Volume 1, Issue 11: November 2022

CONSUMER FOOD INSIGHTS

Center for Food Demand Analysis and Sustainability
College of Agriculture, Purdue University
Jayson L. Lusk and Sam Polzin

TABLE OF CONTENTS

INTRODUCTION

Consumer Food Insights is a monthly survey of more than 1,200 Americans from across the country produced and run by the Center for Food Demand Analysis and Sustainability (CFDAS) at Purdue University to track trends and changes in consumer food demand and food sustainability behaviors.[1] Visit purdue.ag/CFDAS for more details.

In this issue, we look closer at how respondents have answered our survey based on their geographic region. The U.S. Census Bureau categorizes the 50 states based on nine regional divisions (see page 4 for a map). We aggregated eleven months of data (January - November 2022) to compare consumer behaviors across these nine geographic regions.[2] New questions this month also ask about additional nutrition and health topics found on the Apollo Academic Surveys questionnaire. Interested in more in-depth analysis? Contact cfdas@purdue.edu to learn how you can join our industry consortium.

KEY INSIGHTS FROM NOVEMBER

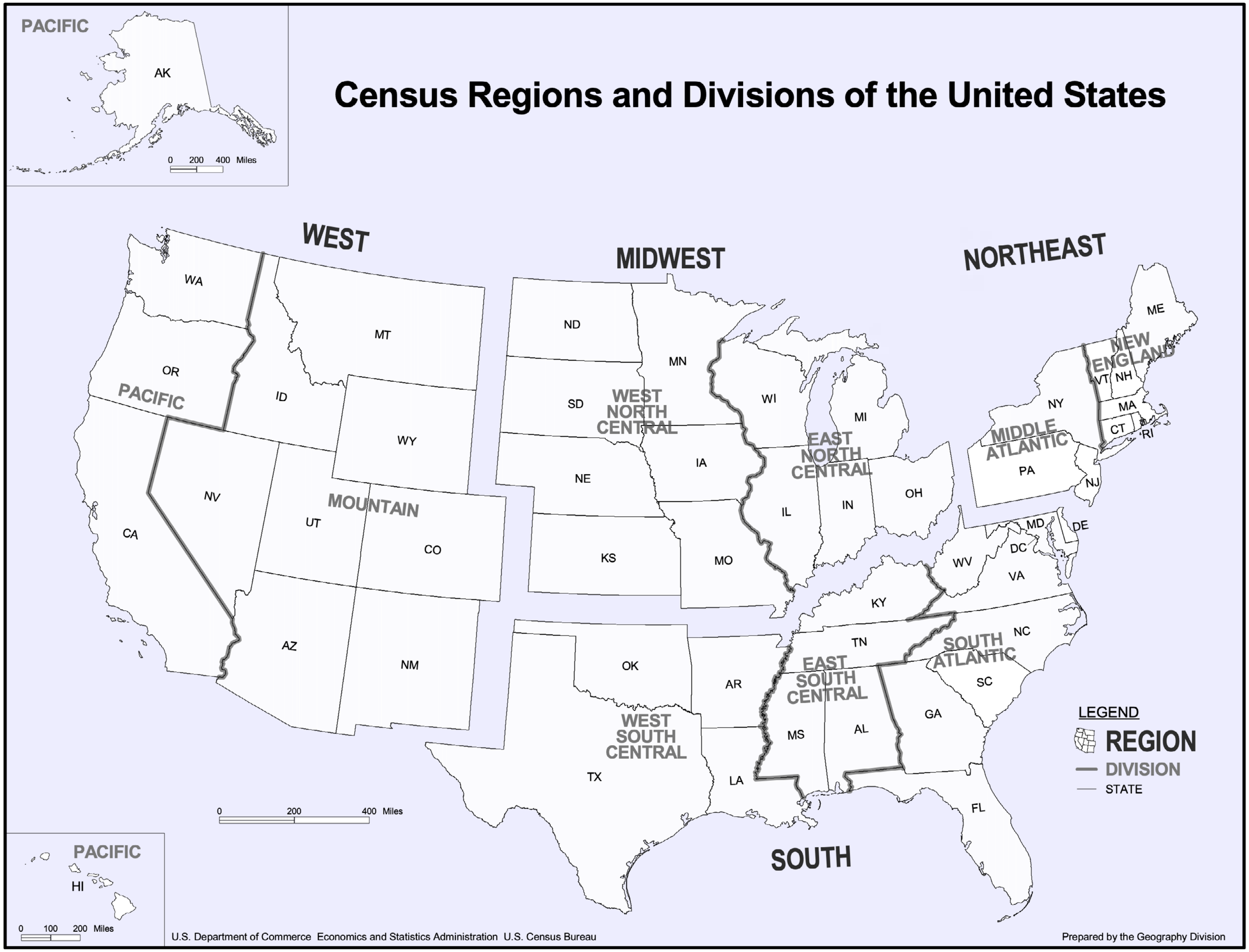
- Food at home (FAH) spending remains at its May levels despite continually rising prices.
- Households closer to the coasts are spending much more per week on food.
- Households farther from the coasts are experiencing higher rates of food insecurity.
- National food insecurity remains unchanged heading into the holidays.
- Intra-region differences in food behaviors demonstrate that broad geographic labels like Northeast vs. South are unhelpful for comparing the food preferences of Americans.
- Americans primarily blame reduced physical activity for the rise in national obesity rates and rank better access to healthy foods as their top policy priority for improving overall health.

SFP INDEX
68/100

FOOD INSECURITY
14%

FOOD SPENDING
$181/WEEK

FOOD HAPPINESS
89%


Census Regions and Divisions of the United States
PACIFIC
AK
0 200 400 Miles
WEST
MIDWEST
NORTHEAST
WA
OR
PACIFIC
ID
MT
WY
NV
CA
UT
MOUNTAIN
CO
AZ
NM
ND
SD
WEST NORTH CENTRAL
MN
NE
IA
KS
MO
WI
MI
EAST NORTH CENTRAL
IL
IN
OH
ME
NEW ENGLAND
VT
NH
MA
CT
RI
NY
MIDDLE ATLANTIC
PA
NJ
DE
MD
DC
WV
VA
KY
NC
TN
SOUTH ATLANTIC
SC
EAST SOUTH CENTRAL
MS
AL
GA
FL
OK
AR
WEST SOUTH CENTRAL
TX
LA
SOUTH
LEGEND
REGION
DIVISION
STATE
0 200 400 Miles
PACIFIC
HI
0 100 200 Miles
U.S. Department of Commerce Economics and Statistics Administration U.S. Census Bureau
Prepared by the Geography Division

Nutrition

What do Americans think are the best approaches to nutrition?

