

2024

Plant-Forward Opportunity

+

The Impact of Digital Media
on Plant-Forward Eating



A DATASSENTIAL REPORT

in collaboration with

The Culinary Institute of America,
Food for Climate League, and the
Menus of Change University Research Collaborative



About This Report

In partnership with The Culinary Institute of America, Food for Climate League, and the Menus of Change University Research Collaborative, this **2024 Datassential Plant-Forward Opportunity Report** is a follow-up to similar reports in 2020-2023. In 2024, we focused our research on understanding the role that **digital media is playing in shaping consumer expectations and perceptions around plant-forward offerings** so that chefs and other foodservice operators can meet consumers where they are and optimize their menus.

The framing of plant-forward is an outgrowth of the CIA-Harvard T.H. Chan School of Public Health—Department of Nutrition joint initiative, Menus of Change. The term indicates “a style of cooking and eating that emphasizes and celebrates, but is not limited to, foods from plant sources—fruits and vegetables, whole grains, legumes, nuts and seeds, plant oils, and herbs and spices—and reflects evidence-based principles of health and sustainability.” In addition to whole, minimally processed—and often globally inspired—approaches to plant-forward, consumers also increasingly have wide-ranging choices around plant-based meat, dairy, and other products.

Join us as we explore consumers' eating habits and beliefs to uncover opportunities to reduce reliance on meat, dairy, and other foods from animal sources in ways that are approachable and appealing to diners. Read on for insights to feed menu innovation and product development, as we dive deeper into plant-forward opportunities.

Methodology

- Online survey of **1,504 Americans** representative of the population
- Fielded between **April 4** and **April 11, 2024**
- Ages ranging from **19** to **86**
- Conducted by **Datassential**, using **Prodege's** consumer panel
- Some figures from this report are compared with corresponding data from the previous year (2023). **1-year statistically significant differences** are visually indicated using the following bubbles:



Definitions

- **Digital Media:** social media, blogs, online articles including Facebook, YouTube, Tik Tok, X (Twitter), as well as traditional online media such as Google search and online news sources (NY Times Cooking, etc.)
- **Meat Limiters:** vegan, vegetarian, pescatarian, and flexitarian respondents
- **Foodies:** respondents who love learning about food and actively try new things when they dine out
- **Happy Food & Beverage Digital Media Users:** respondents who say they use and love digital media for general food and beverage trends

Statistical Significance

- For this report, statistical significance is calculated using **pairwise tests**, in which data points for each subgroup (i.e. male, Gen Z, etc.) is weighed and contrasted against its demographic counterparts (i.e. female, Millennial, etc.), instead of against total.
- For pages with **expanded demographic tables (8, 15, 26, 31, 32)**, data points colored blue are significantly larger than data points colored red.
- For example, in the table below, **Gen Z, Millennials, and Gen X are statistically more likely than Boomers and older consumers** to prefer plant-based protein over animal equivalents.

	Gen Z	Millennial	Gen X	Boomer+
I prefer plant-based protein over animal-based protein	29%	29%	20%	12%



Plant-Forward Attitudes

Understanding how people eat today and their overall perceptions of plant-forward eating.

Plant-Forward Attitudes

Key Takeaways

01

Nearly a quarter of the total population limit meat in their diet.

Meat limiting is driven mostly by women and Boomers; the latter being the most likely generation to say they are flexitarian. Conversely, Gen Z are the likeliest to avoid meat entirely (being either vegetarian or vegan).

02

Nearly a third of consumers say they are willing to pay higher prices for plant-forward menu items.

And although one in five say they wouldn't order plant-forward meals, a larger share of consumers overall are willing to pay more (31%) as say they are not willing to pay more (26%). In addition, Gen Z, Millennials, Foodies, and Meat Limiters are significantly more open to paying higher prices than their demographic counterparts.

03

Taste satisfaction remains the most salient barrier to eating less meat at restaurants.

Over a third of consumers are also worried about not getting enough protein and being hungry shortly after a plant-forward or meat-free/reduced meal. In particular, concerns around missing out on protein and energy are shared among more consumers in 2024 than in years past and are highest among Gen Z and Boomers.

Plant-Forward Attitudes

Key Takeaways

04

Over half of consumers are open to blending animal and plant-based proteins, while two in five consider plant-based proteins to be just as healthy and tasty and animal-based equivalents.

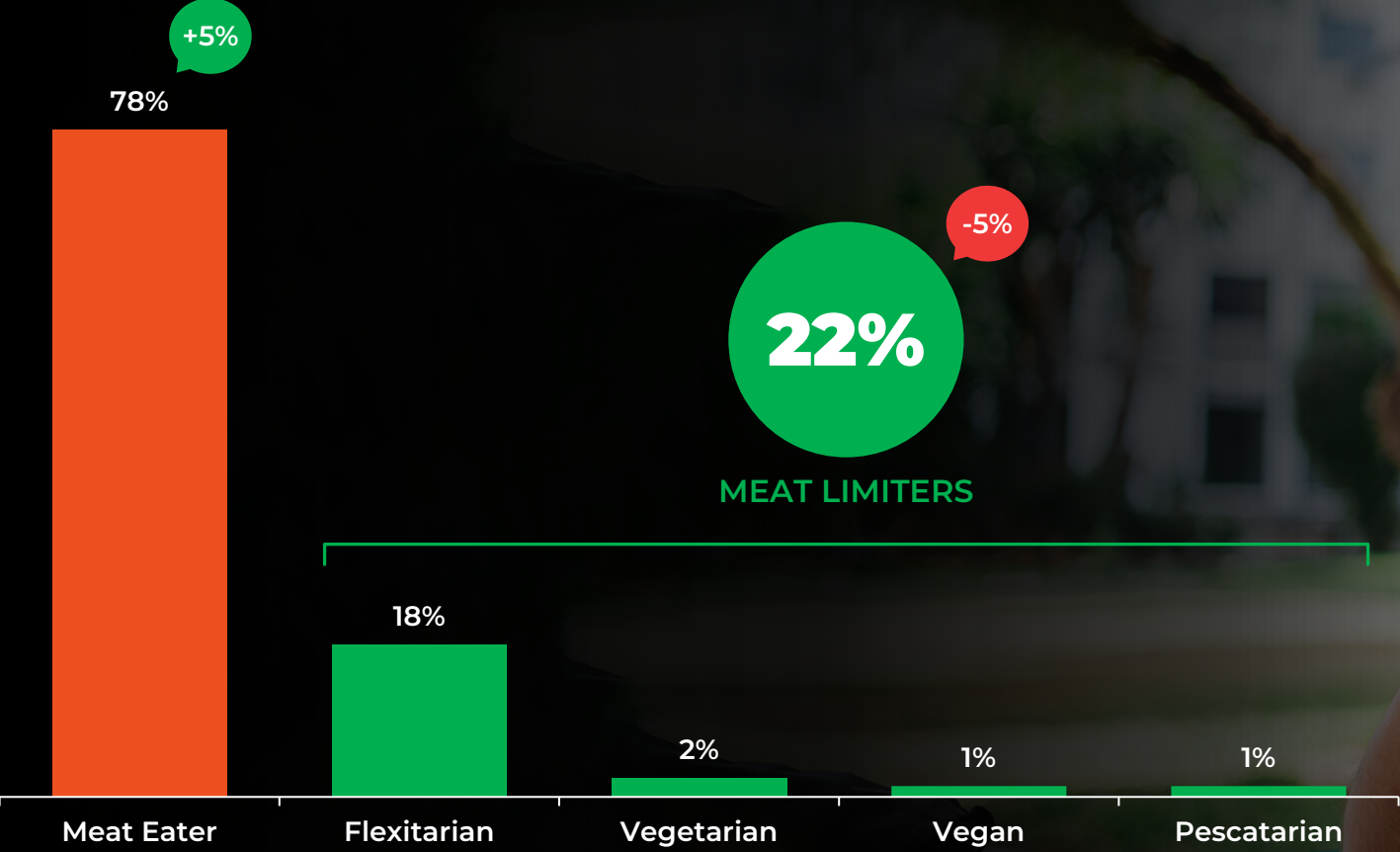
In keeping with general plant-forward trends, Gen Z, Millennials, and current Meat Limiters have a higher affinity for – and better perception of – both plant-based and blended protein options. Over two in five Meat Limiters say they prefer plant-based proteins over animal-based varieties.

05

While nearly half of consumers are open to trying more plant-based dairy, only a quarter say they prefer it over animal-based dairy.

Just like plant-based protein sources, consumer affinity for plant-based dairy is stronger among Gen Z and Millennials (and to a lesser extent Gen X) than Boomers. Between 2023 and 2024, consumers are slightly less enthusiastic about both plant-based protein and dairy alternatives, which can possibly be attributed to a confluence of factors like inflation, budget constraints, or shifting population demographics.

In 2024, nearly a quarter of the general population is actively limiting meat in their diet.



Meat limiting is driven mostly by women and Boomers; the latter being the most likely generation to say they are flexitarians.

Conversely, Gen Z are the likeliest to avoid meat entirely (being either vegetarian or vegan).

