Choosing alternative seafood:
Key insights from research on consumer needs, preferences, and motivations

The Good Food Institute
Informed by Kelton Global research commissioned by GFI

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Introduction

Alternative seafood is a clear market opportunity. While seafood and shellfish make up about 20 percent of the total conventional meat and seafood market, plant-based seafood accounts for just 1 percent of dollar sales of the total plant-based meat and seafood market. Mirroring this market gap is a knowledge gap about consumer attitudes towards alternative seafood. To date, little research has been conducted in this area. To fill this gap and strengthen the alternative seafood innovation ecosystem, GFI partnered with consumer insights and brand strategy firm, Kelton Global, to determine consumer needs, preferences, and motivations as they relate to choosing alternative seafood.[1] This study surveyed 2,500 U.S. residents ages 18-65. Gender, age, and region were roughly balanced with census demographics. This resource outlines the key findings.

Key takeaways

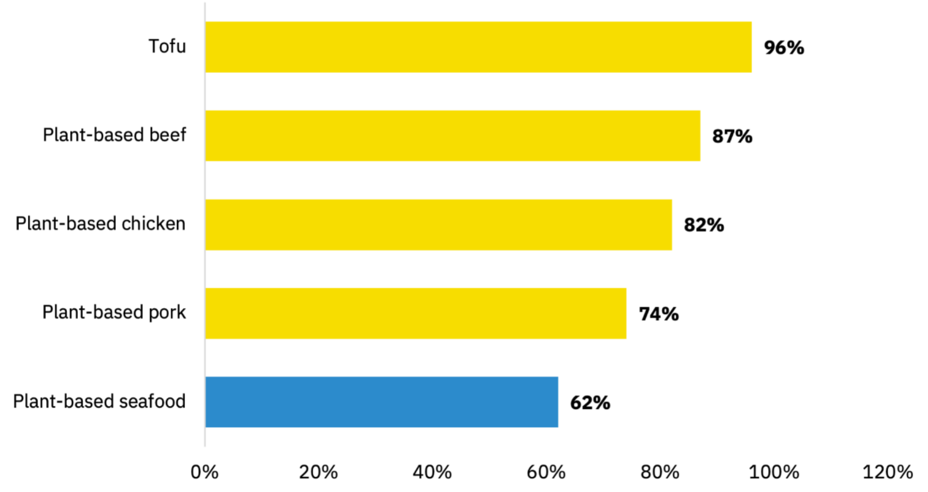
1. Alternative seafood is well positioned to appeal to general consumers as many consumers place importance upon their personal health and the environment.
2. General consumers need more information about the benefits and taste of alternative seafood in order to feel compelled to try it. The primary concerns are taste and texture of the products.
3. While taste is table stakes for both plant-based and cultivated seafood, messaging about products' environmental, health, and functional benefits can bring additional consumers into the category.
4. Consumers showed equal interest in plant-based and cultivated seafood. There is value in pursuing both alternative seafood options.

Consumer familiarity

Consumers answered several questions before being introduced to the concepts of plant-based and cultivated seafood. Prior to that introduction, consumers were less likely to be familiar with plant-based seafood than other plant-based proteins currently on the market.

[1] See here for the full list of questions.

Consumer familiarity with plant-based proteins



Question: How familiar are you with each of the following alternative meat options? Top 4 Box - Aware (Eat it regularly/Eat it occasionally/Tried it/Heard of it)

Respondents were then split between a focus on plant-based and cultivated seafood. After learning about plant-based or cultivated seafood, 42 percent of consumers found plant-based seafood appealing and 43 percent would consider purchasing it in the future. 35 percent of respondents found cultivated seafood appealing and 38 percent would consider purchasing it in the future.

Consumer segmentation

Consumers were grouped into the following three categories based on how appealing they find plant-based or cultivated seafood and how likely they are to purchase either of these options.