In October, Apollo Academic Surveys, with the help of William Masters at Tufts University, asked leaders, fellows, and awardees of the American Society of Nutrition and the Agricultural and Applied Economics Association (i.e., the experts) about their views on nutrition. In turn, we asked a subset of their questionnaire to consumers so we could understand whether the opinions of experts have percolated through the general public. These questions and the responses from our sample of the general population are presented here.

Figure 1 shows that over 50% of adults rank reduced physical activity as the first or second most significant cause of U.S. obesity. A similar portion of experts gave physical activity this ranking; however, change in food composition was ranked #1 by the greatest share of experts (37%) while this option fell much lower among the general public. **Figure 2** further reveals that better access to healthy foods is by far the greatest policy priority among consumers. In contrast, the experts largely favored higher incomes, as 46% ranked this option #1. Both the public and the experts ranked excise taxes last, followed by market regulations, indicating that both groups view carrots rather than sticks as the best route to improving nutrition and health among Americans.

What do you believe caused the sharp rise in U.S. obesity rates since the mid-1970s, as shown by this chart of NHANES data among other sources?

- Higher incomes, allowing consumers to buy more of all foods
- Change in prices of existing foods, leading consumers to buy less healthy & more unhealthy foods
- Change in composition of available foods, from food manufacturers & restaurants
- Change in marketing of foods, including more frequent snacking & larger portion sizes
- Reduced physical activity, either at work or in everyday life

What do you believe should be the highest-priority policies by which to improve nutrition and health for quality of life of the American people?

- Higher incomes for people in poverty, through either employment or social safety nets
- Better access to healthy foods, through lower prices or vouchers and availability in local markets
- Marketing regulations on unhealthy foods and drinks, with rules on what can be sold and how
- Excise taxes on unhealthy foods and drinks, to raise price and discourage use such as soda taxes
- Improvements in consumer decision-making, via education and empowerment

Nutrition

Figure 1. Causes of Rise in U.S. Obesity Rate Ranked by Consumers, November 2022

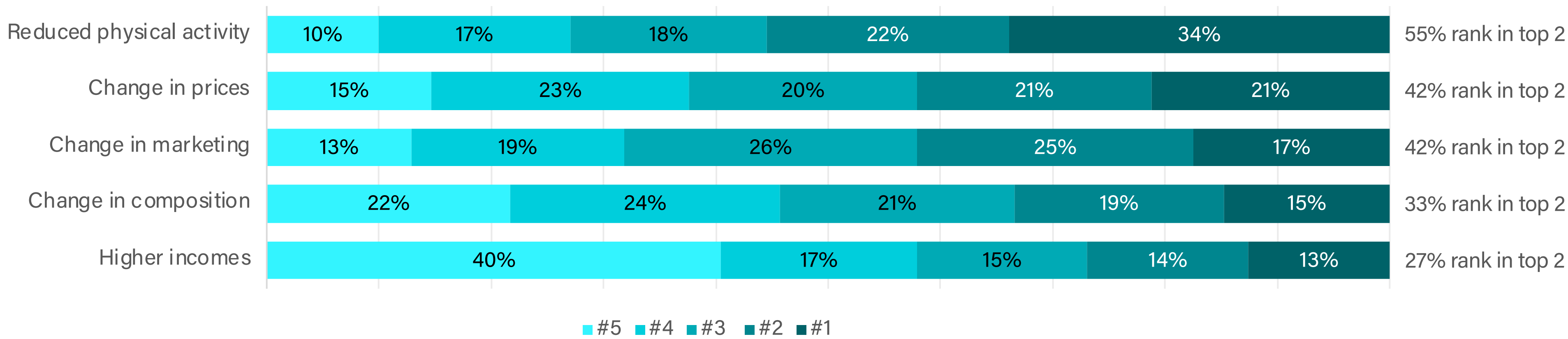
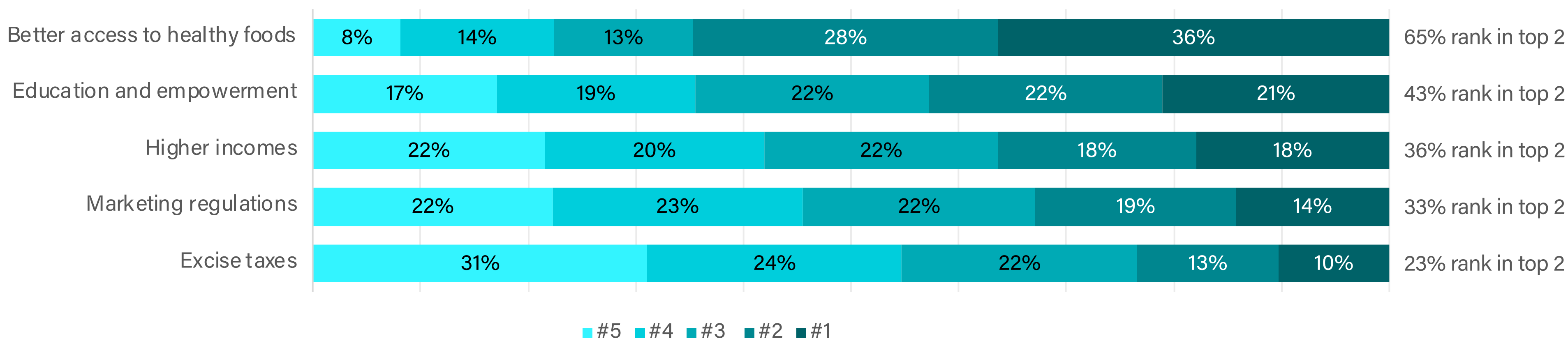


Figure 2. Policy Priorities to Improve U.S. Health and Quality of Life Ranked by Consumers, November 2022



SUSTAINABLE DIETS

Are Americans purchasing sustainable foods?

The overall SFP Index has remained unchanged from previous months. However, we demonstrate that consumers living in different parts of the U.S. score differently on the index (**Figure 3**). For example, the Northeast outperforms the middle of the country, such as the West North Central and East South Central regions, particularly on the nutrition, social, and environment indicators. The West South Central also performs worst on the security measure, which is further reinforced by our food insecurity measure on page 12.

The ***Sustainable Food Purchasing (SFP) Index*** is a self-reported measure of food purchasing designed to assess how well consumer shopping habits align with healthy diets from sustainable food systems, as described by the [EAT-Lancet Commission on Food, Planet, Health](). A top score of 100 reflects consumer food purchasing that aligns with a set of key recommendations for better nurturing human health and supporting environmental sustainability. The SFP Index includes six components—Nutrition, Environment, Social, Economic, Security, and Taste—correlating with the different strategies for achieving food systems transformation. More information on these components and the SFP scoring procedure is described on the CFDAS [website]().

