

## Appendices

Appendix 1: Ten items used to measure meat attachment using a seven-point Likert level of agreement scale

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|-----|--|
| 1)  | I like eating meat   |
| 2)  | Meat is not an essential part of a meal*   |
| 3)  | I would be pleased if I were given meat as part of a roast dinner                  |
| 4)  | Eating meat is part of my identity   |
| 5)  | I would be disappointed if I were cooked a meal containing meat at a dinner party* |
| 6)  | I would not buy meat if it became significantly more expensive*                    |
| 7)  | I would be pleased if I attended a BBQ and only meat was being cooked              |
| 8)  | A balanced diet involved meat  |
| 9)  | I would be disappointed if I were given meat as part of my lunch*                  |
| 10) | Meat is an unimportant part of my diet*  |

*\* denotes items that were reverse coded.*

## Appendix 2: Further information on the online survey items and frequencies of responses

Question	Responses	Frequencies						
Please tick the option that best describes whether you currently follow a diet that excludes some or all types of meat.	No, I do not follow a special diet, I eat meat	46.8%						
	Yes, I follow a pescetarian diet, I eat fish but not meat	6.5%						
	Yes, I follow a vegetarian diet, I eat dairy products but not fish or meat	12.9%						
	Yes, I follow a vegan diet, I avoid all animal-based products	20.9%						
	Yes, I follow a religious-based diet (e.g. Halal, Kosher)	0%						
	Yes, I avoid certain types of meat (e.g. red meat)	2.9%						
	Yes, I avoid meat at certain times (e.g. Meatfree Mondays)	5.0%						
	Other	5.0%						
(If 'Yes...' or 'Other' was answered above) Please indicate the reason that best describes why you currently follow a special diet.	Animal welfare reasons	54.1%						
	Environmental reasons	21.6%						
	Family/friend/partner reasons	0%						
	Financial reasons	0%						
	Health reasons (including allergies)	8.1%						
	Personal preference	10.8%						
	Religious reasons	2.7%						
	Other	2.7%						
To what extent do you agree or disagree with the following statements about meat? Please read the questions carefully before answering.	I like eating meat	Strongly disagree	Disagree	Somewh at disagree	Neither agree nor disagree	Somewh at agree	Agree	Strongly agree
		30.2%	2.2%	2.2%	10.1%	20.1%	20.1%	15.1%
	Meat is not an essential part of a meal	Strongly disagree	Disagree	Somewh at disagree	Neither agree nor disagree	Somewh at agree	Agree	Strongly agree
		5.0%	3.6%	5.8%	2.2%	9.4%	22.3%	51.8%
	I would be pleased if I were given meat as part of a roast dinner	Strongly disagree	Disagree	Somewh at disagree	Neither agree nor disagree	Somewh at agree	Agree	Strongly agree
		37.4%	5.0%	2.9%	4.3%	5.8%	26.6%	18.0%
	Eating meat is part of my identity	Strongly disagree	Disagree	Somewh at disagree	Neither agree nor disagree	Somewh at agree	Agree	Strongly agree



everyday meal.	Lack of availability (e.g. in shops or restaurants)	0%
	Moral or ethical issues (e.g. animal welfare)	19.4%
	Psychological or emotional issues (e.g. disgust)	12.0%
	Preference for other actions (e.g. education on nutrition, reduction in meat consumption)	11.6%
	Preference for other sources of protein (e.g. meat, pulses and lentils etc.)	12.5%
	Safety issues	5.6%
	Social or cultural issues (e.g. acceptability)	0.5%
	Too expensive	1.9%
	Too processed, unnatural or artificial	16.7%
	Unappealing appearance, taste or texture	4.6%
	Other	1.9%
Do you think lab grown meat would be effective in addressing issues relating to the environment and global food security (e.g. availability of food across the world)?	Yes it would be effective	72.7%
	No it would not be effective	27.3%
(If 'Yes...' was answered above) Please select up to three reasons that best describe why you think lab grown meat would be effective in addressing issues relating to the environment and global food security (e.g.	Affordable cost	20.5%
	Environmentally friendly	40.6%
	Moral or ethical reasons (e.g. animal welfare)	22.7%

