

# Strategies to Accelerate Consumer Adoption of Plant-Based Meat

## Recommendations from a Comprehensive Literature Review

March 2020

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# Introduction

Plant-based meat has been commercially available for a number of years but has reached a critical inflection point. Provided that plant-based meat products meet consumers' desired product expectations and are marketed effectively, they hold tremendous potential to meet a growing demand for a healthy, sustainable, and just protein supply. Plant-based meat is currently purchased by "early adopters" yet has the potential to quickly reach a larger, broader segment of the population. **An evidence-based approach to developing and marketing these products will accelerate consumer acceptance and adoption of plant-based meat.**

This document outlines strategic recommendations gleaned from five working papers on consumer adoption of plant-based meat. More detail on each of these recommendations, as well as the literature that underlies them, is available in the original working paper series on plant-based meat consumer adoption:

Szejda, K., Urbanovich, T., & Wilks, M. (2019). *Accelerating consumer adoption of plant-based meat: An evidence-based guide for effective practice*. Washington, DC: The Good Food Institute. Available at [go.gfi.org/plant-based-meat-consumer-adoption](https://go.gfi.org/plant-based-meat-consumer-adoption)

First, we present the key research findings on consumers' foundational and evolving motivations for food choice and how these differ by consumer segment. Then we recommend three strategies for accelerating adoption of plant-based meat: (1) developing products that meet the needs of the target segment, (2) designing the choice environment to make selection easier, and (3) designing messages to change consumption behavior.



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# Understand the Consumer

## Introduction

To significantly shift meat consumption toward the more sustainable, healthy, and socially conscious plant-based proteins, we must first understand the underlying motivations for food choice generally and for protein specifically. Plant-based product development should seek to meet these motivations and address the barriers to consumption of plant-based meat so that consumers increasingly have opportunities to choose a product that is not only tasty, affordable, and convenient but healthier, more sustainable, and just.

## Motivations

Various factors affect food choice: biological determinants (hunger, appetite, taste preferences), economic and physical determinants (cost, income, availability, access, education, skills, time), social determinants (culture, family, peers, habits), and psychological determinants (mood, stress, attitudes, beliefs, and knowledge about food).



### Foundational drivers

The most salient factors are known as “foundational drivers,” those that fulfill immediate wants and needs. These consist of three core motivators: taste, cost, and convenience. Taste is the most influential, consistently identified as the primary motivator in consumer food and protein decisions.

### Evolving drivers

Foundational food motivations must be met before the consumer has the opportunity to make healthier food choices that align with higher, more aspirational values, such as

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environmental impact and animal welfare. These are known as “evolving drivers,” those that don’t directly relate to consumers’ immediate wants and needs. While evolving drivers are growing in importance, they remain less influential than foundational drivers in consumers’ purchasing decisions. Although the health profile of a product relates to how it will benefit the consumer on a personal level, most consumers are unlikely to strongly consider health benefits until they perceive the product as delicious, affordable, and accessible.

## **Point of purchase motivations to select plant-based meat**

Motivations to select plant-based meat products mostly align with the motivations for general food choice. The primary considerations when deciding whether to purchase a plant-based product all relate to how the product will benefit the individual consumer. Taste is the most influential consideration across all age groups and diet types.

Tradition and familiarity are also influential considerations in this category. Consumers display a preference for plant-based meat products that appear familiar over those that appear novel. This is especially the case for traditional meat consumers, who hold the strongest desire for plant-based meat to match the sensory properties of conventional meat.

Health and nutrition considerations are less influential than taste, tradition, and familiarity, although they are still positive drivers of purchase intent in this category. The most important health considerations for consumers appear to be protein and fiber content. Freshness is also a positive driver for purchasing decisions and more important to consumers than any health consideration.

Altruistic benefits of the products are low in the hierarchy of importance for consumers considering whether to purchase plant-based meat, although these could rise in importance if consumers were sufficiently aware of the degree to which meat production is associated with environmental impact or animal suffering. These considerations are most likely to appeal to millennials than to any other demographic group but are still less likely to motivate purchase than taste, familiarity, and health.

The most effective way to make plant-based meat products appealing to the majority of consumers is to emphasize personal attributes, such as taste, freshness, and familiarity, rather than perceived societal benefits.



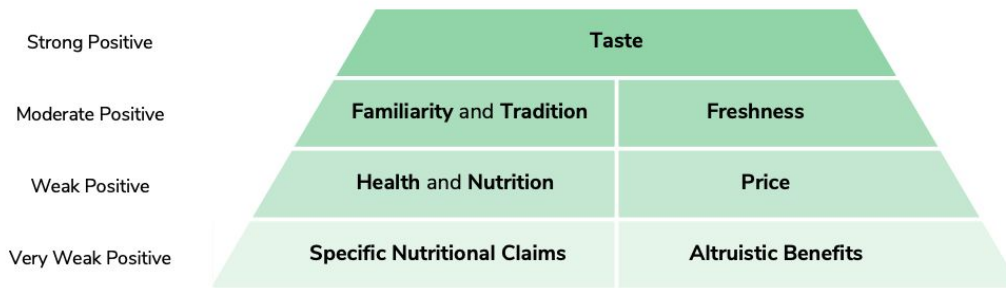
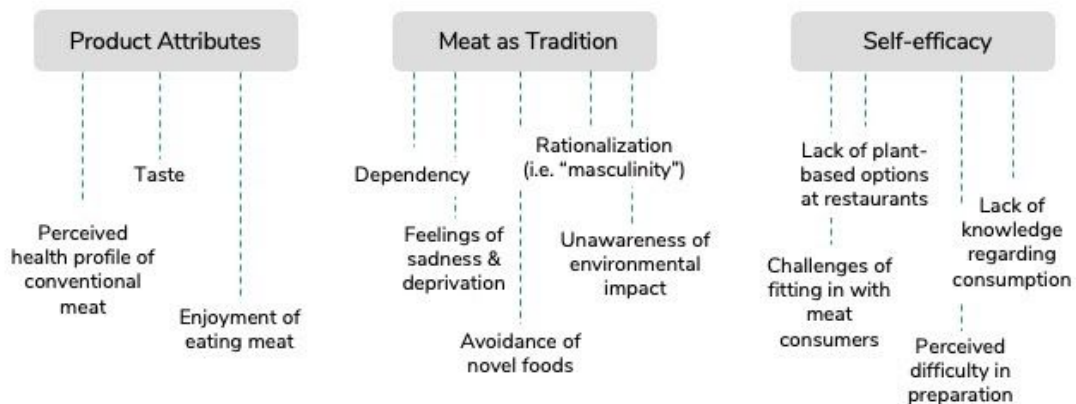


Figure 1. Findings from an implicit purchasing study of the plant-based category. For further information see Parry & Mitchell (2019) and Parry & Szejda (2019).