	Total	Male	Female	Gen Z	Millennial	Gen X	Boomer+
	n = 1,501	735	755	191	422	400	488
Meat Limiters	22%	20%	24%	26%	20%	20%	26%
Meat Eater	78%	80%	76%	74%	80%	80%	74%
Flexitarian	18%	16%	19%	17%	16%	15%	23%
Vegetarian	2%	2%	2%	4%	2%	2%	2%
Vegan	1%	1%	1%	2%	1%	2%	1%
Pescatarian	1%	1%	1%	2%	1%	1%	1%

statistically higher statistically lower

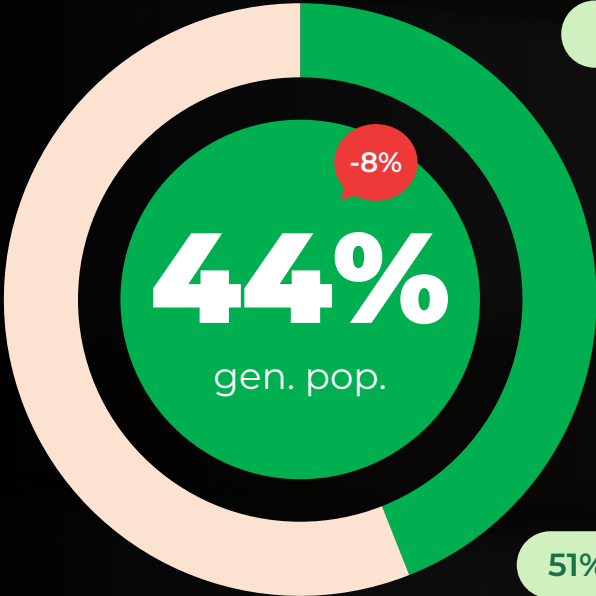
Click this circle to return to matching Key Takeaway.



More than 40% of the general population is open to a plant-forward diet or eating pattern.

Unsurprisingly, two-thirds of consumers who already limit their meat intake would be comfortable adopting a plant-forward lifestyle, as would roughly half of Gen Z, Millennials, High-Income consumers, and self-described Foodies.

“I AM OPEN TO A PLANT-FORWARD DIET”



67% of Meat Limiters

49% of Gen Z

51% of Millennials

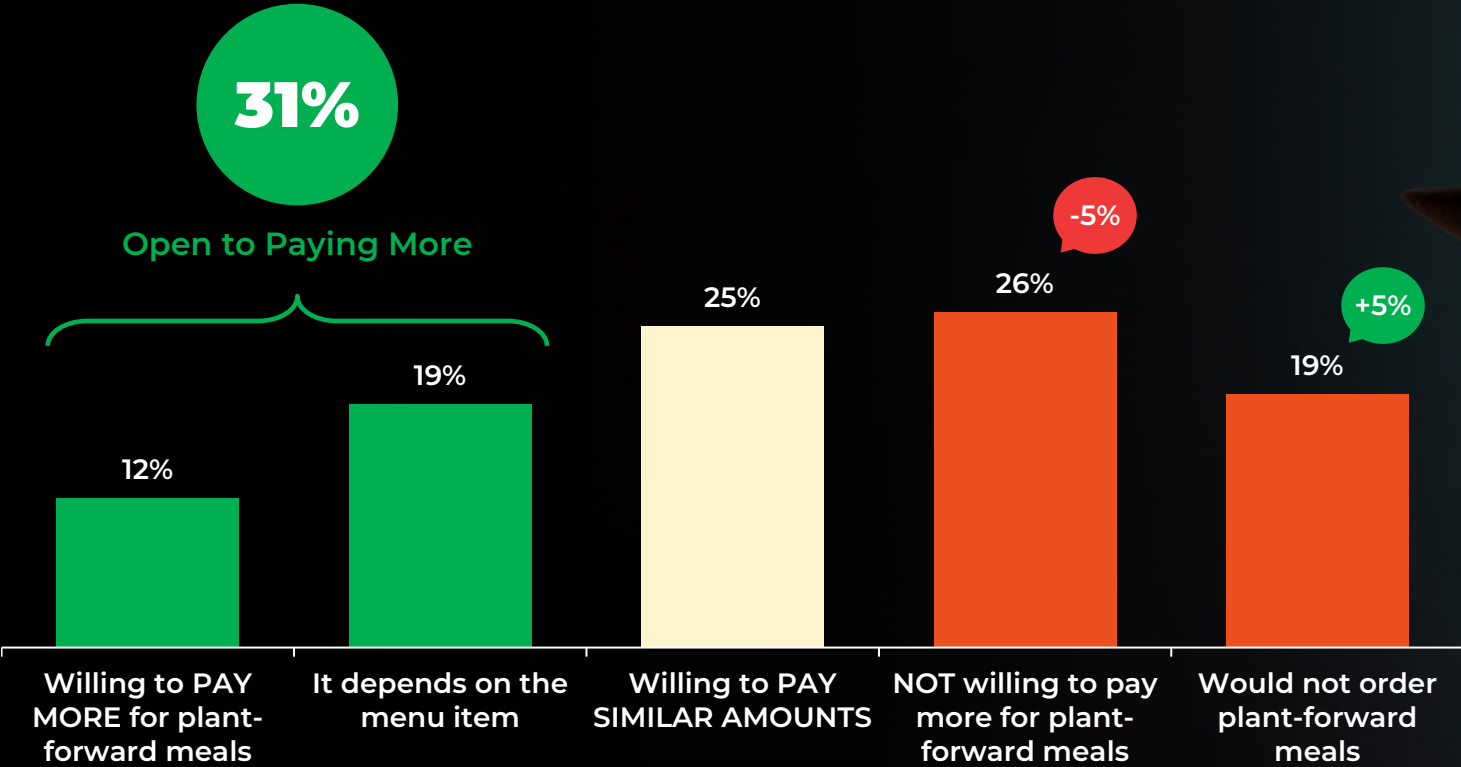
54% of Foodies

51% of High-Income HHs (\$100K+)



Nearly a third of consumers say they are willing to pay higher prices for plant-forward menu items.

And although one in five say they wouldn't order plant-forward meals, a larger share of consumers overall are willing to pay more (31%) as say they are not willing to pay more (26%). In addition, Gen Z, Millennials, Foodies, and Meat Limiters are significantly more open to paying higher prices than their demographic counterparts.



Taste satisfaction remains the most salient barrier to eating less meat at restaurants.

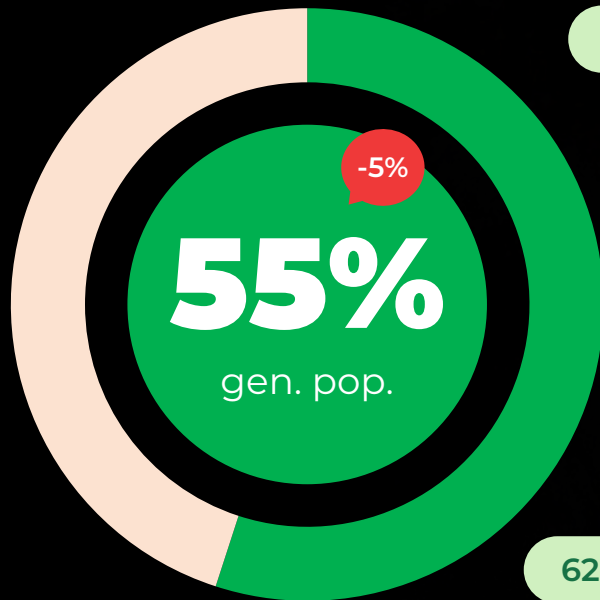
Over a third of consumers are also worried about not getting enough protein and being hungry shortly after a plant-forward or meat-free/reduced meal. In particular, concerns around missing out on protein and energy are shared among more consumers in 2024 than in years past and is highest among Gen Z and Boomers.



Over half of consumers are open to mixing animal and plant proteins in their diets.

Mixing and blending proteins has the highest appeal among Gen Z, Millennials, High-Income consumers, and people who already limit their meat intake.

“I AM OPEN TO TRYING MORE DISHES THAT MIX ANIMAL AND PLANT PROTEINS”



60% of Meat Limiters

57% of Gen Z

60% of Millennials

66% of Foodies

62% of High-Income HHs (\$100K+)

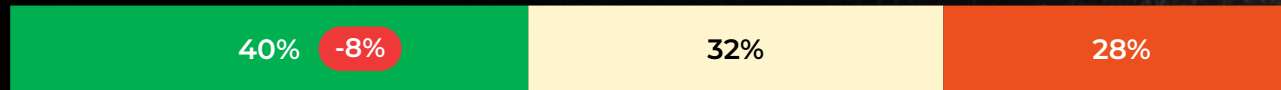


Roughly two in five consumers consider plant-based proteins to be just as healthy and tasty as animal-based proteins.

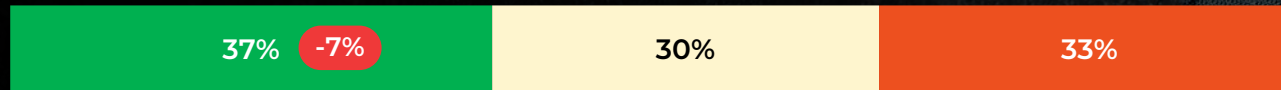
In keeping with general plant-forward trends, Gen Z, Millennials, Foodies, and Meat Limiters have a higher affinity for – and better perception of – plant-based proteins than their demographic counterparts. Over two in five Meat Limiters say they prefer plant-based proteins over animal-based varieties.

■ Agree Completely or Somewhat ■ Neither Agree or Disagree ■ Disagree Completely or Somewhat

“Plant-based protein is just as healthy a source of protein as animal-based protein is.”



“When it is prepared well, plant-based protein tastes just as good as animal-based protein tastes.”



“I prefer plant-based protein over animal-based protein.”



While nearly half of consumers are open to trying more plant-based dairy alternatives, only a quarter say they prefer them over animal-based dairy.

