

Alternative Proteins: Markets and Marketing

Chris Bryant, PhD.



EFFoST
June 2022

Moving away from meat

Different alternative proteins

Market strategies

Reaching a new normal

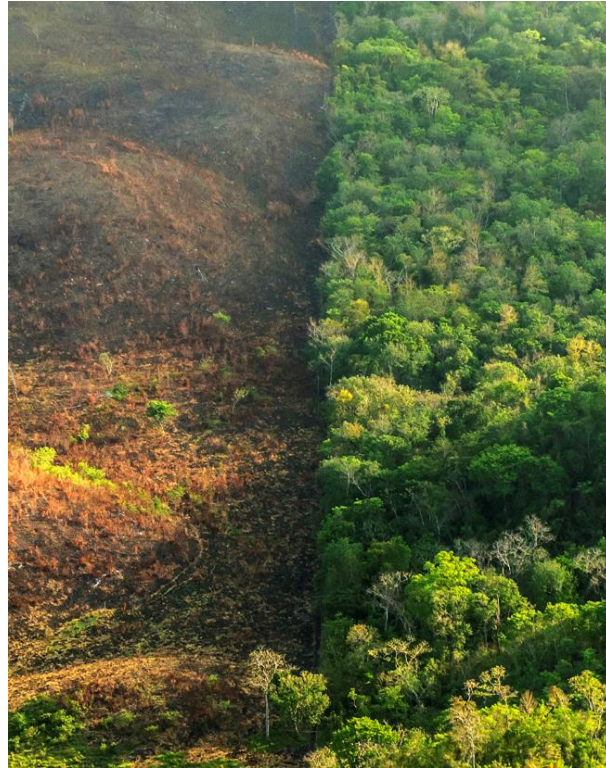
**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

The case against animal farming



Sources: Anomaly (2015); Clark et al. (2020); Tiseo et al. (2020)

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

The case against animal farming



Sources: Anomaly (2015); Clark et al. (2020); Tiseo et al. (2020)

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

The case against animal farming



Sources: Anomaly (2015); Clark et al. (2020); Tiseo et al. (2020)

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Consumers turning away from meat

**The wurst is over: why Germany now
loves to go vegetarian**

Sources: DW (2021); The Guardian (2018; 2020)

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Consumers turning away from meat

**The wurst is over: why Germany now
loves to go vegetarian**

**Germany produced less meat, more
vegan alternatives in 2020**

Sources: DW (2021); The Guardian (2018; 2020)

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Consumers turning away from meat

**The wurst is over: why Germany now
loves to go vegetarian**

**Germany produced less meat, more
vegan alternatives in 2020**

**The unstoppable rise of veganism: how
a fringe movement went mainstream**

Sources: DW (2021); The Guardian (2018; 2020)

Moving away
from meat

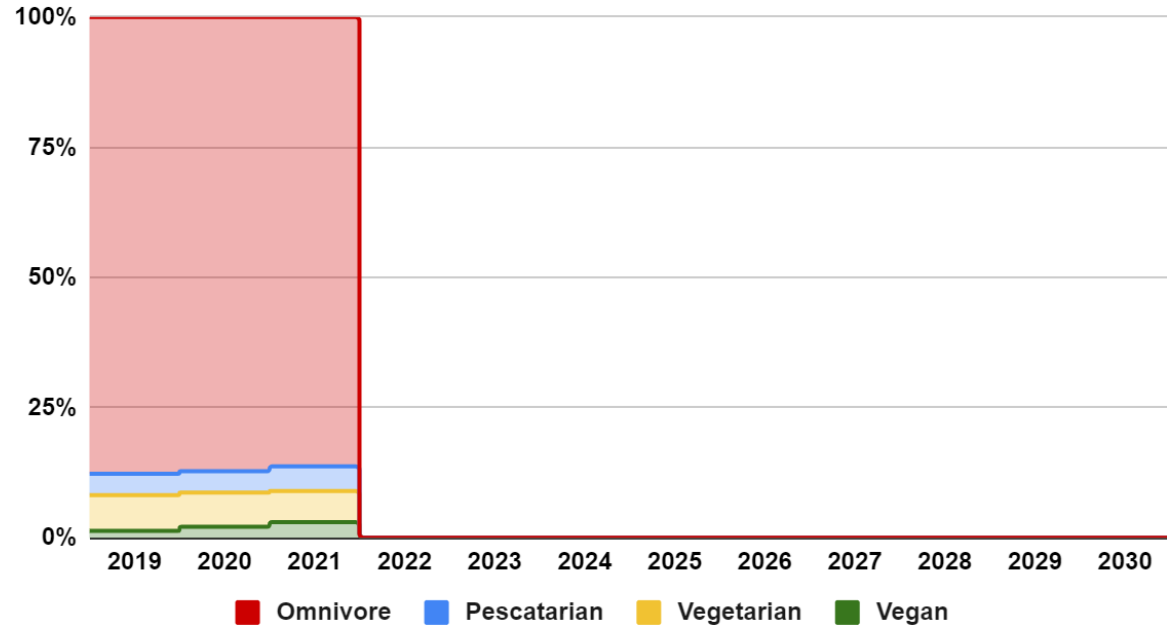
Different
alternative
proteins

Market
strategies

Reaching a
new normal

Consumers turning away from meat

UK Diets Over Time



Sources: Finder (2021)

