

How to drive plant-based food purchasing

# Key findings from a Mindlab study into implicit perceptions of the plant-based category

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## Key Findings

- **Taste** was the attribute most likely to drive purchase intent for all age groups and diet types. Taste should be prioritized above all else.
- **Familiarity** and **tradition** were also strong positive drivers of purchase intent. Consumers were more likely to purchase products that appeared familiar to them than those that appeared novel. Omnivore consumers liked products that looked comparable to their conventional meat or dairy counterparts and language that wasn't unusual or incongruous.
- **Freshness** was a moderate positive driver for purchasing decisions.
- **Health** and **nutrition** positively correlated with purchase intent but less so than taste, familiarity, tradition, and freshness. The older the consumer, the more important the health profile of a product.
- **Altruistic benefits**, such as improved animal welfare and lighter environmental impact of the products, were low in the importance hierarchy for omnivore consumers and unlikely to drive purchase intent. These considerations were more likely to appeal to millennials than to any other demographic group, but they were still less important than taste, familiarity, and health.
- **Positive taste connotations** were generated by a number of factors, including vivid, tempting imagery of the product on pack; bright, saturated colors on a dark or light background; and visibility of the product through the packaging, although this was only when it looked similar to its conventional meat or dairy counterpart. Consumers perceived dark or brown packaging most positively, while boxes and pouches were the most popular format.
- **The word plant** was part of the most successful language to describe plant-based products, especially **plant paired with protein**—*plant-protein, plant-based protein*. Of the most commonly used terms—*vegan, veggie, vegetarian, meatless, meat-free, plant-based*—*plant-based* generated the greatest purchase intent and most frequent positive associations, and *vegan* performed the worst.

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## Introduction

The purpose of this research was to understand the general population's perceptions of plant-based products. Specifically, this study aimed to identify the biggest drivers of purchase behavior among consumers; the effect of differing descriptive language, such as *plant-based*, *meatless*, and *vegan*, in this category; and differing perceptions of plant-based foods among demographic groups. The results are formulated into recommendations for increasing purchase intent of plant-based products, bringing about positive behavior change, and influencing consumers to choose plant-based products over their conventional meat and dairy counterparts.

## Purpose of the study



## Methodology

### Overview of the approach

This study featured a combination of **implicit tests** (measuring the unconscious factors that influence people's behavior) and **explicit questions** (measuring the conscious factors that influence people's behavior).

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## How do people think?

Nobel-winning economist Daniel Kahneman developed a framework that characterizes human thinking and decision-making as a dichotomy between two systems:

### System 1

#### Fast and Instinctual

- Unconscious
- Associative
- Automatic-pilot
- Error-prone
- Everyday



### System 2

#### Slow and Rational

- Conscious
- Logical
- Effortful
- Reliable
- Complex

This approach is based on Daniel Kahneman's System 1 / System 2 framework, which characterizes decision-making as a dichotomy between two modes of thinking: slow (System 1) and fast (System 2). Slow thinking is rational and deliberate, and we captured it here by asking participants explicit questions. Fast thinking operates on intuition, emotion, and heuristic judgments, and we captured it using implicit reaction time tests. This thinking is more heavily relied on in everyday decision-making, such as making food purchasing decisions, and is influenced by previously held associations. Placing people under time pressure forces them to rely on their intuition and mental shortcuts to make decisions and accurately predicts how they would behave in the real world.

## Sample

We recruited a total of 2,518 U.S. participants over the age of 18. The sample was nationally representative in terms of demographic criteria, including race or ethnicity, age, and geographic location. We also collected data on participants' educational backgrounds, political views, relationships to meat or food in general, and shopping habits.

Participants were also nationally representative in terms of their diet types. The sample consisted predominantly of omnivores but also included flexitarians, pescatarians, vegetarians, and vegans. A total of 363 participants stated that they would not consider consuming any variety of plant-based meat, eggs, or dairy, and we subsequently excluded their results from the analysis. After we excluded these category rejectors, the final sample size was 2,155.