Even among Meat Limiters, only two in five would say that plant-based dairy tastes as good as animal-based variants.

Agree Completely or Somewhat **Neither Agree or Disagree** **Disagree Completely or Somewhat**

“I am open to trying more dishes that feature dairy alternatives.”



“Plant-based dairy tastes just as good as animal-based dairy.”



“I prefer plant-based dairy alternatives to animal-based dairy.”



Affinity for – and perception of – both plant-based proteins and dairy alternatives are significantly stronger among Gen Z and Millennials than Boomers.

While Gen X consumers are still mostly on the fence about plant-based proteins, they're closer to being convinced about the taste and utility of plant-based dairy alternatives than Boomers.

	Total	Male	Female	Gen Z	Millennial	Gen X	Boomer+	Meat Eaters	Meat Limiters
<i>% who agree completely or somewhat</i>	<i>n = 1504</i>	735	745	246	464	415	379	1166	338
Plant-based protein is just as healthy a source of protein as animal-based protein is	40%	41%	39%	47%	47%	35%	32%	34%	61%
When it is prepared well, plant-based protein tastes just as good as animal-based protein	37%	37%	38%	48%	44%	32%	28%	31%	60%
I prefer plant-based protein over animal-based protein	22%	23%	21%	29%	29%	20%	12%	16%	44%
I am open to trying more dishes that feature dairy alternatives	48%	48%	48%	58%	53%	49%	35%	45%	59%
Plant-based dairy tastes just as good as animal-based dairy	28%	27%	28%	39%	36%	24%	15%	23%	43%
I prefer plant-based dairy alternatives to animal-based dairy	26%	26%	26%	36%	33%	23%	14%	21%	43%

statistically higher
statistically lower



Digital Media

Understanding how digital media is shaping consumer expectations and perceptions around plant-forward offerings.

“Digital media” is defined as: social media, blogs, online articles including Facebook, YouTube, TikTok, X (Twitter), as well as traditional online media such as Google search and online news sources (NY Times Cooking, etc.).

Digital Media

Key Takeaways

01

Digital media is shaping what we eat.

Two thirds of the general population (regardless of digital media usage) have made at least one concrete change to their diet based on digital media content. That share is even higher among Meat Limiters, Happy Food & Beverage Media Users, younger consumers, and Foodies.

02

Among consumers who have been influenced to adopt new dietary habits by digital media, most are likely to stick with these lifestyle changes.

The more popular the initial adoption of the dietary habit shift, the more likely it's been retained by consumers. Furthermore, consumers are typically more likely to maintain dietary habits that are additive over ones that are subtractive – it's easier to eat more of something than to cut back. For many of these dietary changes, Gen Z are the likeliest to have already abandoned them, even if they're willing to try them again in the future.

03

Younger consumers are most likely to leverage digital media to learn about food-related topics, from recipe ideas to sustainability and new diets.

While there are clear generational differences when it comes to digital media use, Meat Limiters and Meat Eaters are equally as likely to peruse digital media for food information. Content needs to appeal to both consumer types, with recipe ideas that highlight flavorful taste profiles, high protein content, and filling dishes (which are the most salient barriers to plant-forward eating).

Digital Media

Key Takeaways

04

Digital media is shaping plant-forward perceptions, and over one quarter of consumers currently seek out plant-forward content on digital media.

Over one third of all consumers say that digital media content has made them more willing to try plant-forward dishes. That share is even higher among younger generations, current Meat Limiters, Higher-Income households, Foodies, and the happiest food and beverage digital media users.

05

Consumers across all generations generally agree on how plant-forward is described on digital media for key attributes, and it's overall positive.

The majority say plant-forward is portrayed as healthy, fresh, culturally relevant, and easy to find. Less consistent across demographics is how plant-forward foods are portrayed across digital media in an adventurous, unfamiliar, and creative light with younger consumers and Meat Limiters less likely to agree (and more likely to rate them as comforting and familiar).

06

In consumers' eyes, digital media sources and content typically portray plant-forward foods as light and flavorful, but also expensive.

Older consumers are more likely to see plant-forward foods portrayed as light, but also bland and expensive compared to their younger peers. Meat Limiters are more likely to agree that plant-forward foods are seen as flavorful rather than bland, but they agree with their meat-eating counterparts on these offerings being described on digital media as light and expensive.

Digital Media

Key Takeaways

07

Among those who use digital media to learn about plant-forward topics, more consumers say they find the currently available content lacking, compared to those who are already satisfied with existing content.

In addition to the 36% of consumers who are already tapped into plant-forward digital content, an additional 24% are interested in learning more in the future. The overall plant-forward digital landscape has potential for growth, if content can better match consumer interests and needs.

08

To most effectively reach consumers, prioritize leveraging video-based platforms like YouTube, followed by image-based services like Instagram.

Nearly a third of consumers find Facebook a helpful hub of food knowledge, and it's the third most utilized platform among Boomers after YouTube and streaming or cable television. Meanwhile, Gen Z especially loves TikTok – nearly 50% rate the platform as an extremely or very helpful resource.

09

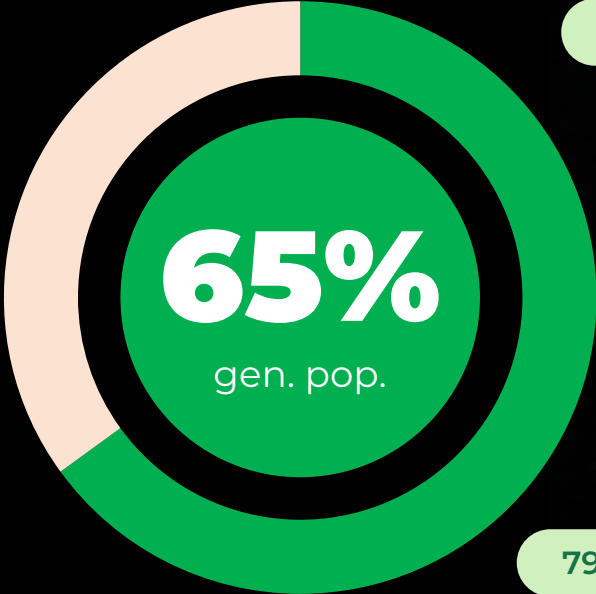
And to best promote plant-forward cooking and eating across digital media, ensure your content provides solid recipes and nutrition advice.

Women, Gen Z, Millennials, and Meat Limiters – who are typically the demographics most amenable to a plant-forward lifestyle – are also the most likely to appreciate digital content with concrete takeaways, like recipe ideas, cooking tutorials, ingredient recommendations, or tips on saving money while eating plant-forward.

Digital media is shaping what we eat.

Two thirds of the general population (regardless of digital media usage) have made at least one concrete change to their diet based on digital media content. That share is even higher among Meat Limiters, Happy Food & Beverage Digital Media Users, younger consumers, and Foodies.

“HAVE MADE AT LEAST ONE CHANGE TO THEIR DIET THAT WAS INFLUENCED BY DIGITAL MEDIA.”



75% of Meat Limiters

80% of Gen Z

70% of Millennials

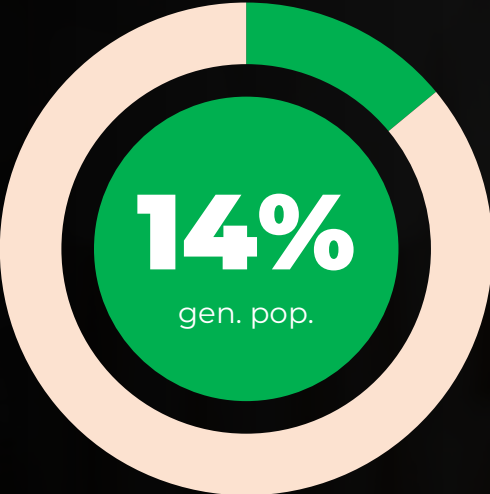
76% of Foodies

79% Happy F&B Digital Media Users

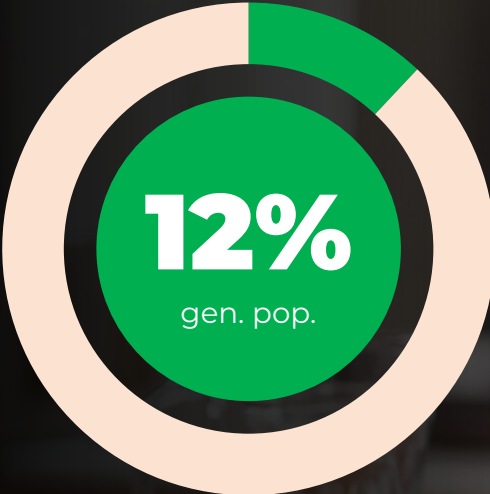


Digital content has started to influence consumers' major health and lifestyle habits.

