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# CONSUMER FOOD INSIGHTS

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# TABLE OF CONTENTS

<b>03</b>	INTRODUCTION
<b>04</b>	ARTIFICIAL INTELLIGENCE
<b>12</b>	FOOD VALUES
<b>13</b>	DIET QUALITY
<b>14</b>	FOOD SECURITY
<b>15</b>	FOOD EXPENDITURES
<b>17</b>	CONSUMER BEHAVIORS
<b>18</b>	CONSUMER BELIEFS
<b>19</b>	CONSUMER TRUST
<b>20</b>	ENDNOTES

# 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.<sup>1</sup> Visit [purdue.ag/CFDAS](https://purdue.ag/CFDAS) or contact [cfdas@purdue.edu](mailto:cfdas@purdue.edu) for more details.

In this edition, we gauge consumer perceptions and level of support for use of artificial intelligence (AI) in the food system. Responses are disaggregated by age groups: 18-35, 35-44, 45-54, 55-64, and 65+.<sup>2</sup>

## KEY INSIGHTS FROM AUGUST

- Food values remain stable, with taste, affordability and nutrition leading; environmental and social impact remain secondary attributes.
- Consumer familiarity with and frequency of AI tool use is high; sentiment about its impact on society leans positive.
- The majority of consumers support the application of AI in food and agriculture production; support increased slightly from June 2023.
- Trust in applications of AI within the food system is moderate; transparency about its use is very or extremely important to most (64%).
- Older consumers are more likely to be skeptical or unsure of AI and its use in food and agriculture; knowledge remains a barrier.
- Consumer food inflation expectations for the next 12 months jumped by 0.5 points to 4.5%, the third consecutive increase.
- Young adults are more likely to believe in the health benefits of organic, gluten-free, and plant-based foods than older consumers.

CPI FOOD  
INFLATION

-0.1\*

**2.9%**

FOOD  
INSECURITY

-1

**14%**

FOOD  
SPENDING

-3

**\$198** /WEEK

GROCERY  
STOCKOUTS

+0

**11%**

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

# ARTIFICIAL INTELLIGENCE

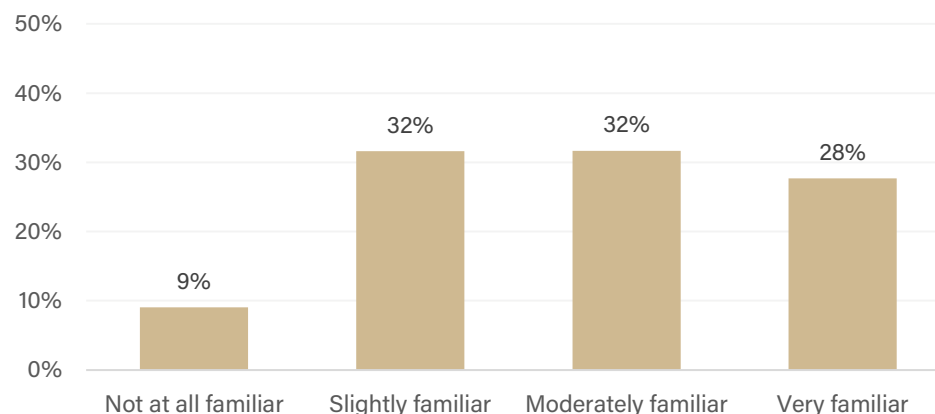
## What are consumer perceptions of artificial intelligence (AI) in the food system?

This survey explores public perspectives on the use of artificial intelligence (AI) in the food system. As AI technologies become more integrated into agriculture, food production, distribution, and personalization, understanding consumer awareness and attitudes is essential. We begin by gauging respondents' general familiarity with AI: how they interact with it, how often they interact with it, and their overall sentiment toward its use.

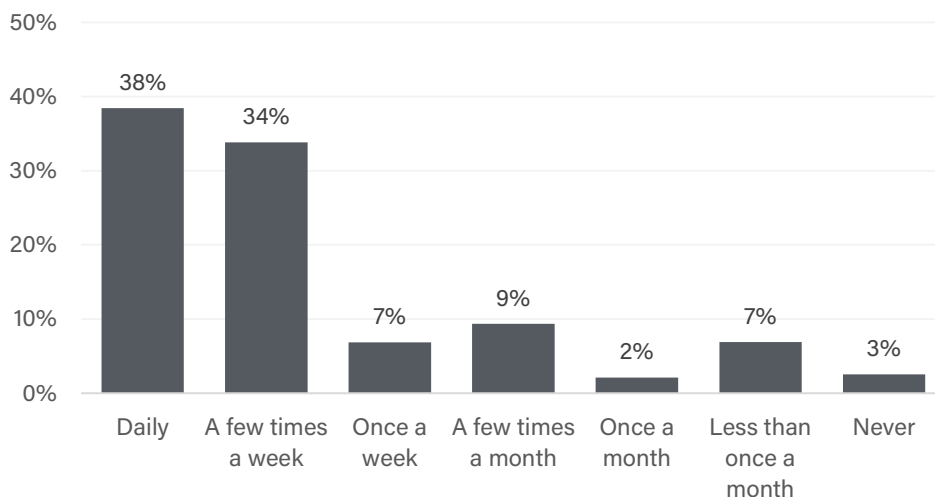
**Figure 1** reveals that the vast majority of consumers are at least slightly familiar with AI (92%) with 28% being "very familiar." The most commonly used AI tools among consumers can all be accessed via smartphone. Chatbots, AI-powered web search, navigation, and voice assistants top the list of the most common AI tools used, selected by nearly half or more respondents. Over two-thirds of consumers utilize AI multiple times a week (**Figure 2**). Additional questions reveal that 43% feel AI is having a positive impact on society in the U.S., compared to 24% who view its impact as negative.

We see that AI is quickly becoming a staple in the lives of many American adults and sentiment is mixed but leaning positive. The question we want to address is, what do these consumers think about AI-powered tools being leveraged in the food system?

