

Taste of the Industry 2025

A Sensory Analysis of Plant-Based Meats

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Foreword

In a world grappling with the environmental impact of our food choices, the alternative protein industry stands at a critical crossroads. The health and climate consequences of conventional meat production are profound. Animal agriculture generates approximately 16.5% of global greenhouse gas emissions,¹ and, according to the Center for Disease Control and Prevention, poultry products cause more human deaths from foodborne illness than any other food²—a reality highlighted by the current H5 bird flu outbreak. Despite growing concerns about conventional meat, one truth remains paramount: taste is non-negotiable for omnivore consumers.

Plant-based meats offer a promising path forward—delivering improved nutrition and reduced environmental impact while striving to match flavors consumers expect. With each plant-based burger producing roughly 91% fewer greenhouse gas emissions than conventional beef,³ the climate benefits could be substantial if mainstream adoption of these products scales.

In service of this mission, NECTAR's *Taste of the Industry 2025* report provides the most comprehensive sensory analysis of plant-based meat to date. As a nonprofit research initiative, NECTAR employs rigorous sensory methodologies to deliver evidence-based insights the industry can trust. Our approach prioritizes transparency, ensuring findings reflect authentic consumer experiences and provide an actionable roadmap for product improvement.

Building on our inaugural 2024 report, this expanded analysis explores fourteen plant-based meat categories. Through blind sensory panels with over 2,600 omnivores and flexitarians, this report objectively compares plant-based products to conventional counterparts, offering invaluable insights into competitive positioning, consumer preferences, and R&D opportunities.

As the plant-based sector continues to navigate adoption challenges, this report comes at a time when producers worldwide—from startups to major corporations—are refining their approaches to create more appealing alternatives.

Our data confirms this investment is worthwhile: companies that prioritize taste generate stronger financial returns and capture more meaningful market share from conventional animal products. Whether you're a manufacturer, retailer, foodservice operator, investor, or consumer, this report illuminates the path toward a more sustainable food system, acknowledging that the transition must be grounded, above all else, in exceptional taste experiences.

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1. Twine, R. (2021). Emissions from Animal Agriculture—16.5% Is the New Minimum Figure. *Sustainability*, 13(11), 6276. <https://doi.org/10.3390/su13116276>

2. Painter JA, Hoekstra RM, Ayers T, Tauxe RV, Braden CR, Angulo FJ, et al. Attribution of foodborne illnesses, hospitalizations, and deaths to food commodities by using outbreak data, United States, 1998–2008. *Emerg Infect Dis* [Internet]. 2013 Mar. <http://dx.doi.org/10.3201/eid1903.111866>

3. EarthShift Global. (2024, April). Comparative life cycle assessment of plant-based meats and conventional animal meats. The Good Food Institute. <https://doi.org/10.62468/casv3213>

Survey Overview

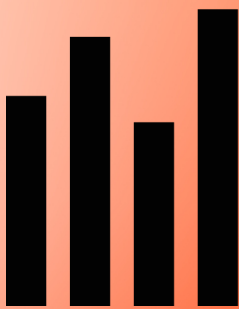
Current Context

Following NECTAR's inaugural *Taste of the Industry* report in 2024 and our *Future of the Industry 2024: Balanced Protein* analysis, the 2025 report expands our examination of plant-based meat alternatives during a critical market transition. The plant-based meat sector has experienced a 20% year-over-year volume decline,¹ with regular company failures highlighting systemic challenges. This downturn follows a period of explosive growth and significant investment, suggesting a market correction as consumers reassess these products.

Plant-based meats currently face challenging market conditions. Consumer adoption is weakening, with 46% of buyers not making repeat purchases claiming taste dissatisfaction.² This weakness isn't uniform across categories - retail scanner data reveals particularly poor performance in plant-based beef products, while plant-based chicken alternatives have demonstrated greater resilience. The foodservice sector shows similarly inconsistent results, with quick-service restaurants reporting mixed outcomes from their plant-based meat trials. These weak market signals highlight the critical importance of addressing the taste gap to improve consumer acceptance and drive sustainable growth in the category.

Despite these challenges, our research reveals that leading categories of plant-based meat capture 5-15x more market share than lower performing categories.³ Leading products in each category significantly outperform competitors, capturing up to 1.5x greater market share on average than lower performing products.⁴ These products demonstrate that excellence in taste and texture is achievable and financially rewarding.

Taste of the Industry 2025 arrives at a pivotal moment as industry recovery depends on elevating product quality across all categories.



Our Approach

NECTAR, a nonprofit initiative working to accelerate the alternative protein transition, conducts an annual *Taste of the Industry* sensory analysis of plant-based meats. These reports are sensory deep dives into the most innovative alternative protein products currently on the market, evaluating a range of technologies, ingredients, and different consumer segment preferences.

Taste of the Industry 2025, the second report in this annual series, provides objective sensory data about plant-based meats through blind taste tests in American restaurant settings. By having omnivores directly compare plant-based products against conventional meat benchmarks, we reveal competitive positioning and specific R&D opportunities for manufacturers in this increasingly important category.

If you have any questions or would like to discuss potential future research areas, please contact NECTAR's Director Caroline Cotto (caroline@nectar.org).

Dashboard access: Explore the full dataset [here](#)

1. Good Food Institute. Key plant-based category sales metrics and purchase dynamics. 2023. <https://gfi.org/marketresearch/>
2. Food Frontier. (2024). The Food Frontier consumer survey 2024: Understanding dietary preferences and changes in Australia.
3. NECTAR (2025). *Taste of the Industry 2025: Plant-Based Meat*. Page 19.
4. NECTAR (2025). *Taste of the Industry 2025: Plant-Based Meat*. Page 20.

Study Design & Methodology

NECTAR partnered with **Palate Insights** to conduct **blind taste tests** at Palate's restaurant partners in San Francisco and New York City between November 2024–January 2025.

✿ Testing Environment

Participants tried products at restaurants in San Francisco and New York City in order to achieve an authentic and natural eating experience.



🍔 Testing Experience

In a blinded, randomized design, participants evaluated one product at a time. Each was presented as a complete, simplified build to facilitate clear assessment. Evaluations covered sensory, price, and nutritional aspects using a standardized survey.



✿ Preparation

All products were prepared according to manufacturer instructions using timers and meat thermometers while controlling for equipment type. Participants were allowed to add condiments but were required to apply them consistently across products.

Products Tested
















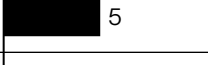












14 product categories were selected using the below criteria:

- **High volume:** Sufficient sales volume (animal or plant-based)
- **Sufficiently developed:** At least five plant-based products exist in market

122 plant-based products were prioritized based on the below criteria:

- **Significant player:** Sufficient sales volume (plant-based)
- **Market-ready:** Product is in-market or at validation stage of development
- **Animal analog:** Product is designed to mimic the animal product
- **Original flavor:** Comparable to an original (unflavored) animal product
- **Distinct:** Uses ingredients or technology that is distinct / unique to other products being tested in the category

Animal benchmarks for each category were chosen based on their volume of retail sales.

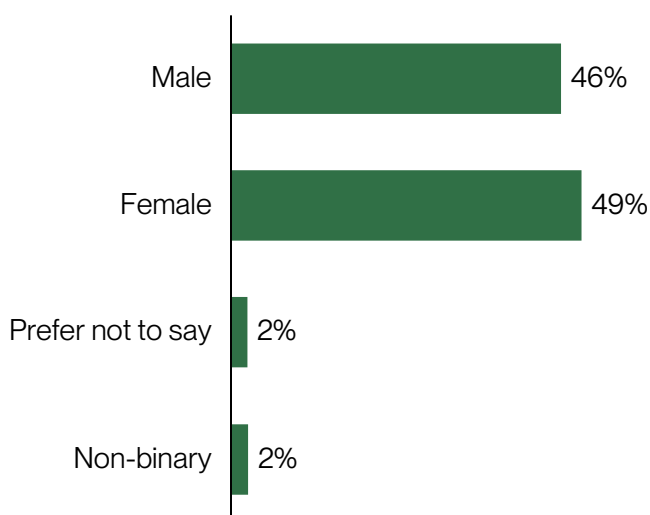
Category	Animal benchmark	Dish	Plant-based products tested
 Bacon	Oscar Mayer Naturally Hardwood Smoked Bacon Original	Bacon, eggs	 10
 Bratwurst	Johnsonville Original Brats	Sausage, sauteed onion, sauteed bell pepper	 9
 Breaded Chicken Fillet	Tyson Chicken Breast Patties	Bun, breaded chicken fillet, mayo, lettuce, tomato	 5
 Breakfast Sausage	Jimmy Dean Heat 'N Serve Original Sausage Patties	English Muffin, breakfast sausage	 10
 Burgers	Bubba Burger Original	Bun, burger, lettuce, tomato, onion, pickle & condiment of choice	 10
 Ham Deli Slices	Oscar Mayer Smoked Uncured Ham	White bread, ham, lettuce, tomato, mayo	 9
 Hot Dogs	Ball Park Bun Sized Beef Franks	Hot dog, bun, condiments of choice	 10
 Meatballs	Cooked Perfect Italian Meatballs	Spaghetti, meatball, red sauce	 5
 Nuggets	Tyson Frozen Chicken Nuggets	Nuggets, condiments of choice	 10
 Pulled Pork	Kirkland Smoked Pulled Pork	Hawaiian roll, pulled pork, BBQ sauce optional	 7
 Steak Fillet & Tenderloin	Kirkland Signature USDA Choice Beef Loin Tenderloin Whole	Butter sauce, steak, side of mashed potatoes	 9
 Turkey Deli Slices	Oscar Mayer Oven Roasted Turkey Breast	White bread, turkey, lettuce, tomato, mayo	 7
 Unbreaded Chicken Fillet	Perdue Harvestland Boneless Chicken Breast	Bun, unbreaded chicken fillet, mayo, lettuce, tomato	 10
 Unbreaded Chicken Strips & Chunks	Tyson Diced Chicken Breast	Chicken, seasoned rice	 10

Study Population

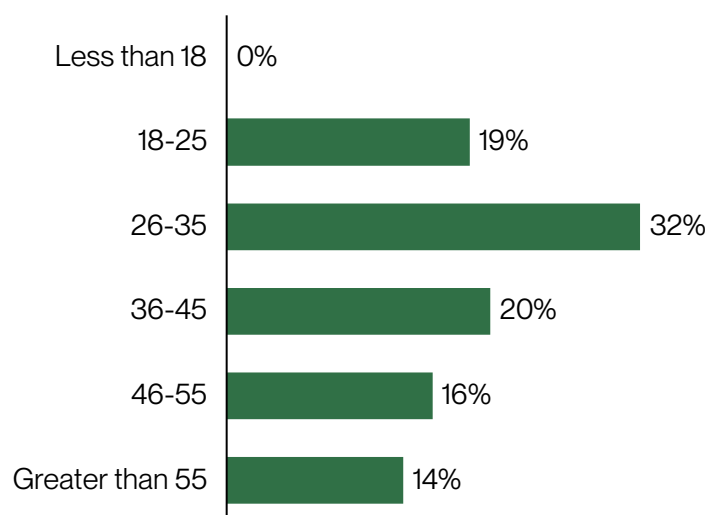
Demographic overview of a sample of 2,684 omnivores and flexitarians.