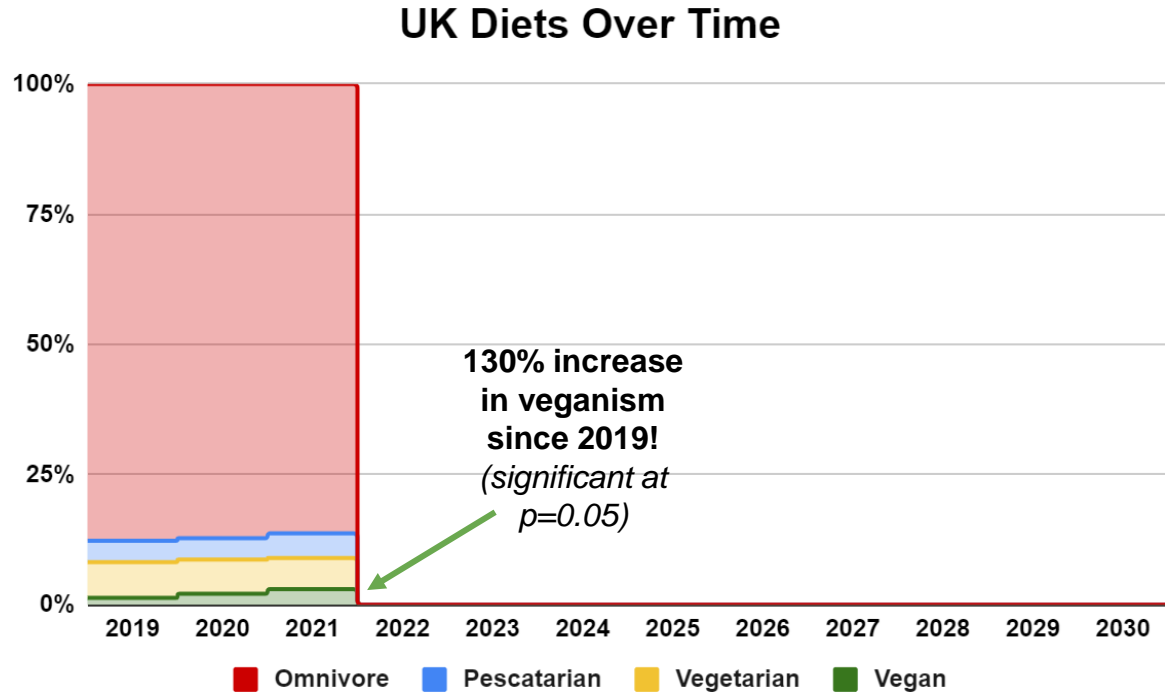
Moving away from meat

Different alternative proteins

Market strategies

Reaching a new normal

Consumers turning away from meat



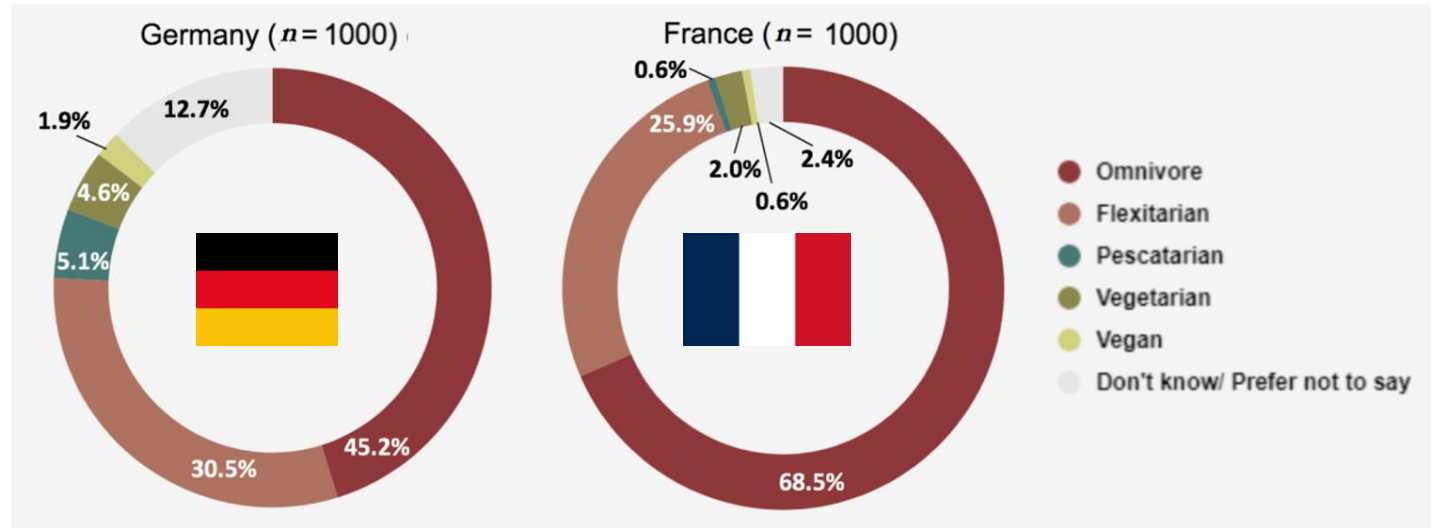
Moving away from meat

Consumers turning away from meat

Different alternative proteins

Market strategies

Reaching a new normal



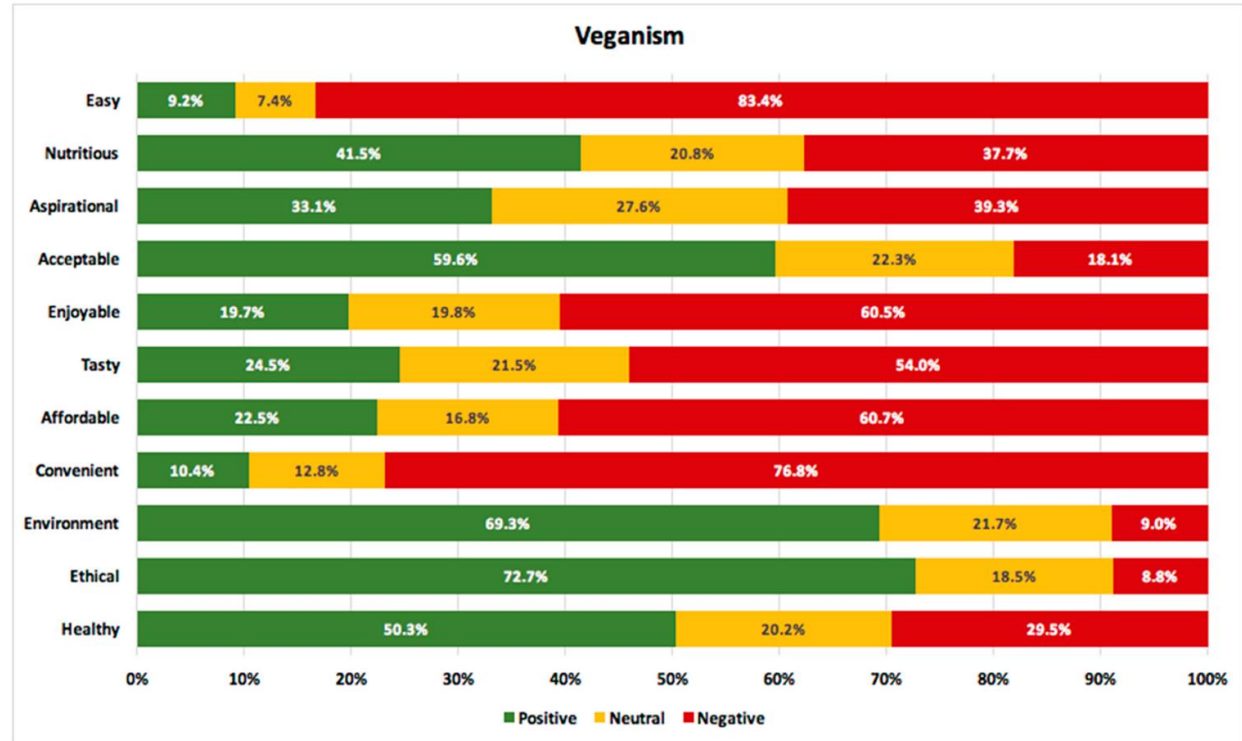
Moving away from meat

Consumers turning away from meat

Different alternative proteins

Market strategies

Reaching a new normal



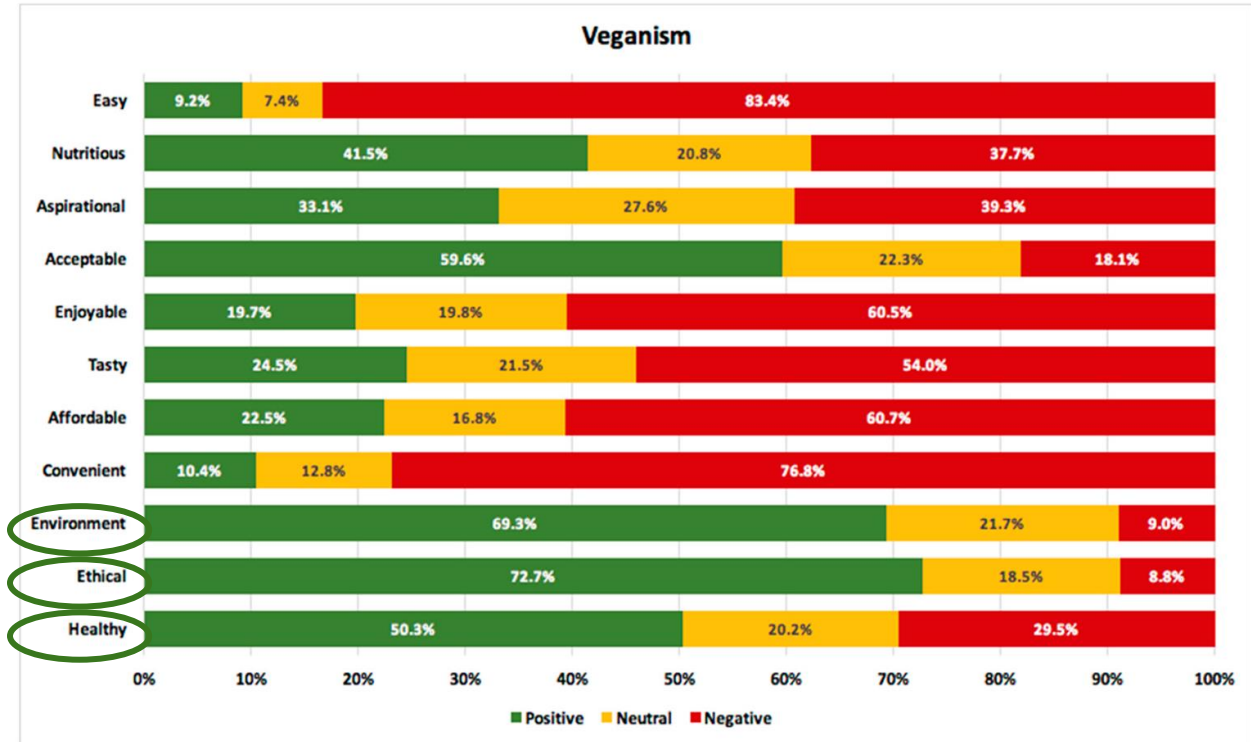
Moving away from meat

Consumers turning away from meat

Different alternative proteins

Market strategies

Reaching a new normal



Sources: Bryant (2019)

