

Cell-Cultured Research

January 2021



NATIONAL CATTLEMEN'S BEEF ASSOCIATION
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Background & Findings

Research Objectives, Methodology, and Key Findings



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Objectives & Methodology

Objectives:

1

Determine what term should be used for cell-cultured meat

2

Understand if consumers think this product should be differentiated from other meat

3

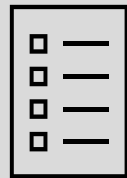
Secondarily, understand perceptions of these terms and cell-cultured meat

Who



Grocery Shoppers
Nationally representative sample balanced by age, gender, and region

How



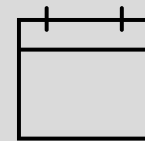
Online
Quantitative
Survey
*7 minutes
n = 1,000*

Why



USDA is moving forward with “cell-cultured” terminology and upcoming regulations

When



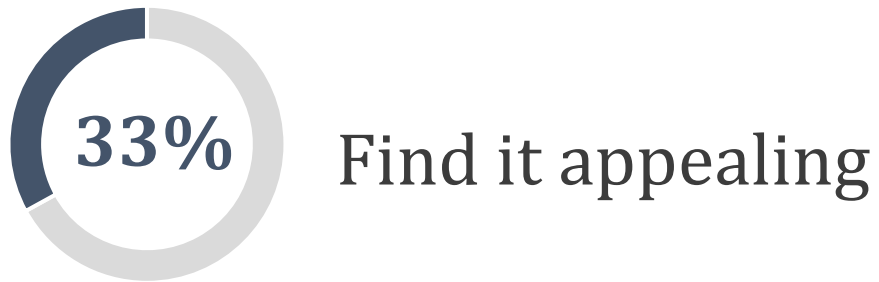
Survey Fielded
January 18th – 21st

Key Findings – Perceptions

Consumers are largely unaware of this kind of meat and will need to learn more before trying it; However, perceptions are already forming of it



Are aware of it



Find it appealing



Would buy it

Top Perceptions:

- Is processed
- Is environmentally friendly
- Is NOT natural
- Is NOT the same as traditionally raised meat

Need to Know:

- Safety
- Taste
- Price
- How it's made
- Is it healthy

Key Findings - Differentiating

With consumers limited understanding of this kind of meat and based on their preferences, it should be clearly differentiated from conventional meat



What Should be Regulated?

74% of consumers agree that restaurants and retailers should make it clear whether you are buying cell-cultured meat or conventionally produced meat



How to Regulate Is Less Clear

From government agencies to the restaurants and retailers themselves, to packaging and signage—consumers vary on how and who should regulate

Terms Testing

Initial Reactions to Claims and Definition



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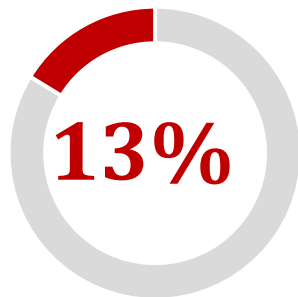
Awareness

Most consumers are unaware of various food innovations, particularly cellular food agriculture or in-vitro meat production

