



PLANT-FORWARD OPPORTUNITY

A Datassential report
in collaboration with
The Culinary Institute of America
and the Menus of Change University
Research Collaborative

As more restaurant and foodservice customers consider health, sustainability, and other personal food values in their meal choices, operators are rethinking menus as never before. Many of these trending consumer preferences center around protein, plants and animals. But whereas, previously, menu options principally fell into “regular” or “vegan/vegetarian” categories, we’re seeing a whole landscape of innovation—an *expansion* of choice—emerging that speaks once again to the creativity of our industry.

This 2021 Datassential **Plant-Forward Opportunity** report, in partnership with The Culinary Institute of America and the [Menus of Change University Research Collaborative](#), is a follow-up to a similarly-focused Datassential-CIA report in 2020 and will again take the pulse of consumers on these issues as well as delve into a number of related, critical questions—from consumer understanding of protein quality to satiety and performance concerns—that also inform menu choices beyond taste, price, and convenience.



The Culinary Institute of America together with the Harvard T.H. Chan School of Public Health, through its jointly presented Menus of Change initiative, has elevated the concept of “plant-forward” as a big tent approach to menu R & D that can appeal to the largest number of consumers—vegans and vegetarians, yes, but also the more substantial percent of the population that has reduced, or is aiming to reduce, their meat consumption without completely giving it up. This raises the visibility and perceived value of menu choices based on vegetables, fruit, legumes (pulses), nuts, whole grains, and healthy plant-based oils while not necessarily taking away options.

Think choice architecture meets the relentless pursuit of deliciousness as opening up more ways to make “better for you and better for the planet” menu choices, with flexibility according to mood, meal occasion, and more. Think the inventive, globally-inspired plant-forward kitchen.



As our industry rebuilds, our customers are eager to recapture those food and hospitality experiences they have missed during the pandemic, but increasingly with an overlay of aspirations that will likely re-invent much of our industry over time. Read on for clues about how to best capture these new opportunities.



PRINCIPLES OF HEALTHY, SUSTAINABLE MENUS

MENUS OF CHANGE
The Institute of Food and Nutrition Studies, Harvard Chan School of Public Health

BE TRANSPARENT ABOUT SOURCING AND PREPARATION

BUY FRESH SEASONAL LOCAL GLOBAL

REWARD BETTER AGRICULTURAL PRACTICES LEVERAGE GLOBALLY INSPIRED, PLANT-FORWARD CULINARY STRATEGIES

FOCUS ON WHOLE, MINIMALLY PROCESSED FOODS

GROW EVERYDAY OPTIONS, WHILE HONORING SPECIAL OCCASION TRADITIONS

LEAD WITH MENU MESSAGING AROUND FLAVOR

REDUCE PORTIONS, EMPHASIZING CALORIE QUALITY OVER QUANTITY

CELEBRATE CULTURAL DIVERSITY & DISCOVERY

DESIGN HEALTH AND SUSTAINABILITY INTO OPERATIONS AND DINING SPACES

© 2020 The Institute of Food and Nutrition Studies and Harvard Chan School of Public Health. All rights reserved. See the full version of the principles at www.menusofchange.org/principles.

MAKE WHOLE, INTACT GRAINS THE NEW NORM
THINK PRODUCE FIRST
LIMIT POTATOES

MOVE LEGUMES AND NUTS TO THE CENTER OF THE PLATE

CHOOSE HEALTHIER OILS GO "GOOD FAT," NOT "LOW FAT"
SERVE MORE KINDS OF SEAFOOD, MORE OFTEN
REIMAGINE DAIRY IN A SUPPORTING ROLE

USE POULTRY AND EGGS IN MODERATION
REDUCE ADDED SUGAR
SERVE LESS RED MEAT, LESS OFTEN

CUT THE SALT: RETHINK FLAVOR DEVELOPMENT FROM THE GROUND UP
SUBSTANTIALLY REDUCE SUGARY BEVERAGES. INNOVATE REPLACEMENTS
DRINK HEALTHY: FROM WATER, COFFEE, AND TEA TO (WITH CAVEATS) BEVERAGE ALCOHOL

DESIGNED BY J. BRINIGHT DESIGN

PLANT-FORWARD

For this report, plant-forward indicates a style of cooking and eating that emphasizes and celebrates, but is not limited to, plant-based foods. Those include fruits and vegetables (produce); whole grains; beans, other legumes (pulses), and soy foods; nuts and seeds; plant oils; and herbs and spices. Plant-forward menu development reflects evidence-based principles of health and sustainability.

Data collected from an online survey of 1,000 U.S. consumers, fielded online in May 2021.

CIA/Menus of Change references:

- www.menusofchange.org
- www.plantforwardkitchen.org
- www.moccollaborative.org

A quarter of consumers are eating meat every day.

Half of consumers consume vegetables and fruits daily, and more than six in ten consumers eat whole grains, nuts and legumes at least few times a week. Around one third of consumers eat plant-based proteins or dairy at least few times a week.

How often do you eat each of the following types of foods?