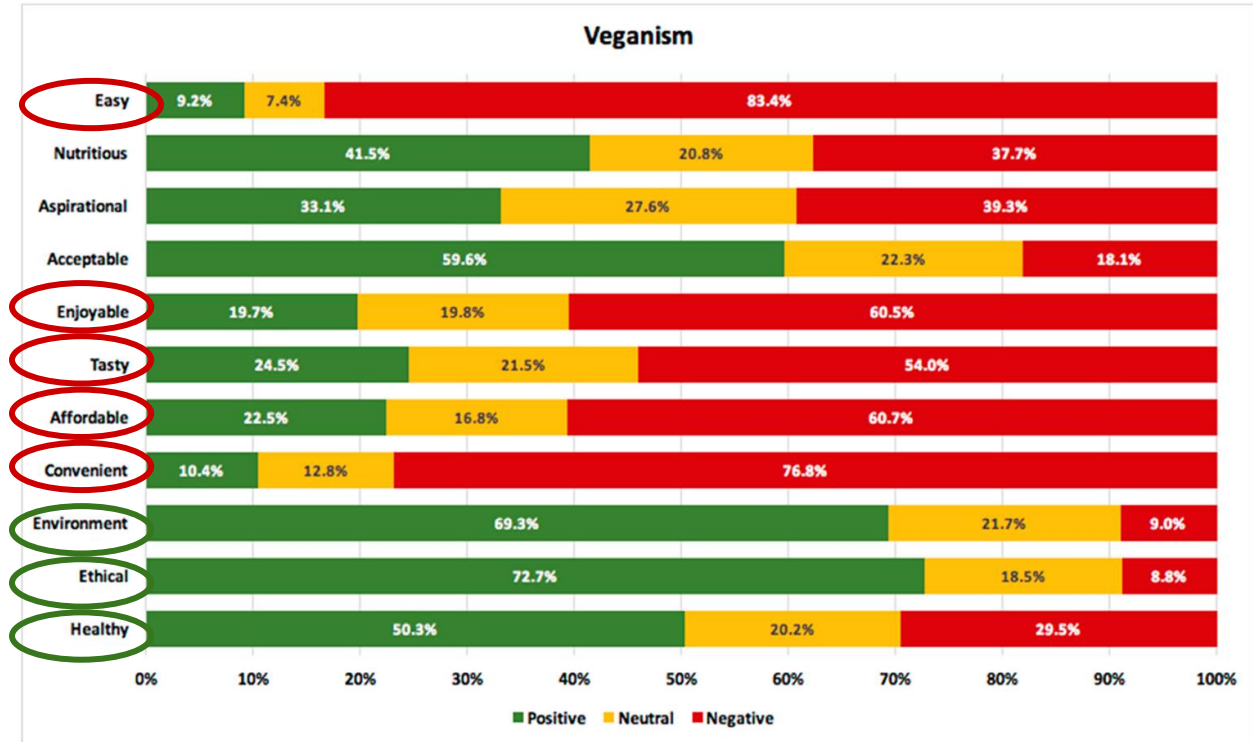
Moving away from meat

Consumers turning away from meat

Different alternative proteins

Market strategies

Reaching a new normal



Sources: Bryant (2019)

Moving away from meat

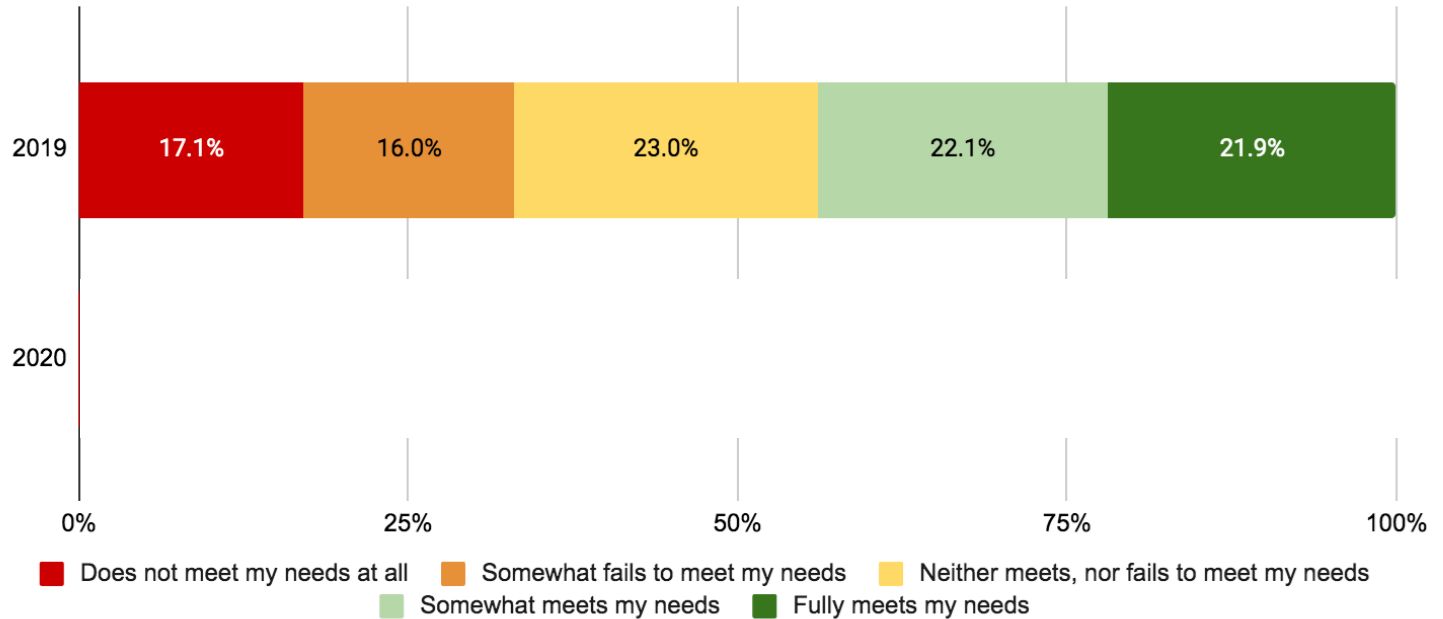
Consumers turning away from meat

Different alternative proteins

Market strategies

Reaching a new normal

Existing Meat Alternatives



Sources: Bryant & Sanctorum (2021)

Moving away from meat

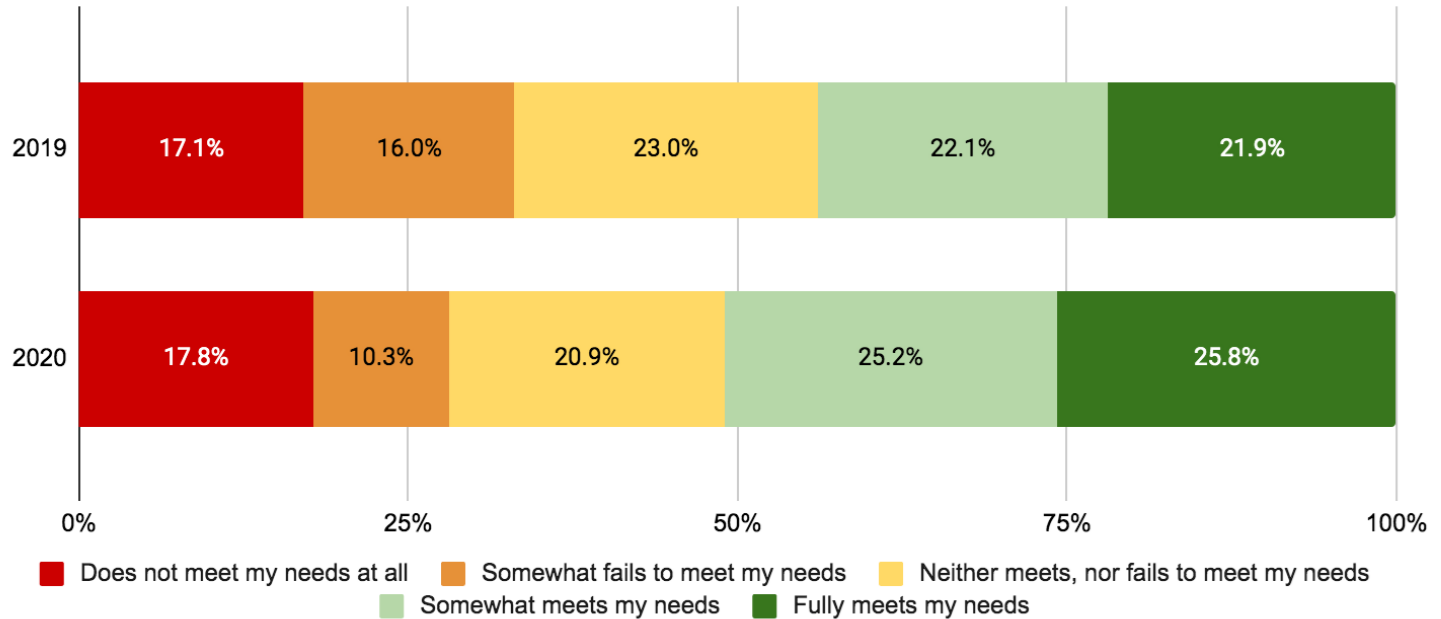
Consumers turning away from meat

Different alternative proteins

Market strategies

Reaching a new normal

Existing Meat Alternatives



Sources: Bryant & Sanctorum (2021)