Participants were additionally screened to **only include those who eat the category being evaluated at least once every 1-2 months.**

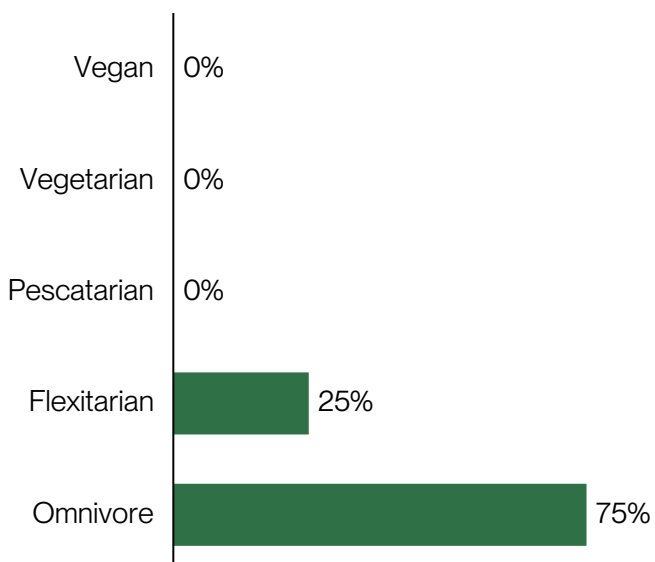
Gender, % of participants



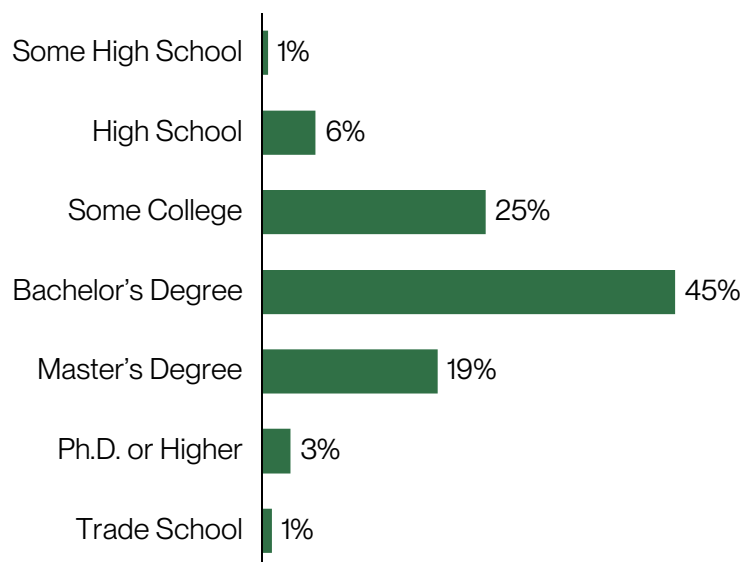
Age, % of participants



Dietary preference, % of participants



Education, % of participants



Analytical Approach

Questions

Liking	Rates products on a 7pt scale from 'Dislike very much' to 'Like very much' covering overall liking, flavor, texture, and appearance
Qualitative	Describes the 'likes' and 'dislikes' of each product using open-ended responses
CATA (Check-all-that-apply)	Describes products using lists of 10-15 attributes available for participants to select or leave unchecked covering flavor, texture, and appearance
Purchase Intent	Rates products on a 7pt scale from "Definitely would buy" to 'Definitely would NOT buy' after revealing either price or nutritional information

Analyses

Mean	The average rating for each product on a 1-7 scale
Histogram of the Differences	Compares each participant's rating for a product against a benchmark to calculate the difference in their ratings for the two products
Wilcoxon Signed-Rank Test	Calculates whether there is a statistically significant difference in two products using the Histogram of the Differences
AI Qualitative Analysis	Synthesizes key themes from qualitative responses using Chat GPT
Product CATA (Check-all-that-apply)	Maps the sensory profile of a product and measures which attributes are associated with higher or lower liking when identified
Comparative CATA (Check-all-that-apply)	Compares the sensory profile of a product against a benchmark to identify its opportunities, weaknesses, and strengths
Pricing Analysis	Calculates the impact of product's price on purchase intent
Nutrition Analysis	Compares purchase intent for a product after revealing its nutrition facts panel and ingredient list and measure the impact of specific ingredients / nutrient levels on any difference in purchase intent

Nomenclature

Plant-Based Average	Calculated by averaging the scores of every plant-based product tested in that category
Plant-Based Leader	The plant-based product in each category that performed the highest on overall liking (independently and against the animal)
TASTY Award Winner	Any plant-based product that was rated the same or better than the animal on overall liking by at least 50% of participants
Animal benchmark	The 'typical' animal product in each category with the highest retail sales volume
Promoter	Participants rating the product as 'like very much' or 'like'
Passive	Participants rating the product as 'like somewhat' or 'neither like nor dislike'
Detractors	Participants rating the product as 'dislike somewhat', 'dislike', or 'dislike very much'

Dashboard Access

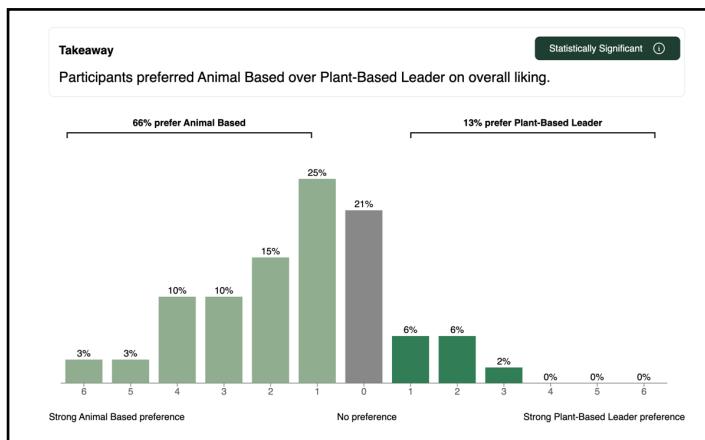
Access the [live dashboard](#) using the links below to explore the full dataset.

- [Bacon](#)
- [Bratwurst](#)
- [Breaded Chicken Fillet](#)
- [Breakfast Sausage](#)
- [Burger](#)
- [Ham Deli Slices](#)
- [Hot Dog](#)
- [Meatballs](#)
- [Nuggets](#)
- [Pulled Pork](#)
- [Steak Fillet](#)
- [Turkey Deli Slices](#)
- [Unbreaded Chicken Fillet](#)
- [Unbreaded Chicken Strips & Chunks](#)

[Click here for a short video walkthrough](#) to get as much as possible out of the dataset.

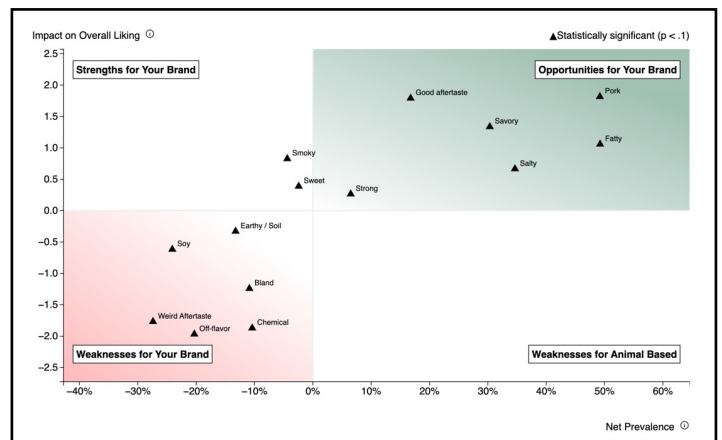
Preference Testing:

Conduct statistical significance testing



CATA Analysis / Penalty Analysis:

Prioritize R&D opportunities



Qualitative Analysis:

Read AI-summaries and each response

Overall, the feedback on sausage 396 is largely positive, with many respondents appreciating its unique flavor, attractive appearance, and enjoyable texture. However, some comments indicate a few mixed feelings regarding the aftertaste and seasoning levels.

Key Points:

- Unique and smoky flavor profile noted by several respondents.
- Visually appealing with a good color and size consistently praised.
- Positive texture feedback including juiciness and firmness, with mentions of a good bite and sear.
- Some concerns about aftertaste and desire for stronger spices were expressed.
- General appreciation for the sausage being well-seasoned and hearty.
- A minority of respondents noted dissatisfaction or lack of appeal.

New Summary

"Good spices for flavor. Good amount of firmness" Positive

"Color and size" Slightly Positive

Raw Data:

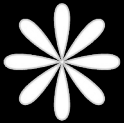
Download and conduct your own analysis

Export to CSV

Respondent	how would you rate the flavor of sausage 396	please check all the words or phrases that descr...	how would you ra
1	"Like"	["Smoky"; "Fatty"]	"Like"
2	"Like somewhat"	["Savory"; "Weird Aftertaste"; "Strong"; "Earthy / Soil"; "Off-flavor"; "Salty"]	"Like somewhat"
3	"Like very much"	["Soy"; "Salty"; "Strong"]	"Like very much"
4	"Dislike very much"	["Earthy / Soil"; "Strong"; "Weird Aftertaste"]	"Like somewhat"

Executive Summary

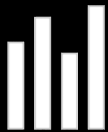
Recommendations and Insights for Plant-Based Meats



Top Performers

Leading products and categories highlight the strong potential to meet taste expectations

- **Many products are already worth celebrating** – 20 products were awarded as TASTY Award winners for being rated the same or better than the animal benchmark on overall liking by at least 50% of participants
- **Taste parity is on the horizon** – No statistically significant difference in overall liking between the animal and four plant-based products
- **Several plant-based categories performed at a higher level** – Unbreaded Chicken Fillets, Burgers, Breaded Chicken Fillet, Chicken Nuggets, and Breakfast Sausage were all rated the same or better than the animal benchmark by 40% of participants at the category level



Gaps in Performance

Improvement is needed, worthwhile, and attainable

- **R&D is still needed for the typical plant-based product** – The average product was rated some form of 'dislike' more frequently than being rated 'like very much' or 'like'
- **Whitespace revealed in key categories** – Opportunity for category-level innovation in Bacon, Steak Fillet, Unbreaded Chicken Strips & Chunks, and Bratwurst
- **Better tasting categories achieved 10x greater market penetration** – High-performing categories (e.g., Burgers, Chicken Nuggets, and Meatballs) have market penetration of 5-14% versus lower-performing categories (e.g., Bacon and Hot Dogs) which have <1% penetration
- **Leading plant-based products capture 50% more market share** – Sales were \$1.5M higher for every 5% increase in the share of participants rating them the 'same or better' than the animal benchmark
- **Improvement is attainable** – Leader products regularly emerged across categories and were rated 'like very much' or 'like' nearly 2x more often than average products



R&D Roadmap

Innovation in both flavor and texture are needed to close the gap to the animal product

- **Flavor is the top opportunity** – Plant-based products were described as 'savory' 35% less often and as having a 'weird aftertaste' or 'off-flavors' 5-6x more often than the animal; these differences were associated with a 1.5-2pts liking gap between animal and plant-based products
- **Texture innovation also key, nearly as important as flavor** – Plant-based products were described as 'juicy' 62% less often than the animal, leading to decreases in liking of 1.1pts; increasing tenderness and reducing mushiness are meaningful secondary priorities
- **Appearance improvements are valuable but lower priority** – Interior color was the largest appearance difference with the animal benchmark; improving exterior color and searing are secondary objectives

Leading Products and Categories

The Potential of Plant-Based






























TASTY Award Winners

The TASTY Awards: A new program celebrating top-performing alternative protein products based on NECTAR's annual *Taste of the Industry* sensory research.

Qualification criterion:

- At least 50% of tasters must rate the product the "same or better" than the animal benchmark in overall liking.

Brands who pass this threshold are displayed in alphabetical order.

	Unbreaded Chicken Fillet					
	Burger					
	Chicken Nugget					
	Breakfast Sausage					
	Turkey Deli Slices					
	Ham Deli Slices					
	Meatball					
	Breaded Chicken Fillet					
	Hot Dog					

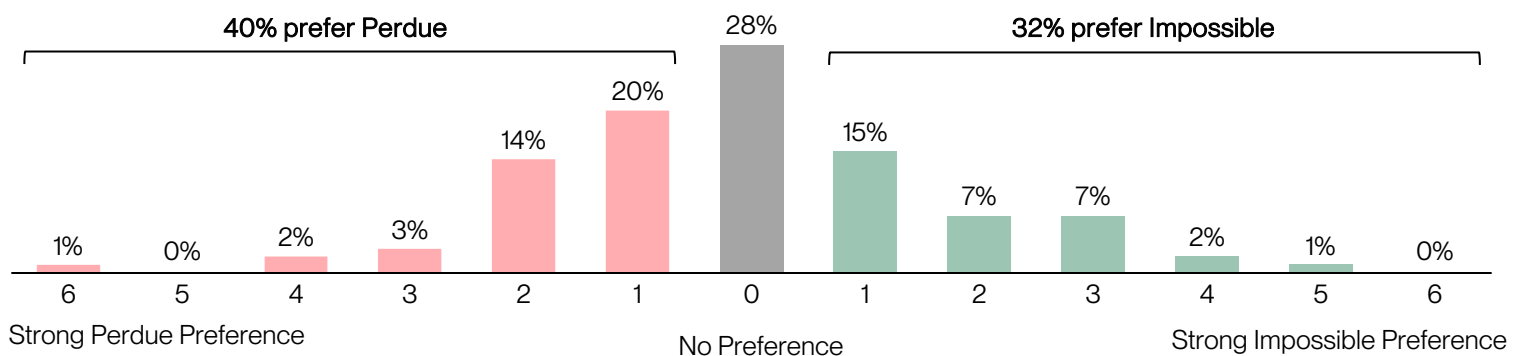
Taste Parity is on the Horizon

NECTAR evaluated performance of the plant-based product against the animal at three thresholds:

- **No Statistically Significant Difference:** The chance of being preferred on overall liking in a future test is at least 10%
- **Taste Parity:** The chance of being preferred on overall liking in a future test is at least 50%
- **Taste Superiority:** The chance of being preferred on overall liking in a future test is at least 90%

How would you rate your OVERALL LIKING of XXX?