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## Stimuli

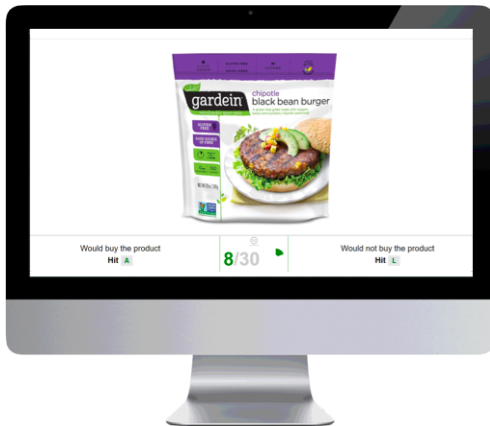
Images	<ul style="list-style-type: none"><li>• 200 images of various plant-based products</li><li>• Including the categories meat, seafood, cheese, milk, yogurt, ice cream, ready meals, mayonnaise, and butter</li></ul>
Attributes	<ul style="list-style-type: none"><li>• 50 attributive words</li><li>• Relating to associations consumers may hold with plant-based products (e.g., <b>healthy, tasty, appealing, strange</b>)</li></ul>
Phrases	<ul style="list-style-type: none"><li>• 32 plant-based category descriptors</li><li>• Describing plant-based products (e.g., <b>plant-based protein, no animal ingredients, 100% plant-based</b>)</li></ul>

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## Procedures

We recruited participants online using a panel provider, and they completed the tests on their PCs or laptops.

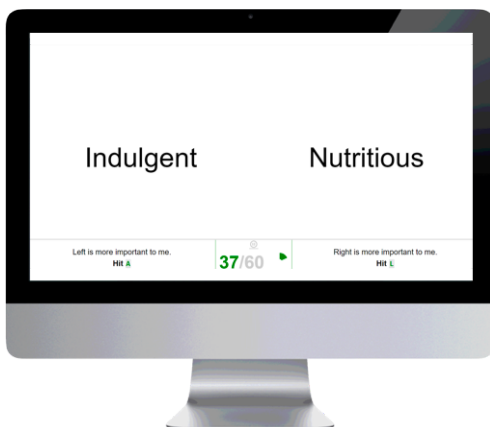
**Implicit tests consisted of the following:**



**Product purchase intent test:** A reaction time test in which participants are presented with a series of single product images and asked to decide whether they would purchase the product



**Language purchase intent test:** A reaction time test in which participants are presented with a series of descriptors on screen and decide whether or not each descriptor makes them want to purchase a plant-based product



**Attribute importance test:** A binary-choice reaction time test in which participants are presented with a pair of attributes and choose which is most important to them when deciding whether to purchase a plant-based product

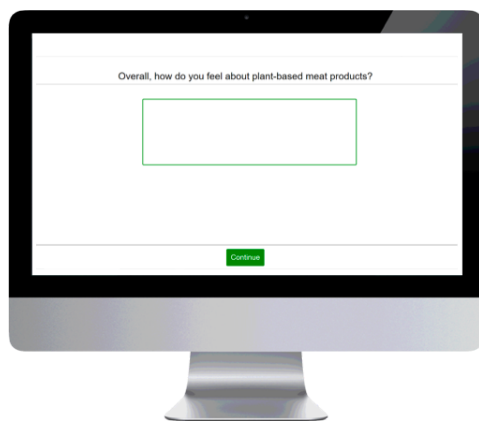


**Product associations test:** A reaction time test in which participants are presented with a series of single product images with various attributive words displayed below and decide whether they believe the attributive word describes the product well



**Language associations test:** A reaction time test in which participants are presented with a series of plant-based category descriptors, with various attributive words displayed below each one, and decide whether each attributive word describes the category descriptor well

**Explicit tests consisted of the following:**



**Explicit questions test:** A series of open-response and multiple-choice questions assessing participants' attitudes toward the plant-based category