**Moving away
from meat**

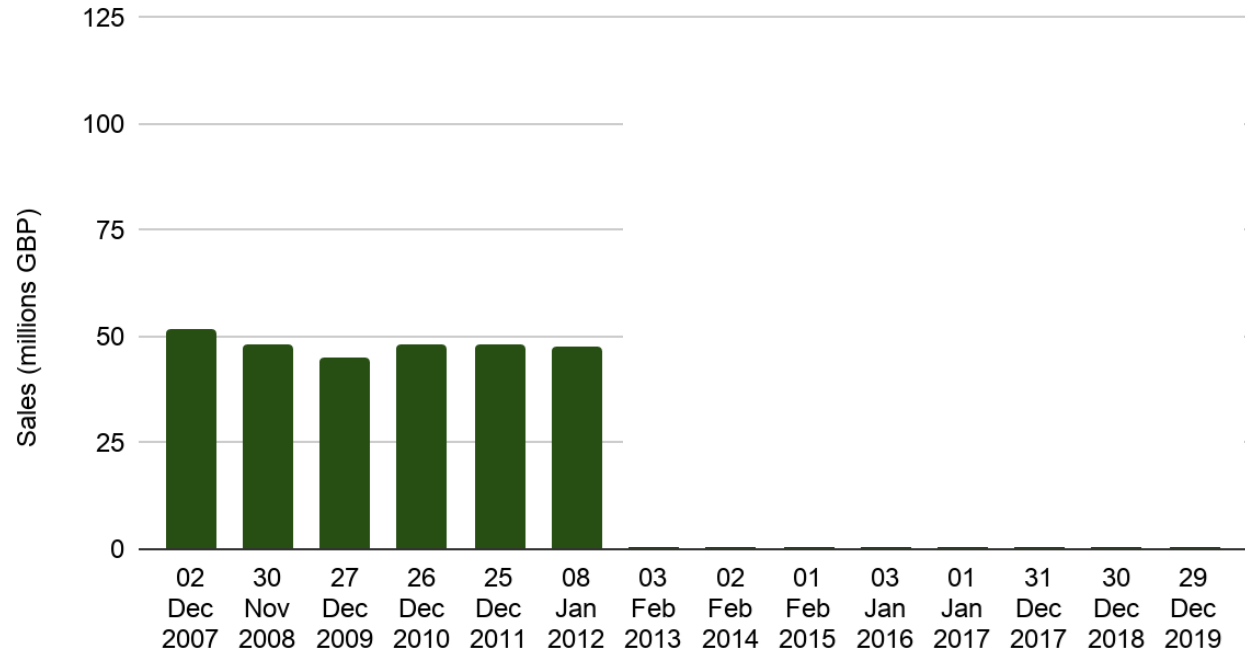
**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Consumers turning away from meat

UK chilled vegetarian food sales



Sources: Kantar (2020)

**Moving away
from meat**

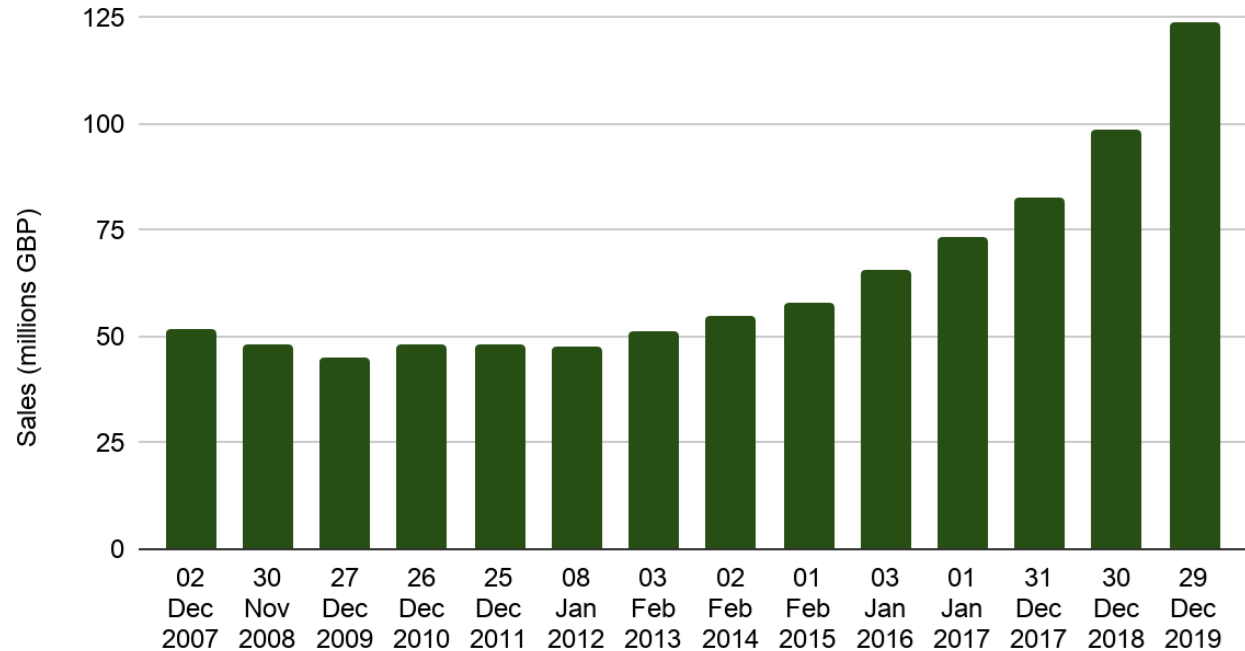
**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Consumers turning away from meat

UK chilled vegetarian food sales



Sources: Kantar (2020)

Moving away
from meat

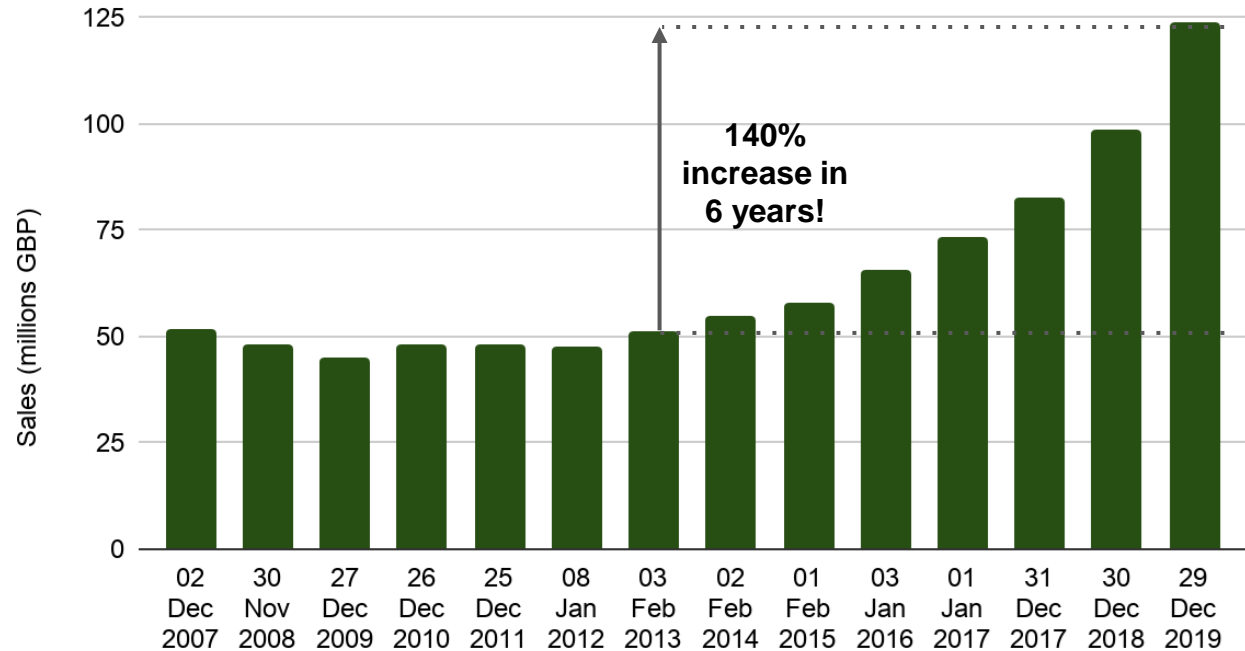
Consumers turning away from meat

Different
alternative
proteins

Market
strategies

Reaching a
new normal

UK chilled vegetarian food sales



Sources: Kantar (2020)

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Different alternative proteins



Sources: Gahukar (2016); Kyriakopoulou, Dekkers & van der Groot (2019); Post et al. (2020)

Moving away
from meat

Different alternative proteins

Different
alternative
proteins



Market
strategies



Reaching a
new normal

Sources: Gahukar (2016); Kyriakopoulou, Dekkers & van der Groot (2019); Post et al. (2020)

Moving away
from meat

Different alternative proteins

Different
alternative
proteins



Market
strategies



Reaching a
new normal

Sources: Gahukar (2016); Kyriakopoulou, Dekkers & van der Groot (2019); Post et al. (2020)

Moving away
from meat

Different alternative proteins

Different
alternative
proteins



Market
strategies



Reaching a
new normal

Sources: Gahukar (2016); Kyriakopoulou, Dekkers & van der Groot (2019); Post et al. (2020)

**Moving away
from meat**

Comparing alternative proteins

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

	Environment	Health	Animal welfare	Consumer acceptance
Whole Plant Foods				
Plant Based Meat				
Cultured Meat				
Insects				

