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Food and You 2:

Wave 1 Key Findings



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Foreword

The FSA has a unique role as the part of Government that looks after consumer interests when it comes to food. Representing people and communities that we serve is central to what we do.

There is really no such thing as ‘the consumer’. We all consume food, and we are all individuals. The same person can be in combination or at different points in their life a small business owner, a new parent, an active citizen, a grower, a home cook, a person celebrating with special meals or indulging with a takeaway, eating in a college canteen, an inmate, a hospital patient or a care home resident. Our needs and interests are complex and constantly on the move.

Conducting deep and careful research and making the data available is a vital part of how we seek to understand and represent the consumer perspective. This first report from our new, more frequent, more flexible, flagship survey represents a huge amount of work.

It has never been more important than now, in the context of a pandemic which has changed how people buy and eat food profoundly, that we listen to the voices of consumers often and at a scale which allows for good analysis. I am delighted that the wholesale review of our flagship consumer survey now gives us the tools to do this better.



Emily Miles

CEO, Food Standards Agency

March 2021

Executive Summary

Introducing Food and You 2

Food and You 2 is a new biannual official statistic survey commissioned by the Food Standards Agency (FSA). The survey measures self-reported consumer knowledge, attitudes and behaviours related to food safety and other food issues amongst adults in England, Wales, and Northern Ireland.

Food and You 2 uses a new methodology, known as ‘push-to-web’, which is primarily carried out online. This method allows the FSA to conduct fieldwork more frequently and with a much larger sample, whilst continuing to use a random probability sampling approach.

Food and You 2 replaces existing surveys including the face-to-face Food and You survey (2010-2018) and Public Attitudes Tracker (2010-2019). Due to differences in the question content, presentation and mode of response, direct comparisons should not be made between these earlier surveys and Food and You 2.

Fieldwork for Food and You 2: Wave 1 was conducted between 29 July and 6 October 2020. A total of 9,319 adults from 6,408 households across England, Wales and Northern Ireland completed the survey.

This survey was taken during the Covid-19 pandemic and so it records the reported attitudes and behaviours under unusual circumstances which have had a significant impact on how and where people buy and eat food, and on levels of household food insecurity.

The modules presented in this report include ‘Food we can trust’, ‘Concerns about food’, ’Food security’, ‘Food shopping’ and ‘Eating at home’.

Summary of key findings

Food we can trust

Confidence in food safety and authenticity

- More than 9 in 10 (92%) respondents reported that they had confidence that the food they buy is safe to eat.
- More than 8 in 10 (86%) respondents reported that they had confidence that the information on food labels is accurate.

Confidence in the food supply chain

- Over three quarters of respondents (78%) reported that they had confidence in the food supply chain.
- Respondents were more likely to report confidence in farmers (90%), and shops and supermarkets (86%) than in take-aways (51%), and food delivery services (39%).

Awareness, trust, and confidence in the FSA

- Over 9 in 10 respondents (91%) had heard of the FSA.
- Three quarters (75%) of respondents who had at least some knowledge about the FSA trust the FSA to make sure food is safe and what it says it is.
- Over half of respondents (57%) reported some knowledge of the FSA.
- Of those who had at least some knowledge about the FSA, most respondents (91%) were confident that the FSA can be relied upon to protect the public from food-related risks, 88% were confident that the FSA is committed to communicating openly with the public about food-related risks, and 91% were confident that the FSA takes appropriate action if a food-related risk is identified.

Concerns about food

- Most respondents (84%) reported they had no concerns about the food that they eat, and only 16% of respondents reported that they had a concern.
- Respondents who reported a concern about the food they eat were asked to briefly explain what their concerns related to. Food production methods (29%), environmental and ethical concerns (26%) and food provenance (21%) were the most mentioned concerns.
- When all respondents were asked to indicate if they had concerns about the food they eat, from a list of given options, the most common concerns related to the amount of sugar in food (59%), food waste (58%) and animal welfare (57%).

Food security

Food and You 2: Wave 1 data were collected between 29th July and 6th October 2020, during the COVID-19 pandemic which had a significant impact on society, on the economy, on how and where people buy and eat food and on the day-to-day lives of everyone. It is expected that the COVID-19 pandemic had an impact on the level of food security reported by respondents in Food and You 2.

- Across England, Wales, and Northern Ireland, 84% of respondents were classified as food secure (72% high, 12% marginal) and 16% of respondents were classified as food insecure (9% low, 7% very low).
- Food security levels were comparable across England, Wales, and Northern Ireland. Over three quarters of respondents were food secure (high, marginal) in England (84%), Wales (83%) and Northern Ireland (85%). Approximately 1 in 6 respondents were food insecure (low, very low) in England (16%), Wales (17%) and Northern Ireland (15%).
- Almost three-quarters (73%) of respondents who had changed their eating habits in the last 12 months reported the changes were, at least partly, due to COVID-19 and lockdown.

Food shopping

Where do respondents buy food?

- Most respondents reported that they have often (i.e. once a week or more frequently) bought food from a supermarket or mini supermarket (85%). Convenience shops (e.g. corner shops) (44%), and independent shops (e.g. greengrocers') (51%) were typically used on an occasional basis (i.e. '2-3 times a month' or less often). A small number of respondents (6%) have used Facebook marketplace to buy food.

What do respondents look for when buying food?

- When shopping, respondents reported they often checked the use-by (80%) or best before date (78%).

Confidence in allergen labelling

- Most respondents (79%) who go food shopping and take into consideration a person who has a food allergy or intolerance were confident that the information provided on food labelling allows them to identify foods that will cause a bad or unpleasant physical reaction.

- Respondents who buy food sold loose were more confident in identifying foods that will cause a bad or unpleasant physical reaction when buying this food in-store at a

supermarket (74%), when buying food from a supermarket online (71%) and when shopping at independent food shops (68%). Respondents were less confident when buying food from food markets or stalls (56%).

Eating at home

Use-by dates

- Almost three quarters (71%) of respondents identified the use-by date as the information which shows that food is no longer safe to eat.
- Almost two thirds (64%) of respondents stated that they always check use-by dates before they cook or prepare food. A third (33%) of respondents check use-by dates at least occasionally and just 2% never check use-by dates.
- Many respondents reported that they never ate cooked meats (64%), smoked fish (85%), cheese (52%), bagged salads (49%) or milk (67%) past the use-by date. Conversely, some respondents reported that they had eaten those foods past the use-by date. For example, almost half of respondents had eaten bagged salad past the use-by date (6% every week, 21% some weeks and 17% just one week in the last month).

‘Eat within’ information

- Around a quarter (27%) of respondents reported that they always follow the on-pack instruction.

Acknowledgements

First and foremost, our thanks go to all the respondents who gave up their time to take part in the survey.

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Introduction

The Food Standards Agency: role, remit, and responsibilities

The Food Standards Agency (FSA) is an independent Government department working to protect public health and consumers' wider interests in relation to food in England, Wales, and Northern Ireland[1]. The FSA's overarching mission is 'food we can trust'. The FSA's goal and vision is to ensure that food is safe, and food is what it says it is, such that consumers can make informed choices about what to eat. In Northern Ireland, the FSA is responsible for nutrition policy and has the additional goal to ensure that consumers have access to an affordable diet, now and in the future.

Food and You 2 is designed to monitor the FSA's progress against these goals and inform policy decisions by measuring self-reported consumers' knowledge, attitudes and behaviours related to food safety and other food issues in England, Wales, and Northern Ireland on a regular basis.

Food and You 2

Ipsos MORI were commissioned by the FSA to develop and run a new biannual survey, 'Food and You 2', carried out primarily online. The new methodology, known as 'push-to-web', allows the FSA to continue collecting robust data using a random probability sampling approach. This methodology also allows the survey to be run more frequently, to be more responsive to new and emerging issues, and for more people to take part.

Food and You 2 replaces the FSA's face-to-face Food and You survey (2010-2018)[2], Public Attitudes Tracker (2010-2019) and Food Hygiene Rating Scheme (FHRS) - Consumer Attitudes Tracker (2014-2019). Due to differences in the question content, presentation and mode of response, direct comparisons should not be made between these earlier surveys and Food and You 2. More information about the history and methodology can be found in Annex A.

[1] In Scotland, the non-ministerial office Food Standards Scotland, is responsible for ensuring food is safe to eat, consumers know what they are eating and improving nutrition.
[2] The Food and You survey has been an Official Statistic since 2014.

Food and You 2: Wave 1

Fieldwork for Food and You 2: Wave 1 was conducted between 29 July and 6 October 2020. A total of 9,319 adults from 6,408 households across England, Wales, and Northern Ireland completed the survey (an overall response rate of 30%).

Food and You 2 is a modular survey, with 'core' modules being included every wave, 'rotated' modules being repeated annually or biennially, and 'exclusive' modules being asked on a one-off basis. The modules presented in this report include 'Food we can trust' (core), 'Concerns about food' (core), 'Food security' (rotated), 'Food shopping' (rotated) and 'Eating at home' (full, rotated)[3].

This report presents key findings from the Food and You 2: Wave 1 survey. Not all questions asked in the Wave 1 survey are included in the report. The full results are available in the accompanying data tables and underlying dataset.

To highlight the key differences between socio-demographic and other sub-groups, variation in response profiles are typically reported only where the absolute difference is 10 percentage points or larger and is statistically significant at the 5% level ($p<0.05$). However, some differences between socio-demographic and other sub-groups are included where the difference is less than 10 percentage points, when the finding is notable or judged to be of interest. These differences are indicated with a double asterisk (**). The report presents trends between some socio-demographic and sub-groups in the population. In some cases, it was not possible to include the data of all sub-groups, however these data are available in the full data set and tables.

Key information is provided for each reported question in the footnotes, including: question wording in survey (question); response options (response) and differences not shown in the main text (additional differences); number of respondents presented with each question (base = N); a single asterisk indicates that the value is not reported as the base size is below 100 and therefore is not representative (*); N.B. indicates important points to consider when interpreting the results.

Future publication plans

Modules expected to be reported in the Food and You 2: Wave 2 Key Findings report include, 'Food we trust' (core), 'Concerns about food' (core), 'Food security' (rotated) and 'Eating at home' (brief, rotated). The 'Food shopping' (rotated) module is expected to be reported in the Food and You 2: Wave 3 Key Findings report. However, findings included in the Food and You 2: Key Findings reports will be responsive to new and emerging

[3] Two versions of the Eating at Home module have been created, a brief version which includes a limited number of questions, and a full version which includes all related questions. The brief version of the module is expected to be reported in Wave 2.

issues and observations which are novel or of interest. A series of secondary reports will explore key modules in more detail.

Chapter 1: Food we can trust

Introduction

The FSA's overarching mission is 'food we can trust'. The FSA was established in 2000 following several high-profile outbreaks of food-related illness. The FSA aims not only to protect people but also to reduce the economic burden of foodborne illnesses and support the economy and trade by ensuring that food has a strong reputation for safety and authenticity in the UK and abroad. The FSA is responsible for the systems that regulate food businesses and is at the forefront of tackling food crime.

This chapter will provide an overview of respondents' confidence in food safety and authenticity, awareness of and trust in the FSA, and confidence in the FSA.

Confidence in food safety and authenticity

Most respondents reported confidence in food safety and authenticity; 92% of respondents reported that they had confidence that the food they buy is safe to eat, and 86% of respondents reported that they had confidence that the information on food labels is accurate[4].

Confidence in food safety varied between different types of people in the following ways:

- NS-SEC[5]: respondents who were long term unemployed or had never worked (80%) were less likely to report confidence that the food they buy is safe to eat, compared to respondents in many other occupational groups (e.g. 94% managerial, administrative and professional occupations).

Confidence that the information on food labels is accurate varied between different types of people in the following ways:

- NS-SEC: long term unemployed respondents or those who had never worked (73%) were less likely to report confidence that the information on food labels is accurate, when compared to full-time students (86%), or respondents in many other occupational groups, such as those in managerial, administrative and professional occupations (87%).

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[4] Question: How confident are you that… A) the food you buy is safe to eat. B) the information on food labels is accurate (e.g. ingredients, nutritional information, country of origin). Responses: Very confident, Fairly confident, Not very confident, Not confident at all, It varies, Don't know. Base= 9319, all respondents. N.B. 'Very confident' or 'Fairly confident' respondents are referred to as 'confident'.

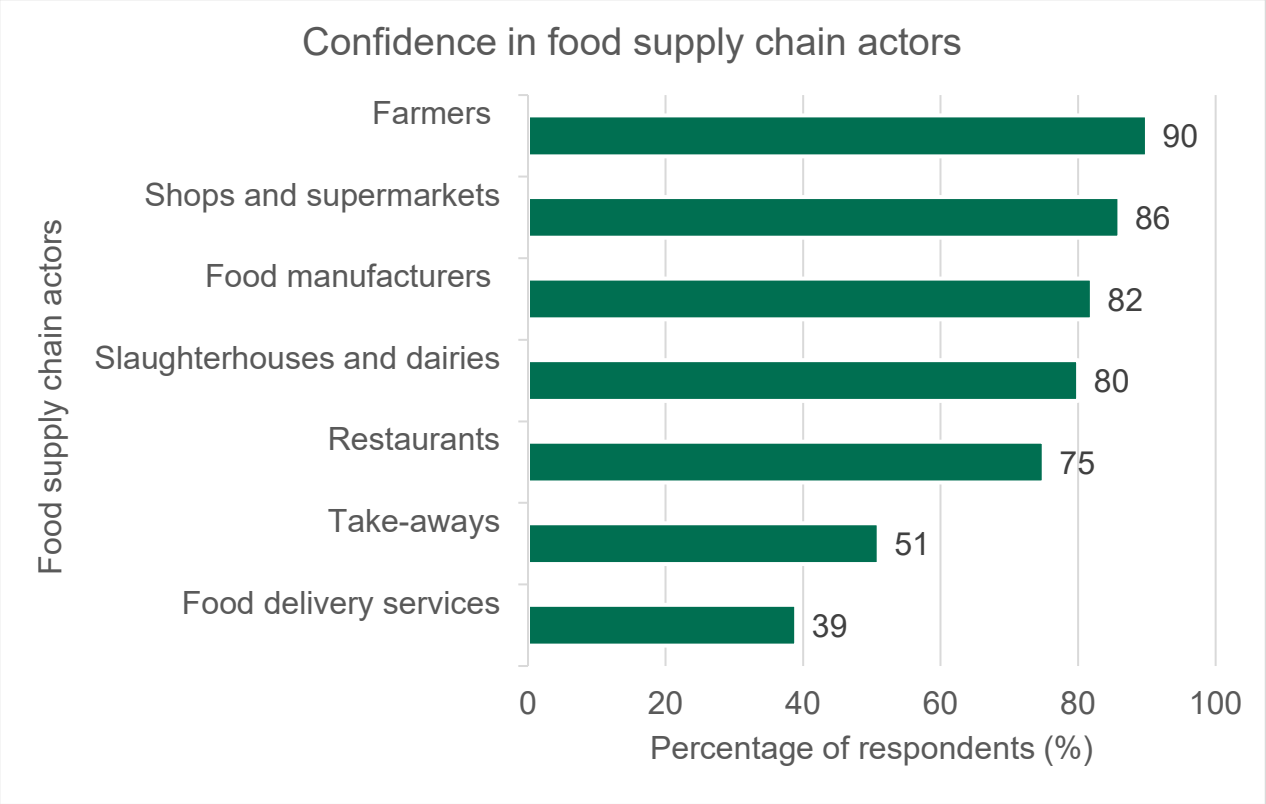
[5] National Statistics Socio-Economic Classification

- Responsibility for shopping: 88% of respondents who were responsible for food shopping reported that they were confident that the information on food labels is accurate, compared to 76% of those who never do food shopping.