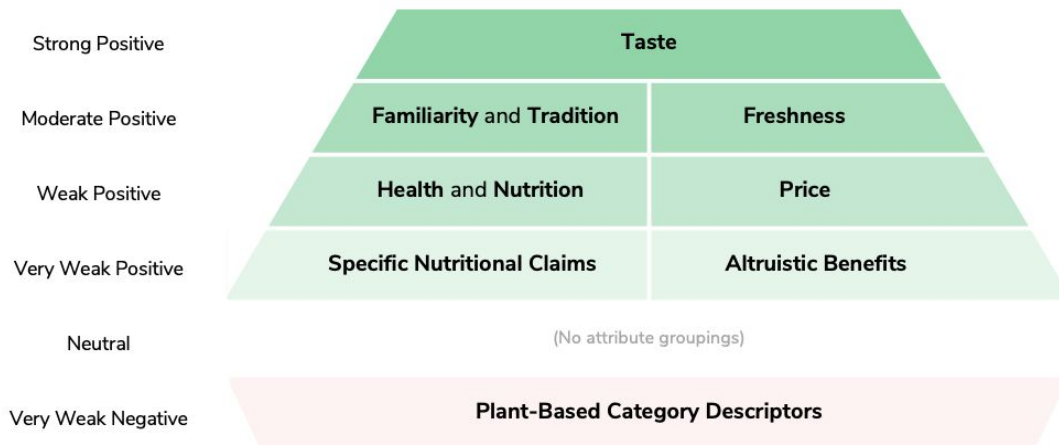
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# Strategic Recommendations

## What is most likely to increase purchase intent for plant-based products?<sup>1</sup>

Taste, familiarity, and tradition were the most influential in motivating consumers to purchase plant-based products. These were followed by the need for the products to be fresh, nutritious, and healthy. Altruistic attributes, such as sustainability and animal welfare, were less important to consumers and much less likely to influence purchasing decisions.

### Primary motivators for purchasing decisions



Note: Shades of green indicate an attribute’s positive association with purchasing decisions, the darker greens showing stronger associations. Light pink indicates a very weak negative association with purchasing decisions.

This suggests that the primary considerations when deciding whether to purchase a plant-based product all relate to how the product will benefit the individual consumer. Unless the product meets taste expectations and fits in with consumers’ existing perceptions of an animal-based meat or dairy product,

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<sup>1</sup> In order to determine the attributes most likely to increase purchase intent, we correlated the data from the product purchase intent test (assessing which plant-based products consumers would most likely purchase) with the data from the product associations test (assessing the attribute associations that consumers hold with plant-based products). Through this analysis we determined what the products with the highest purchase intent communicated to consumers and, conversely, the negative associations consumers held toward the products they were not likely to buy. We also took data from the attribute importance test and explicit questions test into consideration when formulating these recommendations.

its environmental or ethical profile is unlikely to influence the majority of consumers. Ultimately, the most effective way to make a product appealing is to emphasize personal attributes, such as taste, rather than perceived societal benefits.

Attribute	Correlation	This study consistently showed that <b>taste</b> was the primary motivator for purchasing decisions. Participants' explicit and implicit decision-making replicated this result. The attributes <i>delicious</i> and <i>appealing</i> were the biggest drivers, along with <i>tasty</i> and <i>satisfying</i> .
Delicious	0.71	
Appealing	0.69	
Tasty	0.64	
Satisfying	0.61	

Attribute	Correlation	<b>Familiarity</b> and <b>tradition</b> also demonstrated a strong positive association with purchase intent, indicating that consumers are more likely to buy products that appear <i>familiar</i> to them than they are those that appear <i>novel</i> . <i>Comfort food</i> showed a moderate positive correlation, scoring slightly higher than both <i>exciting</i> and <i>interesting</i> .
Familiar	0.61	
Traditional	0.60	
Comfort food	0.56	
Exciting	0.54	
Interesting	0.48	

Attribute	Correlation	A product's <b>freshness</b> was more important than any other health consideration. When asked directly, consumers stated that <i>fresh</i> was more important than any of the 47 attributes we tested it against. In actual implicit purchase decisions, it fell in rank slightly but still demonstrated a moderately positive correlation.
Fresh	0.40	

Attribute	Correlation	Although consumers identified <b>health</b> and <b>nutrition</b> as two of the most important attributes when deciding whether to purchase plant-based foods, these attributes positively correlated only weakly with purchase intent. This reveals that health considerations, while moderately affecting consumer behavior, are not the primary drivers in purchasing decisions and not as influential as consumers believe they may be in their decision-making at the point of purchase.
Nutritious	0.34	
Healthy	0.28	