availability of food across the world).	Economic impacts (e.g. on jobs)	10.5%
	Other	5.7%
(If 'No...' was answered above) Please select up to three reasons that best describe why you think lab grown meat would not be effective in addressing issues relating to the environment and global food security (e.g. availability of food across the world).	Economic impacts (e.g. on jobs)	6.6%
	Environmentally unfriendly	6.6%
	Need to address other issues first (e.g. global distribution of wealth or food)	28.3%
	Preference for other actions (e.g. education on nutrition, reduction in meat consumption)	24.5%
	Preference for other sources of protein (e.g. meat, pulses and lentils etc.)	14.2%
	Psychological or emotional issues (e.g. disgust)	5.7%
	Safety issues (e.g. regulation)	5.7%
	Too expensive	7.5%
	Other	0.9%
Would you or would you not eat insects as part of an everyday meal?	Yes I would eat insects	25.9%
	No I would not eat insects	74.1%
(If 'Yes...' was answered above) Please select up to three reasons that best describe why you would eat insects as part of an everyday meal.	Appealing appearance, taste or texture	9.8%
	Cultural reasons (e.g. eat them elsewhere)	4.3%
	Easy to grow, rear and manage	23.9%
	Environmentally friendly	29.3%
	Health or nutrition reasons	18.5%
	Moral or ethical reasons (e.g. animal welfare)	8.7%
	Other	5.4%
(If 'No...' was answered above) Please select up to three reasons	Lack of availability (e.g. in shops or restaurants)	1.5%

that best describe why you would not eat insects as part of an everyday meal.	Moral or ethical issues (e.g. animal welfare)	15.8%
	Preference for other actions (e.g. education on nutrition, reduction in meat consumption)	9.8%
	Preference for other sources of protein (e.g. meat, pulses and lentils etc.)	18.9%
	Preparation or cooking issues	1.9%
	Psychological or emotional issues (e.g. disgust)	24.9%
	Social or cultural issues (e.g. acceptability)	2.6%
	Safety issues	0.8%
	Unappealing appearance, taste or texture	20.8%
	Other	3.0%
Do you think insects would be effective in addressing issues relating to the environment and global food security (e.g. availability of food across the world)?	Yes they would be effective	61.9%
	No they would not be effective	38.1%
(If 'Yes...' was answered above) Please select up to three reasons that best describe why you think insects would be effective in addressing issues relating to the environment and global food security (e.g. availability of food across the world).	Affordable cost	23.2%
	Available and plentiful	29.6%
	Easy to grow, rear and manage	30.5%
	Economic impacts (e.g. on jobs)	1.7%
	Health or nutrition reasons	6.4%
	Less processed or more natural	6.4%
	Social or cultural reasons (e.g. acceptability)	0.9%
	Other	1.3%

(If 'No...' was answered above) Please select up to three reasons that best describe why you think insects would not be effective in addressing issues relating to the environment and global food security (e.g. availability of food across the world).	Address other issues first (e.g. global distribution of wealth or food)	17.7%
	Environmentally unfriendly	4.6%
	Economic impacts (e.g. on jobs)	2.3%
	Social or cultural reasons (e.g. acceptability)	21.5%
	Preference for other actions (e.g. education on nutrition, reduction in meat consumption)	23.8%
	Preference for other sources of protein (e.g. meat, pulses and lentils etc.)	23.1%
	Other	6.9%
Would you or would you not eat meat substitutes as part of an everyday meal?	Yes I would eat meat substitutes	90.6%
	No I would not eat meat substitutes	9.4%
(If 'Yes...' was answered above) Please select up to three reasons that best describe why you would eat meat substitutes as part of an everyday meal.	Affordable cost	9.5%
	Appealing appearance, taste or texture	12.3%
	Available (e.g. in shops or restaurants)	13.8%
	Easy or convenient to prepare or cook	12.6%
	Environmentally friendly	14.0%
	Health or nutrition reasons	15.2%
	Moral or ethical reasons (e.g. animal welfare)	19.8%
	Safety reasons	0.9%
	Social or cultural reasons (e.g. acceptability)	1.4%
	Other	0.6%
(If 'No...' was answered above) Please select up to three reasons that best describe why you would not eat meat substitutes as part of an everyday meal.	Cooking or preparation issues	0%
	Environmentally unfriendly	0%
	Health or nutrition issues	9.4%