Confidence in the food supply chain

Over three quarters of respondents (78%) reported that they had confidence in the food supply chain[6].

Figure 1: Most respondents were confident that food supply chain actors ensure food is safe to eat.



Source: Food and You 2: Wave 1

Respondents were asked to indicate how confident they were that actors in the food supply chain ensure that the food they buy is safe to eat. Respondents were more likely

[6] Question: How confident are you in the food supply chain? That is all the processes involved in bringing food to your table. Responses (additional differences): Very confident (17%), Somewhat confident (61%), Not very confident (12%), Not confident at all (2%), It varies (4%), Don't know (4%). Base= 9319, all respondents. N.B. 'Very confident' or 'Fairly confident' respondents are referred to as 'confident'.

to report confidence in farmers (90%), and shops and supermarkets (86%) than in take-aways (51%), and food delivery services (39%) (Figure 1)[7].

Awareness, trust and confidence in the FSA

Over 9 in 10 respondents (91%) had heard of the FSA[8]. Respondents who had at least some knowledge of the FSA were asked how much they trusted the FSA to do its job. Three quarters (75%) reported that they trusted the FSA to make sure food is safe and what it says it is[9].

Awareness of the FSA varied between different types of people in the following ways:

- Age group: awareness of the FSA was more likely to be reported by older respondents than younger respondents. For example, 95% of those aged 65-74 years reported awareness of the FSA, compared to 84% of those aged 16-24 years.
- Ethnic group: 93% of white respondents reported awareness of the FSA, compared to 81% of Asian or Asian British respondents.

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[7] Question: How confident are you that... A) Farmers, B) Slaughterhouses and dairies, C) Food manufacturers e.g. factories, D) Shops and supermarkets, E) Restaurants, F) Take-aways, G) Food delivery services e.g. Just Eat, Deliveroo, Uber Eats…in the UK (and Ireland) ensure the food you buy is safe to eat. Responses (Additional differences): Very confident, Fairly confident, Not very confident, Not at all confident, It varies (A=1%, B=1%. C=2%, D=2%, E=5%, F=6%, G=4%), don't know (A=3%, B=6%, C=3%, D=2%, E=3%, F=5%, G=21%). Base= 7648, all online respondents and those who completed the food poisoning postal (FPP) questionnaire.

[8] Question: Which of the following, if any, have you heard of? Please select all that apply. Response: Food Standards Agency (FSA), Public Health England (PHE), (England) Department for Environment, Food and Rural Affairs (DEFRA), (England) Environment Agency, (England and Wales) Health and Safety Executive (HSE), (Wales) Public Health Wales (PHW), (Wales) Natural Resources Wales, (NI) Public Health Agency (PHA), (NI) Department of Agriculture, Environment and Rural Affairs (DAERA), (NI) Health and Safety Executive Northern Ireland (HSENI), (NI) Safefood. Base= 5936, online respondents. N.B. All consumers taking part in the survey had received an invitation to take part in the survey from Ipsos MORI which mentioned the FSA. An absence of response indicates the organisation had not been heard of by the respondent or a non-response.

[9] Question: How much do you trust or distrust the Food Standards Agency to do its job? That is to make sure that food is safe and what it says it is. Responses (Additional differences): I trust it a lot, I trust it, I neither trust nor distrust it (22%), I distrust it*, I distrust it a lot*, don't know*. 'I trust it a lot' and 'I trust it' referred to as trust. Base=5457, all respondents who know a lot or a little about the FSA and what it does.

- Responsibility for cooking: 92% of respondents who were responsible for cooking reported awareness of the FSA, compared to 76% of those who do not cook.
- Responsibility for shopping: 92% of respondents who were responsible for food shopping reported awareness of the FSA, compared to 74% of those who never do food shopping.

Over half of respondents reported some knowledge of the FSA (57%); 6% reported that they knew a lot about the FSA and what it does, and 51% reported that they knew a little about the FSA and what it does. Less than half (43%) of respondents reported they had little or no knowledge of the FSA; 33% had heard of the FSA but knew nothing about it, 5% had not heard of the FSA before being contacted to take part in Food and You 2, and 5% had not heard of the FSA[10].

Knowledge of the FSA varied between different types of people in the following ways:

- Age group: knowledge about the FSA was more likely to be reported by respondents aged between 35 and 74 years (e.g. 55-64 67%) than by the youngest respondents (16-24 39%, 25-34 52%) or oldest respondents (75+ 52%).
- Annual household income: respondents with a higher income were more likely to report knowledge of the FSA compared to those with a lower income. For example, 64% of respondents with an income of £32,000-£63,999 reported knowledge of the FSA, compared to 50% of those with an income of less than £19,000).
- Employment status: working (61%) or retired (59%) respondents were more likely to report knowledge of the FSA than those who were not working (47%).
- NS-SEC: respondents in managerial, administrative, and professional occupations (64%) were more likely to report knowledge of the FSA than those in other occupations (e.g. semi-routine and routine occupations 51%), or full-time students (47%).
- Ethnic group: 59% of white respondents reported knowledge of the FSA compared to 45% of Asian or Asian British respondents.
- Responsibility of cooking: 59% of respondents who were responsible for cooking reported knowledge of the FSA compared to 42% of respondents who do not cook.
- Responsibility of food shopping: 61% of respondents who were responsible for food shopping reported knowledge of the FSA compared to 36% of respondents who never do food shopping.

[10] Question: How much, if anything, do you know about the Food Standards Agency, also known as the FSA? Response: I know a lot about the FSA and what it does, I know a little about the FSA and what it does, I've heard of the FSA but know nothing about it, I hadn't heard of the FSA until I was contacted to take part in this survey, I've never heard of the FSA. Base = 9319, all respondents. N.B. All consumers taking part in the survey had received an invitation to take part in the survey which mentioned the FSA.

When considering respondents who had at least some knowledge about the FSA, most respondents (91%) were confident that the FSA can be relied upon to protect the public from food-related risks, 88% were confident that the FSA is committed to communicating openly with the public about food-related risks, and 91% were confident that the FSA takes appropriate action if a food-related risk is identified[11].

Respondents who reported that they had little or no knowledge of the FSA were asked how confident they were in the 'government agency responsible for food safety' (without naming the FSA). Overall, almost three quarters (74%) of respondents reported that they were confident that the government agency can be relied upon to protect the public from food-related risks (such as food poisoning or allergic reactions from food), 67% were confident that the government agency is committed to communicating openly with the public about food-related risks, and 72% were confident that the government agency takes appropriate action if a food-related risk is identified[12].

[11] Question: How confident are you that Food standards Agency...A) Can be relied upon to protect the public from food-related risks (such as food poisoning or allergic reactions from food). B) Is committed to communicating openly with the public about food-related risks. C) Takes appropriate action if a food related risk is identified? Responses: Very confident, Fairly confident, Not very confident, Not at all confident, Don't know. Base=3547, all online respondents who know a little or a lot about the FSA and what it does. N.B. 'Very confident' and 'Fairly confident' referred to as confident.

[12] Question: How confident are you that the government agency responsible for food safety in England, Wales and Northern Ireland...A) Can be relied upon to protect the public from food-related risks (such as food poisoning or allergic reactions from food). B) Is committed to communicating openly with the public about food-related risks. C) Takes appropriate action if a food related risk is identified? Responses: Very confident, Fairly confident, Not very confident, Not at all confident, Don't know. Base = 3785, all respondents who have little or no knowledge of the FSA. N.B. 'Very confident' and 'Fairly confident' referred to as confident.

Chapter 2: Concerns about food

Introduction

The Food Standards Agency's (FSA) overarching mission is 'food we can trust'. The FSA's goal and vision is to ensure that food is safe to eat and food is what it says it is. The aim of the FSA is to ensure that consumers can make informed choices about what to eat, trust that the food they buy is safe to eat, and have access to an affordable diet, now and in the future[13].

This chapter provides an overview of respondents' concerns about food and how these vary between different types of people.

Common concerns

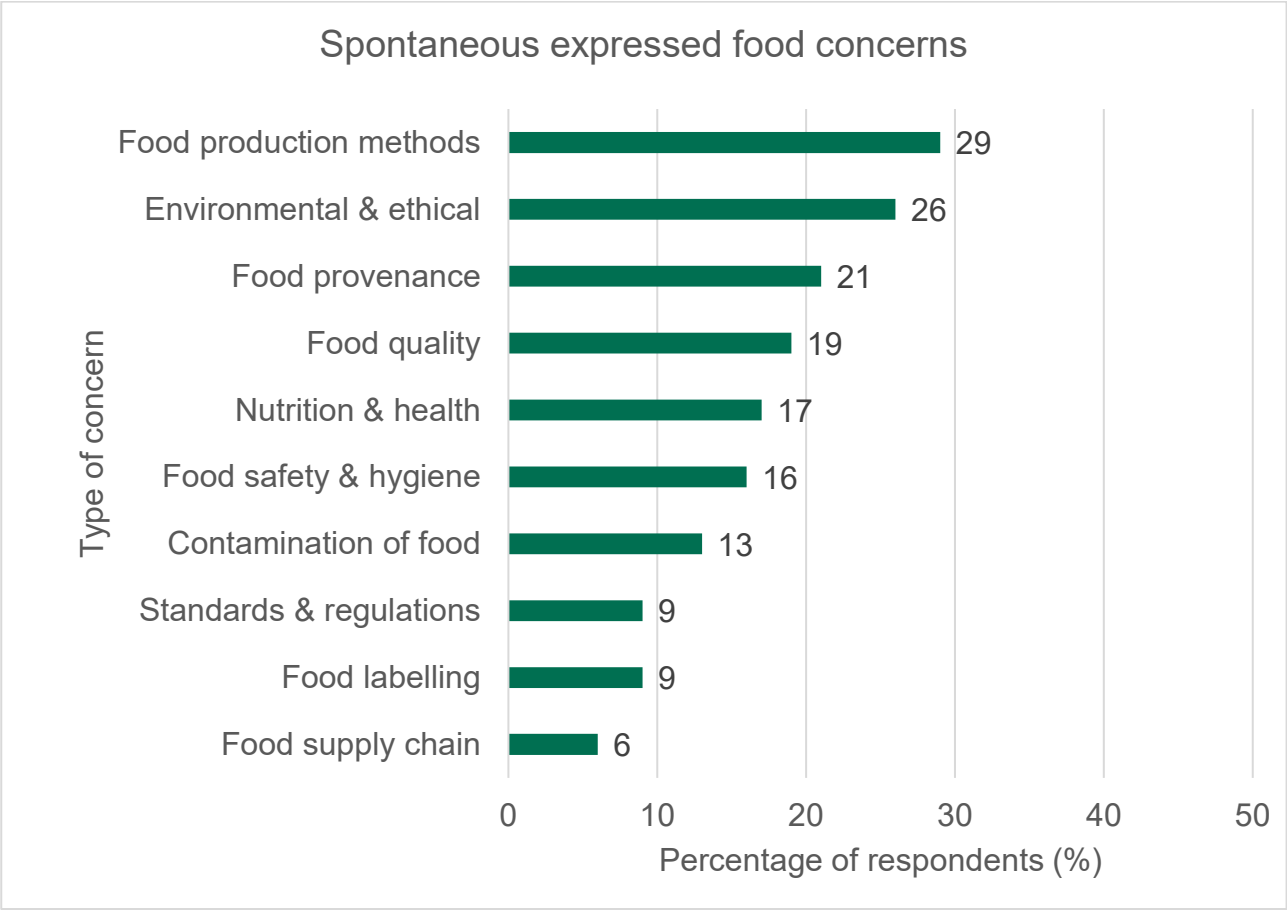
Respondents were asked to report whether they had any concerns about the food they eat. Most respondents (84%) had no concerns about the food they eat, and only 16% of respondents reported that they had a concern[14].

Concern about food varied between different types of people in the following ways:

- Age group: younger respondents were more likely to report that they had no concerns about the food they eat than older adults. For example, 89% of respondents aged 16-24 years reported no concerns about the food they eat, compared to 77% of those aged 75+ years.
- Household size: 90% of respondents in larger households (5+ persons) reported that they had no concerns about the food they eat compared to 80% of respondents in a single person household.

[13] The FSA is not responsible for nutrition policy in England and Wales, only in Northern Ireland.
[14] Question: Do you have any concerns about the food you eat? Responses: Yes, No. Base= 9313, all respondents.

Figure 2. Ten most common spontaneous expressed concerns about food.