Attribute	Correlation
Clean-label	0.37
Natural	0.24
Low-salt	0.13
High-protein	0.09
High-fiber	0.09
Low-fat	0.08
Low-calorie	0.04
Low-sugar	0.03
Organic	0.02

**Clean-label** and **natural** showed a weak positive correlation with purchase intent and influenced consumers’ purchasing decisions more than a product’s perceived nutritional profile. Comparatively, **high-protein** and **high-fiber** were more likely to drive purchase than *low-calorie* or *low-sugar*, but these attributes had only a negligible effect on purchasing decisions. **Organic** positively correlated only weakly with purchase intent, suggesting that a product’s status as organic is unlikely to influence omnivores’ decision-making.

Attribute	Correlation
Sustainable	0.23
Ethical	0.20
Humane	0.16
Environmentally friendly	0.12

Attributes relating to the **altruistic benefits** and ethical nature of a product—*sustainable, ethical, humane, and environmentally friendly*—yielded very weak scores. However, they still positively correlated with purchase intent. This was evident in both implicit purchasing decisions and explicit statements about importance. This suggests that the ethical profile of food is unlikely to influence omnivore consumers.

Attribute	Correlation
Affordable	0.21

When explicitly asked, consumers stated that price was the factor second most likely to either encourage or discourage them from purchasing a plant-based product, just behind taste. **Affordable**’s weak positive correlation with purchase intent suggests that price may not be as important to consumers implicitly.

Attribute	Correlation
Meatless	0.09
Plant-based	-0.02
Vegan	-0.06
Vegetarian	-0.13

**Category words**—*vegetarian, vegan, plant-based, and meatless*—ranged in correlation with purchase intent from very weak positive to very weak negative. This shows that vegan labeling will not appeal to a predominantly omnivore consumer base.

## Full list of motivators for purchasing decisions

Delicious	0.71	<b>Strong Positive</b>	Novel	0.24	<b>Weak Positive</b> (continued)
Appealing	0.69		Sustainable	0.23	
Tasty	0.64		Affordable	0.21	
Satisfying	0.61		Ethical	0.20	
Familiar	0.61		Humane	0.16	
Traditional	0.60		Low-salt	0.13	
Indulgent	0.58		Environmentally friendly	0.12	
Comfort food	0.56		Dairy-free	0.11	
Quality	0.56		Non-GMO	0.11	
Socially acceptable	0.55		High-protein	0.09	
Exciting	0.54	Meatless	0.09	<b>Very Weak Positive</b>	
Interesting	0.48	High-fiber	0.09		
Safe	0.47	Low-fat	0.08		
Filling	0.47	Processed	0.06		
Simple	0.43	Masculine	0.05		
Fresh	0.40	Egg-free	0.05		
Clean-label	0.37	Low-calorie	0.04		
Easy to prepare	0.36	Low-sugar	0.03		
Nutritious	0.34	Organic	0.02		
Innovative	0.34	Plant-based	-0.02		
Artisan	0.32	Vegan	-0.06	<b>Very Weak Negative</b>	
Feminine	0.29	Fake	-0.13		
Healthy	0.28	Vegetarian	-0.13		
Natural	0.24	Weak Positive	-0.17	<b>Weak Negative</b>	
			-0.25		
			-0.35		

Note: Shades of green indicate an attribute's positive association with purchasing decisions, the darker greens showing stronger associations. Light pink indicates a very weak negative association with purchasing decisions.

## What are the best category descriptors for labeling plant-based food?<sup>2</sup>

Descriptor	Influence
Plant-protein	56%
Plant-based protein	56%
Veggie	54%
100% plant-based	53%
Plant-based	53%
Non-dairy	53%
100% plants	52%
Plant-powered	41%

### Terms featuring **plant** are popular, especially those that pair **plant with protein**.

Plant in the descriptive language is effective in driving purchase intent, especially when paired with protein (e.g., **plant-protein**, **plant-based protein**). Such language is also effective at generating positive associations for products and especially effective at communicating the attributes *tasty, satisfying, and healthy* to consumers. Related terms, including *100% plant-based* and *100% plants*, were also well received.

