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CONSUMER FOOD INSIGHTS

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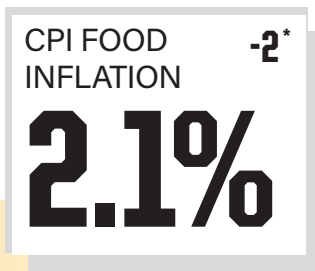
INTRODUCTION

Consumer Food Insights (CFI) is a monthly survey of more than 1,200 American adults from across the country. Since January 2022, the Center for Food Demand Analysis and Sustainability (CFDAS) at Purdue University has used this survey to track trends and changes in consumer food demand and food sustainability behaviors.¹ Visit purdue.ag/CFDAS or contact cfdas@purdue.edu for more details.

In this issue, we compare a national CFI survey sample (U.S.) with an independent sample of 1,209 consumers from 6 states that were heavily impacted by the recent hurricanes (Helene and Milton) and flooding (Six-State): FL, GA, NC, SC, TN and VA.² New questions this month were created in collaboration with CFDAS research economist Dr. Ahmad Wahdat, and focus on changes in consumer food behavior and spending due to the recent natural disasters in the U.S. Additional summaries are included for those directly impacted by the storms within the six-state sample.

KEY INSIGHTS FROM NOVEMBER

- Taste, affordability and nutrition remain the key attributes factored into food purchases, over social and environmental impact.
- Most (84%) hurricane-impacted consumers sheltered at home during hurricanes Helene and Milton; 70% stocked up on foods.
- Food insecurity was higher among the impacted households (24%) relative to non-impacted households (15%) in the six-state sample.
- In the first 7 days from when they were first impacted, 20.8% of households "sometimes" or "often" did not have enough food to eat.
- In the last 7 days from when they took the survey, 12.5% of impacted households "sometimes" or "often" did not have enough food to eat.
- Over half (52%) of directly impacted households increased their food spending, primarily due to food spoilage and stockpiling.
- Consumer food inflation expectations for the next 12 months reached its lowest point in the lifetime of the CFI survey (2.5%).



*+/- in upper right corner tracks the unit change in the statistic from the previous month or quarter, depending on data collection frequency

HURRICANE IMPACTS

How did hurricanes Helene and Milton impact consumer food behaviors, access and spending?

This section focuses on responses to the new survey questions regarding consumers' food experiences during and after the recent hurricanes and flooding in the southeast that occurred between September 25th through the middle of October. Response summaries in this section include consumers from the six heavily impacted states shown in **Figure 1**. Among this sample, 33.2% reported being directly impacted by hurricanes Helene and Milton (e.g., property damage, evacuation, power loss, food access issues). Around 98% of these impacted consumers proceeded with the hurricane questions.

Figure 1. Six-State Sample: FL, GA, NC, SC, TN and VA (n=1,209), Nov. 2024



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HURRICANE IMPACTS

How did the recent storms impact consumer behavior?

Screening questions found that the majority (84%) of impacted consumers stayed/sheltered at home during the storm while the other 16% evacuated. Motivations for evacuating or staying during a natural disaster vary widely. While some may be prepared to sit tight during a storm, others may have no choice but to do so due to a lack of time or resources to evacuate.³

Of those who sheltered at home, 70% said their household stocked up on food before sheltering (**Figure 2**). The main items stockpiled include non-perishable items such as water, snacks and canned and boxed foods (**Figure 3**). Given the impacts these storms can have on the power grid, most consumers opted to stock up on goods that do not require refrigeration.

Figure 2. "Did you or anyone in your household stock up on food items before sheltering at home?", Nov. 2024

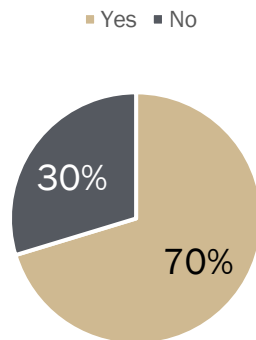
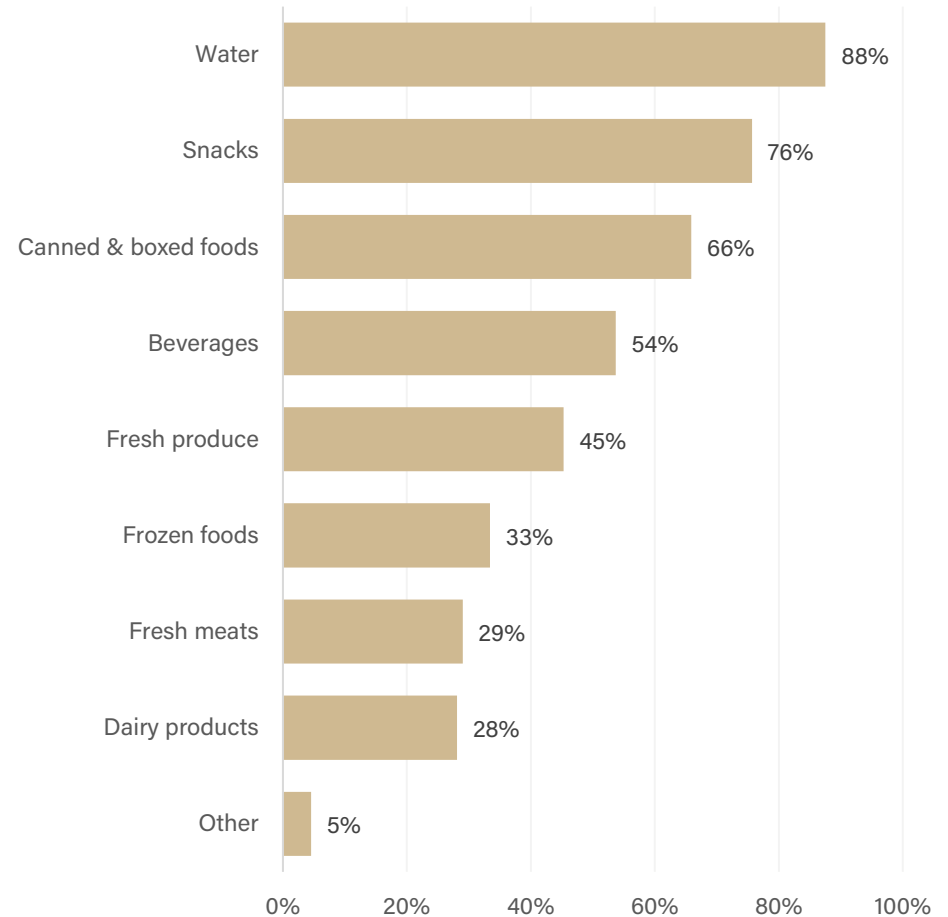


