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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 Americans 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 break down the CFI results by food security status, comparing those consumers who live in households experiencing high, low, and very low security.[2] We aggregate the last twelve months of data (May 2022-April 2023) to perform this analysis. In our discussion, we refer to high food security households as *food secure* and low and very low food security households as *food insecure*. See the endnotes for a demographic summary of these three categories. New questions included in this month's survey also asked about consumer food purchasing at dollar stores and about their preference for organic foods.

KEY INSIGHTS FROM APRIL

- Total food spending is up 7% from this time last year, while consumers similarly estimate annual food inflation to be about 7%
- Dollar store shoppers most often buy snack foods, candy, and drinks, only purchasing grocery items like milk every 1 in 5 trips
- Vegetables and fruits are the most popular organic items, but less than a third of consumers often or always choose organic
- A large majority of food insecure consumers are living paycheck to paycheck when it comes to needing to buy groceries
- Food insecure consumers are much less satisfied with their diets than food secure consumers, though most are still happy
- The food behaviors of food secure and insecure households differ relatively little on many common shopping choices

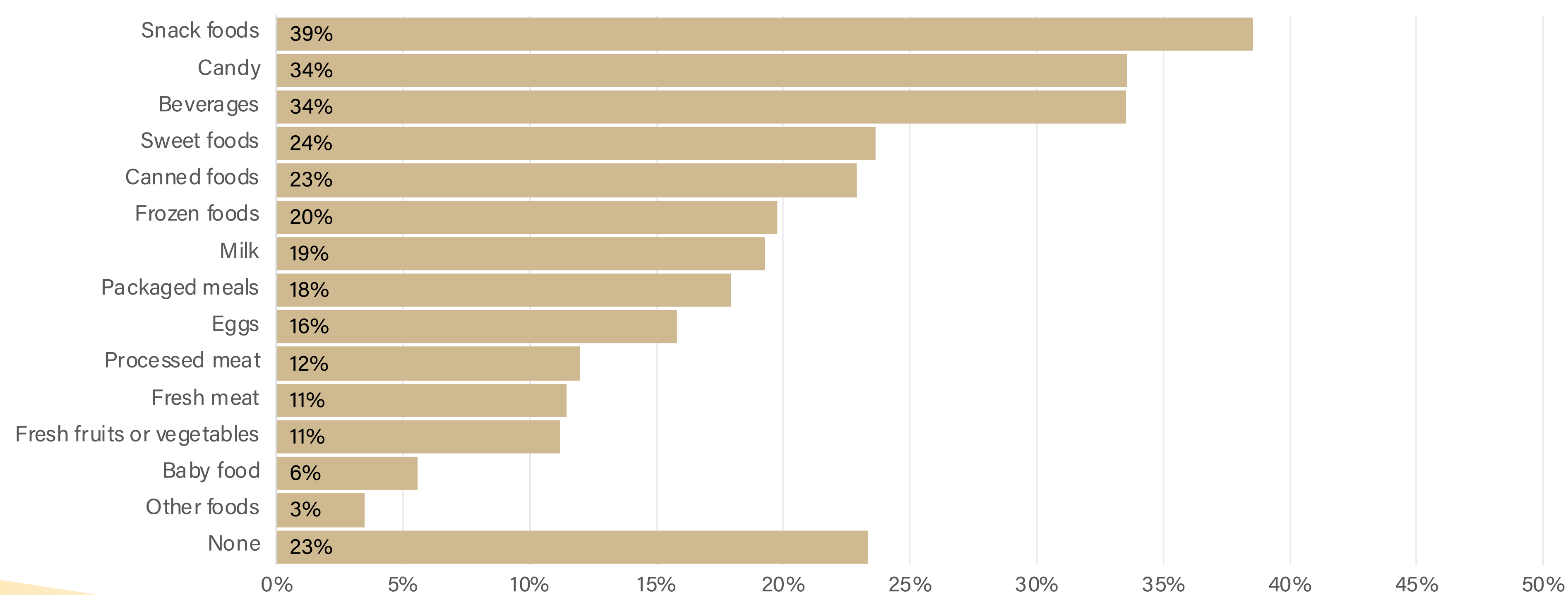
SFP INDEX	FOOD INSECURITY	FOOD SPENDING	GROCERY STOCKOUTS
70/100	14%	$184/WEEK	13%

DOLLAR STORES

What foods are Americans buying at dollar stores?

In recent years, an increase in the number of dollar stores (e.g., Dollar General, Family Dollar, Dollar Tree) has led to more discussion about the relationship of these stores to Americans' food spending habits. 55% of consumers shopped at a dollar store in the last 30 days. Of those consumers, we asked what, if any, foods they purchased (**Figure 1**). Snack foods, followed by candy and beverages, were the top three most purchased items. Less than 20% of consumers reported buying items that might traditionally be purchased at a full-service supermarket, such as milk, eggs or meat. About a quarter of dollar store shoppers did not purchase any food or beverages.

Figure 1. Foods that Dollar Store Shoppers Purchased in Last 30 Days, Apr. 2023



DOLLAR STORES

Will more Americans start shopping at dollar stores?

More dollar stores are beginning to sell fresh fruits, vegetables and meat as they attempt to compete with grocery stores. We asked, if a nearby dollar store were to add a full-service grocery section, how likely are consumers to shop at that store? Half said it would make no difference to them, while a quarter said they would be much more likely to visit the dollar store (**Figure 2**). Another factor affecting dollar store shopping might be distance. According to consumers, 30% live within 5 minutes of a dollar store, and only 16% travel that far to buy groceries (**Figure 3**). Evidently, dollar stores are well-positioned to minimize the distance consumers need to travel to buy groceries.

Figure 2. Likelihood of Consumers Shopping at a Dollar Store that Adds a Full-Service Grocery Section, Apr. 2023

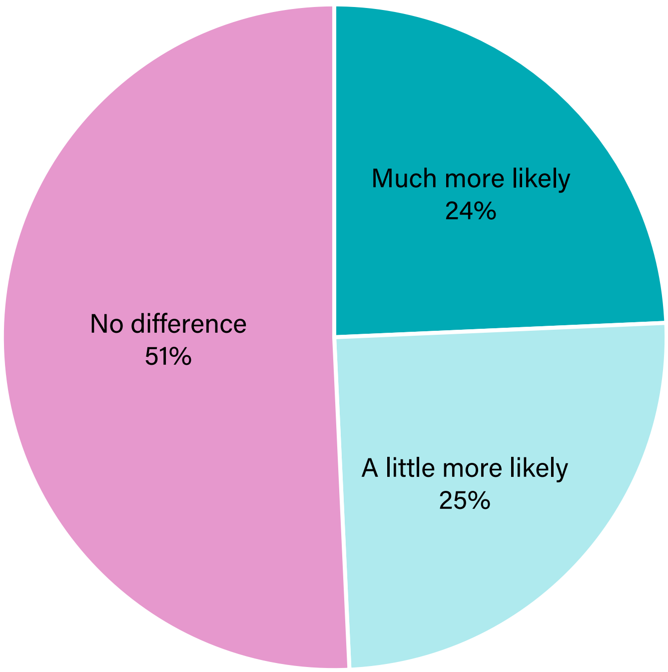
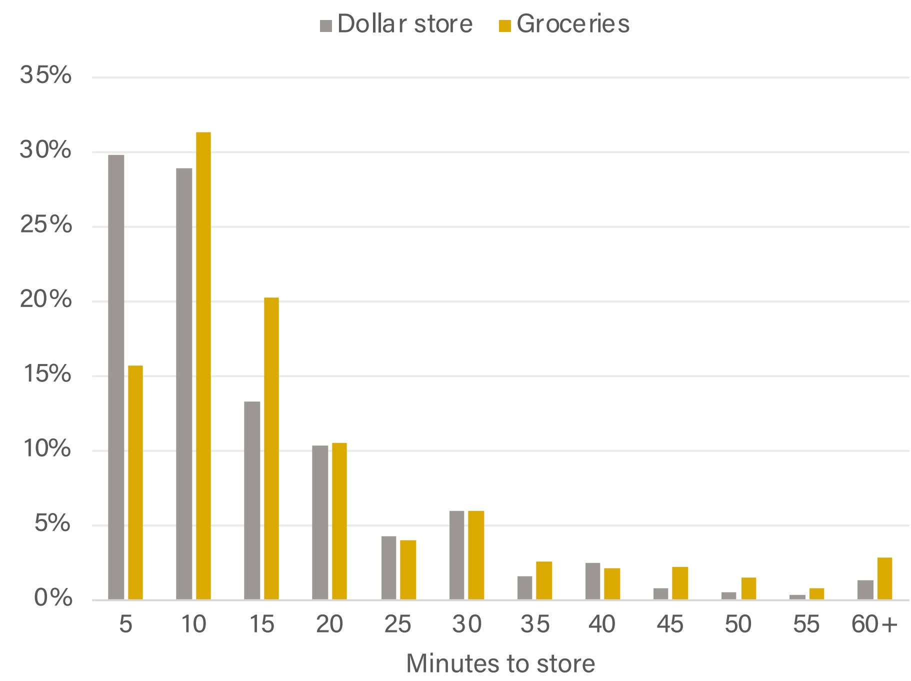