Descriptor	Influence
Plant-based protein	56%
100% plant-based	53%
Plant-based	53%
Meatless	42%
Meat-free	42%
Vegan	35%

### People prefer **plant-based over vegan, meatless, and meat-free**

The term **plant-based** is dramatically more effective at increasing purchase likelihood than the terms *vegan*, *meatless*, and *meat-free*. Of the 32 descriptor terms tested in this study, *plant-based* was one of the most effective and *vegan* one of the least effective. Compared with *vegan*, consumers saw *plant-based* as more *appealing, satisfying, indulgent, and filling*, all attributes that had previously been identified as influential in purchasing decisions. Therefore, it is unlikely that the term will appeal to an omnivore consumer base.

Descriptor	Influence
Veggie	54%
Vegetarian	44%

### **Veggie is better than vegetarian**

Labeling a product **veggie** is more likely to drive purchase intent than labeling it *vegetarian*. *Veggie* was among the most popular of the terms tested and effective at communicating the attributes *traditional, fresh, safe, and healthy*.

<sup>2</sup> We based recommendations for the best descriptive language to use for plant-based products on the results of the language purchase intent test (a measure of which plant-based descriptor terms are most likely to encourage consumers to purchase plant-based products) and the language associations test (a measure of which associations consumers implicitly hold toward descriptor terms). The scores highlighted below are taken from the language purchase intent test and show for each term the percentage of times that participants stated that reading the term would influence them to purchase a plant-based product.

Descriptor	Influence
Plant-based meat	42%
Veggie "beef"	41%
Veggie "chicken"	39%
Plant-based seafood	31%
Veggie "pork"	29%
Veggie "fish"	23%

### Familiar terms are more popular

In general, consumers prefer terms that are more **common in the marketplace**. For instance, *plant-based protein* was preferable to *plant-based meat* and preferable even more so to *plant-based seafood*. Veggie "chicken" and veggie "beef" were more popular than veggie "fish" and veggie "pork." Increased familiarity with terms that pair *plant* or *veggie* with specific meat words will likely build in acceptance. However, specific combinations should be tested on pack for acceptability.

## Purchase intent: plant-based descriptive language

Plant-protein	56%	Meatless	42%
Plant-based protein	56%	Meat-free	42%
Veggie	54%	Plant-powered	41%
100% plant-based	53%	Veggie "beef"	41%
Plant-based	53%	Veggie "chicken"	39%
Non-dairy	53%	Meat substitute	38%
100% plants	52%	Egg-free	38%
Dairy-free	50%	Slaughterless	38%
No animal ingredients	47%	Vegan	35%
Slaughter-free	45%	Beefless	34%
Meat alternative	45%	Chickenless	31%
Grain meat	44%	Porkless	31%
Chik'n	44%	Plant-based seafood	31%
Animal-free	44%	Veggie "pork"	29%
Vegetarian	44%	Fishless	26%
Plant-based meat	42%	Veggie "fish"	23%

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## What kind of package imagery is most effective?<sup>3</sup>

### To make a plant-based product look tasty, use vivid imagery

Showing a **professionally shot photo** of the product, one that has **vivid colors** and looks **tempting** to consumers, dramatically increased positive taste associations for both plant-based meat and plant-based dairy products. It also increased general product appeal. Vivid imagery of the key product ingredient on pack, such as almonds on a carton of almond milk, achieved the same effect. When product images were less championed or not featured at all, taste associations were dramatically lower.

### Familiarity is key for on-pack images

Imagery will be effective only if it is **familiar** to omnivore consumers in some way—for example, if it closely resembles the product’s conventional meat or dairy counterpart. Vivid imagery of food that looks unusual in some way, such as a green burger or shredded veggie pork, drove negative taste connotations.

### Showing key ingredients on pack is the best way to make a product appear healthy

For health-focused plant-based meat products, showing **vegetables in the product photo**, particularly if they were part of the product, was the best way to make them appear healthy and nutritious. For plant-based dairy products, showing the key ingredient on pack, such as almonds on a carton of almond milk, increased positive health and taste associations.

### Contrasting colors

If they are to increase both appeal and positive taste associations, **images should stand out** on a light or dark background, and colors should be bright and saturated.