Figure 3. "What types of foods did you or anyone in your household stock up on when sheltering at home during the hurricane(s) or flooding? Please select all that apply.", Nov. 2024



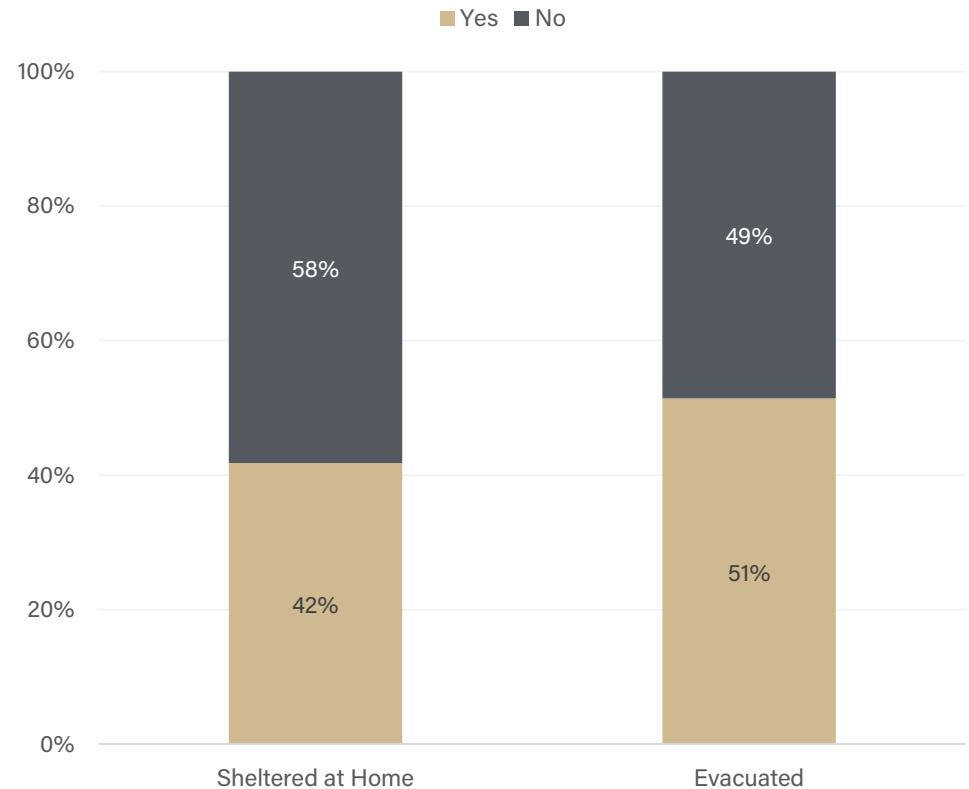
HURRICANE IMPACTS

What impact did the storms have on food access?

Figure 4 summarizes the share of impacted households who received free food from a resource such as a shelter or food bank during the storm. A larger share of those who evacuated utilized free food resources.

Adopting the U.S. Census Bureau's Household Pulse Survey's single question measure of food insufficiency⁴, we find that 20.8% of households that were directly impacted by the storms experienced food insufficiency within the first 7 days of first experiencing the natural disaster (**Figure 5**). Later in the survey, we followed up with the same question using an updated reference period to estimate a food insufficiency rate of 12.5% in the 7 days from when the respondent took the survey. This is more in line with the national food security rate (see Food Security section). Unsurprisingly, a sizable share of consumers in the path of the storm(s) experienced a disruption to their food access, and even though a majority remained food sufficient, only around one-third say they had enough food that also fit their preferences. However, the improvement in the food insufficiency rate shows the resiliency of our food system and highlights the importance of disaster relief programs and organizations in restoring food access.

Figure 4. Share of Households that Received Free Food while Sheltering at Home or Evacuating, Nov. 2024

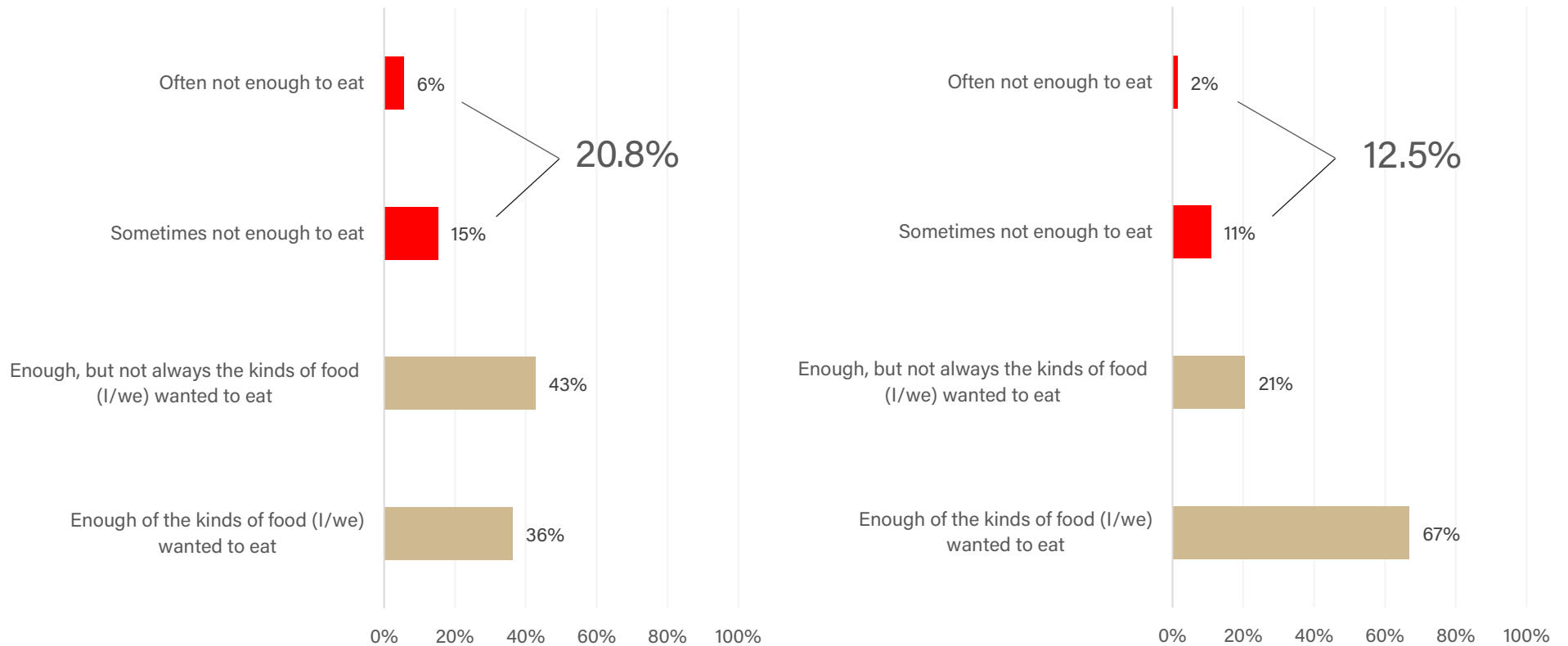


HURRICANE IMPACTS

Figure 5. Rate of Household Food Insecurity Among Hurricane/Flooding Impacted Households: Six-State Sample, Nov. 2024