- **Alternative seafood enthusiasts:** those who find alternative seafood very appealing and are very likely to purchase in the future
- **Alternative seafood interested:** consumers who are neither enthusiasts nor rejectors
- **Alternative seafood rejectors:** those who do not find alternative seafood appealing and are unlikely to purchase in the future

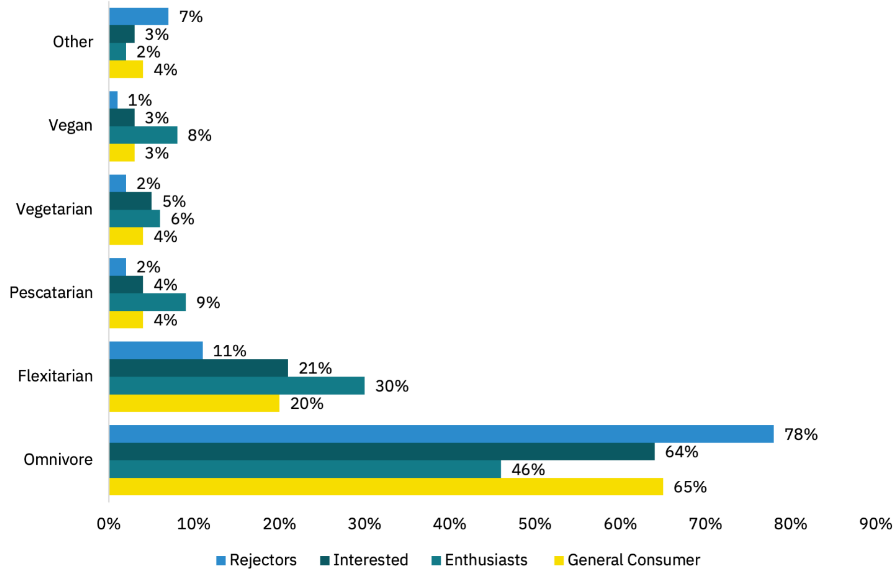
Demographic differences in consumer preferences

Demographic	General consumers	Alt seafood enthusiasts (14%)	Alt seafood interested (59%)	Alt seafood rejectors (27%)
Average age	42	49	40	47
Male/female ratio	48 / 51	62 / 38	48 / 51	62 / 38
Geographic region	More likely from the South (37%)	More likely from the Northeast (23%)	More likely from the South (37%)	More likely from the Midwest (30%)
Racial identity	More likely to be White (62%)	More likely to be Hispanic (23%)	More likely to be Asian (8%)	More likely to be White (77%)
Average household income	$65,560	$92,770	$62,310	$58,930
Urbanicity	32% live in a large city	56% live in a large city	32% live in a large city	21% live in a rural area

The majority of surveyed consumers fell into the **alternative seafood interested** category. In the graph below, we can see that **alternative seafood enthusiasts** are more likely to be flexitarian and pescatarian than the general consumer. We also see that the **alternative seafood interested** consumers are tracking right along with general consumers.

Notably, a greater proportion of alternative seafood enthusiasts are flexitarian and pescatarian than the general consumer. Alternative seafood is therefore already appealing to groups beyond vegans and vegetarians.