	Meat (beef, veal, pork and lamb)	Poultry	Seafood (incl. shellfish)	Dairy	Fruits & Veg	Whole grains	Nuts & Legumes (nut butters, beans, lentils etc.)	Other Plant Protein (tofu, tempeh, or seitan)	Plant-Based Meat or Egg (substitutes/analogs)	Non-Dairy Substitutes (vegan cheese, nut and seed milks)
Daily	27%	19%	13%	43%	52%	29%	23%	13%	11%	17%
Once or more per week	51%	57%	39%	38%	36%	44%	43%	21%	21%	21%
1 to 3 time a month	15%	18%	36%	15%	9%	22%	26%	28%	28%	25%
Never	7%	7%	13%	4%	3%	5%	8%	39%	40%	36%

Younger generations are the top consumers of daily animal and plant-based proteins, especially millennials.

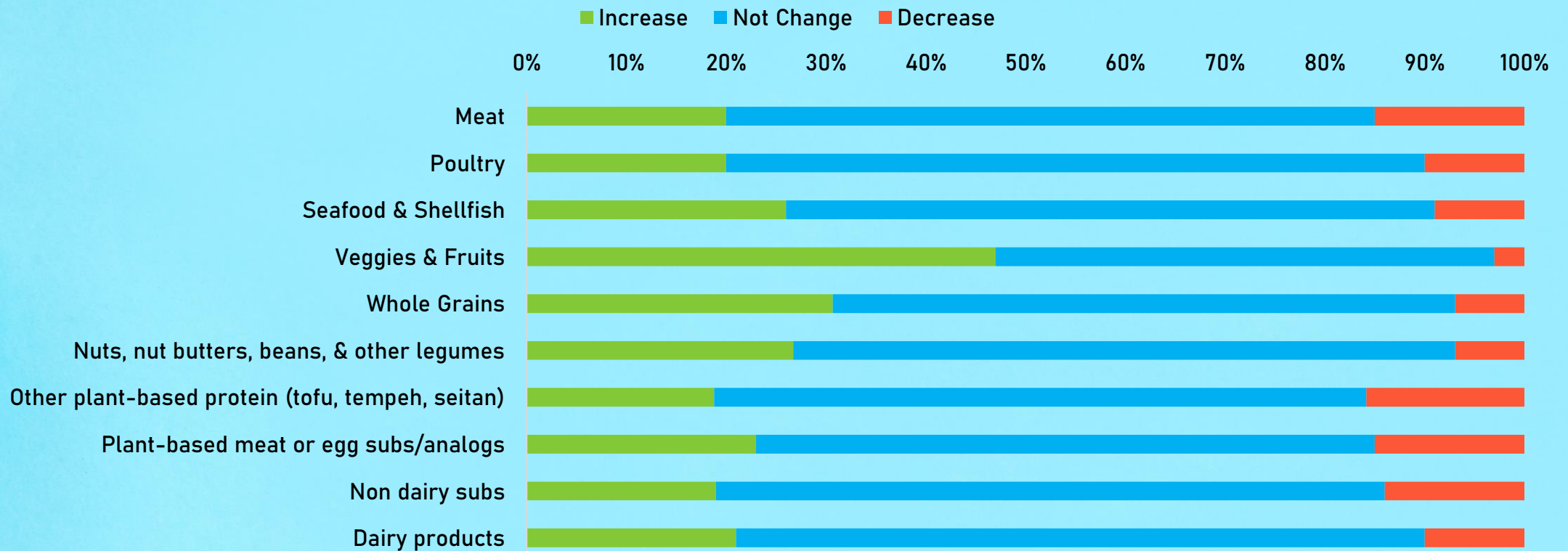
Boomers eat vegetables and fruits on a daily basis, more than any other animal or plant-based proteins.

How often do you eat each of the following types of foods?

	Meat (beef, veal, pork and lamb)	Poultry	Seafood (incl. shellfish)	Dairy	Fruits & Veg	Whole grains	Nuts & Legumes (nut butters, beans, lentils etc.)	Other Plant Protein (tofu, tempeh, or seitan)	Plant-Based Meat or Egg (substitutes/analogs)	Non-Dairy Substitutes (vegan cheese, nut and seed milks)
DAILY EATERS	27%	19%	13%	43%	52%	29%	23%	13%	11%	17%
Gen Z	38%	25%	18%	46%	47%	30%	22%	13%	17%	26%
Millennials	35%	30%	21%	46%	51%	36%	30%	22%	18%	28%
Gen X	23%	15%	10%	39%	47%	25%	20%	11%	10%	13%
Boomers	16%	6%	3%	44%	61%	22%	19%	3%	2%	5%

Consumers are wary of large dietary shifts, yet plant-based foods are the categories most aim to increase, especially fruits and vegetables, whole grains, and nuts/legumes.

Of all animal-based proteins, seafood has the highest number of consumers looking to increase their consumption. One in four consumers are looking to increase their intake of seafood & shellfish.