Sources: Bryant & Barnett (2020); Bryant et al. (2019); Craig (2010); Crimarco et al. (2020); Eilenberg et al. (2015); Fraeye et al. (2020); Godfray et al. (2018); Gomez-Luciano et al (2019); Heller & Keoleian (2018); Klein & Barron (2016); Lundy & Parrella (2015); Mishyna, Chen & Benjamin (2020); Odegard & Sinke (2021); Saerens et al. (2021); Willett et al. (2019)

**Moving away
from meat**

Comparing alternative proteins

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

	Environment	Health	Animal welfare	Consumer acceptance
Whole Plant Foods	Very good.	Very good.	Very good.	Very limited.
Plant Based Meat				
Cultured Meat				
Insects				

Sources: Bryant & Barnett (2020); Bryant et al. (2019); Craig (2010); Crimarco et al. (2020); Eilenberg et al. (2015); Fraeye et al. (2020); Godfray et al. (2018); Gomez-Luciano et al (2019); Heller & Keoleian (2018); Klein & Barron (2016); Lundy & Parrella (2015); Mishyna, Chen & Benjamin (2020); Odegard & Sinke (2021); Saerens et al. (2021); Willett et al. (2019)

**Moving away
from meat**

Comparing alternative proteins

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

	Environment	Health	Animal welfare	Consumer acceptance
Whole Plant Foods	Very good.	Very good.	Very good.	Very limited.
Plant Based Meat	Very good.	Good.	Very good.	Good.
Cultured Meat				
Insects				

Sources: Bryant & Barnett (2020); Bryant et al. (2019); Craig (2010); Crimarco et al. (2020); Eilenberg et al. (2015); Fraeye et al. (2020); Godfray et al. (2018); Gomez-Luciano et al (2019); Heller & Keoleian (2018); Klein & Barron (2016); Lundy & Parrella (2015); Mishyna, Chen & Benjamin (2020); Odegard & Sinke (2021); Saerens et al. (2021); Willett et al. (2019)

**Moving away
from meat**

Comparing alternative proteins

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

	Environment	Health	Animal welfare	Consumer acceptance
Whole Plant Foods	Very good.	Very good.	Very good.	Very limited.
Plant Based Meat	Very good.	Good.	Very good.	Good.
Cultured Meat	Good.	Same as meat?	Good, potentially very good.	Moderate.
Insects				

Sources: Bryant & Barnett (2020); Bryant et al. (2019); Craig (2010); Crimarco et al. (2020); Eilenberg et al. (2015); Fraeye et al. (2020); Godfray et al. (2018); Gomez-Luciano et al (2019); Heller & Keoleian (2018); Klein & Barron (2016); Lundy & Parrella (2015); Mishyna, Chen & Benjamin (2020); Odegard & Sinke (2021); Saerens et al. (2021); Willett et al. (2019)

**Moving away
from meat**

Comparing alternative proteins

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

	Environment	Health	Animal welfare	Consumer acceptance
Whole Plant Foods	Very good.	Very good.	Very good.	Very limited.
Plant Based Meat	Very good.	Good.	Very good.	Good.
Cultured Meat	Good.	Same as meat?	Good, potentially very good.	Moderate.
Insects	Moderate.	Moderate.	Very bad.	Very limited.

Sources: Bryant & Barnett (2020); Bryant et al. (2019); Craig (2010); Crimarco et al. (2020); Eilenberg et al. (2015); Fraeye et al. (2020); Godfray et al. (2018); Gomez-Luciano et al (2019); Heller & Keoleian (2018); Klein & Barron (2016); Lundy & Parrella (2015); Mishyna, Chen & Benjamin (2020); Odegard & Sinke (2021); Saerens et al. (2021); Willett et al. (2019)

Moving away
from meat

Different
alternative
proteins

Market
strategies

Reaching a
new normal



Comparing alternative proteins

	Would not buy cultured meat	Maybe would buy cultured meat	Would buy cultured meat
PBMs do not meet their needs	11.4%	9.5%	9.7%
PBM maybe meets their needs	5.3%	8.8%	7.8%
PBMs meet their needs	9.6%	16.1%	21.7%

Source: Bryant & Sanctorum (2021)

Moving away
from meat

Different
alternative
proteins

Market
strategies

Reaching a
new normal



Comparing alternative proteins

	Would not buy cultured meat	Maybe would buy cultured meat	Would buy cultured meat
PBMs do not meet their needs	11.4%	9.5%	9.7%
PBM maybe meets their needs	5.3%	8.8%	7.8%
PBMs meet their needs	9.6%	16.1%	21.7%

Source: Bryant & Sanctorum (2021)

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Comparing alternative proteins



- **More appealing to vegetarians**
- **More appealing to females**
- **Concerns mainly about taste**

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Comparing alternative proteins



- More appealing to vegetarians
- More appealing to females
- Concerns mainly about taste

- More appealing to meat-eaters
- More appealing to males
- Concerns mainly about safety



Source: Bryant & Barnett, 2020

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Essential product features

Sources: Fotopoulos et al. (2009); Januszewska et al. (2011); Prescott et al. (2002)

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Essential product features



Tasty

Sources: Fotopoulos et al. (2009); Januszewska et al. (2011); Prescott et al. (2002)

Moving away
from meat

Different
alternative
proteins

Market
strategies

Reaching a
new normal

Essential product features



Tasty



Convenient

Moving away
from meat

Different
alternative
proteins

Market
strategies

Reaching a
new normal

Essential product features



Tasty



Convenient



Affordable

Sources: Fotopoulos et al. (2009); Januszewska et al. (2011); Prescott et al. (2002)

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Promising consumer segments

Sources: Bryant & Barnett (2020); Bryant et al. (2019);

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Promising consumer segments



Higher education

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Promising consumer segments



Higher education



Urban-dwelling

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Promising consumer segments



Higher education



Urban-dwelling



Left-leaning

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Promising consumer segments



Higher education



Urban-dwelling



Left-leaning



**Environmentally
conscious**

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Promising consumer segments



Higher education



Urban-dwelling



Left-leaning



**Environmentally
conscious**



Health conscious

Sources: Bryant & Barnett (2020); Bryant et al. (2019);

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Promising consumer segments



Higher education



Urban-dwelling



Left-leaning



**Environmentally
conscious**



Health conscious



Active lifestyle

Sources: Bryant & Barnett (2020); Bryant et al. (2019);

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Optimal messaging strategies

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Optimal messaging strategies

- 1. Avoid prominent
'VEGAN' labels &
segregated vegan
sections**
-

Moving away
from meat

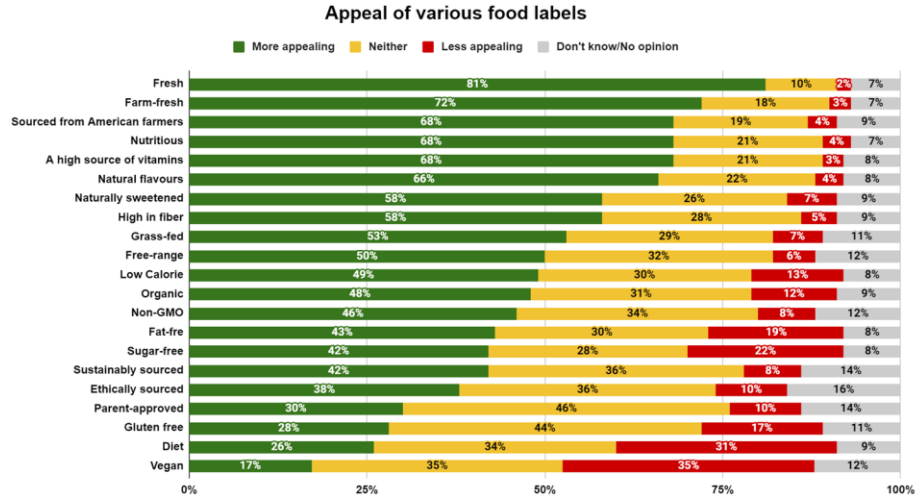
Different
alternative
proteins

Market
strategies

Reaching a
new normal

Optimal messaging strategies

1. Avoid prominent 'VEGAN' labels & segregated vegan sections



Sources: Morning Consult (2018)