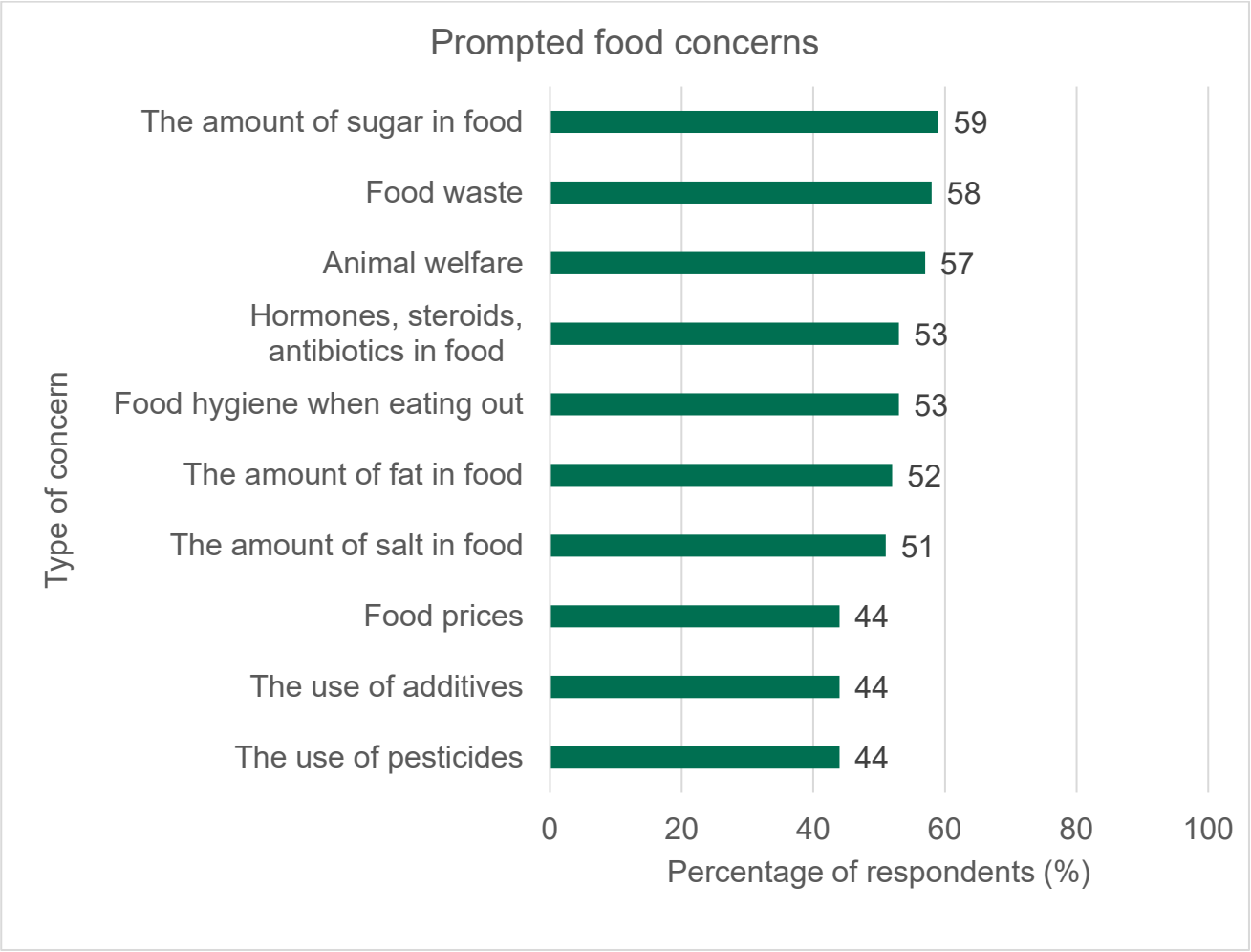


Source: Food and You 2: Wave 1

Respondents who reported a concern about the food they eat were asked to briefly explain what their concerns were. The most common concerns related to food production methods (e.g. use of preservatives and colouring in foods, use of pesticide and fertilizer) (29%), environmental and ethical concerns (e.g. animal welfare, sustainability) (26%), and food provenance (e.g. where food comes from) (21%). Only 5% of respondents reported concerns relating to food authenticity (Figure 2)[15].

[15] Question: What are your concerns about the food you eat? Responses: [Open text]. Base= 1557, all with concerns about the food they eat. N.B. additional responses are available in the data tables and data file, responses were coded by Ipsos MORI, see Technical Report for further details.

Figure 3. Ten most common prompted concerns about food.



Source: Food and You 2: Wave 1

All respondents were asked to indicate if they had concerns about the food they eat, from a list of given options[16]. The most common concerns, identified from a list, related to the amount of sugar in food (59%), food waste (58%) and animal welfare (57%) (Figure 3).

In addition, 43% of respondents reported that they were concerned about food fraud or crime. In contrast to the spontaneous concerns of respondents (food production methods, environmental and ethical concerns, food provenance) the most common

[16] Question: Do you have concerns about any of the following? Responses (Additional differences): Cooking safely at home (8%), Food poisoning (38%), Food hygiene when eating out, The use of pesticides, The use of additives (e.g. preservatives and colouring), Chemical contamination from the environment (39%), Hormones, steroids or antibiotics in food, Genetically modified (GM) foods (37%), Food prices, Food allergen information (18%), The amount of salt in food, The amount of sugar in food, The amount of fat in food, The number of calories in food (42%), Food waste, Animal welfare, Food miles (36%), Food fraud or crime (43%), None of these (7%), Don't know (2%). Base= 5936, all online respondents.

concerns from the listed options were, the amount of sugar in food, food waste, and animal welfare (Figure 2, Figure 3).

Insight into most common prompted concerns

The amount of sugar in food

Over half of respondents (59%) reported that they were concerned about the amount of sugar in food.

Concern about the amount of sugar in food varied between different types of people in the following ways:

- Age group: older adults were more likely to report concern about the amount of sugar in food than younger adults. For example, 67% of respondents aged 75+ years reported concern about the amount of sugar in food compared to 44% of those aged 16-24 years.
- Employment status: 73% of retired respondents reported concern about the amount of sugar in food compared to 48% of those who were working and 40% of those who were not working.
- Children (under 16 years) in the household: respondents with no children in the household (63%) were more likely to report concern about the amount of sugar in food than those with children in the household (51%).
- NS-SEC: respondents in many occupations (e.g. 65% in managerial, administrative, and professional occupations) were more likely to report concern about the amount of sugar in food than those in lower supervisory and technical occupations (52%), semi-routine and routine occupations (47%) or full-time students (50%).
- Food security: respondents with high food security (64%) were more likely to report concern about the amount of sugar in food than those with marginal food security (52%) or those with low food security (54%). Concern about the amount of sugar in food was least likely to be reported by respondents with very low food security (41%).
- Responsibility for cooking: 61% of respondents who were responsible for cooking reported concern about the amount of sugar in food more compared to 41% of those who do not cook.
- Responsibility for shopping: 61% of respondents who were responsible for food shopping reported concern about the amount of sugar in food compared to 44% of those who never do food shopping.

Food waste

Over half of respondents (58%) reported that they were concerned about food waste.

Concern about food waste varied between different types of people in the following ways:

- Age group: older adults were more likely to report concern about food waste than younger adults. For example, 71% of respondents aged 65-74 years reported concern about food waste compared to 50% of those aged 16-24 years.
- Household size: respondents in smaller households were more likely to report concern about food waste than those in larger households. For example, 66% of respondents in 1-person households reported concern about food waste compared to 48% of respondents in larger (5+ person) households.
- Children (under 16 years) in the household: 63% of respondents with no children in the household reported concern about food waste compared to 47% of those with children in the household.
- Employment status: 67% of respondents who were retired reported concern about food waste compared to 57% of respondents who were working and 51% of respondents who were not working.
- Food security: respondents with high food security (62%) were more likely to report concern about food waste than those with marginal food security (54%) and those with low food security (52%). Concern about food waste was least likely to be reported (46%) by respondents with very low food security.
- Responsibility for cooking: 60% of respondents who were responsible for cooking reported concern about food waste compared to 31% of those who do not cook.
- Responsibility for shopping: 60% of respondents who were responsible for shopping reported concern about food waste compared to 40% of those who never do food shopping.

Animal welfare

Over half of respondents (57%) reported concern about animal welfare.

Concern about animal welfare varied between different types of people in the following ways:

- Age group: younger adults (e.g. 48% 16-24) and those over 75 years (47%) were less likely to report concern about animal welfare (e.g. 64% 65-74) than other age groups.
- Children (under 16 years) in the household: 61% of respondents with no children in the household reported concern about animal welfare compared to 48% of those with children in the household.
- Employment status: respondents who were retired (60%) and those who were working (59%) were more likely to report concern about animal welfare than those who were not working (48%).
- NS-SEC: respondents in some occupations (e.g. managerial, administrative, and professional occupations 62%) were more likely to report concern about animal welfare than those in semi-routine and routine occupations (45%) or full-time students (44%).

- Food security: respondents with high food security (60%) were more likely to report concern about animal welfare than those with marginal food security (53%) and those with low food security (49%). Concern about animal welfare was least likely to be reported (44%) by respondents with very low food security.
- Responsibility for cooking: 59% of respondents who were responsible for cooking reported concern about animal welfare compared to 32% of those who do not cook.
- Responsibility for shopping: 58% of respondents who were responsible for shopping reported concern about animal welfare compared to 39% of those who never do food shopping.

Chapter 3: Food Security

Introduction

This chapter reports the level of food security in England, Wales, and Northern Ireland, and how food security varied between different types of people.

Food security means that all consumers always have access to enough food for a healthy and active lifestyle. Food and You 2 uses the U.S. Adult Food Security Survey Module developed by the United States Department of Agriculture (USDA) to measure food security at the level of consumers. More information on how food security is measured can be found in Annex A.

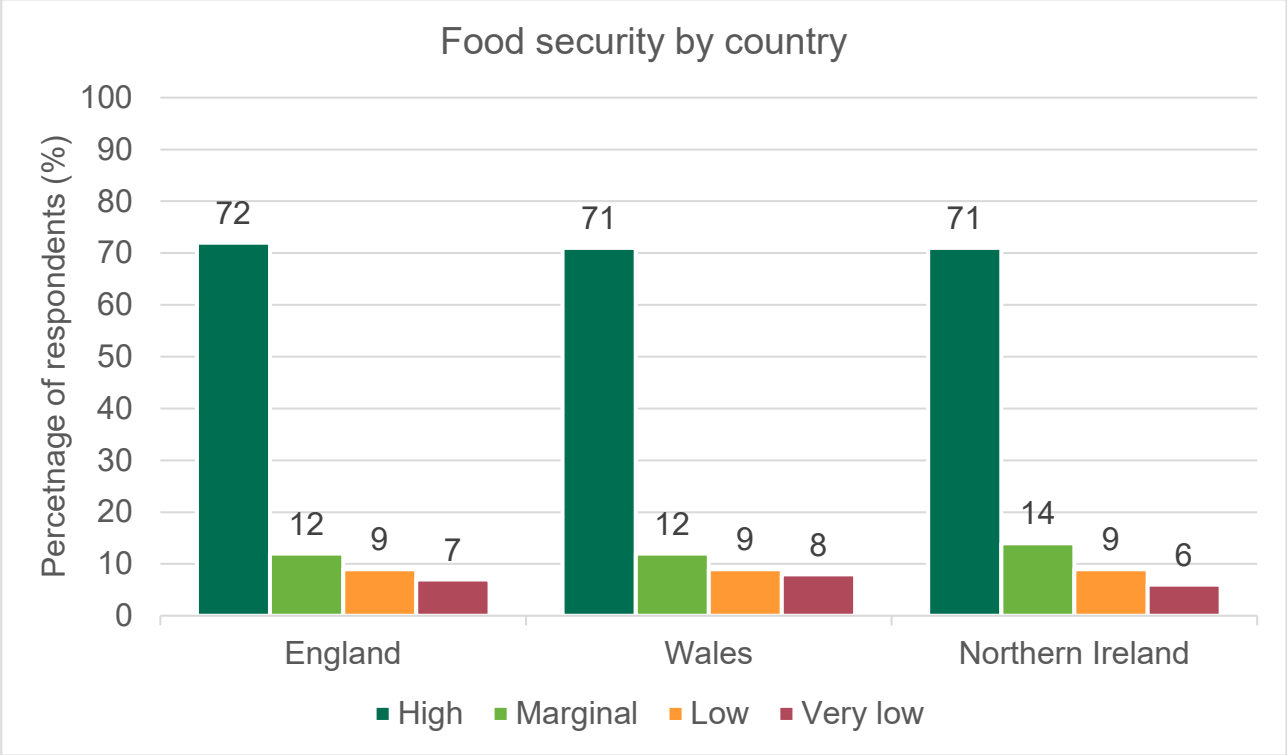
Food and You 2: Wave 1 data were collected between 29th July and 6th October 2020, during the COVID-19 pandemic which had a significant societal and economic impact and an impact on the day-to-day lives of everyone. The COVID-19 pandemic had a widely reported impact on food security in England, Wales, and Northern Ireland. It is expected that the COVID-19 pandemic had an impact on the level of food security reported by respondents in Food and You 2[17].

[17] The COVID-19 Consumer Research (2020), FSA. Food waste and COVID-19: Life in flux survey 3 (2020). WRAP. The impact of COVID-19 on food banks in the Trussell Trust Network. The Department of Work and Pensions (DWP) expect to release the 2019/2020 Family Resources Survey (FRS) in 2021. The FRS asks respondents to report experiences of food insecurity in the last 30 days so responses cannot be compared with Food and You 2.

Food Security

Across England, Wales, and Northern Ireland, 84% of respondents were classified as food secure (72% high, 12% marginal) and 16% respondents were classified as food insecure (9% low, 7% very low)[18] [19].

Figure 4. Food security is comparable across England, Wales, and Northern Ireland.



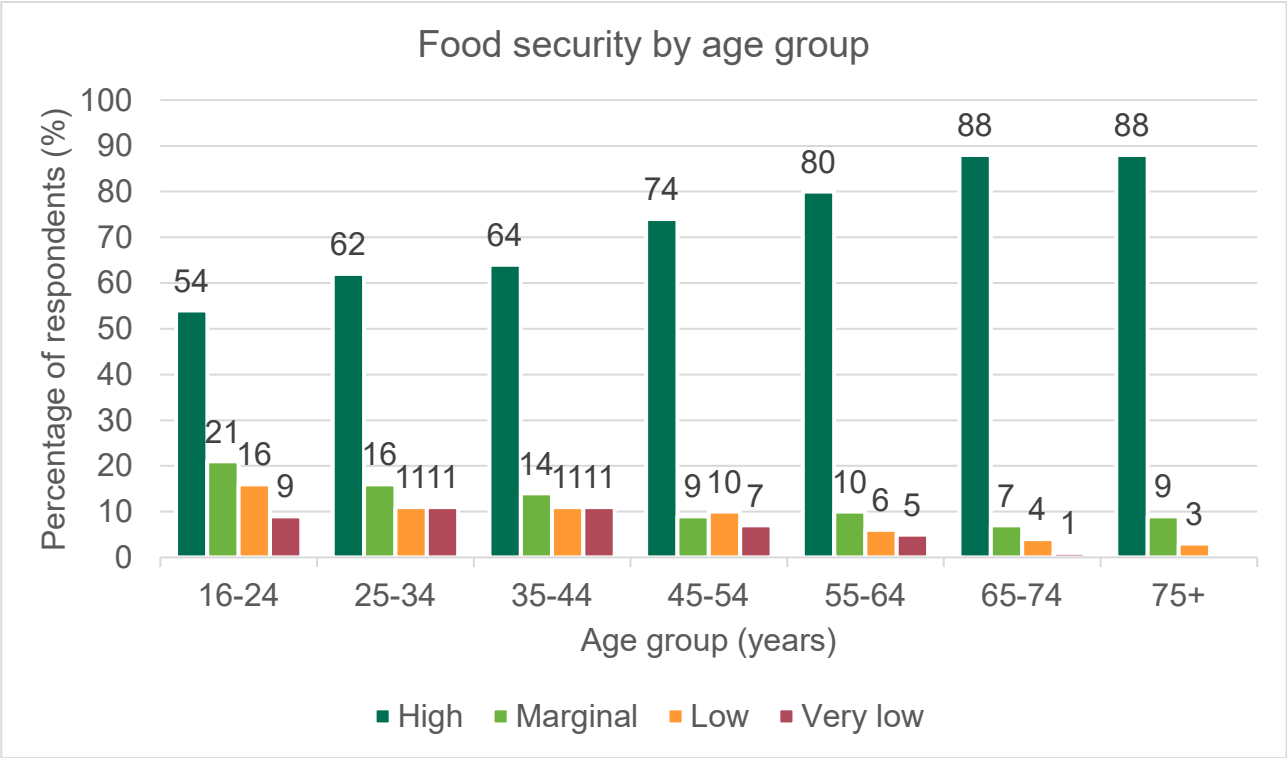
Source: Food and You 2: Wave 1

Food security levels were comparable across England, Wales, and Northern Ireland**. Over three quarters of respondents were food secure (i.e. had high or marginal food security) in England (84%), Wales (83%) and Northern Ireland (85%). Approximately 1 in 6 respondents were food insecure (i.e. had low or very low food security) in England (16%), Wales (17%) and Northern Ireland (15%) (Figure 4).