## Barriers

Even more important than understanding the primary motivations for food and protein purchasing decisions is understanding the barriers that inhibit dietary change. Barriers can counteract motivations, and they often hold more influence in consumer purchasing decisions than drivers do.

Meat reducers are the primary consumer segment open to consuming plant-based meat. Here we focus on the barriers to meat reduction and how plant-based meat can overcome these barriers.



### Product attributes

The strongest barrier relates to the perceived health profile of conventional meat. The majority of consumers still consider conventional meat to be healthy and a good source of nutrients, especially those who follow a traditional omnivorous diet. The belief that conventional meat is healthy and not a cause of disease is highly predictive of reluctance to reduce consumption.

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Hedonism, or the enjoyment that people experience when eating meat, acts as a major barrier to reduction. A combination of factors contributes to this enjoyment—taste, a feeling of fulfillment, and satisfaction. Taste also acts as a barrier for people adhering to flexitarian diets and is a commonly cited reason that former vegetarians return to meat consumption.

## Meat as tradition

Traditional meat consumers exhibit dependency and feelings of sadness and deprivation when asked to consider abstaining from meat consumption. Consumers who display a strong attachment to conventional meat are likely to be more resistant to dietary change and hold rationalizations to avoid changing their behavior. These beliefs are often tied to a more “traditional” view of masculinity. Those who rate themselves as more masculine are more likely to justify eating conventional meat.

Many consumers are not sufficiently aware of the degree to which meat production is associated with environmental impact. Given that awareness of conventional meat’s environmental impact is predictive of behavior change, this lack of awareness might partly explain consumers’ unwillingness to reduce their consumption. However, even with increased awareness, more immediate factors with personal benefits (such as taste, familiarity, freshness, and convenience) will probably play a much greater role at the point of purchase.

In addition to feeling a strong attachment to conventional meat, consumers may experience food neophobia. This individual trait behavior is a general reluctance to or avoidance of eating novel foods. Common plant-based meat alternatives, such as tofu and tempeh, remain novel foods to some and reluctance to eat such foods acts as a significant barrier to dietary change.

## Self-efficacy

Lack of available plant-based options at restaurants, perceived difficulty of preparing plant-based foods, and general lack of knowledge regarding consumption of plant-based foods are commonly cited barriers to dietary change. Furthermore, the challenges of fitting in with traditional meat consumers in social settings when following a plant-based diet may make behavior change more difficult.

## Consumer Segmentation

Food motivations and barriers differ among individuals and groups. Understanding the complexity of meat-consumption choices and applying a concise consumer segmentation strategy are vital to developing an evidence-based approach to accelerating adoption of plant-based meat. Such a strategy will allow marketers and



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product developers to make targeted formulation, labeling, branding, and messaging choices.

The most effective strategy is to begin targeting consumers who are most receptive to dietary change. This will accelerate the adoption process and pave the way for increased plant-based meat adoption throughout society.

Tested theoretical frameworks provide practical insight into strategies for targeting consumers and accelerating adoption over time. Marketers can use these to identify the most willing groups and then systematically focus on groups that are more difficult to influence.

## Diffusion of Innovations

Originally developed in 1962, the Diffusion of Innovations Theory (DOI) explains how adoption of new ideas, products, or behaviors spreads throughout a population over time. The DOI posits that some people in a social system are more likely to initially adopt or consider a particular change than are others. The new innovation then diffuses throughout society over time.

