- 35 Arizona
- 36 Pennsylvania
- 37 Alabama
- 38 Nebraska
- 39 Nevada
- 40 Rhode Island
- 41 North Carolina
- 42 California
- 43 Louisiana
- 44 Kentucky
- 45 Texas
- 46 Mississippi
- 47 Georgia
- 48 Tennessee
- 49 Illinois
- 50 Maryland
- 51 Arkansas

#### HIGHEST

## **Preferred Policies**

### **MOST PREFERRED**



surplus **donation** requirement



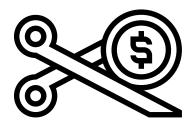
liability protection for donations



in-school food waste **education** 



food waste reduction targets



tax incentives for food donation



drop-off for organic waste

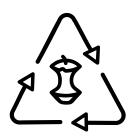


public food waste outreach

#### LEAST PREFERRED



pick-up for organic waste



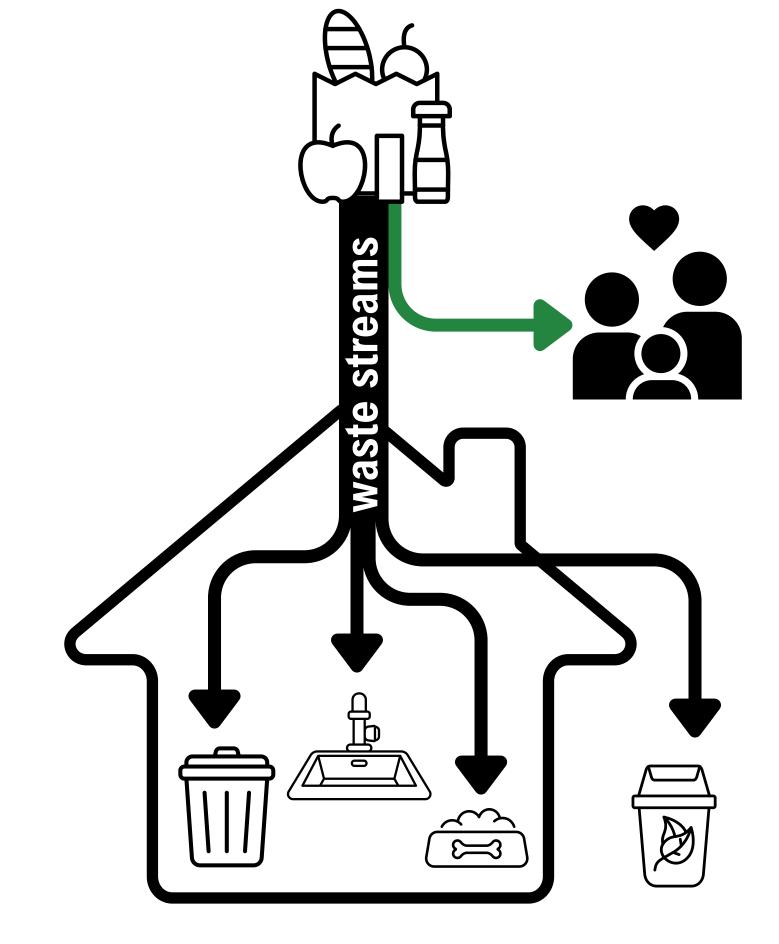
**mandatory** food composting



ban food waste from **landfills** 



