

2021 Consumer Study: Blend Attitudes & Behaviors

Main Report



Mushroom Council
May 24, 2021

Prepared by Mark Lang, PhD

Project Background

As the Council adopts a more measured approach to marketing evaluation and planning, two types of regular consumer research are performed. One is a larger scale attitudes and behaviors study (A&U) and the other is a periodic smaller tracking survey. Separate studies for the Blend and General Mushrooms are completed on an alternating schedule.

The Blend consumer attitudes and behaviors study is repeated every three to five years depending on the marketing team's information needs for strategy, planning, and executional support. The original Blend attitudes and behaviors study was conducted in 2016.

Tracking surveys should be repeated every two to three years to support the regular setting and assessment of marketing goals and KPIs. The last Blend tracking study was completed in 2018.

Project Objective

The primary objective of the present research study is to field the second Blend consumer attitudes and behaviors study to compare to the 2016 and 2018 studies. This study will support the assessment of marketing goals and KPIs as Blend marketing transitions through its timeline into the mainstream consumer market.

This study will support the assessment of Blend mainstream market penetration, market strength, consumption, and shopper segmentation.

The secondary objective of this study is to investigate some questions of the moment, specifically the impact of nutritional labeling and promotion and a comparison to the plant-forward trend.

Research Methodology

This study was fielded across the USA in March 2021 with a sample of 1931 adults that closely resembles the US census population in composition and geographic distribution.

Participants from an established commercial consumer panel completed a 12-minute online survey. People that did not perform less than 25% of their household's food shopping were screened out. Some controls on age and income were used for representativeness.

A subset of questions has been maintained across this study and the 2016 and 2018 studies for tracking progress over time.

Rating questions were based on a 1 (Strongly Disagree) -10 (Strongly Agree) or similar scale.

Average ratings and Top2Box scores for items are reported. Top2Box scores are the percent of respondents that rated something 9 or 10 which indicates a strong agreement or intention for marketing purposes.

Study design, fielding, and analysis were completed by Mark Lang, PhD, Professor of Marketing at The University of Tampa, working with the extended Mushroom Council Marketing Team.

Blend Awareness & Trial

Q6 Have you **HEARD** of this concept of "**Blending**" ground meat and ground or diced mushrooms together to make burgers, meatballs, tacos, etc.?

2021 based on 1831 respondents that eat meat at least occasionally.

	2016	2018	2021
Yes, I have heard of this concept	32%	34%	42%
No, I have not heard of this concept	68%	66%	58%

Increases in awareness correspond with penetration into the mainstream population.

Q7 Where have you **seen or heard about** products with ground or diced mushrooms "Blended" into ground meat? Select any that apply.

2021 based on 819 respondents aware of the Blend.

	2016	2018	2021
Restaurant	31%	58%	54%
Cafeteria/College/Dining Hall	4%	13%	18%
Food store, supermarket	23%	33%	39%
Event	6%	11%	15%
Social media	20%	31%	41%
Newspapers	4%	10%	15%
Recipe websites	26%	33%	23%
Food blogs	17%	19%	22%
Other websites	5%	7%	9%
Cable & Local TV	28%	28%	16%
Radio & Podcasts	1%	6%	9%
Magazines	12%	9%	17%
Friend, family, or colleague	31%	21%	24%
YouTube	n/a	n/a	22%
Other	13%	6%	3%

Changes in form of exposure correspond with changes in marketing activity. e.g. Increase in impact of Social Media.

Q8 **When** did you first become **AWARE** of the concept "**Blending**" mushrooms into ground meat like in a burger, tacos, meatballs, etc.?

2021 based on 819 respondents aware of the Blend.

	2016	2018	2021
Within the past month	11%	23%	22%
Within the past 2-4 months	11%	21%	24%
Within the past 5-8 months	6%	14%	18%
Within the past 9-12 months	6%	10%	11%
Within the past year	13%	10%	7%
More than one year ago	12%	6%	7%
More than two years ago	41%	17%	12%

Marketing efforts continue to create Blend awareness with new consumers.

Q9 Have you **TRIED** the concept of "**Blending**" mushrooms into ground meat like in a burger, tacos, meatballs, etc.?