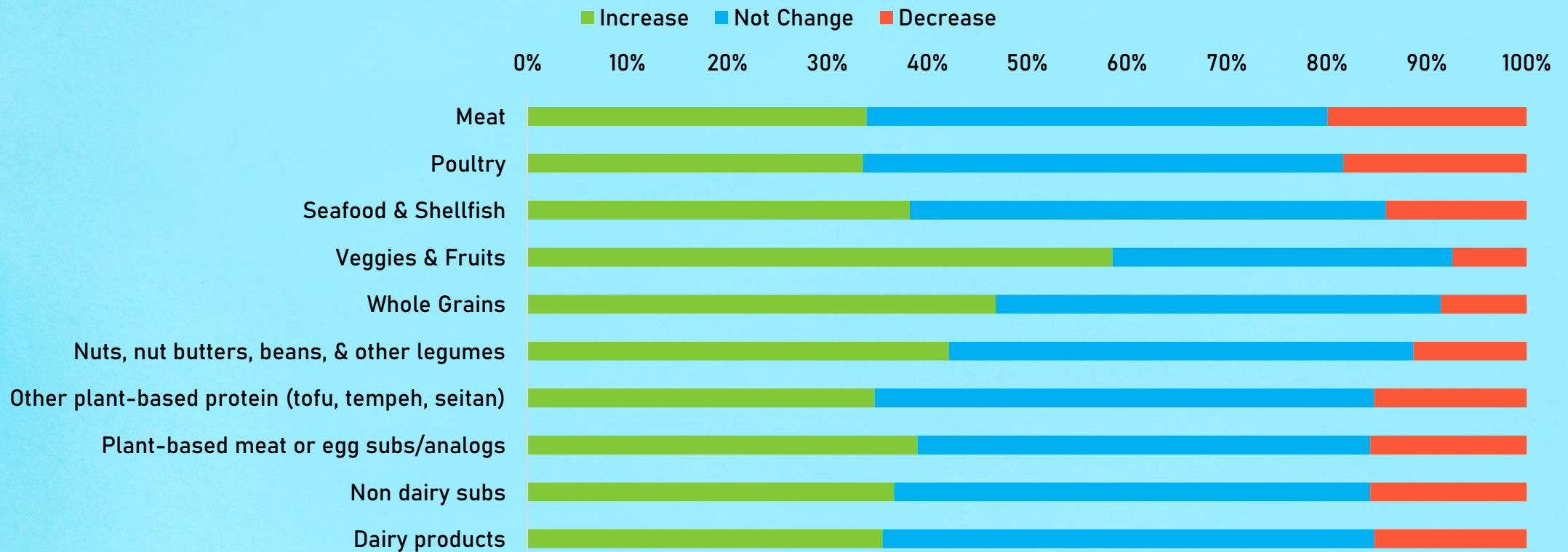


general population (n=1500)

Younger generations are more polarized, wanting to both increase and decrease their intake of animal and plant-based proteins.

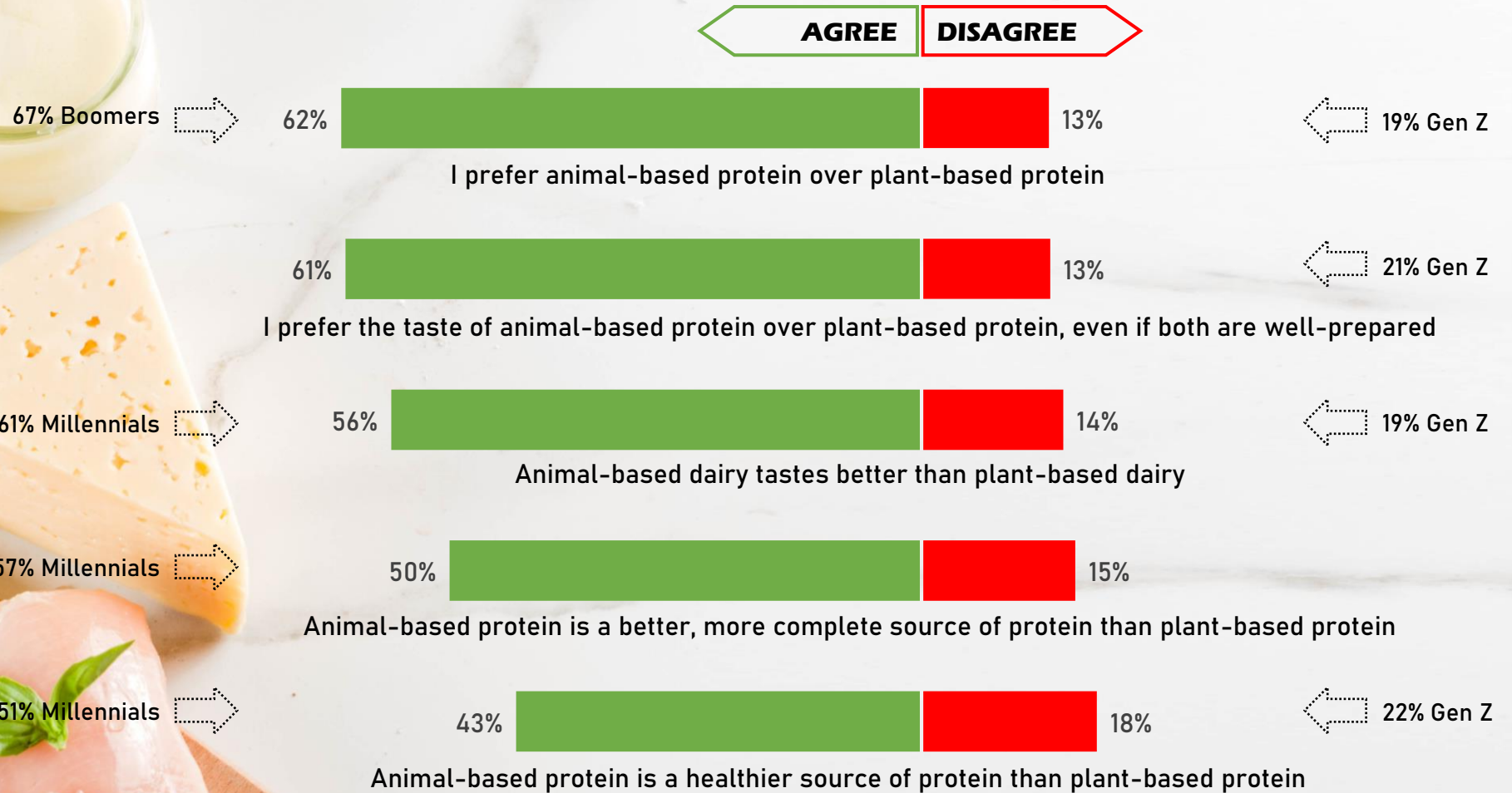
Compared to the general population, a higher ratio of students (full and part-time) want to increase and decrease their intake across all categories. Similar trends are seen across gen-z and millennials.