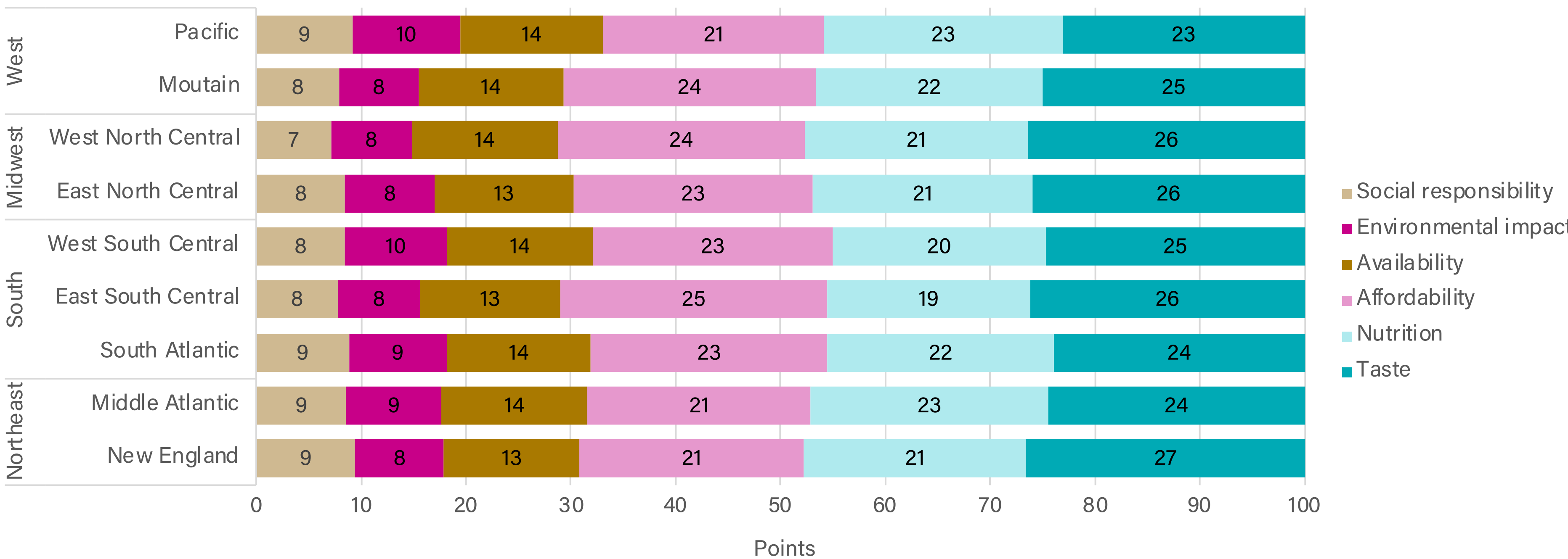
Figure 3. Sustainable Food Purchasing Index by U.S. Region, January - November 2022

FOOD VALUES

What attributes do Americans most value when purchasing food?

Respondents were asked to allocate 100 points to six different attributes based on their importance when food shopping (**Figure 7**). These attributes closely reflect the components of the SFP Index. How much consumers value these sustainability components has remained relatively stable on a month to month basis. Looking closer at how these values break down across geographic regions, their distributions are broadly similar. On average, regions like New England value taste by a few more points than others, while the East South Central values affordability by a couple more points. These diferences, however, are small.

Figure 4. Share of 100 Points Allocated to Food Attributes by U.S. Region, January - November 2022



FOOD EXPENDITURES

How much are Americans spending on their food?

Respondents were asked to estimate their weekly food spending (**Figure 5**). On average, consumers reported spending $119/week on groceries (FAH) and $61/week on restaurants and carryout meals (FAFH).[3] FAH spending has remained flat since May 2022, despite food prices continuing to increase, which amounts to a decline in purchasing in real terms. Similarly, while FAFH spending has risen slightly following a three month decline, it is below its summer peak. We further show that consumers continue to think that food price inflation will be 3 points lower over the next 12 months relative to the past 12 months, though they largely underestimate the current rate of annual inflation compared to official government estimates (**Figure 6**).

In addition, **Figures 7** reveals differences in total food spending across the country. There is a $40 gap between the highest spending Pacific and New England regions and lowest spending West North Central and East South Central regions. This spending gap holds across both FAH and FAFH.