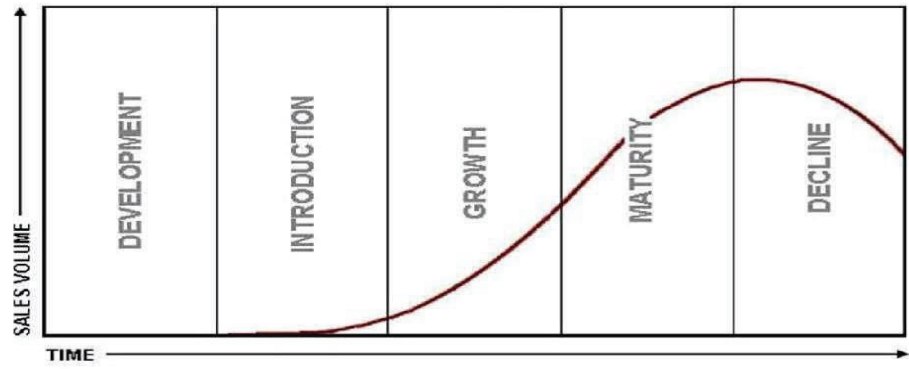
Select the statement that best applies to you.

2021 based on 760 respondents aware of the Blend and eat meat at least occasionally.

	2016	2018	2021
No, I have not tried and am not interested	11%	13%	10%
No, I have not tried, but would try if available to me	35%	27%	22%
Yes, I have tried just once, but won't likely have again	2%	10%	9%
Yes, I have tried just once, and intend to have again	11%	16%	16%
Yes, I have tried more than once	15%	14%	16%
Yes, I have tried more than once, and will continue to consume	26%	21%	24%
Total tried	54%	60%	66%

Trial continues to increase, but at a lower rate than the increase in awareness. Likely due to lower propensity of mainstream population to adopt new things. 2021 trial within overall population calculates to be 27% (42%x66%) compared to 20% in 2018.

The Blend: Long Term Strategy Timeframe



Introduction						Growth							
1	2	3	4	5	6	7	8	9	10	11	12	Yrs to Maturity	
2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025		
Innovators (2.5%)			Early Adoptors (13.5%)						Early Majority (34%)			Late Majority (34%)	
0.8%	0.8%	0.8%	4.5%	4.5%	4.5%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	Annual Trial	
0.8%	1.7%	2.5%	7.0%	11.5%	16.0%	27.3%	38.7%	50.0%	61.3%	72.7%	84.0%	Cumm Trial	

By 2020, the Mushroom Council planned for trial of the Blend to have occurred with 27% of the population and for that to grow to about 38% during 2021.

As of March 2021, trial was at 27% of the population that eats meat at least occasionally.

It should be noted that achieving higher levels of trial into the larger mainstream population may get harder with fixed budgets.

Q10 **Where** have you **tried** a product with mushrooms "**Blended**" into meat? Select all that apply to you.

2021 based on 525 respondents that have tried the Blend.

	2016	2018	2021
My own home	88%	64%	63%
A friend or family member's home	26%	35%	31%
Specialty Food Store	6%	19%	25%
Hotel & Resort	3%	5%	24%
Traditional Supermarket, Deli	8%	20%	22%
Cafeteria e.g Office Complex	3%	9%	16%
Local Family Restaurant/Diner	5%	14%	14%
Casual Dining e.g. Applebee's, Chilis	6%	15%	13%
Fast Casual e.g. Panera's, Corner Bakery	2%	8%	12%
Primary/Secondary School	1%	4%	11%
College/University	2%	7%	11%
Bar & Tavern	4%	11%	10%
Fine Dining e.g. white table cloth	7%	12%	9%
Festival/Event/Burger Bash	4%	8%	8%
Golf, Dining, Business club	1%	2%	7%
Food Truck	5%	8%	7%
Hospital / Retirement Home	1%	4%	5%
Other	2%	2%	2%

In-homes continues to be the most common palce where consumers. try the Blend.

Q11 **When** did you first **TRY** the concept of "**Blending**" blending mushrooms into ground meat?