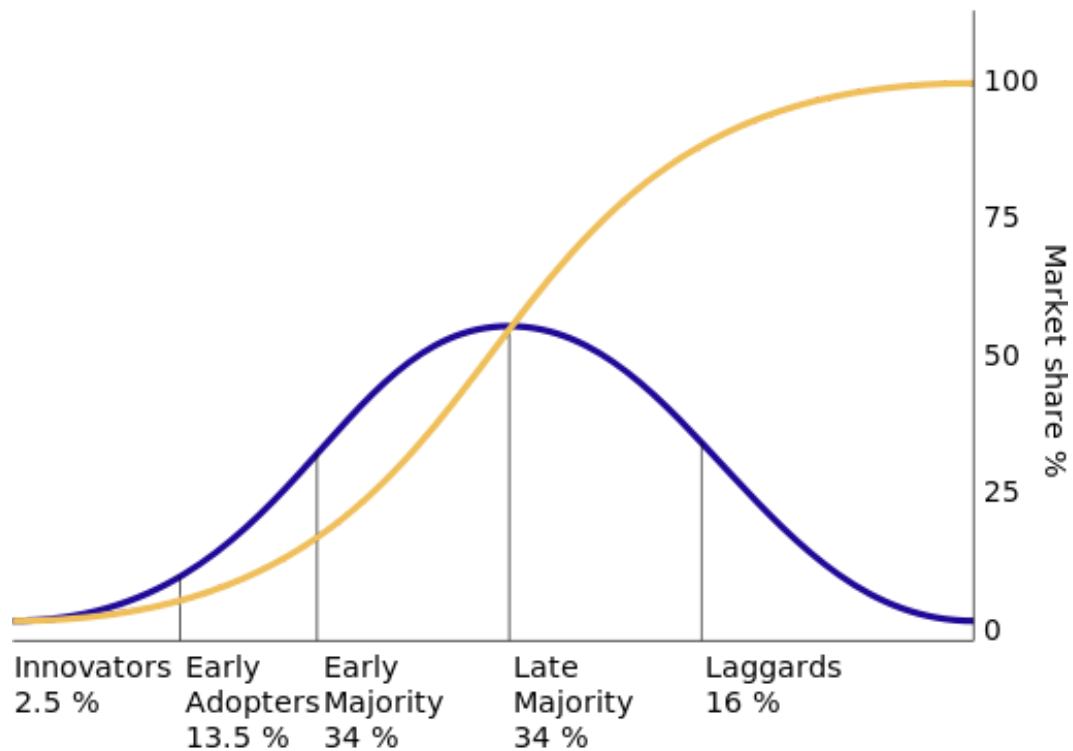


Figure 2. Adopter categorization on the basis of innovativeness. Source: Wikimedia Commons. Based on Rogers, E. (1962). *Diffusion of innovations*. London, NY: Free Press.

Figure 2 shows the (blue) bell curve of the distribution of a population across adopter categories. The number of people within each category is typical and observed across various (successful) innovation contexts. The (yellow) S curve shows the increasing market share as successive groups of consumers adopt the innovation and eventually saturate the market.

DOI segments the population into five groups:

Segment	Description	Estimated Population Percentage	Successive Market Share
<b>Innovators</b>	Innovators are the first to try a new behavior, product, or idea (and may even be its creators, as the term implies).	2.5%	2.5%
<b>Early Adopters</b>	Early adopters are comfortable with innovations and cognizant that change is often inevitable.	13.5%	16%
<b>Early Majority</b>	The early majority must see evidence of the innovation's worth prior to their adoption of it.	34%	50%
<b>Late Majority</b>	The late majority is skeptical and more reluctant to embrace change, only adopting an innovation once it becomes the norm in their society.	34%	84%
<b>Laggards</b>	Laggards are bound by tradition and suspicion and fervently dislike change.	16%	100%

To reach the largest target market, segmentation strategies should focus on profiling the early adopter and early majority segments (for more information, see GFI's [report](#) on attitudinal and sociodemographic profiles of U.S. early adopters). By understanding the characteristics of these groups, marketers can more effectively tailor promotional messages, as well as integrate communication tactics to best influence all consumers in the social environment to “get on board.”

Both the late majority and laggard segments are reluctant to embrace change. It is wise to wait until plant-based meat becomes normative behavior rather than directly target these populations with marketing strategies. The late majority will be more likely to consider adoption once plant-based meat products become more socially accepted and the benefits of the products (taste, ease of preparation) are easily observable. Similarly, laggards will begin to change their dietary behavior only once plant-based meat becomes more visible in grocery stores and more frequently discussed in social circles.

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Until then, efforts to market to this group may not be the most effective use of resources.

## Target meat reducers

While the optimal marketing strategy is to develop comprehensive profiles of early adopter and early majority segments, the most practical strategy is to target consumers according to their current meat consumption habits. Segmenting on the basis of current dietary choices provides an accurate prediction of consumers' willingness to consume plant-based meat. This segmentation strategy results in three primary consumer categories: meat avoiders, meat reducers, and traditional meat consumers.

While research into consumers' food choices underscores the precedence of foundational and personal food-choice motivations (taste, cost, convenience, and health) over value-based motivators (sustainability and animal welfare) for the majority of consumers, motivations to reduce meat consumption do differ among these three consumer groups.

Meat reducers	<ul style="list-style-type: none"><li>• Substantial portion of population and open to behavioral change</li><li>• Best messaging includes appeal to taste, freshness, familiarity, convenience, health benefits rather than altruistic benefits</li></ul>
Traditional meat consumers	<ul style="list-style-type: none"><li>• Health is a primary driver for reducing meat consumption</li><li>• Most difficult segment to reach</li><li>• Produce sets of rationalizations to not reduce meat</li></ul>
Meat avoiders	<ul style="list-style-type: none"><li>• Place higher value on animal welfare</li><li>• Not the primary target segment if goal is to increase adoption rates</li></ul>

Overall, health is a primary driver for reducing meat consumption among all three consumer groups. Traditional meat consumers and flexitarians appear more concerned about health than the environment and animal welfare, while vegetarians and vegans place high value on animal welfare.

If the goal is to increase the rate of adoption of plant-based products, then current plant-based meat consumers (especially vegetarians and vegans) should not be the primary target segment. Targeting the meat reducer segment is a much more efficient use of resources. This group is already open to changing its behavior and also represents a substantial portion of the population. Traditional meat consumers are the most difficult segment to reach. If pressed to limit their consumption, these consumers tend to produce sets of rationalizations for not doing so, including the beliefs that eating conventional meat is necessary for health and that alternative dietary choices are unrealistic.

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To appeal to meat reducers, messages should be about great taste, freshness, familiarity, convenience, and health benefits rather than environmental impact and animal welfare. Appeals to taste and familiarity will probably also not lead to greater resistance to the products among traditional meat consumers, a potential risk when focusing on altruistic messaging.

Importantly, the meat reducer segment varies on a number of key variables, such as motivation, type(s) of meat reduced, and extent of reduction. Care should be taken when targeting meat reducers to account for the multitude of factors that may influence their behavior (e.g., demographics, attitudes, emotions, values, diet). A key research need is to develop a comprehensive profile of this segment based on subsegments.

## Consumers Conclusion

The three core motivations for food choice are taste, cost, and convenience. Essentially, a food choice or product must first meet perceived needs for tastiness, affordability, and ease of purchase and preparation for the majority of consumers to consider it. Familiarity is also an important purchasing driver for novel food products, such as plant-based meat. If these drivers are met, consumers have the opportunity to incorporate their higher values, such as health, sustainability, and animal welfare, into their food choices.

Barriers tend to weigh more heavily than perceived benefits in consumers' decisions to reduce meat consumption. Thus, barriers are difficult to overcome, while benefits may not sufficiently encourage reduction. The core barriers to reducing meat consumption are social norms and general enjoyment of eating conventional meat, health concerns (mainly about protein and other nutrients), lack of familiarity with alternative ways of eating, fear of new foods, and unwillingness to change dietary habits.