Figure 5. Weekly Household Food Expenditures, January - November 2022

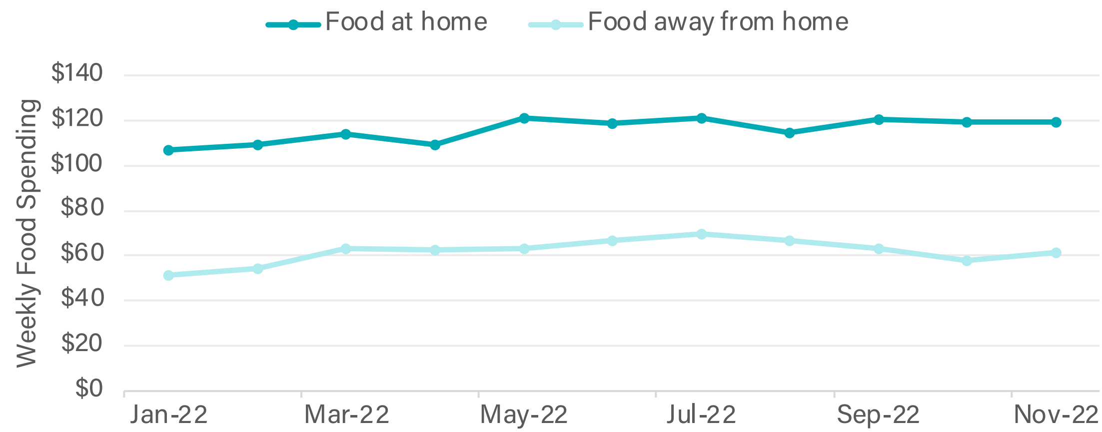
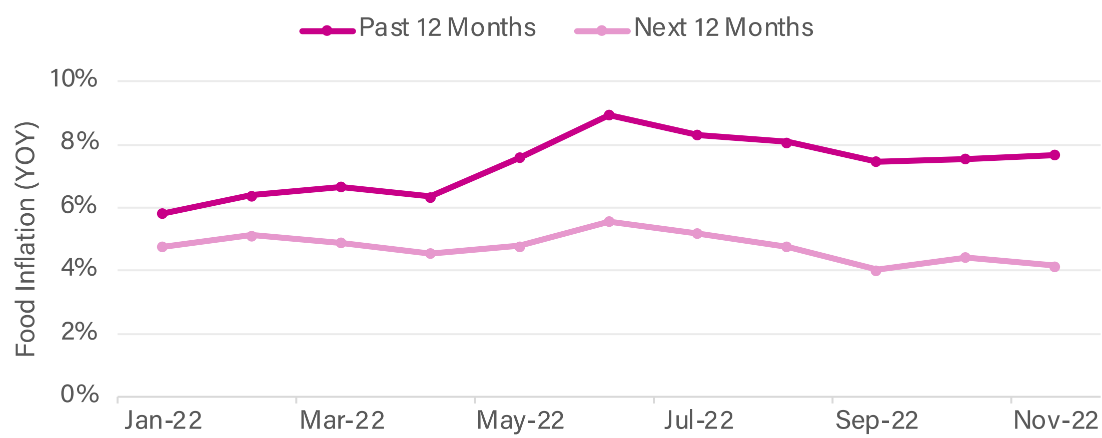
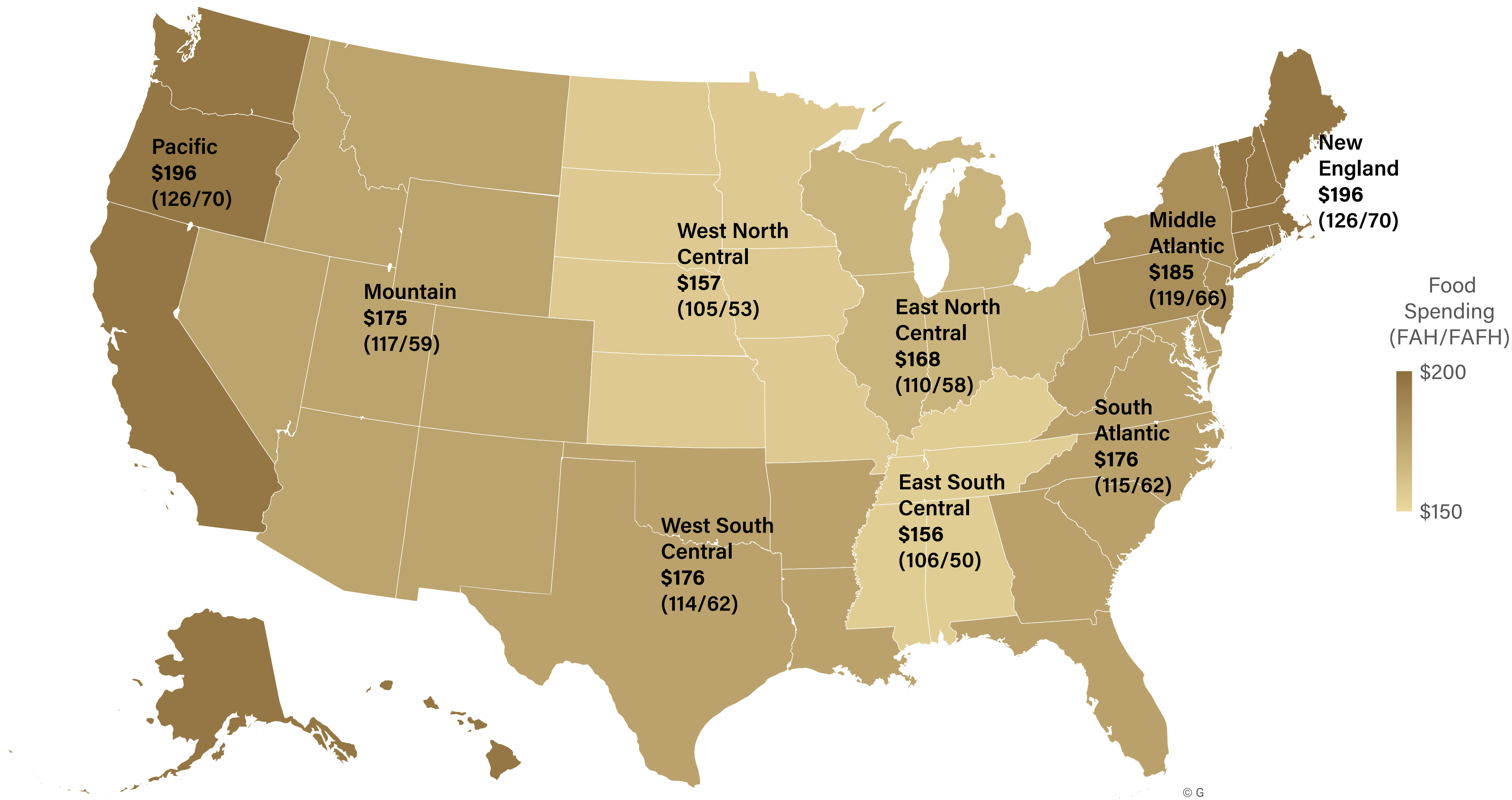


Figure 6. Consumer Estimates of Food Price Inflation, January - November 2022



FOOD EXPENDITURES

Figure 7. Weekly Household Food Expenditures by U.S. Region, January - November 2022



FOOD SECURITY

Are Americans having trouble buying food for their families?

Based on responses to six standardized questions about food bought and eaten in the last 30 days, we estimate the national rate of food insecurity to be 14%.[4] **Figure 8** shows that this rate has deviated little at the national level, although very low food security (5.5%) is down more than 4 points from its highest level recorded this year (9.7%). **Figure 9** further supports the notion that rates of food insecurity have not increased, despite a high price environment, as the rate of households frequenting food banks or other sources of free food has not changed either.

However, we observe disparities in food insecurity based on the region in which a household resides (**Figure 10**). There is a 10 percentage-point gap between the highest rate in the East South Central (22%) and the lowest rate in the Pacific (12%). Notably, a majority of this difference is found in the rate of very low food security, suggesting that the gap between the most food secure and most food insecure regions is even more pronounced.

Figure 8. Household Food Security in the Last 30 Days According to USDA Survey Module: Six-Item Short Form, January - November 2022