Figure 3. Distance Consumers Traveled to Buy Groceries vs. Distance to Closest Dollar Store, Apr. 2023



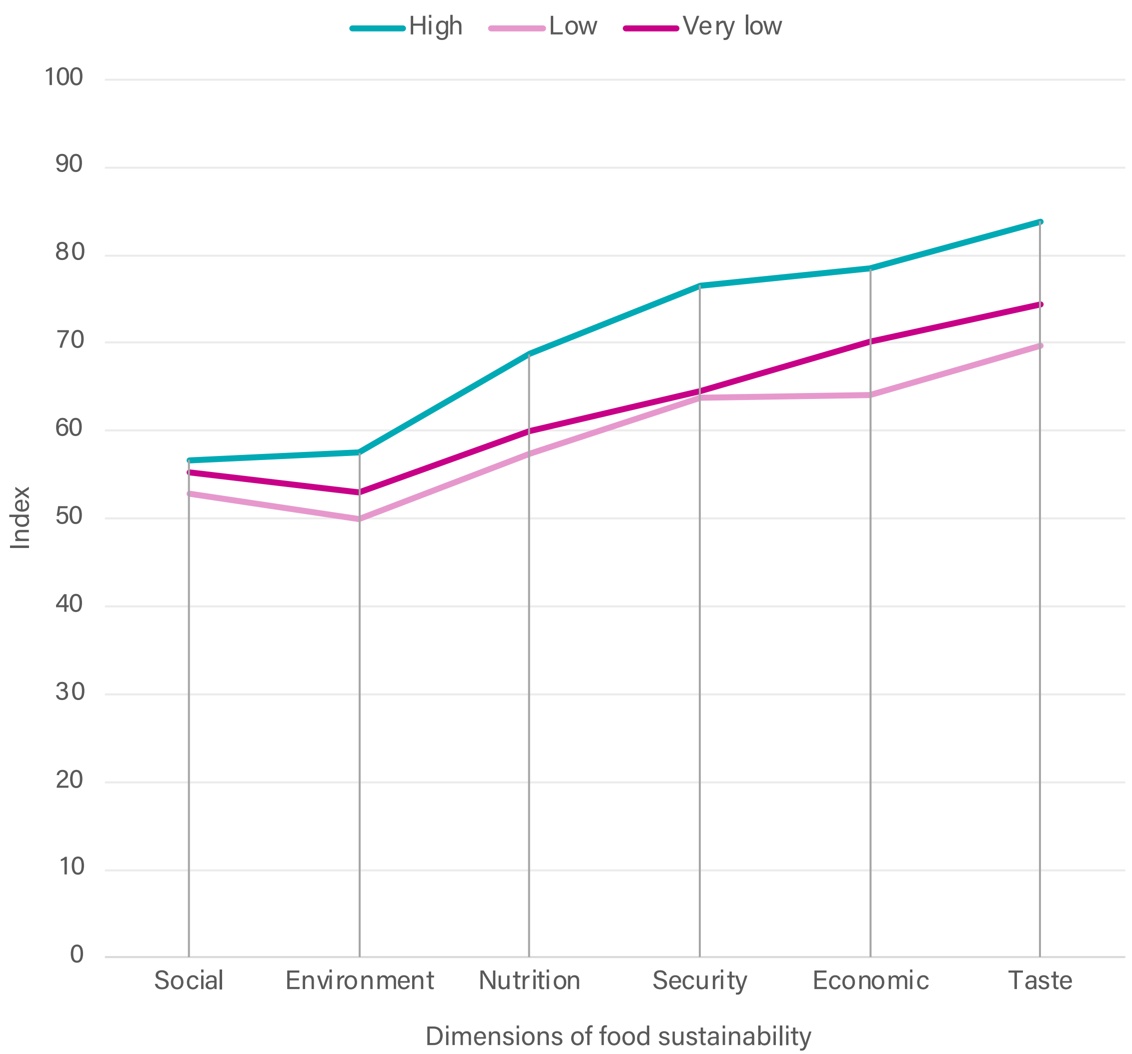
SUSTAINABLE DIETS

Are Americans purchasing sustainable foods?

Overall, the Sustainable Food Purchasing (SFP) Index[3] continues to show a relatively stable trend since January 2022. As the food environment has experienced significant turbulence since January 2022, the stickiness of these indicators suggests that the relationship of the average consumer to "sustainability" is influenced by many factors that may be slow to change. However, we find that these indicators diverge when the index is disaggreagted by the food security status of consumers (**Figure 4**).

Food insecure households are worse off across the index compared to food secure households. Yet, it is surprising to also see that the very low security consumers are performing better than the low security consumers, except for the nutrition indicator. It is likely that other demographic and socioeconomic factors are interacting with these degrees of food security. For example, very low security consumers are older, more white, and more female than low security consumers.

Figure 4. Sustainable Food Purchasing Index by Food Security Status, May 2022 - Apr. 2023

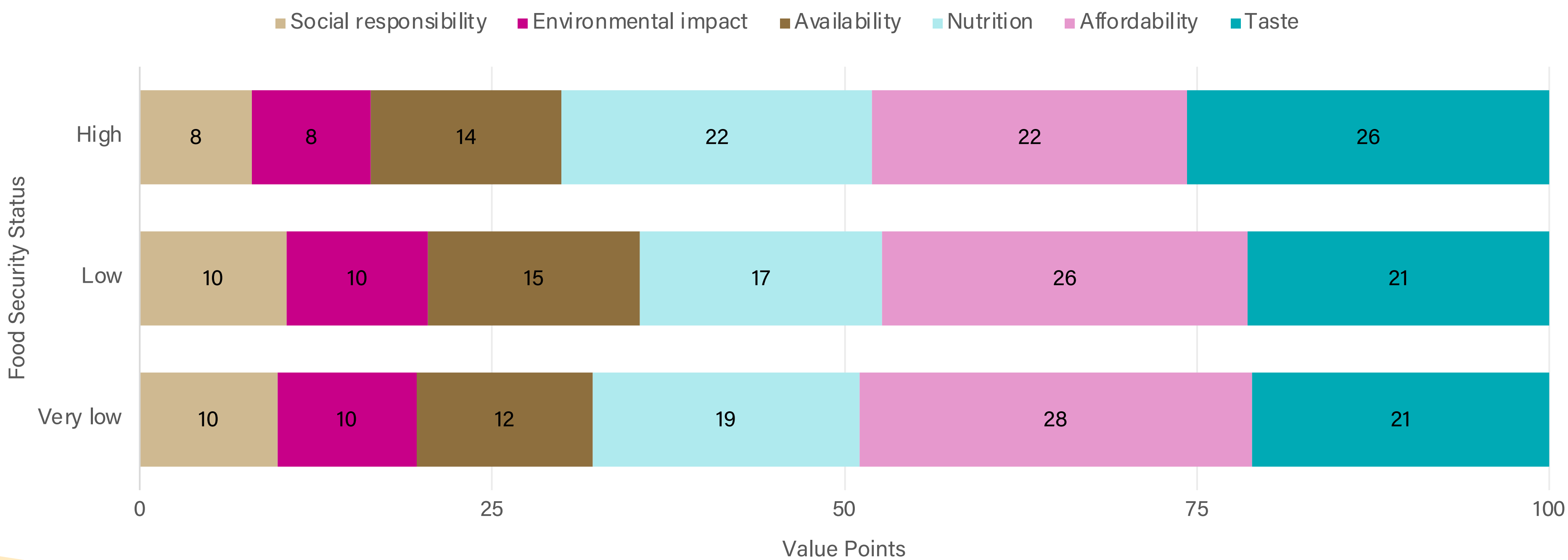


FOOD VALUES

What attributes do Americans most value when purchasing food?