For each of the following types of foods, are you generally trying to INCREASE, NOT CHANGE or DECREASE your intake (among full and part-time students)



Many believe that animal-based protein is better, tastier and healthier protein.

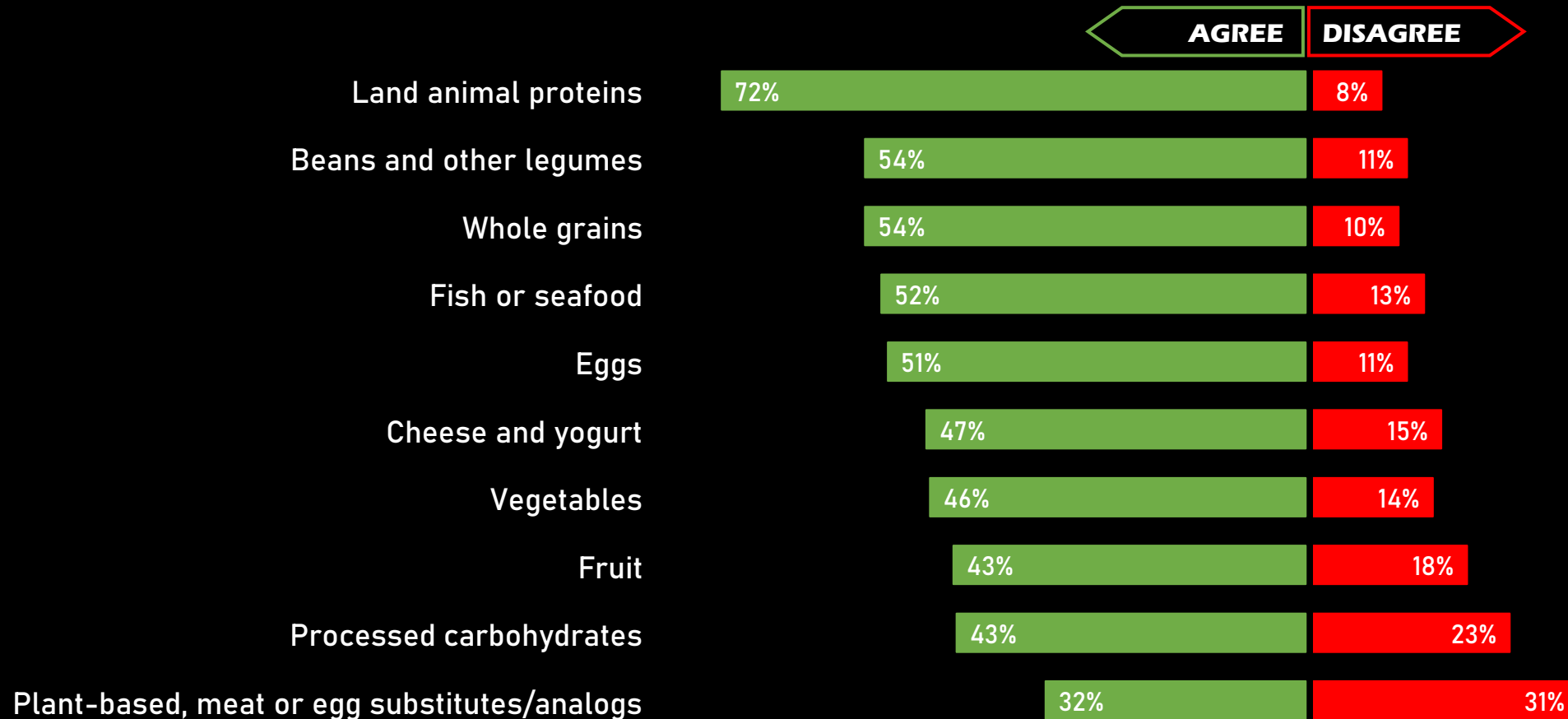
This perception is significantly higher among millennials. However, more gen-z consumers disagree with this argument at significantly higher rates.



Land animal proteins are perceived to be more filling.