**Figure 1.** "How familiar are you with 'artificial intelligence (AI)'?", Aug. 2025



**Figure 2.** "How often do you use artificial intelligence (AI) tools or services?", Aug. 2025

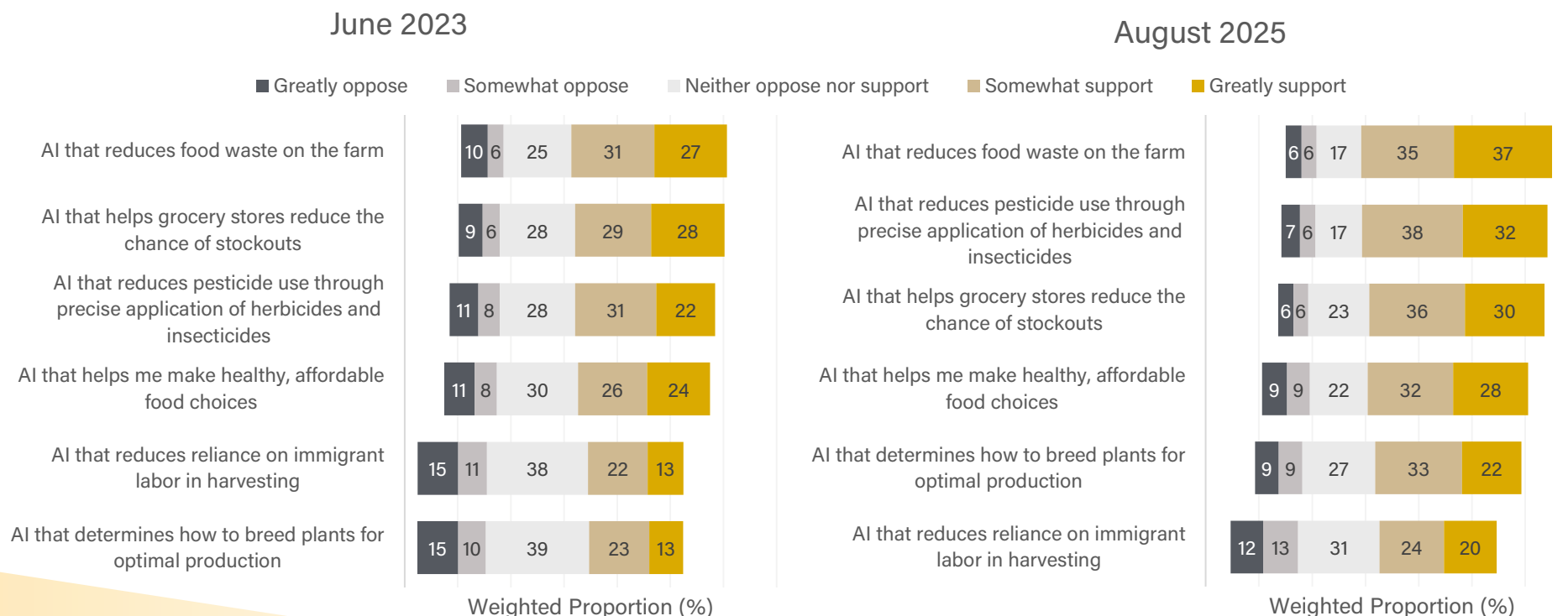


# ARTIFICIAL INTELLIGENCE

## What are consumer perceptions of artificial intelligence (AI) in the food system?

During the initial rise of AI tools and applications among the public, CFDAS asked how consumers feel about developing AI tools for use in the food and agriculture sectors in June 2023. We revisited this question in this month's survey and observe fewer consumers taking a neutral stance and a slight increase in overall support across the board (**Figure 3**). The majority of consumers express support for AI that improves efficiency in the food system, such as reducing food waste, pesticide use and stockouts. Support for AI that impacts the reliance on labor in harvesting is more mixed. Given that the prospect of AI automation usually comes with concerns about job loss, it is not entirely surprising to see this statement yield mixed levels of support.

**Figure 3.** Consumer support for or opposition to the application of AI in food and agriculture, Aug. 2025

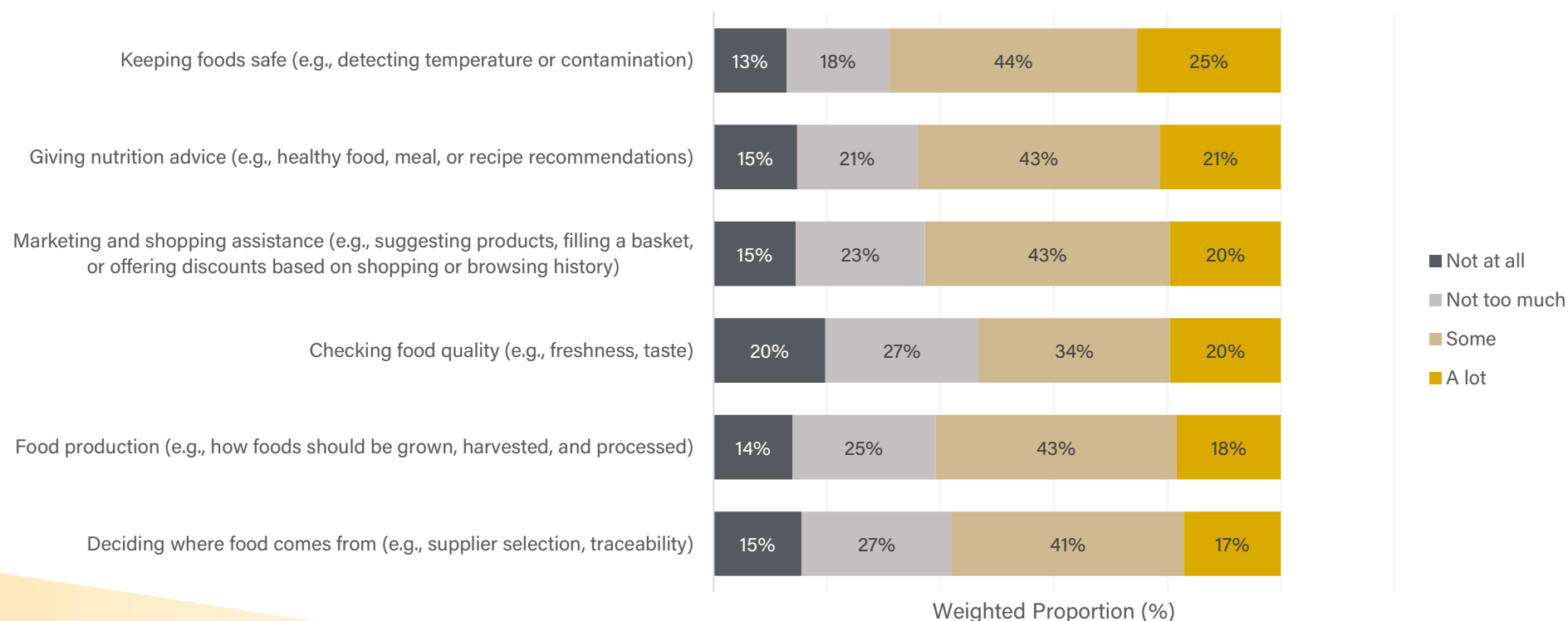


# ARTIFICIAL INTELLIGENCE

## What are consumer perceptions of artificial intelligence (AI) in the food system?

About half of respondents express moderate to high trust in AI across various food system roles, especially in food safety and nutrition advice (**Figure 4**). However, skepticism remains. Around 15% consistently report having no trust in AI to perform key tasks. These results suggest cautious optimism, but also highlight a persistent segment of consumers who remain deeply skeptical — underscoring the need for targeted outreach and clearer communication to address concerns and build trust. Still, most consumers appear fairly open to the use of these tools if they contribute to safety and efficiency improvements in the food system.

**Figure 4.** "How much do you trust AI to make decisions about the following parts of the food system?"



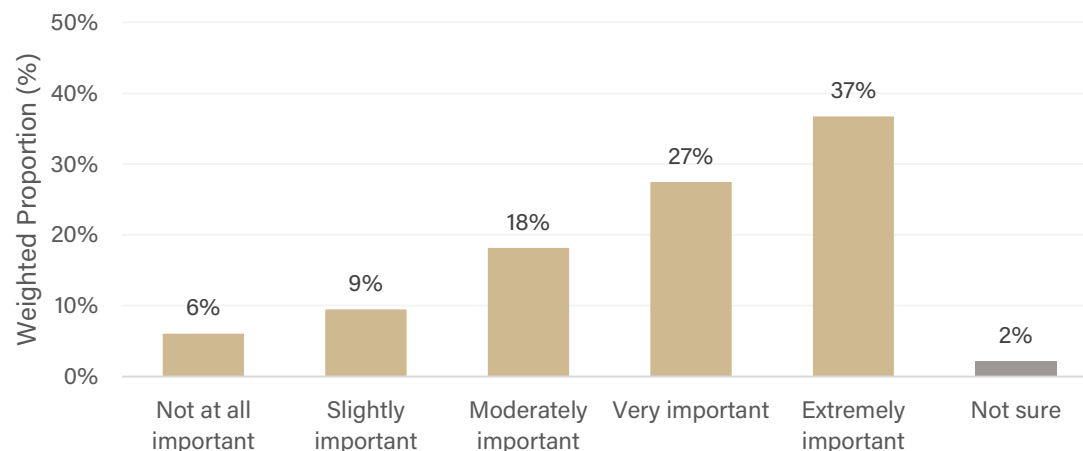
# ARTIFICIAL INTELLIGENCE

## What are consumer perceptions of artificial intelligence (AI) in the food system?

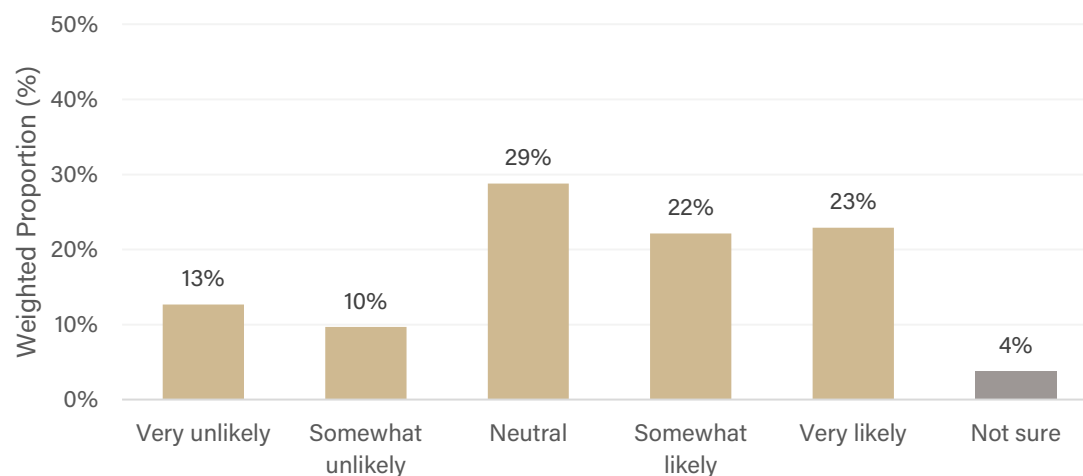
The outlook for AI in food and agriculture in terms of consumer acceptance is promising. Still, building lasting trust in new technology and production methods is imperative for long-term acceptance, with 64% of consumers placing high importance on transparency. As with many other aspects of food production, it is vital for producers to keep in mind the importance of being transparent about its use (**Figure 5**).