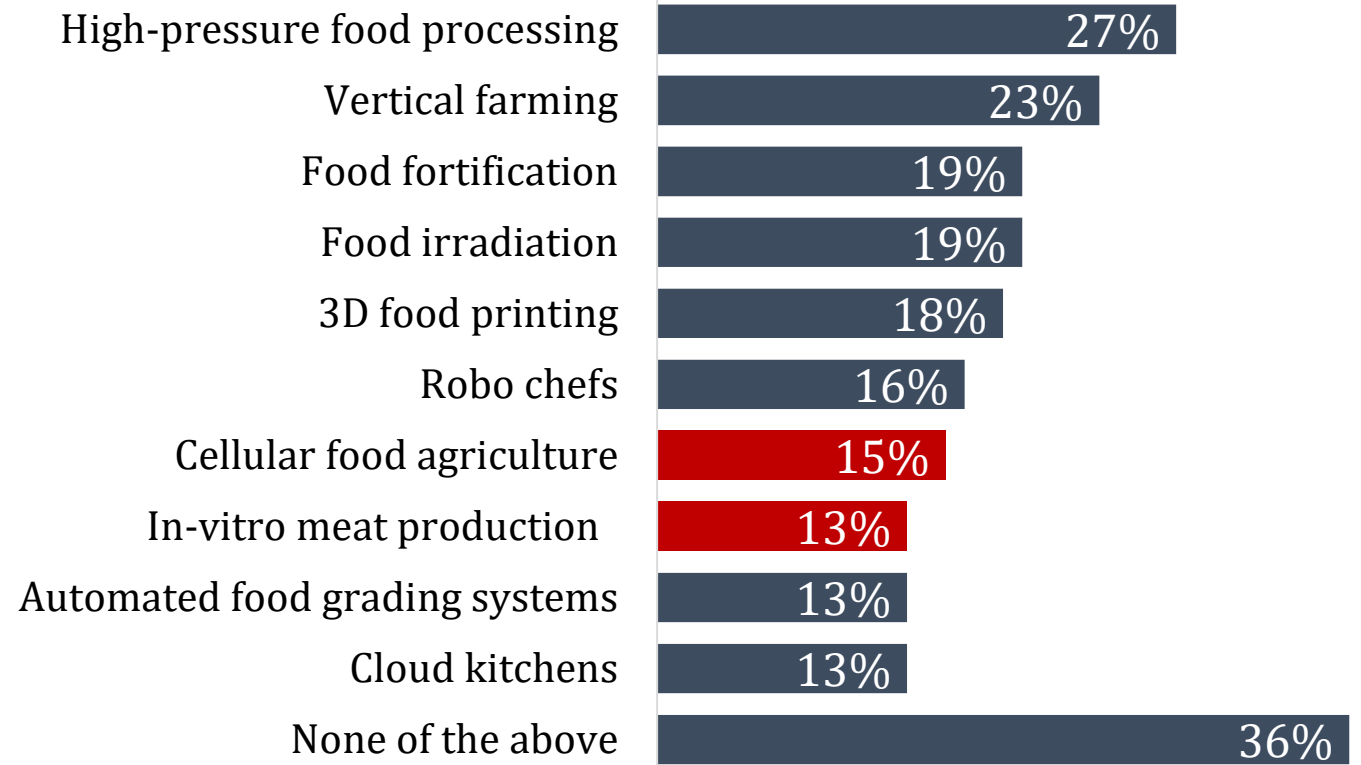
Cellular Food
Agriculture



In-Vitro Meat
Production



Aided Awareness



Defining the Terms

Consumer verbatims...

"Fake, plant based"

"Meat that is grown in a lab"

"I have no idea but possibly meat made by replication of cells"

"Meat that is made without animal by product"

"Fake meat"

"Plant based meat"

"I have no idea"

"Meat that is not meat but still taste like meat. Maybe it is healthier."

"Doing something with the animals' cells to make it grow faster."

"Meat that is carefully raised and the livestock are taking care of through a good diet and environment."

"Meat mixed with plant"



Defining the Terms

Across terms, “Cell-cultured” and “Lab-grown” aided consumer definitions the most; “Cell-based” was least defined

	Cell-cultured meat (A)	Lab-grown meat (B)	Cultivated meat (C)	Synthetic meat (D)	Cell-based meat (E)	In-vitro meat (F)
Showed partial/full understanding of term	15% CDF	14% CDF	4%	7%	12% CF	6%
Defined but not clearly understood	41% E	50% AE	50% AE	69% ABCEF	32%	46% E
Couldn't/Didn't define	44% BD	35% D	47% BD	25%	56% ABCD	48% BD



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Now please read the following term: [Insert one term: Cell-cultured meat, Lab-grown meat, Cultivated meat, Synthetic meat, Cell-based meat, In-vitro meat].
To the best of your ability, and without googling it, please provide a definition for this term. There are no right or wrong answers. (n=167 per term)

Initial Perceptions – One Term Shown

Across terms, many consumers believe they are processed or developed in a processing facility;
Some terms do garner more unique perceptions

	Cell-cultured meat (A)	Lab-grown meat (B)	Cultivated meat (C)	Synthetic meat (D)	Cell-based meat (E)	In-vitro meat (F)
Is developed in a processing facility	47% _{CDEF}	40% _C	26%	35% _C	35% _C	37% _C
Is processed	35% _C	31%	26%	47% _{ABCEF}	28%	29%
Has a low impact on the environment	26%	31%	25%	26%	26%	24%
Is a healthy choice	22%	20%	23%	23%	19%	20%
Is high in protein	22%	28%	24%	34% _{ACEF}	23%	24%
Is safe to eat	21%	22%	32% _{ABE}	27%	20%	29% _{AE}
Is from a real animal	17% _{BD}	10%	15%	8%	16% _{BD}	19% _{BD}
Is natural	17%	16%	24%	18%	19%	17%
Is a high-quality protein	15%	22%	22%	17%	22%	16%
Is great tasting	14%	12%	15%	14%	13%	12%
Is raised on a farm or ranch	13%	10%	19% _{ABDF}	8%	15% _D	10%
None of the above	13%	17%	13%	16%	18%	14%



Comparison of Terms & Perceptions – All Terms Shown

Consumers agreed with more when it came to cultivated meat, but also felt a lot of these attributes didn't apply to any of the terms

	Cell-cultured meat (A)	Lab-grown meat (B)	Cultivated meat (C)	Synthetic meat (D)	Cell-based meat (E)	In-vitro meat (F)	None of these (G)
Is developed in a processing facility	31% _G	38% _{CEFG}	29% _G	37% _{CEFG}	29% _G	26% _G	21%
Is processed	30% _G	36% _{EFG}	31% _G	39% _{ACEFG}	29% _G	28% _G	21%
Has a low impact on the environment	24%	31% _{CEF}	23%	27% _F	24%	22%	28% _{CF}
Is high in protein	23%	25%	33% _{ABDEF}	24%	25%	23%	29% _{DF}
Is safe to eat	19%	20%	30% _{ABDEF}	21%	22%	18%	34% _{ABDEF}
Is a high-quality protein	19%	21%	27% _{ABDF}	17%	21%	17%	34% _{ABCDEF}
Is a healthy choice	17%	17%	24% _{ABDEF}	16%	20%	16%	37% _{ABCDEF}
Is from a real animal	16% _D	13%	26% _{ABDEF}	10%	18% _D	16% _D	35% _{ABCDEF}
Is great tasting	14%	16%	25% _{ADEF}	15%	16%	15%	40% _{ABCDEF}
Is natural	13%	11%	23% _{ABDEF}	11%	15%	13%	41% _{ABCDEF}
Is raised on a farm or ranch	12%	13%	25% _{AVDEF}	10%	12%	14% _D	39% _{ABCDEF}



Definition Reactions

While more than half find the definition easy to understand, just over a third find it appealing

“Meat grown from the cells of animals, such as livestock, poultry, and seafood. It is made using novel technologies to create meat in a new way that is biologically the same as the meat that comes from animals raised on farms or ranches.”