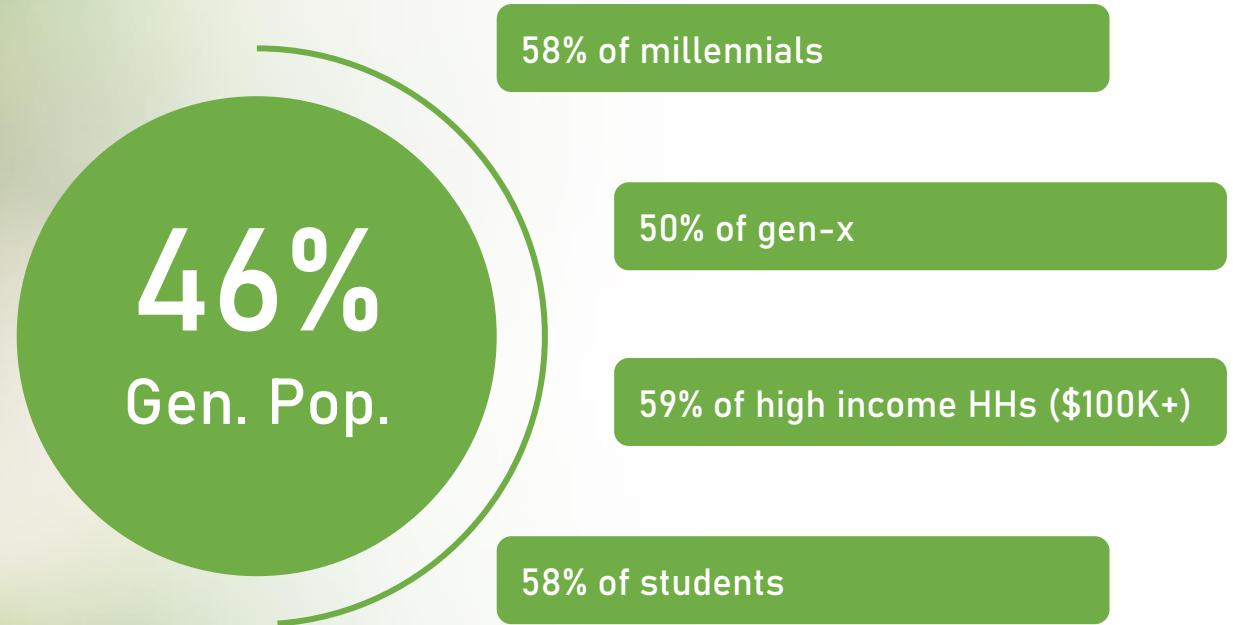
More consumers believe that plant-based meat or egg substitutes are less filling than processed carbs like white bread and chips.

Thinking of the below food items, which are the most satiating to you
(i.e., where you feel full and aren't hungry in 2-3 hours)?



“Plant-based protein is a more sustainable source of protein than animal-based protein”

About half of consumers believe that plant-based protein is more sustainable, especially millennials, gen-x, high income households and college students.



Less meat and more plant foods are thought to be better for our health and the environment.

Millennials especially believe that reducing meat and increasing plant-based consumption would make us healthier (less heart disease, cancer and diabetes) and be better for the environment.

If we reduced our consumption of meat AND increased our consumption of plant-based foods (e.g., fruits and vegetables, whole grains, nuts, beans, vegetable oils, and/or meat substitutes/plant-based meats), would we be?

62%

↓ down from 70%
(2020 report)

“We would be healthier”



71% Millennials

56%

↓ down from 62%
(2020 report)

“We would have less of a negative impact on the environment”



65% Millennials



Millennials understand the concept of plant-forward eating



44%
Gen. Pop.

58%
millennials

“Plant-forward or flexitarian eating means favoring foods from plant-sources and substantially reducing foods from animal sources but not necessarily becoming a vegan or vegetarian”

Consumers, especially millennials, are open to plant-forward eating



I am open to trying more dishes that mix animal and plant proteins (e.g., lentils with pork, chickpeas with seafood, whole grains with eggs, etc.)

50%

65%
millennials

I am open to trying more dishes that feature dairy alternatives (e.g. vegan cheese, nut milks)

47%

66%
millennials

I prefer dairy alternatives to animal-based dairy

37%

51%
millennials

Plant-forward, vegan and vegetarian dishes are popular with foodies and strict dieters

Please tell us your interest in the following.

	gen pop.	foodies*	strict dieters**
Primarily plant-based dishes with a small amount of meat, fish, poultry, or dairy for flavor	41%	60%	69%
Primarily plant-based dishes with a small amount of meat or dairy that are inspired by world cuisines (e.g., Mediterranean, Asian, Latin American)	36%	54%	63%
Vegan dishes that are inspired by world cuisines (e.g., Mediterranean, Asian, Latin American)	36%	52%	67%
Vegetarian dishes that are inspired by world cuisines (e.g., Mediterranean, Asian, Latin American)	38%	55%	65%

* foodie = I love learning about new foods and like to try new things when I eat out; I'm the type of person who reads food magazines and watches food shows on TV