2021 based on 525 respondents that have tried the Blend.

	2016	2018	2021
Within the past month	9%	24%	28%
Within the past 2-4 months	14%	23%	26%
Within the past 5-8 months	8%	10%	17%
Within the past 9-12 months	4%	7%	9%
Within the past year	10%	13%	5%
More than one year ago	10%	8%	7%
More than two years ago	45%	15%	9%

Marketing efforts continue to create trial with new consumers.

Blend Consumption

Q12 **How often** do you **consume** meat and mushroom "Blended" products at home or away from home?

2021 based on 320 respondents that have tried the Blend more than once.

Weekly	48%
Monthly	36%
Yearly	8%
Less than Yearly	6%
Do Not Consume at ALL	2%

Even if these numbers may be inflated, they indicate those who consume the Blend are regular users.

Q17 How much of your meat and mushroom "Blended" products consumption occurs at home?

2021 based on 295 respondents that consume the Blend at least yearly.

Percent of Blend consumption at home	76%
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Q18 In which ways below are you **most likely to consume** a meat and mushroom "Blended" product like a Blended Burger?

You may select up to TWO ways.

2021 based on 295 respondents that consume the Blend at least yearly.

	2016	2018	2021
Made at <u>home</u> from scratch with <u>fresh</u> mushrooms	65%	63%	58%
Made at <u>home</u> from scratch with <u>pre-chopped and packaged fresh</u> mushrooms	38%	44%	45%
Made at <u>home</u> from scratch with <u>pre-chopped and packaged frozen</u> mushrooms	6%	13%	26%
Cooked at <u>home</u> from a <u>pre-formed</u> blended burger patty from a food store or deli	19%	13%	24%
Consumed at <u>home</u> from a <u>pre-cooked</u> blended burger patty from a food store or deli	9%	9%	17%
Cooked at <u>home</u> from a <u>premade, prepackaged</u> blended burger patty from a food store freezer	n/a	n/a	16%
Prepared, served, and eaten at a <u>restaurant</u> or cafeteria	34%	17%	14%

New added format (2nd to last) disrupts comparisons to previous years. But there still looks like a shift to value added product formats.

Q19 Assume, for the purpose of this question, you were to **prepare and serve "Blended" products at home 10 times** over the next year. How many times would you serve a ground meat-mushroom blend in any of the following forms?

Total should add to 10.

2021 based on 295 respondents that consume the Blend at least yearly.

	2016	2018	2021
Burgers : _____	3.5	3.5	2.7
Meatloaf : _____	1.4	1.7	1.3
Tacos : _____	1.1	1.2	1.3
Pasta with ground meat sauce : _____	1.7	1.4	1.2
Stir Fry with ground meat : _____	0.7	1.1	1.1
Chili with ground meat : _____	1.0	0.9	1.1
Meatballs : _____	n/a	n/a	0.8
Other : _____	0.6	0.3	0.4

New added format (2nd to last) disrupts comparisons to previous years. But Burgers are still the dominant format for consuming the Blend.

Blend Assessment & Marketing

Q20 How much are the following statements about "**Blending**" mushrooms into ground meat (e.g. Blended burger or tacos) true for you?

2021 based on all 1931 respondents taking survey.

	2016		2018		2021	
	Top2Box	Average	Top2Box	Average	Top2Box	Average
You Understand the concept, how it works	81%	9.2	59%	8.1	53%	7.9
You Evaluate it favorably, like it	48%	7.6	37%	6.7	35%	6.7
You Believe its benefits	51%	7.9	38%	7.1	35%	7.1
You are Interested in it, in knowing more	48%	7.4	41%	6.8	38%	6.7
You Intend to have it in the near future	41%	7.0	35%	6.4	33%	6.4

Q21 Compared to a traditional beef burger, how much do you **BELIEVE** that "**Blending**" mushrooms into ground meat would...

2021 based on all 1931 respondents taking survey.