[18] Question/Responses: Derived variable, see USDA Food Security guidance and Technical Report. Base= 9319, all respondents. N.B. High and marginal food security referred to as food secure. Low or very low food security referred to as food insecure.
[19] A more detailed Food Security report is expected to be released 2021-2022.

Food security varied between different types of people [20].

Figure 5. Food security was more common in older adults.

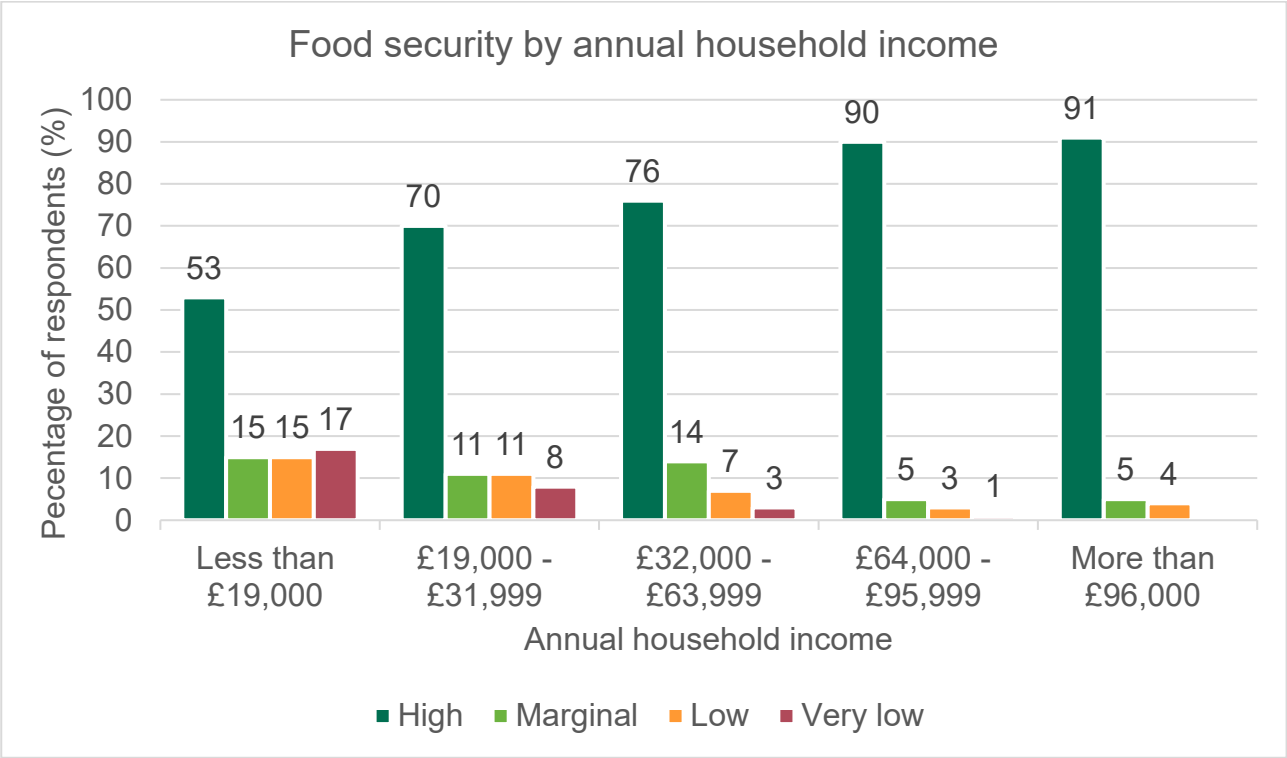


Source: Food and You 2: Wave 1

Food security varied by age group. Older adults were more likely to report that they were food secure than younger adults. Correspondingly, younger adults were more likely to report that they were food insecure than older adults, (Figure 5).

[20] Question/Responses: Derived variable, see USDA Food security guidance. and Technical Report. Base= 9319, all respondents.

Figure 6. Food security was more prevalent in households with a higher income.



Source: Food and You 2: Wave 1

Over two thirds of respondents within each household income band were classified as food secure. More than 9 in 10 respondents with a household income over £32,000 were food secure. As expected, food insecurity was more likely to have been reported in lower income households, with a third (32%) of households with an income below £19,000 experiencing food insecurity, (Figure 6).

The reported level of food security varied between different types of people[21]:

- Children (under 16 years) in household: 88% of households without children reported that they were food secure compared to 77% of households with children.
- Employment status: 96% of retired respondents reported that they were food secure compared to 84% of those who were working and 71% of those who were not working.
- NS-SEC: food security was more likely to be reported by respondents in most occupational groups (e.g. managerial, administrative and professional occupations 89%) compared to those who were long term unemployed or had never worked (56%).

[21] Question/Responses: Derived variable, see USDA Food Security guidance and Technical Report. Base= 9319, all respondents.

- Relationship status: 90% of respondents who were married or in a civil partnership reported being food secure compared to 75% of those who were living as a couple and 78% of those who were single.

Changes in eating habits

Respondents were asked to indicate if and how their eating habits had changed over the last 12 months. Due to the outbreak of the COVID-19 pandemic and the impact this has had on the day-to-day lives of consumers, it is expected that eating habits changed more in the last 12 months than in a typical 12-month period.

Eating habits had changed for most respondents with only 18% of respondents indicating that there had been no change in their eating habits. The most common changes related to what and where respondents ate (eaten out less 56%, eaten at home more 55%, cooked more at home 53%, eaten fewer take-aways 43%), reducing food costs (bought items on special offer 37%, changed where you buy food for cheaper alternatives 26%, changed the food you buy for cheaper alternatives 23%) and increased positive food management behaviours (prepared food that could be kept as leftovers 21%, made more packed lunches 21%)[22, 23].

Respondents who had reported a change in their eating habits in the last 12 months were asked to indicate why their eating habits had changed. The main cause of reported changes in eating habits were COVID-19 and lockdown (73%), health reasons (43%) and financial reasons (36%)[24]. There were 23% of respondents who reported making changes because of both COVID-19 and lockdown and financial reasons.

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[22] Question: Have you, or has anyone in your household, made any of these changes to your eating habits in the last 12 months? Responses (Additional differences): Eaten at home more, Eaten fewer take-aways, Eaten out less, Made packed lunches more (43%), Bought items that were on special offer, Changed where you buy food for cheaper alternatives, Changed the food you buy to cheaper alternatives, Prepared food that could be kept as leftovers more, Kept leftovers for longer before eating (7%), Eaten food past its use-by date more, Bought food close to its use-by date more (12%), Used a food bank/emergency food (2%), Other (1%), No, I/we haven't made any changes. Base= 9319, all respondents.

[23] WRAP has reported citizen changes in citizen food purchasing, management as waste behaviours during the COVID-19 pandemic.

[24] Question: Thinking about the changes to eating habits that you have made in the last 12 months, why did you make these changes? Responses (additional differences): Financial reasons, Health reasons, Food safety reasons (5%), Due to the bad or unpleasant physical reaction that certain foods cause (3%), Because of lockdown/covid-19, Other (3%), Prefer not to say (2%). Base= 7534, all respondents who have changed their eating habits in the last 12 months.

Figure 7. Ten most common changes in eating habits for financial reasons.



Source: Food and You 2: Wave 1

Of the respondents who had changed their eating habits in the last 12 months for financial reasons, the most common changes related to what and where respondents ate (eaten out less 65%, eaten at home more 66%, cooked more at home 65%, eaten fewer take-aways 61%) and reducing food costs (bought items on special offer 67%, changed where you buy food 58%, changed the food you buy for cheaper alternatives 56%) (Figure 7). In addition, 16% of respondents reported that they had eaten food past its use-by date, 15% had kept leftovers for longer before eating and 5% reported that they had used a food bank or emergency food[25].

[25] Question: Have you, or has anyone in your household, made any of these changes to your eating habits in the last 12 months? Responses (additional differences): Eaten at home more, Eaten fewer take-aways, Eaten out less, Made packed lunches more, Bought items that were on special offer, Changed where you buy food for cheaper alternatives, Changed the food you buy to cheaper alternatives, Prepared food that could be kept as leftovers more, Kept leftovers for longer before eating, Eaten food past its use-by date more, Bought food close to its use-by date more, Used a food bank/emergency food, Other*. Base= 2561, all respondents who have changed their eating habits in the last 12 months for financial reasons.

The prevalence of changes in eating habits for financial reasons varied between different types of people in the following ways:

- Age group: older respondents were less likely to have changed their eating habits for financial reasons compared to those in other age groups. For example, 9% of respondents over 75 years changed their eating habits for financial reasons, compared to 41% of those aged 16-24 years.
- Household size: 30% of respondents in 2-person households had changed their eating habits for financial reasons compared to 44% of those in 3-person households and 42% of those in 4-person households.
- Children (under 16 years) in the household: 48% of respondents with children in the household changed their eating habits for financial reasons compared to 31% of those with no children in the household.
- Annual household income: respondents with a lower income were more likely to have changed their eating habits for financial reasons compared to those with a higher income. For example, 51% of those with an income below £19,000 changed their eating habits for financial reasons compared to 28% of those with an income of £64,000-£95,999.
- Employment status: respondents who were not working (48%) or working (39%) were more likely to have changed their eating habits for financial reasons compared to retired respondents (14%).

Chapter 4: Food Shopping

Introduction

The Department for Environment, Food and Rural Affairs (Defra) also plays a major role in food production. Defra co-funded questions in this chapter which relate to food provenance, sustainability, and animal welfare.

Regulation of food labelling is complex, and the remit of food labelling is held by multiple bodies, which differ between England, Wales and Northern Ireland.

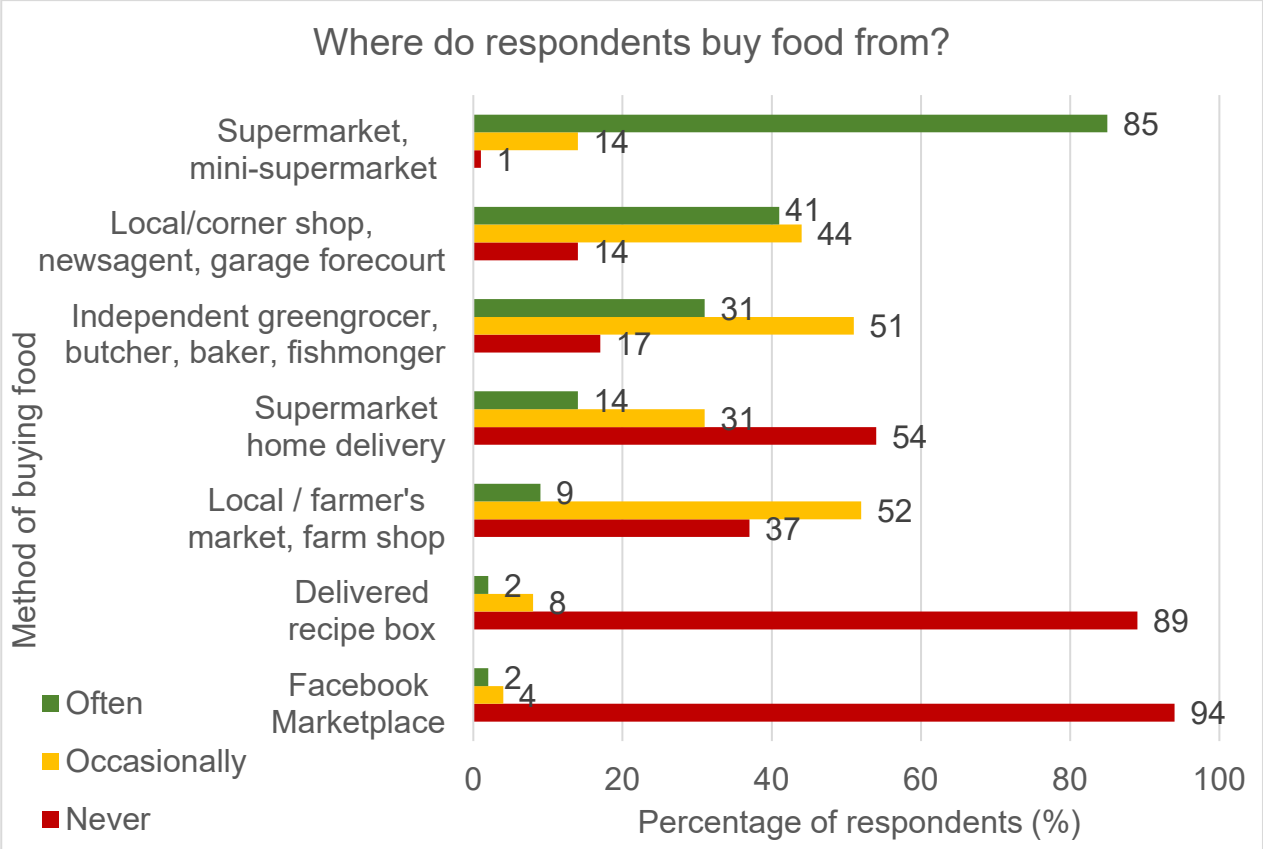
The FSA is responsible for aspects of food labelling which relate to food safety and allergens in England, Wales, and Northern Ireland. In addition, the FSA in Wales is responsible for food labelling related to food composition standards and country of origin. The FSA in Northern Ireland is responsible for food labelling related to food composition standards, country of origin and nutrition[26]. Defra is responsible for aspects of food labelling including composition and country of origin in England.

This chapter provides an overview of food purchasing, what respondents look for when they are shopping and confidence in allergen labelling.

[26] Nutrition standards and nutrition food labelling is the remit of the Department of Health and Social care in England and the Welsh Government in Wales.

Where do respondents buy food?

Figure 8. Food is most often bought from supermarkets or mini supermarkets.