**pay-as-you-throw** food waste pricing



## **Household Food Waste**

## NATIONALLY REPRESENTATIVE SURVEY 9,259 respondents

measure household food waste behaviors, knowledge, amount, and demographics

## FOOD WASTE TRACKER APP 257 participants

measure objective waste over one week

## VOLUME ESTIMATION 114 participants

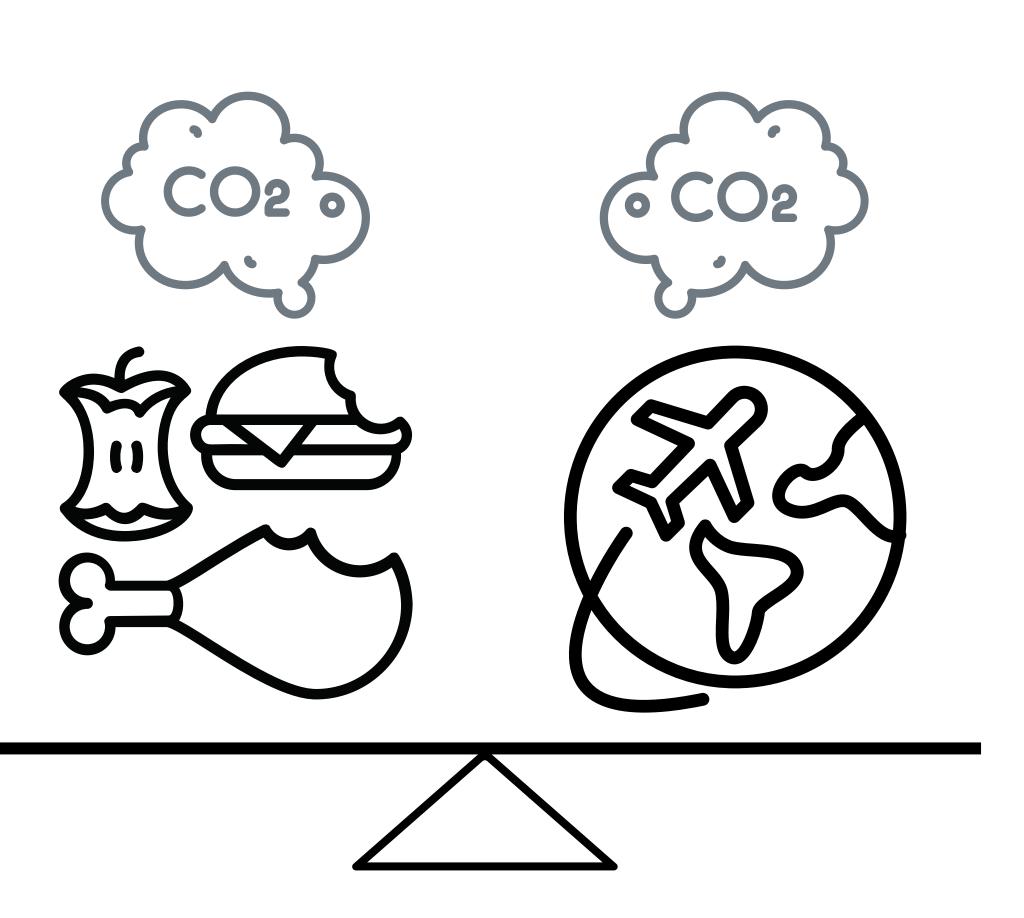
track waste using volume estimations only, as measured in cups and tablespoons

## BLUETOOTH SCALE 143 participants

track waste using volume estimations AND scale weights measured in grams

## Food Footprint = Flight Footprint

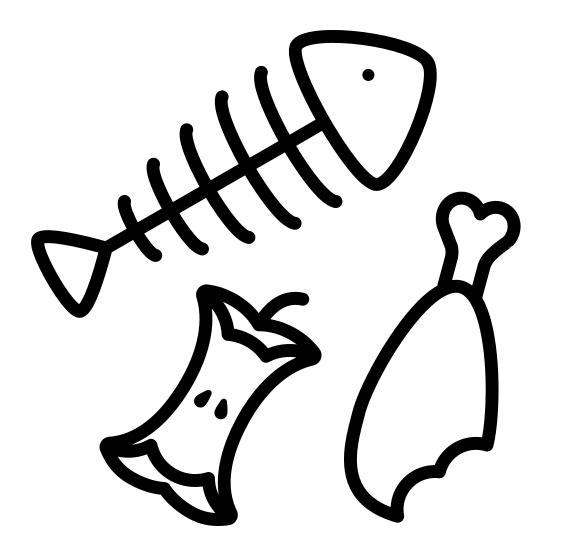
The climate footprint of American food waste is equivalent to that of the United States aviation industry passenger, commercial, and military combined.



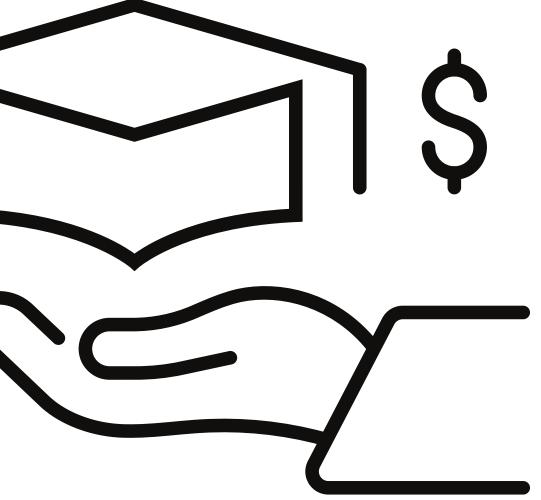
Source: ReFED. Food Waste Solutions - Reduce food waste, food recycling & recovery. https://refed.org/