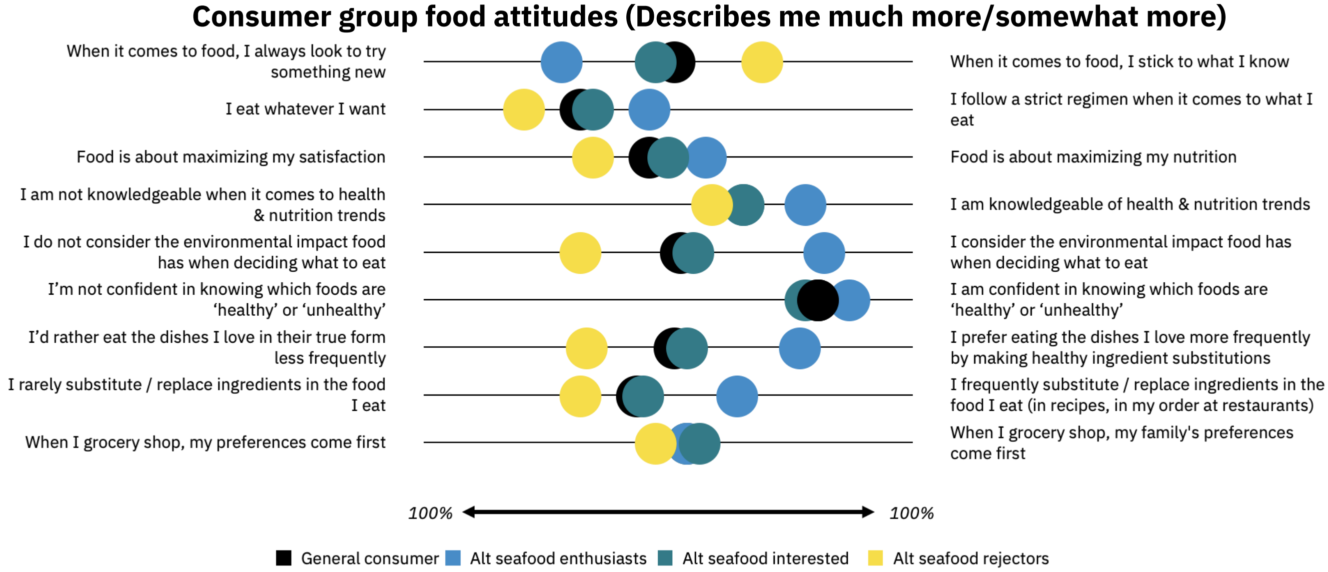
Consumer interest by diet category



Base: n=2538, omnivores were 65% of sample
Question: What is your dietary preference?

As shown below, **alternative seafood enthusiasts** have a greater tendency to try new products than all other consumers while **alternative seafood rejectors** tend to stick to what they know and avoid substitutions. This speaks both to the value of alternative seafood tapping into novelty for early adopters but also signifies the importance of achieving familiarity in order to appeal to the **alternative seafood rejectors**. We also see that the majority of consumers in all groups consider themselves knowledgeable about health and nutrition. This suggests that focusing on health and health messaging may play a role in successful early adoption of alternative seafood products.

Consumer group food attitudes (Describes me much more/somewhat more)



Top 2 Box (somewhat important or extremely important)

Benefits of alternative seafood

Consumers are interested in the environmental, health, and functional factors associated with plant-based and cultivated seafood.

Environmental

Consumers state that the environmental benefits of alternative seafood are important to them. Consumers are most interested in the plastic pollution reduction potential of alternative seafood, followed by saving ocean habitats and reducing harm to marine animals. Consumers ranked the environmental impacts for plant-based and cultivated seafood in the same order.

Environmental benefit	Plant-based	Cultivated
Reducing plastic waste in the ocean	67%	70%
Saving ocean habitats	66%	69%
Reducing harm towards marine animals	64%	66%
Reducing overfishing	61%	64%
Reducing bycatch	60%	64%
Reducing environmental pollution from fish farms	60%	63%
Reducing waste along the seafood supply chain	59%	63%
Reducing antibiotic use in fish farms	59%	62%
Reducing the impact of fishing and fish farms on the climate	57%	59%
Reducing individual carbon footprint	55%	58%

Question: If all of the following statements were true and either on the label of or included in the advertising for a plant-based (left) or cultivated (right) seafood product, how important would each of the following environmental factors be in your decision to eat plant-based/cultivated seafood over wild-caught or farm-raised seafood? Top 2 Box (somewhat important or extremely important)

Health

Consumers also rank the health benefits of plant-based and cultivated seafood similarly, with lack of mercury contamination being the top selling point.