Respondents were asked to allocate 100 points to six food attributes based on their importance when grocery shopping. These attributes closely reflect the components of the SFP Index. On a monthly basis, we have not observed changes that might be considered significant. However, the food security status of a person appears to have a clear relationship to their food values (**Figure 5**). Those who are food insecure value affordability more than taste, but they also value the environmental imapct and social responsibility of their food more than those who are food secure. Of note, very low security consumers value affordability the most, and low security consumers value availability the most, which may indicate that the kind of insecurity facing these consumers may differ.

Figure 5. Share of 100 Points Allocated to Food Attributes by Food Security Status, May. 2022 - Apr. 2023



FOOD EXPENDITURES

How much are American households spending on their food?

Respondents were asked to estimate the weekly food spending of their household over the last 30 days (**Figure 6**). On average, consumers reported spending $118/week at the grocery store (FAH) and $66/week on restaurants and other carryout (FAFH).[4] Relative to last April, FAH spending is up 8% while FAFH spending is up 5%. Last summer, we saw FAFH spending rise to a summer peak then decline through October. Will we see a similar summer increase, or are consumers feel more constrained this year?

Consumers' estimate of food inflation for the past year is also about the same rate that they have reported their food spending to have increased (**Figure 7**). This half a percentage-point decline from last month continues to track with the downward trend in official estimates in inflation. However, consumers' prediction for food inflation for the next year has not decreased for the last 6 months, as they appear to have set a floor for inflation around 4%.

Figure 6. Weekly Household Food Expenditures, Jan. 2022 - Apr. 2023

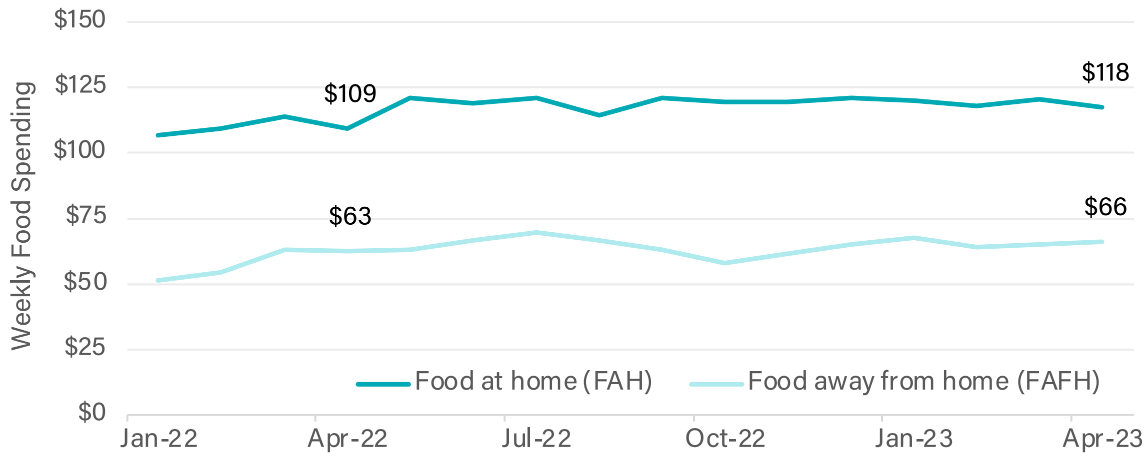
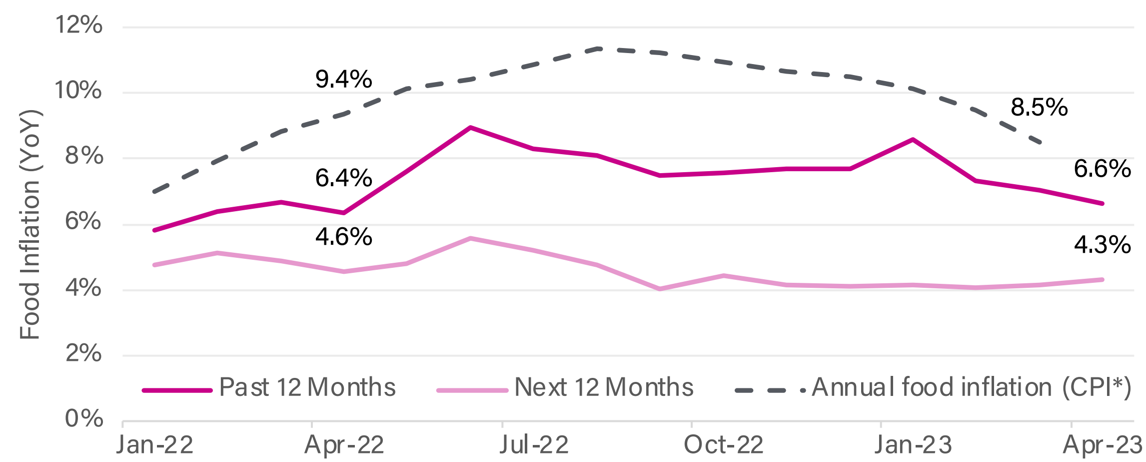


Figure 7. Consumer Estimates of Food Inflation Compared to Gov. Estimate, Jan. 2022 - Apr. 2023



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

FOOD EXPENDITURES

How is American grocery shopping changing in a post-pandemic environment?

After highlighting that the share of consumers who bought groceries online hit its lowest point last month, this rate jumped back up to 18% this month (**Figure 8**). There is not an obvious reason for this monthly increase, but vendors who are pushing online grocery shopping may be stabilizing their consumer base. In contrast, the share of consumers who could not find an item at the grocery store remains at its lowest point (**Figure 9**). This consistency projects optimism as food supply chains appear to have stabilized, particularly after the shock from egg shortages this winter. As we look to the future, diets tend to change with the seasons, so we will look to see if new shortages arise as Americans head outside.

Just over **20%** of American grocery shopping occurs at superstores, unchanged from last April.