Because different groups of consumers are at different places in the plant-based meat adoption process, consumer segmentation is an important practice when promoting adoption of plant-based meat. The most practical segmentation strategy is to separate populations by their current rates of meat consumption. Targeting the meat reducer segment (i.e., flexitarians) will be the most effective use of resources because this group is already open to changing its behavior. Flexitarians' adoption of plant-based meat will lead the way for greater societal adoption.

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# Strategy 1: Product Development

## Introduction

High-fidelity plant-based meat offers a relatively easy path for substitution for those looking to reduce consumption of conventional meat. However, plant-based meat as a category has not yet achieved parity with conventional meat on several key product attributes. To deliver products that consumers both need and want, product developers and marketers must understand the attributes that consumers desire and develop products that possess these attributes. Below we review the existing strengths of plant-based meat products, as well as product attributes that act as barriers to wider consumption.

Plant-based meat products should be developed with the primary objective of providing personal benefits to the consumer, such as improved taste and other sensory aspects, lower cost, increased convenience, and greater nutritional value. The products should be exciting yet provide a strong sense of familiarity. This familiarity is achievable through similarity to animal-based meat and the ability to “fit” in appealing dishes and established meal contexts.

### Sensory aspects and likeness to meat



#### **Recommendation**

Develop products that mimic the sensory properties of meat.

#### **Why?**

Developing products that are more meat-like in terms of taste, texture, juiciness, smell, and appearance will increase appeal among consumers. Low sensory appeal is one of the most salient barriers to plant-based meat consumption. The majority of consumers do not perceive the current sensory properties of plant-based meat to match those of conventional meat, even for new high-fidelity products.

The desire for plant-based meat to mimic the sensory properties of conventional meat is strongest among omnivores. Among vegans and vegetarians, the desire is mixed. However, strongly appealing sensory properties are vitally important regardless of product type.

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## Price adjustments



### **Recommendation**

Reduce price to reach a larger consumer segment.

### **Why?**

Targeting price-driven consumers will reach not only the majority of people but the people who consume the most conventional meat. When plant-based meat producers are able to reduce product price, strongly attached meat consumers will be more likely to accept the products. Coupons may be used as tools to encourage people to try the products and eventually become regular consumers.

Price is one of the most influential attributes in consumers' purchasing decisions and one of the main barriers to consuming plant-based meat among omnivores. The price of conventional meat is also a stated reason that consumers reduce their meat consumption. Creating plant-based meats that are the same price or less expensive than their conventional counterparts is likely to be an effective strategy to accelerate adoption for all consumer groups.

## Convenience



### **Recommendation**

Develop products that are easy to prepare and fit in with consumers' habits and social norms.

### **Why?**

Plant-based meat is perceived as less convenient than conventional meat in a number of aspects. There is not a great understanding of how to prepare some plant-based meals, and products may take more time to prepare than their conventional counterparts. Effort should be made to develop products that are easy to prepare and fit in with consumers' habits and social norms; consumers display the greatest purchase intent toward products that are convenient. Furthermore, availability for purchase also acts as a barrier: Products should be easy to locate in the grocery store for the target consumer.

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## Meal context



### **Recommendation**

Develop plant-based meat that can directly replace the conventional meat component in familiar dishes.

### **Why?**

Meal-context appropriateness is a social and cultural attribute that influences consumer purchasing decisions. Product developers should create products that fit in with dishes currently perceived as appealing. Developing products that fit in as part of a larger meal context rather than as individual ingredients is a promising avenue for increasing plant-based meat adoption. Regular consumers of plant-based meat will want to share plant-based meat products that are more meat-like with their social circles because the products easily fit in with familiar meal contexts.

Naming strategies can be used to convey a product's appropriateness within a meal context. Describing a product as specifically as possible (e.g., instead of "spaghetti with plant-based meat," the product label should read "spaghetti with plant-based ground beef"), highlighting provenance (e.g., "Cumberland-spiced veggie sausages"), or using descriptive language that emphasizes delicious meat-like taste could be effective strategies.

## Familiarity and novelty



### **Recommendation**

Frame plant-based meat as a new, exciting variation of a familiar meal component.

### **Why?**

Plant-based meat is uniquely positioned to meet both the need for familiarity and the desire to try new and exciting foods. These two opposing forces should be considered when developing and marketing new products.

Consumers have a greater desire for products to be familiar in terms of flavor, appearance, and preparation than they do for products to be novel. Familiarity with a dish strongly influences the desire to consume that dish. Since plant-based meat dishes are not yet widely perceived as familiar, they may be less preferred. Products that are familiar to their conventional versions in sensory aspects, packaging, preparation, and marketing should be developed.



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While novelty isn't as strong a driver of purchase intent as familiarity, consumers still express a relatively strong desire for plant-based products to be exciting and interesting. This is especially the case for those with low food neophobia. Developing and marketing plant-based meat products as new and exciting variations of familiar products may be an effective strategy as long as the products maintain appealing sensory properties.

## Health benefits



### **Recommendation**

Promote plant-based meat's perceived health benefits and address consumers' health concerns in product development.

### **Why?**

At the point of purchase, health and nutrition are influential factors in consumers' purchasing decisions, albeit less so than factors such as taste, familiarity, and freshness. Currently, many consumers perceive plant-based meat to be high in protein, excellent for weight control, and low in saturated fat. Plant-based meat should retain these qualities. However, consumers also perceive it to be lower in overall nutritional value compared with conventional meat. More care should be taken to improve the products along other components of health. For example, a plant-based beef patty could be fortified with vitamin B12 and zinc (nutrients found in conventional beef). Addressing these health concerns will help reduce one of the key barriers to consumption.

## Altruistic benefits



### **Recommendation**

Don't put altruistic benefits at the forefront.