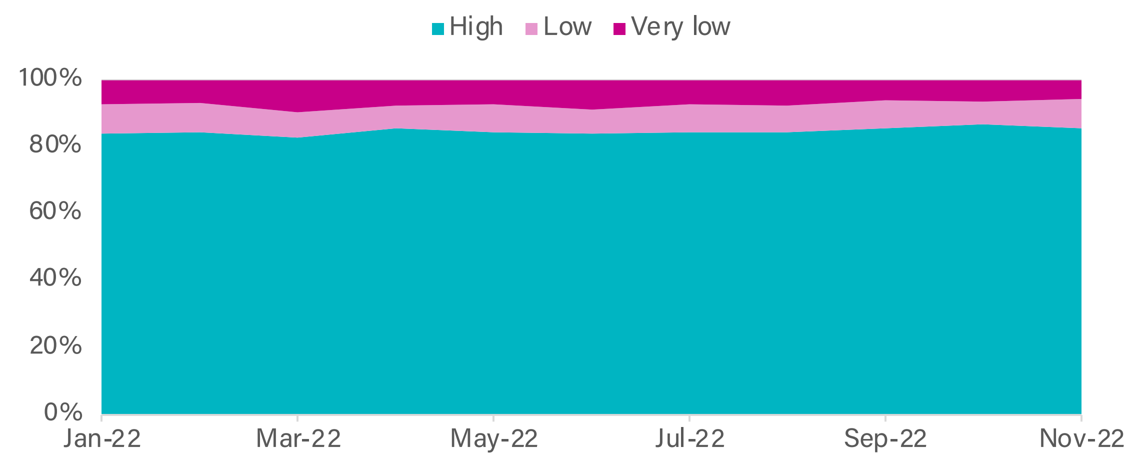
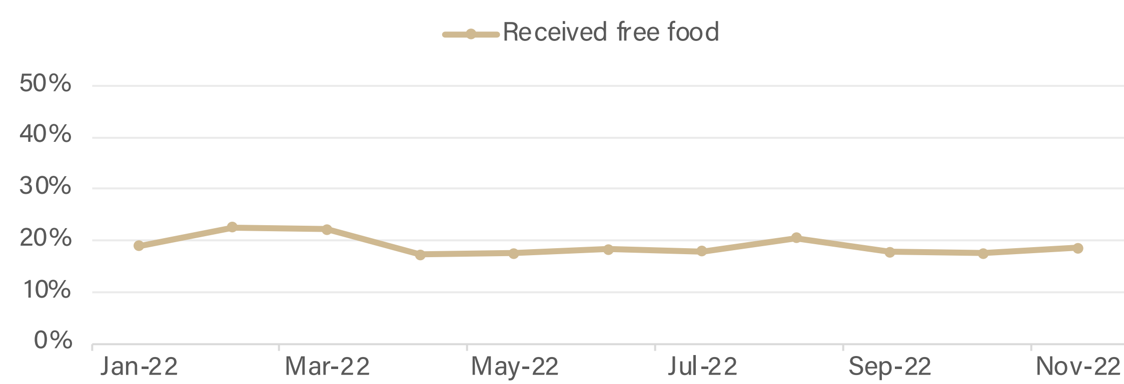
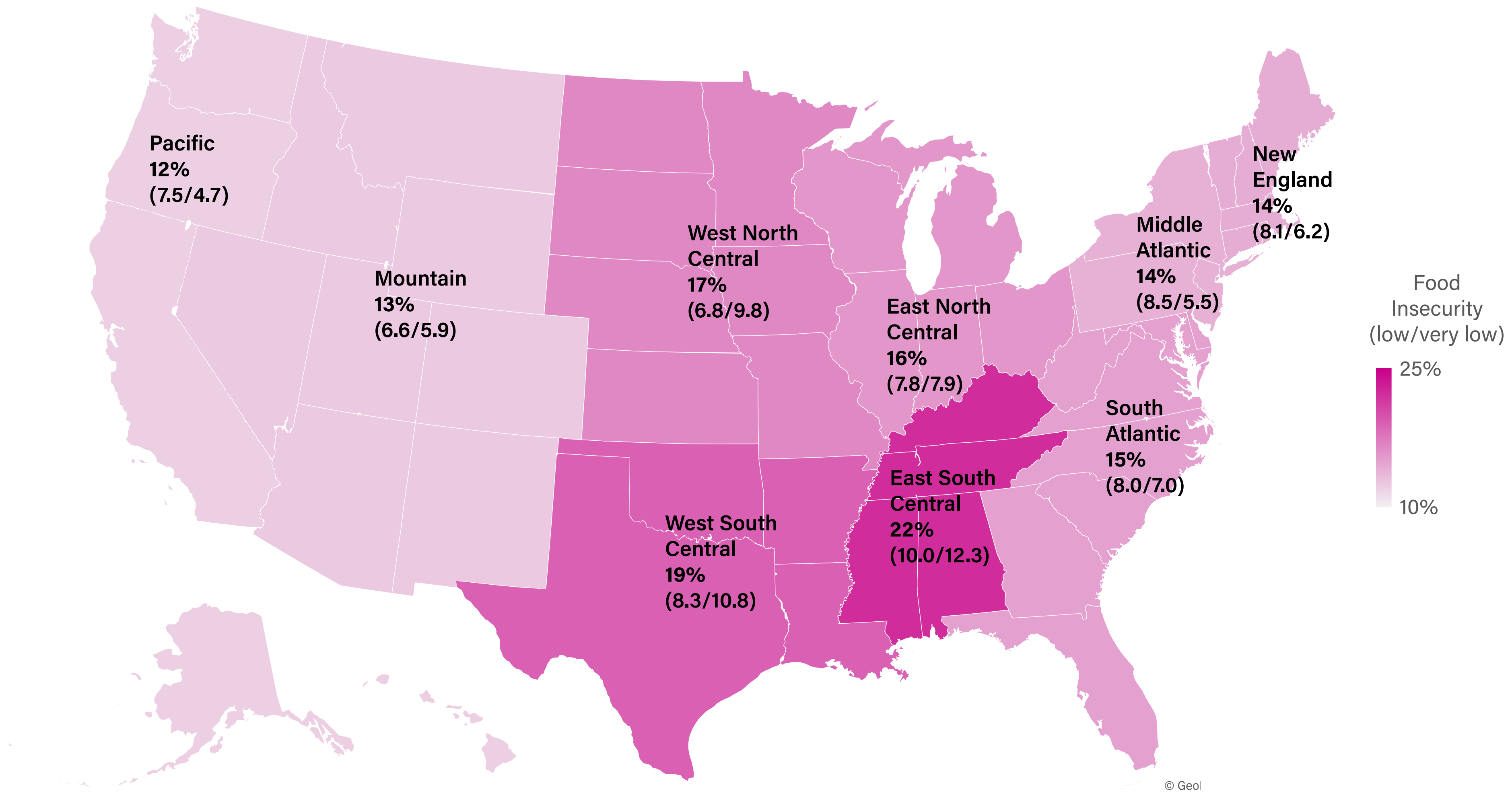


Figure 9. Households Receiving Groceries from a Food Bank or Pantry in the Last 30 Days, January - November 2022