	2016		2018		2021	
	Top2Box	Average	Top2Box	Average	Top2Box	Average
Taste better	34%	6.9	30%	6.4	28%	6.4
Be healthier	53%	8.0	44%	7.4	40%	7.3
Be more environmentally sustainable	39%	7.2	35%	6.8	34%	6.9
Cost less	34%	6.9	28%	6.4	24%	6.2
Be new and interesting	48%	7.7	44%	7.3	39%	7.1

Assessments of the Blend have remained stable since 2018. They may inch down as more mainstream consumers encounter the Blend. They tend to be less food oriented.

Q22 Please select and rank the **TOP FIVE** reasons why you would (or did) consume meat and mushroom "**Blended**" products. Drag and drop your Top 5 reasons into the top of the listing below.

2021 based on all 1931 respondents taking survey.

	2016	2018	2021	2021-2018
Health: gets more vegetables into our diet	60%	58%	56%	-3%
Health: healthier way to consume meat for me and my family	59%	57%	53%	-3%
Health: acquire things good for my health e.g. nutrients, vitamins, etc	54%	51%	50%	0%
Health: avoid things bad for my health e.g. fat, calories, etc	53%	47%	50%	3%
Price: reduces the cost of meat, helps with food budget	50%	52%	46%	-6%
Tastes better: makes meat more savory, adds more flavor	50%	47%	45%	-2%
Tastes better: makes meat juicier, improves texture	44%	44%	45%	1%
Culinary: try a new and interesting food idea	43%	39%	41%	2%
Culinary: new recipe, new way to use mushrooms	35%	38%	40%	1%
Sustainability: reduces impact of meat production on the environment	30%	36%	39%	3%
Sustainability: addresses concerns over animal welfare	23%	30%	34%	4%

Health continues to be the top reason why people consume the Blend.
 The low cost benefit seems to be eroding, likely due to lower meat prices.
 While still at the bottom of the ranking, sustainability reasons may be ticking up in importance.

Q23 Please indicate any of the following you have encountered, participated in, or joined over the past year. Select any that apply.

2021 based on 819 respondents aware of the Blend.

Blended Burger product	38%
Blended Burger advertisement, information, or recipe	38%
James Beard Foundation Blended Burger Project	24%
" Blenditarian " advertisement or information	26%
Bon Appetit Blended Burger Contest	29%
Food Network advertisement or contest	25%

Mushroom Attitudes & Consumption

Q32 To what degree were you **AWARE** of the following about **fresh mushrooms**?

2021 based on all 1931 respondents taking survey.

	2018		2021	
	Top2Box	Average	Top2Box	Average
Consuming fresh mushrooms contributes to better nutrition and health	7.3	38%	7.2	38%
Mushrooms are a highly environmentally sustainable crop to produce	6.6	29%	6.9	34%
Mushrooms add a lot of flavor to a meal or recipe	7.6	45%	7.1	38%
Mushrooms are a moderately priced produce item	7.1	30%	7.0	33%
Mushrooms are a popular food	7.1	31%	7.1	35%
Mushrooms are a versatile food; can be used in many ways	7.9	49%	7.5	44%

As less food oriented mainstream consumers encounter the Blend, evaluation of flavor may be decreasing.

Q39 Would you say you are now using more, less or about the same amount of **fresh mushrooms** in your food preparation compared to one year ago?

2021 based on all 1524 respondents consuming mushrooms at least yearly.

	2018	2021
More	25%	29%
Less	6%	12%
About the same	70%	58%
Began cooking with fresh mushrooms for the first time	n/a	1%

Entering and existing COVID during this one year timing will make it difficult to interpret a shift in this measure of in-home behavior.

Q41 How do you think your cooking with **fresh mushroom AT HOME** will change **AFTER** things get back to normal?
Select one.

2021 based on all 1524 respondents consuming mushrooms at least yearly.

	2020	2021
More cooking with fresh mushrooms	25%	28%
About the same	63%	69%
Less	4%	3%
Will not consume at all	8%	0%

But some positive in-home impact from COVID may still be apparent.

Q57 To what degree did you **KNOW** the following about fresh mushrooms?

2021 based on all 1931 respondents taking survey.