Health benefit	Plant-based	Cultivated
No mercury	45%	46%
Low risk of foodborne illness	37%	42%

High in protein	36%	39%
No microplastics	36%	39%
Rich in omega-3s	34%	36%
Contains few and easily recognizable ingredients	33%	35%
Eliminates allergy concerns	28%	N/A
High in fiber	26%	28%
Micronutrient content	25%	28%
Low fat content	24%	26%
Low sodium	24%	26%
Low calorie	24%	23%

Question: How important would each of the following health factors be in your decision to eat plant-based (left) or cultivated (right) seafood over wild-caught or farm-raised seafood?
Top 2 Box (somewhat important or extremely important)

Functionality

The most appealing functional benefit of alternative seafood is flavor, food safety benefits and texture. The contrast between plant-based and cultivated percentages may be a result of consumers holding cultivated seafood, a product they are largely unfamiliar with, to a higher bar than plant-based seafood.

Functionality factor	Plant-based	Cultivated
Has good flavor	52%	78%
No chance of food poisoning	47%	73%
Tastes like wild-caught or farm-raised seafood	40%	72%
Good texture	40%	72%
Filling and satisfying	38%	72%
Easy to cook	38%	68%
No bones	37%	62%
Product flavor consistency	36%	68%
Competitively priced	34%	66%
Less or no “fishy” smell	31%	62%
Looks just like wild-caught or farm-raised seafood	29%	61%

Longer shelf life	27%	57%
No skin	25%	50%

Question: If all of the following statements were true and either on the label of or included in the advertising for a plant-based (left) or cultivated (right) seafood product, how important would each of the following functional factors be in your decision to eat plant-based/cultivated seafood over wild-caught or farm-raised seafood?
Top 2 Box (somewhat important or extremely important)

Barriers to overcome

Plant-based and cultivated seafood must overcome taste and texture hurdles. Most consumers cite expected taste and texture as barriers to choosing alternative seafood. Availability is also key. Over a quarter of respondents have never seen plant-based seafood in their grocery stores.

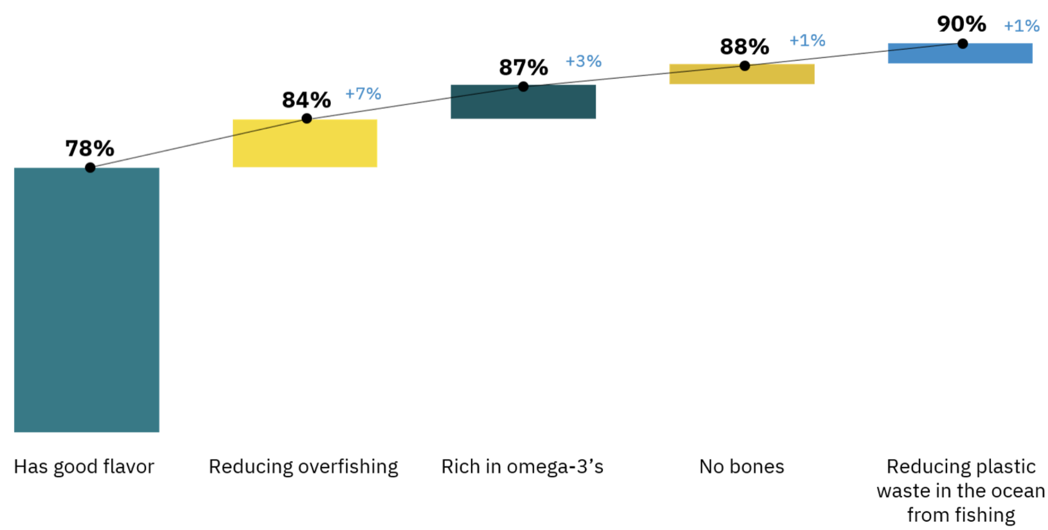
Barrier to choosing alternative seafood	Plant-based	Cultivated
Anticipate disliking taste	38%	32%
Anticipate disliking texture	27%	27%
Never seen plant-based seafood at grocery store	27%	N/A
Wild-caught or farm-raised is more natural	18%	21%
Less fresh than wild-caught or farm-raised	18%	21%
Would miss the taste of wild-caught or farm-raised	18%	18%
Unsure how to cook	18%	18%
Lack of trust in alternative seafood	17%	17%
Wild-caught and farm-raised are healthier	15%	16%
No barriers	15%	15%
Desire to support the fishing industry	14%	15%
Trust only wild-caught or farm-raised seafood	12%	14%
Desire to support the fish farming industry	11%	13%
No desire to try something new	11%	13%
Other	3%	3%