58%

Agree this definition is easy to understand

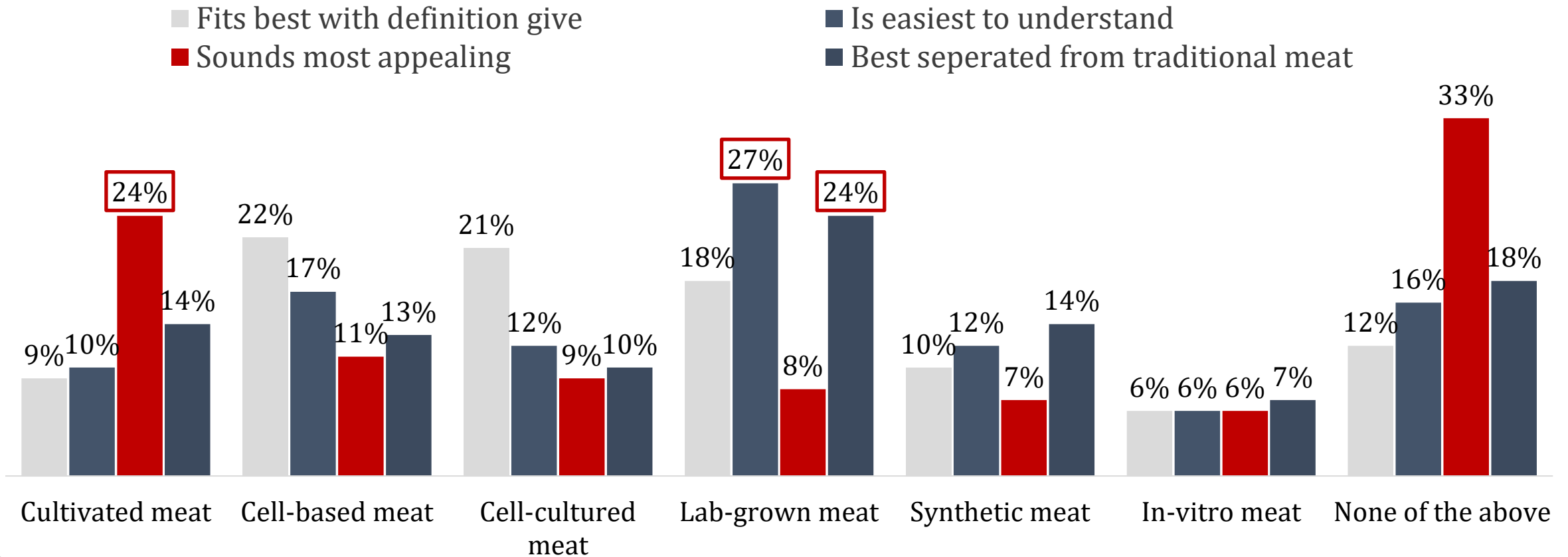
33%

Agree this meat sounds appealing



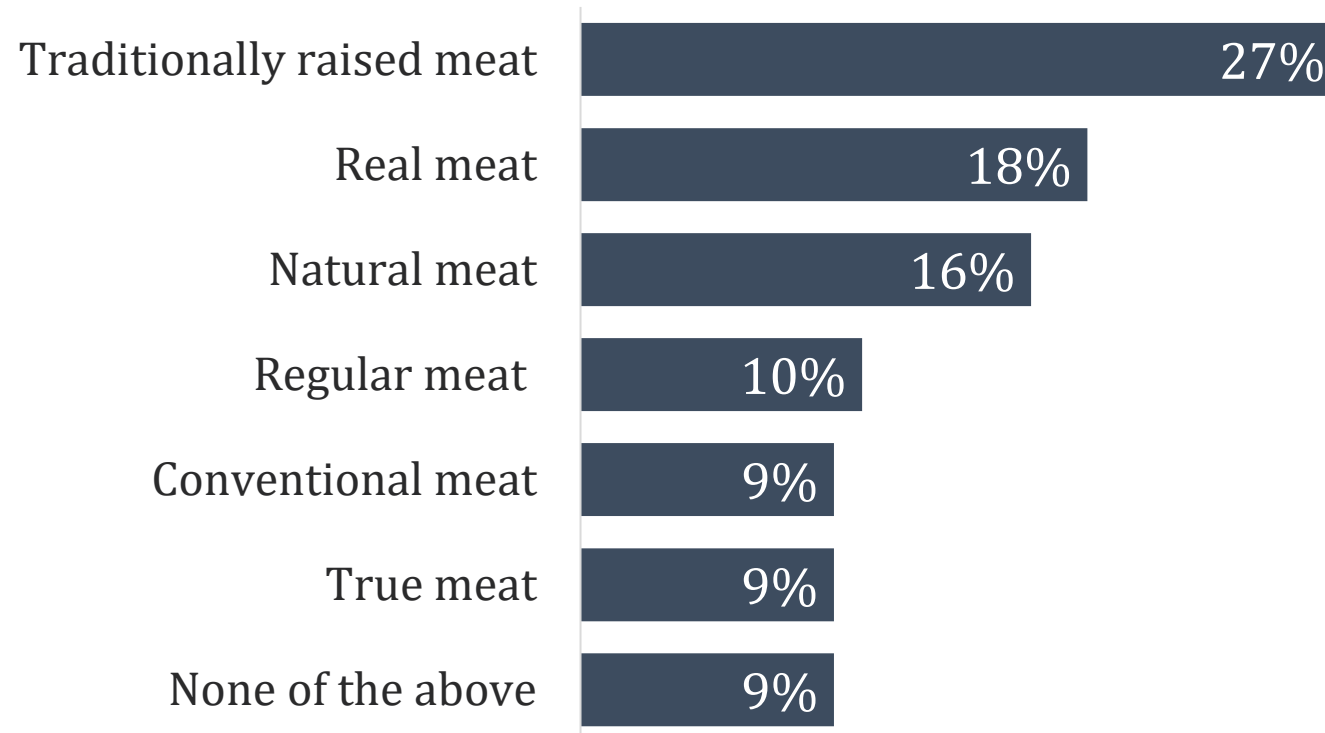
Other Term Reactions

Outside of fit, lab-grown is easiest to understand and best separated from traditional meat, while cultivated meat sounds most appealing