Impossible Unbreaded Chicken vs Perdue, Difference in Overall Liking (N=103)¹



No statistically significant difference with animal²

✓

Taste parity over animal²

✗

Taste superiority over animal²

✗

Takeaways

There was no statistically significant preference for the animal benchmark against the top-performing plant-based products

- The animal failed to achieve statistically significant preference against four products (less than 90% change of being preferred on overall liking in a future test)
- The four products were Impossible Unbreaded Chicken Breast, Impossible Chicken Nuggets, Impossible Burger, Morningstar Farms Nuggets

Taste parity is achievable

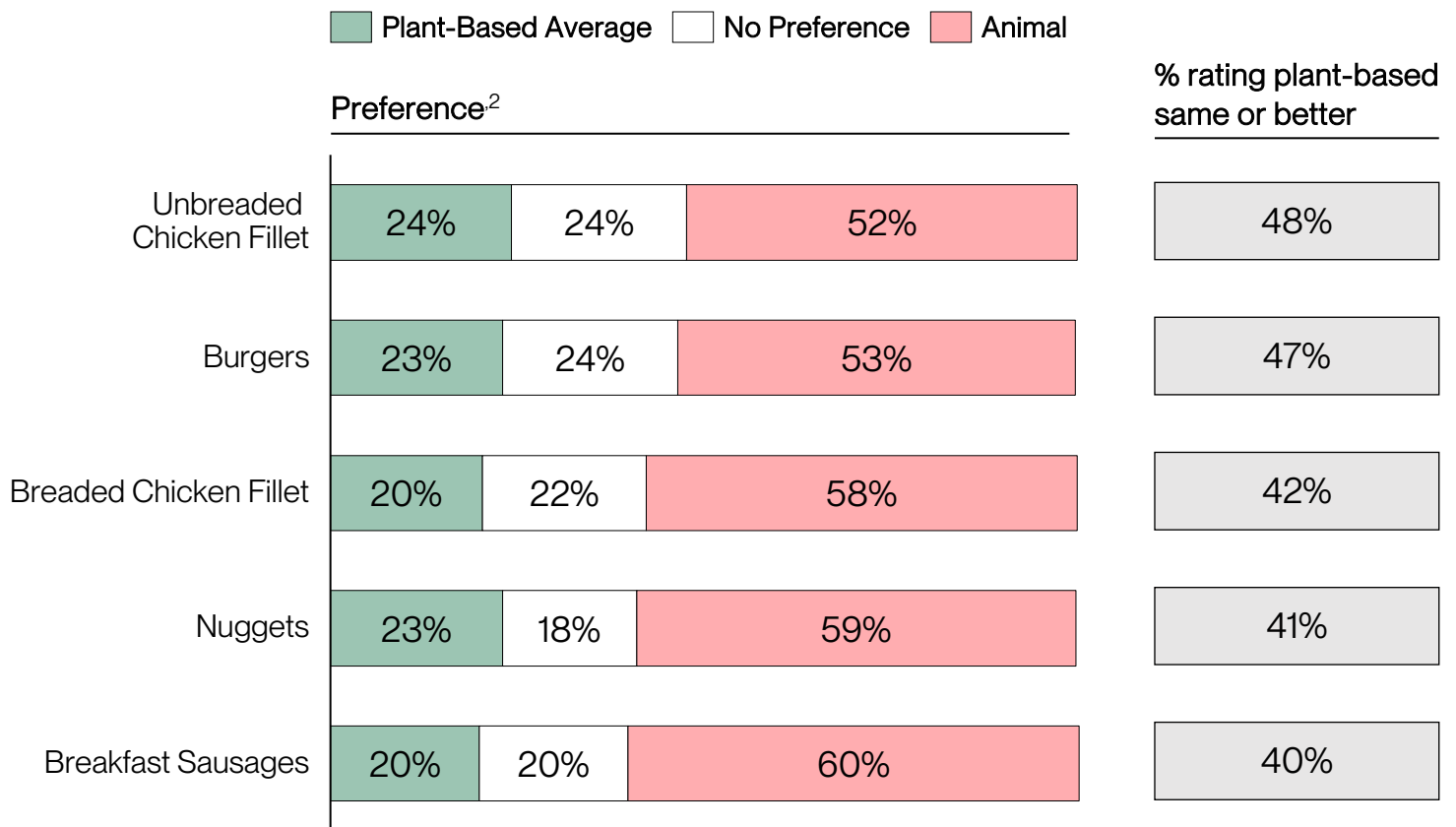
- Further improvement to the top-performing products could result in achieving parity, defined as equal likelihood that each product would be preferred on a future test

Dashboard access: Explore the full dataset [here](#)

1. Calculated using Wilcoxon Signed Rank Test which compares the difference in each participants rating for two products. Null Hypothesis: Animal <= Plant-based. Alternative Hypothesis: Animal > Plant-based.
 2. Null Hypothesis: Perdue is less than or equal to Impossible; Alt Hypothesis: Perdue is greater than Impossible | Outcome: P = 0.314; We fail to reject the null hypothesis with statistical significance but have directional evidence that alternative hypothesis is correct: Perdue is better

Several categories performed well against the animal benchmark

How would you rate your OVERALL LIKING of XXX?, % of participants (N=100)¹



Takeaways

Meaningful number of participants rated plant-based products the same or better than the animal benchmark

- At least 40% of participants rated the plant-based product the same or better than the animal in the five categories above

A diversity of proteins were amongst the top-performing categories

- Products replicating beef, chicken, and pork all achieved average ratings of 40% same or better

Unbreaded chicken and burgers were top-performing categories

- Both categories were rated the same or better than the animal by nearly 50% of participants

Dashboard access: Explore the full dataset [here](#)

1. Number of participants was approximately 100 per test (average = 99.4)

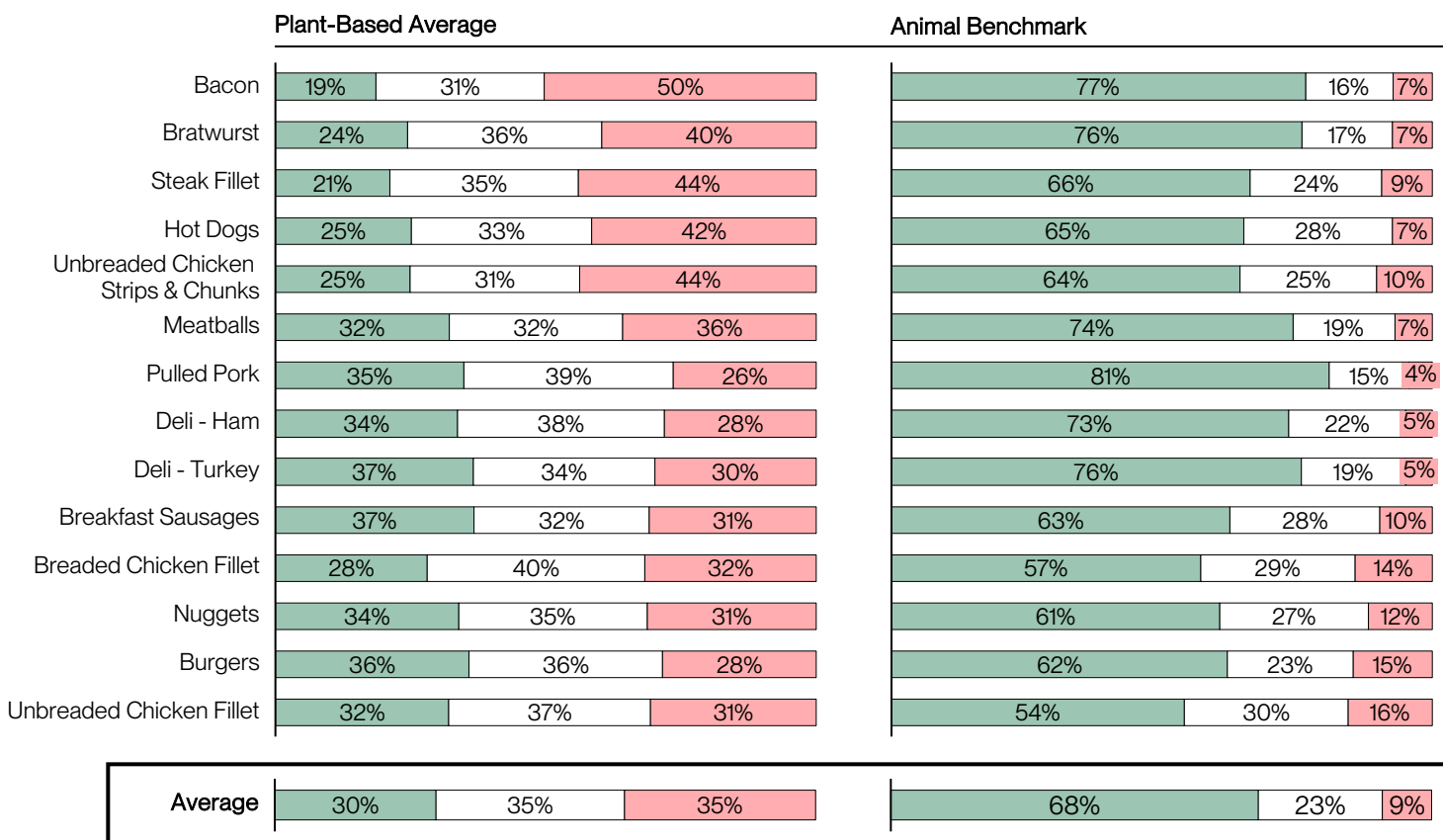
2. Calculated by comparing the difference in each participants overall liking rating for the plant-based product and the animal benchmark

Improvement
is needed,
worthwhile,
and attainable

Further R&D is needed

How would you rate your **OVERALL LIKING** of XXX?, % of participants (N=100)¹

■ **Promoters:** Ratings of 'like very much' or 'like'
■ **Passives:** Ratings of 'neither like nor dislike' or 'like somewhat'
■ **Detractors:** Ratings of 'dislike very much', 'dislike', or 'dislike somewhat'



Takeaways

The average plant-based product was generally 'disliked'

- Products were disliked more frequently than they were liked (35% rated some form of 'dislike' while just 30% rated 'like very much' or 'like')

There are large liking gaps between plant and animal-based products

- 68% rated the animal as 'like very much' or 'like' (versus just 30% for the plant-based average)