Moving away
from meat

Different
alternative
proteins

Market
strategies

Reaching a
new normal

Optimal messaging strategies

1. Avoid prominent 'VEGAN' labels & segregated vegan sections

<p>Risotto primavera (v) <i>Peas, mushrooms, lemon 14.00</i></p>	<p>Lobster & crab roll <i>Avocado, lettuce, lemon mayonnaise 17.00</i></p>
<p>Lobster & crab roll <i>Avocado, lettuce, lemon mayonnaise 17.00</i></p>	<p>Sautéed king prawns <i>Chilli, garlic & parsley, basmati rice 22.50</i></p>
<p>Sautéed king prawns <i>Chilli, garlic & parsley, basmati rice 22.50</i></p>	<p>Deep fried haddock <i>Minted peas, hand cut chips, sauce tartar 15.50</i></p>
<p>Deep fried haddock <i>Minted peas, hand cut chips, sauce tartar 15.50</i></p>	<p>Chicken cacciatora <i>Roasted chicken breast, mushrooms, tomato, olives 14.50</i></p>
<p>Chicken cacciatora <i>Roasted chicken breast, mushrooms, tomato, olives 14.50</i></p>	<p>Steak frites <i>Rump pavé, hand cut chips, béarnaise sauce 19.50</i></p>
<p>Steak frites <i>Rump pavé, hand cut chips, béarnaise sauce 19.50</i></p>	<p>Hamburger <i>Relish, hand cut chips 13.50</i></p>
<p>Hamburger <i>Relish, hand cut chips 13.50</i></p>	<p>————— VEGETARIAN DISHES —————</p>
<p>Ricotta & spinach ravioli (v) <i>Asparagus, butter & sage sauce 13.50</i></p>	<p>Risotto primavera (v) <i>Peas, mushrooms, lemon 14.00</i></p>
<p>Ricotta & spinach ravioli (v) <i>Asparagus, butter & sage sauce 13.50</i></p>	<p>Ricotta & spinach ravioli (v) <i>Asparagus, butter & sage sauce 13.50</i></p>

v - suitable for vegetarians

**Moving away
from meat**

**Different
alternative
proteins**

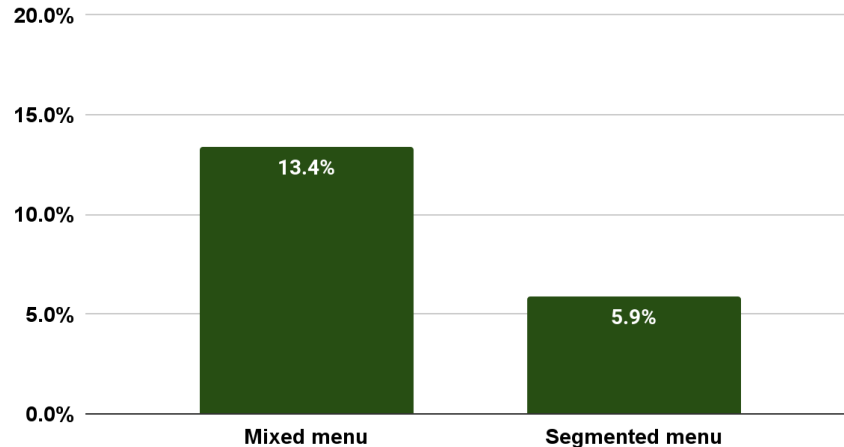
**Market
strategies**

**Reaching a
new normal**

Optimal messaging strategies

- 1. Avoid prominent
'VEGAN' labels &
segregated vegan
sections**

Percentage choosing vegetarian option



Sources: Bacon & Krpan (2018)

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Optimal messaging strategies

**1. Avoid prominent
'VEGAN' labels &
segregated vegan
sections**

**2. Highlight
origins and rich
flavours**

**Moving away
from meat**

**Different
alternative
proteins**

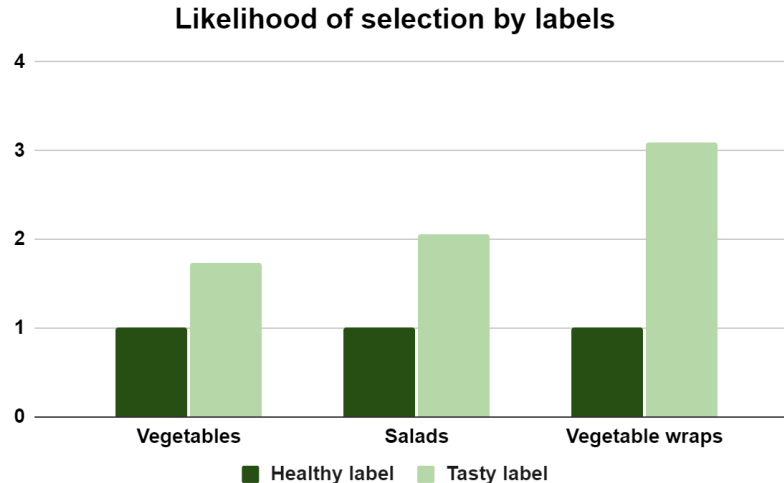
**Market
strategies**

**Reaching a
new normal**

Optimal messaging strategies

**1. Avoid prominent
'VEGAN' labels &
segregated vegan
sections**

**2. Highlight
origins and rich
flavours**



Sources: Turnwald & Crum (2019)

Moving away
from meat

Different
alternative
proteins

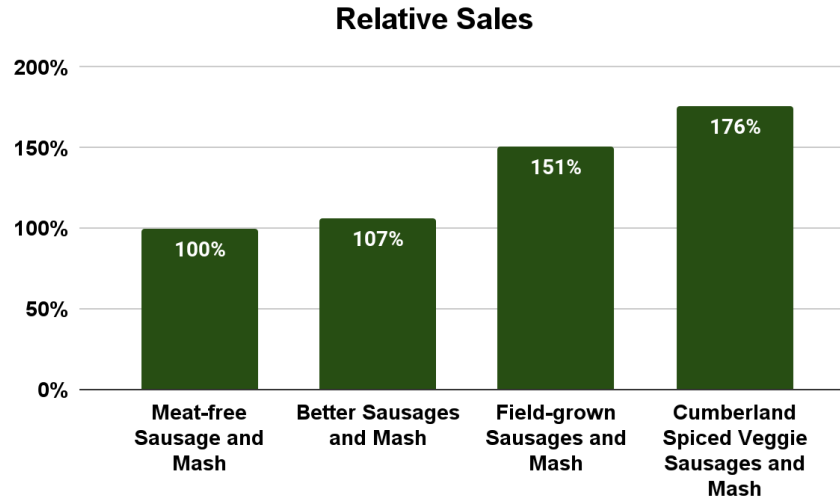
Market
strategies

Reaching a
new normal

Optimal messaging strategies

1. Avoid prominent
'VEGAN' labels &
segregated vegan
sections

2. Highlight
origins and rich
flavours



Sources: World Resources Institute (2018)

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Optimal messaging strategies

**1. Avoid prominent
'VEGAN' labels &
segregated vegan
sections**

**2. Highlight
origins and rich
flavours**

**3. Approach health
messages with
caution**

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

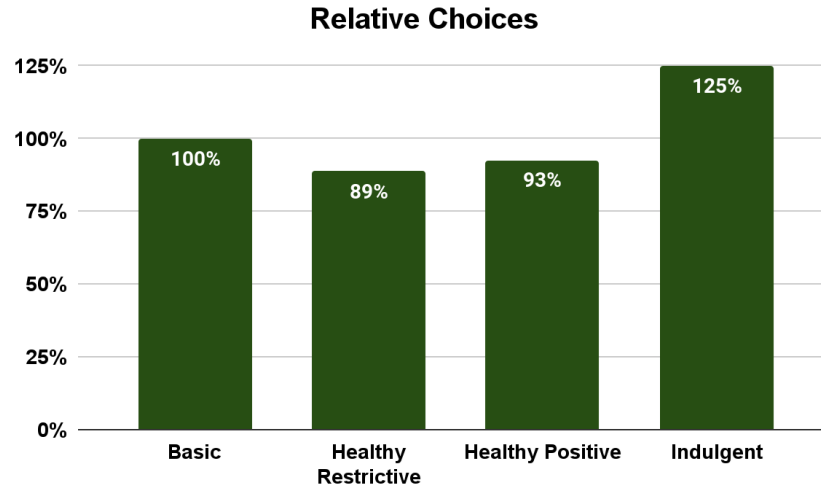
**Reaching a
new normal**

Optimal messaging strategies

**1. Avoid prominent
'VEGAN' labels &
segregated vegan
sections**

**2. Highlight
origins and rich
flavours**

**3. Approach health
messages with
caution**



Sources: Turnwald, Boles & Crum (2017)

**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

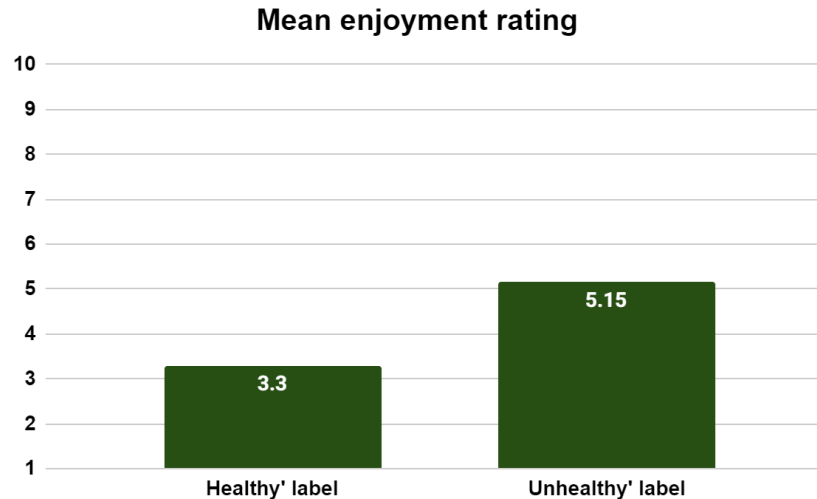
**Reaching a
new normal**

Optimal messaging strategies

**1. Avoid prominent
'VEGAN' labels &
segregated vegan
sections**

**2. Highlight
origins and rich
flavours**

**3. Approach health
messages with
caution**



Sources: Raghunathan, Walker Naylor & Hoyer (2006)