Terminology for Other Meat

Traditionally raised meat fits best with meat from animals raised on farms or ranches—likely because it highlights a process as well



Perceptions

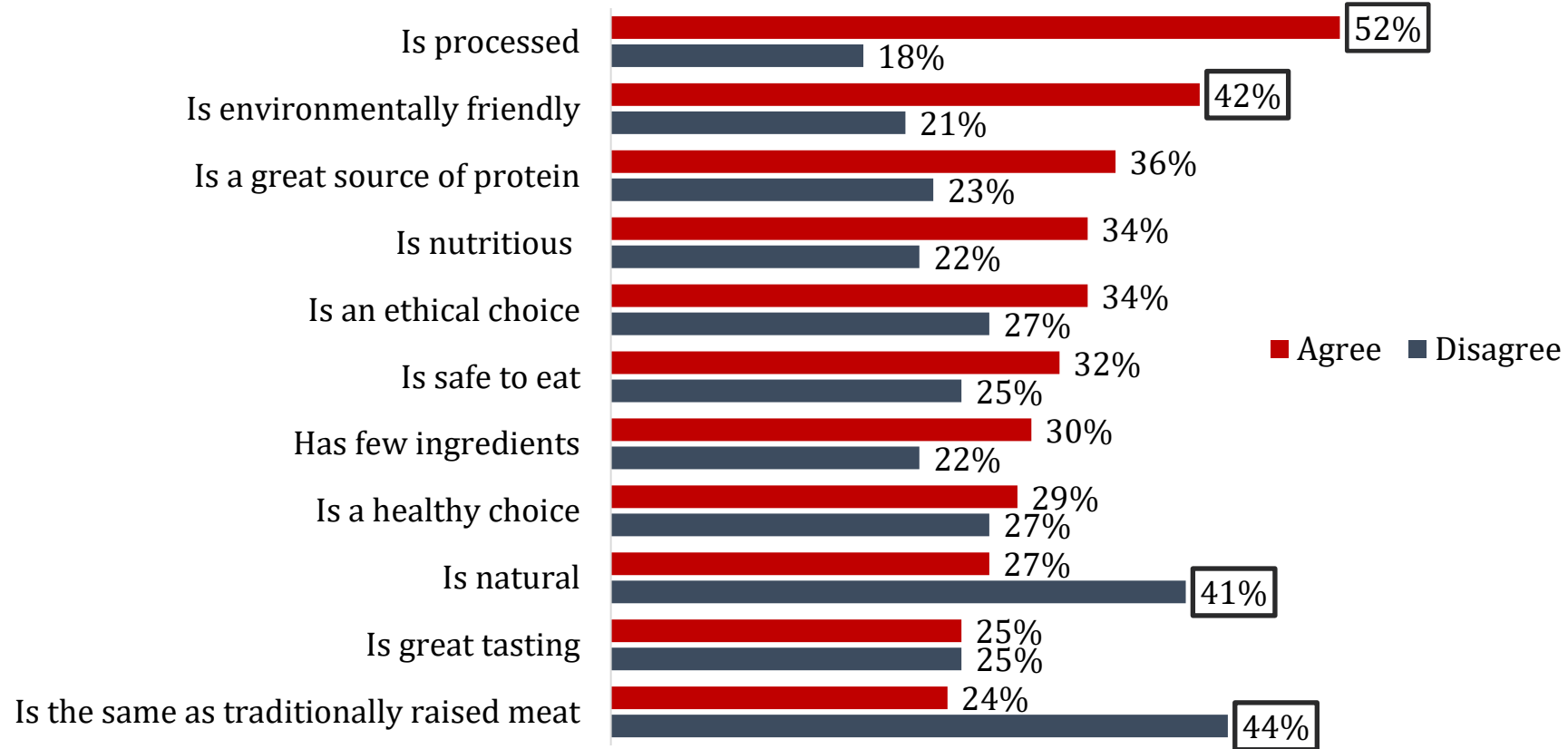
Additional Feedback on Cell-Cultured Meat