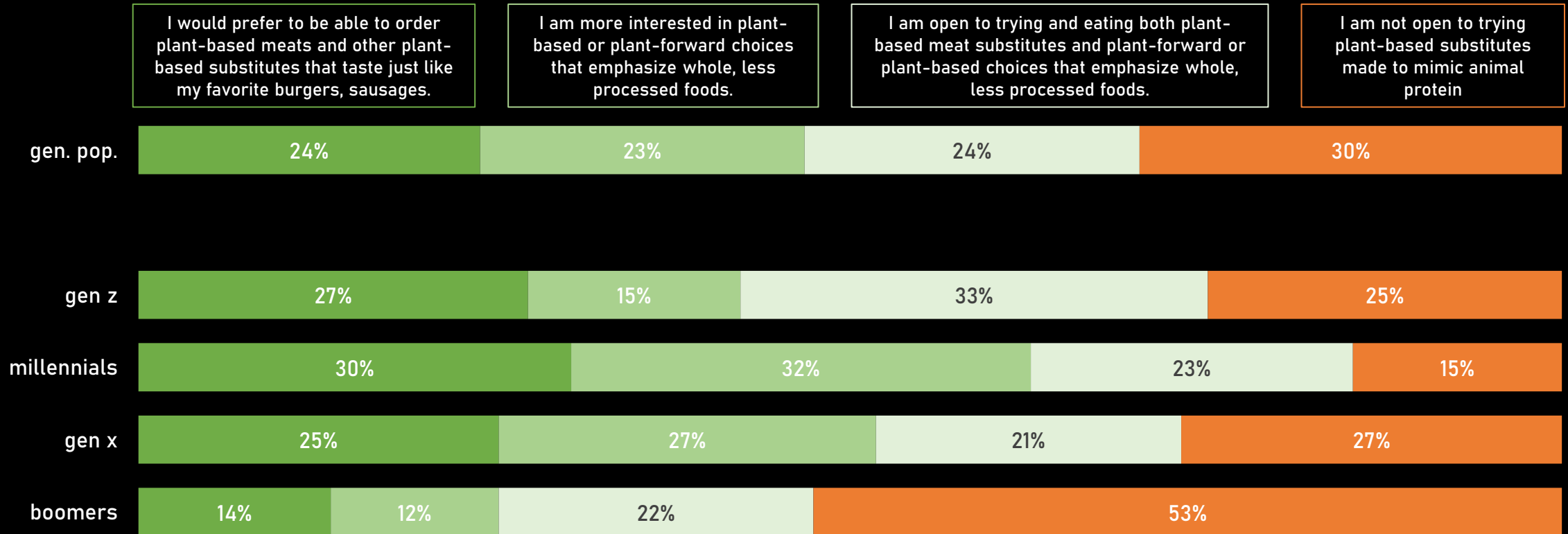
** strict dieter = Which best describes your attitude toward healthy eating? I follow a strict, specific diet

Top 2 boxes: agree completely and agree somewhat (n=varies).

Consumers are open to ordering plant-based and plant-forward foods at restaurants, except for boomers.

Over half boomers are not open to trying plant-based substitutes made to mimic animal proteins

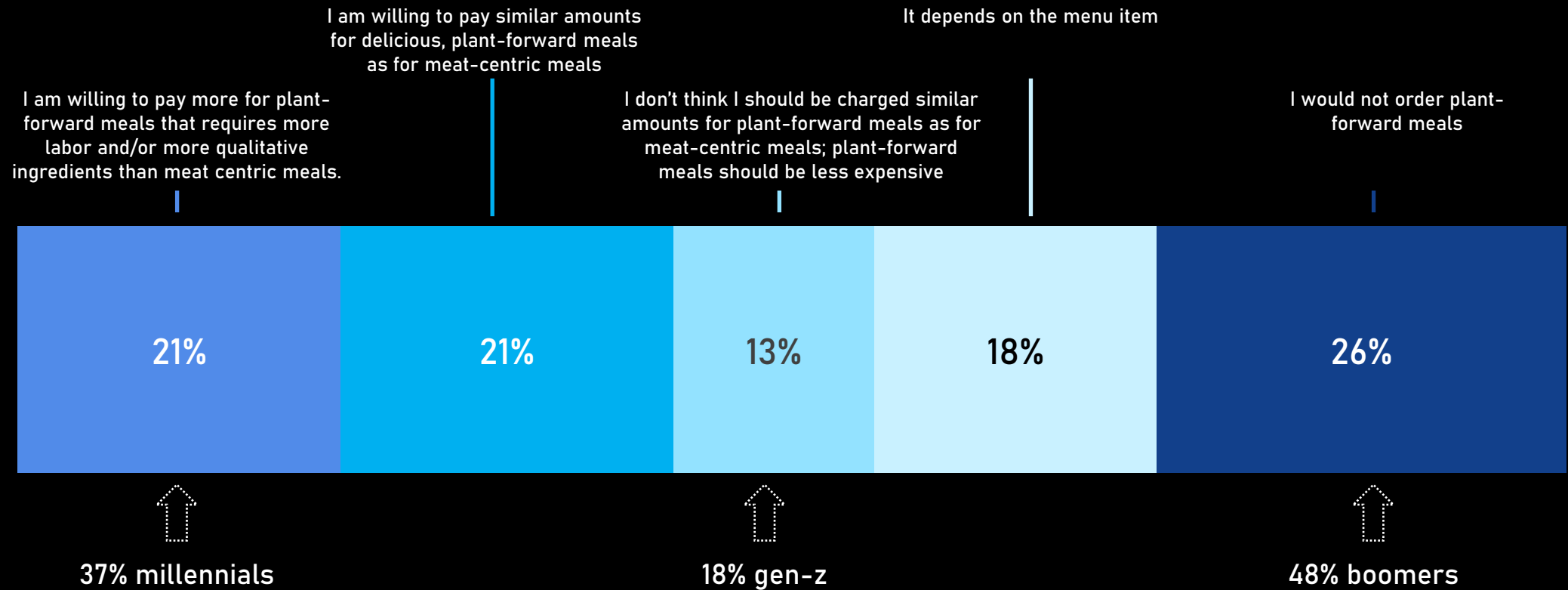
Which of the following would be your preference when ordering plant-based foods at a restaurant?