### **Why?**

While plant-based meat has clear altruistic benefits over conventional meat, ethical considerations are weaker drivers than taste, familiarity, freshness, health, and convenience. Ethics-focused messaging alone is insufficient for targeting non-vegetarian groups and should be highlighted only as a "bonus" benefit when products meet foundational needs for food choice.

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## Product Development Conclusion

Overall, to increase adoption of plant-based meat, product development must focus primarily on meeting consumers' desire for a product with an appealing sensory profile that is similar to that of conventional meat. Rather than rely largely on ethics claims, marketers should place the greatest emphasis on sensory appeal and familiarity. They should also take meal context into account to aid in the development of exciting variations of familiar dishes. Price reduction would also reach a larger consumer segment, including the early and late majority segments. Auxiliary foci should be to increase convenience through accessibility and ease of meal preparation and to continually improve health profiles.

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# Strategy 2: Choice Architecture

## Introduction

Choice architecture influences consumer decisions in purchasing environments, such as a grocery store or restaurant, by designing the presentation of choices. Choice architecture interventions encourage, or “nudge,” consumers to make the desired choice. These nudge strategies include product labels, product placement at a grocery store, a “default” menu ingredient, listing a food item first or last on a menu, or a combination of these strategies. Such strategies have great potential to increase consumer adoption of plant-based meat by leveraging unconscious processes to guide consumer purchasing decisions.

## Product Labeling



### Recommendation

Use “plant-based” or “plant protein” as category descriptors.

### Why?

Various labels are used in the marketplace to indicate that a product contains no animal ingredients (e.g., “plant-based,” “vegan,” “meat-free,” “meatless”). Research reveals that both “plant-based” and “plant protein” are more appealing than other descriptors. These two terms generate the greatest purchase intent among consumers. Restrictive terms, such as “meat-free,” “vegetarian,” and “vegan,” are less effective because they highlight a loss and hold negative connotations for many omnivores.



### Recommendation

On-product health labels should focus on health gains, particularly high protein or high fiber.

### Why?

Although health and sustainability are not the primary motivators in food choice—consumers prioritize cost, taste, and convenience in their decision-making—they are nonetheless desirable product attributes for a large set of consumers. Research indicates that health-focused descriptive labels have a moderate positive influence on selection of plant-based meat products. The most successful language used to describe

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the health profile of a meal or product appeals to health gains, such as high protein or fiber content. Consumers respond less positively to restrictive health labels, such as “dairy-free.”

## Product Location



### **Recommendation**

Place plant-based meat either adjacent to the conventional meat section or in the “protein aisle” of a supermarket.

### **Why?**

Convenience is an important factor in food purchasing decisions. Research suggests that placing plant-based meat in an easily accessible area increases the likelihood that it will be purchased and consumed. Placing products in the mainstream section of their respective categories, such as in an adjacent segregated set, will nudge consumers to purchase these products. Accessible product placement ensures that traditional meat consumers need not exert extra physical or psychological effort to reach plant-based products.



### **Recommendation**

Place items in the most prominent location in the store as possible.

### **Why?**

The prominence of the location in which a food item is placed is more important than the number of locations in which it is placed. Placing products in high-visibility and high-traffic areas effectively encourages their selection. The importance of location prominence has been demonstrated in both buffet and supermarket settings.

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# Menu Design



## Recommendation

Integrate plant-based items into the full menu instead of placing them in a vegetarian section.

### Why?

Several menu design studies have shown that omnivores are more likely to select plant-based dishes that are integrated into the full menu rather than placed in a separate vegetarian section. By reframing the context in which plant-based dishes are presented, it is possible to nudge consumers toward choosing the plant-based options on a menu.



## Recommendation

Provide default plant-based meals or meal components on the menu.

### Why?

Interventions in menu structure increase selection of plant-based meat by making plant-based options the easier choices or by making conventional meat options more effortful choices.

Default options are implemented if a person takes no action—for example, a salad on a menu that can be made with various protein components but will come with a plant-based protein component unless the consumer requests otherwise. Providing default plant-based meal options nudges consumers to choose these options over the conventional meat options. Changing default meal components steers food selection because people tend to avoid the mental and sometimes physical effort involved in decision-making. The default option is also implicitly recommended to the consumer as the best in a given scenario.



## Recommendation

Use indulgent language that emphasizes product taste and the experience and enjoyment of eating.

### Why?

Menu item descriptions influence food selection. Research indicates that language communicating the experience and enjoyment of the food performs best (e.g., “melt in the mouth,” “comforting”). Indulgent language (e.g., “sweet sizzlin’ green beans and crispy shallots”) has also been particularly effective at increasing the volume of

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vegetables consumed, more so than basic descriptive language or language that emphasizes health benefits.



**Recommendation**

Use descriptive language that highlights provenance, such as “local” and “seasonal.”

**Why?**

Effective framing of descriptive language influences purchasing decisions. Highlighting ingredients’ geographical origins (e.g., “Cumberland-spiced veggie sausages”) or using positively perceived plant-related descriptors (e.g., “field-grown,” “garden”) increases the likelihood that consumers will order plant-based items. Similarly, descriptive, appealing language, such as “fresh” and “seasonal,” increases the selection of plant-based options among those who infrequently eat vegetarian food.



**Recommendation**

When describing healthy meal options, use healthy positive language rather than healthy restrictive language.

**Why?**

Gains-focused framing of health benefits is more effective in steering consumer choice than loss-focused framing. For example, implicit testing of plant-based food selection showed that emphasizing high nutritional content (e.g., “high-protein,” “high-fiber”) was more effective than emphasizing low negative nutritional content (e.g., “low-fat,” “low-calorie,” “low-sugar”). In cafeteria settings, framing a vegetable option as healthy positive (e.g., “healthy, energy-boosting green beans and shallots”) resulted in greater selection of that option than framing it as healthy restrictive (e.g., “light ’n’ low-carb green beans and shallots”).

## Choice Architecture Conclusion

Choice architecture interventions encourage, or “nudge,” consumers to make a desired choice. These nudge strategies include product placement at a grocery store, product labels, a default menu ingredient, menu item descriptions, listing a food item first or last on a menu, or a combination of these strategies. These choice architecture strategies increase the likelihood that consumers will choose plant-based meat by making it the easier choice.