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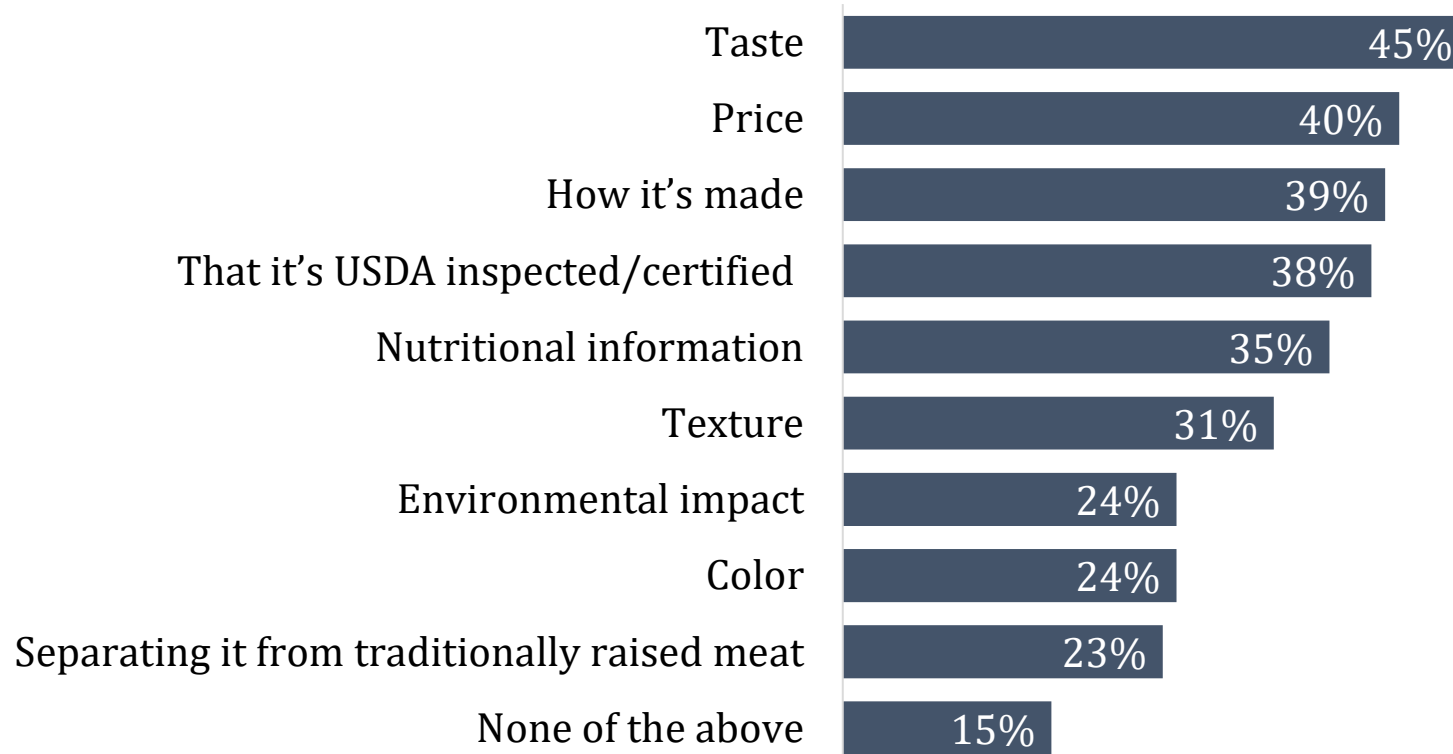
Perceptions Based on Definition

The definition has positive perceptions to some, and is clearer in separating this meat from traditionally raised meat than the terms



Need to Know

Additionally, consumers would like to know more about the taste, price, and how it's made

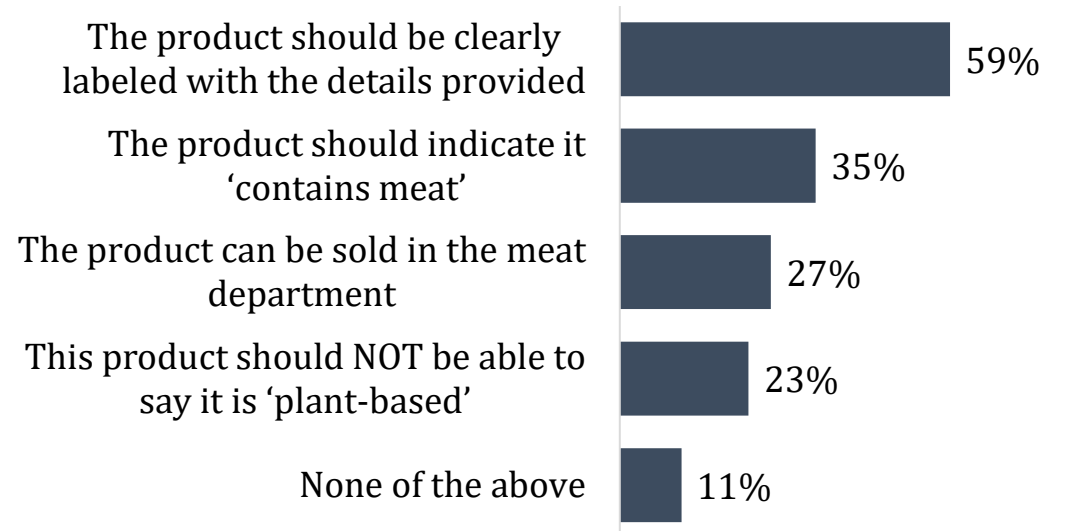
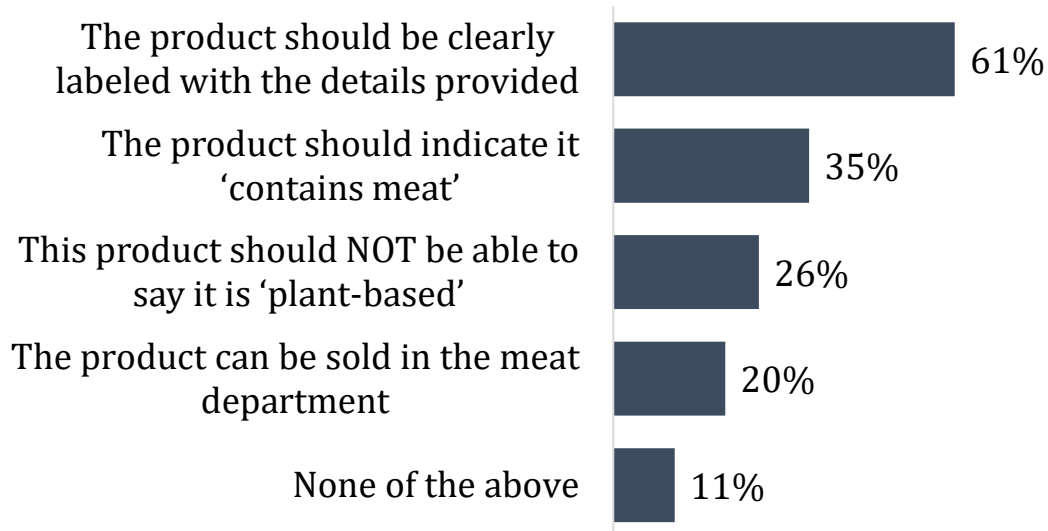