Roughly one in five Gen Z and Millennials have been influenced by digital content to start counting calories in their food. Around 15% of women, younger generations, as well as High-Income consumers have also been swayed by digital content to experiment with new diets like keto or paleo.



have previously been influenced by digital media to start **COUNTING CALORIES IN THEIR FOOD**



have previously been influenced by digital media to **ADOPT A NEW DIET (keto, paleo, etc.)**



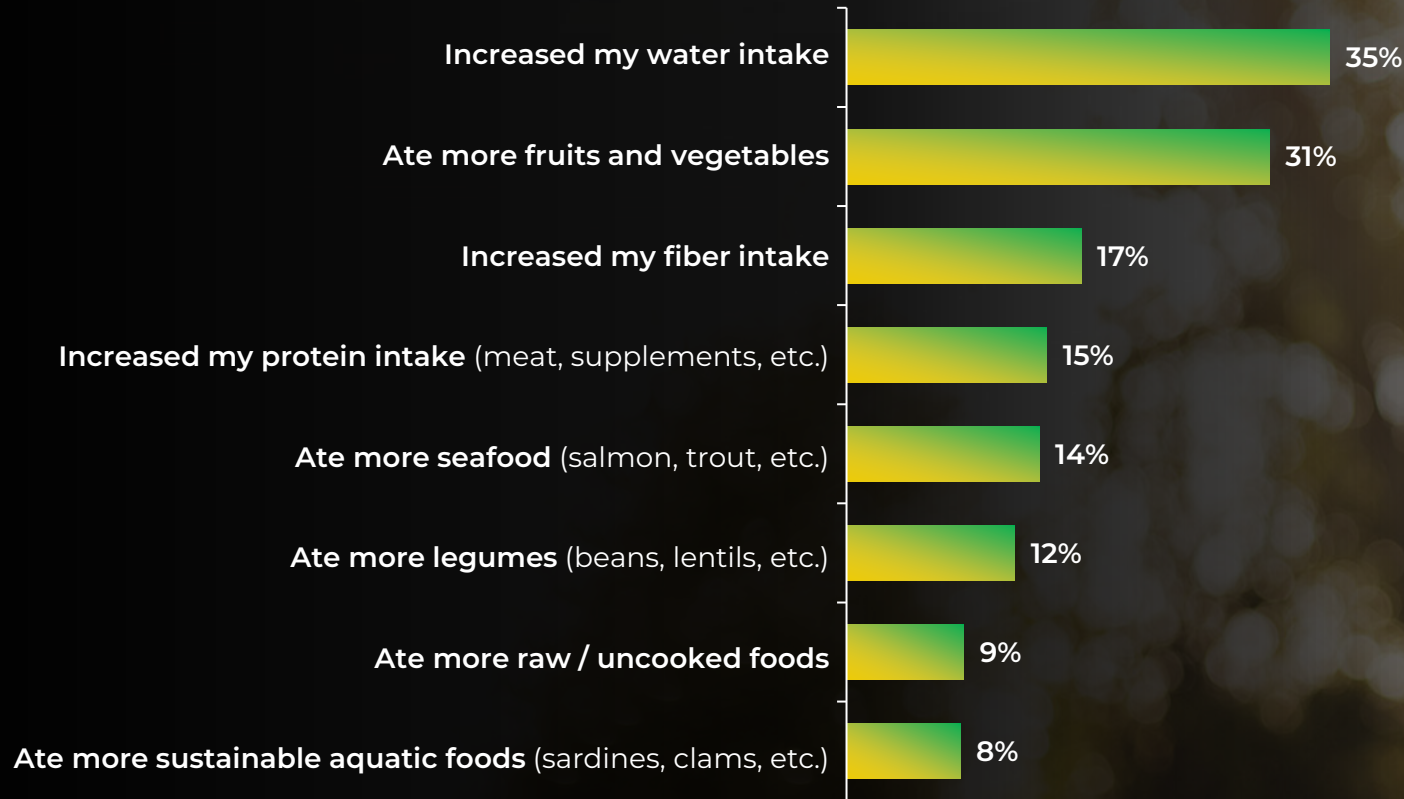
Over a quarter of consumers – and especially Gen X – have previously been inspired to cut back on processed foods because of digital media.

15% of Gen Z consumers have been influenced to reduce their dairy consumption – the highest among all generations.



Digital media has shaped hydration consumption for consumers and that is especially true for Gen Z (46%).

When it comes to nutrition or wellness, Gen Z are typically more likely than older generations to focus on protein, and the same pattern manifests here: a quarter of Gen Z have previously been influenced to eat more protein, whether through meat, plant-based products, powders, or supplements.



Consumers overall tend to stick with dietary habit changes they learn from digital media.

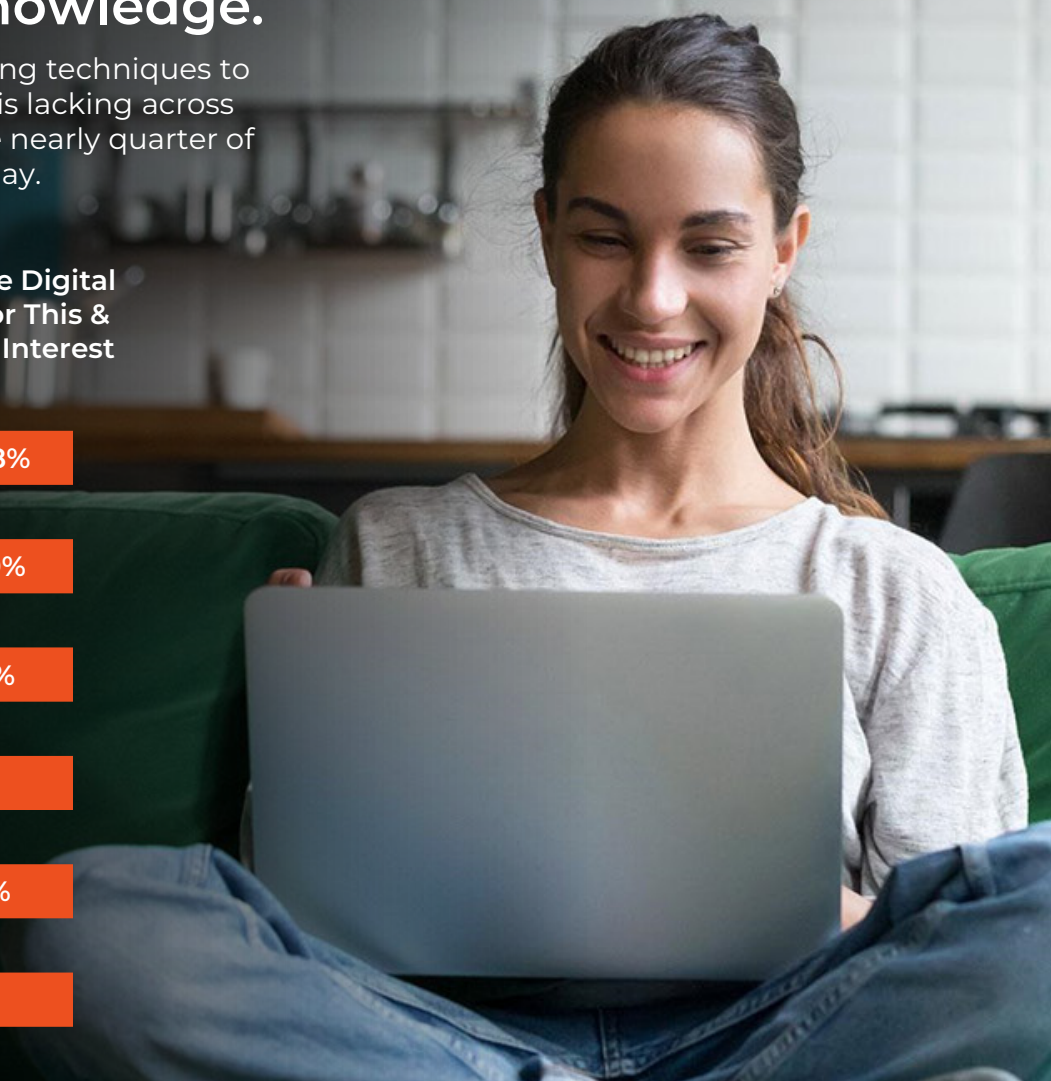
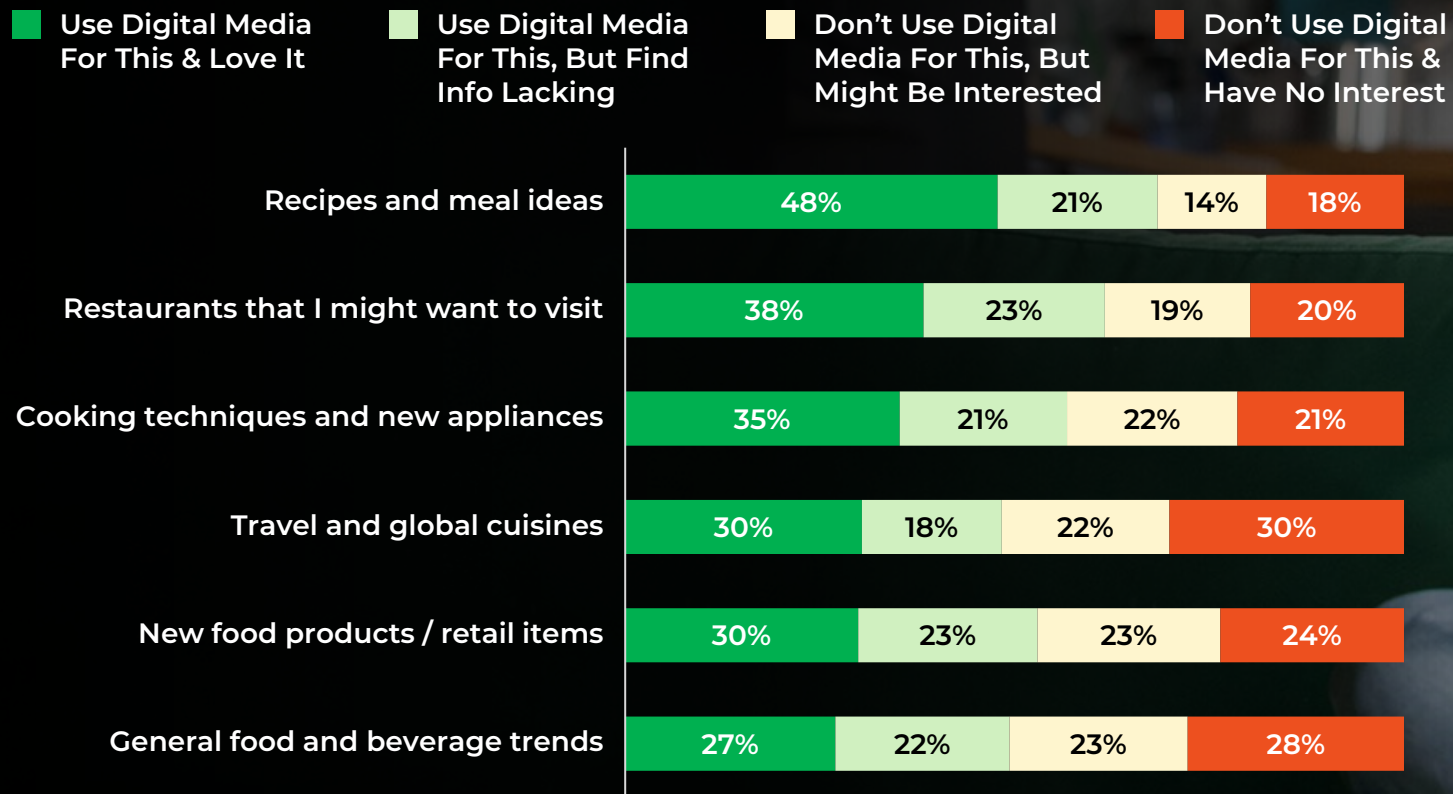
And the more popular the initial adoption of the dietary habit shift, the more likely it's been retained by consumers. Furthermore, consumers are typically more likely to maintain dietary habits that are additive over ones that are subtractive – it's easier to eat more of something than to cut back. For many of these dietary changes, Gen Z are the likeliest to have already abandoned them, even if they're willing to try them again in the future.