## Which packaging types for plant-based meat are most appealing to consumers?<sup>4</sup>

### Boxes and pouches are the most liked formats

**Boxes and pouches** generated the most positive associations on average and were seen

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<sup>3</sup> In order to determine the most effective imagery to use on pack, we grouped the product images according to their scores for a number of key attribute associations in the product associations test. We identified clear trends through subjective interpretation of differences among groups.

<sup>4</sup> In order to determine which packaging types are most likely to appeal to consumers, we considered data from the product associations test. We grouped plant-based meat products based on their packaging format and color.

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as more *tasty, delicious, and appealing* than any other packaging type. They were also more often seen as *nutritious, healthy, plant-based, and vegan*.

### **Showing the product in shrink wrap is beneficial for meaty product types**

Products in **shrink wrap** were seen as *comfort food* and as *artisan, fresh, and especially meaty* but not *healthy*. They were also seen as more expensive than products in any other format. Generally, shrink wrap was effective at increasing product appeal but only if the product visible through the packaging looked similar to its conventional meat counterpart.

### **Cans should be avoided**

Cans performed poorly on every measure, including the attributes *appealing* and *tasty*. They also ranked as the most *strange, bland, and disgusting*.

### **Brown and dark packaging is well received**

In terms of color, **dark or brown packages** were the most effective. They ranked highest of all for the attributes *delicious* and *tasty*—two of the most desirable. They also ranked as the most *healthy* and *nutritious*.

### **Green packaging divides opinions among consumers**

Green packaging is effective at increasing appeal and makes a product appear more *indulgent* and *exciting*. However, it was also seen as more *disgusting, strange, and bland* than other packaging colors. Interestingly, green performed poorest of all for the attribute *healthy* but was strongly associated with *organic*.













### **Red should generally be avoided**

Red packaging was not well liked and was less often seen as *comfort food* or as *appealing, exciting, fresh, filling, and artisan* than products with different-colored packaging.



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## Packaging do's and don'ts

Do		Depends	Don't
 Dark colors	 Brown	 Green	 Red
 High contrast	 Boxes and pouches	 Shrink wrap and clear windows	 Cans
 Key ingredients	 Vegetable association		
 Professional photos	 In-context, familiar imagery		

## The role of taste in purchasing decisions<sup>5</sup>

### Taste is more important to consumers than anything else

Taste was the most important consideration for consumers when deciding whether to purchase a plant-based product. It was both what consumers explicitly stated as most important to them and what influenced them the most at the point of purchase.

Despite some subtle differences among demographic groups, taste was the most important attribute for consumers of every age range and diet type.

### Communicate taste visually

As mentioned, the most effective way to generate positive taste perceptions is through a pack's design features. A vivid, professionally shot photo of a product placed prominently on the packaging dramatically increased taste associations. Imagery of key ingredients, such as almonds on a carton of almond milk, was also effective. Visibility of a product—through shrink wrap, for example—was effective but only if the actual product looked similar to its conventional meat counterpart. Contrasting colors on pack further enhanced taste associations. Colors should be bright and saturated and stand out against a light or dark background.

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<sup>5</sup> The data summarized here represent the insights derived from a combination of all the tests included in this research. We considered both the participants' implicit responses (fast and instinctual decision-making) and explicit responses (slow and rational decision-making).

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## What are the top strategies for communicating taste visually?



Professional photos



Key ingredients



Shrink wrap and clear windows  
(if product looks similar to conventional counterpart)



High contrast



In-context, familiar imagery

## The role of familiarity in purchasing decisions<sup>6</sup>

### Omnivore consumers show a clear preference for products that are familiar and traditional

Familiarity and tradition were among the strongest drivers of purchase intent, just behind taste in importance. These attributes were more important to consumers than an interesting or exciting appearance and dramatically more important than a novel appearance.

### Familiar imagery is an effective way to increase appeal

Omnivore consumers preferred products that looked comparable to their conventional meat and dairy counterparts. Vivid imagery of the product on pack and visibility of the actual contents through shrink wrap are effective ways to increase both positive taste associations and general appeal. However, clear packaging was effective only if the product looked similar to conventional meat. Any imagery that appears unusual to consumers in some way is likely to dramatically reduce the product's appeal.