Figure 8. Rate of Online Grocery Shopping, Jan. 2022 - Apr. 2023

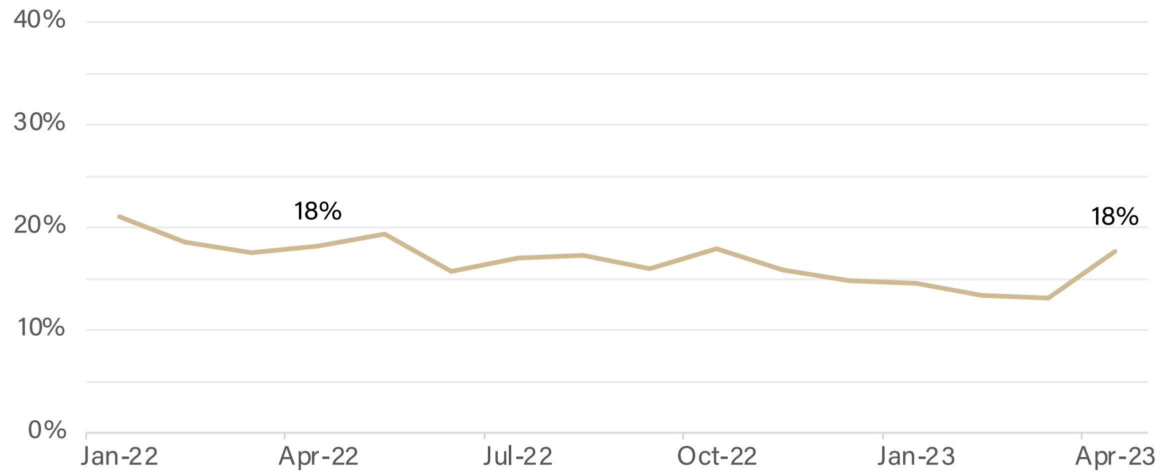
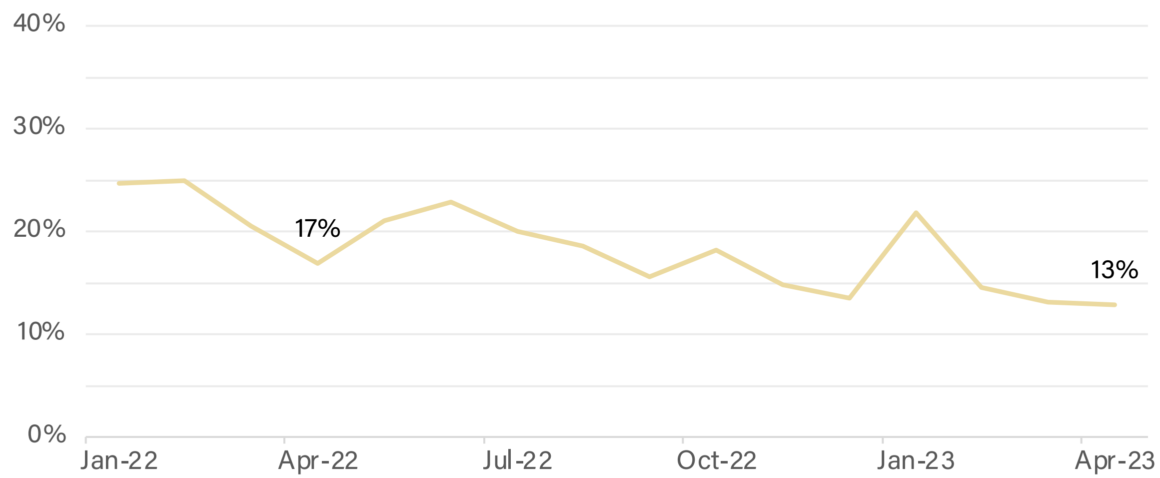


Figure 9. Rate of Grocery Stockouts (of at least one food product), Jan. 2022 - Apr. 2023



FOOD SECURITY

Are Americans having trouble buying food for their families?

Based on a set of six standard questions about food purchased and eaten in the in the last 30 days, we estimate the current national rate of food insecurity to be about 14%. **Figure 10** shows that this rate has remained relatively steady over the last year. Though, **Figure 11** reveals that food pantry use is up slightly from last April and is up four percentage-points from January.

Figure 12 further demonstrates how food pantry use and SNAP benefits are distributed across food security levels. The most vulnerable people evidently rely on this food aid more, but there are also food secure households who use these services to support their food consumption. We also ask whether households have had to wait until their next paycheck to buy groceries or buy meals out at a restaurant (**Figure 13**). Well over 55% of low security consumers and over 80% of very low security consumers are effectively living paycheck to paycheck as they must wait to visit the grocery store or eat out.

Figure 10. Rate of Household Food Insecurity in Last 30 Days, Jan. 2022 - Apr. 2023

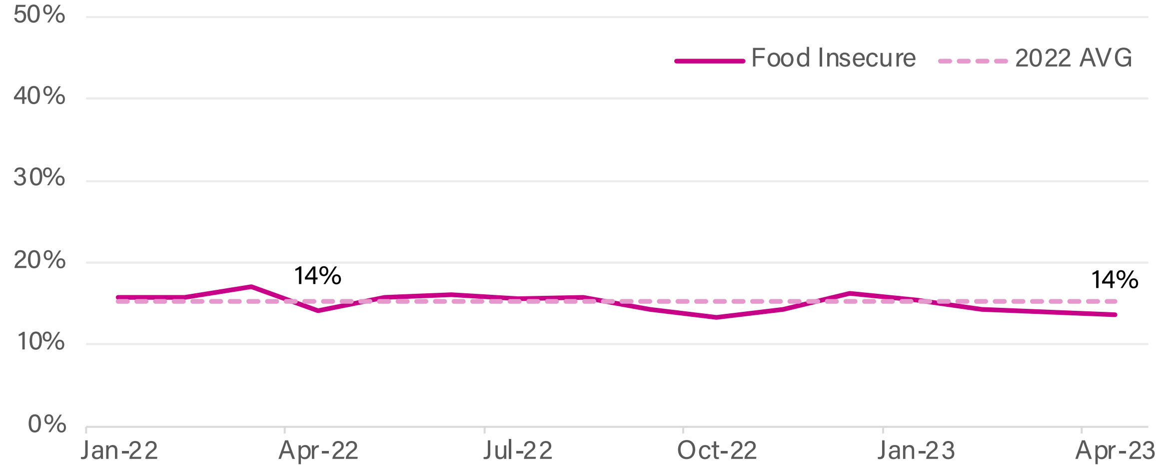
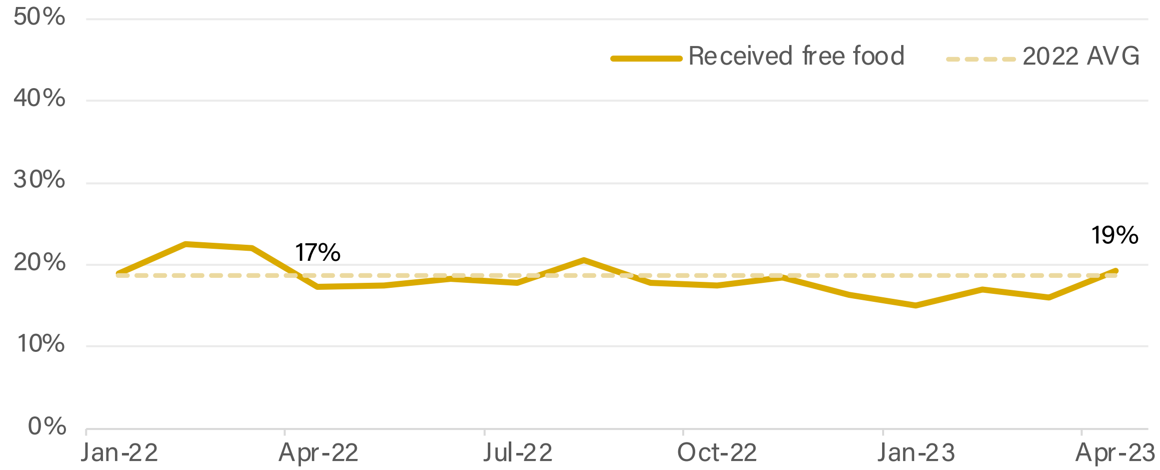


Figure 11. Rate of Household Food Pantry Use in Last 30 Days, Jan. 2022 - Apr. 2023



FOOD SECURITY

Figure 12. Rate of Household Food Pantry and SNAP Use by Food Security Status, May 2022 - Apr. 2023