Respondents were asked about their likelihood of choosing a food product with labeling that informs them that AI was used in the production process.<sup>3</sup> We observe a mix of responses, with around one-quarter being unlikely to some degree, 29% being neutral to the choices and 45% saying they would likely choose the labeled product (**Figure 6**). Because of the novelty of AI and the variety of perspectives consumers have regarding these technologies, participants received a follow-up question dependent on their responses that tried to better understand the reasoning behind their selections.

**Figure 5.** "How important is it to you that food producers disclose (tell people) when AI is used in food production or decision-making?", Aug. 2025



**Figure 6.** "How likely would you be to choose a food product labeled 'AI-assisted' over the same product made without AI, assuming they are the same price?", Aug. 2025

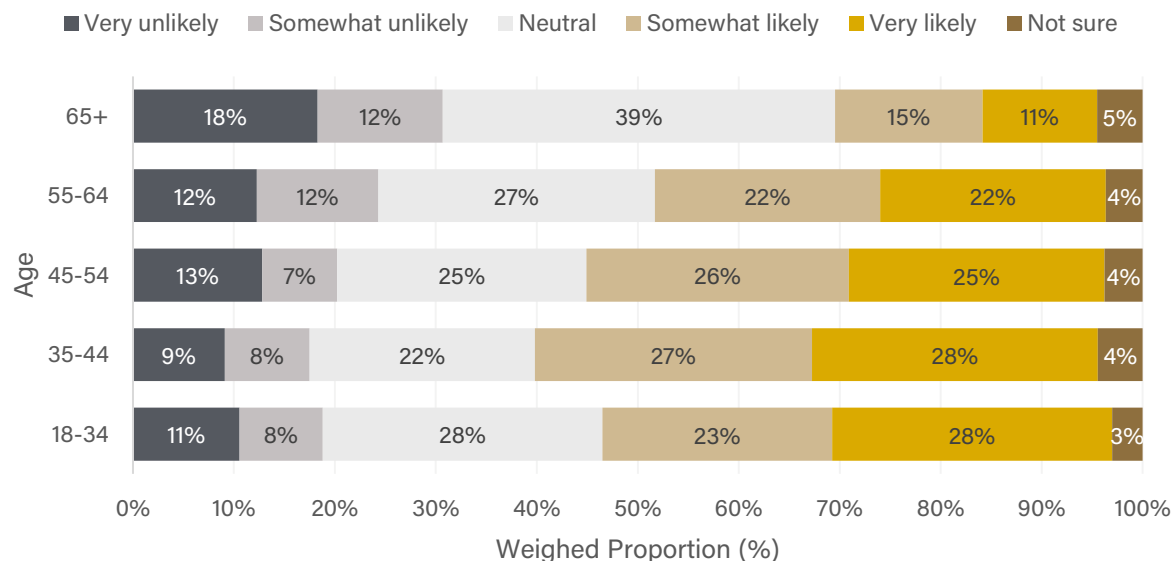


# ARTIFICIAL INTELLIGENCE

## What are consumer perceptions of artificial intelligence (AI) in the food system?

Older consumers, particularly those age 65 and above, are less likely to select AI-assisted food products (**Figure 7**). Follow-up questions reveal heightened skepticism and uncertainty about what 'AI-assisted' actually means. This aligns with earlier findings showing lower levels of familiarity with AI among older consumers. Together, these insights suggest that increasing transparency and education around AI in food production may be key to improving acceptance among older demographics.

**Figure 7.** "How likely would you be to choose a food product labeled 'AI-assisted' over the same product made without AI, assuming they are the same price?" by age, Aug. 2025