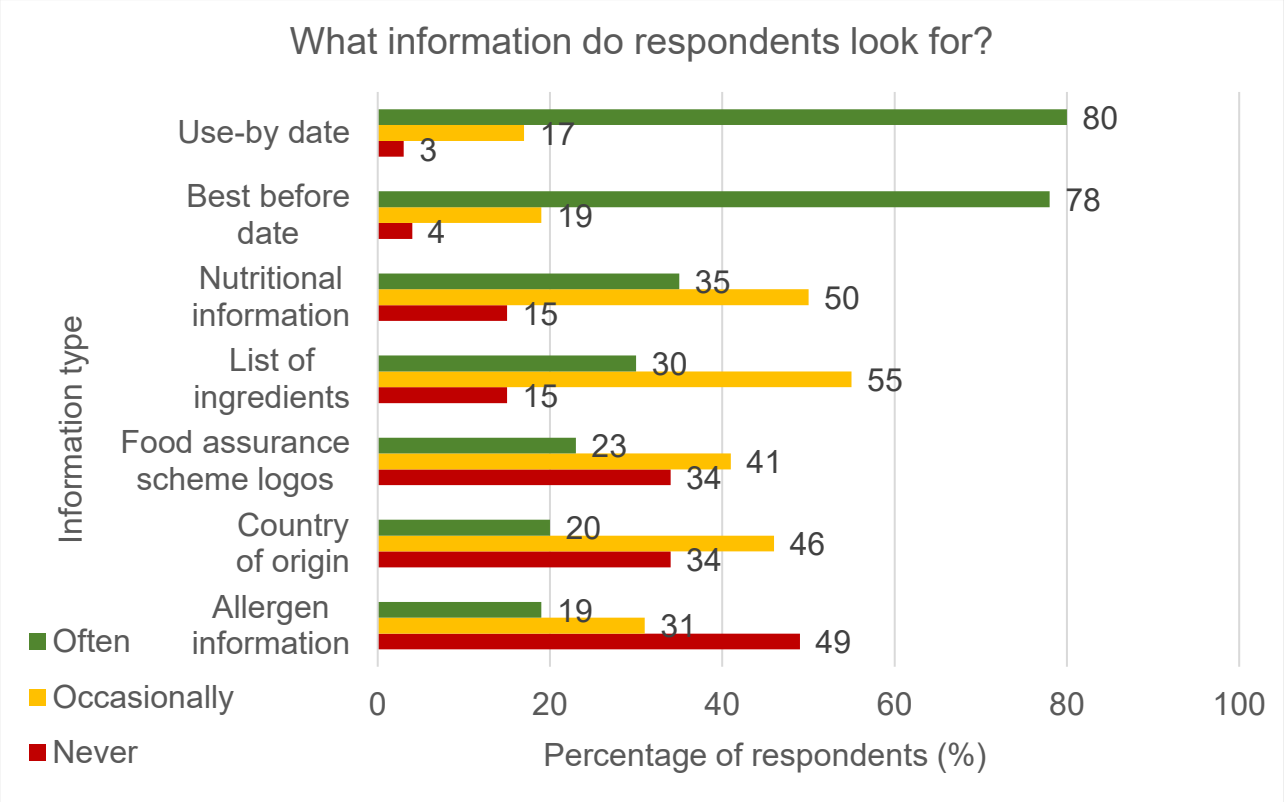
Source: Food and You 2: Wave 1

Respondents were asked to indicate where and how often they buy food. Most respondents reported that they often (i.e. ‘about once a week’ or more frequently) have bought food from a supermarket or mini supermarket. Convenience (local/corner shops, newsagents', garage forecourts) and independent (greengrocers', butchers', bakers', fishmongers') shops were typically used by respondents on an occasional basis (i.e. ‘2-3 times a month’ or less often). A small number of respondents (6%) have used Facebook marketplace to buy food, 2% had often (i.e. ‘about once a week’ or more frequently) used

Facebook marketplace, and 4% used Facebook on an occasional basis (i.e. '2-3 times a month' or less often). (Figure 8)[27].

What do respondents look for when buying food?

Figure 9. Use-by and best before information is most often looked for when buying food.



Source: Food and You 2: Wave 1

Respondents were asked to indicate what information they check when buying food. Most respondents reported that they often (i.e. 'always' or 'most of the time') check the use-by or best before date when they have bought food. Respondents reported that they

[27] Question: How often, if at all, do you…A) Shop for food in store at a supermarket (including mini supermarkets like Metro/ Local). B) Shop for food at independent greengrocers', butchers', bakers' or fishmongers'. C) Shop for food at local/corner shops, newsagents' or garage forecourts. D) Get a home delivery from a supermarket. E) Shop at a local market, farmer's market or farm shop. F) Get a recipe box delivered (e.g. Hello Fresh, Gousto). Responses (Additional differences): Every day, Most days, 2-3 times a week, About once a week, 2-3 times a month, About once a month, Less than once a month, Never, Can't remember (A=1%, B=1%, C*, D=1%, E=2%, F=1%). Base= 5548, all online respondents who have at least some responsibility for food shopping for their household. N.B. 'Everyday, Most days, 2-3 times a week, About once a week' referred to as often; '2-3 times a month, About once a month, Less than once a month' referred to as occasional.

check nutritional information, the list of ingredients, food assurance scheme logos and country of origin on an occasional basis (i.e. 'about half the time' or less often). Allergen information was least often checked by respondents, (Figure 9)[28]. However, respondents who have at least one food allergy or intolerance (diagnosed by NHS/private medical practitioner) were more likely (64%) to have checked allergen information when food shopping.

Respondents were asked to spontaneously report what they consider to be important when they choose food to buy. The most common attribute that respondents mentioned when they buy food is price (34%). Other commonly mentioned attributes were quality (26%), health (22%), freshness (22%), taste or appearance (21%), use-by dates (14%) and origin of food (11%)[29].

When asked what information is used to judge the quality of food from a list of options, respondents reported that they most often used freshness (60%), appearance (45%), and taste (44%) to judge food quality. Fewer respondents reported that they used price (31%), ingredients (30%), brand (23%), animal welfare (21%) and country of origin (17%) to judge food quality. Assurance schemes (11%), environmental impact (9%) and convenience (4%) were reported to be least used by respondents when judging food quality[30].

Respondents were asked to indicate which, of a given number of factors, were important to them. The majority of respondents reported that it was important to support British (NI: UK and Irish) farmers and food producers (91%), to buy meat, eggs and dairy which are

[28] Question: When shopping for food, how often, if at all, do you check…A) Use-by dates. B) Best before dates. C) List of ingredients. D) Allergen information. E) Nutritional information. F) Country of origin. G) Food assurance scheme logos. Responses (Additional differences): Always, Most of the time, About half the time, Occasionally, Never, Don't know (A*, B*, C*, D=1%, E*, F=1%, G=2%). Base= 5548, all online respondents who have at least some responsibility for food shopping for their household. N.B. 'Always', 'Most of the time' referred to as often, 'About half the time, Occasionally' referred to as occasional.

[29] Question: What is most important to you when you are choosing which foods to buy? Responses: [open text]. Base= 9319, all respondents. N.B This question was co-funded by Defra. Additional responses are available in the data tables and data file.

[30] Question: What do you use to judge the quality of food? (Please select up to 3 answers). Responses (Additional differences): Taste, Appearance, Country of origin, Convenience, Ingredients, Animal welfare, Freshness, Assurance schemes, Brand, Price, Environmental impact, Other (2%). Base= 9319, all respondents. N.B. This question was co-funded by Defra.

produced with high standards of animal welfare (92%) and to buy food which has a low environmental impact (86%)[31].

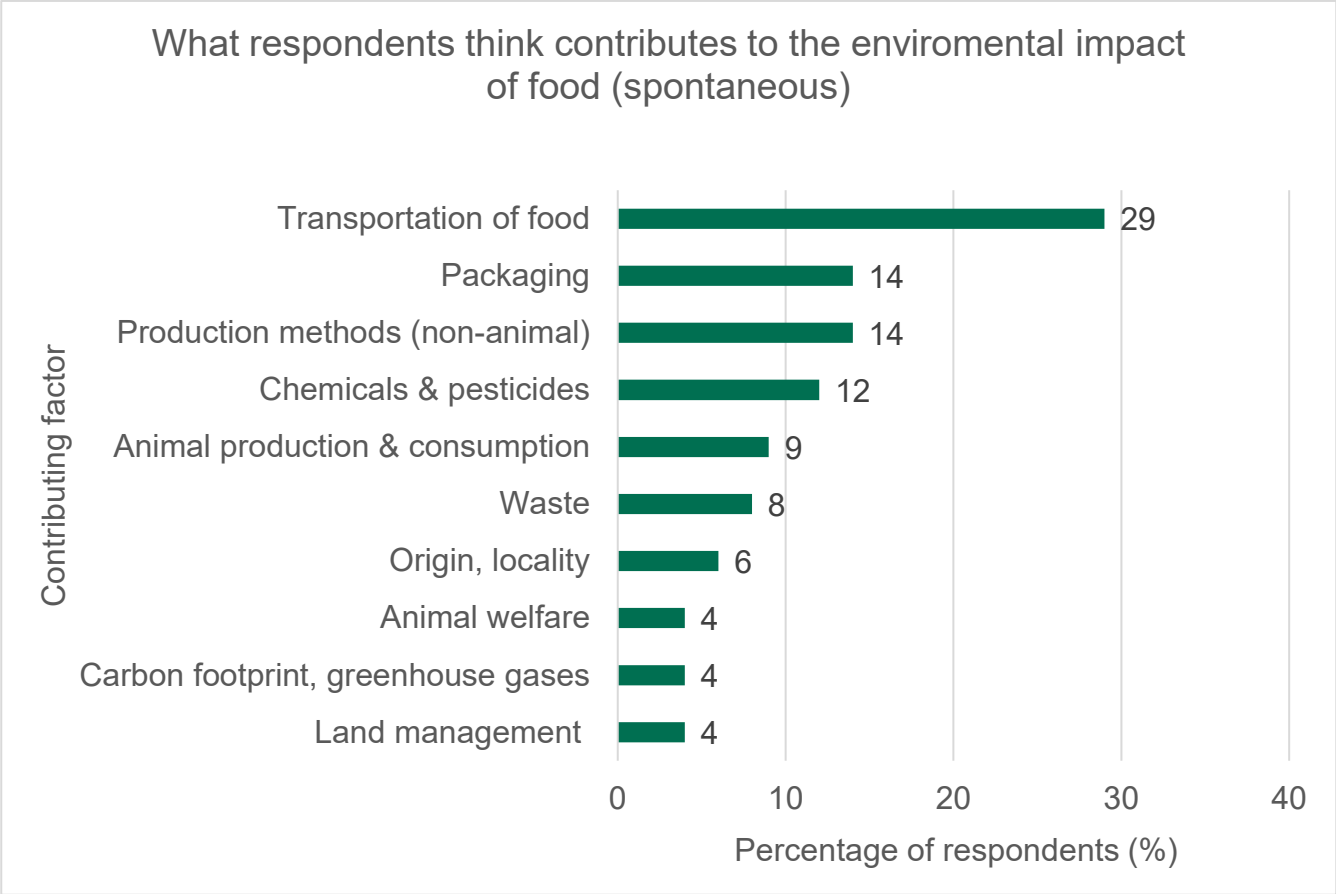
Respondents were asked how often they check for information about the environmental impact and animal welfare of food when shopping. Thirty-five percent of respondents reported that they checked for information about the environmental impact when purchasing food. Forty-four percent of respondents reported that they checked for information about animal welfare at least most of the time[32]. However, only 31% of respondents thought that meat, eggs, and dairy products show enough information about animal welfare[33].

[31] Question: How important is it to you…A) To support British (NI: UK and Irish) farmers and food producers. B) To buy meat, eggs and dairy which are produced with high standards of animal welfare. C) To buy food which has a low environmental impact. Responses (Additional differences): Very important, Somewhat important, Not very important, Not at all important, Don't know (A=3%, B=3%, C=4%). Base= 9319, all respondents. N.B. This question was co-funded by Defra.

[32] Question: When purchasing food, how often do you do the following…A) Check for information on animal welfare. B) Check for information on environmental impact. Responses (Additional differences): Always, Most of the time, About half the time, Occasionally, Never, Don't know (A=5%, B=5%). Base= 9319, all respondents. N.B. This question was co-funded by Defra.

[33] Question: To what extent do you agree or disagree with the following? Meat, eggs and dairy products show enough information about animal welfare. Responses (Additional differences): Strongly agree, Agree, Neither agree nor disagree (34%), Disagree (20%), Strongly disagree (5%), Don't know (10%). Base= 9319, all respondents. N.B. This question was co-funded by Defra.

Figure 10. Transportation is the most common factor thought to contribute to the environmental impact of food.

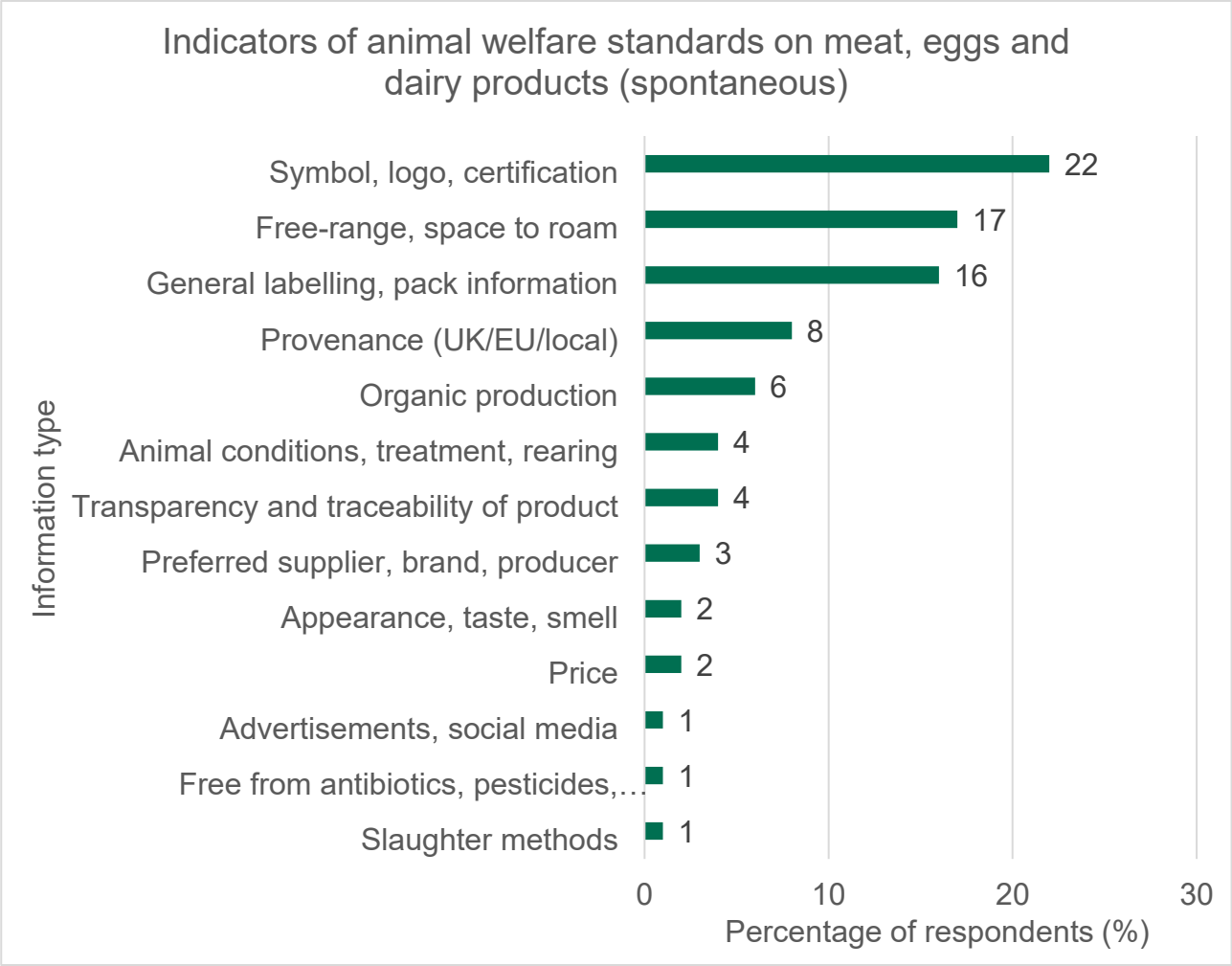


Source: Food and You 2: Wave 1

Respondents were asked to spontaneously report what they think contributes to the environmental impact of food. The most commonly reported contributor was the transportation of food (29%). Packaging (14%), production methods (14%), chemicals and pesticides (12%) were also suggested as contributors to the environmental impact of food. Fewer respondents reported that animal production/consumption (9%) and waste (8%) are contributing factors to the environmental impact of foods. Forty percent of respondents reported that they do not know what contributes to the environmental impact of food (Figure 10)[34].