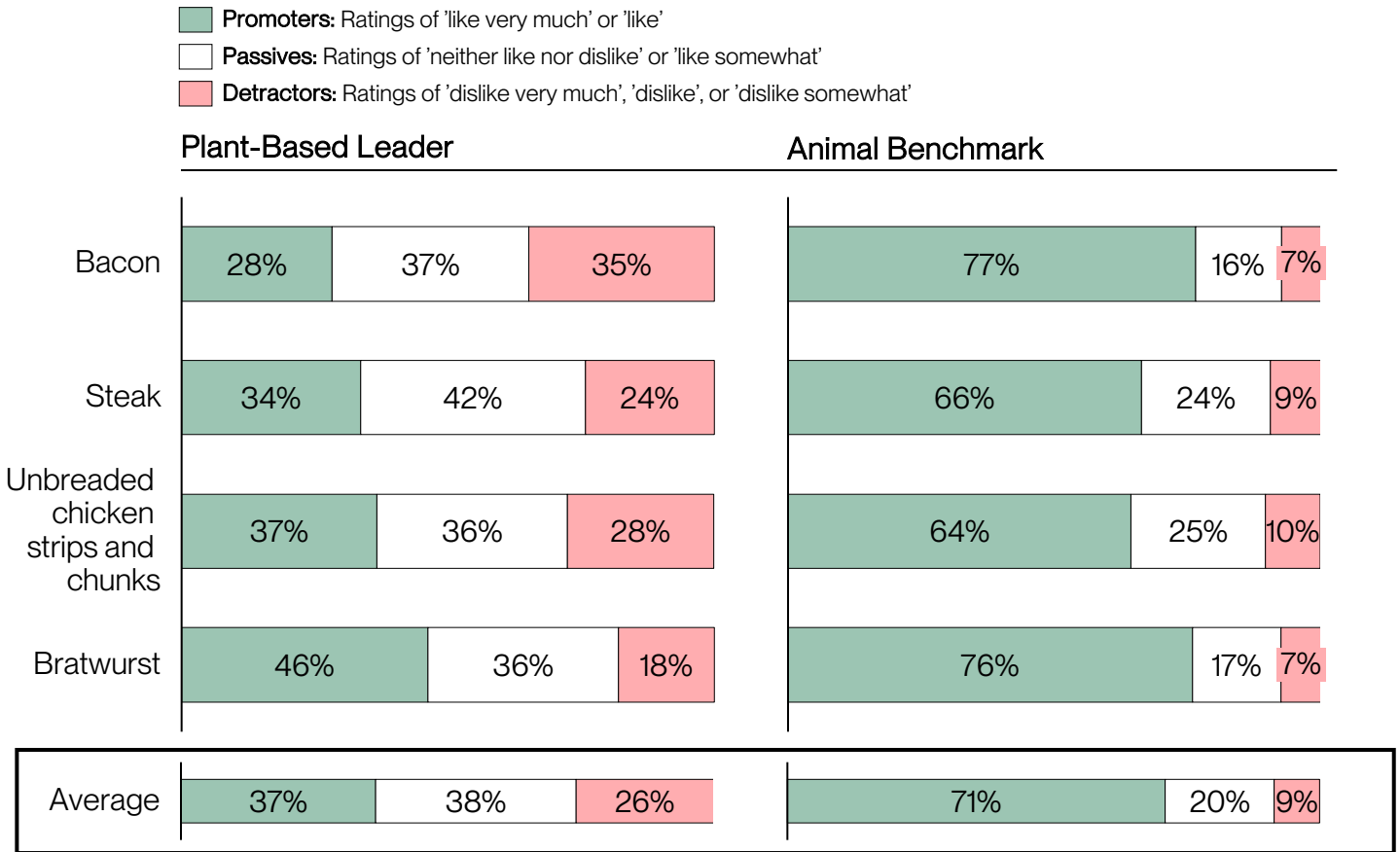
There is wide variation in liking between plant-based categories

- The top plant-based categories were rated 'like very much' or 'like' nearly 2x more often than the bottom-performing category (Bacon)

Industry-wide innovation needed in key categories

Categories with the biggest gaps from leader to average products

How would you rate your **OVERALL LIKING** of XXX?, % of participants (N=100)¹



Takeaways

Even leader products had large gaps in liking compared to the animal benchmark in many categories

- Just 37% rated the plant-based leader as 'like very much' or 'like,' versus 71% for the animal

Upstream innovation in ingredients or processing could close gap

- Lack of strong leader products indicates consistent challenges faced across manufacturers

Whitespace for leader product to emerge and grow the market

- No leader product is currently performing closely to the animal in the categories above



Opportunity to target early adopters while overcoming resistant segments in the long term

Most interested in plant-based meat

- Middle-aged consumers (35-55)
- Females
- Flexitarians
- Consumers prioritizing health

Least interested in plant-based meat

- Younger consumers (18-35)
- Males
- Consumers prioritizing taste, price, and familiarity

Lower purchase intent  Higher purchase intent Higher animal preference  Higher plant-based preference

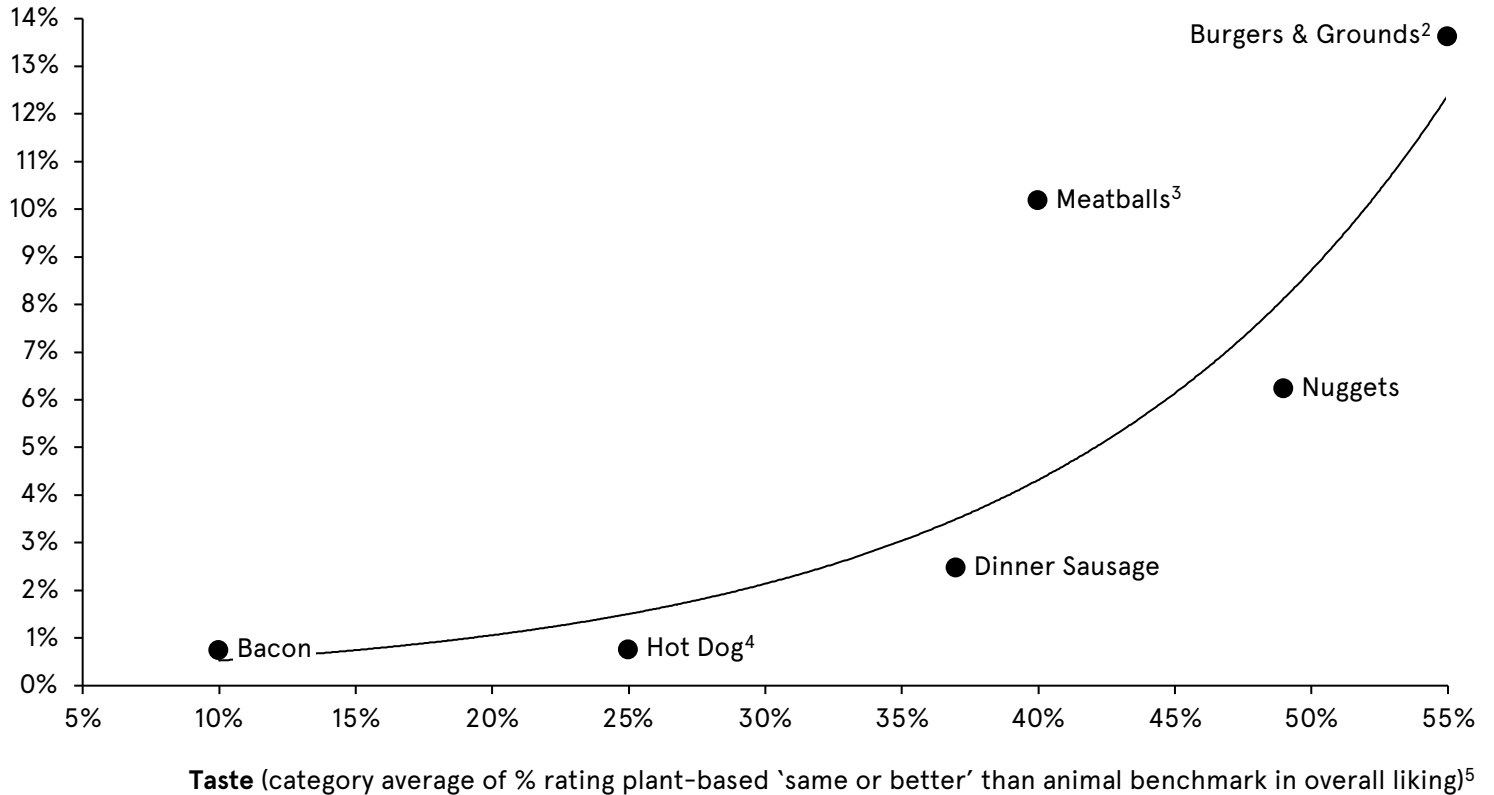
How likely would you be to purchase XXX?, Mean Purchase Intent (1-7)

Demographic	Segment	Plant-based meat product	Conventional meat product	Difference
Age	18-25	4.6	5.8	-1.2
	26-35	4.7	5.9	-1.2
	36-45	4.8	5.7	-0.9
	46-55	4.8	5.7	-0.9
	55+	4.7	5.7	-1.0
Gender	Male	4.7	5.9	-1.2
	Female	4.8	5.7	-0.9
Dietary Preference ¹	Omnivore	4.6	5.9	-1.3
	Flexitarian	5.2	5.3	-0.1
Education	Some high school	4.2	5.5	-1.3
	High school	4.4	5.6	-1.2
	Some college	4.5	5.4	-0.9
	Bachelor's degree	4.9	6.0	-1.1
	Master's degree	4.8	5.8	-1.0
	PH.D or higher	4.5	6.1	-1.6
	Trade school	4.5	5.9	-1.4
Consumption Drivers	Health	4.9	5.7	-0.8
	Price	4.6	5.8	-1.2
	Taste	4.7	5.8	-1.1
	Convenience	5.0	5.8	-0.8
	Familiarity	4.2	5.6	-1.4
	Environment	4.9	5.7	-0.8
	Animal welfare	4.6	5.2	-0.6

Better-tasting categories capture more share from the animal

Relationship between 2024 Retail Sales Data and Sensory Performance in 2025 TOTI

Market Share (Plant-based category sales as percentage of all plant-based and animal-based sales)¹



Takeaways

Increase in product quality leads to greater category penetration

- Burgers, Meatballs, and Nuggets have 5-15x greater market penetration than lower performing categories like Bacon and Hot Dogs

Categories that fail to perform comparably with the animal product have much lower sales

- Categories that were only rated the 'same or better' than the animal product by 25% of participants have captured less than 1% of the market (e.g., bacon, hot dogs)

Dashboard access: Explore the full dataset [here](#)

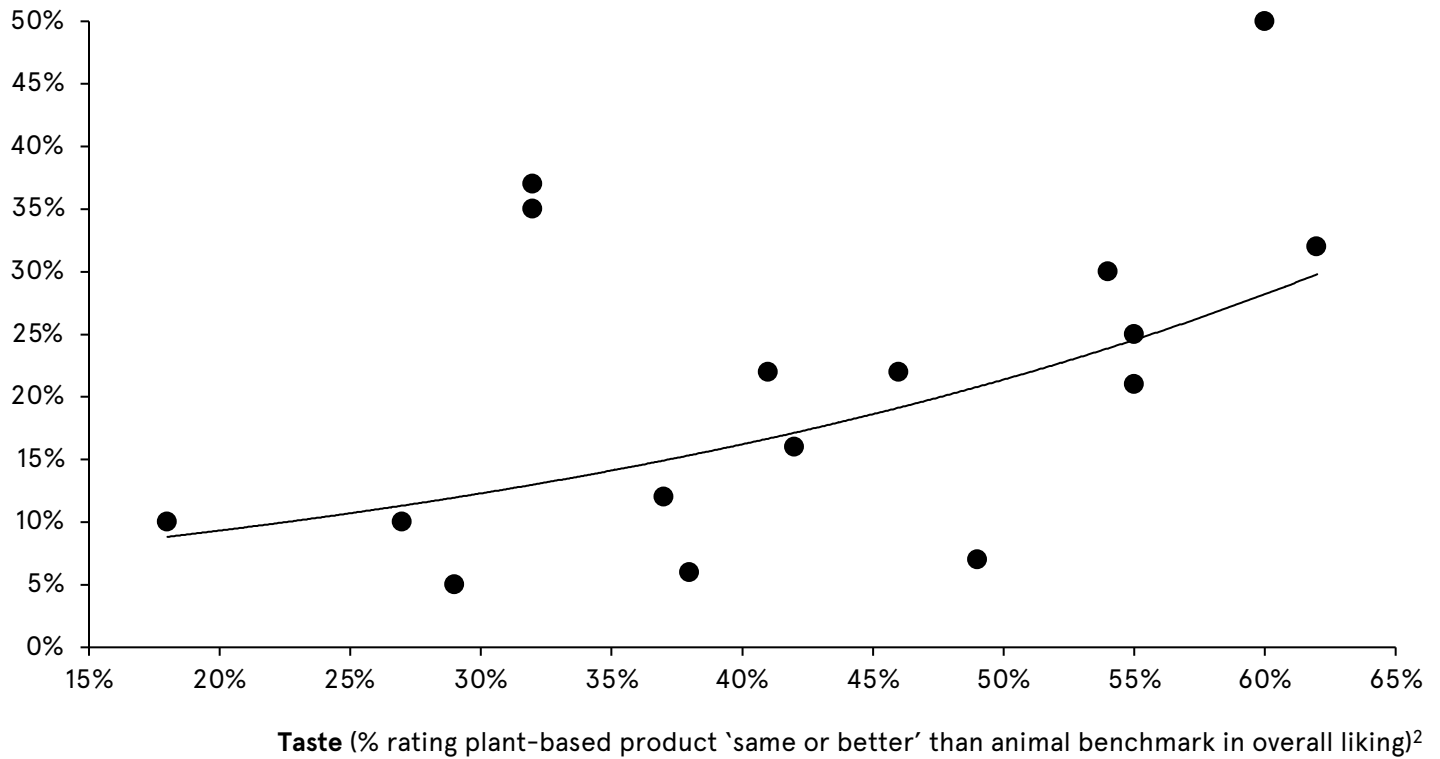
Source: NECTAR 2025 TOTI Sensory Database; Online Sources covering Retail Data; Team Analysis