	2018		2021	
	Top2Box	Average	Top2Box	Average
Mushrooms are a low calorie ingredient that can enhance weight loss when substituted for meats	32%	6.5	37%	7.0
Mushrooms are a natural source of Vitamin D supporting strong bones by helping absorb calcium	19%	5.4	32%	6.6
Mushrooms are dense with nutrients, vitamins, and minerals that help the immune system, blood pressure, metabolism and energy level	23%	5.9	32%	6.8
Mushrooms naturally contain antioxidants ergothioneine and selenium which protect cells from damage that may lead to serious chronic diseases including cancer	17%	5.1	31%	6.5
Adding mushrooms to recipes is a simple way to reduce fat and sodium intake	24%	6.0	35%	6.9

As expected, there have been strong positive shifts in health perceptions of mushrooms including Vitamin D.

Q58 Please rank the following by how much each **claim** on a **package label** would **increase** your **likelihood to purchase** fresh mushrooms. Enter the numbers 1 through 5 in the boxes to indicate your five most important. 1=most important.

2021 based on all 1931 respondents taking survey.

Organic	2.7
100% Vitamin D	2.8
Picked fresh daily	2.9
Excellent Source of Vitamin D	2.9
Naturally Fat and Cholesterol Free	2.9
From your local farmer	2.9
Great for your saute, salad and pizza	3.0
Natural Antioxidant Source	3.2
A Good Source of B-Vitamins	3.2
A Good Source of Phosphorus, promotes strong bones, teeth	3.3
A Good Source of Selenium	3.4

Note a lower number here indicates an average ranking closer to #1 spot.

Vitamin D has moved up significantly on the ladder of packaging health claims that we consider.

Q59 Are you aware of special fresh mushrooms that are **HIGH in VITAMIN D**?

2021 based on all 1931 respondents taking survey.

	2018	2021
Yes	26%	49%
No	74%	51%

Awareness and purchase of Vitamin D mushrooms have increased substantially since 2018.

Q60 Have you ever bought fresh mushrooms that are **HIGH in VITAMIN D**?

2021 based on all 1931 respondents taking survey.

	2018	2021
Yes	16%	44%
No	84%	56%

Increases in purchases may reflect confusion whether all or special mushrooms have Vitamin D.

Q61 How much are the following statements about fresh mushrooms that are **HIGH in VITAMIN D** true for you?

2021 based on all 1931 respondents taking survey.

	Vitamin D		The Blend	
	Top2Box	Average	Top2Box	Average
You Understand the concept, how it works	35%	6.8	53%	7.9
You Evaluate them favorably, like them	35%	7.0	35%	6.7
You Believe their health and immunity benefits	37%	7.3	35%	7.1
You are Interested in them, in knowing more	36%	6.9	38%	6.7
You Intend to have them in the near future, if available where you shop	34%	6.8	33%	6.4

Except for "Understanding", Vitamin D mushrooms performs as well as the Blend in terms of consumer reception.

Q67 Please rank the following by **importance** to you in order to have improved **health, nutrition, and immunity**.

Enter the numbers 1 through 5 in the boxes to indicate your **five most important**. 1=most important.

2021 based on all 1931 respondents taking survey.

Vitamin D	2.5
Vitamin C	2.7
Iron	2.9
Calcium	2.9
Riboflavin (B2)	3.3
Zinc	3.3
Copper	3.3
Selenium	3.3
Vitamin E	3.3
Potassium	3.3
Niacin (B3)	3.5

Note a lower number here indicates an average ranking closer to #1 spot.

Additional support for the increased strength of Vitamin D in health and immunity with shoppers.

Label Impact Experiment

Each respondent was exposed to only one of seven package/label images and asked to evaluate it along four dimensions (see example images below). As a result, each package/label was seen and rated by about 280 different respondents. In the analysis, each package/label was compared to the basic version (shaded first row in table below).