FOOD SECURITY

Figure 10. Household Food Security by U.S. Region, January - November 2022

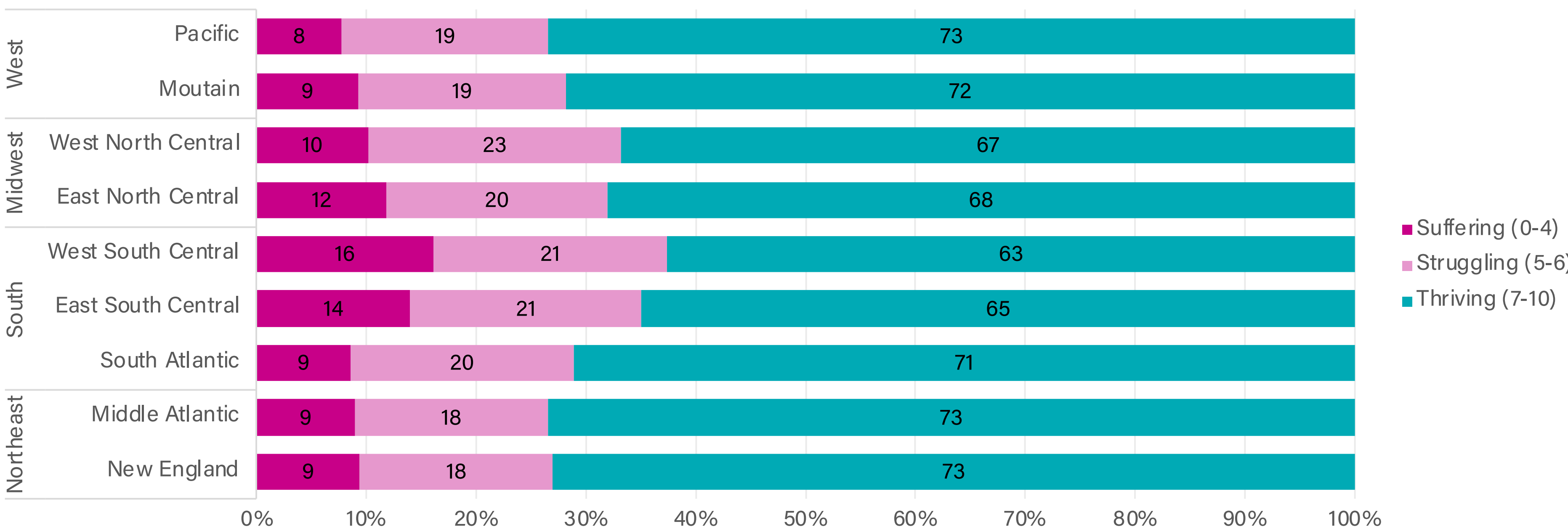


FOOD SATISFACTION

Are Americans satisfied with their diets?

Respondents were asked to score their own diet on a 0-10 scale, with top of that scale representing their ideal diet.[5] Consumer ratings of their diet are moderately worse for those living in the middle of the country, particularly the West South Central region (**Figure 11**). This difference is also noticeable in **Figures 12 & 13**, where West South Central consumers are most likely to be unhappy with both their diets and their lives. Yet, while consumers in New England rate their diets as thriving by 10 points more than those in the West South Central, their rates of happiness are not significantly higher, which raises the question of how much of a correlation diet well-being has with overall happiness. Notably, food security does appear to closely correlate with diet well-being across geographic regions of the U.S.

Figure 11. Diet Well-Being Rating by U.S. Region, January - November 2022



FOOD SATISFACTION

Figure 12. Diet Happiness by U.S. Region, January - November 2022

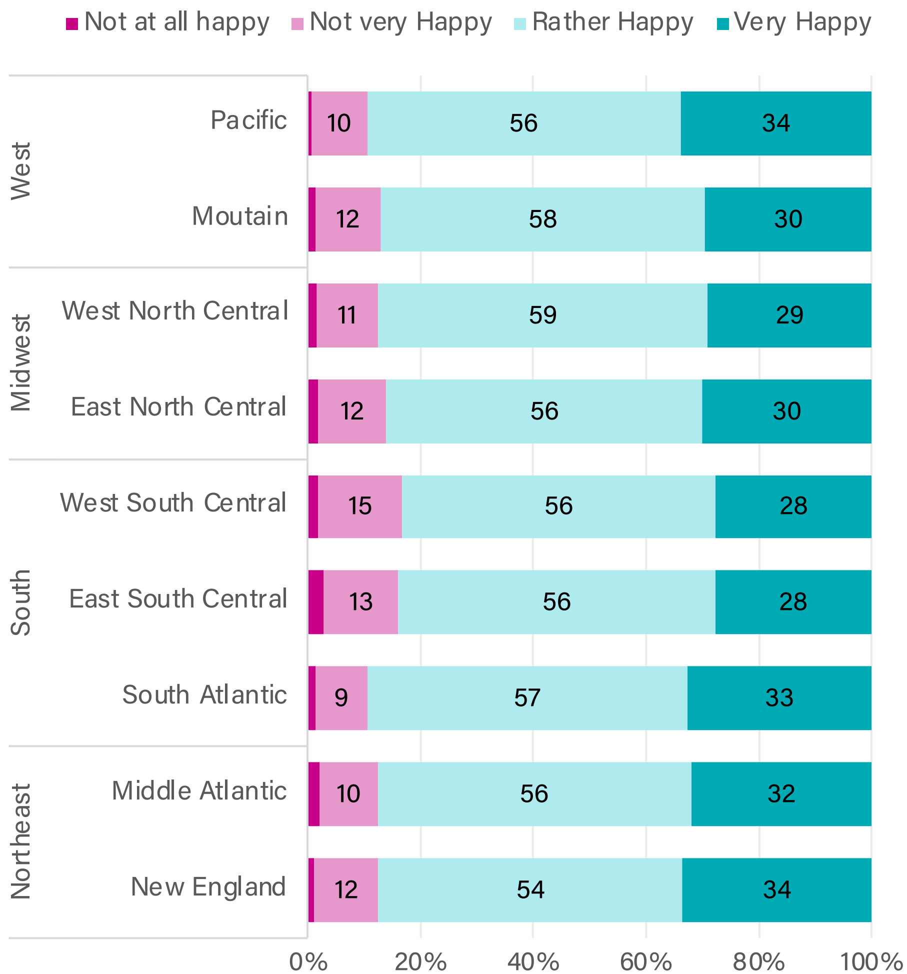
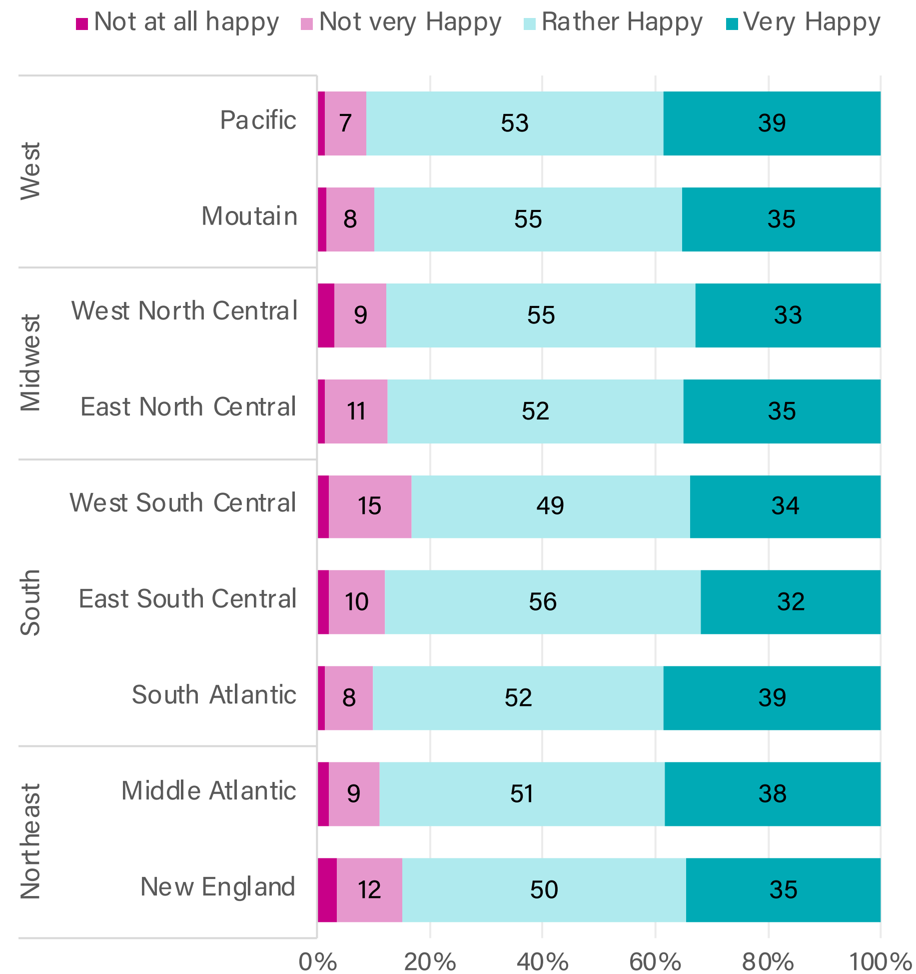