[34] Question: What do you think contributes to the environmental impact of food? Responses: [Open text]. Base= 9319, all respondents. N.B. This question was co-funded by Defra. Additional responses are available in the data tables and data file.

Figure 11. Symbols, logos, or certification is most often looked for to indicate high animal welfare standards of meat, eggs, and dairy products.



Source: Food and You 2: Wave 1

When respondents were asked what would report whether a product containing meat, eggs or dairy had been produced with high standards of animal welfare, the most common indicator mentioned was a symbol, logo, or certification (22%). Other indicators of animal welfare standards were 'free-range' or space to roam (17%), general label or pack information (15%) and provenance (8%). However, 41% of respondents reported that they did not know or were unsure what indicated high standards of animal welfare, (Figure 11)[35].

[35] Question: What would indicate to you whether a product containing meat, eggs or dairy had been produced with high standards of animal welfare? Responses: [Open text]. Base= 9319, all respondents. N.B. additional responses are available in the data tables and data file. N.B. This question was co-funded by Defra. Full description of information type from Figure 11 'Free from antibiotics, pesticides, additives or steroids.'

Confidence in allergen labelling

Respondents who go food shopping and take into consideration a person who has a food allergy or intolerance were asked how confident they were that the information provided on food labelling allows them to identify foods that will cause a bad or unpleasant physical reaction[36]. Overall, 79% of respondents stated that they were confident in the information provided[37].

Confidence in the information provided on food labelling varied between different types of people in the following ways:

- Household size: respondents in 1-person households (69%) were less likely to report confidence in the information provided on food labelling compared to those living in larger households (e.g. 88% 4-person households).
- Annual household income: respondents with a higher income were more likely to have reported confidence in the information provided on food labelling compared to those with a lower income. For example, 84% of those with an income of £19,000-£31,999 reported confidence in the information provided on food labelling compared to 72% of those with an income below £19,000.
- Responsibility for cooking: 80% of respondents who were responsible for cooking reported confidence in the information provided on food labelling, compared to 70% of those who do not cook.

Respondents were asked how confident they were in identifying foods that will cause a bad or unpleasant physical reaction when buying foods which are sold loose, such as at a bakery or deli counter. Respondents who bought food loose were more confident in identifying these foods in-store at a supermarket (74%), when buying food from a supermarket online (71%) and when shopping at independent food shops

[36] A more detailed Food Hypersensitivity report is expected to be released late 2021.
[37] Question: How confident are you that the information provided on food labelling allows you to identify foods that will cause you, or another member of your household, a bad or unpleasant physical reaction? Responses: Very confident, Fairly confident, Not very confident (9%), Not at all confident (2%), It varies from place to place (5%), Don't know (5%). Base= 3779, all online who do shopping and live in a household where someone has an allergy/intolerance, and all postal suffering bad/unpleasant physical reaction after consuming certain foods or avoiding certain foods because of the bad/unpleasant physical reaction they might cause. N.B. ‘Very confident’ and ‘Fairly confident’ referred to as ‘confident’.

(68%). However, respondents were less confident when buying food from food markets or stalls (56%)[38].

[38] Question: When buying food that is sold loose (e.g. at a bakery or deli counter), how confident are you that you can identify foods that will cause you or another member of your household a bad or unpleasant physical reaction? Consider food sold loose from the following source…A) Supermarkets in store. B) Supermarkets online. C) Independent food shops. D) Food markets/stalls. Responses: Very confident, Fairly confident, Not very confident (A=16%, B=19%, C=17%, D=30%), Not at all confident, It varies from place to place (A=6%, B*, C/D=9%), Don't know (A= 3%, B=7%, C/D=5%). Base A=2716, B=2068, C=2534, D=2391, all online who do shopping and live in a household where someone has an allergy/intolerance, excluding ‘I don't buy food from here'/`I don't buy food sold loose’. N.B. ‘Very confident’ and ‘Fairly confident’ referred to as confident. ‘Not very confident’ and ‘Not at all confident’ referred to as not confident.

Chapter 5: Eating at home

Introduction

The FSA is responsible for protecting the public from foodborne diseases. This involves working with farmers, food producers and processors, and the retail and hospitality sectors to ensure that the food people buy is safe. Since consumers are responsible for the safe preparation and storage of food in their home, the FSA gives practical guidance and recommendations to consumers on food safety and hygiene in the home.

Food and You 2 asks respondents a series of questions about their knowledge and reported behaviour, in relation to five important aspects of food safety: cleaning, cooking, chilling, avoiding cross-contamination and use-by dates.

Cleaning

The FSA recommends that everyone should wash their hands before they prepare, cook or eat food. The majority (77%) of respondents reported that they always wash their hands before preparing or cooking food. However, 23% of respondents reported that they do not always (i.e. 'most of the time' or less often) wash their hands before preparing or cooking food [39].

Chilling

The FSA provides guidance on how to chill food properly to help stop harmful bacteria growing.

If and how respondents check fridge temperature

When asked what temperature the inside of a fridge should be, 65% of respondents reported that it should be below 5 degrees Celsius, in line with FSA recommendations.

[39] Question: When you are at home, how often, if at all, do you wash your hands before starting to prepare or cook food. Responses: Always, Most of the time, About half the time, Occasionally, Never, I don't cook, Don't know. Base= 8803, all online who do some food preparation and cooking, and all those who completed the postal questionnaires, excluding 'I don't cook / prepare food' respondents.

However, 14% of respondents reported that they did not know what temperature the inside of their fridge should be[40].

Over half of respondents who have a fridge reported that they monitored the temperature, either manually (49%) or via an internal temperature alarm (10%)[41]. Of the respondents who monitor the temperature of their fridge, 75% reported that they check the temperature of their fridge at least once a month, as recommended by the FSA[42].

The likelihood of respondents checking the temperature of their fridge varied between different types of people in the following ways:

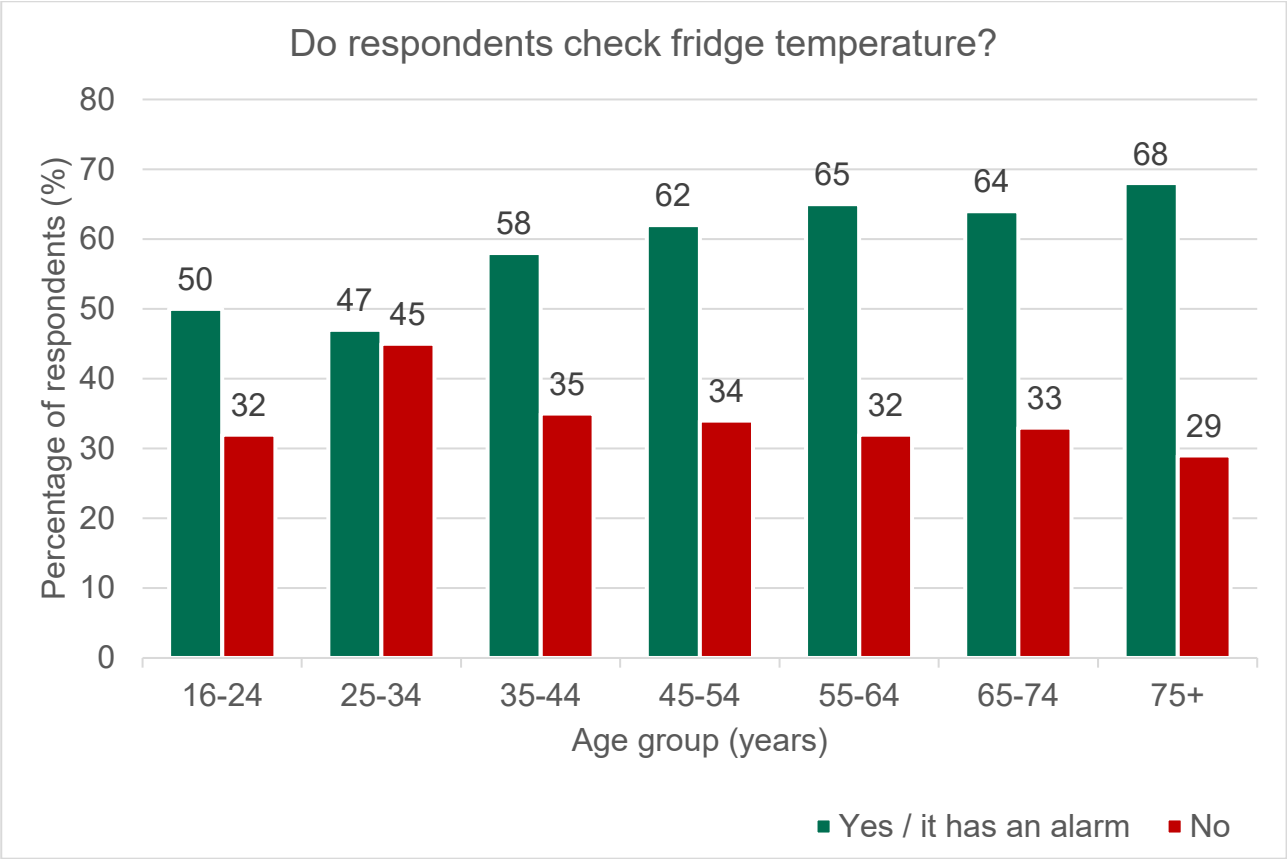
- NS-SEC: respondents in managerial, administrative, and professional occupations (60%), small employers and own account workers (61%), and semi-routine and routine occupations (61%) were more likely to check the temperature of their fridge than full-time students (50%).
- Responsibility for shopping: respondents who were responsible for shopping (56%) were more likely to check the temperature of their fridge than those who never do food shopping (45%).

[40] Question: What do you think the temperature inside your fridge should be? Responses (Additional differences): Less than 0 degrees C (less than 32 degrees F), Between 0 and 5 degrees C (32 to 41 degrees F), More than 5 but less than 8 degrees C (42 to 46 degrees F) (18%), 8 to 10 degrees C (47 to 50 degrees F) (2%), More than 10 degrees C (over 50 degrees F) (1%), Other*, Don't know. Base=9304, all respondents who have a fridge.

[41] Question: Do you, or anyone else in your household, ever check your fridge temperature? Responses: Yes, No, I don't need to - it has an alarm if it is too hot or cold. Base= 9305, all respondents who have a fridge.

[42] Question: How often, if at all, do you or someone else in your household check the temperature of the fridge? Responses (Additional differences): At least daily, 2-3 times a week, once a week, less than once a week but more than once a month, once a month, four times a year (7%), 1-2 times a year (8%), never (6%), don't know (4%). Base= 4738, all where someone in household checks fridge temperature.

Figure 12. Older adults are more likely to check the temperature of their fridge.



Source: Food and You 2: Wave 1

Older adults were more likely to check the temperature of their fridge than younger adults. For example, 50% of respondents aged 16-24 years reported that they check the temperature of their fridge, compared to 68% of those aged 75+ years[43], (Figure 12).

Defrosting

The FSA recommends that food is defrosted in the fridge, or, if this is not possible to use a microwave on the defrost setting. Respondents are advised not to defrost foods at room temperature.

Respondents were asked which method they use to defrost meat and fish. Approximately 2 in 5 (41%) respondents reported that they defrost meat or fish in the fridge and 5% reported that they use a microwave, as recommended by the FSA. Less than half of

[43] Percentages show may not add up to 100% as “Don’t know” responses are not shown.

respondents (46%) reported that they leave the meat or fish at room temperature and 6% leave the meat or fish in water[44].

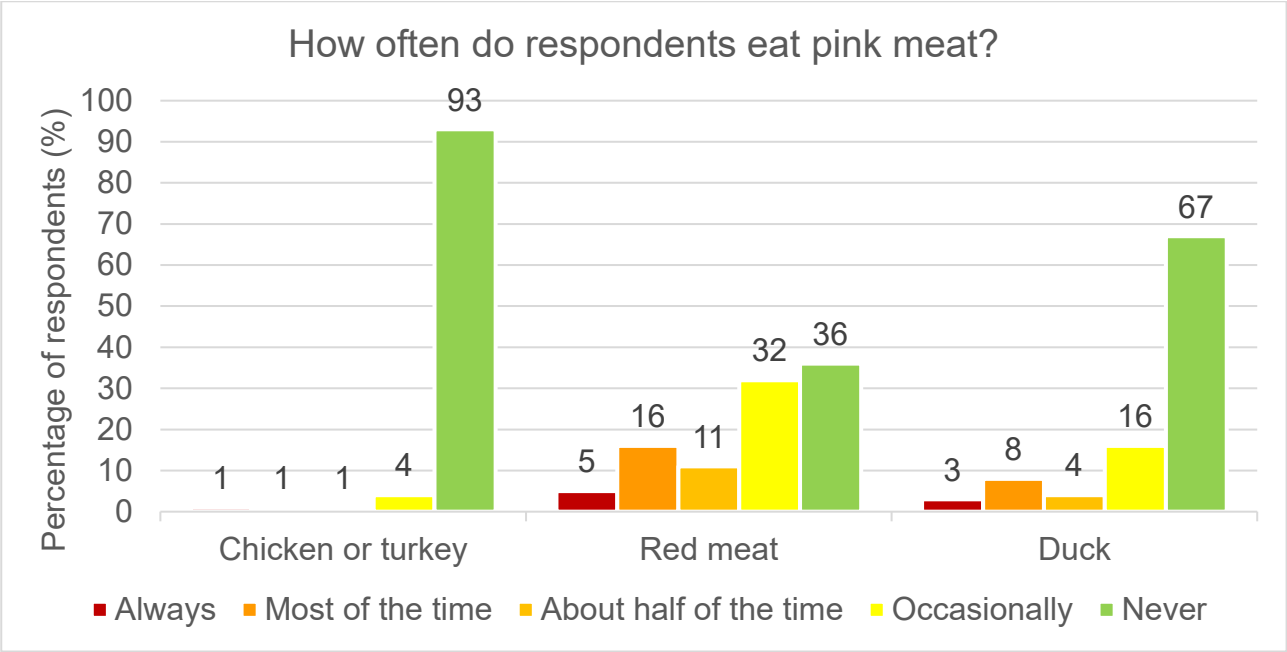
Cooking

The FSA recommends that cooking food at the right temperature and for the correct length of time will ensure that any harmful bacteria are killed. When cooking pork, poultry, and minced meat products the FSA recommends that the meat is steaming hot and cooked all the way through, that none of the meat is pink and that any juices run clear.