### Avoid using language that is unusual or incongruous

Consumers also preferred more familiar descriptive language. Terms that paired *plant* or *veggie* with *meat* or *seafood* were among the least effective at increasing purchase intent for plant-based products. The two terms with the highest purchase intent scores featured the word *plant* (*plant protein*, *plant-based protein*). These terms were also most associated with the attributes *satisfying*, *nutritious*, and *healthy*. *Veggie* (by itself) was the third most successful at driving purchase intent and also succeeded at communicating *fresh*, *traditional*, *safe*, and *healthy*. This suggests that both *plant* and *veggie* can be very successful in different contexts. A pattern emerged whereby terms more common in the marketplace were more popular. *Veggie "chicken"* and *veggie "beef,"* for example, were more popular than *veggie "fish"* and *veggie "pork,"* and *plant-protein* was more popular than *plant-based meat* and *plant-based seafood*. On

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<sup>6</sup> The data summarized here represent the insights derived from a combination of all the tests included in this research. We considered both the participants' implicit responses (fast and instinctual decision-making) and explicit responses (slow and rational decision-making).

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pack, *plant* or *veggie* paired with specific meat words and the suffix *-less* (e.g., *fishless*) was largely ineffective at driving purchase intent. Acceptability of the pairings may increase over time as familiarity increases.

Consumers typically rejected unusual language or altered familiar language, such as *malk*, *cashewgurt*, and *veggiemilk*, on packaging for plant-based dairy products. Familiar descriptors, such as *non-dairy* and *dairy-free*, were better accepted and far more appealing to consumers.

### **Mention familiar ingredients and place unfamiliar ingredients low in the hierarchy**

To appeal to omnivores, avoid placing ingredients that are not part of a typical omnivorous diet, including soy, tempeh, seitan, quinoa, and jackfruit, high in the hierarchy of visual elements on pack. Products that emphasized ingredients that may have been unfamiliar to participants, such as seitan and quinoa for meat products and soy and oats for dairy products, ranked low on taste associations. For ice cream and milk, nut-based products (e.g., almond-based, cashew-based) performed better on taste associations than products with a quinoa, soy, oat, or hemp base.

**Leveraging language and visuals to communicate familiarity**

 Highlight familiar ingredients	 Use shrink wrap and clear windows (if product looks similar to conventional counterpart)	 Avoid altering familiar language (including melding words and combining animal and plant terms)
 Minimize unfamiliar ingredients	 Use in-context, familiar imagery	

## **The role of health in purchasing decisions<sup>7</sup>**

### **Health is important to consumers but less so than taste and familiarity**

When asked directly, consumers identified health and nutrition as among the most influential attributes when deciding whether to purchase a plant-based product. In a measure of consumers' implicit purchasing behavior, however, health and nutrition positively correlated only weakly with purchase intent, falling behind taste, familiarity, tradition, and freshness in importance.

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<sup>7</sup> The data summarized here represent the insights derived from a combination of all the tests included in this research. We considered both the participants' implicit responses (fast and instinctual decision-making) and explicit responses (slow and rational decision-making).

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## Protein content communicates health and satisfaction

Consumers identified *high-protein* as one of the most important attributes when asked directly. However, when measured implicitly, it positively correlated only very weakly with purchase intent. Although it was still influential, other attributes were much more likely to influence consumers' purchasing decisions. That said, emphasizing plant-based protein content is a good way to indicate health and satiety. Descriptive language that featured *plant* and *protein* communicated *healthy*, *nutritious*, and *satisfying* most effectively.

## Healthy positive language is generally more effective than healthy restrictive language

Emphasizing the high nutritional content—*high-protein*, *high-fiber*—drove purchase intent more than emphasizing low negative nutritional content—*low-fat*, *low-calorie*, *low-sugar*. With the exception of *low-salt*, both *high-protein* and *high-fiber* were stronger drivers of purchase intent than the healthy restrictive language tested.

## Health is a more salient attribute for older generations

Baby boomers place more importance on health considerations than younger generations. The attributes *fresh*, *healthy*, *high-fiber*, *low-sugar*, *low-salt*, *low-fat*, and *unprocessed* were all more important to the older demographic groups.