Increased my water intake	93%
Ate more fruits and vegetables	92%
Ate more legumes (beans, lentils, etc.)	83%
Ate more seafood (salmon, trout, etc.)	82%
Increased my fiber intake	78%
Reduced my consumption of fat, sugar, carbs, salt, etc.	77%
Cut back on processed foods	76%
Increased how much protein I consume (meat, supplements, etc.)	75%
Reduced or eliminated how much red meat I eat	74%
Reduced or eliminated dairy products in my diet	70%
Ate more sustainable aquatic foods (sardines, sea vegetables, etc.)	67%
Reduced or eliminated how much non-red meat I eat	63%
Ate more raw / uncooked foods	61%



Recipes and meal ideas are the most used and most loved way of leveraging digital media for food-related knowledge.

Overall, consumers show similar usage of digital media across topics from restaurants to cooking techniques to retail products. However, nearly one third of current digital media users say that available info is lacking across topics. There is room for improving content which will have the added benefit of engaging the nearly quarter of consumers who are interested in using digital media to learn about these topics but aren't today.



Those who love digital media across all types of food-related information tend to skew younger but there is no strong skew between Meat Limiters vs. Meat Eaters.

This is notable since it means that consumers who are turning to digital media are a mix of those who already limit meat and those who do not. Content needs to appeal to both consumer types with recipe ideas that highlight flavorful taste profiles, high protein content, and filling dishes (top barriers to plant-forward eating with consumers overall).

% who use to get info and love it

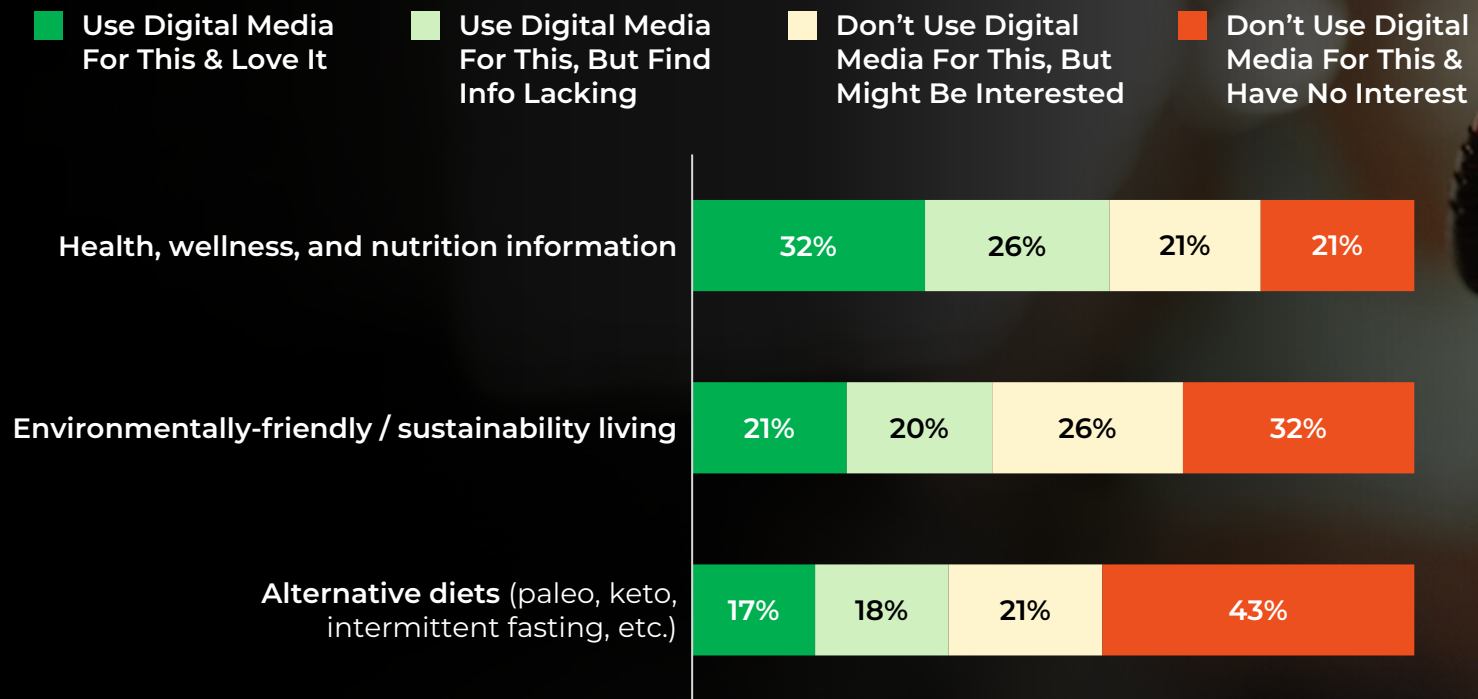
	Total	Male	Female	Gen Z	Millennial	Gen X	Boomer+	Meat Eaters	Meat Limiters	Happy F&B Digital Media Users
	n = 1504	735	745	246	464	415	379	1166	338	742
Recipes and meal ideas	48%	42%	53%	49%	53%	52%	36%	49%	45%	65%
Restaurants that I might want to visit	38%	38%	38%	43%	46%	36%	28%	39%	37%	54%
Cooking techniques and new appliances	35%	33%	37%	38%	42%	37%	23%	36%	33%	53%
Travel and global cuisines	30%	30%	30%	40%	35%	28%	21%	31%	29%	46%
New food products / retail items	30%	29%	31%	37%	38%	27%	17%	29%	33%	46%
General food and beverage trends	27%	25%	29%	31%	34%	27%	16%	27%	28%	55%

statistically higher statistically lower



Well over half of consumers utilize digital media to get overall health information, while fewer rely on digital media to learn about more specific topics like sustainability or alternative diets.

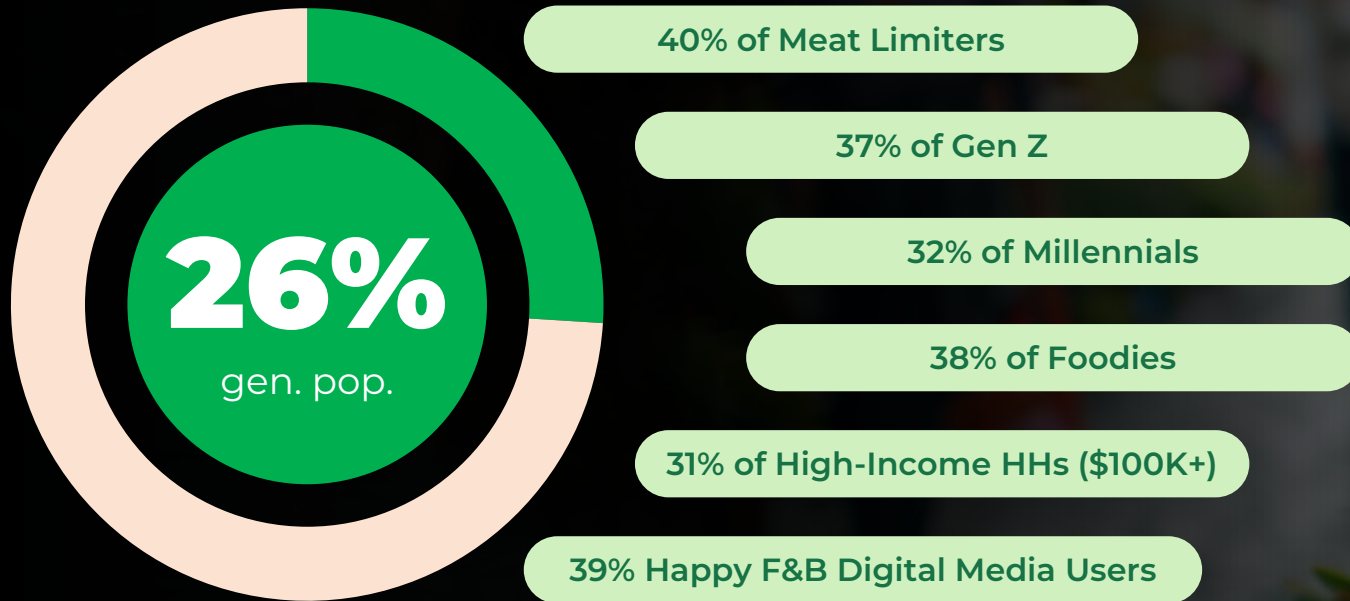
This is likely driven by naturally lower interest in these topics among the overall population. Over a quarter of Millennials love using digital media to learn about alternative diets, but that's only the case for about 10% of Gen Z.