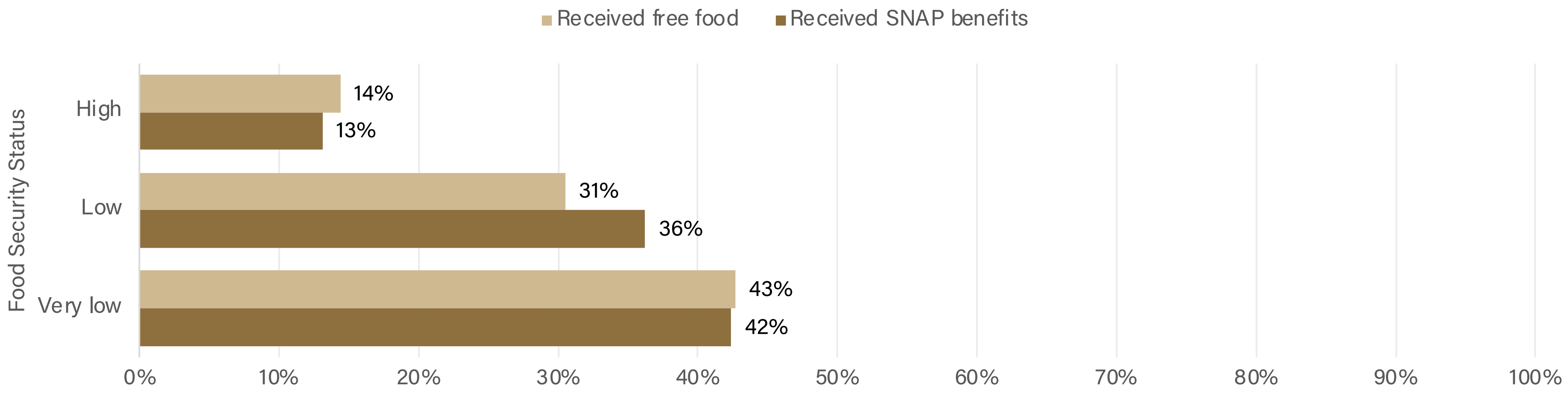
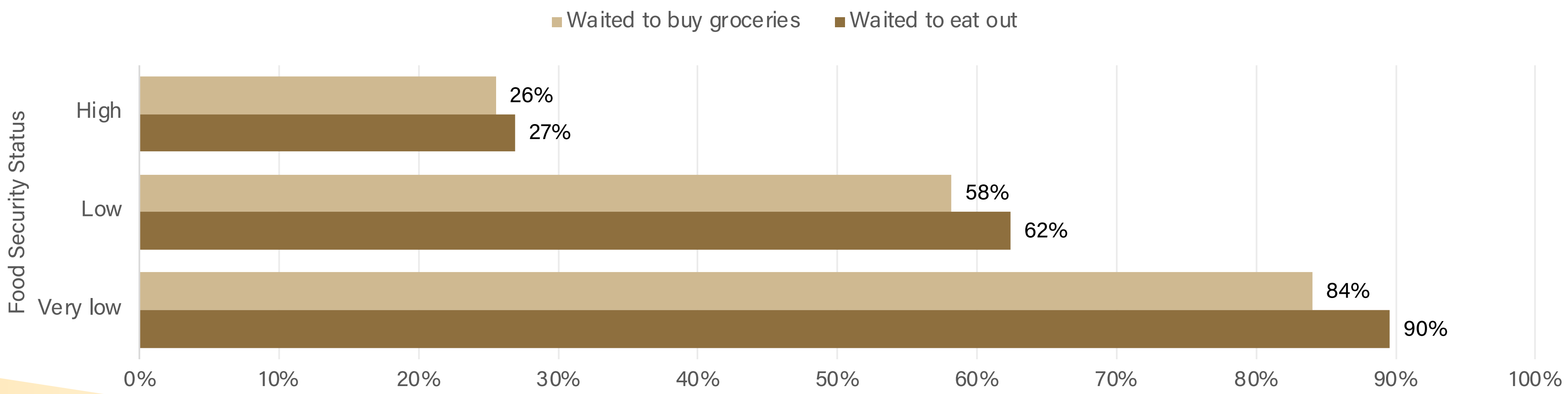


Figure 13. Rate of Households who have Forgone Groceries or Eating Out Until Next Paycheck by Food Security Status, May 2022 - Apr. 2023

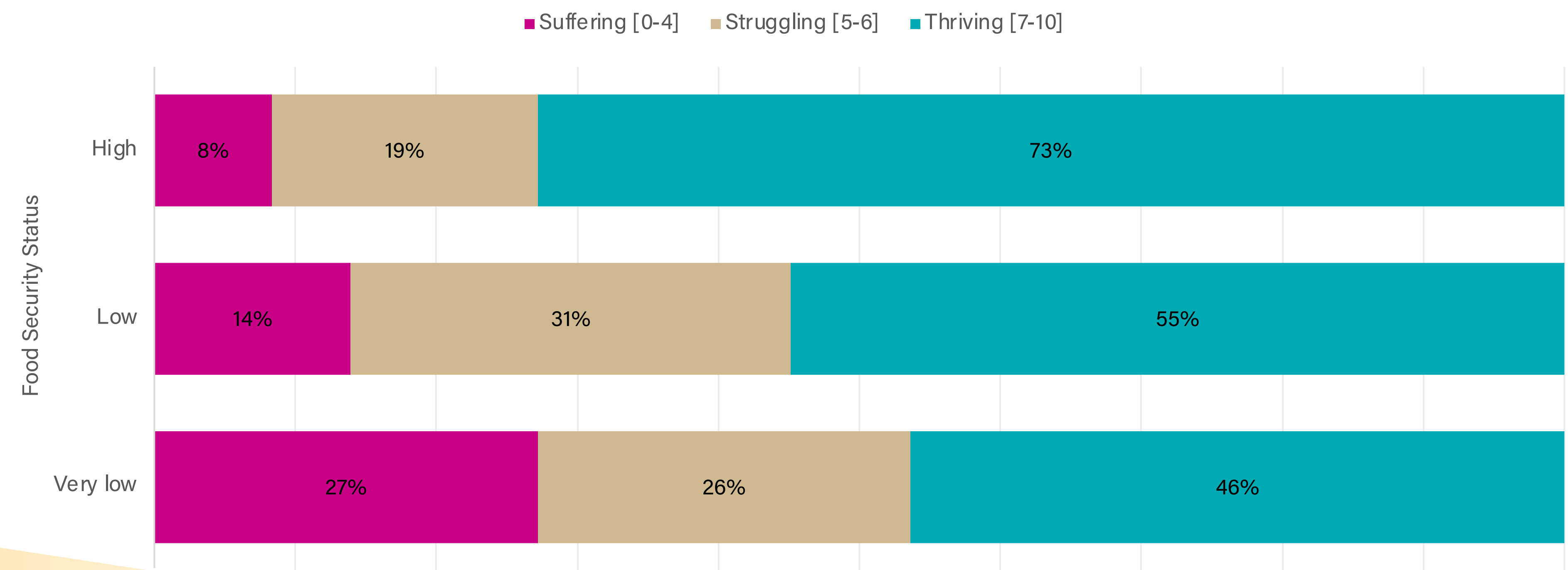


FOOD SATISFACTION

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] Scores were then categorized as thriving (7-10), struggling (5-6) or suffering (0-4). Nationally, a majority of Americans (69%) continue to be considered thriving. But, **Figure 14** reveals a more dramatic picture in which 73% of high food security consumers are thriving compared to 46% of very low food security consumers. A similar disparity bears out when consumers are asked to simply give their level of happiness with the food that is available to them (**Figure 15**). However, this gap narrows when we ask about life happiness, which make sense given that many more factors will affect general happiness (**Figure 16**).

Figure 14. Diet Well-Being Index (0-10 Scale) by Food Security Status, May 2022 - Apr. 2023



FOOD SATISFACTION

Figure 15. Rate of Consumer Diet Happiness by Food Security Status, May 2022 - Apr. 2023