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# Strategy 3: Targeted Messaging

## Introduction

Direct-to-consumer messaging—when well-executed—is a necessary and effective component for increasing consumer adoption of plant-based meat. When preparing a marketing strategy, message designers must consider not only the content of the message but the message source, channel, target audience, and framing. Below we provide a synthesis of suggested message content areas followed by suggestions for integrating evidence-based messaging concepts into message design.

## Message Content

The most effective messaging claims overall will highlight foundational drivers of food choice, especially taste and other sensory properties. Familiarity, tradition, ease of preparation, meal context, and protein content are also important. While these drivers provide a foundation, a clear consumer segmentation approach is essential to creating an effective messaging strategy for each brand and product. Health is a common driver of meat reduction and brings consumers to the product category. However, point-of-purchase appeals should ensure that taste appeals are prominent and health appeals secondary. Social norms messaging is another promising message content area. Highlighting that people are increasingly consuming plant-based meat is likely to drive purchasing.

### Taste and sensory appeal



#### Recommendations

Develop positive messaging around the taste and sensory properties of plant-based meat.

Highlight the properties of plant-based meat that are similar to those of conventional meat.

#### Why?

Taste and sensory appeal are the most consistently reported motivations across all groups for product selection within the plant-based category.

Many consumers express sensory dissatisfaction with most plant-based substitutions for conventional meat products and find them insufficiently appealing in terms of flavor, juiciness, and texture. Highlighting the ways in which plant-based meat products are similar to conventional meat products could be effective at appealing to both traditional



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meat consumers and meat reducers, as these groups have the greatest desire for plant-based meat products to match conventional meat in their sensory properties.

## Familiarity and novelty



### **Recommendation**

Frame plant-based meat as an improved, exciting variation of a familiar meal component.

### **Why?**

Emphasizing both the familiarity and the novelty of plant-based meat products is beneficial. Highlighting plant-based meat as a useful and easy swap for conventional meat in one's favorite meals allows consumers to maintain food choices that fit in with their habits without having to exert significant effort to change their behavior. Marketing a product as innovative and exciting may also increase consumer adoption among more adventurous, non-neophobic consumers. However, care should be taken to keep the product in the realm of the familiar.

## Convenience



### **Recommendation**

Highlight plant-based meat's similarity to conventional meat in its ease and quickness of preparation.

### **Why?**

Convenience, or ease of preparation and product accessibility, is a core driver of food choice and a motivating attribute for consumption of plant-based meat. Previous consumer research shows that people perceive plant-based meat to be less convenient—not as easy to prepare and not as available in retail outlets—than conventional meat. An abundance of behavioral dietary research indicates that people will not change their eating habits unless they perceive themselves as able to do so (see self-efficacy section below). Messaging describing plant-based meat as convenient and easy to prepare is likely to appeal to the widest possible audience. An effective messaging strategy could include instructions for preparation, highlighting plant-based meat's similarity to conventional meat in its ease and quickness of preparation, as well as its suitability in a broader meal context.

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## Health benefits



### Recommendation

Frame health benefits as a positive gain rather than a negative loss.  
Emphasize high protein content in particular.

### Why?

Protein content is one of the most salient aspects of plant-based meat's perceived health attributes and is often reported as a concern or a desired attribute in plant-based food research. Because protein is both a highly desired core attribute of plant-based meat and a salient perceived barrier, high protein content should be the central point highlighted in health-focused marketing messages, as this will appeal to the majority of consumers. Emphasizing the presence of a positive nutritional component, such as protein, is also likely to be more effective than highlighting the absence of a negative nutritional component, such as saturated fat.

## Altruistic benefits



### Recommendation

Message about altruistic benefits sparingly or only alongside appeals to traditional core drivers of food choice.

### Why?

Although research demonstrates that consumers generally acknowledge and appreciate the altruistic benefits of plant-based meat (e.g., environmental impact and animal welfare), most consumers are primarily motivated by the core drivers of taste, price, convenience, and familiarity. Furthermore, messaging about altruistic benefits appeals predominantly to people who already avoid meat. This messaging strategy influences purchasing behavior only if it is clear to consumers that the product also meets their foundational food-choice needs.

## Social norms



### Recommendation

Emphasize plant-based meat's increasing acceptability and prevalence.

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### Why?

People's thoughts, feelings, and behaviors are strongly influenced by actual, imagined, or implied social pressure. This normative influence by others (social norms) may even be a stronger predictor of food choice than individual preference. Norms messaging encourages consumers to perform desired behavior, as they desire to conform to a perceived norm. This increases consumer acceptance of the product and fosters the perception of it as more mainstream.

Social norms messaging has been successful in behavioral interventions in general and in the context of meat reduction specifically. Effectively implementing social norms messaging strategies is likely to be effective in the new context of plant-based meat adoption.

Dynamic descriptive norms are particularly effective. These are statements that convey expected growth or the norm's increased popularity over time (e.g., "in the last four years, three in 10 people have changed their behavior and begun purchasing plant-based meat on a weekly basis"). Dynamic descriptive norms show the rate of change and draw attention to positive change in consumer behavior. Framing these messages as positive behaviors rather than prominent undesired behaviors is most effective.

## Elements of Effective Message Design

With a message designed to increase consumer adoption of plant-based meat, several considerations beyond message content may help or hinder the message's ability to influence an intended recipient. These additional core considerations include targeting, channel choice, and message source.

### Targeted messages



#### **Recommendation**

Design message content and framing with a specific subsegment of consumers in mind.

### Why?

Receptivity to a message varies by consumer segment. The ideal target audience for messages promoting plant-based meat adoption is the meat reducer (flexitarian) segment. Message design should further focus on targeting a specific subsegment of

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meat reducers with a distinct profile of motivations, barriers, demographics, culture, and shopping habits. An alternative strategy is to target consumers who exercise influence over members of the target audience, such as those in charge of family purchasing decisions.