Over one quarter of consumers are seeking out plant-forward content on digital media.

This content seeking behavior is highest among Meat Limiters, Happy F&B Digital Media Users, Gen Z, Millennials, Foodies, and High-Income consumers.

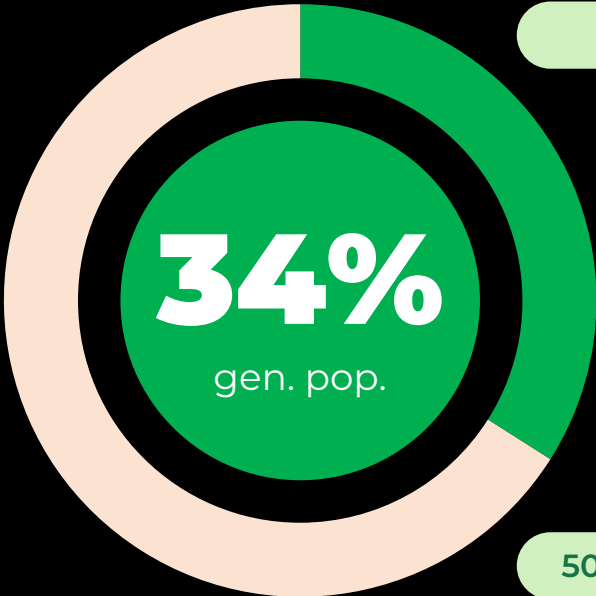
“I SEEK OUT PLANT-FORWARD FOOD / BEVERAGE CONTENT ON DIGITAL MEDIA.”



Digital media is positively shaping plant-forward perceptions.

Over one third of all consumers say that digital media content has made them more willing to try plant-forward dishes and that share is even higher among younger generations, current Meat Limiters, High-Income households, Foodies, and Happy F&B Digital Media Users.

“CONTENT ON DIGITAL MEDIA HAS MADE ME MORE WILLING TO TRY PLANT-FORWARD FOODS / DISHES.”

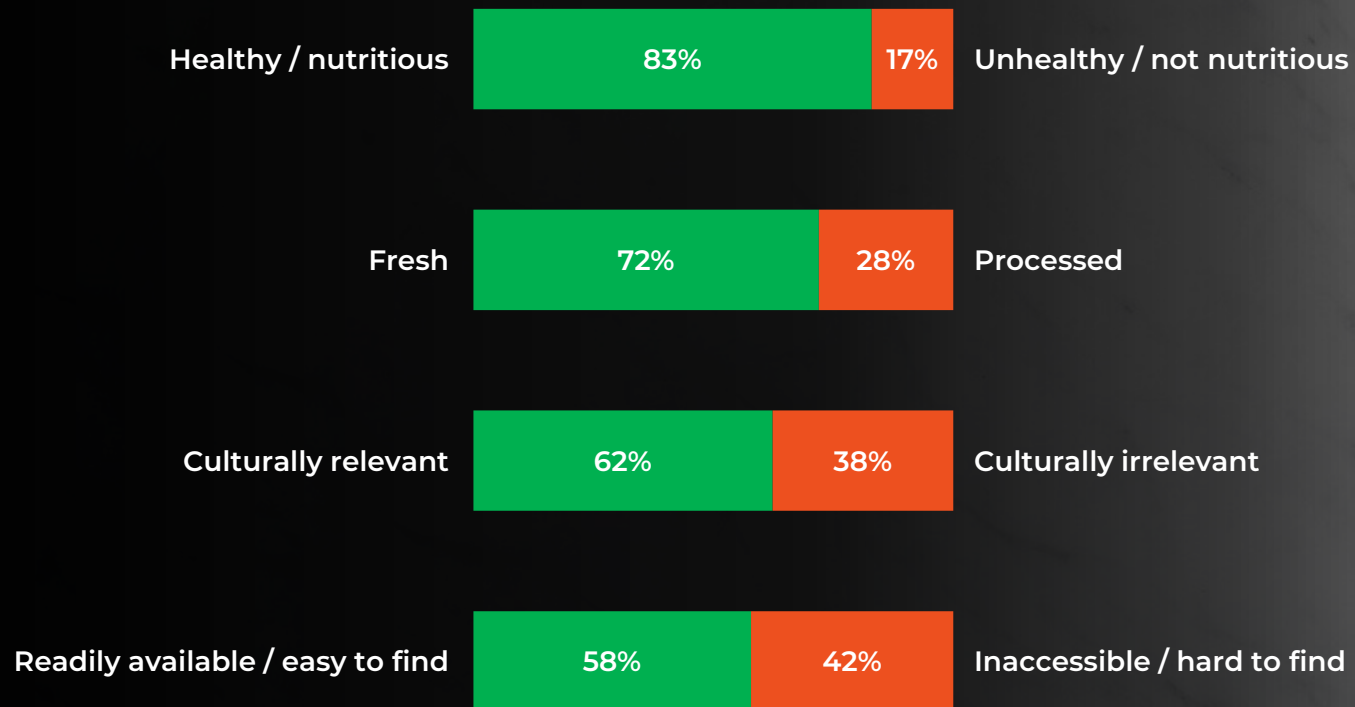


- 47% of Meat Limiters
- 46% of Gen Z
- 44% of Millennials
- 49% of Foodies
- 42% of High-Income HHs (\$100K+)
- 50% Happy F&B Digital Media Users



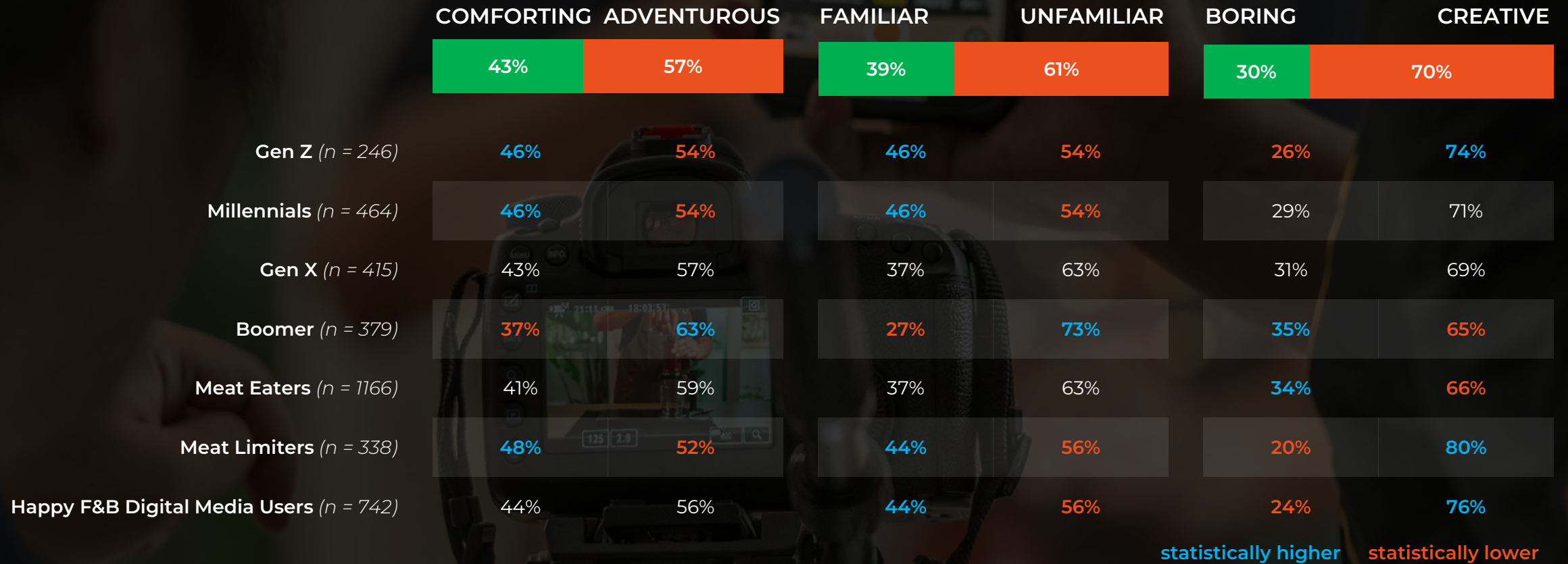
Overall, the majority say plant-forward foods are portrayed as healthy, fresh, culturally relevant, and easy to find.

Consumers across generations generally agree on how plant-forward foods are described or portrayed on digital media, for these key attributes.