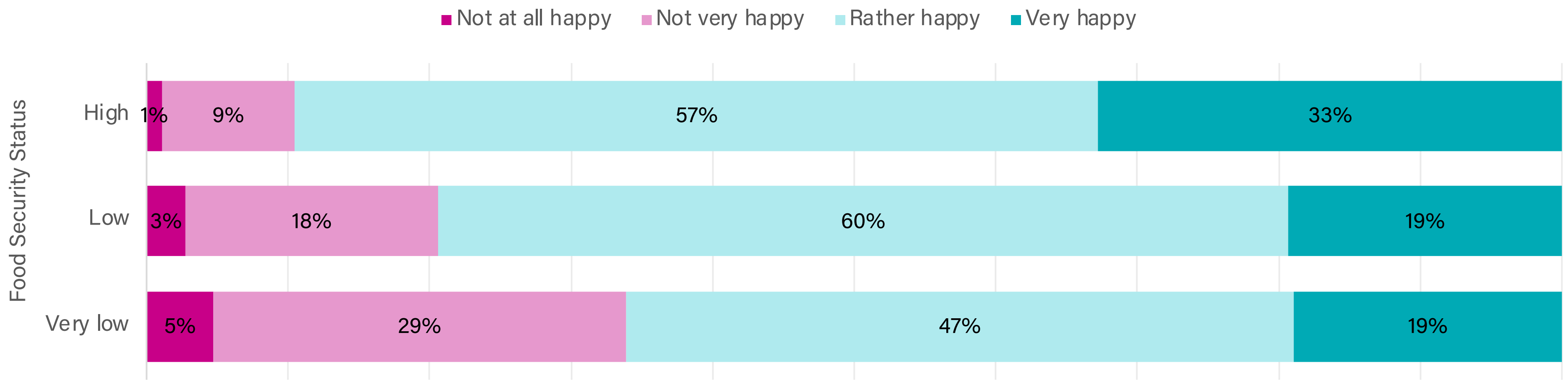
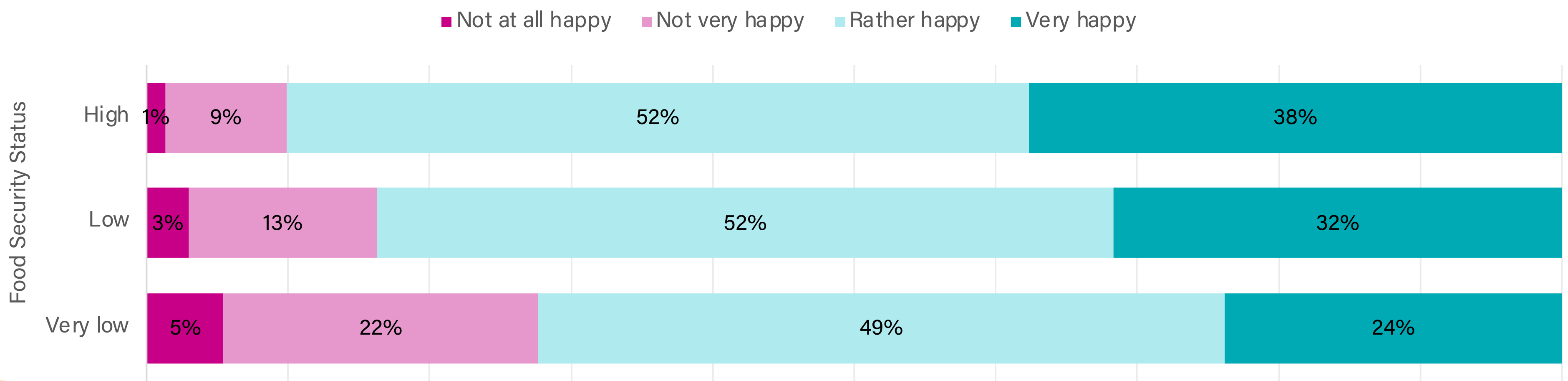


Figure 16. Rate of Consumer Life Happiness by Food Security Status, May 2022 - Apr. 2023



CONSUMER BEHAVIORS

How are Americans navigating their food environment?

Food insecure households are generally eating at home and gardening more often than food secure households (**Figures 17 & 18**). These trends run counter to some narratives that criticize the food insecure for not ‘helping themselves’ and using their resources inefficiently. There are, however, some differences within food insecure households. Very low security consumers are much more likely to cook at home, as well as much more likely to report no plans to garden in the future.

Figure 19 further reveals that many behaviors which are commonly viewed as the more sustainable or ethical option are not out of reach or uncommon among the food insecure. In other words, food insecure consumers about as likely as food secure consumers to buy local foods, plant-based proteins, or foods with natural labels. As expected, food security status does correlate with choosing generic brands over name brands. However, some of these behaviors are more muddled, as recycling food packaging is much more favored by food secure consumers while food insecure consumers seem compost food scraps slightly more often.

Figure 17. Rate of Households Eating Home-Cooked Meals Per Week by Food Security Status, May 2022 - Apr. 2023

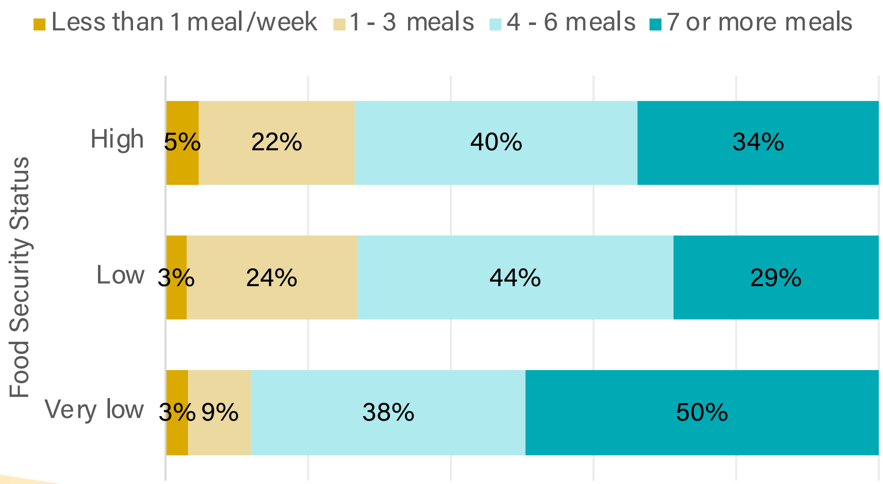
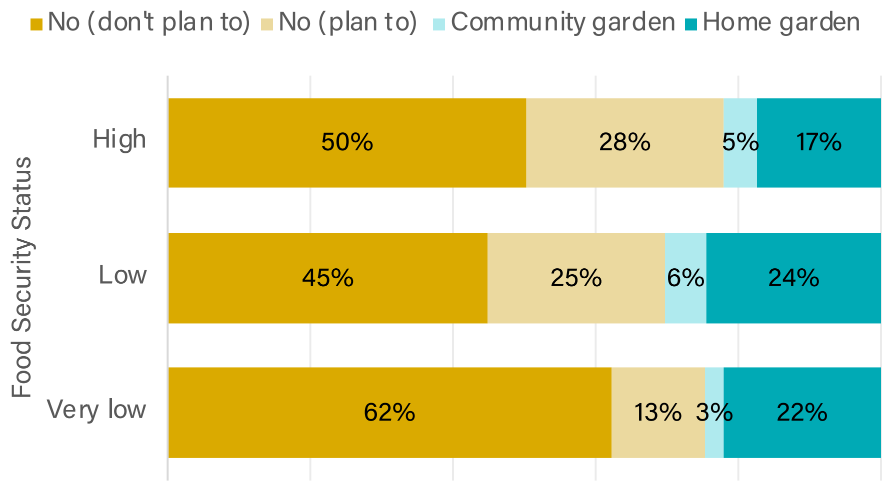


Figure 18. Rate of Household Food Gardening by Food Security Status, May 2022 - Apr. 2023



CONSUMER BEHAVIORS

Figure 19. Frequency of Consumer Shopping and Eating Habits by Food Security Status, May 2022 - Apr. 2023

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

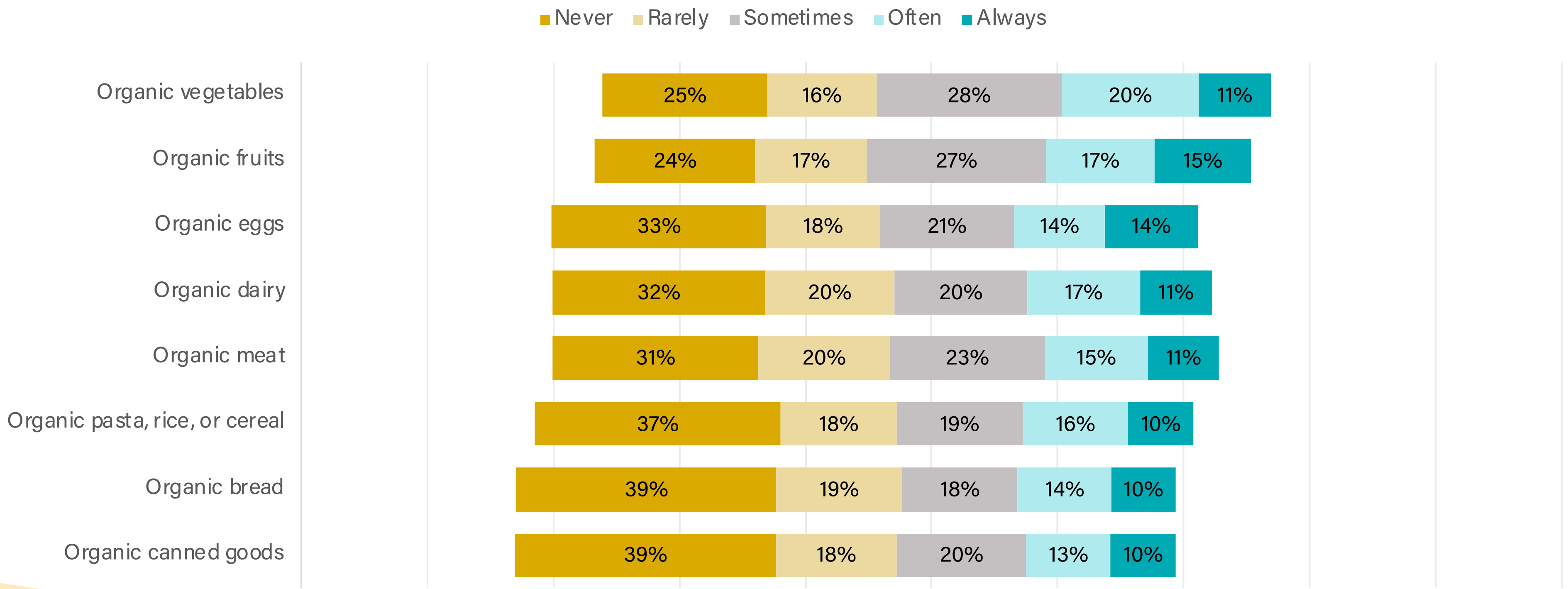
Mean Score	
5	Always
4	Often
3	Sometimes
2	Rarely
1	Never