In the first 7 days from when households were first impacted by the storm(s)

In the last 7 days from when households took the survey in November

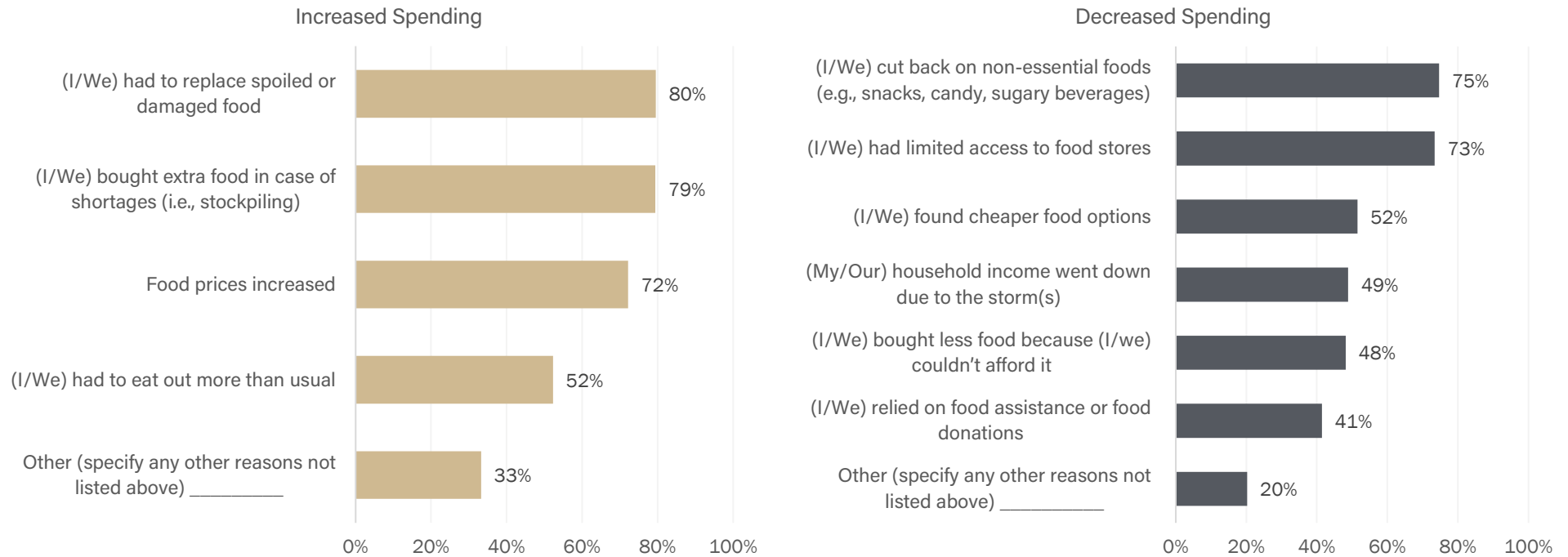


HURRICANE IMPACTS

Did households change their food spending due to the storms?

Around half (52%) of impacted households increased their weekly household food spending due to the storms. Just under one-quarter (23%) decreased their food spending, and 21% reported no effect on food spending. Those who increased their spending primarily cite food spoilage, stocking up and increased food prices as the reason for their spending change (**Figure 6**). Those who decreased their food spending primarily attribute their change to limited access to food stores, cutting back on non-essential foods (e.g., snacks, candy, sugary beverages), seeking out cheaper food options and affordability issues.

Figure 6. Reason for Changing Weekly Household Food Spending Due to Storms, Nov. 2024



HURRICANE IMPACTS

How did consumers who were not directly impacted respond to the storms?

Additional questions were asked to those who were not directly impacted. These gauge the perspective of those outside of the situation and also ask non-impacted consumers to report any behavior changes caused by news of the storms. These questions were also administered to the national sample to capture the perspectives of those outside of the heavily affected region. **Figures 7 and 8** compare the responses from the national sample as well as the six-state sample.* Generally, news of the storms had no effect on the majority of non-affected households. However, we see some heightened levels of concern about their own food access and stockpiling behavior, particularly among consumers in the hurricane-affected states.

Figure 7. "Did hearing about the recent hurricane(s) and/or flooding change your level of concern about food availability or access for your household?", Nov. 2024

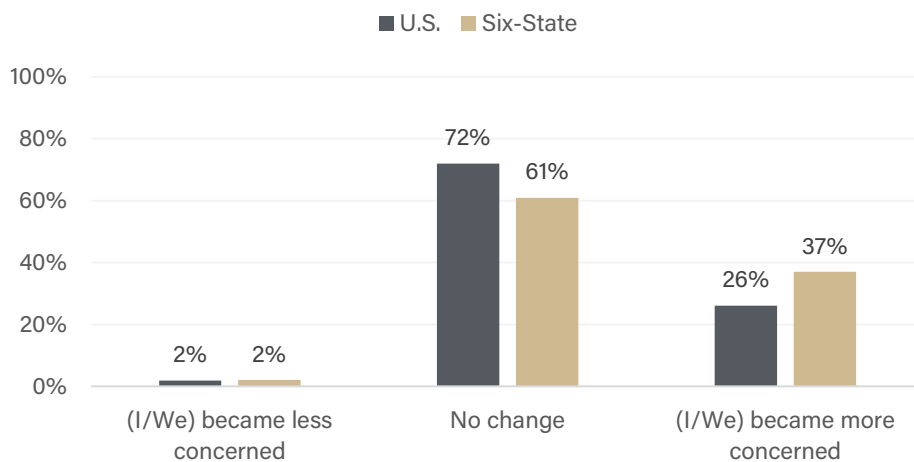
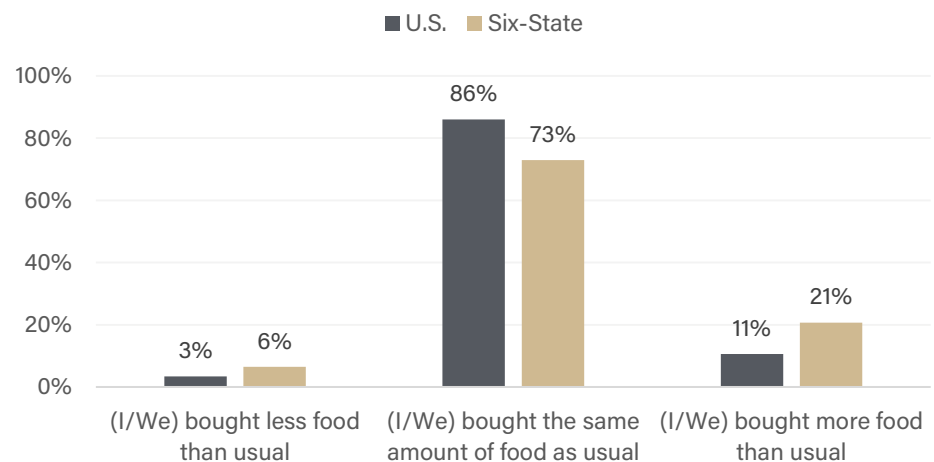