1. Calculated as the total plant-based sales of the product category in retail divided by the total retail sales of the product category (animal and plant-based)
2. Categories combined to account for variation in consumer habits for buying pre-formed burgers versus shaping the patties from grounds
3. Likely overrepresents plant-based penetration since it only includes pre-made animal meatballs (excluding all meatballs formed from grounds)
4. Excludes products launched in 2025 since sales data is from 2024
5. Calculated as the percentage of consumers rating the plant-based product the same or better than the animal on overall liking

Better-tasting products sell more than their plant-based competitors

Relationship between 2024 Retail Sales Data and Sensory Performance in 2025 TOTI

Market share within plant-based category (Plant-based brand sales as share of plant-based category sales)¹



Takeaways

Investment in R&D has strong financial returns

- Sales increased \$1.5M for every 5% increase in 'same or better' rating in overall liking³

The plant-based leaders captured >1.5x more sales than other plant-based products

- Average market share was 28% for plant-based leaders (versus 18% for other products)

Dashboard access: Explore the full dataset [here](#)

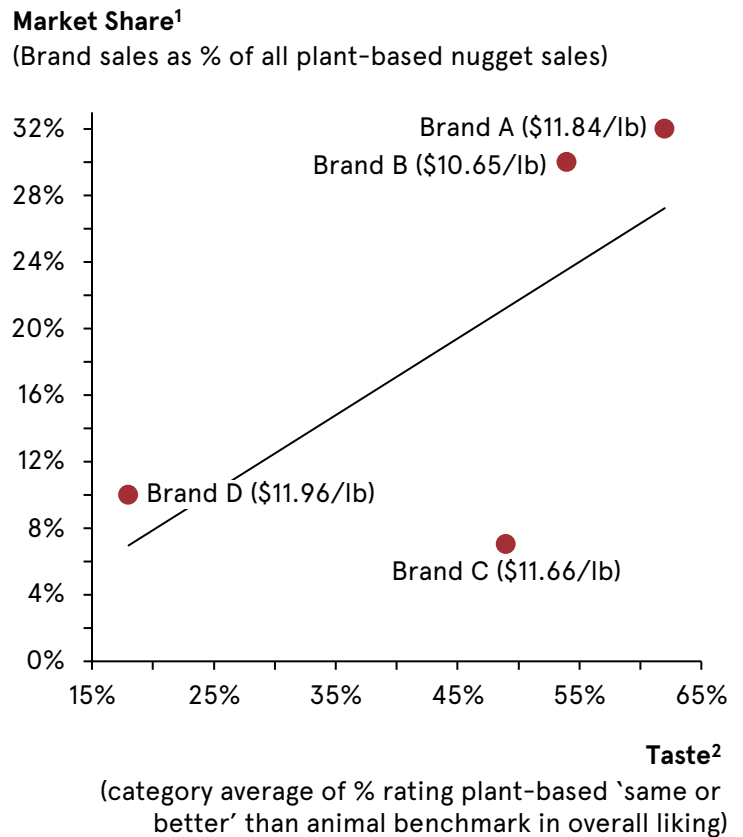
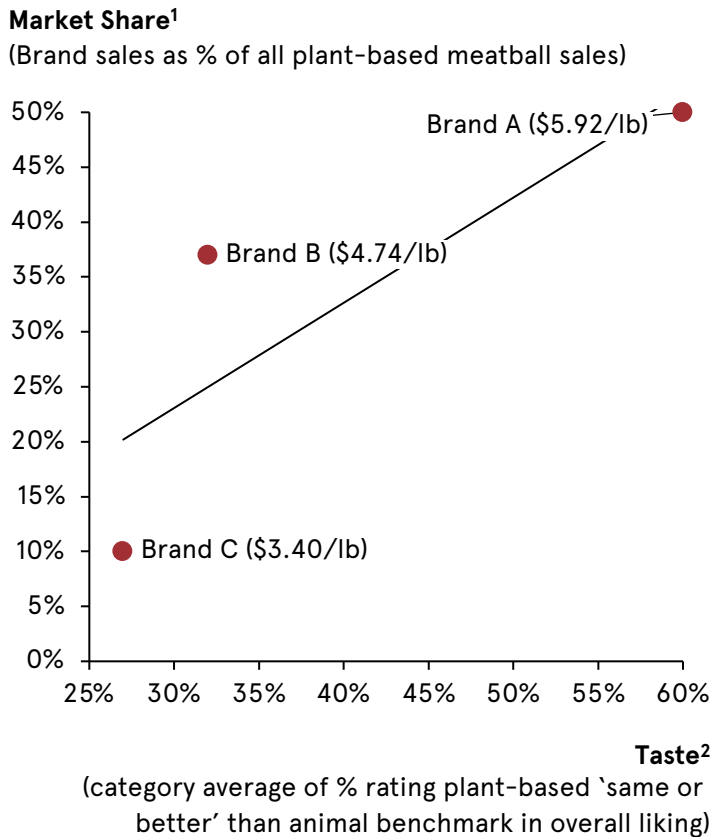
Source: NECTAR 2025 TOTI Sensory Database; Online Sources covering Retail Data; Team Analysis

1. Calculated by as the total plant-based sales of the brand divided by the total retail sales of the plant-based product category
2. Calculated as the percentage of consumers rating the plant-based product the same or better than the animal on overall liking
3. Calculated by extrapolating a linear relationship between taste and price which showed that a 5% increase in the 'same or better' rating led to 2.6% increase in market share within the plant-based category, equivalent to \$1.6M assuming an average market size of \$62M

Case study: Meatballs and Nuggets

Better tasting products capture more market share

Relationship between 2024 Retail Sales Data and Sensory Performance in 2025 TOTI



Takeaways

Investment in R&D has strong financial returns

- Sales increased \$2.1M for every 5% increase in 'same or better' overall liking rating in the nuggets category³
- Sales increased \$1.4M for every 5% increase in 'same or better' overall liking rating in the meatball category³

Tastes outweighs price in the meatball category

- Higher-performing meatballs outperform lower-performing products despite being more expensive

Dashboard access: Explore the full dataset [here](#)

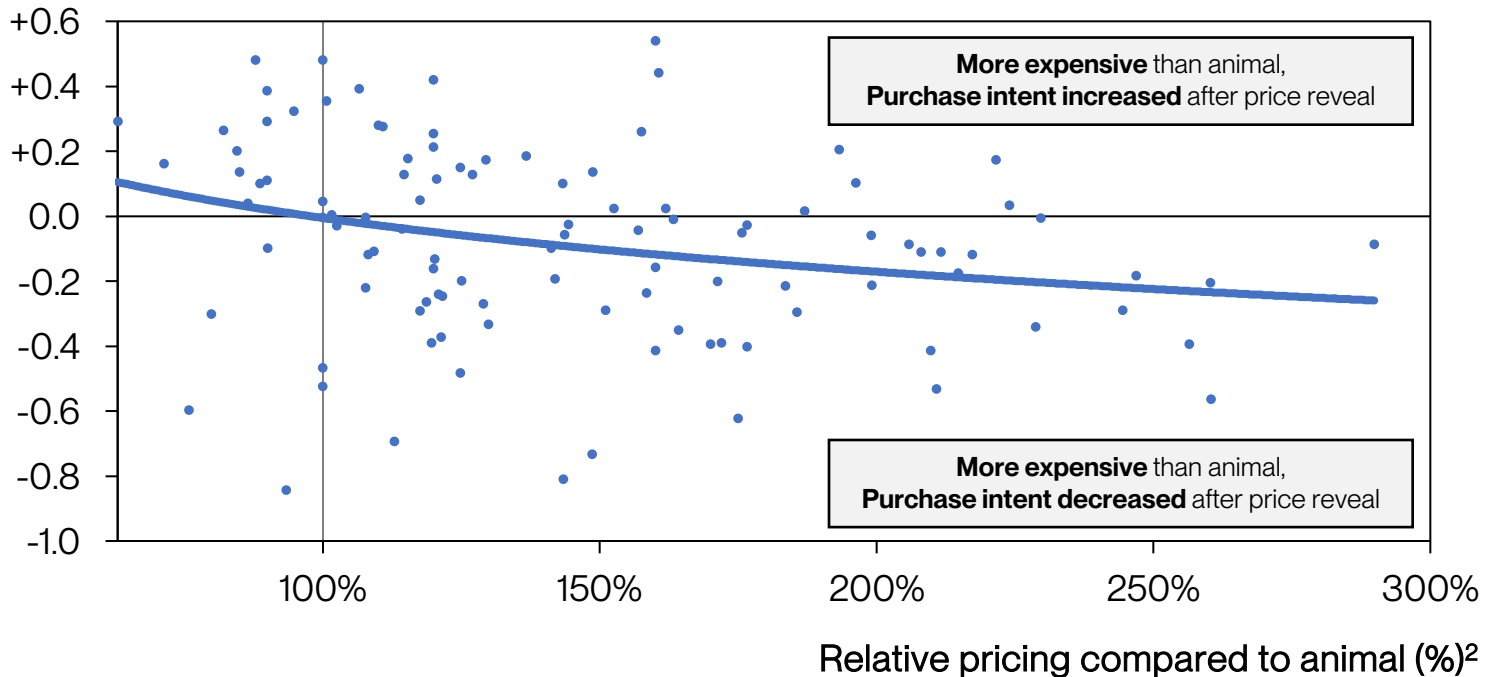
Source: NECTAR 2025 TOTI Sensory Database; Online Sources covering Retail Data; Team Analysis

1. Calculated by as the total plant-based sales of the brand divided by the total retail sales of the plant-based product category
2. Calculated as the percentage of consumers rating the plant-based product the same or better than the animal on overall liking
3. Calculated by extrapolating a linear relationship between taste and price. It showed that a 5% increase in the 'same or better' rating led to 4.9% increase in market share within the plant-based meatball category, equivalent to \$1.4M assuming an average market size of \$29M. It showed a 5% increase in the 'same or better' rating led to 2.3% increase in market share within the plant-based nugget category, equivalent to \$2.1M assuming an average market size of \$90M

Price had a limited impact on purchase intent

Stated Purchase Intent after revealing in-store price and package weight alongside the animal benchmark

Change in purchase intent (mean difference)¹



Note: Data may underweight impact of price since evaluation was conceptual

Takeaways

Price had a limited impact on purchase intent

- Overall changes in purchase intent as price increased or decreased were fairly small, ranging from +0.6pts to -0.9pts at maximum

Consumers struggle to evaluate price difference when package weights vary

- Low correlation coefficient for relationship between relative pricing and change in purchase intent