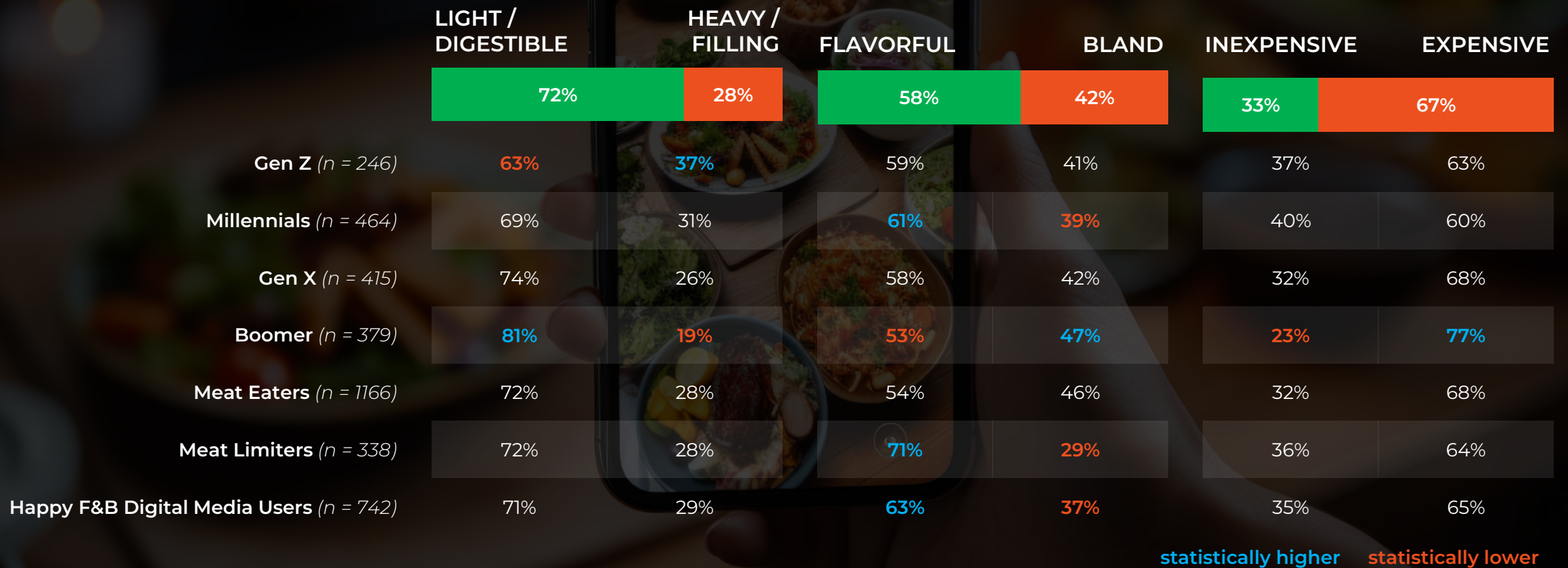
Plant-forward foods are seen as portrayed across digital media in an adventurous and creative light, which is perhaps why they tend to feel somewhat unfamiliar.

As we'd expect, younger consumers and Meat Limiters are more likely to say that plant-forward foods are comforting and familiar, though even for these groups (who are typically more likely to embrace plant-forward eating), fewer than half agree.



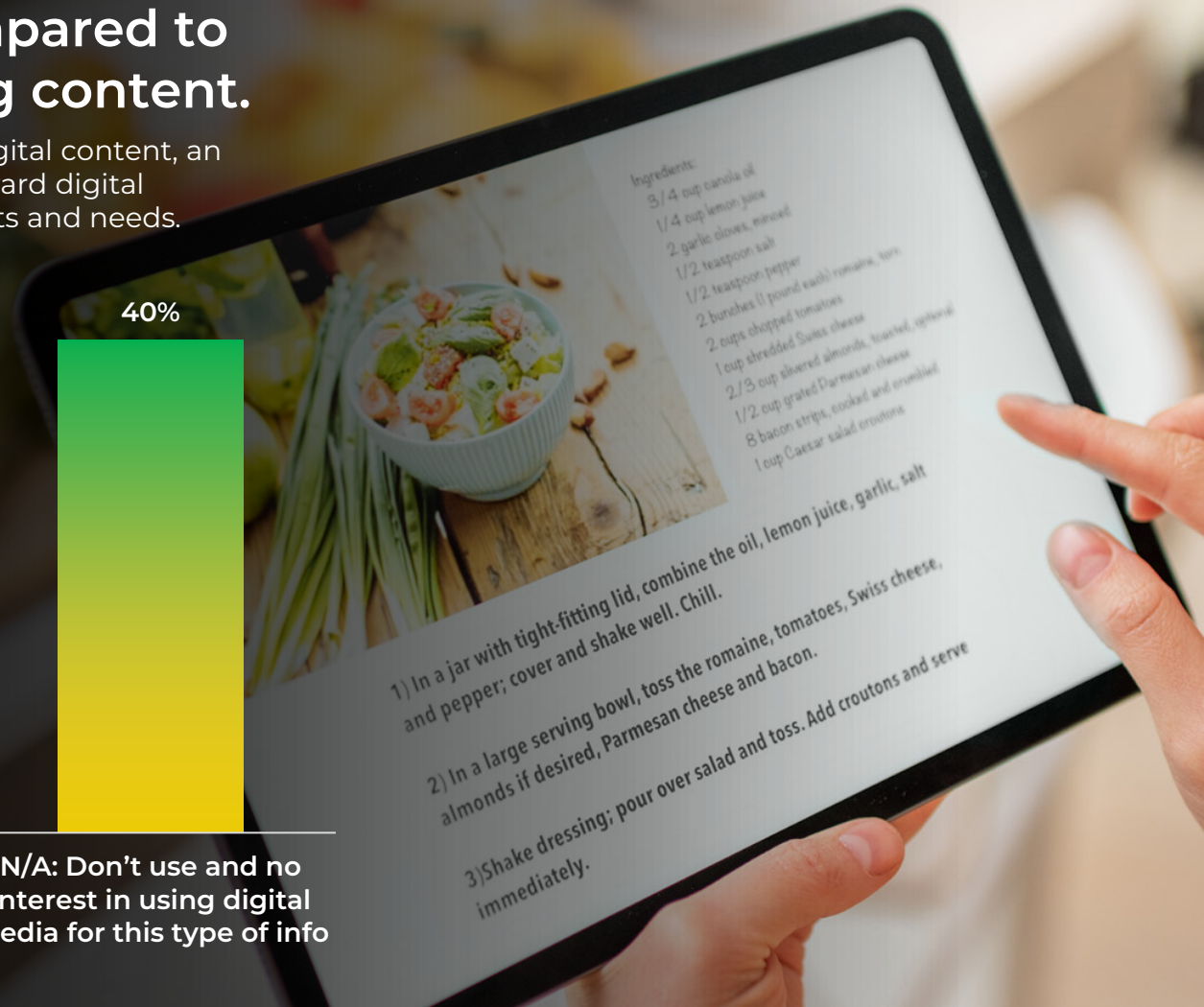
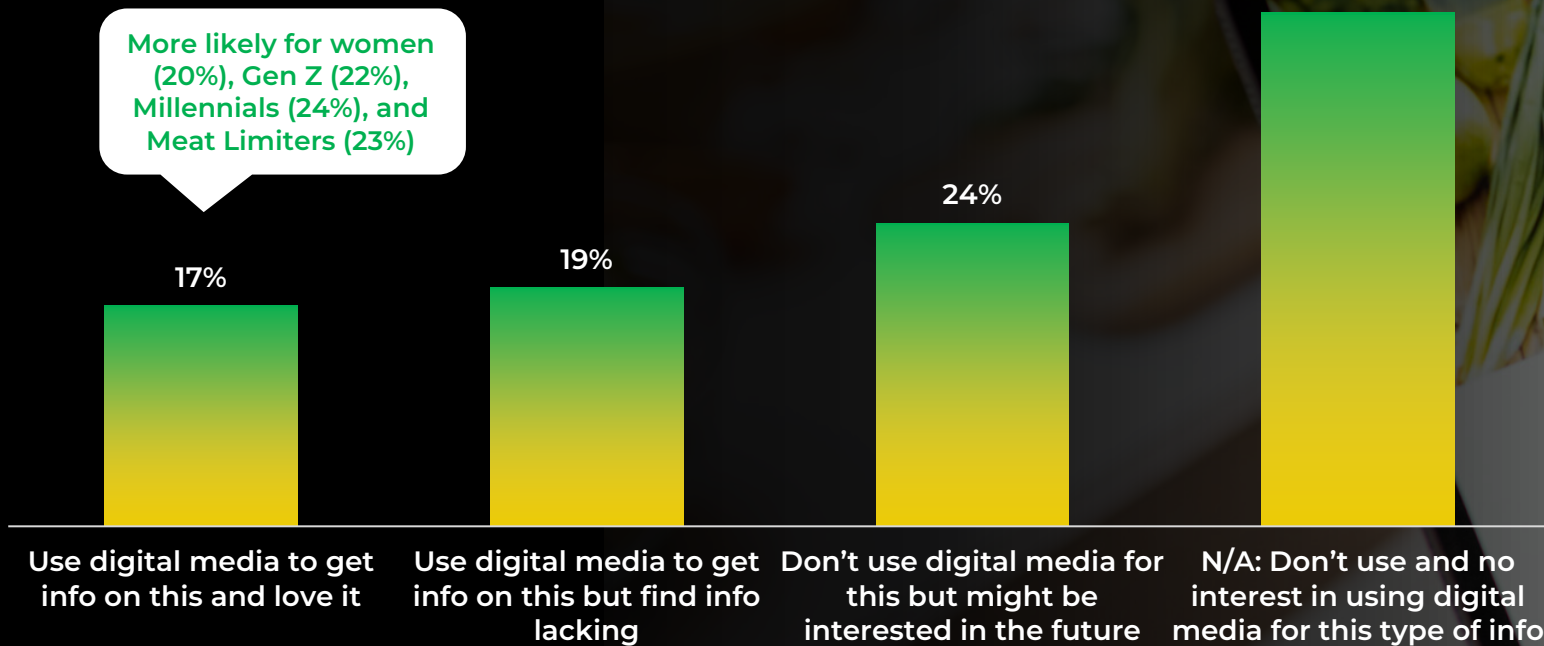
Consumers say digital media typically portrays plant-forward foods as light and flavorful, but also expensive.