Figure 8. "Did your household change the amount of food purchased due to news about the hurricane(s) and/or flooding?", Nov. 2024



*survey samples are independent; however the scope of the regions are not exclusive, meaning an individual from one of the six states could have received an invitation to take either the national survey or six-state survey

HURRICANE IMPACTS

How do consumers rate the government response to the situation?

Hurricanes Helene and Milton brought intense news coverage of updates and relief efforts, some of which came under scrutiny.⁵ We aim to gauge how affected and non-affected consumers perceive the food response efforts.

Figure 9 shows how those directly impacted by the storms in the six-state sample rate the federal, state and local governments' efforts to maintain food access for their community. Overall, we see a relatively positive rating with 32% providing a rating of "good" and 20% providing a rating of "excellent." We see similar ratings among those not directly impacted by the storms. **Figure 10** compares the ratings of those not directly impacted between the national and six-state samples. Interestingly, the experience among the affected consumers appears to be more split, as a larger share rate the response as "very poor" or "poor" (20%). Understandably, a larger share of the non-affected consumers, particularly among the national sample, feel they are unable to rate the response efforts.

Figure 9. "Overall, how would you rate the local, state, and federal governments' efforts to maintain food access for those impacted by the hurricanes (Helene and Milton) and/or flooding in your community?", Nov. 2024

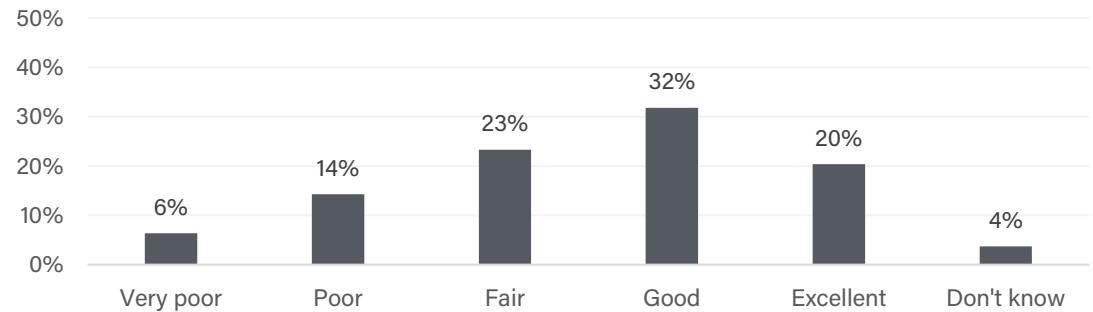
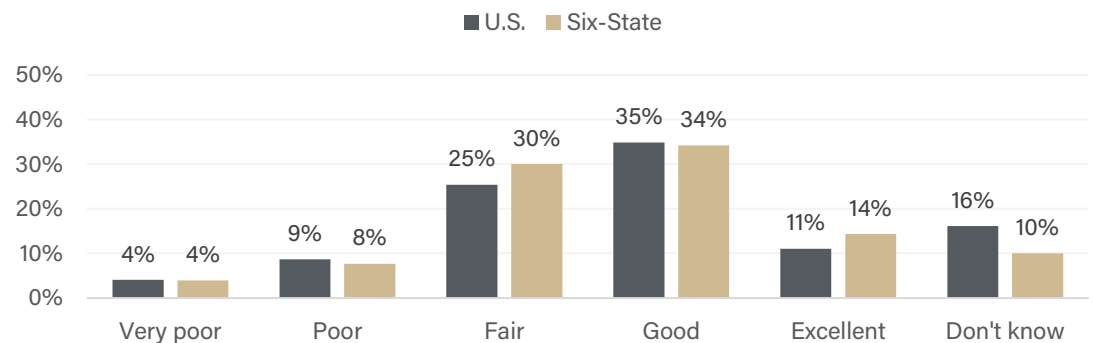


Figure 10. "Overall, how would you rate the local, state, and federal governments' efforts to maintain food access for those impacted by the hurricanes (Helene and Milton) and/or flooding?", Nov. 2024