## Message source



### **Recommendation**

Use a message sender who is a trusted source of food-choice information.

### **Why?**

The person or entity that sends a message plays an important role in influencing consumer attitudes. This is especially true when a consumer is making a passive choice, such as quickly choosing food in the grocery store, instead of a carefully scrutinized choice. Consumers must trust a message source, and this trust could be based on factors such as similarity, popularity, and expertise. The most trusted sources for food-choice information are experts and include registered dietitians, healthcare professionals, health coaches, scientists, and fitness professionals. However, social influence also plays an important role, and celebrity endorsements should also be explored as a tool for widely determining and changing social norms around plant-based meat.

## Channels



### **Recommendation**

Use the medium that is most likely to reach the target audience.

### **Why?**

Communication channel choice—the medium through which one sends a message—is also imperative to consider when seeking to influence consumers. To reach a specific audience, message designers must find out which communication media their audience uses most or to which communication media it is most exposed. Additionally, people find various communication methods more or less credible when considering food, health, and dietary information. Generally, oral face-to-face and video communication have the greatest effects on intended outcomes.

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## Message framing

Framing theory suggests that the context in which information is presented affects the audience's receptivity to and interpretation of that information. For example, if a message about plant-based meat is framed in terms of taste (e.g., indulgent) or a health benefit (e.g., high protein), message recipients will perceive plant-based meat differently than if the message were presented in an environmental or animal welfare frame.



### **Recommendation**

Increase general awareness of or familiarity with plant-based meat to increase purchasing.

### **Why?**

If they have already been thinking about and evaluating plant-based meat, consumers will be more receptive to claims that promote plant-based meat. Prior familiarity is an important predictor of plant-based meat purchase intent. This familiarity ensures that consumers both form and access their feelings and beliefs about the product. In turn, future promotional messages will be more effective because consumers have already thought about the product.



### **Recommendation**

Use narrative to help engage consumers with the message.

### **Why?**

Framing a message as a narrative helps the target audience remember, think about, and like the product. Stories should exemplify an underlying message. For example, if a message designer wants to promote the claim that plant-based meat is familiar, traditional, and similar to conventional meat, a story about a family who shares a holiday meal including plant-based meat will intrinsically carry this message.

## Antecedents of Behavior Change

Applying tested behavioral and social influence theories to message design and dissemination increases the likelihood of achieving desired behavioral outcomes. The Integrative Model provides the most comprehensive understanding of the multitude of variables that influence behavior. Effectively influencing a consumer's decision to

purchase plant-based meat is much more complex than simply explaining the product's health benefits or low cost. A host of factors influences a consumer's journey to behavior change.

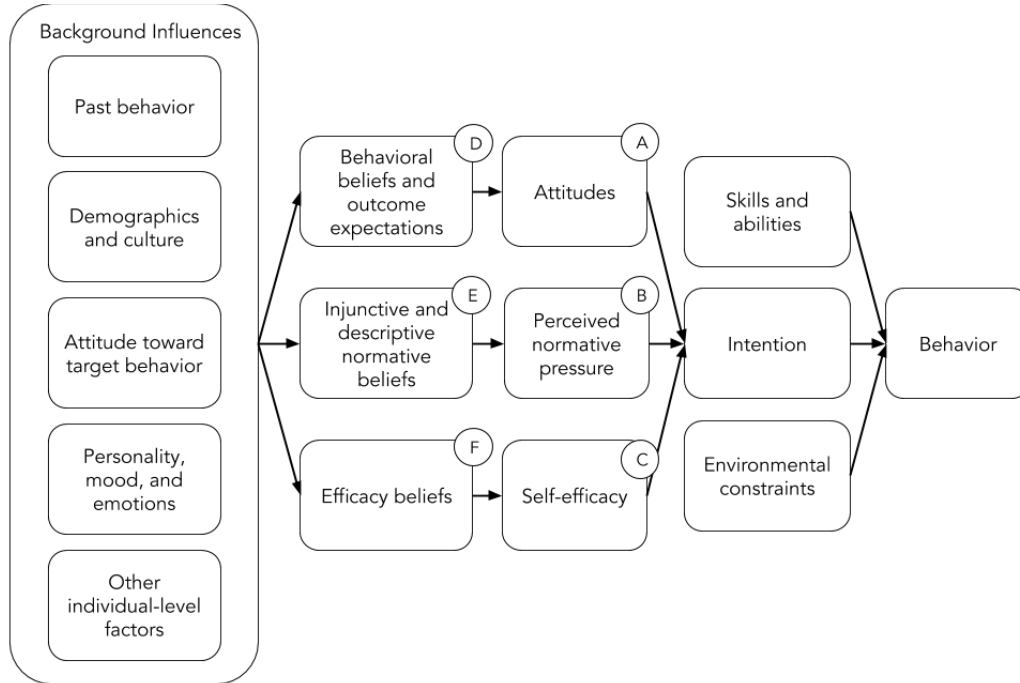


Figure 2. Integrative model of behavior change. Adapted from Fishbein and Cappella's (2006) Integrative Model.

In the current context, the model posits that intention to purchase plant-based meat is influenced by the following:

- (a) attitudes toward the behavior
- (b) perceptions of normative pressure about the behavior
- (c) perceptions of ability to execute the behavior

Essentially, to influence behavior, communicators should seek to influence a person's intention to engage in that behavior. To influence a consumer's intention to engage in a behavior (i.e., consuming plant-based meat), an effective messaging influence strategy must focus on three factors: attitudes, normative beliefs, and self-efficacy.

Marketers can use this model as a roadmap. They can decide which of the primary constructs that affect intention they would like to influence. For example, if a marketing campaign's goal is to increase awareness and adoption of plant-based meat, then messaging should address changing attitudes toward and current normative beliefs about plant-based meat.

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## Attitudes



### Recommendation

Design messages that appeal to target consumers' attitudes.

### Why?

To be most effective, message designers should research a target audience's prior beliefs and attitudes about a product and then use these in message content choice and framing. Attitudes are one of the most consistent predictors of intentions, although they are just one of many factors that ultimately result in behavior change.