Question: Which of the following might stop you from choosing plant-based (left) or cultivated (right) seafood?
Top 2 box answers

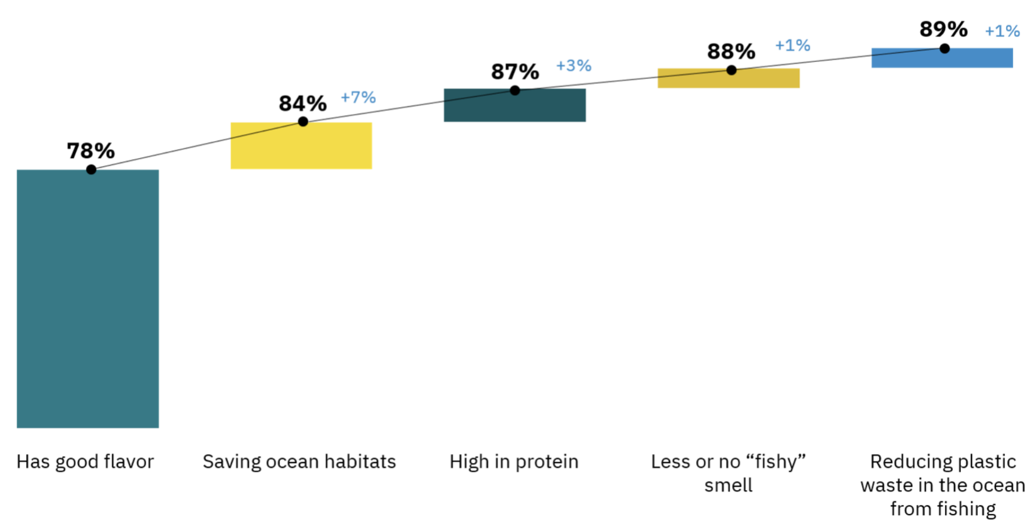
Overcoming taste hurdles

The TURF (Total Unduplicated Reach and Frequency) analyses below demonstrate ideal messaging to reach the maximum number of consumers. Taste is table stakes for both plant-based and cultivated seafood, and messaging about products' environmental, health, and functional benefits can bring additional consumers into the category. The most compelling environmental messaging is on ocean health and the reduction of overfishing, while the most compelling health benefits are around protein and omega-3 fatty acids. Once consumers have a positive impression of alternative seafood flavor, messaging focused on these benefits are likely to make products more appealing to consumers.

Plant-based seafood messaging attributes TURF analysis (total reach)



Cultivated seafood messaging attributes TURF analysis (total reach)



Conclusion

Alternative seafood remains a white space in the alternative protein market. This research shows that both plant-based and cultivated seafood are well poised to appeal to the general consumer as long as the products achieve parity with conventional seafood on flavor and texture. Once products appeal to all consumers on sensory characteristics, the health and environmental benefits of alternative seafood can bring early adopters into the category. In the long term, capturing the omnivore segment will require providing consumers with a truly familiar product.

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Cover image courtesy of WildType.

About GFI

The Good Food Institute is a 501(c)3 nonprofit organization developing the roadmap for a sustainable, secure, and just protein supply. We identify the most effective solutions, mobilize resources and talent, and empower partners across the food system to make alternative proteins accessible, affordable, and delicious.

Our Sustainable Seafood Initiative

The welfare of billions of people and the stability of life on earth depend on healthy oceans. Overfishing has driven numerous species to extinction and ecosystems to the point of collapse. Shifting to plant-based, cultivated, and fermentation-derived seafood is the most tractable way to improve our oceans' health.

Visit **gfi.org/seafood** to learn more.