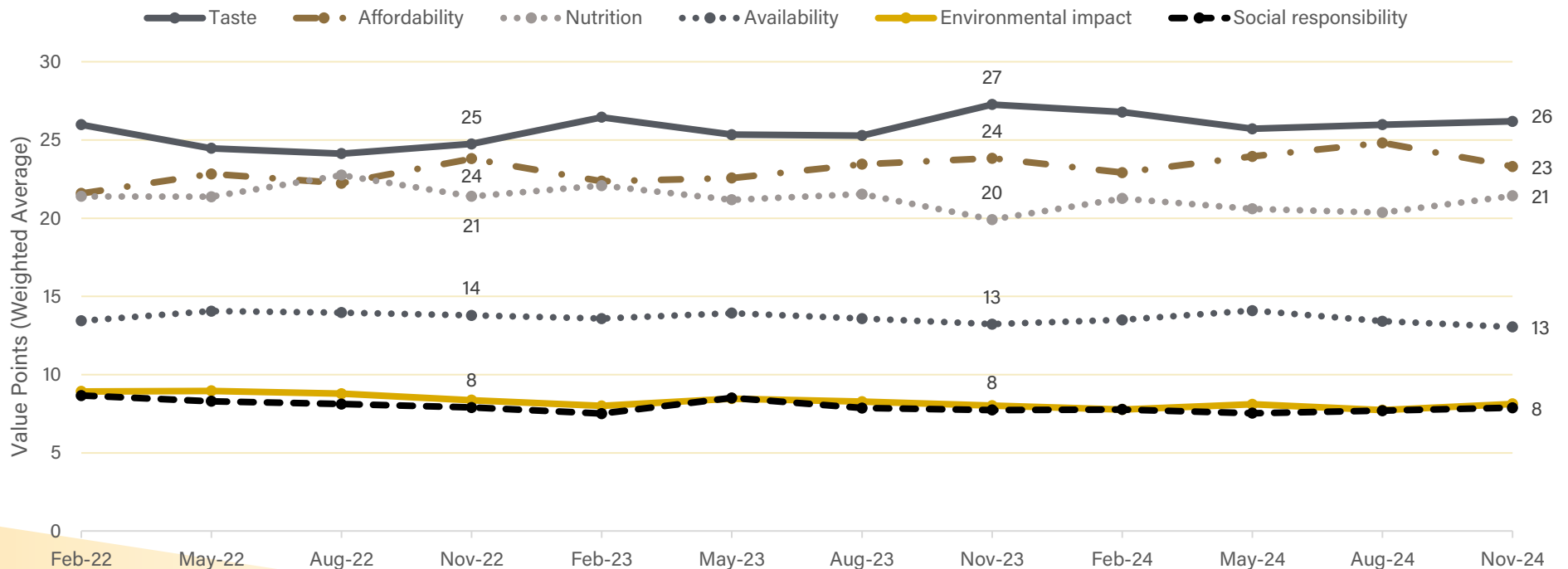


FOOD VALUES

What attributes do Americans value most when purchasing food?

Respondents were asked to allocate 100 points to six food attributes based on their importance when grocery shopping.⁶ Taste (26 points) remains the most important attributes consumers look for when making purchasing decisions at the grocery store, slightly ahead of affordability (23 points) and nutrition (21) points. On a monthly basis, we have not observed significant changes in the distribution of points across these attributes. They have remained steady in the face of economic changes since January 2022. With affordability consistently valued more than nutrition and environment and social impact, it is important for food companies to focus efforts on maintaining affordability when promoting healthy and sustainable foods (**Figure 11**).

Figure 11. Share of 100 Points Allocated to Food Attributes, Jan. 2022 - Nov. 2024



FOOD EXPENDITURES

How much are American households spending on their food?

Each month, consumers report their household's weekly spending on food from the last 30 days (**Figure 12**). On average, consumers reported spending about \$123/week on groceries (FAH) and \$68/week on restaurants and other carryout this month (FAFH).⁷ Overall weekly food spending this month is 4.4% higher than in November 2023 and 5.5% higher than in November 2022. Average weekly food spending among the six-state sample was \$205/week in the last 30 days, \$14 higher than the national average and in line with the spending increase reported by many consumers due to the storms.

Consumers' estimate of food inflation over the past 12 months dropped to 5.2% in November. Expectations for food inflation in the coming 12 months (2.5%) saw an even greater decrease, dropping 0.5 percentage-points from last month (3.0%). This is the lowest estimate of food inflation for the next 12 months reported by American consumers since the inception of the CFI survey in January 2022 (**Figure 13**).

Figure 12. Weekly Household Food Expenditures, Jan. 2022 - Nov. 2024

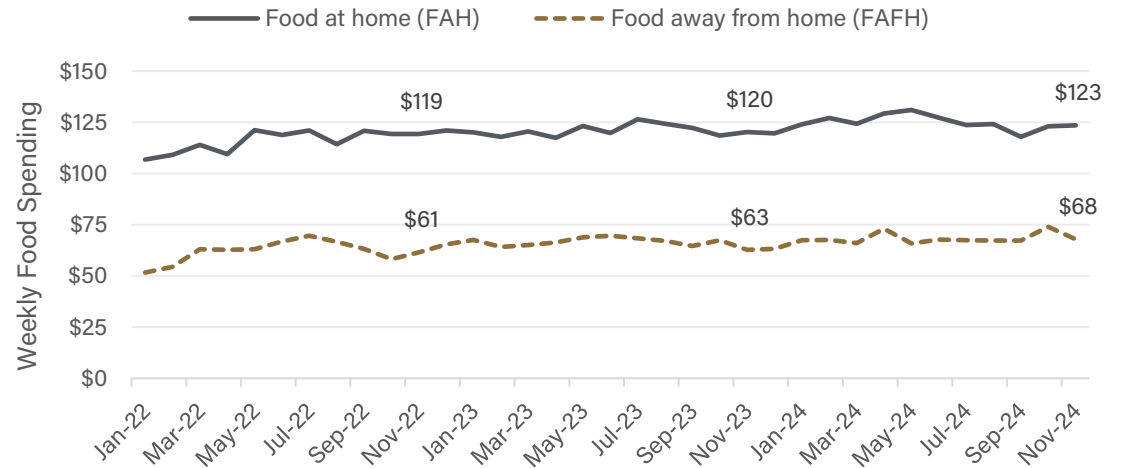
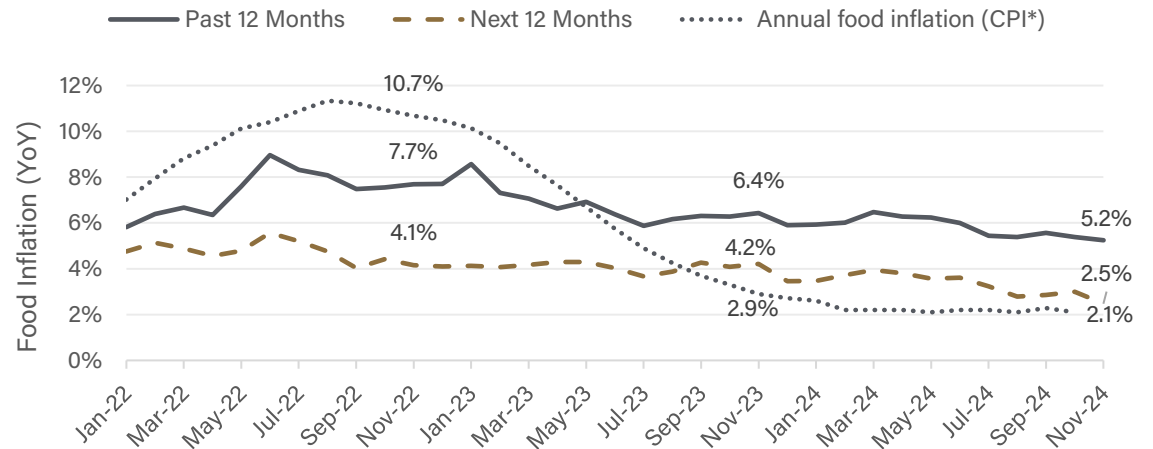


Figure 13. Consumer Estimates of Food Inflation Compared to Gov. Estimate, Jan. 2022 - Nov. 2024



*The Consumer Price Index (CPI) is a measure of inflation computed by the U.S. Bureau of Labor Statistics.

FOOD SECURITY

Which Americans are having trouble buying food for their families?

Based on a set of six standard questions about food purchased and eaten in the past 30 days, we estimate national food insecurity to be 12.7% (Figure 14).⁸

The food insecurity rate among the six-state sample this month is 17.8%, around five percentage-points higher than the average from the national sample.