CONSUMER BEHAVIORS

How often are Americans choosing the organic option?

The answer to this question is not very often. Just over 30% of consumers claim to be purchasing organic vegetables and fruits often or always (**Figure 20**). For every other surveyed food category (e.g., eggs, meat, bread), a majority of people are rarely or never choosing the organic product. These results are not surprising though. While organic sales are up and more farms are switching some of their acreage to organic production every year, only one percent of U.S. farmland was organic in 2019 and organic produce makes up around six percent of overall food sales. Thus, consumers are likely overestimating how often they are purchase organics.

Figure 20. Frequency the Consumers Choose the Organic Food Option, Apr. 2023

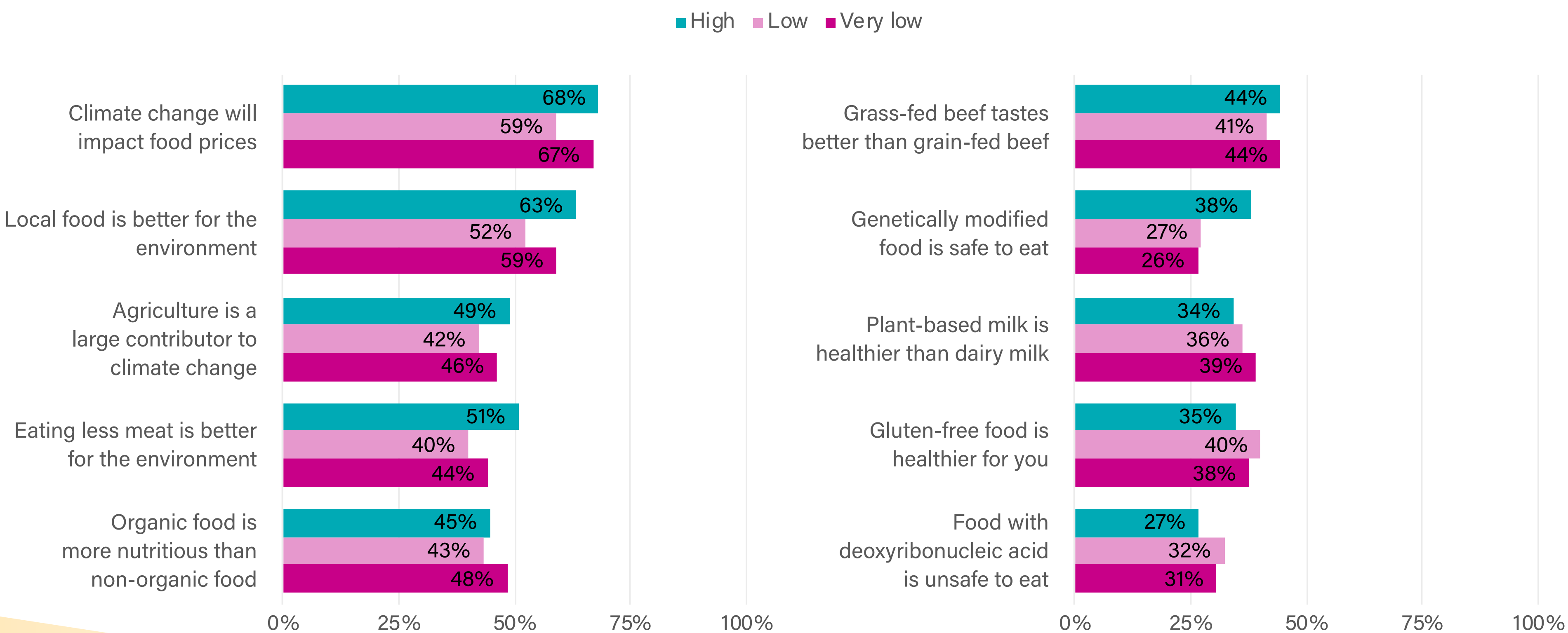


CONSUMER BELIEFS

What do Americans believe about their food and food system?

Experiences of food insecurity might correlate with some beliefs about the food system (**Figure 21**). One of the biggest differences in consumer beliefs relates to GMO foods, as food secure consumers agree that they are safe to eat by more than 10 percantage-points. Interestingly, where we see food insecure consumers generally showing more agreement than food secure consumers is on topics of health, such as organic food is more nutritious, plant-based milk is healthier and gluten-free food is healthier.

Figure 21. Share of Consumers who 'Somewhat Agree' or 'Strongly Agree' with Claims about Food by Food Security Status, May 2022 - Apr. 2023