Figure 13. Life Happiness by U.S. Region, January - November 2022

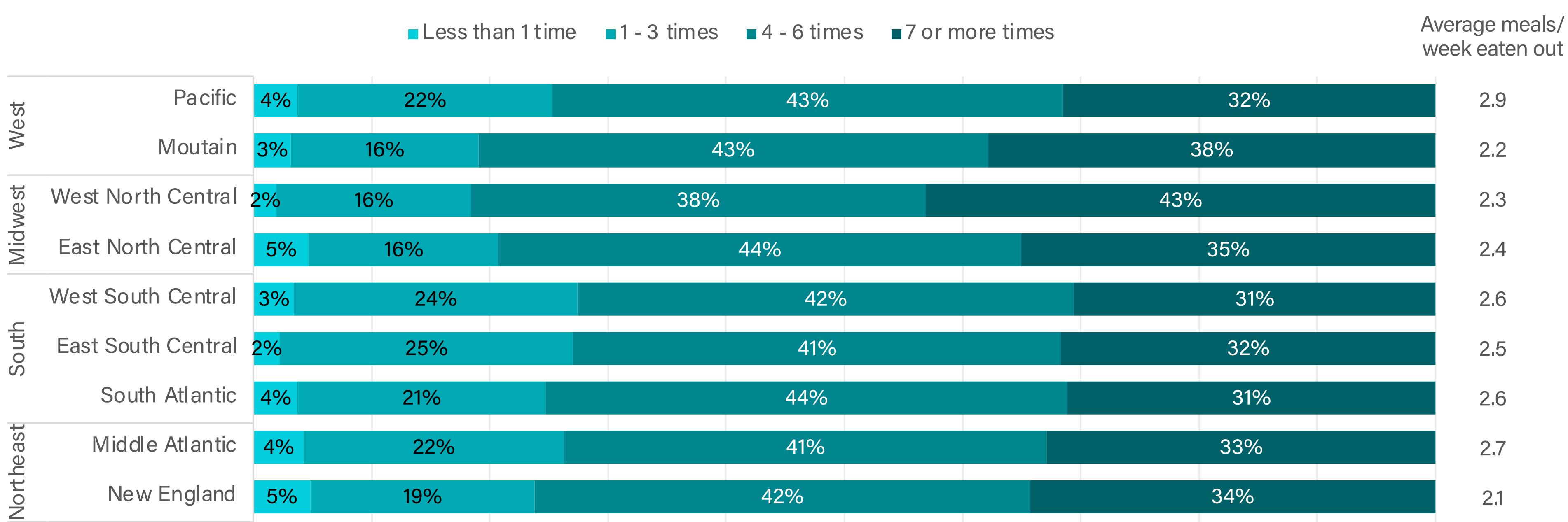


CONSUMER BEHAVIORS

How are Americans navigating their food environment?

Figure 14 reveals small differences in where Americans eat (at home or away from home) depending on their region. West North Central consumers eat at home most often and eat out least often. The West North Central region also stands out in **Figure 15**, alongside the East South Central region, as these consumers are less likely to choose behaviors viewed as ethical or sustainable (e.g., choosing grass-fed over conventional beef or choosing organic over non-organic foods). However, these regional patterns appear complex, as the East South Central is much less likely to recycle compared to the Middle Atlantic while the West North Central is much less likely to look for natural labels compared to the East North Central, revealing differences within larger regional categories like the South or Midwest.

Figure 14. Number of Meals Cooked at Home and Eaten Out Per Week by U.S. Region, May - November 2022



CONSUMER BEHAVIORS

Figure 15. Consumer Shopping and Eating Habits by U.S. Region, January - November 2022

	Pacific	Mountain	W. N. Central	E. N. Central	W. S. Central	E. S. Central	South Atlantic	Mid Atlantic	Northeast
Chose generic foods over brand name foods	3.3	3.4	3.3	3.4	3.4	3.3	3.4	3.3	3.0
Chose local foods over non-local foods	3.2	2.9	3.0	3.1	3.1	3.0	3.1	3.3	3.1
Chose wild-caught fish over farm-raised fish	3.2	2.9	2.8	2.9	2.9	2.7	3.0	3.0	2.9
Chose grass-fed beef over conventional beef	3.1	2.7	2.4	2.7	2.8	2.5	2.8	2.9	2.9
Chose cage-free eggs over conventional eggs	3.1	2.8	2.7	2.9	2.8	2.7	2.9	3.0	2.9
Chose organic foods over non-organic foods	2.9	2.6	2.4	2.7	2.8	2.4	2.8	2.8	2.7
Chose plant-based proteins over animal proteins	2.7	2.3	2.3	2.4	2.5	2.3	2.6	2.7	2.4
Checked the use-by/sell-by date at the store	4.0	4.0	3.9	4.0	3.9	4.0	4.0	4.1	4.1
Checked the nutrition label before buying new foods	3.6	3.4	3.2	3.4	3.3	3.2	3.5	3.5	3.4
Checked for natural or clean labels	3.2	2.8	2.6	3.0	3.0	2.9	3.1	3.2	2.9
Checked where my food originated	3.1	2.8	2.7	2.9	2.9	2.7	3.0	3.0	2.9
Checked for food recalls	3.0	2.7	2.5	2.7	2.8	2.6	2.9	2.9	2.7
Checked for GMO ingredients	3.0	2.7	2.5	2.9	2.9	2.9	3.0	3.0	2.8
Checked how my food was produced	3.0	2.6	2.5	2.7	2.8	2.6	2.9	2.9	2.7
Took steps to reduce food waste at home	3.8	3.8	3.8	3.7	3.7	3.6	3.7	3.8	3.7
Recycled food packaging	3.8	3.5	3.4	3.5	3.3	2.8	3.4	3.8	3.9
Threw away food past the use-by date	3.3	3.0	3.0	3.2	3.3	3.2	3.3	3.3	3.0
Composted food scraps	2.8	2.2	2.1	2.3	2.5	2.3	2.4	2.5	2.3
Ate fruits and vegetables without washing them	2.3	2.2	2.2	2.4	2.3	2.1	2.3	2.3	2.2
Ate rare or undercooked meat	2.2	1.8	1.9	2.0	2.0	1.8	2.0	2.0	2.0
Ate raw dough or batter	2.0	1.8	1.9	2.0	2.1	1.8	2.0	2.1	1.8