Label viewed	Mean Scores on scale 1-10			
	Evaluate	Health	Interested	Purchase
1Basic Control	7.1	7.3	6.7	6.8
2Short NutPanel	7.6 **	7.4	7.2 **	7.4 **
3Short NutPanel 50%D	7.4 *	7.3	7.1 *	7.2 *
4Short NutPanel 100%D	7.3	7.2	6.7	7.1
5Long NutPanel	7.3	7.2	6.8	7.1
6Long NutPanel 100%D	7.4 *	7.3	7.0	7.0
7Long NutPanel 100%D Burst	7.5 **	7.2	6.8 *	7.0

Mean Agreement with 1=Not at all and 10=Very Much

** 90% confident result is a statistically valid comparison to the Basic Control (10% chance of not being statistically valid)

* 80% confident result is a statistically valid comparison to the Basic Control (20% chance of not being statistically valid)

Evaluate	You Evaluate it favorably, like it
Health	Consuming this product would contribute to better nutrition, health , and immunity
Interested	You are Interested in it, in knowing more
Purchase	You would Purchase this product in the near future, if available where you shop

From the statistical test results in the table, **2Short NutPanel** and **3Short NutPanel 50%D** scored higher than the Basic label on Evaluation, Interested, and Purchase Intent.

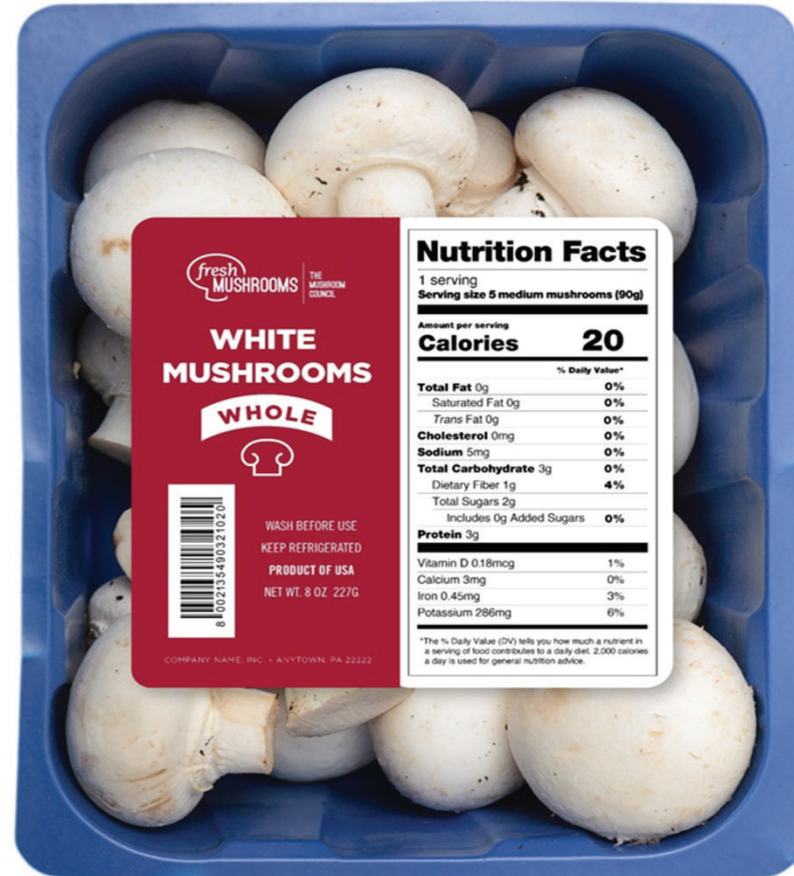
This may align with marketing experience that less can be more on labels - keep it simple. And even some mention of Vitamin D can be impactful.

7Long NutPanel 100%D Burst scored higher than the Basic label on Evaluation and Interested, probably based on the burst.

1Basic Control



2Short NutPanel



Each of the seven package/label images isolates and tests one additional feature to a label.

1Basic Control

2Short NutPanel

3Short NutPanel 50%D

4Short NutPanel 100%D

5Long NutPanel

6Long NutPanel 100%D

7Long NutPanel 100%D Burst

Basic label with no other information (above)

Short nutritional panel (above)

Short nutritional panel with 50% Vitamin D

Short nutritional panel with 100% Vitamin D

Long nutritional panel

Long nutritional panel with 100% Vitamin D

Long nutritional panel with 100% Vitamin D and a Vitamin D burst