Potential Product Perceptions

For each potential product, most consumers want it to be clearly labeled

[Product A] This food product is primarily plant-based (about 90%), but in order to enhance the product to have meat like qualities and flavors, a small amount of cell-cultured animal fat is added to the product.

[Product B] This food product is a blended product that has equal amounts of plant based and cell-cultured animal-based ingredients, about 50/50. The animal-based ingredients are a combination of cell-cultured meat and fat and the plant-based ingredients are a processed blend.



Differentiating

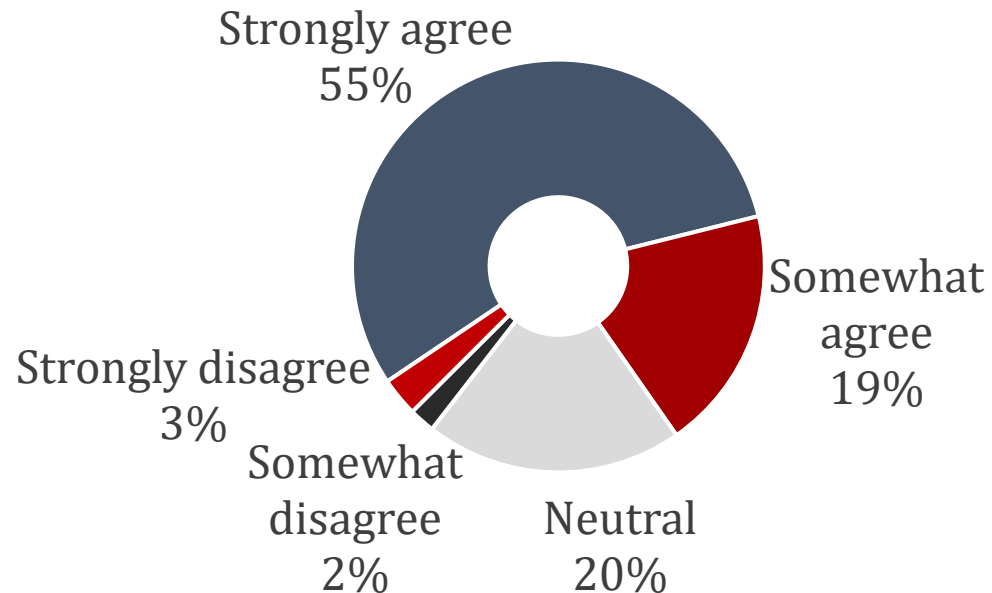
“Cell-Cultured” versus “Conventional Meat”



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Should It be Differentiated?

A good majority of consumers, when directly asked, feel that cell-cultured meat should be differentiated from conventional meat