Figure 15 further compares food insecurity between those directly impacted and not directly impacted by the recent hurricanes and flooding within the six-state sample. Nearly one-quarter of households directly impacted by the storms report struggling to acquire nutritionally adequate food in the past 30 days relative to around 15% of those who were not affected. Consumers who were hit by the storms were more likely to report disruptions to food access, so it is understandable that the incidence of food insecurity is higher among this group, especially if households' food access has not returned to normal in the past month.

Figure 14. Rate of Household Food Insecurity in the Last 30 Days, Jan. 2022 - Nov. 2024

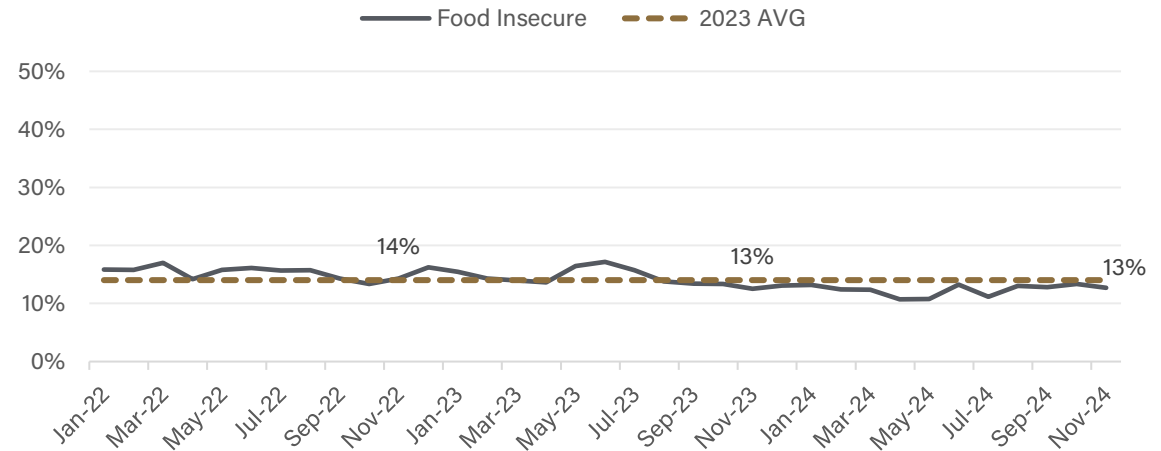
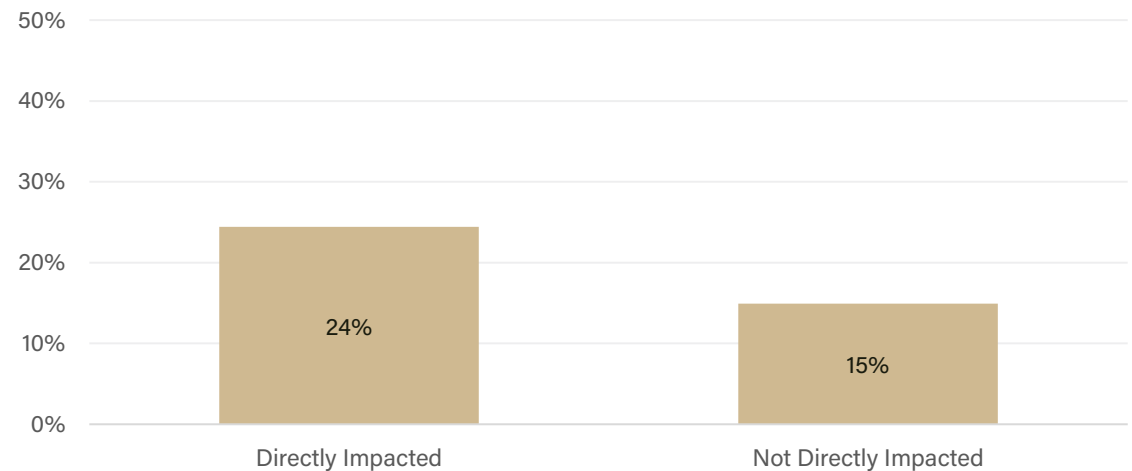


Figure 15. Rate of Household Food Insecurity in the Last 30 Days: Households Directly Impacted by the Storms within the Six-State Sample, Nov. 2024



CONSUMER BEHAVIORS

How are Americans navigating their food environment?

Consumers are asked to report the frequency at which they chose certain foods, checked labels and performed at-home food behaviors.

Figure 16 compares the national, six-state sub-sample and those within the sub-sample directly affected by the storms. Overall, we see few differences between the groups in the most recent month of data. However, those within the six-state sample who were directly impacted by the hurricanes and/or flooding report choosing generic foods over brand-names foods slightly more frequently. Interestingly, those who report having been directly impacted by the storms also report checking labels and participating in risky food behaviors more frequently. There is relatively little difference between the hurricane impacted sub-group and the sample means when it comes to this set of behaviors.

Figure 16. Frequency of Consumer Shopping and Eating Habits: National Sample, Six-State Sample and Storm Impacted Sub-Sample, Nov. 2024