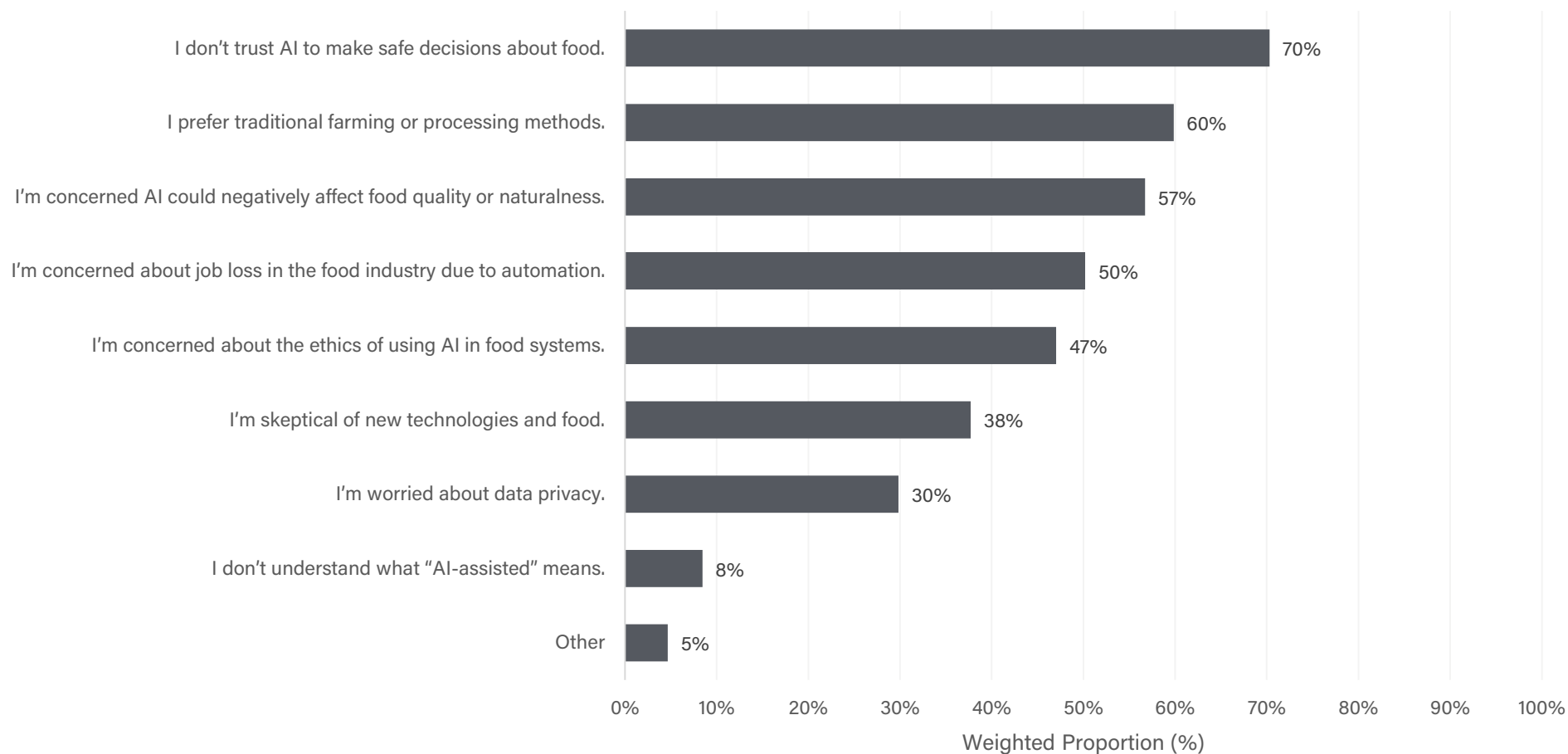


**Figure 8, 9 and 10** summarize follow-up responses that explain participants' reasoning behind their selections of 'unlikely,' 'neutral,' and 'likely' regarding choosing AI-assisted foods, respectively. Among those who selected 'unlikely,' the most frequently cited concerns, mentioned by at least half, include food safety, quality and naturalness, a preference for traditional farming methods and fears of job displacement. Nearly one-third of participants took a neutral stance. Of those, many expressed a need for more information and a better understanding of how AI is integrated into food production before forming a clear opinion. In contrast, those who indicated they would be 'likely' to choose AI-assisted food products pointed to improved food safety (53%) and efficiency-related benefits as key motivators. Notably, a significant portion (70%) of 'unlikely' respondents reported distrust in AI's ability to make food safety decisions. This presents a strategic challenge for food producers and brands: while AI is increasingly leveraged to enhance efficiency, reduce costs, and improve food safety, nearly a quarter of consumers remain unconvinced. Bridging this trust gap will be essential for broader market acceptance and successful integration of AI in the food system.



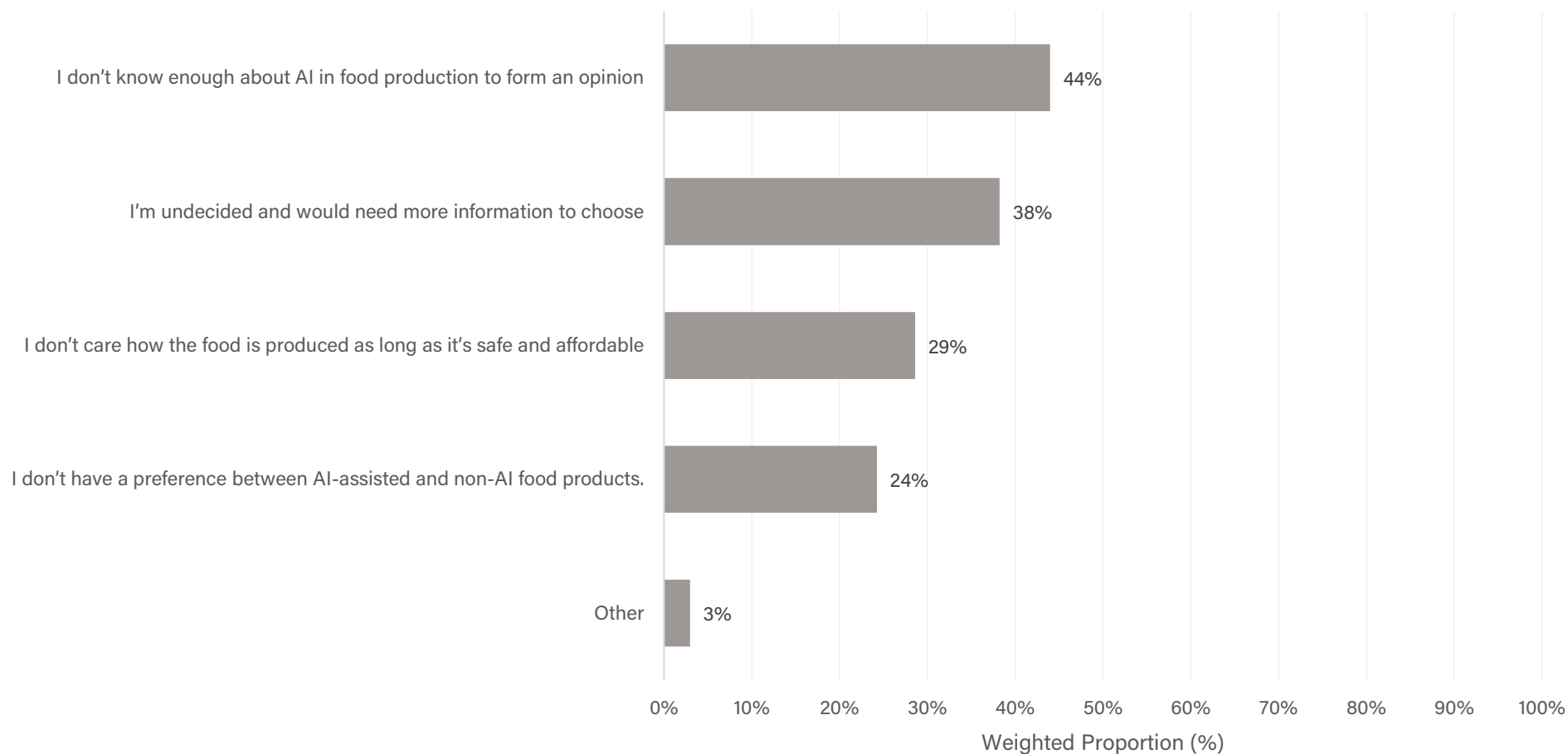
# ARTIFICIAL INTELLIGENCE

**Figure 8.** "You indicated that you would be unlikely to choose a food product labeled 'AI-assisted' over the same product made without AI. What concerns or reservations do you have about food products labeled 'AI-assisted'? (Select all that apply)", Aug. 2025



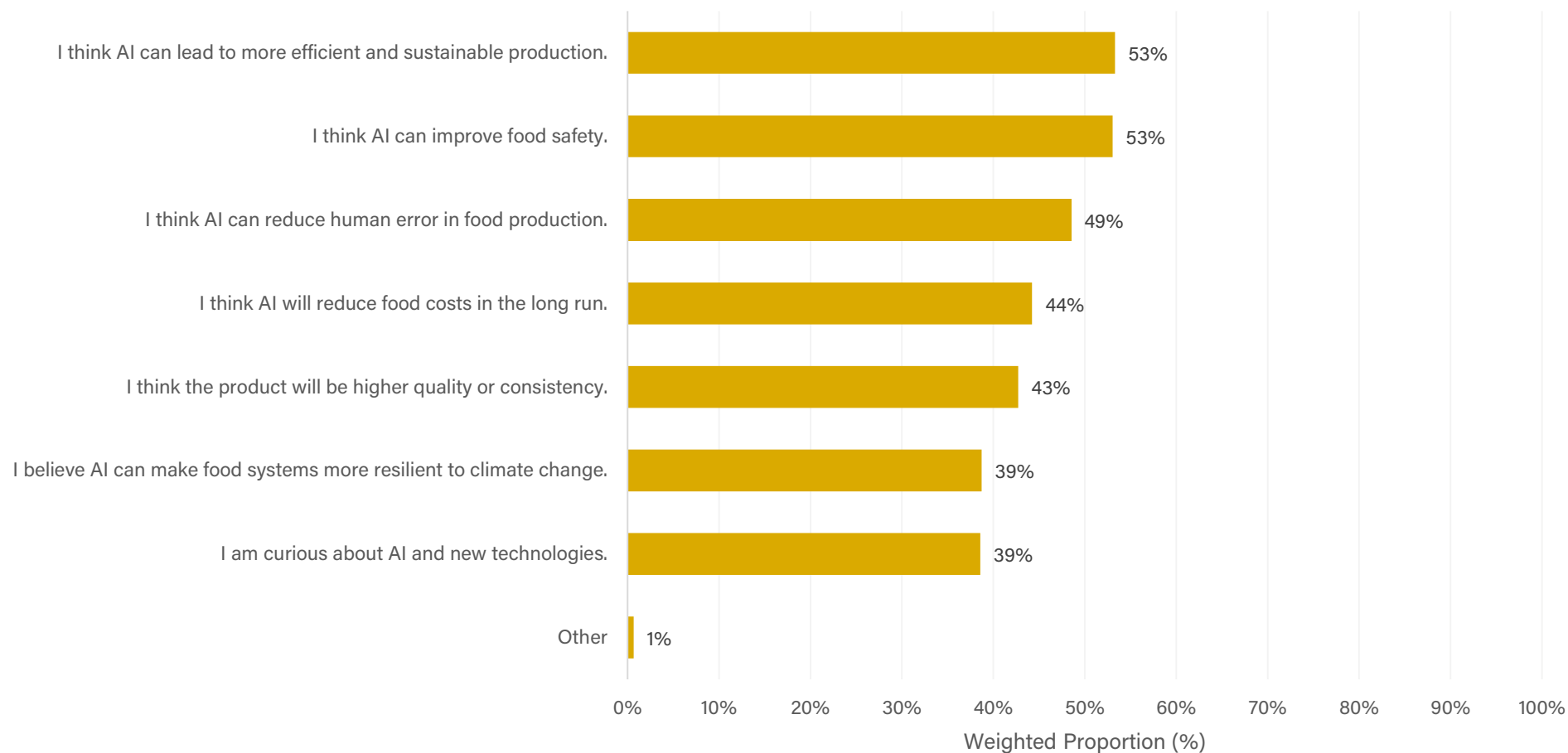
# ARTIFICIAL INTELLIGENCE

**Figure 9.** "You indicated that you are neutral or unsure about choosing a food product labeled 'AI-assisted' over the same product made without AI. What best describes your reason for feeling neutral or unsure? (Select all that apply)", Aug. 2025