### Which attributes communicate health?



Protein content communicates health and satisfaction

**High-protein** is one of the most important attributes explicitly, and though it falls in implicit tests, emphasizing plant-based protein content is the best way to frame a product's status as vegan.



Healthy positive language is more effective than healthy restrictive

**High-protein** and **high-fiber** are better at communicating health than **low-calorie** and **low-sugar**.



Health is more salient to older consumers

Attributes such as **healthy**, **high-fiber**, **low-sugar**, **low-salt**, **low-fat**, and **unprocessed** were all more important to older participants.

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## How do attitudes differ among dietary groups and generations?<sup>8</sup>

### Flexitarians place greater importance on altruistic benefits

Flexitarians scored the attributes *tasty*, *delicious*, and *indulgent* moderately lower than omnivore consumers did. This shows that flexitarians believe the taste of a plant-based product is less likely to influence their purchasing decisions. They also scored *comfort food* substantially lower and to a lesser extent, *traditional*.

	Overall	Omnivore	Flexitarian
Tasty	70%	72%	59%
Delicious	69%	71%	62%
Indulgent	47%	48%	42%
Comfort food	58%	61%	46%
Traditional	57%	58%	51%
Sustainable	50%	49%	56%
Environmentally friendly	49%	48%	54%
Non-GMO	49%	48%	55%

Conversely, flexitarians placed more importance on the environmental and ethical profile of plant-based food. *Sustainable*, *environmentally friendly*, and *non-GMO* all scored moderately higher, suggesting that these attributes are more likely to influence flexitarians' conscious decision-making.

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<sup>8</sup> The data summarized here represent the insights derived from a number of different tests included in this research. Findings in this section are based primarily on participants' conscious decision-making (under time pressure and not) rather than their implicit purchasing behavior.

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### **Millennials care more about ethical considerations**

Millennials place more importance on attributes relating to the environmental and ethical profile of a food. The attributes *sustainable*, *environmentally friendly*, and *humane* ranked as much more important to them than to any other demographic group. It's important to note, however, that sustainability, environmental friendliness, and animal welfare still fell way behind taste, familiarity, and health in importance.

### **Millennials are more receptive to the plant-based category in general**

Millennials consistently rated all plant-based category descriptors more favorably than other demographic groups did. They were also much more likely to consider buying a plant-based product. This is perhaps representative of generational differences in consumer perceptions of plant-based products, with younger demographics better accepting the idea of plant-based meat and dairy.

### **Convenience is more important to millennials**

*Availability* and *easy to cook/prepare* ranked as more important to millennials than to any other age group. A higher percentage of millennials also stated that they were willing to pay prices higher than those of conventional meat and dairy for plant-based products.

### **Familiarity is more important to older consumers**

Baby boomers were far more likely to identify lack of familiarity as a factor that would discourage them from purchasing a plant-based product. Although familiarity is still important to millennials, they place less importance on familiarity when making purchasing decisions compared with baby boomers.

### **Taste is more important to older consumers**

While taste is the most important attribute for every demographic group, it was more important to older consumers. Baby boomers and above are far more likely to see taste as an attribute that would encourage them to purchase a plant-based product.

### **Health and naturalness are more important to baby boomers**

Health attributes, such as *fresh*, *healthy*, *high-fiber*, *low-sugar*, *low-salt*, *low-fat*, and *unprocessed*, ranked as more important to baby boomers than to any other age group. Compared with millennials, baby boomers were more likely to be put off by a product they viewed as *too processed*, *unnatural*, or *lacking nutrients*.

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## References

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James Parry (MSc in psychology) is a researcher with experience designing and conducting market research studies for some of the world's largest brands. While working for Mindlab International, he spearheaded this piece of research assessing implicit perceptions of the plant-based food category. Currently he holds a position as consumer research fellow at The Good Food Institute, contributing to research into consumer adoption of plant-based meat.

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## About GFI

The Good Food Institute is a global nonprofit building a sustainable, healthy, and just food system. Our scientists, entrepreneurs, lawyers, and policy experts are harnessing the power of food innovation and markets to accelerate the transition of the world's food system to plant-based and cell-based meat, eggs, and dairy.



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