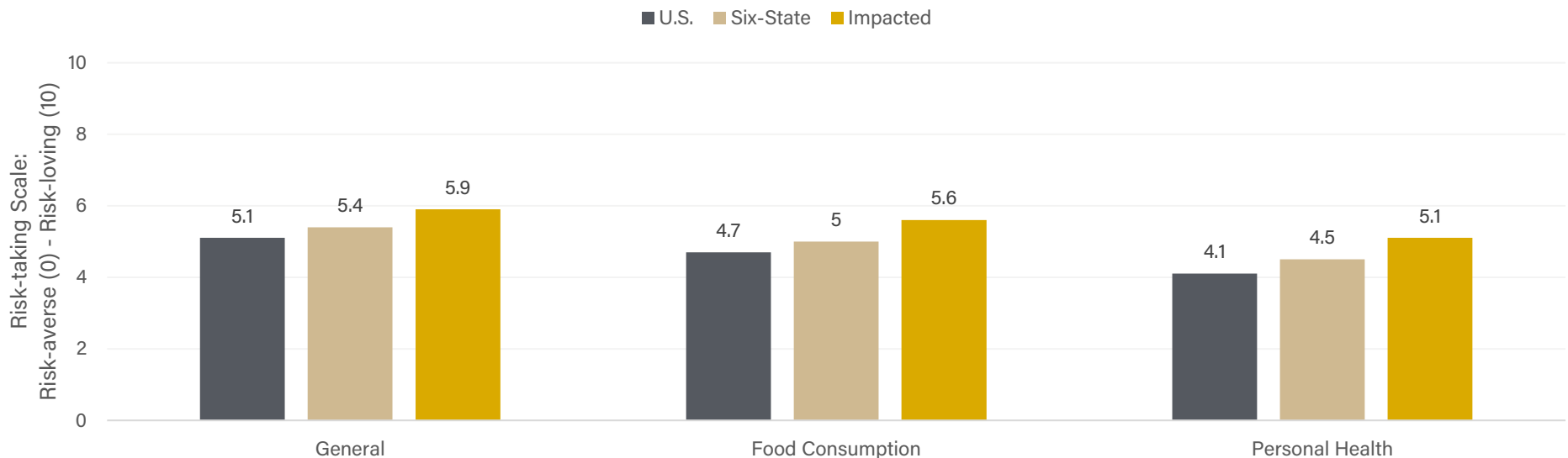
	U.S.	Six-State	Impacted	
Chose generic foods over brand-name foods	3.3	3.3	3.5	Mean Score 5 Always 4 Often 3 Sometimes 2 Rarely 1 Never
Chose local foods over non-local foods	3.1	3.2	3.3	
Chose wild-caught fish over farm-raised fish	2.9	2.9	3.0	
Chose grass-fed beef over conventional beef	2.8	2.8	3.1	
Chose cage-free eggs over conventional eggs	2.8	2.8	3.0	
Chose organic foods over non-organic foods	2.7	2.7	3.0	
Chose plant-based proteins over animal proteins	2.3	2.3	2.6	
Checked the use-by/sell-by date at the store	4.0	4.1	4.0	
Checked the nutrition label before buying new foods	3.5	3.4	3.5	
Checked for natural or clean labels	2.9	3.0	3.2	
Checked where my food originated	2.8	2.9	3.1	
Checked for food recalls	2.9	3.1	3.2	
Checked for GMO ingredients	2.8	2.7	3.0	
Checked how my food was produced	2.7	2.9	3.1	
Took steps to reduce food waste at home	3.8	3.8	3.8	
Recycled food packaging	3.6	3.2	3.5	
Threw away food past the Use-By date	3.1	3.3	3.3	
Composted food scraps	2.4	2.3	2.6	
Ate fruits and vegetables without washing them	2.2	2.2	2.5	
Ate rare or undercooked meat	1.9	1.9	2.3	
Ate raw dough or batter	1.9	1.9	2.2	

CONSUMER BEHAVIORS

How are Americans navigating their food environment?

Consumers describe their willingness to take risks on a 0 (risk-averse) to 10 (fully prepared to take risks) scale (**Figure 17**). Concerning general risk, those within the six-state sample who were impacted by the storms report a higher score on the scale compared to the national and six-state averages. Despite a lower willingness to take risks when it comes to foods consumed and personal health compared to general risk attitudes, we observe similar differences between the three groups. This higher willingness to take risks aligns with the decision by many who were directly affected by the hurricanes to shelter at home during the storm rather than evacuate. Though it should be noted that the decision to stay or evacuate is likely influenced by many factors, such as transportation resources, support and disaster preparedness.

Figure 17. Self-reported Attitudes Toward Risk: National Sample, Six-State Sample and Storm Impacted Sub-Sample, Nov. 2024

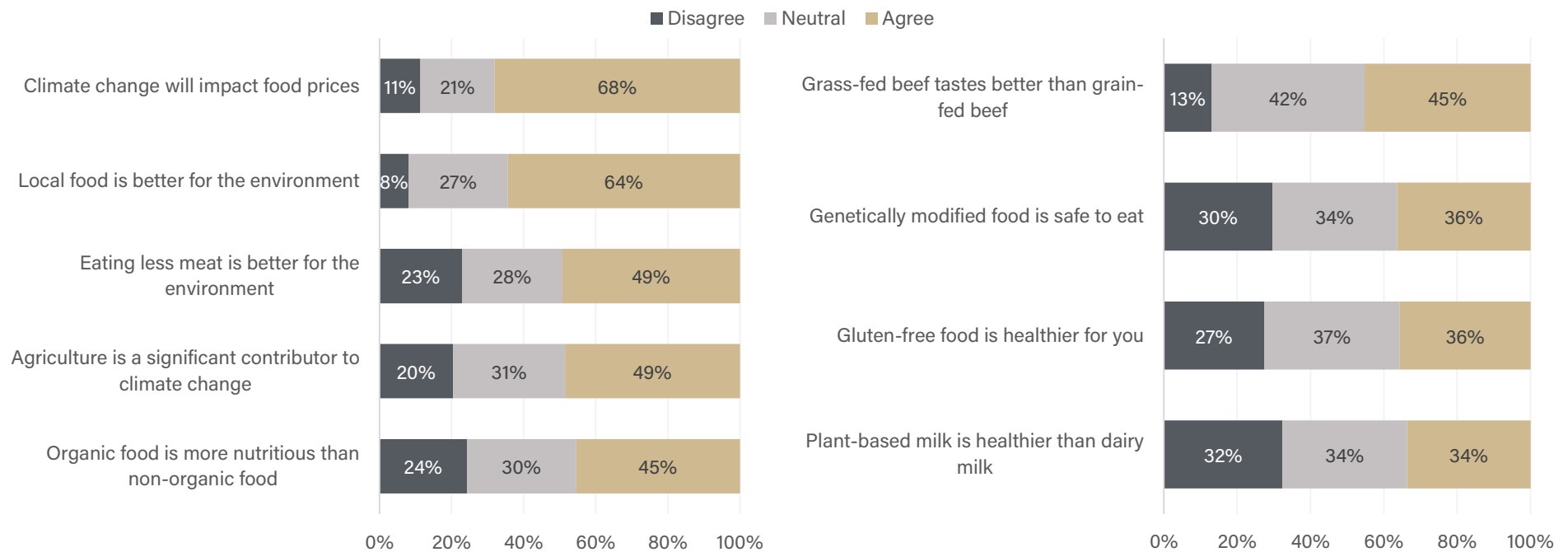


CONSUMER BELIEFS

What do Americans believe about their food and food system?

Figure 18 summarizes consumer agreement with various statements pertaining to our food system. Overall, we have not seen substantial changes in the share of consumers who disagree, are neutral or agree with the statements since this block of questions was first administered in the CFI in March 2022. Most consumers agree that climate change will impact food prices and that local food is better for the environment. Agreement is more split when it comes to statements about the safety and health of alternative foods, such as gluten-free food and plant-based milk, compared to their conventional counterparts.