# ARTIFICIAL INTELLIGENCE

**Figure 10.** "You indicated that you would be likely to choose a food product labeled "AI-assisted" over the same product made without AI. What appeals to you about products labeled 'AI-assisted'? (Select all that apply)", Aug. 2025

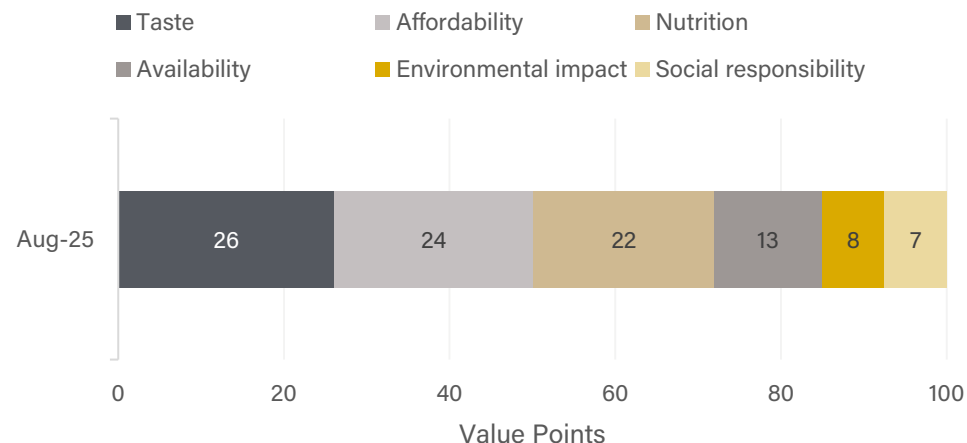


# FOOD VALUES

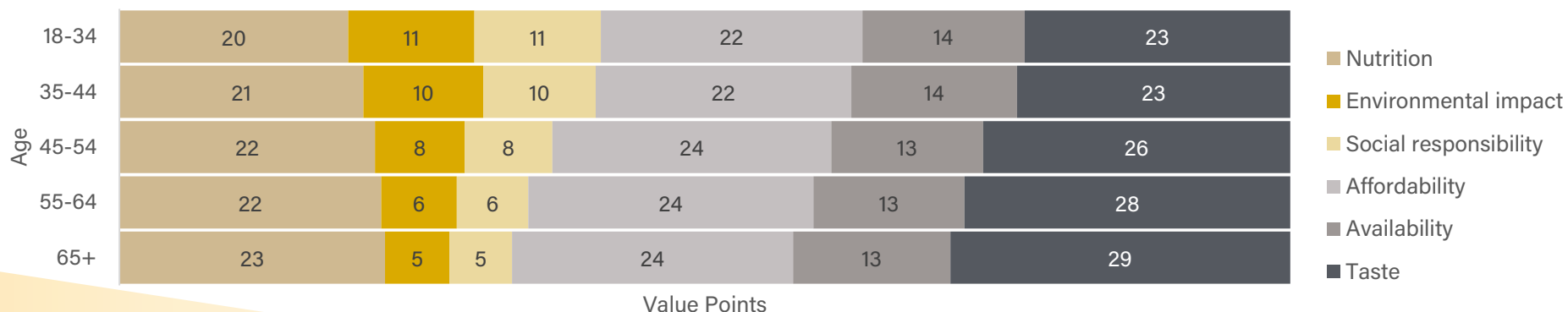
## What attributes do Americans value most when purchasing food?

Respondents were asked to allocate 100 points to six food attributes based on their importance when grocery shopping.<sup>4</sup> Taste, affordability and nutrition remain the key attributes consumers use to make their purchasing decisions, while environmental impact and social responsibility remain relatively low (**Figure 11**). This disparity is even greater among older adults. Environmental impact and social responsibility are valued much lower than taste, affordability and nutrition among those who are middle-age and older. Youngers consumers value the environmental and social impacts of their food to a greater degree. Still, taste, affordability and nutrition are a greater priority among this group (**Figure 12**).

**Figure 11.** Share of 100 points allocated to food attributes, Aug. 2025



**Figure 12.** Share of 100 points allocated to food attributes by age, Jan. 2022 - Aug. 2025



# DIET QUALITY

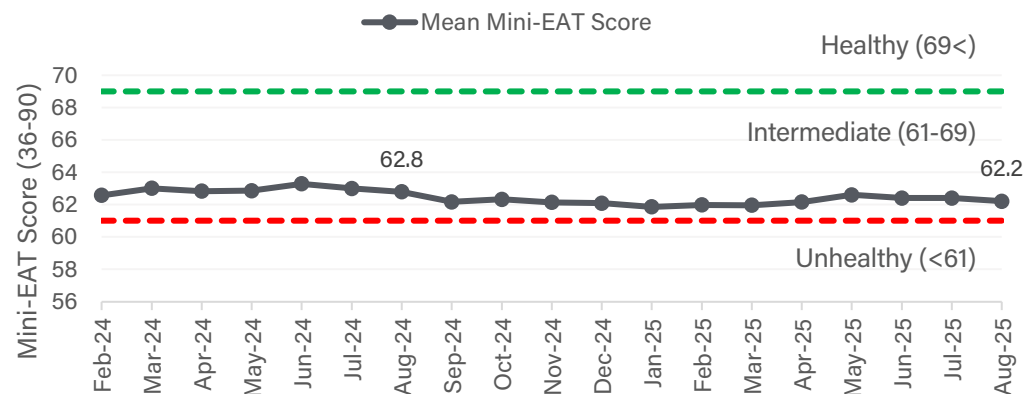
## What is the quality of the American adult diet?

Utilizing a nine-item questionnaire known as the Mini-EAT Tool<sup>5</sup>, we estimate consumers' self-reported diet quality in the last 30 days.

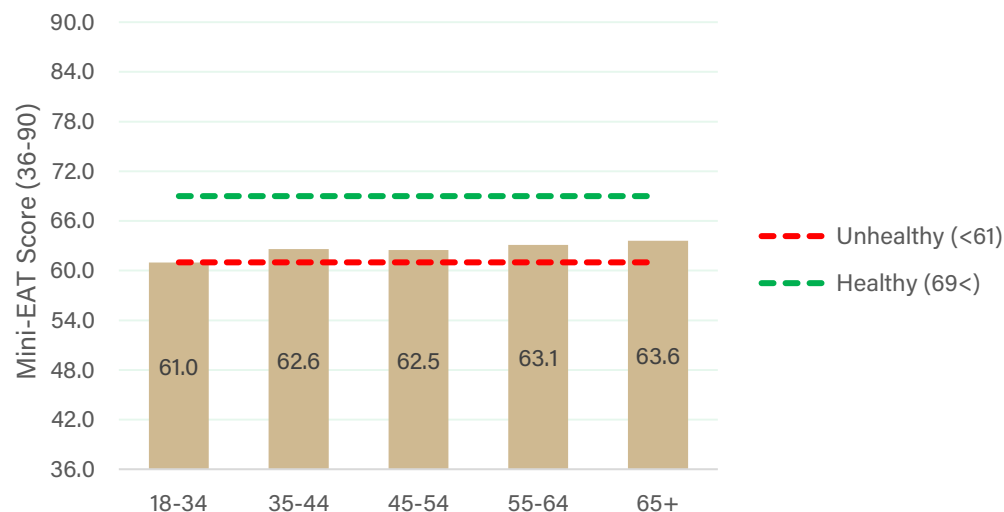
**Figure 13** summarizes average Mini-EAT scores since February 2024. Diets are classified as unhealthy (<61), intermediate (61-69) and healthy (69<). American adults score an average of 62.2 on this scale, which puts them in the intermediate classification. This average remains unchanged from last month. In August, 17%, 36% and 47% are classified as "healthy", "intermediate", and "unhealthy", respectively.