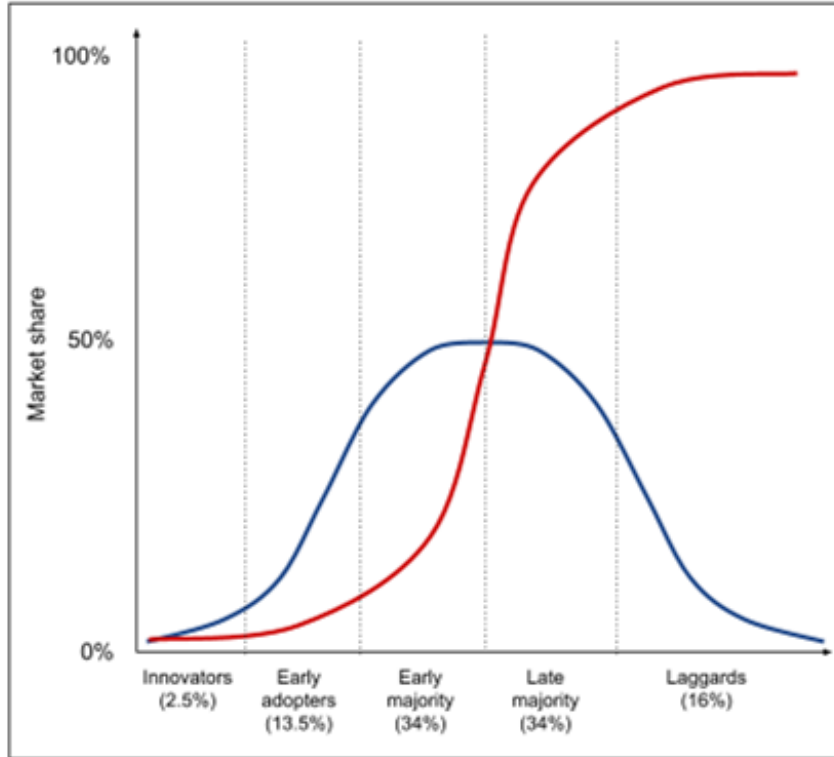
**Moving away
from meat**

**Different
alternative
proteins**

**Market
strategies**

**Reaching a
new normal**

Reaching a new normal



Sources: Rogers (2003)

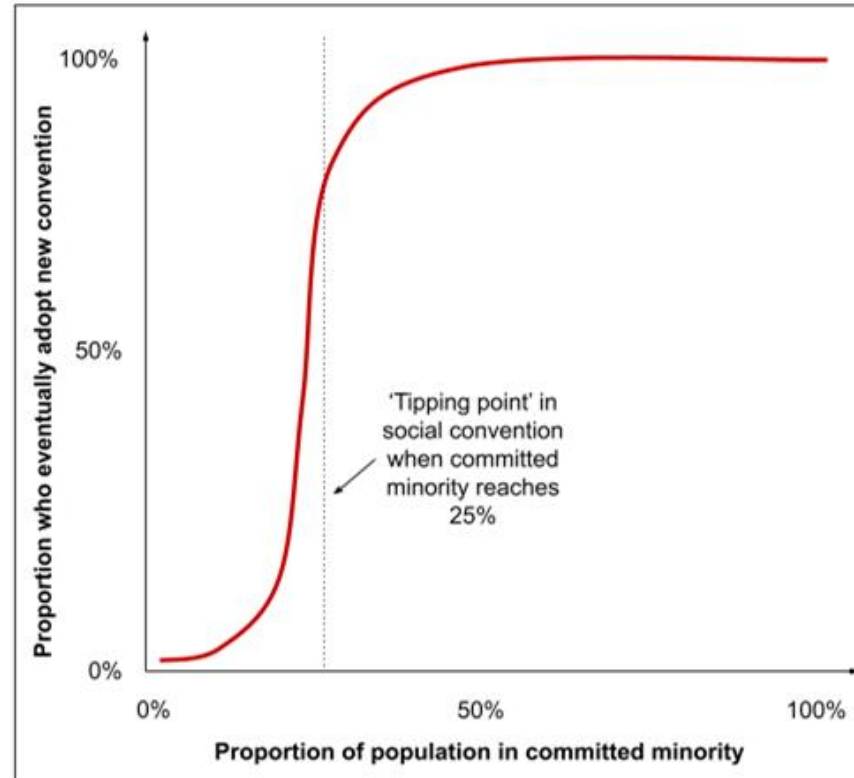
Moving away
from meat

Different
alternative
proteins

Market
strategies

Reaching a
new normal

Reaching a new normal



Sources: Centola et al. (2018)

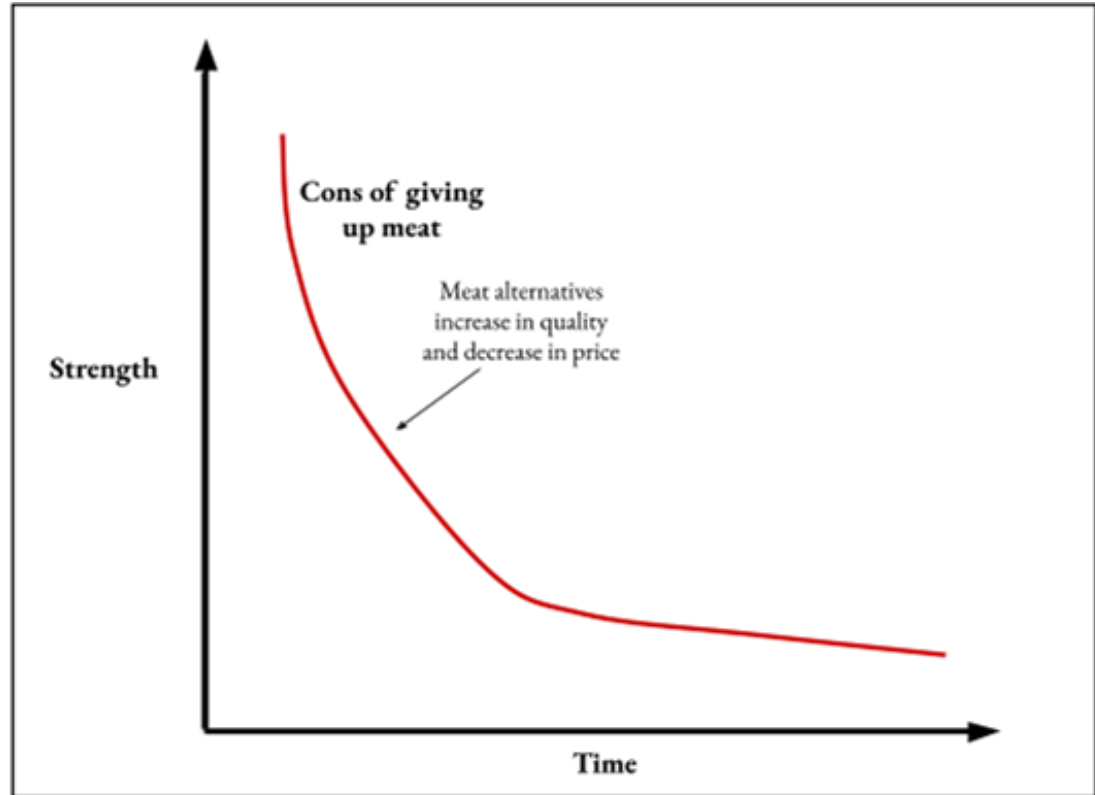
Moving away
from meat

Different
alternative
proteins

Market
strategies

Reaching a
new normal

Reaching a new normal



Sources: Bryant (forthcoming)