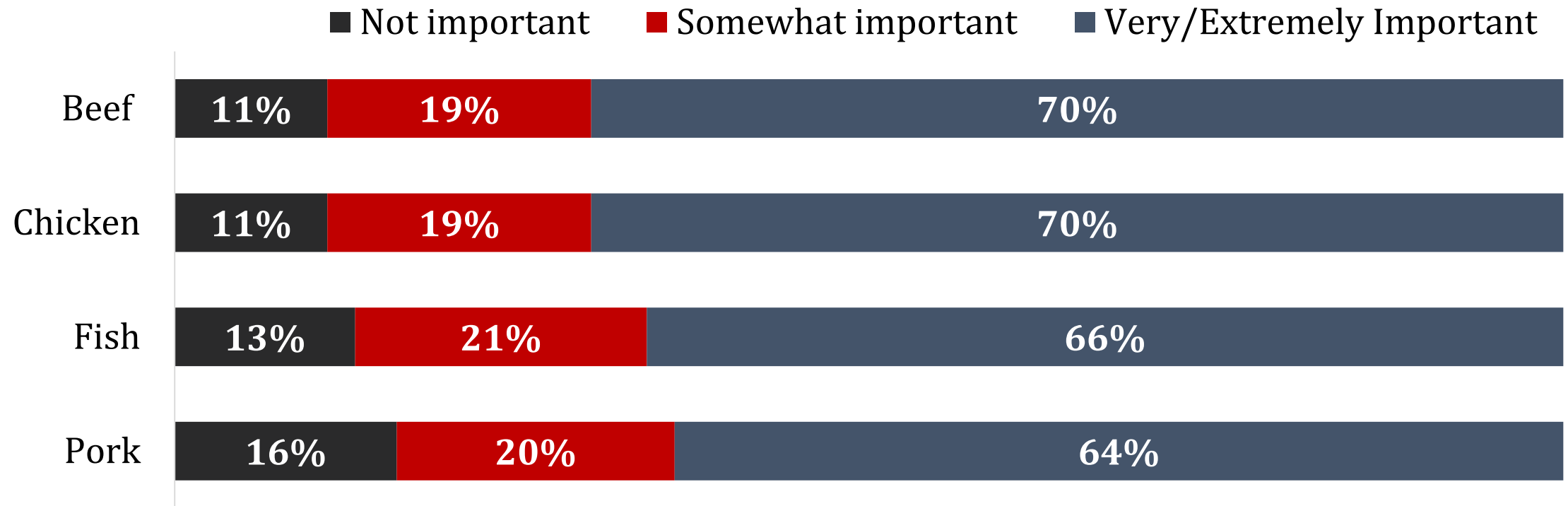
74% agree that...

“Restaurants and retailers should make it clear whether you are buying cell-cultured meat or conventionally produced meat.”



Importance by Protein

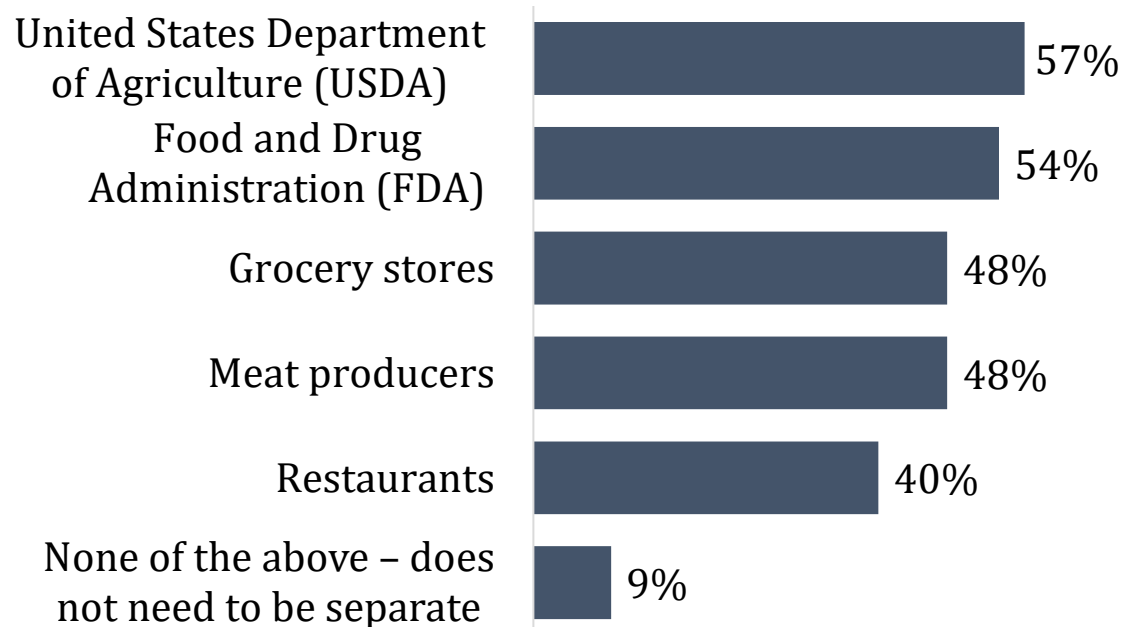
The importance of differentiating cell-cultured meat from conventional meat remains high across proteins, but especially beef and chicken