**Figure 14** summarizes diet quality scores by age group. We observe a correlation between average diet quality scores and age with the oldest age group (65+) scoring highest and the youngest group (18-34) scoring the lowest on the scale. Yet, the average diet quality among all age groups falls in the intermediate classification. These findings suggest that while diet quality improves with age, there remains significant room for improvement across all age groups.

**Figure 13.** Purdue's American Diet Quality Index (PADQI), Feb. 2024 - Aug. 2025



**Figure 14.** Weighted average Mini-EAT diet quality score by age, Feb. 2024 - Aug. 2025



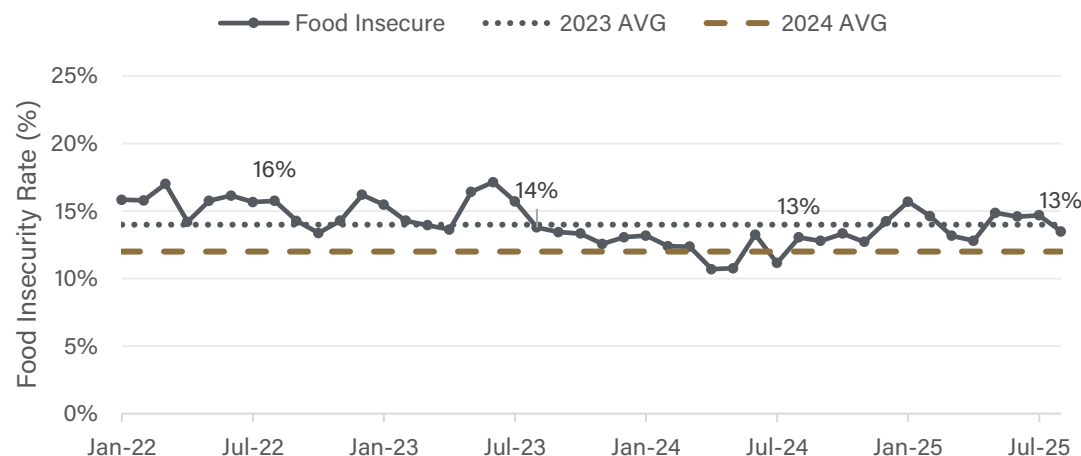
# FOOD SECURITY

## Which Americans are having trouble buying food for their families?

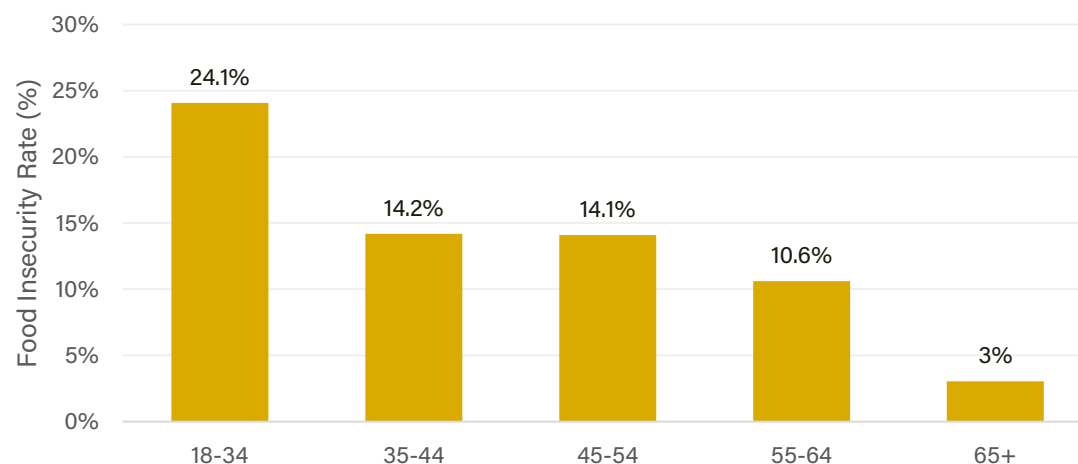
Based on a set of six standard questions about food purchased and eaten in the past 30 days, we estimate national food insecurity to be 13.5% in August, a slight decrease from the previous month (Figure 15).<sup>6</sup>

**Figure 16** summarizes food insecurity rates by age groups. We observe large difference across adults at different life stages. Older adults aged 65+ report the lowest rate of household food insecurity at 3% compared to the youngest cohort of adults (18-34) who report a rate of 24.1%. Younger adults, often in transitional phases of education, employment, or housing, may face greater economic volatility, contributing to their higher vulnerability. These findings highlight the importance of targeted interventions that address the unique challenges faced by younger populations in securing consistent access to food.

**Figure 15.** Rate of household food insecurity in the last 30 days, Jan. 2022 - Aug. 2025



**Figure 16.** Rate of household food insecurity in the last 30 days by age, Jan. 2022 - Aug. 2025



# FOOD EXPENDITURES

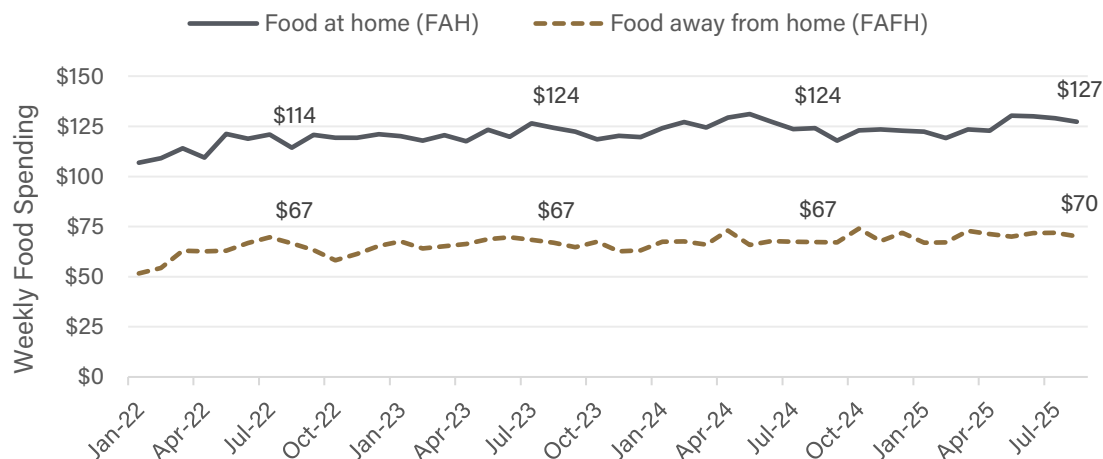
## How much are American households spending on food?