Respondents were asked to indicate how often they cook food until steaming hot and cooked all the way through. Over three quarters (77%) of respondents reported that they always cook food until steaming hot and cooked all the way through, however 23% reported that they do not always do this[45].

[44] Question: Typically, how do you defrost frozen meat or fish? Responses (Additional differences): Place the meat or fish in water, Leave the meat or fish at room temperature (e.g. on the worktop on a plate, in a container or in its packaging), Leave the meat or fish in the fridge, Defrost the meat or fish in the microwave oven, Some other way (1%), Don't know (1%). Base=6681, all online who do some food preparation and cooking, and all those who completed the food safety postal questionnaire who defrost meat or fish.
[45] Question: How often, if at all, do you cook food until it is steaming hot and cooked all the way through? Responses (Additional differences): Always, Most of the time, About half of the time, Occasionally, Never, Don't know (1%). Base= 8794, all online respondents who ever do some food preparation or cooking for their household, and all those who completed the postal questionnaire, excluding 'I don't cook food' and 'not stated'

Figure 13. Most respondents never eat pink chicken or turkey.



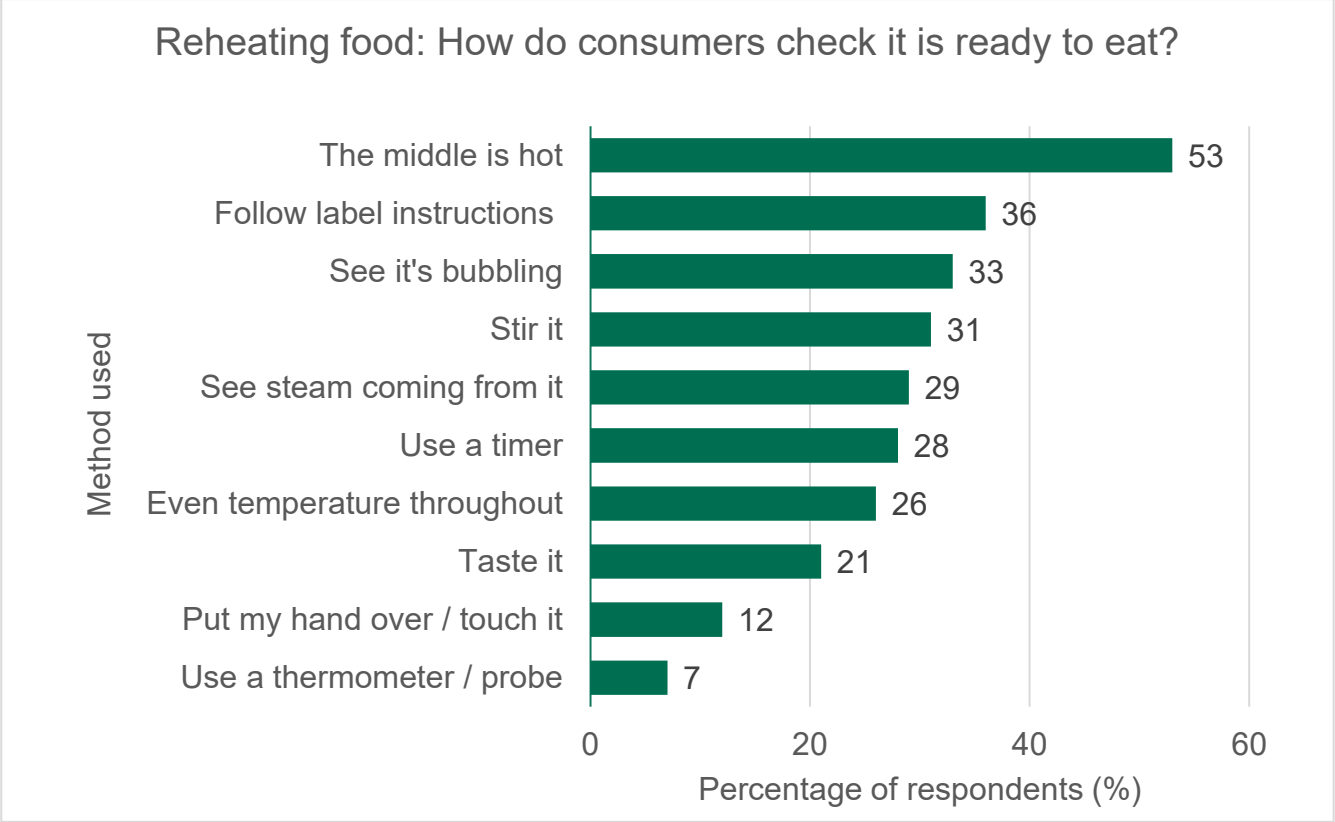
Source: Food & You 2: Wave 1

When respondents were asked to indicate how often they eat different meats when they are pink or have pink juices, the majority reported that they never eat chicken or turkey (93%) or duck (67%) when it is pink or has pink juices. However, more respondents reported eating red meat (at least occasionally) when it is pink (64%) than those who never eat red meat when it is pink (36%) (Figure 13)[46].

[46] Question: How often, if at all, do you do the following? Eat…A) chicken or turkey, B) red meat, C) duck…when it is pink or has pink or red juices. Responses: Always, Most of the time, About half of the time, Occasionally, Never, Don't know (A=1%, B=1%, C=2%). Base A=8672, B=5329, C=4227, all online who are not vegan/ pescatarian/ vegetarian who eat this type of meat.

Reheating

Figure 14. Checking that the middle is hot is the most common method to check food is reheated and ready to eat.



Source: Food & You 2: Wave 1

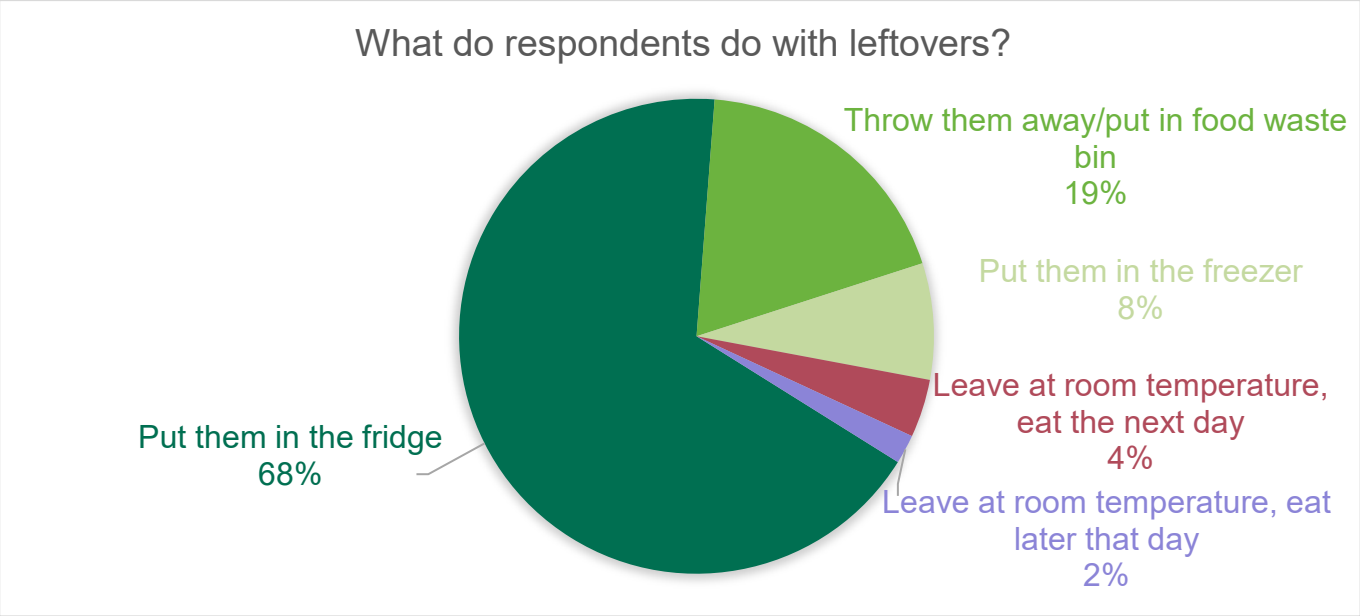
Respondents were asked to indicate how they check food is ready to eat when they reheat it. The most common method reported was to check the middle is hot (53%), and the least common method reported was to use a thermometer or probe (7%) (Figure 14)[47].

[47] Question: When reheating food, how do you know when it is ready to eat? (Select all that apply). Responses (Additional differences): I can see steam coming from it, I taste it, I stir it, I check the middle is hot, I check it's an even temperature throughout, I put my hand over it/touch it, I use a thermometer/probe, I use a timer to ensure it has been cooked for a certain amount of time, I follow the instructions on the label, None of the above*, I don't check*, I don't reheat food (6%). Base= 8922, all online respondents who ever do some food preparation or cooking for their household, and all those who completed the postal questionnaire.

When respondents were asked how many times they would reheat food, the majority reported that they would only reheat food once (83%), 9% would reheat food twice, and only 3% would reheat food more than twice[48].

Leftovers

Figure 15. Leftovers are typically put in the fridge.



Source: Food & You 2: Wave 1

Respondents were asked what they generally do with leftovers after a meal. Most respondents reported that they put leftovers in the fridge (68%). Some respondents reported throwing leftovers away or putting them in a food bin (19%). A small proportion of respondents said they left any leftovers at room temperature and ate them either the same day (2%) or the next day (4%) (Figure 15)[49].

Respondents who reported that they put leftovers in the fridge or freezer were asked to indicate how soon after cooking they would typically put leftovers into the fridge or

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[48] Question: How many times would you consider reheating food after it was cooked for the first time? Responses (Additional differences): Not at all (4%), Once, Twice, More than twice, Don't know (1%). Base=8600, all online respondents who reheat food using one of the methods in the previous question, and all those who completed the postal questionnaire.

[49] Question: Generally, what do you do with any leftovers following a meal? Responses: I throw them away or put them in the food waste bin, I leave them at room temperature and eat them later the same day, I leave them at room temperature and eat them the next day, I put them in the fridge, I put them in the freezer. Base=6973, all online respondents and those who completed the food safety postal questionnaire, excluding those who don't have leftovers.

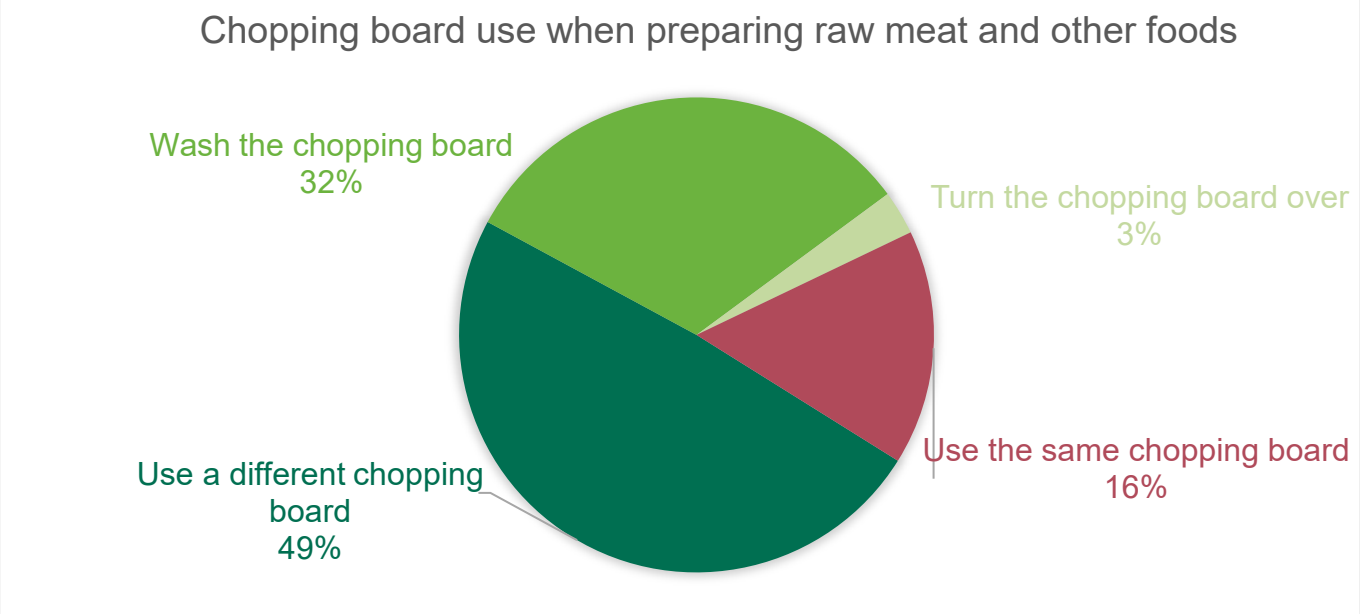
freezer. Many respondents reported that they typically placed leftovers in the fridge or freezer within 1 hour (35%) or 1-2 hours of cooking (41%). Less than a fifth (17%) of respondents put leftovers in the fridge or freezer after more than two hours, and only 6% would put leftovers in the fridge or freezer straight away[50].

Respondents who put leftovers in the fridge were asked how long they would keep the leftovers for. Most respondents said they would eat leftovers within 2 days (71%), or within 3-5 days (21%) and only 1% would eat leftovers after 5 days or longer[51].

Avoiding cross-contamination

The FSA provides guidelines on how to avoid cross-contamination. Bacterial cross-contamination is more likely to occur when raw food touches or drops onto ready-to-eat food, utensils, or surfaces.

Figure 16. Different chopping boards are typically used when preparing raw meat and other foods.



Source: Food & You 2: Wave 1

[50] Question: Typically, how soon after cooking do you put any leftovers in the fridge or freezer? Responses (Additional differences): Straight away, Within 1 hour of cooking, 1 - 2 hours after cooking, More than 2 hours after cooking, Don't know (2%). Base=5171, all online respondents and all those who completed the food safety postal questionnaire, who leave leftovers in a fridge or freezer.

[51] Question: When is the latest you would consume any leftovers stored in the fridge? Responses (Additional differences): The same day, Within 1-2 days, Within 3-5 days, More than 5 days later, It varies too much (3%), Don't know (3%). Base=9319, all respondents.

Respondents were asked how they use chopping boards when they prepare raw meat and other foods. Almost half of respondents (49%) reported that they use different chopping boards for raw meat and other foods and 32% of respondents reported that they wash the chopping board between preparing raw meat and other foods. Sixteen percent of respondents reported using the same chopping board (without washing) and a small proportion (3%) reported turning the chopping board over between preparing raw meat and other foods (Figure 16)[52].

The FSA recommends that respondents do not wash raw meat. Washing raw meat can spread harmful bacteria onto your hands, clothes, utensils, and worktops.