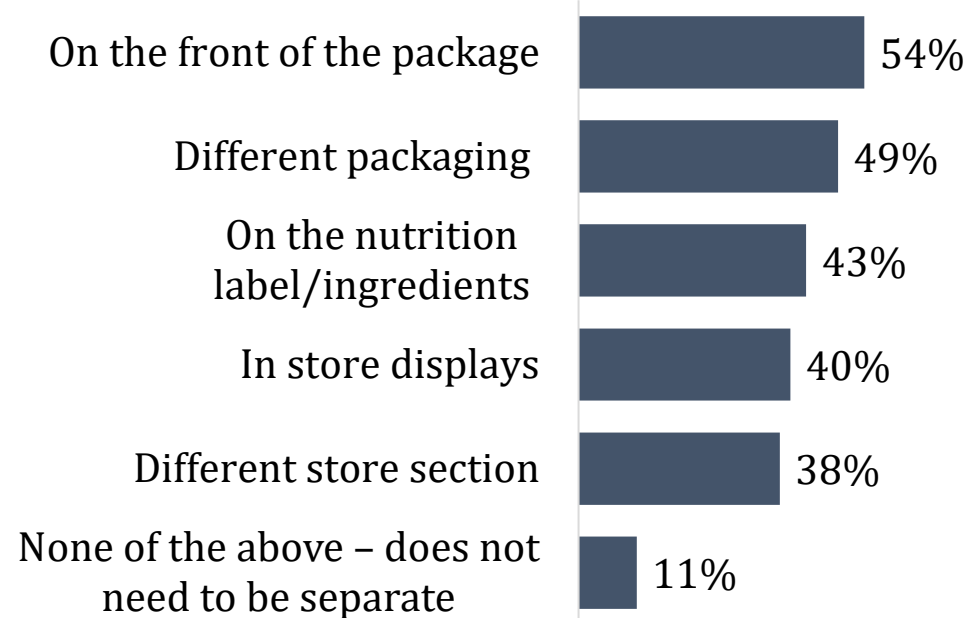
Differentiating from Conventional Meat

The responsibility of differentiating is placed on government agencies most, with packaging being the most preferred way for doing so

Who Should Regulate

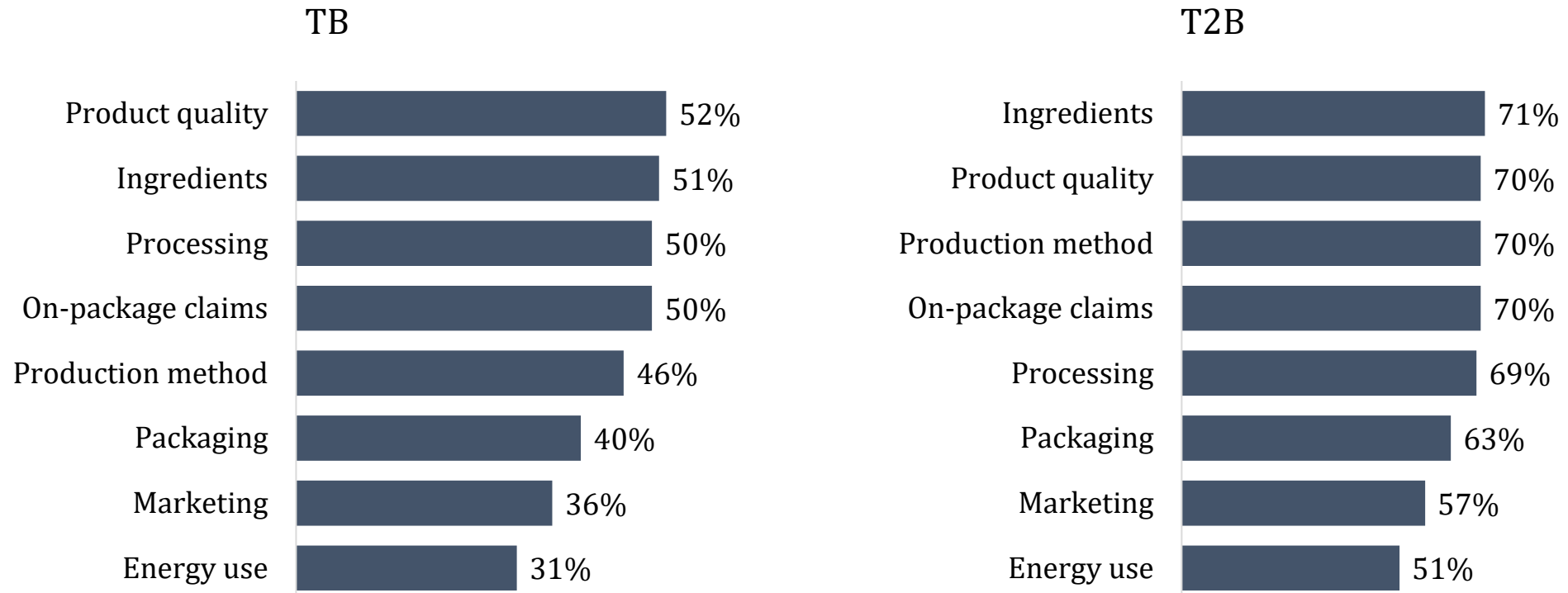


How to Differentiate



What to Regulate

Many consumers think it's important to regulate the majority of aspects related to meat production when it comes to cell-cultured meat



Appendix



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Demographics

Gender	
Male	46%
Female	54%

Age	
18-20	6%
20-34	33%
35-44	23%
45-54	21%
55-65	17%
66+	N/A

Children in HH	
Yes	39%
No	61%

Region	
Midwest (ND, MN, SD, IA, NE, MI, IL, IN, OH, MO, KS)	22%
Northeast (ME, NH, VT, NY, MA, CT, RI, NJ, PA)	20%
South (TX, OK, AR, LA, MS, AL, TN, KY, WV, MD, DE, DC, VA, SC, GA, AL, FL)	37%
West (WA, OR, ID, MT, WY, UT, CO, NV, CA, AZ, NM)	21%

Ethnicity	
Black/African American	15%
Asian	7%
Hispanic	8%
Pacific Islander	2%
White	65%
Other	2%
Prefer not to say	2%

Income	
< \$50K	41%
\$50 - \$99K	31%
\$100K +	22%
Prefer not to say	5%

Education	
Some high school	4%
Graduated high school	19%
Some college	21%
Associates/Technical degree	13%
Graduated college	25%
Post graduate studies (Masters, Doctorate)	17%
Prefer not to say	2%