Each month, consumers report their household's weekly spending on food from the last 30 days (**Figure 17**). On average, consumers reported spending about \$127/week on groceries (food at home—FAH) and \$70/week on restaurants and other carryout (food away from home—FAFH) in August.<sup>7</sup>

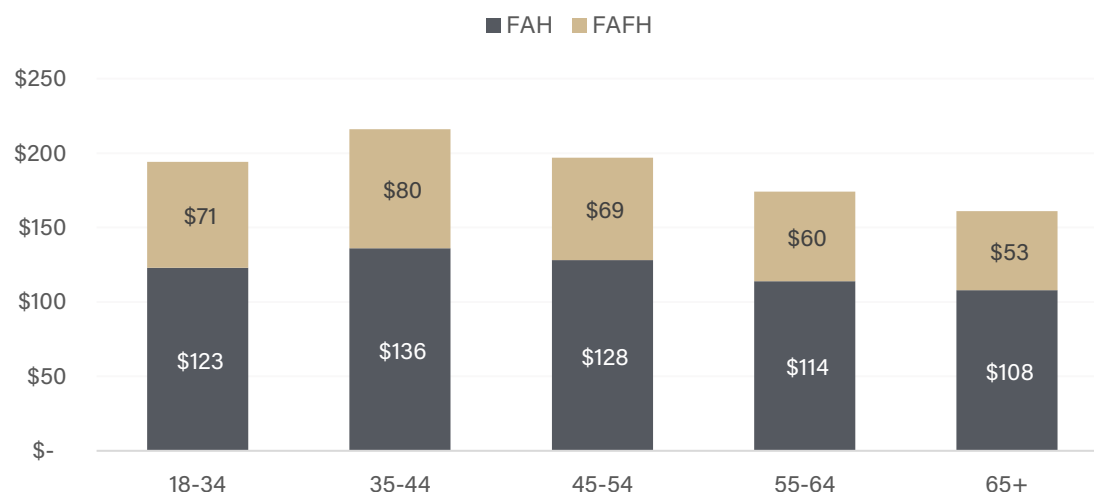
Household food spending varies by age, which is likely reflective of households being in different life stages (**Figure 18**). Food spending is highest among young to middle-aged adults. These households are more likely to be larger and have children under the age of 18, leading to greater food expenses.

Consumer food inflation expectations and estimates both increased again this month, 0.5 and 0.2 percentage-points, respectively (**Figure 19**). The CPI estimate of food inflation remained unchanged and has hovered round 3% over the past couple of months. Consumer expectations for future food prices continue to increase, signaling a growing concern among households about sustained inflationary pressures in the food sector.

**Figure 17.** Weekly household food expenditures, Jan. 2022 - Aug. 2025

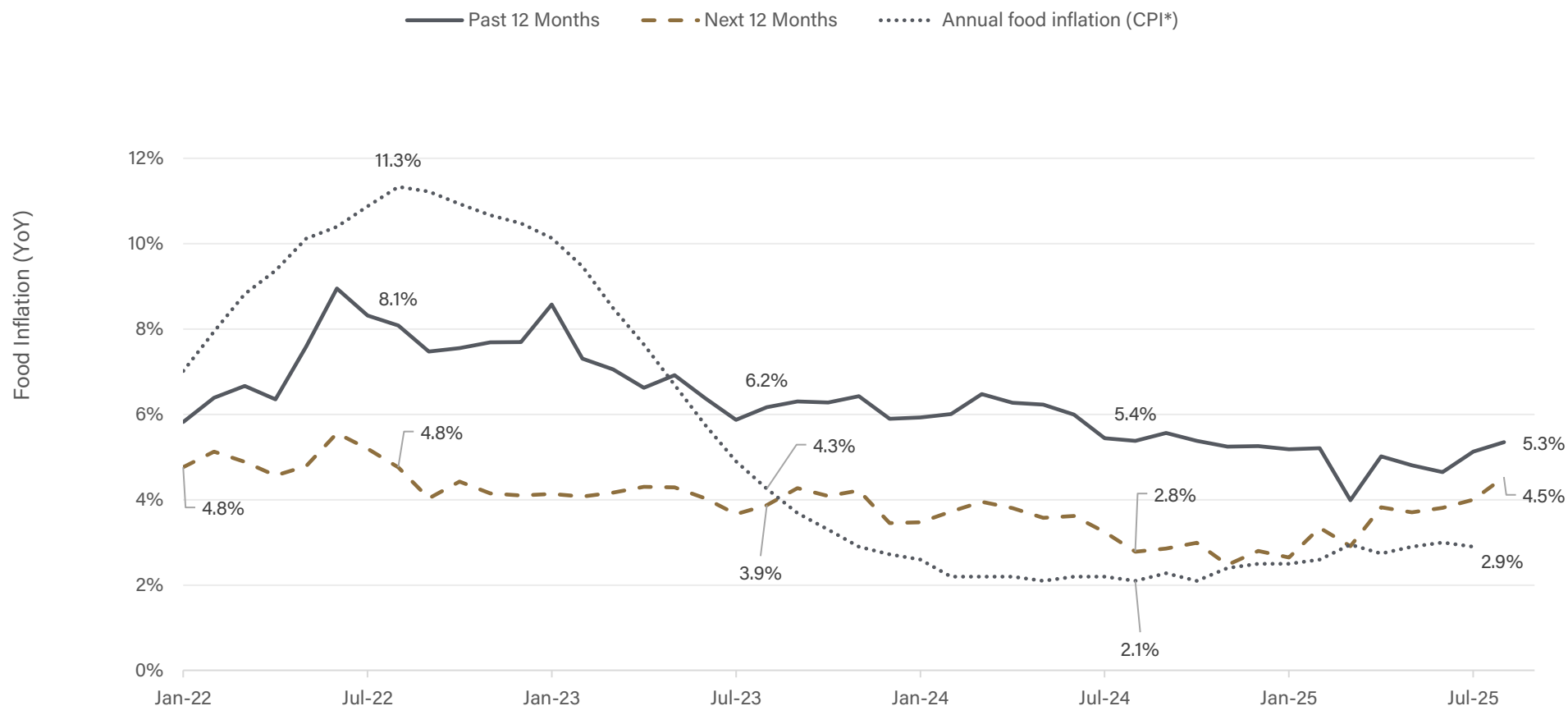


**Figure 18.** Weekly household food expenditures, Jan. 2022 - Aug. 2025



# FOOD EXPENDITURES

**Figure 19.** Consumer estimates of food inflation compared to gov. estimate, Jan. 2022 - Aug. 2025



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



# 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 20**). Young consumers are more likely to choose foods commonly marketed as more sustainable or ethical compared to older consumers. They also tend to check a variety of information of food labels more frequently, though all consumers check dates and nutrition labels often.

Older consumers take fewer risks with their food, eating raw, unwashed and undercooked foods less often. Interestingly, they are more likely to take steps to reduce food waste and throw food away past-date less often.