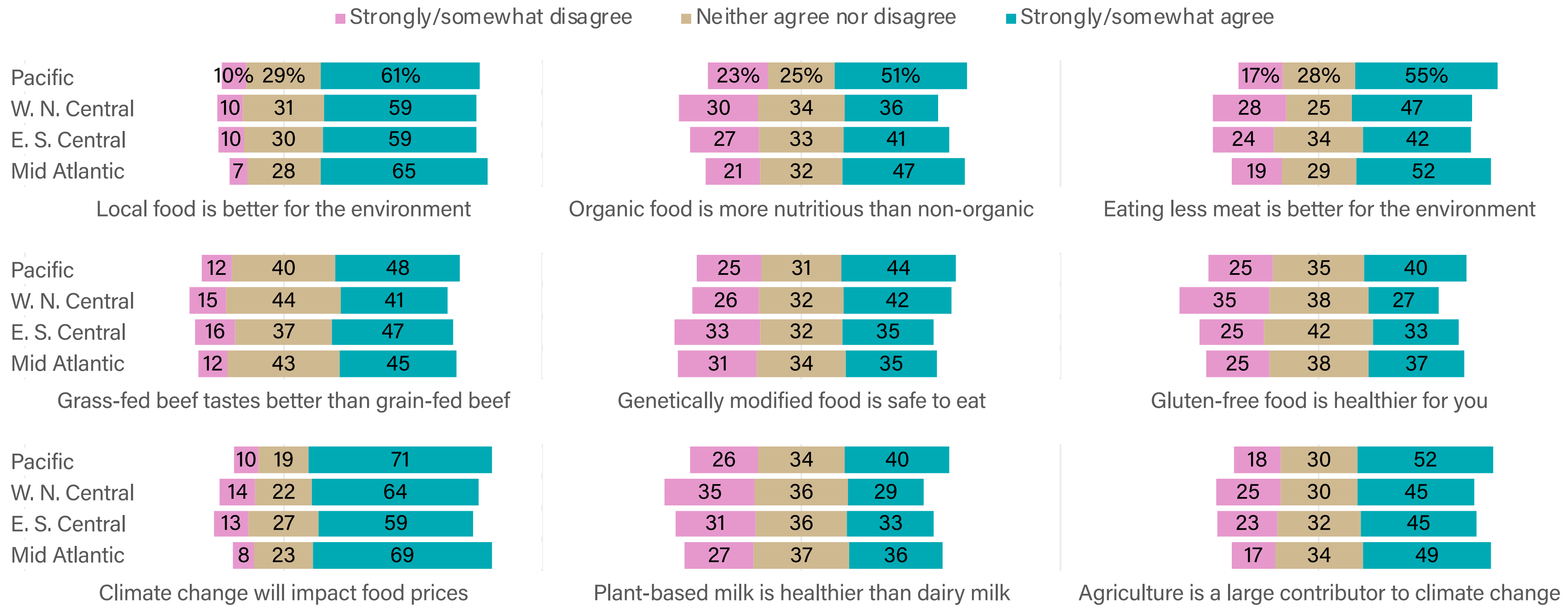
Mean Score	
5	Always
4	Often
3	Sometimes
2	Rarely
1	Never

CONSUMER BELIEFS

What do Americans believe about their food and food system?

We compare select regions in **Figure 16** and find moderate differences in the food beliefs of consumers. Broadly, those on the coasts are more likely to agree with statements about health or the environment. However, the West North Central region, which is politically more conservative, is more likely than the Mid Atlantic to say GMO food is safe to eat. While Americans are known to geographically sort, the regional level at which we observe these differences likely obscures nuanced differences within and between states.

Figure 16. Consumer Agreement with Claims about Food and Nutrition by Select U.S. Regions, March - November 2022



ENDNOTES

1 Data were collected from an online panel maintained by the firm Dynata over a two-day period from November 21-23, 2022. The eligible population included U.S. adults ages 18+. A weighting method called iterative proportional fitting—or raking—was applied to ensure a demographically balanced sample by age, sex, race, census region, income, and SNAP participation. Every respondent from the previous month was re-contacted and asked to take the survey again. About 59% of October's sample participated this month, thus the rest of the sample was filled in with a new pool of respondents. Data collection for every survey begins on the third Monday of each month, unless otherwise dictated by holidays or extenuating circumstances.

2 Sample sizes: Pacific (n=1,762), Mountain (n=992), West North Central (n=802), East North Central (n=2,055), West South Central (n=1,505), East South Central (n=719), South Atlantic (n=3,117), Middle Atlantic (n=2,144), New England (n=595)

3 Food at home (FAH) refers to food sales meant for home or off-site consumption and the value of donations and non-market acquisitions, which is acquired from outlets such as grocery stores, convenience stores, direct sales, etc. Food away from home (FAFH) refers to food sales meant for immediate consumption, federal food programs, and food furnished as an ancillary activity, which is acquired from outlets such as restaurants, bars, schools, etc.

4 High or marginal food security (i.e., food secure): 0-1 reported indications of food-access problems; little or no indication of change in diet or food intake. Respondents who reported an annual household income above 185% of the Federal poverty line were also screened as having high food security. This determination was made according to research by Ahn et al. (2020), which demonstrates that using a modified income-based screening procedure for internet surveys better approximates the government estimates of food insecurity. Low food security (i.e., food insecure): 2-4 reported indications of reduced quality, variety, or desirability of diet; little or no indication of reduced food intake. Low food security (i.e., food insecure): 2-4 reported indications of reduced quality, variety, or desirability of diet; little or no indication of reduced food intake.

5 This scale is based on the Cantril Scale used in Gallup's World Poll to assess well-being and happiness around the world. Thus, we use the same validated conceptual labels—thriving, struggling, and suffering—to group responses.