There are some very interesting nuances to these perceptions by demographics. Older consumers are more likely to see plant-forward foods portrayed as light, but also bland and expensive compared to their younger peers. Meat Limiters are more likely to agree that plant-forward foods are seen as flavorful rather than bland, but they agree with their meat-eating counterparts on these offerings being described on digital media as light and expensive.



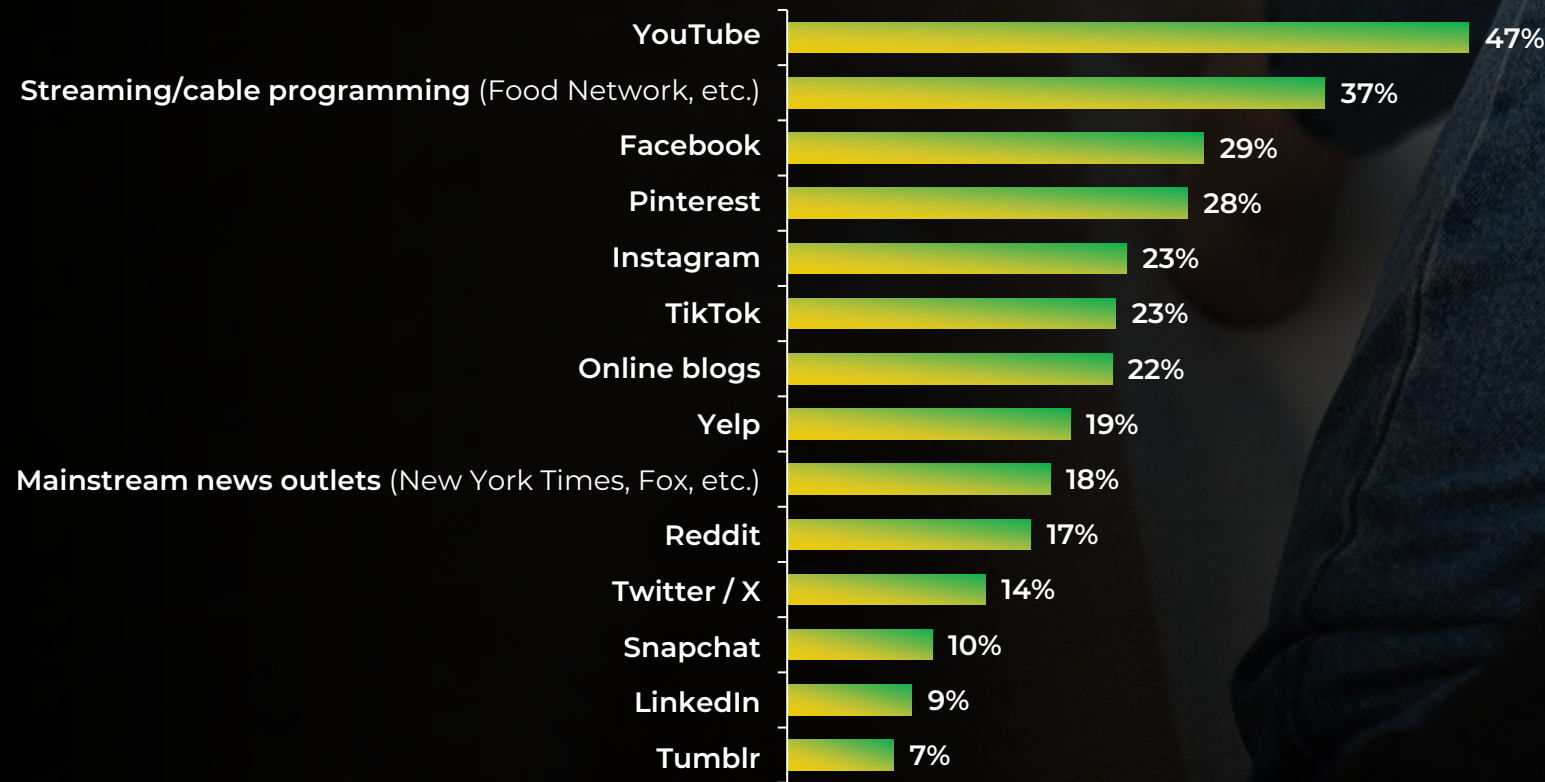
Among those who use digital media to learn about plant-forward topics, more consumers say they find the currently available content lacking, compared to those who are already satisfied with existing content.

In addition to the 36% of consumers who are already tapped into plant-forward digital content, an additional 24% are interested in learning more in the future. The overall plant-forward digital landscape has potential for growth, if content can better match consumer interests and needs.



When searching for food inspiration, consumers typically find video-based platforms most helpful, followed by image-based services like Pinterest or Instagram.

Nearly a third of consumers find Facebook a helpful hub of food knowledge, and it's the third most utilized platform among Boomers after YouTube and streaming or cable television. Meanwhile, Gen Z especially loves TikTok – nearly 50% rate the platform as an extremely or very helpful knowledge resource.



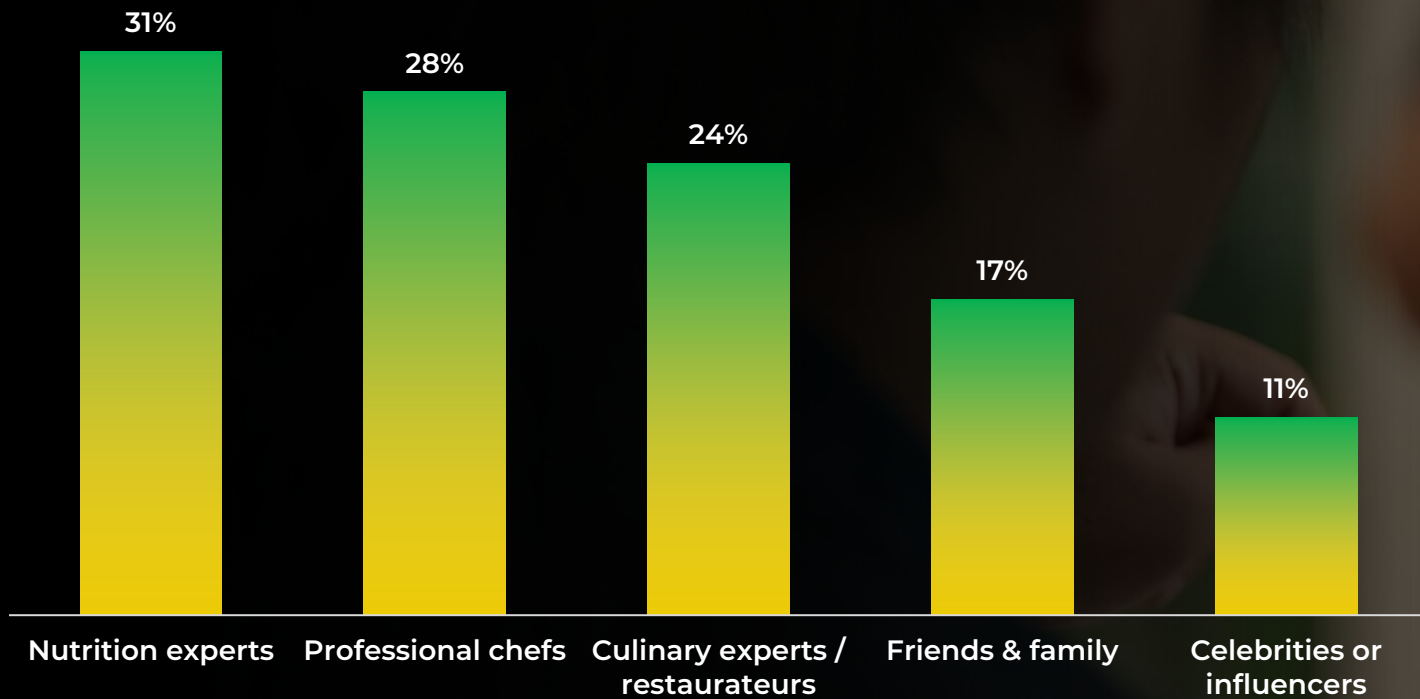
Recipe ideas are the best way to promote plant-forward dining across digital media.

Women, Gen Z, Millennials, and Meat Limiters – who are typically the demographics most amenable to a plant-forward lifestyle – are also the most likely to appreciate digital content with concrete takeaways, like recipe ideas, cooking tutorials, ingredient recommendations, or tips on saving money while eating plant-forward.



Expertise matters – consumers are more likely to rate plant-forward digital content as helpful if it comes from professional or accredited sources, rather than from family, friends, or celebrities.

Gen Z are more likely to find plant-forward content helpful across ALL listed sources, as do Foodies.



For additional inquiries & information, please reach out to:

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