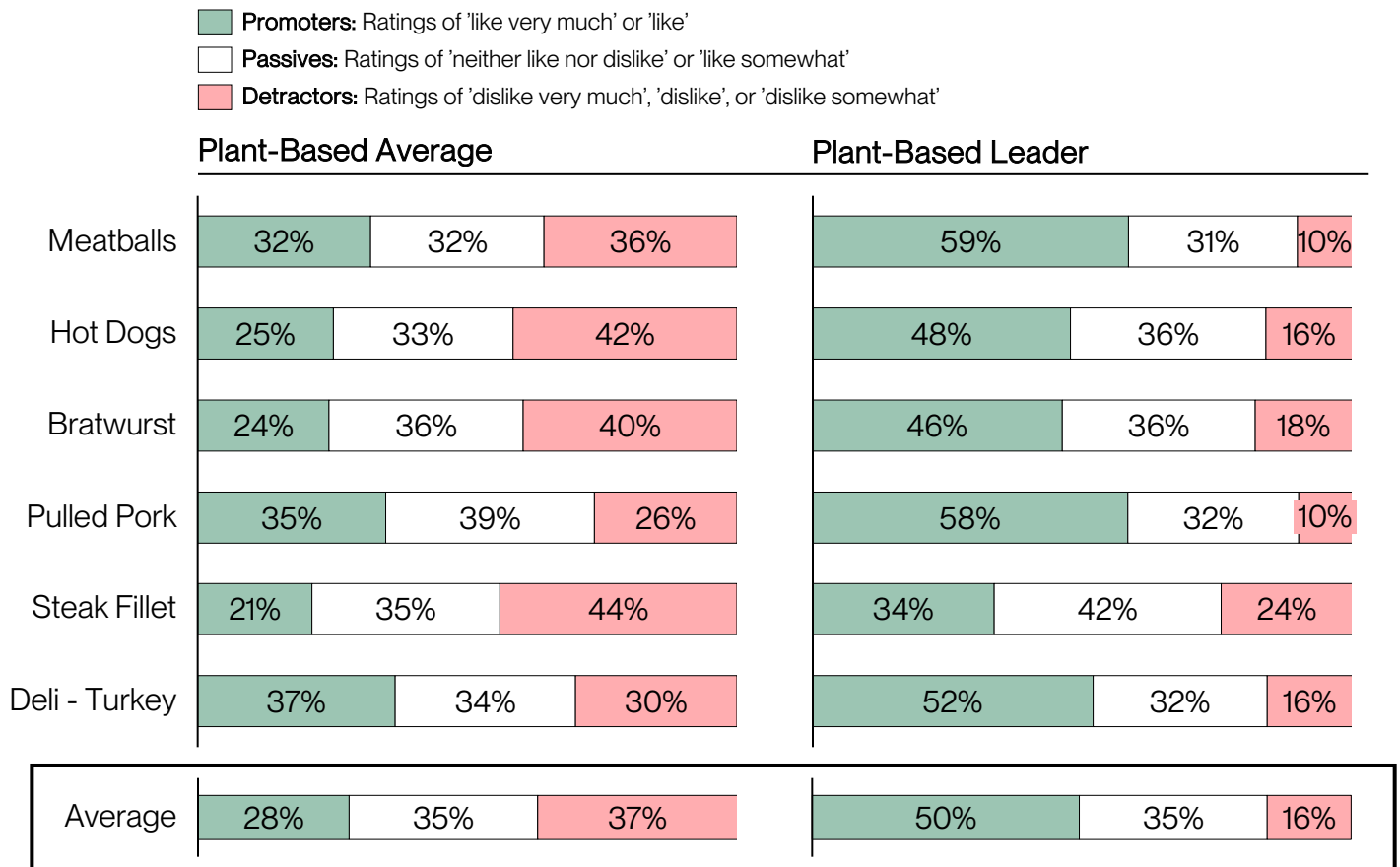
Dashboard access: Explore the full dataset [here](#)

1. Calculated by comparing Mean Expected Purchase Intent and Purchase Intent after Pricing Reveal. Mean Expected Purchase Intent is projected using historical data comparing overall liking ratings and purchase intent ratings.
2. Calculated as Price of Animal Product per Gram divided by Price of Plant-Based Product per Gram. Pricing data pulled from comparable stores on Instacart or other websites as needed. When not available, manufacturers were consulted on expected price differences.

Improvement is achievable

Categories with the biggest gaps between leader to average products

How would you rate your **OVERALL LIKING** of XXX?, % of participants (N=100)¹



Takeaways

Large gaps between average and leading products show improvement is feasible

- Plant-based leaders were rated 'like very much' or 'like' by 50% of participants, versus just 28% for the average plant-based product

Flavor provided an opportunity for leading products to differentiate

- Categories with bolder flavors had bigger gaps in liking between the average and leading products

More R&D needed in beef and pork relative to chicken

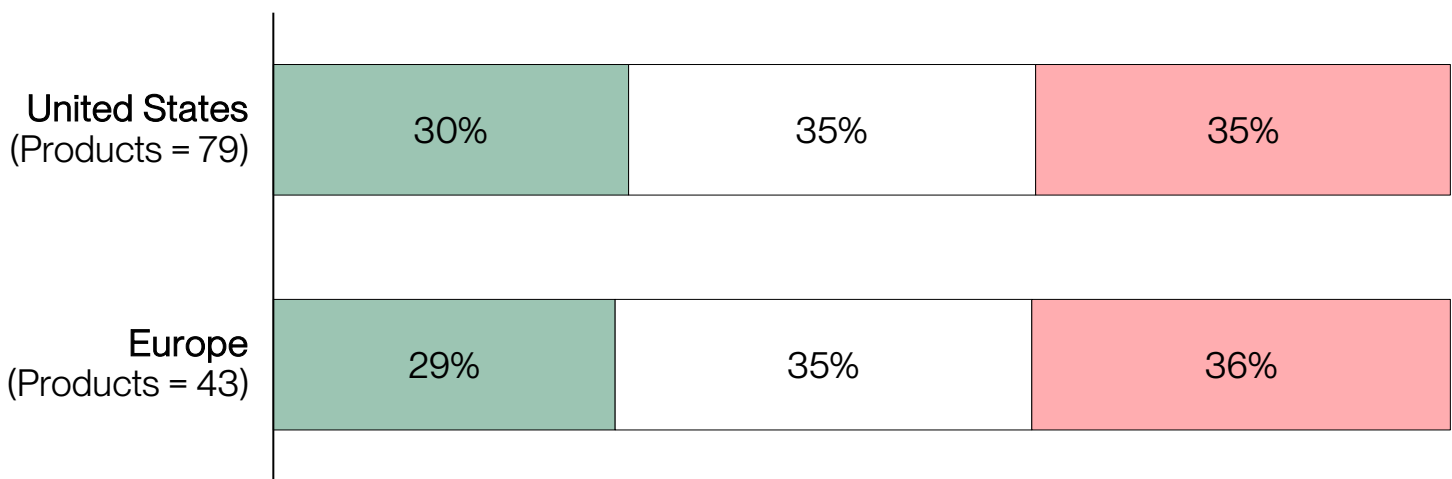
- No chicken products appeared amongst the products with big gaps from the average to leader

European and US products are equivalent in overall liking

How would you rate your **OVERALL LIKING** of XXX?, % of participants

- Promoters:** Ratings of 'like very much' or 'like'
- Passives:** Ratings of 'neither like nor dislike' or 'like somewhat'
- Detractors:** Ratings of 'dislike very much', 'dislike', or 'dislike somewhat'

Plant-Based Average
(N=11,340)



Takeaways

European and American products were equally liked

- No meaningful differences in liking for products based on region

Limited differences in taste preferences between US and EU consumers likely

- Equivalent performance of American and European products indicates that IP is exportable

European products can compete in the US market

- Though developed in Europe, these products performed equally well with American consumers as products developed in the United States

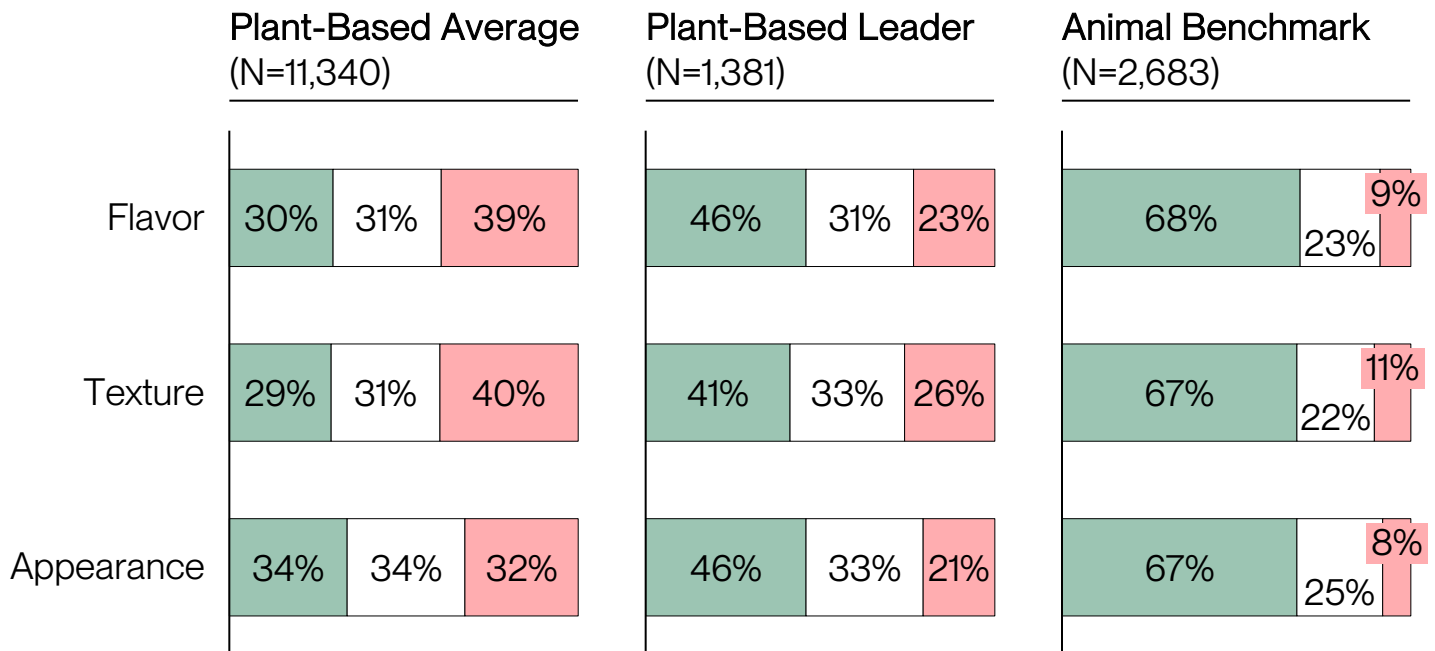
Product Development Opportunities

R&D Roadmap to grow sales

Improvements to flavor and texture should be prioritized

How would you rate your **OVERALL LIKING** of XXX?, % of participants

■ **Promoters:** Ratings of 'like very much' or 'like'
■ **Passives:** Ratings of 'neither like nor dislike' or 'like somewhat'
■ **Detractors:** Ratings of 'dislike very much', 'dislike', or 'dislike somewhat'



Takeaways

Leading plant-based products tend to differentiate against average products on flavor

- The gap in share of promoters (ratings of 'like very much' or 'like') from the plant-based average to the plant-based leader was largest on flavor (1.5x more 'promoters')

Texture improvements are the biggest opportunity for the plant-based leader to close the gap to the animal benchmark