Consumer attitudes will be influenced by beliefs about whether engaging in a specific behavior will result in the desired outcome. To overcome negative attitudes toward plant-based meat, messaging should provide evidence for, or testimonies to, the achievement of the desired outcome (e.g., better taste, health) by countless others as a result of consuming plant-based meat.

## Normative beliefs



### Recommendation

Demonstrate that most people similar to the target consumer choose to eat plant-based meat.

Demonstrate that the rate of adoption is increasing.

### Why?

Focusing on beliefs about whether a majority, particularly of people of influence, engage in a behavior has the potential to alter a person's food-choice preference. One approach is to provide understandable statistics showing how many people are eating plant-based meat and persuading consumers that others believe eating plant-based meat is a better choice. Highlighting the rate of adoption in recent years is also an effective strategy, as it shows that consuming plant-based meat is an increasingly normative behavior.

## Self-efficacy



### Recommendation

Use messaging that provides encouragement and instructions regarding the preparation of plant-based meat.



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### Why?

Self-efficacy strongly relates to the adoption of plant-based meat. In the meat reduction context, people often report as a barrier the lack of skills or knowledge around eating in alternative ways. Studies examining plant-based meat consumption also report this finding: Participants report not knowing how to prepare plant-based meat. By making food preparation as familiar as possible or including on-package and online preparation instructions with familiar recipes that are easy to access and execute, plant-based meat marketing efforts will ensure consumers are confident that they have the skills and abilities needed to change their behavior.

## Messaging Conclusion

When designing messages to increase consumer adoption of plant-based meat, choose the message content most likely to drive purchasing. Desirable product attributes include taste and sensory appeal, familiarity, tradition, meal context, ease of preparation, and high protein content. Effective social norms include descriptive norms, such as dynamic norms. In addition to message content, marketing strategies should consider message source, channel, target audience, and framing. Applying tested behavioral and social influence theories to message design and dissemination will increase the likelihood of achieving desired behavioral outcomes.

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# Conclusion

This paper first provides a summary of consumer food and protein choices as they vary by consumer segment. Secondly, it builds on consumer motivations and suggests a series of strategies to increase the rate of plant-based meat adoption. These strategies include recommendations on product development, choice architecture, and messaging.

The strongest motivations for general food choice are those that relate to consumers' immediate needs and wants. These are known as foundational drivers and consist of three core motivators: taste, cost, and convenience. Motivations to purchase plant-based meat align with motivations for general food choice; however, consumers also have a strong desire for plant-based products to be traditional and familiar. The most effective way to make plant-based meat appealing to consumers is to emphasize taste and familiarity rather than altruistic motivations, such as animal welfare or environmental impact.

Barriers influence purchasing behavior even more strongly than drivers. While taste, convenience, and price are strong motivators, negative beliefs about these attributes also serve as barriers. Similarly, health beliefs both motivate and inhibit purchasing. Many consumers view conventional meat as healthy (e.g., a good source of nutrients and a necessary dietary component) or view plant-based meat as unhealthy (e.g., insufficient protein or too processed). Other barriers to meat reduction include enjoying the experience of conventional meat and feeling attached to it, masculinity beliefs about conventional meat, and fear of trying new foods.

Food motivations and barriers differ among individuals and groups. Developing a strategy that targets the segments most receptive to change will increase the rate at which plant-based meat adoption diffuses throughout society. Segmentation strategies should focus on developing comprehensive profiles of the early adopter and early majority groups to understand how their motivations and barriers differ. The most practical strategy is to segment by meat consumption patterns, as current dietary behavior predicts consumers' willingness to consume plant-based meat. The meat reducer segment should be the primary target because meat reducers are already open to changing their behavior.

Products should meet consumers' foundational needs. Rather than relying solely, or even largely, on ethics or health claims, marketers should place greater emphasis on attributes of sensory appeal, affordability, and the various components of convenience. Product developers should address health concerns (e.g., uncertainty about protein and nutrient content, digestive difficulty) by developing products that are nutritionally similar to or better than conventional meat. They should also take meal context into account to aid in the development of either familiar dishes or exciting new products.

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Choice architecture approaches are realistic to implement and effective at increasing consumer adoption of plant-based meat in a purchasing environment, whether in a retail or a restaurant setting. Such approaches include product location, product labeling, and menu design. Because these methods are already pervasive in the marketing context, marketers can easily design them to effectively influence the purchasing behavior of meat reducers without creating reactance among traditional meat consumers.

Finally, to provide a foundation for marketing plant-based meat, promoters should carefully design messages using theoretical and evidence-based approaches. Messaging claims should highlight the sensory aspects of a product, familiarity, tradition, ease of preparation, meal context, and protein content. Demonstrating that consumers are adopting plant-based meat at an ever-increasing rate is also a promising strategy. Additionally, promoters should take into account message source, channel, and framing and then design their messages with a specific subset of consumers in mind.

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Keri's research advances the plant-based and cultivated meat market sectors by generating effective messaging that helps consumers make sustainable, healthy, and just food choices. She is also a visiting scholar with the School of Social and Behavioral Sciences at Arizona State University (ASU). Keri earned her PhD in communication from ASU's Hugh Downs School of Human Communication and completed postdoctoral work in science communication with ASU's School for the Future of Innovation in Society.

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# Suggested Citation

Szejda, K., & Parry, J. (2020). *Strategies to accelerate consumer adoption of plant-based meat: Recommendations from a comprehensive literature review*. Research Report. Washington, DC: The Good Food Institute. Available at [go.gfi.org/plant-based-meat-consumer-adoption-recommendations](https://go.gfi.org/plant-based-meat-consumer-adoption-recommendations)

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# Acknowledgements

The recommendations in this report are based on a comprehensive literature review written by Keri Szejda, Tessa Urbanovich, and Matti Wilks. The Good Food Institute is a 501(c)(3) nonprofit organization. We are powered by philanthropy, relying on gifts and grants from our family of supporters to fulfill our mission.

Cover photo courtesy of Beyond Meat.

## 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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