**Figure 20.** Frequency of consumer shopping and eating habits by age, Jan. 2022 - Aug. 2025

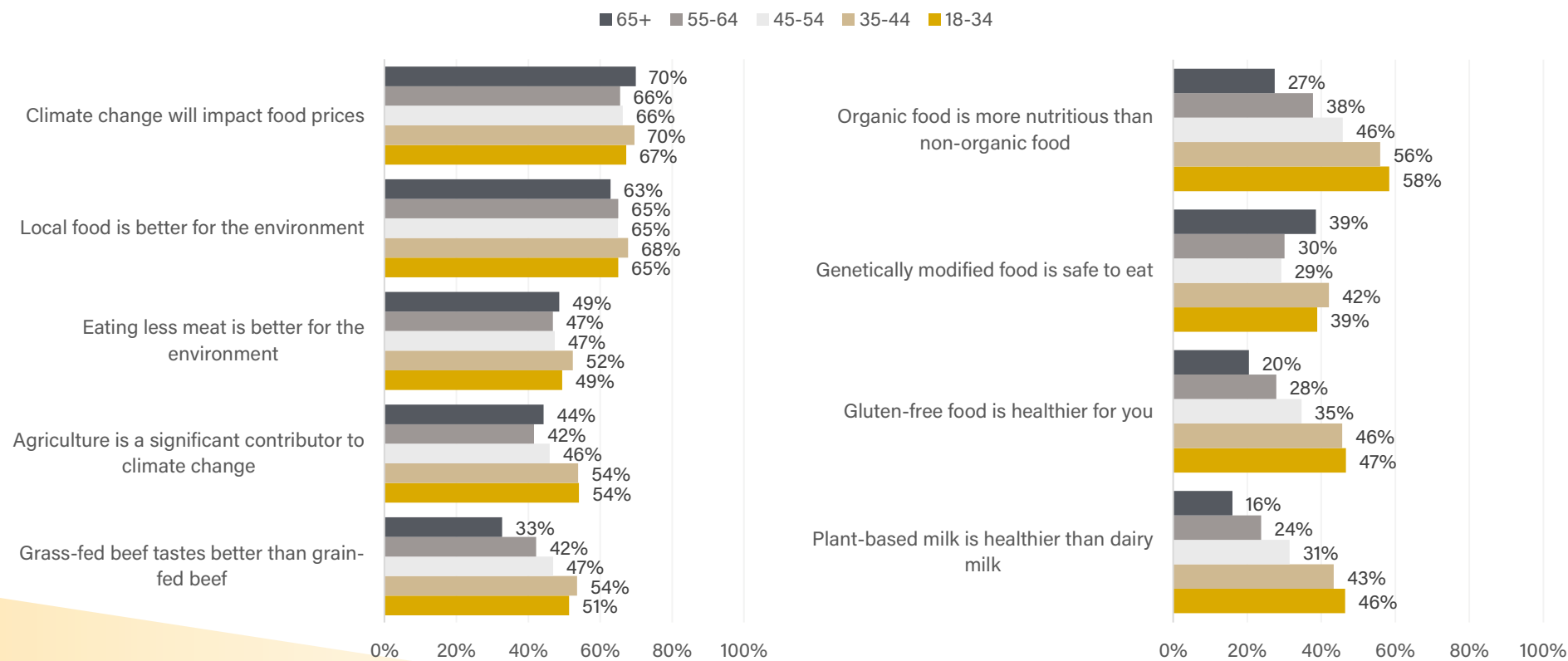


# CONSUMER BELIEFS

## What do Americans believe about their food and food system?

**Figure 21** summarizes consumer agreement with various statements about the food system disaggregated by perceived need for diet improvement. Beliefs about the connection between the food system and the environment are consistent across age groups, with a large share agreeing with such claims. Differences emerge when it comes to claims about the healthfulness of organic, gluten-free and plant-based foods compared to their conventional counterparts. Generally, we see agreement decreasing substantially as age increases regarding these statements.

**Figure 21.** Share of consumers who "somewhat agree" or "strongly agree" with claims about food by age, Jan. 2022 - Aug. 2025



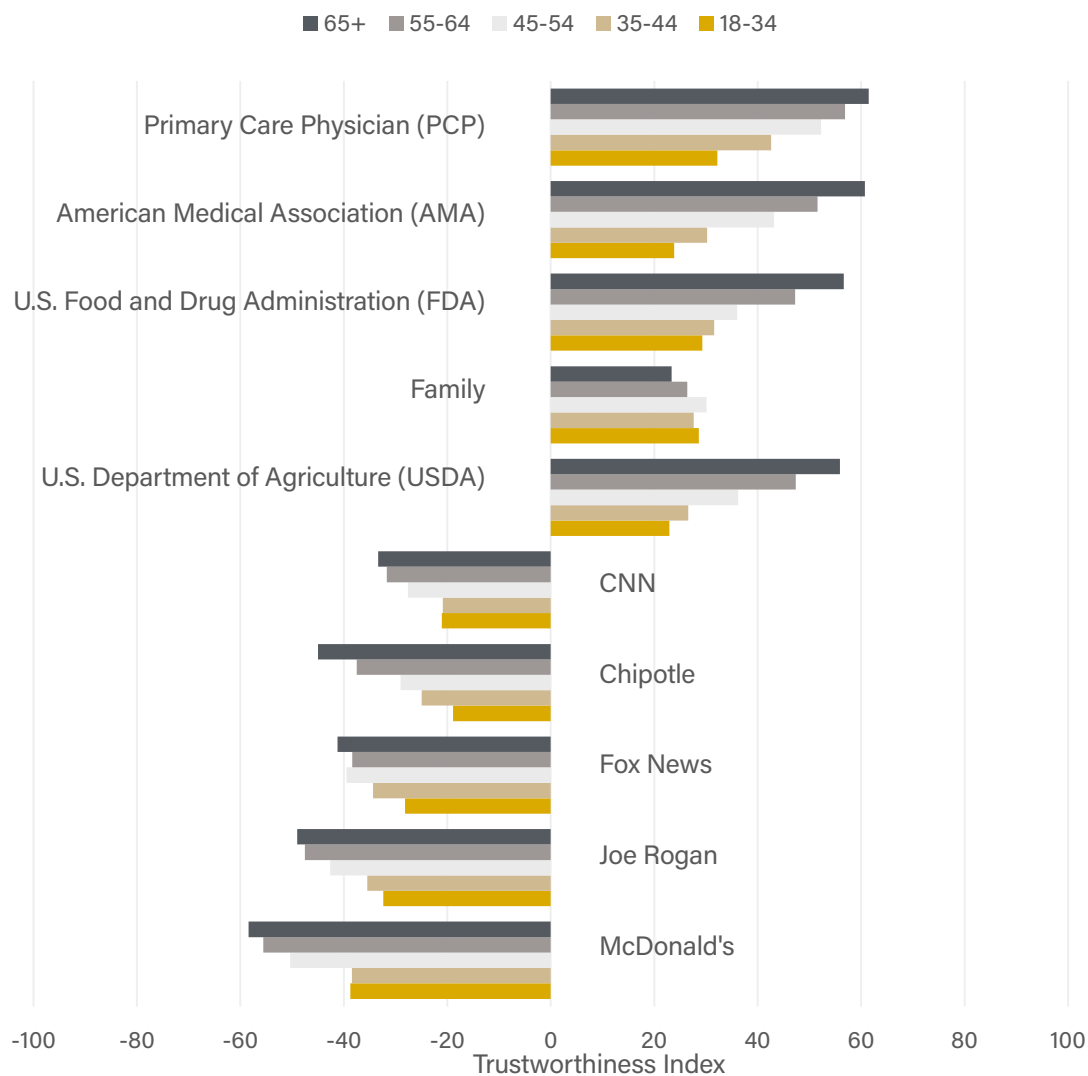
# CONSUMER TRUST

## Who do Americans trust on topics of food?

Respondents select their most-trusted and least-trusted sources of information about healthy and sustainable food from a list that includes a variety of information sources, such as news networks, government agencies, food companies, personal networks and higher education institutions. Responses are scored and converted to a Trust Index from -100 (least trusted) to 100 (most trusted).<sup>8</sup>

**Figure 22** summarizes the trust scores by age. The differences in magnitude of trust scores signals greater variation in trust among younger adults, reflecting a variety of viewpoints on different entities. Consistent with previous editions of the CFI, consumer trust in food corporation and news media as sources of information on healthy and sustainable foods is low compared to trust in government organizations that serve the food system and health professionals. Health professionals and government organizations score highest among older consumers. These results reinforce a pattern across age groups, with older adults showing more stable and higher levels of trust in institutional sources, while younger adults exhibit greater variability in their trust across different entities.

**Figure 22.** Trust index of food-related information sources by age, Jan. 2022 - Aug. 2025



# ENDNOTES

1 Data were collected from an online opt-in panel maintained by the company Dynata over a five-day period from August 18-22, 2025. 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 recontacted and asked to take the survey again. About 42% of July'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 Sample size Aug. 2025: 18-34 (n=317); 35-44 (n=203); 45-54 (n=197); 55-64 (n=200); 65+ (n=286)  
Sample size Jan. 2022 - Aug. 2025: 18-34 (n=12,683); 35-44 (n=9,347); 45-54 (n=8,845); 55-64 (n=9,610); 65+ (n=14,102)

3 Additional text presented to respondents preceding the response options:

*"AI-assisted" in this context refers to the use of artificial intelligence technologies to support food production or processing. This can include but is not limited to...*

*Optimizing irrigation*

*Predicting crop yields*

*Automating harvesting, packaging, processing, and sorting*

*Monitoring food safety*

*Developing new food products or recipes"*

4 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)

# ENDNOTES

**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)

5 Lara-Breitinger KM et al. *Validation of a Brief Dietary Questionnaire for Use in Clinical Practice: Mini-EAT (Eating Assessment Tool)*. J Am Heart Assoc. 2023 Jan 3;12(1):e025064. doi: 10.1161/JAHA.121.025064. Epub 2022 Dec 30. PMID: 36583423; PMCID: PMC9973598.

6 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 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 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.

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 Trust questions were not fielded in the Consumer Food Insights survey from October 2022 - December 2022. Starting June 2025, respondents were allowed to select up to 5 options for "most" and "least" trusted.