Figure 18. Share of Consumer Agreement with Claims about Food, Mar. 2022 - Nov. 2024



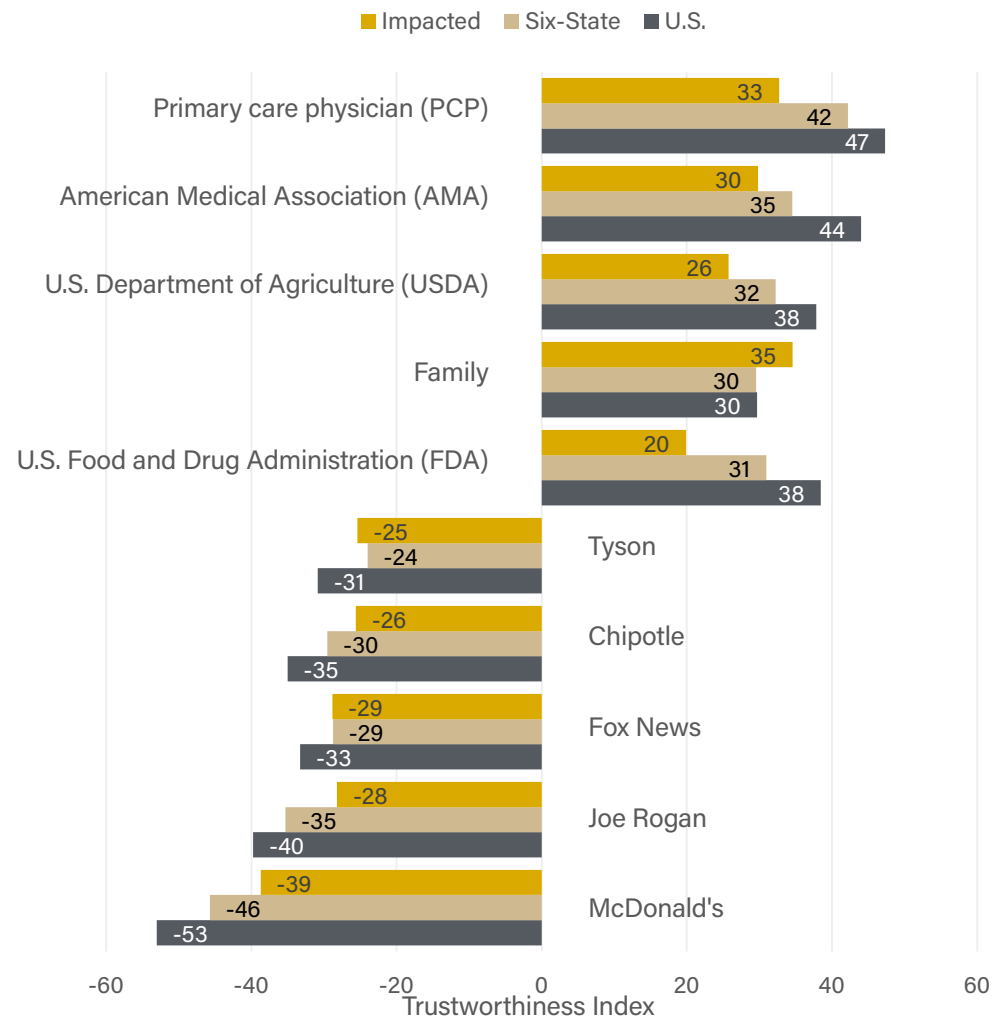
CONSUMER TRUST

Who do Americans trust on topics of food?

Respondents select their most-trusted and least-trusted sources of information about healthy and sustainable food, which are scored on a Trust Index from -100 (least trusted) to 100 (most trusted).⁹

Figure 19 summarizes the top five most and least trusted sources of information about healthy and sustainable food, comparing the national sample with the six-state sample and the hurricane impacted sub-group. The results show that the level of trust varies to a greater degree within the more regionally concentrated six-state sample. The magnitude of trust or distrust in each entity is smaller among the six-state sample and the storm impacted sub-group across most entities, relative to the national sample. Those who were directly impacted by the storms report higher levels of trust in family compared to the trust score among the nationally representative sample.

Figure 19. Trust Index of Food-Related Information Sources: National Sample, Six-State Sample and Storm Impacted Sub-Sample, Nov. 2024



ENDNOTES

1 Data were collected from an online panel maintained by the company Dynata over a 5-day period from November 18-22, 2024. 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. Population proportions reflect the most recent complete year of ACS Census data (2023). Every respondent from the previous month was re-contacted and asked to take the survey again. Not all respondents retake the survey, so the sample is filled with a new pool of respondents each month. Data collection for every survey begins on the third Monday of each month, unless otherwise dictated by holidays or extenuating circumstances. This report is released on the second Wednesday of the following month. The Six-State sample was balanced based on state-level population proportions for the same demographic variables.

2 Sample size Jan. 2022 - Nov. 2024: n=43,587

CFI U.S. sample size Nov. 2024: n=1,253

Six-State sample size Nov. 2024: n=1,209; directly impacted (n=416); not directly impacted (n=793)

Note: The monthly CFI U.S. sample targets respondents from the entire U.S. population by U.S. census region, including the six states of focus in the sub-national sample. However, survey samples are independent, meaning a respondent from one of the six states did not respond to both surveys.

3 Ye, Y. (2024) "Evacuating is a privilege: Why some stay behind when hurricanes strike". CU Boulder Today. Accessed: 2 December 2024. <https://www.colorado.edu/today/2024/10/09/evacuating-privilege-why-some-stay-behind-when-hurricanes-strike>

4 U.S. Department of Agriculture, Economic Research Service (2024). "Food Security in the U.S.: Measurement." Accessed: 2 December 2024. <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-u-s/measurement/#insufficiency>

Food insufficiency refers to households "sometimes" or "often" not having enough to eat. Food insecurity incorporates the concept of food insufficiency, as well as a household's ability to acquire a variety of quality foods.

5 FEMA (2024). "FEMA Launches Web Page to Respond to Rumors and Confirm the Facts Related to Hurricane Helene Response and

ENDNOTES

Recovery" [Press release]. <https://www.fema.gov/press-release/20241004/fema-launches-web-page-respond-rumors-and-confirm-facts-related-hurricane>

6 Descriptions of each attribute:

Nutrition (amount and type of fat, protein, vitamins, etc., are healthy and nourishing)

Environmental impact (production and consumption improve rather than damage environment)

Social responsibility (farmers, processors, retailers, workers, animals and consumers all benefit)

Affordability (food prices are reasonable, fit within your budget, and allow you lots of choices)

Availability (enough safe and desirable food is easy to find and physically accessible)

Taste (flavor and texture in your mouth are pleasing and high quality)

7 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.

8 High or marginal food security (i.e., food secure): 0-1 reported indications of food-access problems; little indication of change in diet or food intake. Respondents who reported an U.S. Census Region 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 shows that using a modified income-based screening procedure for internet surveys better approximates 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 indication of reduced food intake. Very low food security (i.e., food insecure): 5-6 reported indications of disrupted eating patterns, changes in diet, and reduced food intake.

9 Trust questions were not fielded in the Consumer Food Insights survey from October 2022 - December 2022.