Millennials are willing to pay more for plant-forward meals at restaurants, however, gen-z consumers believe that they should be less expensive.

Half of boomers will not order plant-based food regardless of price

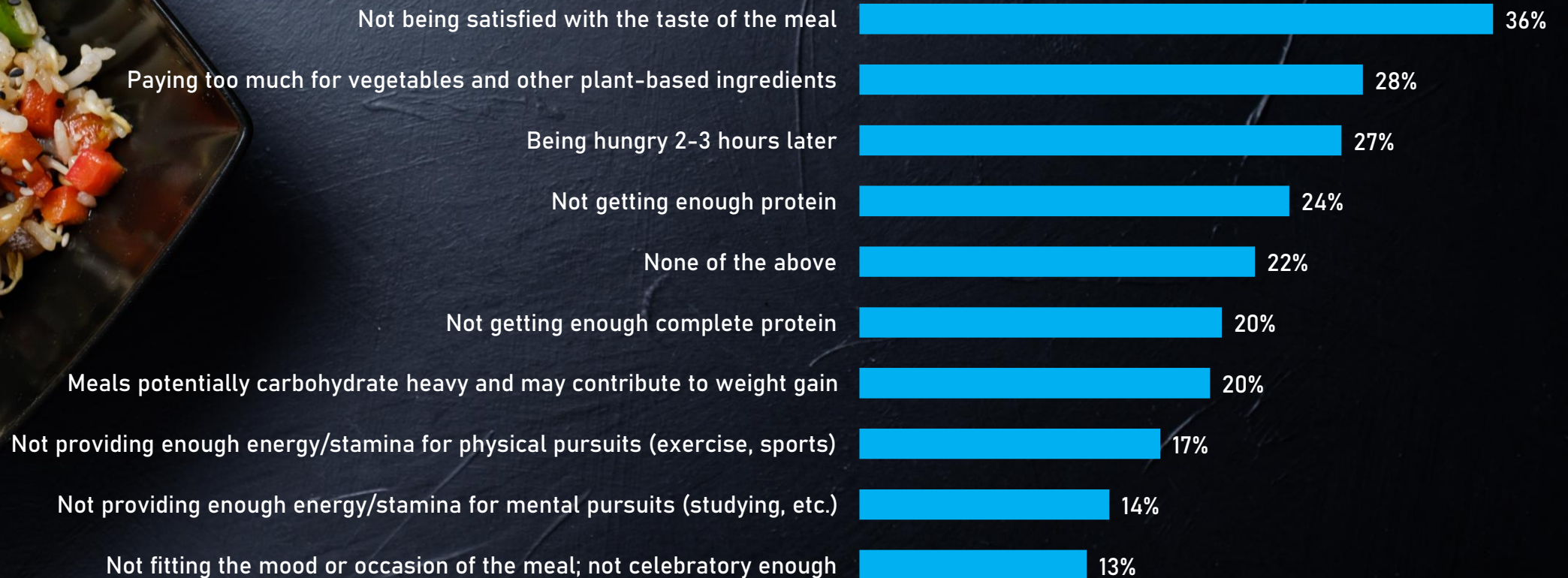
Which of the following would be your preference when ordering plant-based foods at a restaurant?



Taste, cost and satiety are the top concerns consumers have with eating more plant-based food at restaurants