	Lack of availability (e.g. in shops or restaurants)	0%
	Preference for other actions (e.g. education on nutrition, reduction in meat consumption)	12.5%
	Preference for other sources of protein (e.g. meat, pulses and lentils etc.)	25.0%
	Social or cultural issues (e.g. acceptability)	0%
	Too processed	18.75%
	Unappealing appearance, taste or texture	25.0%
	Other	9.4%
Do you think meat substitutes would be effective in addressing issues relating to the environment and global food security (e.g. availability of food across the world)?	Yes they would be effective	77.0%
	No they would not be effective	23.0%
(If 'Yes...' was answered above) Please select up to three reasons that best describe why you think meat substitutes would be effective in addressing issues relating to the environment and global food security (e.g. availability of food across the world).	Affordable cost	17.0%
	Environmentally friendly	27.6%
	Moral or ethical reasons (e.g. animal welfare)	24.4%
	Health or nutrition reasons	20.5%
	Social or cultural reasons (e.g. acceptability)	8.8%
	Other	1.8%
(If 'No...' was answered above) Please select up to three reasons	Environmentally unfriendly	7.1%



that best describe why you think meat substitutes would not be effective in addressing issues relating to the environment and global food security (e.g. availability of food across the world).	Need to address other issues first (e.g. global distribution of wealth or food)	22.4%
	Economic impacts (e.g. on jobs)	0%
	Preference for other actions (e.g. education on nutrition, reduction in meat consumption)	15.3%
	Preference for other sources of protein (e.g. meat, pulses and lentils etc.)	21.2%
	Social or cultural issues (e.g. acceptability)	5.9%
	Too expensive	11.8%
	Too processed or unnatural	15.3%
	Other	1.2%

## Laboratory-grown meat

- **What is it and how is it made?** Meat produced in a laboratory using stem cells from an animal and a growth medium.
- **How does it compare to conventional meat?** 96% fewer greenhouse gas emissions, 45% less energy, 99% less land, lower risk of meat-related diseases and infections and less fat content. Also, just a few animal cells can be turned in to tonnes of meat.
- **What is it like to eat?** Meaty texture and consistency but lacking in juiciness.
- **Approximate protein per 100g?** Not yet known, but likely to be similar to beef which has approximately 25g of protein in 100g.
- **Is it vegetarian or vegan?** Not currently vegetarian as the cells are grown in the fetal calf serum of a slaughtered cow.
- **How much does a portion cost and is it available?** The first burger cost £215,000, but now costs approximately £9. Potentially available in the next 5-10 years.
- **Examples?** Burgers and meatballs have been made.



# Insects

- **What are they and how are they made?** The eggs, larvae, pupae and adults of certain insects are reared and then harvested.
- **How do they compare to conventional meat?** Less land needed, lower greenhouse gas emissions and risk of disease, can be reared on waste products and up to 80% of their bodyweight is digestible.
- **What are they like to eat?** Crunchy, chewy, sometimes slightly bitter, they absorb flavour well.
- **Approximate protein per 100g?\*** 21 – 67g depending on insect.
- **Are they vegetarian or vegan?** No as animals are slaughtered.
- **How much does a portion cost and are they available?** Between 70p - £8 for 5g, and yes, over 1000 species are eaten globally.
- **Examples?** Ants, beetles, caterpillars, wasps, grasshoppers, locusts, crickets, termites and flies.

*\*There's approximately 27g of protein in 100g of chicken.*



# Meat substitutes

- **What are they and how are they made?** Processed products that mimic the taste and texture of meat. Made from processing plant and fungi sources such as soy, wheat protein, seitan or mycoprotein.
- **How do they compare to conventional meat?** Less land and water needed.
- **What are they like to eat?** Not always as chewy and juicy as meat, but salty and flavoursome.
- **Approximate protein per 100g\*** Between 7g – 19g depending on product and brand.
- **Is it vegetarian or vegan?** Yes and sometimes vegan if made without dairy products.
- **How much does a portion cost and are they available?** Between 46p – £1.80 for 100g depending on product and brand. Yes, many different brands available.
- **Examples?** Quorn, Linda McCartney, Cauldron, Fry's.

*\*There's approximately 27g of protein in 100g of chicken.*