- Texture was rated lower than flavor and appearance for the plant-based leader

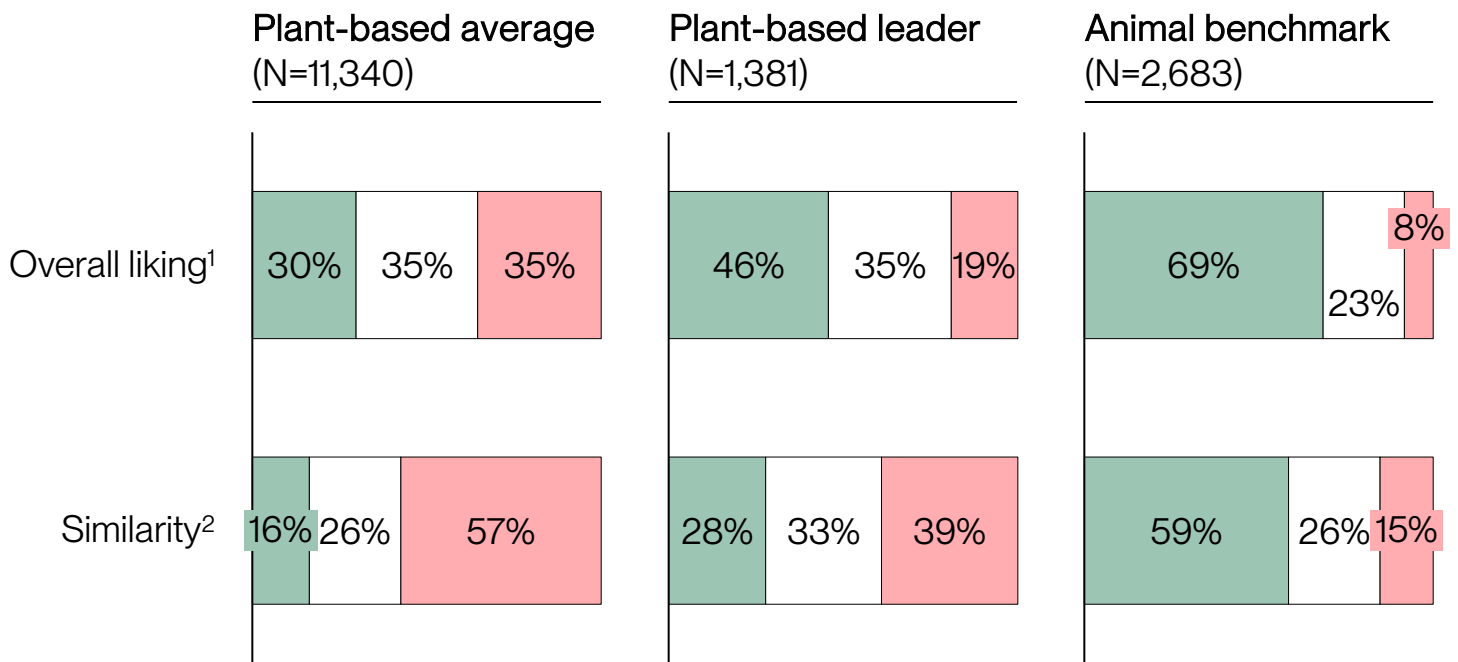
Appearance is the lowest priority for R&D

- Appearance was rated higher than flavor or texture for the plant-based average

Similarity remains a challenge, even for leading products

Comparison between similarity and liking ratings

■ **Promoters:** Ratings of 'like very much' or 'like'
■ **Passives:** Ratings of 'neither like nor dislike' or 'like somewhat'
■ **Detractors:** Ratings of 'dislike very much', 'dislike', or 'dislike somewhat'



Takeaways

Further improvement is needed to truly mimic animal products, even for leading products

- Just 28% rated the leading products as 'very similar' or 'similar' while 39% rated them dissimilar to some degree
- The gap in similarity between leading plant-based products and the animal benchmark was much larger than the gap in liking

Products can be liked without being similar

- Nearly twice as many participants rated products as 'like very much' or 'like' than rated products 'very similar' or 'similar'

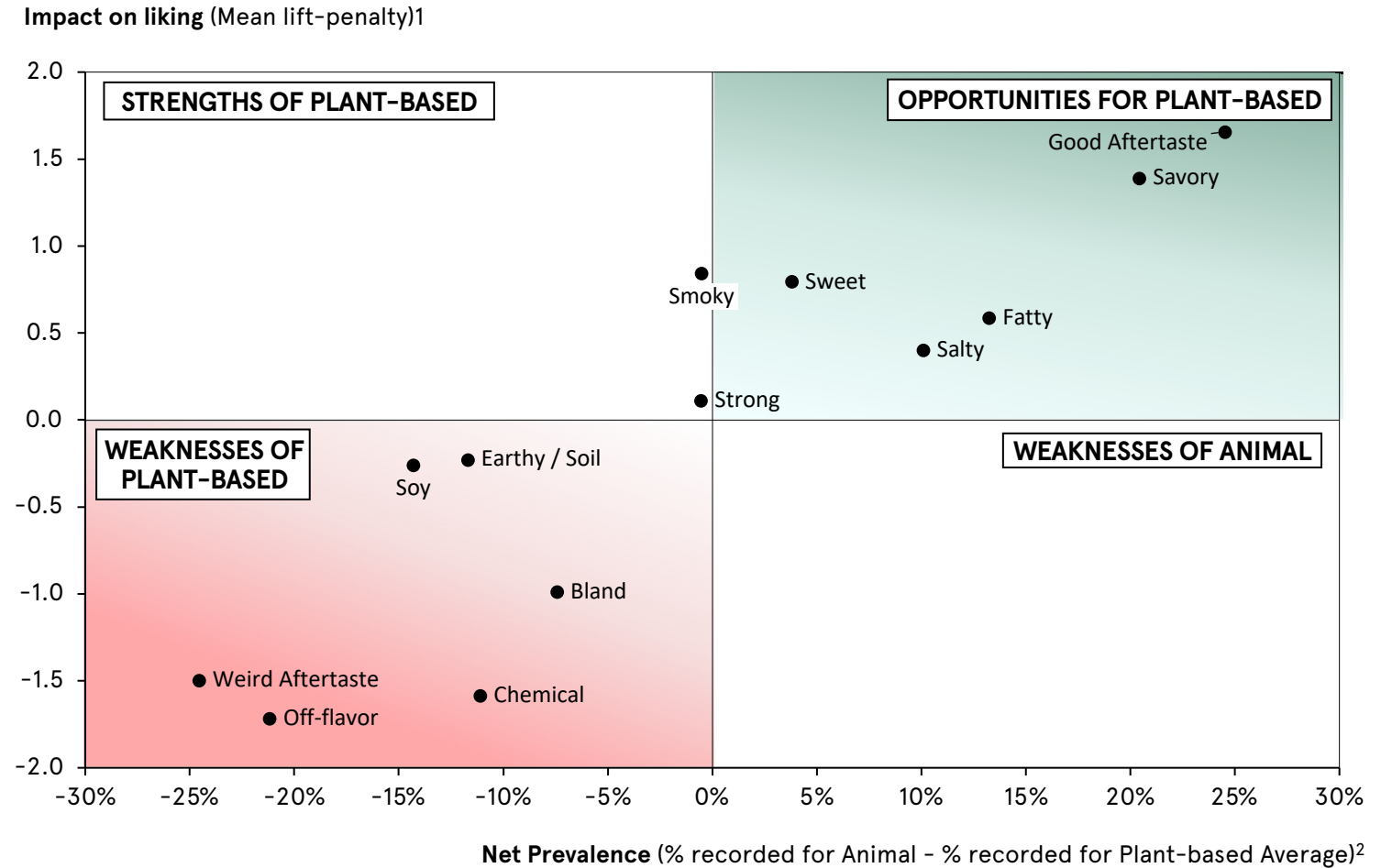
Dashboard access: Explore the full dataset [here](#)

1. Responses to: How would you rate your OVERALL LIKING of XXX?
2. Responses to: How SIMILAR is XXX to [product category] you typically consume?

Flavor: Top R&D Opportunities

Prioritization framework for identifying differences in sensory profile that have a large impact on liking

Penalty analysis on flavor using check-all-that-apply responses, Mean drop/lift and Prevalence



Explore category-level penalty analysis and qualitative feedback [here](#).

Takeaways

Top opportunities to improve flavor of plant-based products are:

Very high impact

- Improve aftertaste
- Increase savoriness
- Reduce off-flavors

High impact

- Reduce chemical-like flavors

Moderate impact

- Increase fattiness
- Increase saltiness
- Reduce blandness

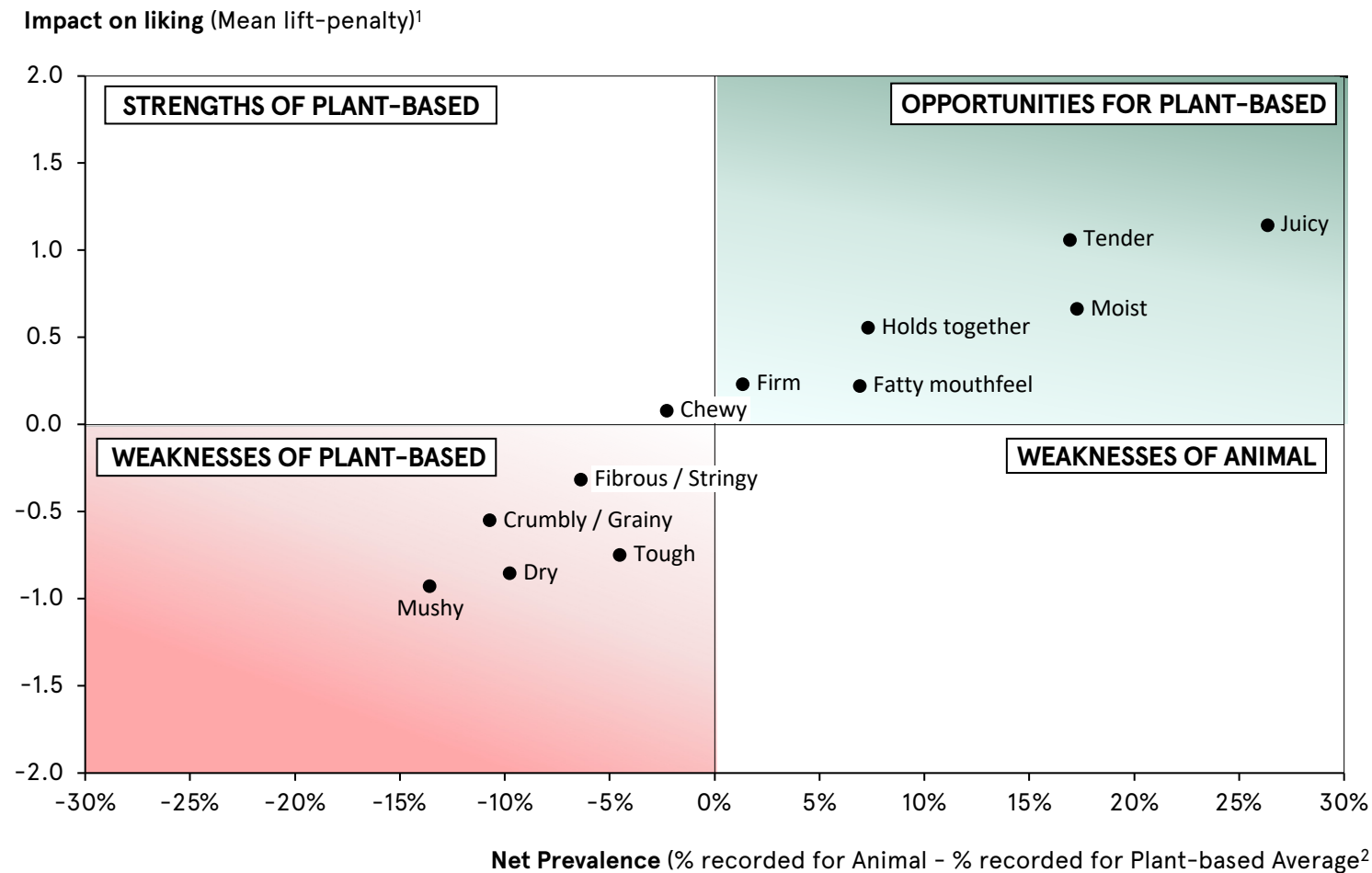
1. The average change in overall liking on 7pt scale for products for all responses using the relevant attribute as a descriptor compared to the mean liking for all products tested in this category. Calculated as mean liking of products with the associated response minus mean liking of all products for all responses.