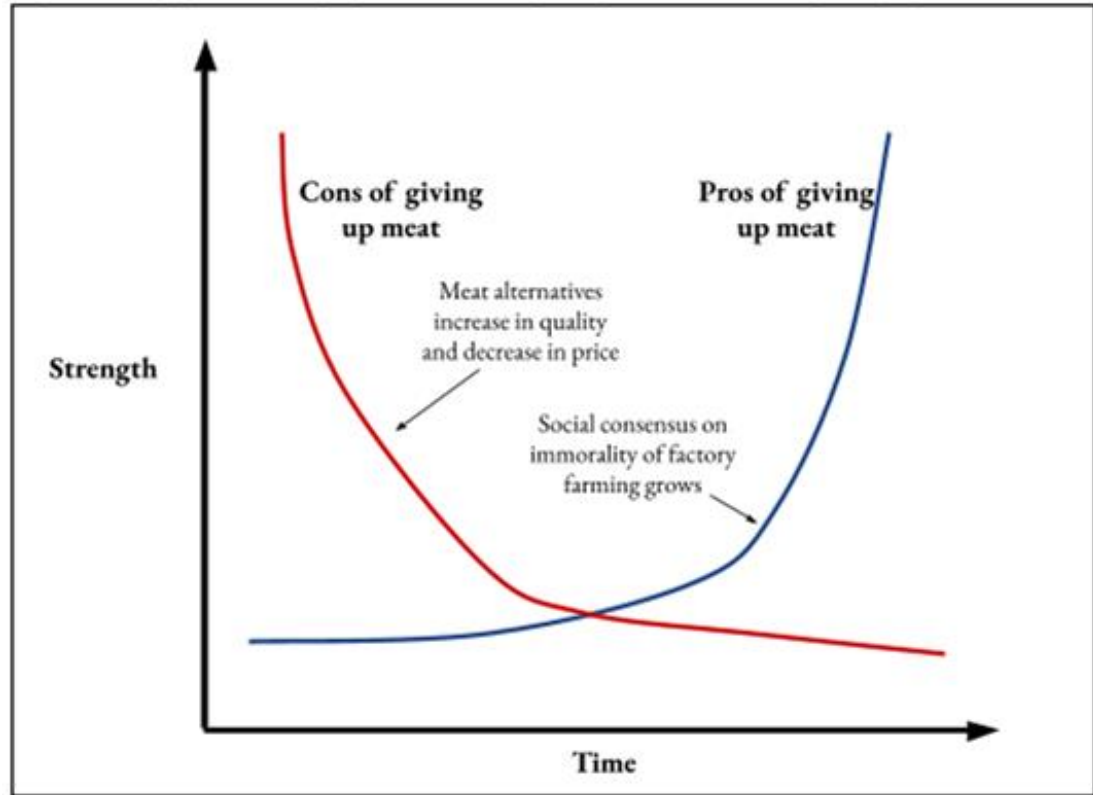
Moving away
from meat

Different
alternative
proteins

Market
strategies

Reaching a
new normal

Reaching a new normal



Sources: Bryant (forthcoming)

Thank you.

Christopher Bryant, PhD.



www.bryantresearch.co.uk 
chris@bryantresearch.co.uk 
<https://tinyurl.com/EFfoST2022> 

References

Anomaly, J. (2015). What's wrong with factory farming?. *Public Health Ethics*, 8(3), 246-254.

Arora, R. S., Brent, D. A., & Jaenicke, E. C. (2020). Is India Ready for Alt-Meat? Preferences and Willingness to Pay for Meat Alternatives. *Sustainability*, 12(11), 4377.

Bryant, C. J. (2019). We can't keep meating like this: Attitudes towards vegetarian and vegan diets in the United Kingdom. *Sustainability*, 11(23), 6844.

Bryant, C., & Barnett, J. (2018). Consumer acceptance of cultured meat: A systematic review. *Meat science*, 143, 8-17.

Bryant, C. J., & Barnett, J. C. (2019). What's in a name? Consumer perceptions of in vitro meat under different names. *Appetite*, 137, 104-113.

Bryant, C., & Barnett, J. (2020). Consumer acceptance of cultured meat: an updated review (2018–2020). *Applied Sciences*, 10(15), 5201.

Bryant, C., & Dillard, C. (2019). The impact of framing on acceptance of cultured meat. *Frontiers in nutrition*, 6, 103.

Bryant, C., & Sanctorem, H. (2021). Alternative proteins, evolving attitudes: Comparing consumer attitudes to plant-based and cultured meat in Belgium in two consecutive years. *Appetite*, 161, 105161.

References

- Bryant, C., Szejda, K., Parekh, N., Deshpande, V., & Tse, B. (2019). A survey of consumer perceptions of plant-based and clean meat in the USA, India, and China. *Frontiers in Sustainable Food Systems*, 3, 11.
- Bryant, C., van Nek, L., & Rolland, N. (2020). European markets for cultured meat: A comparison of Germany and France. *Foods*, 9(9), 1152.
- Circus, V. E., & Robison, R. (2019). Exploring perceptions of sustainable proteins and meat attachment. *British Food Journal*.
- Clark, M. A., Domingo, N. G., Colgan, K., Thakrar, S. K., Tilman, D., Lynch, J., ... & Hill, J. D. (2020). Global food system emissions could preclude achieving the 1.5° and 2° C climate change targets. *Science*, 370(6517), 705-708.
- Dupont, J., & Fiebelkorn, F. (2020). Attitudes and acceptance of young people toward the consumption of insects and cultured meat in Germany. *Food Quality and Preference*, 85, 103983.
- Egolf, A., Hartmann, C., & Siegrist, M. (2019). When evolution works against the future: Disgust's contributions to the acceptance of new food technologies. *Risk Analysis*, 39(7), 1546-1559.
- Geipel, J., Hadjichristidis, C., & Klesse, A. K. (2018). Barriers to sustainable consumption attenuated by foreign language use. *Nature Sustainability*, 1(1), 31-33.
- Grasso, A. C., Hung, Y., Olthof, M. R., Verbeke, W., & Brouwer, I. A. (2019). Older consumers' readiness to accept alternative, more sustainable protein sources in the European Union. *Nutrients*, 11(8), 1904.

References

- Gómez-Luciano, C. A., de Aguiar, L. K., Vriesekoop, F., & Urbano, B. (2019). Consumers' willingness to purchase three alternatives to meat proteins in the United Kingdom, Spain, Brazil and the Dominican Republic. *Food quality and preference*, 78, 103732.
- Lupton, D., & Turner, B. (2018). Food of the future? Consumer responses to the idea of 3D-printed meat and insect-based foods. *Food and Foodways*, 26(4), 269-289.
- Mancini, M. C., & Antonioli, F. (2019). Exploring consumers' attitude towards cultured meat in Italy. *Meat science*, 150, 101-110.
- Mancini, M. C., & Antonioli, F. (2020). To What Extent Are Consumers' Perception and Acceptance of Alternative Meat Production Systems Affected by Information? The Case of Cultured Meat. *Animals*, 10(4), 656.
- Michel, F., & Siegrist, M. (2019). How should importance of naturalness be measured? A comparison of different scales. *Appetite*, 140, 298-304.
- Odegard, I. & Sinke, P. (2021). LCA of cultivated meat. Future projections for different scenarios. CE Delft & The Good Food Institute. Available at <https://cedelft.eu/publications/rapport-lca-of-cultivated-meat-future-projections-for-different-scenarios/>
- Post, M. J., Levenberg, S., Kaplan, D. L., Genovese, N., Fu, J., Bryant, C. J., ... & Moutsatsou, P. (2020). Scientific, sustainability and regulatory challenges of cultured meat. *Nature Food*, 1(7), 403-415.

References

- Rolland, N. C., Markus, C. R., & Post, M. J. (2020). The effect of information content on acceptance of cultured meat in a tasting context. *PLoS One*, *15*(4), e0231176.
- Shaw, E., & Iomaire, M. M. C. (2019). A comparative analysis of the attitudes of rural and urban consumers towards cultured meat. *British Food Journal*.
- Specht, A. R., & Buck, E. B. (2019). Crowdsourcing change: An analysis of Twitter discourse on food waste and reduction strategies. *Journal of Applied Communications*, *103*(2).
- Szejda, K., Bryant, C. J., & Urbanovich, T. (2021). US and UK Consumer Adoption of Cultivated Meat: A Segmentation Study. *Foods*, *10*(5), 1050.
- Tiseo, K., Huber, L., Gilbert, M., Robinson, T. P., & Van Boeckel, T. P. (2020). Global trends in antimicrobial use in food animals from 2017 to 2030. *Antibiotics*, *9*(12), 918.
- Tucker, C. (2018). Using environmental imperatives to reduce meat consumption: Perspectives from New Zealand. *Kōtuitui: New Zealand Journal of Social Sciences Online*, *13*(1), 99-110.
- Valente, J. D. P. S., Fiedler, R. A., Sucha Heidemann, M., & Molento, C. F. M. (2019). First glimpse on attitudes of highly educated consumers towards cell-based meat and related issues in Brazil. *PloS one*, *14*(8), e0221129.

References

Weinrich, R., Strack, M., & Neugebauer, F. (2020). Consumer acceptance of cultured meat in Germany. *Meat science*, 162, 107924.

Wilks, M., Phillips, C. J., Fielding, K., & Hornsey, M. J. (2019). Testing potential psychological predictors of attitudes towards cultured meat. *Appetite*, 136, 137-145.

Zhang, M., Li, L., & Bai, J. (2020). Consumer acceptance of cultured meat in urban areas of three cities in China. *Food Control*, 118, 107390.