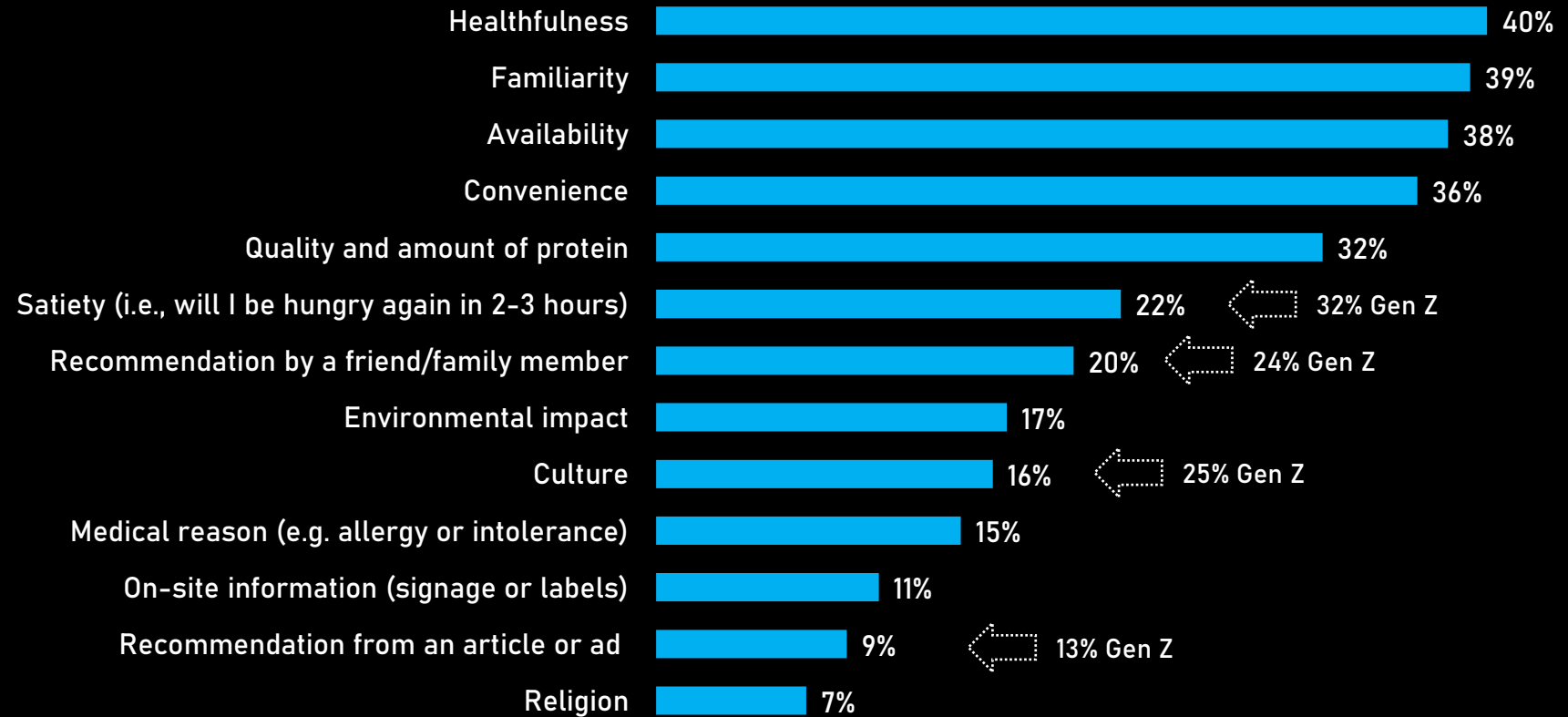
Which of the following, if any, are concerns you have with eating less meat in restaurants and more vegetables, whole grains, legumes and other plant-based food?



Healthfulness and familiarity are top factors that influence consumers food choice, beyond price and taste

Satiety, culture and recommendations are factors that are more important to gen-z consumers than older generations

Price and taste aside, which of these other factors MOST influence your food choices?



(n=1500)

KEY TAKEAWAYS:

PLANT-FORWARD OPPORTUNITY



01

MORE CONSUMERS ARE INTERESTED IN MEAT REDUCTION, NOT ELIMINATION.

Familiarity is a strong driver of food choice, and for the most part consumers aren't looking to make any major shakeups in their current diets. However, only about a quarter of consumers are eating meat every day, and nearly half agree that plant-forward and flexitarian eating styles don't necessitate a complete avoidance of animal-based foods.

02

YOUNGER GENERATIONS ARE STILL FIGURING OUT WHAT THEY WANT FROM PLANT-BASED.

While they are more open to trying both processed and whole food plant-based substitutes, younger generations are divided on whether they want to increase or decrease their intake of plant-based and animal-based foods. Familiarizing them with plant-based foods could be key to tipping the scales, as well as a heightened focus on deliciousness in plant-forward menus.

03

MORE EDUCATION IS NEEDED AROUND THE QUALITY AND BENEFITS OF PLANT-BASED FOODS.

Although consumers agree that plant-based foods are healthier and better for the environment, there are still significant hurdles when it comes to perception of how they stack up against animal protein. Half of consumers still (mistakenly) think that animal-based protein is a "higher quality" source of protein than plant-based and worry that consuming only plant-based protein won't be satiating, won't contain enough protein, and won't provide energy or stamina for both mental and physical pursuits. Health and environmental benefits can be used as a springboard to remind consumers that plant-based proteins can be just as filling and fueling as their animal-based counterparts. Greater protein literacy will likely help shift purchase intent.

04

CONSUMERS ARE LOOKING TO INCREASE THEIR CONSUMPTION OF WHOLE PLANT-BASED FOODS.

Veggies, fruits, whole grains, nuts/nut butters, and legumes (e.g., beans, lentils, etc.) are the foods consumers most want to increase in consumption. They also find legumes and whole grains extremely satiating, even more so than animal-based options seafood and eggs. This widespread bias towards increasing whole plant-based foods in our diets represents significant permission for chefs to prioritize innovation.

05

FLEXITARIAN STRATEGY-INCLUDING BLENDING-IS THE WAY FORWARD.

Half of consumers would try more dishes that mix animal and plant proteins with other plant-sourced foods, and nearly half of consumers are familiar with the concept of plant-forward eating.

06

THE PANDEMIC SHIFTED PRIORITIES

Environmental concerns took a back seat during the Covid-19 pandemic, as consumers became more interested in increasing their immunity. Datassential's research during the height of the pandemic showed that plant proteins were generally not perceived to be immunity boosting, which may have contributed to a drop in interest. The post-pandemic communications landscape provides an opportunity to refresh the narrative around plant-forward and plant-based connecting to near- and long-term consumer aspiration.