2. Calculated as the share of participants selecting that attribute for the animal minus the share of participants selecting that attribute for the plant-based product

Texture: Top R&D Opportunities

Prioritization framework for identifying differences in sensory profile that have a large impact on liking

Penalty analysis on flavor using check-all-that-apply responses, Mean drop/lift and Prevalence



Explore category-level penalty analysis and qualitative feedback [here](#).

Takeaways

Top opportunities to improve texture of plant-based products are:

Very high impact

- Increase juiciness

High impact

- Increase tenderness
- Reduce mushiness

Moderate impact

- Increase moistness
- Reduce dryness
- Reduce crumbliness / graininess

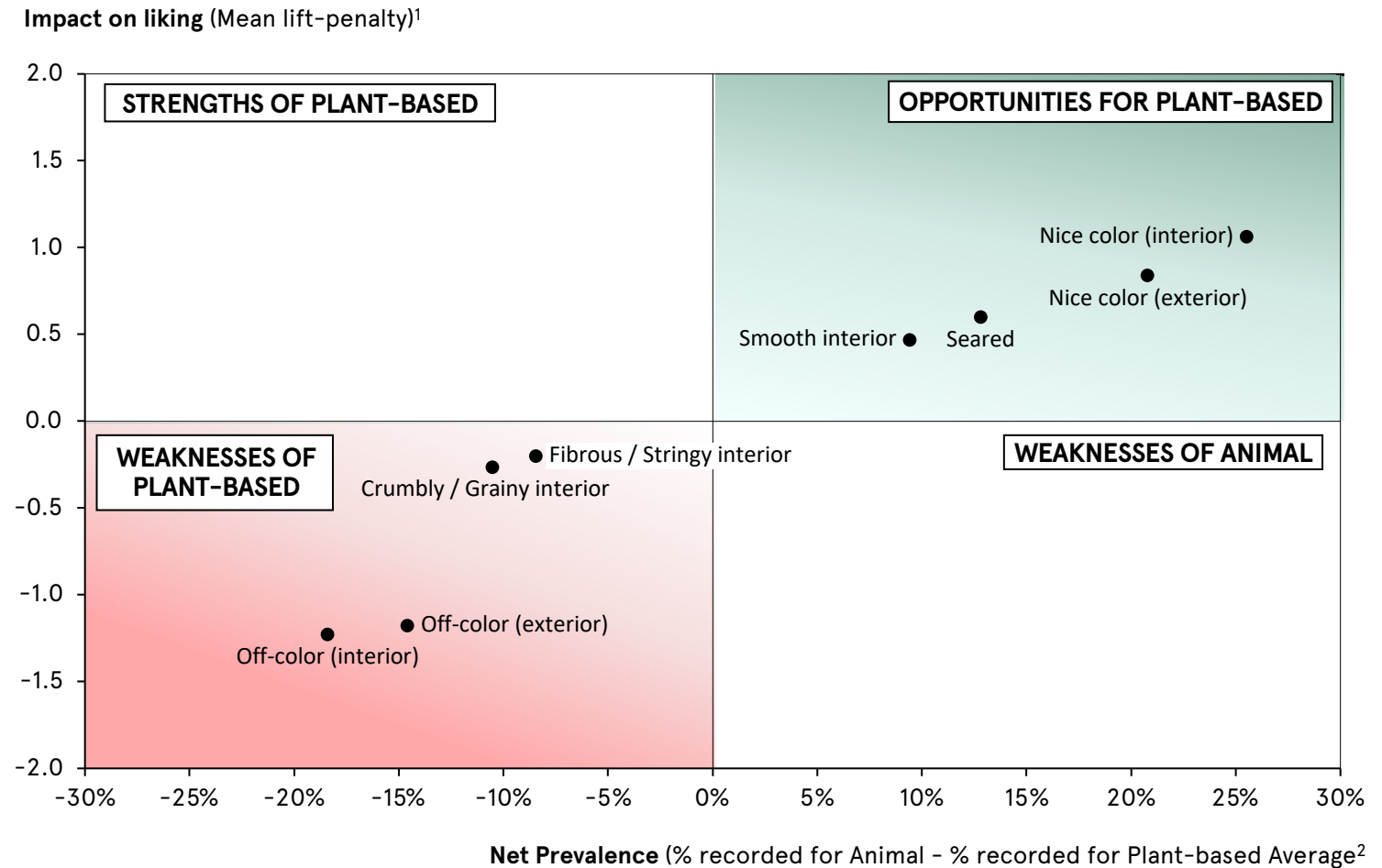
1. The average change in overall liking on 7pt scale for products for all responses using the relevant attribute as a descriptor compared to the mean liking for all products tested in this category. Calculated as mean liking of products with the associated response minus mean liking of all products for all responses.

2. Calculated as the share of participants selecting that attribute for the animal minus the share of participants selecting that attribute for the plant-based product

Appearance: Top R&D Opportunities

Prioritization framework for identifying differences in sensory profile that have a large impact on liking

Penalty analysis on flavor using check-all-that-apply responses, Mean drop/lift and Prevalence



Explore category-level penalty analysis and qualitative feedback [here](#).

Takeaways

Top opportunities to improve appearance of plant-based products are:

Very high impact

- Improve interior color

High impact

- Improve exterior color
- Improve searing

Moderate impact

- Create smoother interior

1. The average change in overall liking on 7pt scale for products for all responses using the relevant attribute as a descriptor compared to the mean liking for all products tested in this category. Calculated as mean liking of products with the associated response minus mean liking of all products for all responses.
 2. Calculated as the share of participants selecting that attribute for the animal minus the share of participants selecting that attribute for the plant-based product

The nutrition profiles of plant-based products generally led to slight increases in purchase intent

Impact of nutrition on product performance and purchase intent

Lower  Higher

Characteristic of nutrition panel	Change in purchase intent after nutrition panel reveal (mean difference) ¹	Impact on overall liking (mean difference) ²	Relevance to consumers (% selected) ³	% of plant-based products with attribute
Calories: 0 - 120	0.4	-0.2	15%	24%
Dietary fiber: 3 - 5g	0.2	0.1	7%	29%
Total fat: 0 - 7g	0.2	-0.2	15%	36%
Sodium: 150 - 330mg	0.2	-0.1	25%	23%
Protein: >15g	0.1	0.0	25%	40%
Few ingredients	0.1	NA	6%	NA
Protein: 10g - 15g	0.1	0.2	26%	30%
Lots of ingredients	-0.1	NA	10%	N/A
Total fat: >12g	-0.2	0.1	16%	27%
Unrecognizable ingredients	-0.2	NA	12%	NA
Sodium: >600mg	-0.4	0.1	33%	13%

Takeaways

Protein and Sodium are most relevant

- Sodium and protein, regardless of the quantity, were most relevant
- Protein levels above 10g were frequently notice by consumers and were associated with increases in purchase intent

Lower fat and calorie levels may be appealing but are also associated with lower product performance

- While both attributes led to a higher purchase intent (+0.2 to +0.4), they were also associated with a lower overall liking score by about the same magnitude (-0.2)

Dashboard access: Explore the full dataset [here](#)

1. Participants were surveyed on purchase intent after trying the product, then given the nutrition label for that product, and surveyed again on purchase intent to isolate the impact of nutrition facts on purchase intent
2. Difference in overall liking between products that include the corresponding attribute and the mean liking across all plant-based products
3. Percentage of the time the nutrition attribute was included and explicitly selected as a factor for purchase intent rating. Answer options were more generalized instead of including specific quantities (e.g., "Calorie count" or "Amount of protein")

Most ingredients are overlooked while a few meaningfully impact purchase intent

Impact of ingredients on product performance and purchase intent

Lower  Higher

Characteristic of nutrition panel	Change in purchase intent after nutrition panel reveal (mean difference) ¹	Impact of ingredient inclusion on overall liking (mean difference) ²	Relevance to consumers (% selected) ³	% of plant-based products with attribute
Potato	0.5	0.2	13%	30%
Mushroom	0.5	-0.3	25%	12%
Mycelium	0.4	-0.7	13%	3%
Coconut Oil	0.4	0.0	7%	30%
Pea	0.1	0.0	16%	43%
Soy	0.0	0.0	15%	66%
Sunflower Oil	-0.1	0.0	6%	52%
Wheat	-0.3	0.0	10%	50%
Methylcellulose	-0.3	0.1	6%	55%
Canola Oil	-0.4	0.0	7%	49%

Takeaways

Coconut Oil outperformed Sunflower and Canola Oil

- Highest consumer perception with no meaningful impact on taste

Ingredients had a limited impact on purchase intent for most participants

- No attribute was selected by more than 25% of participants

Mushroom and mycelium are appealing but underperforming ingredients

- Both were associated with a positive change in purchase intent (0.4-0.5pts) but lower overall liking ratings

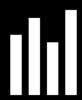
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1. Participants were surveyed on purchase intent after trying the product, and then given the nutrition label for that product, and surveyed again on purchase intent to isolate the impact of nutrition facts on purchase intent
2. Difference in overall liking between products that include the corresponding ingredient and the mean liking across all plant-based products
3. Percentage of the time the ingredient was included and explicitly selected as a factor for purchase intent rating

Final Takeaways

Conclusion

Conclusion



Making Sense of the Present

Continued innovation offers a pathway to a more sustainable future

This report demonstrates that taste parity with animal products is within reach—several plant-based meat products already perform remarkably well on overall liking, with some achieving no statistically significant difference from animal products in blind tastings.

As a non-profit and independent sensory research initiative, NECTAR's commitment to objective, bias-free evaluation provides the industry with trustworthy data upon which to base critical decisions. Our blind testing protocols, diverse participant base, world-class advisory board, and rigorous statistical methodologies create a level playing field where products are judged solely on their merits. This approach cuts through marketing claims and industry hype to deliver insights grounded in real consumer experiences that have the potential to drive meaningful impact.



Taking Action for the Future

Investment in taste-forward innovations delivers tangible returns

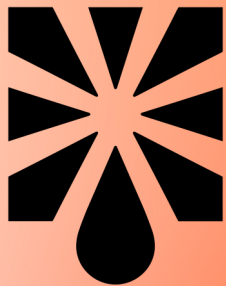
The data reveals a compelling business opportunity: better-tasting categories achieve 10x greater market penetration, on average, while leading products within categories capture 1.5x more market share on average.¹ The path forward requires focused R&D efforts and continued investment in product refinement.

For the plant-based category to realize its full potential, all stakeholders must play a role:

- **Brands and manufacturers** must embrace an iterative, taste-centric development approach. The report's pre-competitive sensory insights provide a roadmap for focused innovation where it matters most.
- **Retailers and foodservice operators** should recognize their crucial role as venues for consumers to discover plant-based innovations and prioritize products that deliver on taste claims.
- **Investors and funders** looking for climate solutions would be well-served to consider the outsized impact potential of plant-based products that can achieve mainstream adoption through superior taste.
- **Researchers and academics** can build upon NECTAR's foundational work, using our methodologies and findings to advance understanding of consumer preferences and sensory science in sustainable foods.

To explore how this objective data can inform your strategy or to participate in future research, contact NECTAR's Director Caroline Cotto (caroline@nectar.org).

Key Stakeholders



NECTAR

NECTAR is a nonprofit initiative of Food System Innovations dedicated to accelerating the protein transition by leveraging large-scale sensory data to improve the taste of plant-based foods. NECTAR's mission is to empower the alternative protein industry by providing actionable data and fostering collaboration. Through its research and awards programs, NECTAR supports brands in enhancing consumer satisfaction and driving market growth. By focusing on taste, NECTAR aims to drive meaningful market adoption and accelerate the transition to a more sustainable food system. Learn more at www.nectar.org.



Food System Innovations

Food System Innovations (FSI) is a philanthropic impact platform investing in a humane and sustainable future of food. As an impact platform, FSI is a strategic hub that accelerates change by combining multiple tools and approaches, acting as both a funder and operator, directly implementing programs while empowering others through grants, investments, and capacity building. Learn more at www.fsi.org.



Palate Insights

Palate Insights is a product feedback platform pioneering authentic, affordable, and agile tools exclusively for the sustainable food industry. Palate helps companies get consumer feedback through pop-up events with their restaurant and grocer partners and chef feedback through their panel of 500+ Executive Chefs. Learn more at www.palateinsights.com.



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