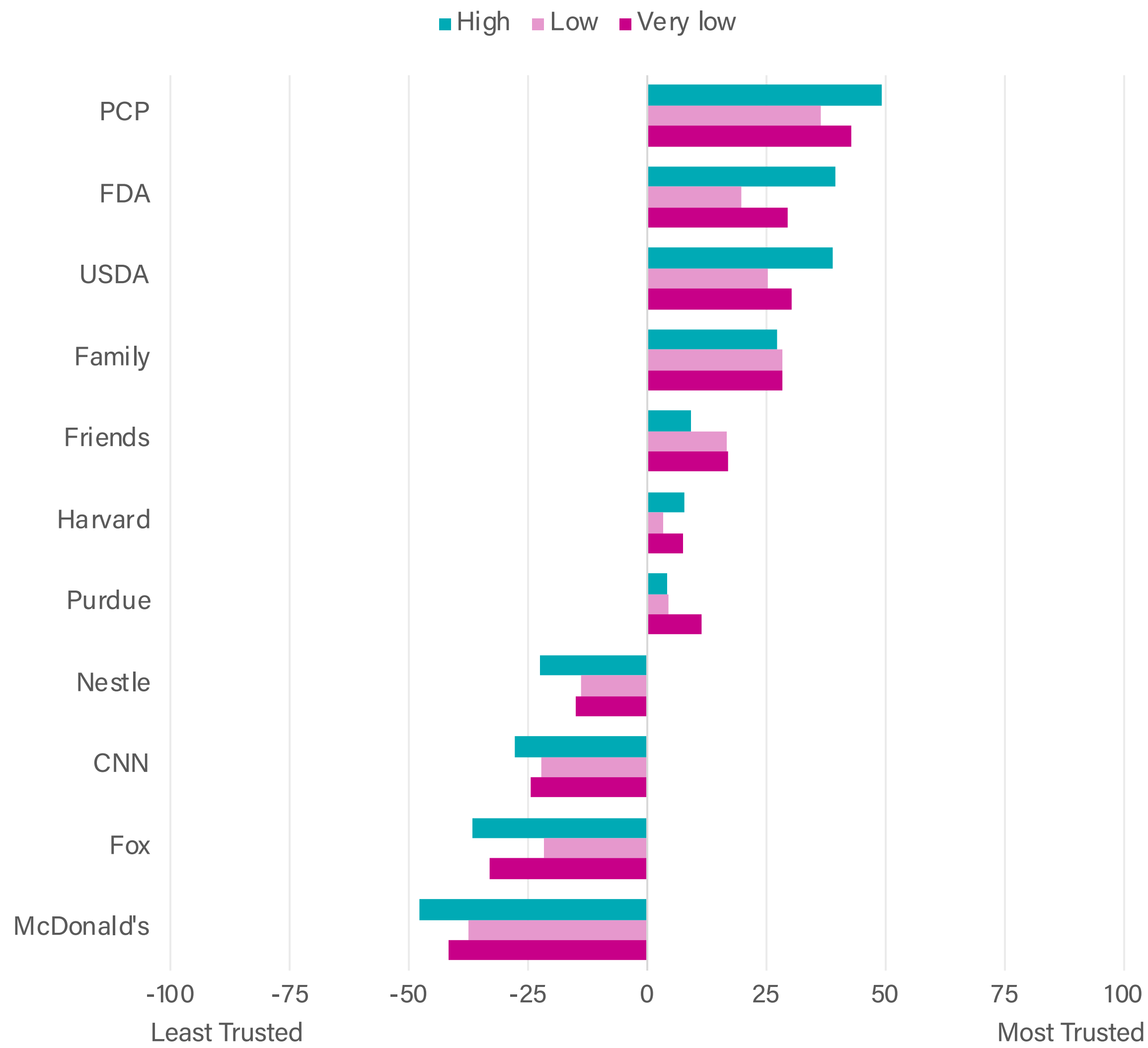
CONSUMER TRUST

Who do Americans trust on topics of food?

We asked respondents to select their five most trusted and five least trusted sources of food-related information and scored these different sources on a Trustworthiness Index. **Figure 22** reveals that food secure consumers tend to trust agencies like the Food and Drug Administration (FDA) more while they distrust companies like McDonald's more. Notably, trust levels between low and very low food secure consumers varies across many of these options. As we discussed in earlier sections of this report, we can theorize that households facing different levels of food insecurity have different experiences with these entities—e.g., very low security consumers are more likely to be receiving SNAP benefits, which is federally managed by the U.S. Department of Agriculture (USDA).

Trust in **Fox News** hit a low this month, falling 8% from last month and 14% from last April, as the company paid out a historic defamation settlement.

Figure 22. Trust Index of Food Information by Food Security Status, May 2022 - Apr. 2023



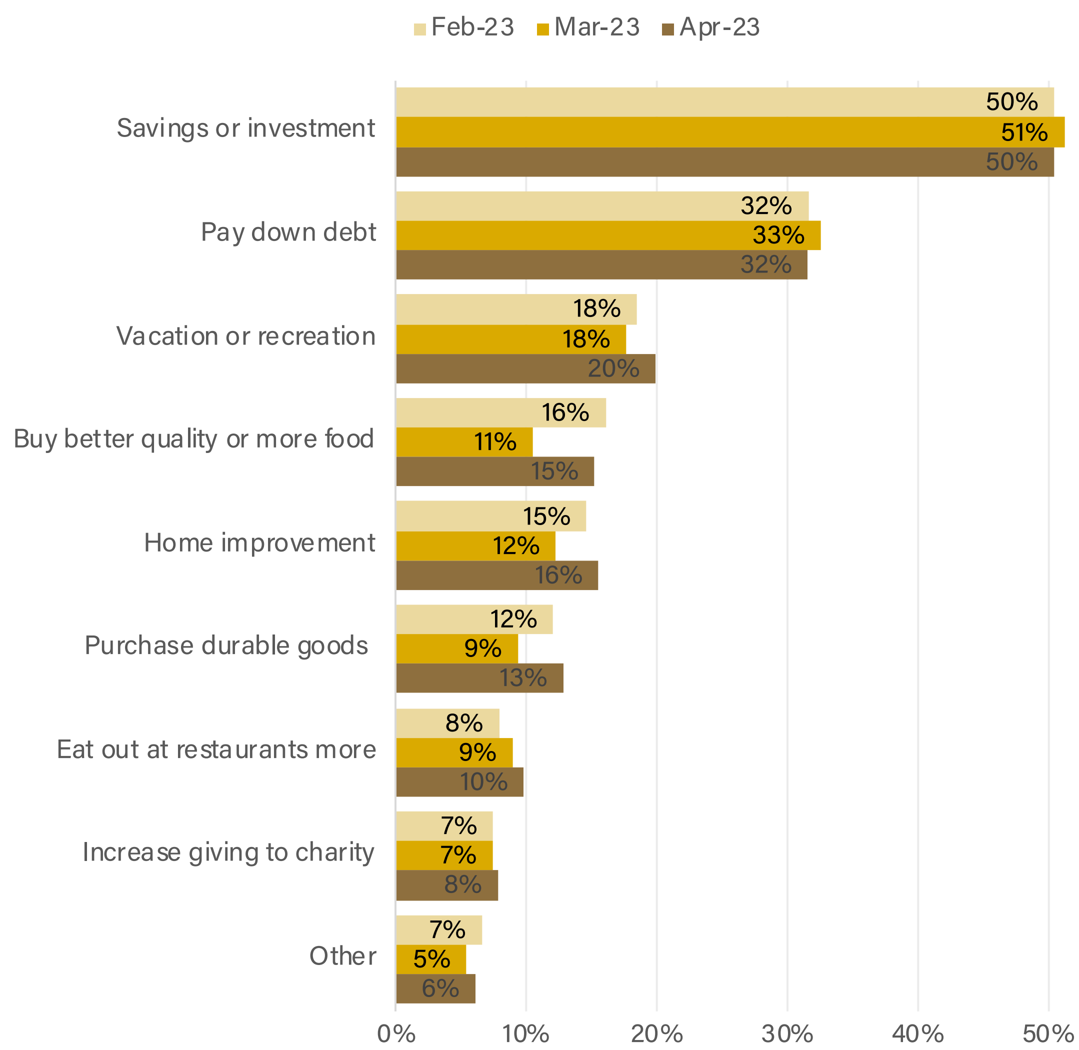
TAX SEASON

How do Americans plan to use their tax refund this year?

This tax season, we continued to ask if consumers have received or expect to receive a federal tax refund this year. As of this month, 45% report receiving a refund and another 22% say that they expect a refund, which roughly aligns with other estimates that about 3 in 4 Americans receive a refund annually.

Similar to last month, we see that a majority of consumers plan to save or invest their tax refund, while a third also intend to pay down some of their debts (**Figure 23**). Interestingly, about the same share of people who will be making home improvements or making a major purchase will also be using this money to buy a little extra food at the grocery store. In addition, as eating out is as popular as ever among Americans, less than 10% of consumers will be using their refund to go out to a restaurant. As a minority of people will be using their refunds on discretionary spending, it is clear that Americans don't view tax season as an excuse to treat themselves this year.

Figure 23. Consumer Plans for their 2023 Tax Refunds, Feb. - Apr. 2023



ENDNOTES

1 Data were collected from an online panel maintained by the firm Dynata over a three-day period from April 18-20, 2023. The eligible population included U.S. adults ages 18+. A weighting method called iterative proportional fitting 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 47% of March'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. This report is released on the second Wednesday of the following month.

2 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. Sample sizes by food security status: high (n=4,096); low (n=5,907); very low (n=744).

3 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.

4 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.

ENDNOTES

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.

Demographic and Socio-Economic Characteristics of Sample

		Household Food Security Status			
Category		**High**	**Low**	**Very low**	**Census**
Age	18-34 years old	26	56	45	30
	35-54 years old	33	28	36	33
	55 years or older	40	16	19	37
Race	White	53	28	33	58
	Black	9	19	15	12
	Asian	7	2	<1	6
	Hispanic	24	39	37	19
	Other	8	11	15	5
Sex	Male	52	38	29	49
	Female	48	61	70	51
	Transgender or other	<1	1	1	<1
Geography	Northwest	17	17	15	17
	Midwest	21	23	24	21
	South	38	38	42	38
	West	25	23	19	24
Income	<$35,000/year	15	85	92	26
	$35,000–$100,000/year	46	15	8	41
	>$100,000/year	39	0	0	33