**One year of food waste** costs the United States an estimated

# \$310 billion

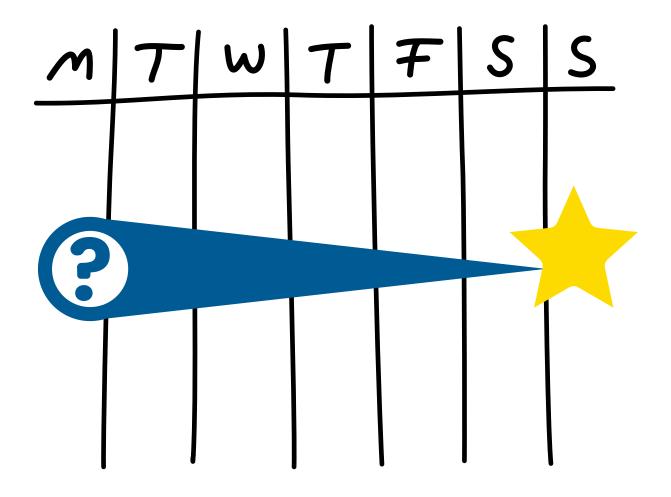


## That's equivalent to nearly 6 million years of tuition at Harvard



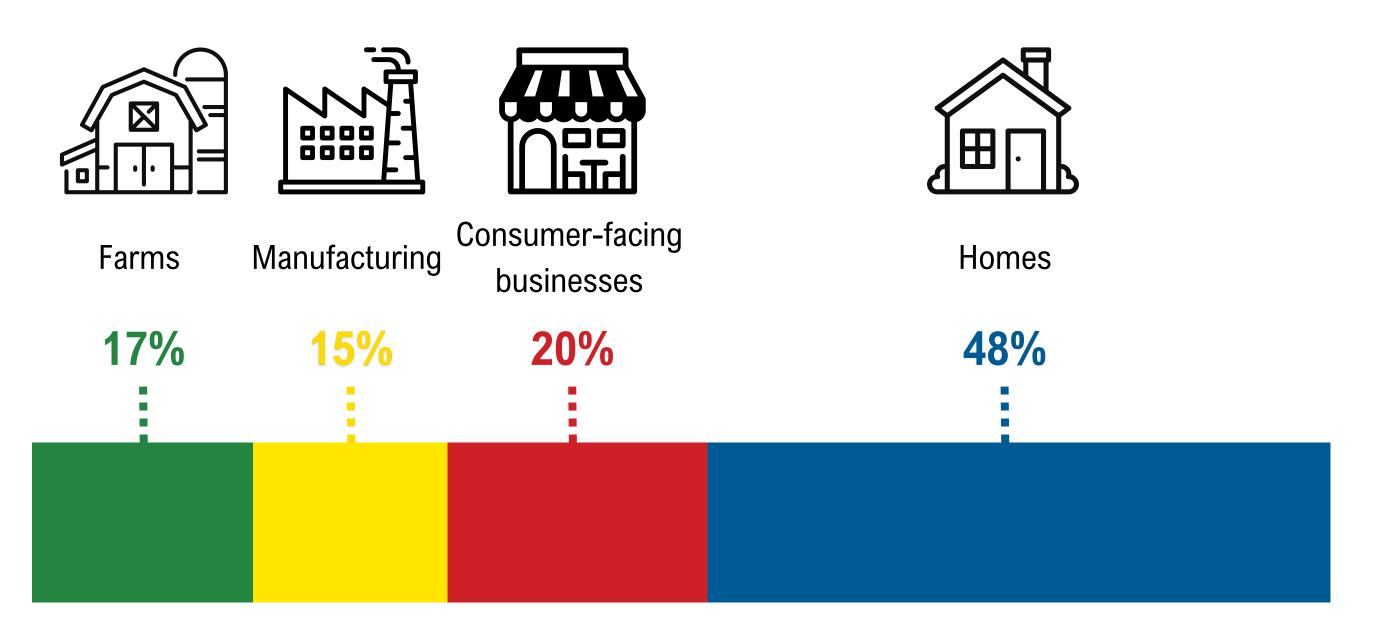
## Why One Week?

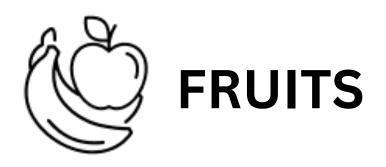
Memories of specific details, like waste amount, reduce in accuracy over time



## Where's the Waste?

Food is lost at all levels of the food supply chain, from going unharvested on farms, being rejected by grocery stores for imperfections, spoiling on buffet lines, and shriveling in the fridge. Nearly half of waste occurs in the home, making household waste a crucial facet to better understand and reduce.









**Berries** 



Melons



Fruit Juice







**Other Fruits** 



**Starchy Vegetables** 













**Non-Dairy** 



Yogurt





**MIXED DISH** 



**OILS, FATS & SUGARS** 







Meats





Poultry

Beans, Peas & Lentils

**Other Vegetables** 



Seafood



Eggs



Nuts and Seeds



**Soy Products** 





Whole Grains







**Refined Grains**