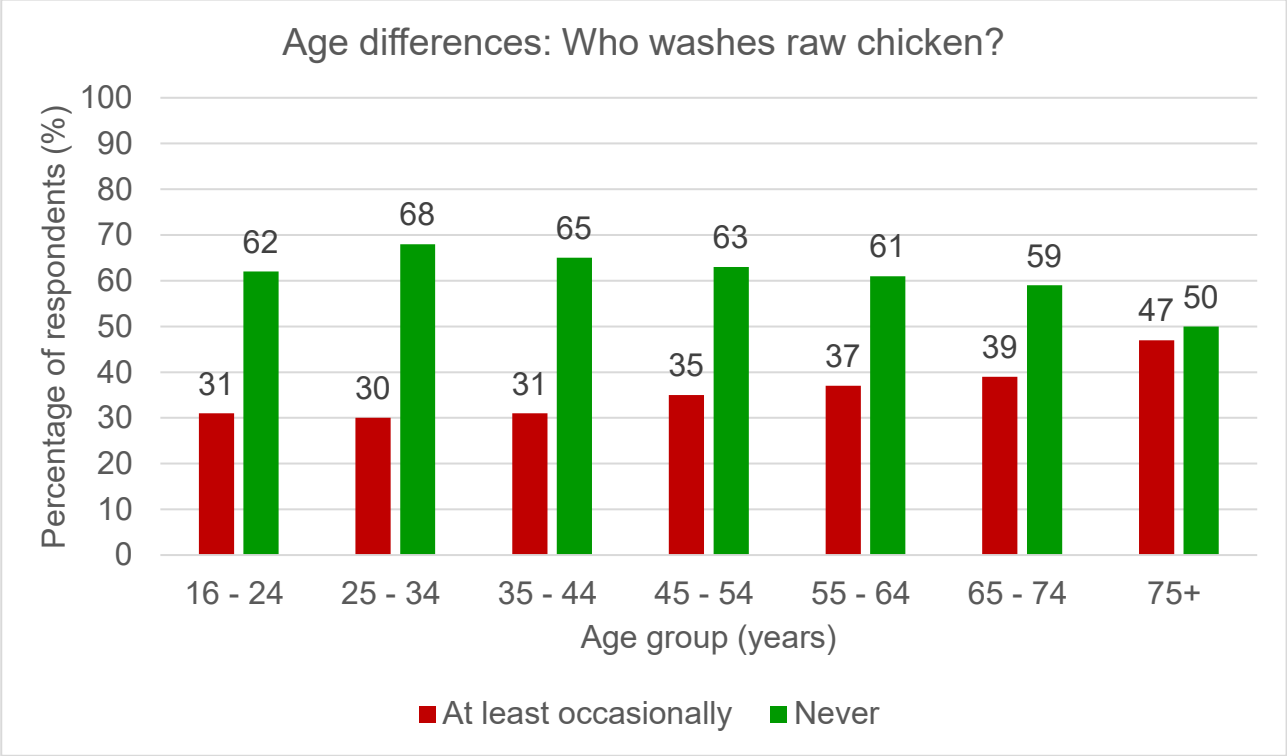
Over half of respondents (62%) reported that they never wash raw chicken[53], whilst 35% of respondents wash raw chicken at least occasionally[54].

[52] Question: Typically, how do you use chopping boards when preparing a meal with raw meat? Responses: I use a different chopping board for raw meat and other foods, I wash the chopping board between preparing raw meat and other foods, I turn the chopping board over between preparing raw meat and other foods, I use the same chopping board for preparing raw meat and other foods (without washing the board). Base=6442, all online respondents who do some food preparation and cooking and use chopping boards and cook with meat, and all those who completed the food safety questionnaire and use chopping boards and cook with meat.

[53] Washing chicken is likely to lead to increased risk of spread of Campylobacter in the kitchen, as discussed in the Advisory Committee on the Microbiological Safety of Food report.

[54] Question: How often, if at all, do you do the following? Wash raw chicken. Responses (Additional differences): Always, Most of the time, About half of the time, Occasionally, Never, Don't know (3%). Base=8922, all online respondents who ever do some food preparation or cooking for their household, and all those who completed the postal questionnaire.

Figure 17. Older adults wash chicken more than other age groups.



Source: Food & You 2: Wave 1

Respondents aged 75+ years (47%) more often reported that they wash chicken (at least occasionally) than other age groups (e.g. 31% 16-24 years) (Figure 17).

The most common reasons that respondents gave for washing raw chicken were to clean the meat (e.g. to remove slime, juices, or blood) (53%), or for food safety reasons (e.g. to remove or kill bacteria) (30%)[55].

How and where respondents store raw meat and poultry in the fridge

The FSA recommends that refrigerated raw meat and poultry is kept covered, separately from ready-to-eat foods and stored at the bottom of the fridge to avoid cross-contamination.

Respondents were asked to indicate, from a range of responses, how they store meat and poultry in the fridge. Respondents were most likely to report storing raw meat and

[55] Question: Why do you wash raw chicken. Response = [open text]. Base=1609, all online respondents who ever do some food preparation or cooking for their household and wash raw chicken, and all those who completed the postal questionnaires and wash raw chicken. N.B. additional responses are available in the data tables and data file, responses were coded by Ipsos MORI, see Technical Report for further details.

poultry in its original packaging (68%) or away from cooked foods (48%). Almost a third of respondents reported storing raw meat and poultry covered with film/foil (31%) or in a sealed container (31%), with fewer keeping the product on a plate (15%)[56].

How respondents store raw meat and poultry in the fridge varied between different types of people in the following ways:

- Age group: older respondents were more likely to store raw meat away from cooked foods than younger respondents. For example, 55% of those aged 75+ years reported storing raw meat away from cooked foods compared to 35% of those aged 25-34 years.
- Employment status: retired (58%) respondents were more likely to store raw meat away from cooked foods than those who were working (46%) or not working (42%).
- NS-SEC: full-time students (36%) and those who were long term unemployed or never worked (38%) were less likely to store raw meat away from cooked foods compared to respondents in many occupational groups (e.g. 55% semi-routine and routine occupations).
- Ethnic group: 49% of white respondents reported storing raw meat away from cooked foods, compared to 35% of Asian or Asian British respondents.

Almost two-thirds (65%) of respondents reported storing raw meat and poultry at the bottom of the fridge, as recommended by the FSA. However, 12% of respondents reported storing raw meat and poultry in the middle of the fridge, 6% at the top of the fridge, and 20% of respondents reported storing raw meat and poultry wherever there is space in the fridge[57].

Where respondents store raw meat and poultry in the fridge varied between different types of people in the following ways:

- Gender: 70% of females reported storing meat at the bottom of the fridge compared to 59% of males.

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[56] Question: How do you store raw meat and poultry in the fridge? Please select all the apply. Responses: Away from cooked foods, Covered with film/foil, In a sealed container, In its original packaging, On a plate, I don't store raw meat/poultry in the fridge, I don't have a fridge*, Don’t know. Base=8503, All respondents except those who don't buy/store meat/poultry, don’t store raw meat/poultry in the fridge, do not have a fridge or don't know.

[57] Question: Where in the fridge do you store raw meat and poultry? Responses (Additional differences): Wherever there is space, At the top of the fridge, In the middle of the fridge, At the bottom of the fridge, Don’t know (1%). Base= 8363, all respondents who store raw meat/poultry in the fridge, except those who don't buy meat/poultry, don't store it in the fridge, or don't have a fridge.

- Age group: respondents aged 45-64 years (71% 45-54, 70% 55-64 years) were more likely to store raw meat at the bottom of the fridge than respondents aged 16-24 (56%) and 75+ years (58%).
- Ethnic group: 66% of white respondents reported storing raw meat at the bottom of the fridge compared to 42% of Asian or Asian British respondents.
- NS-SEC: respondents in most occupational groups (e.g. 74% semi-routine and routine occupations) were more likely to report storing raw meat at the bottom of the fridge than full-time students (48%). Full-time students (32%) were more likely to report storing raw meat wherever there is space in the fridge compared to those in occupational groups (e.g. 12% semi-routine and routine occupations).

Use-by dates

Respondents were asked about their understanding of the different types of date labels and instructions on food packaging, as storing food for too long or at the wrong temperature can cause food poisoning. Use-by dates relate to food safety. Best before (BBE) dates relate to food quality, not safety.

Respondents were asked to indicate which date shows that food is no longer safe to eat. In accordance with FSA recommendations, 71% of respondents identified the use-by date as the information which shows that food is no longer safe to eat. However, 11% of respondents identified the best before date as the date which shows food is no longer safe to eat[58].

Knowledge that use-by dates show that food is no longer safe to eat varied between different types of people in the following ways:

- Age group: respondents aged 25-74 years (e.g. 76% 45-54 years) were more likely to identify that use-by dates show that food is no longer safe to eat than those aged 75+ years (61%).
- NS-SEC: respondents in most occupational groups (e.g. 75% intermediate occupations) and full-time students (69%) were more likely to identify that use-by dates show that food is no longer safe to eat than those who were long term unemployed or had never worked (58%).

[58] Question: Which of these shows when food is no longer safe to eat? Responses (Additional differences): Sell by date (2%), Display until date (1%), All of these (4%), It depends (3%), None of these (3%), Don't know (1%). Base=9319, all respondents.

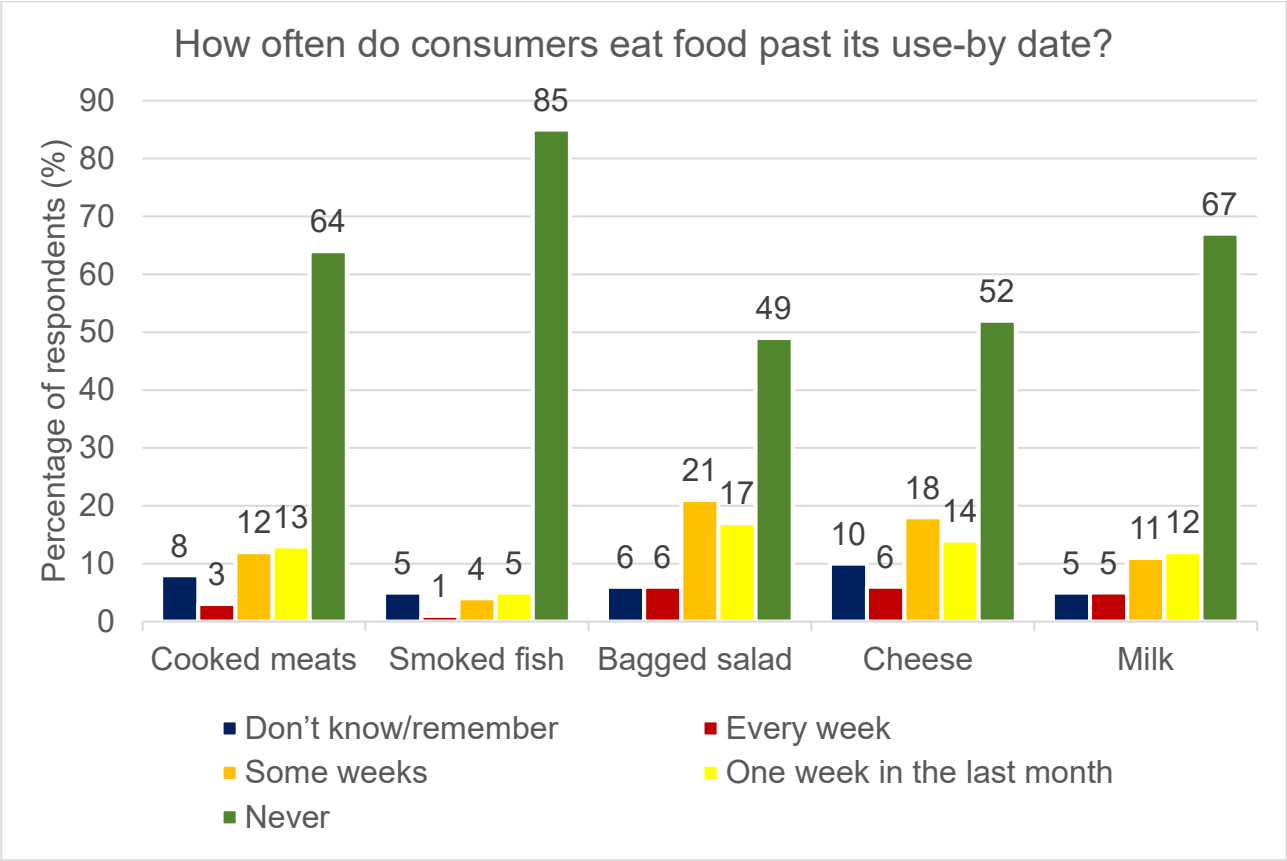
Almost two thirds (64%) of respondents reported that they always check use-by dates before they cook or prepare food. A third (33%) of respondents reported checking use-by dates at least occasionally and just 2% reported never checking use-by dates[59].

Adherence to use-by dates varied between different types of people in the following ways:

- Responsibility for cooking: 65% of those who were responsible for cooking reported that they always check use-by dates before they cooked or prepared food, compared to 48% of those who never cook.
- Responsibility for shopping: 64% of those who were responsible for shopping reported that they always check use-by dates before they cooked or prepared food, compared to 50% of those who never do food shopping.

[59] Question: How often, if at all, do you check use-by dates when you are about to cook or prepare food? Responses (Additional differences): Always, Most of the time, About half of the time, Occasionally, Never, It varies too much (1%), I don't cook/prepare food (1%), Don't know*. Base=8922, all online respondents who ever do some food preparation or cooking for their household, and all those who completed the postal questionnaire.

Figure 18. Most respondents do not eat food past its use-by date.



Source: Food & You 2: Wave 1

Respondents were asked to indicate how often, if at all, they ate certain foods past the use-by date. Most respondents reported that they never ate cooked meats (64%), smoked fish (85%), cheese (52%), bagged salads (49%) or milk (67%) past the use-by date. Conversely, some respondents reported that they had eaten those foods past the use-by date. For example, almost half of respondents had eaten bagged salad past the use-by date (6% every week, 21% some weeks and 17% just one week in the last month) (Figure 18)[60].

Respondents were asked to indicate what they do with food which is about to go past its use-by date. Most respondents reported that they either eat (38%) or freeze (26%) food

[60] Question: In the last month have you eaten any of the following foods that has gone past its use-by date? A) Cooked meats B) Smoked fish C) Bagged salads D) Cheese E) Milk. Responses: Yes, this happened every week. Yes, this happened some weeks but not every week. Yes, this happened just one week in the last month. No, never. Don't know. Prefer not to say. Base A= 6771, B=5439, C=6477, D=7198, E=7244, all online respondents and those who completed the postal questionnaire containing the food safety module, who have eaten/drunk these within the last month.

before it reaches its use-by date. Fewer respondents reported that they throw it away (13%) or eat it after the use-by date (8%)[61].

‘Eat within’ information

Some foods have instructions on the label which advise that the food should be eaten within a few days of opening. Respondents were asked to indicate how often they follow this recommendation. Less than a third (27%) of respondents reported that they always follow the on-pack instruction. However, most respondents (73%) reported that they do not always follow the on-pack instructions[62].

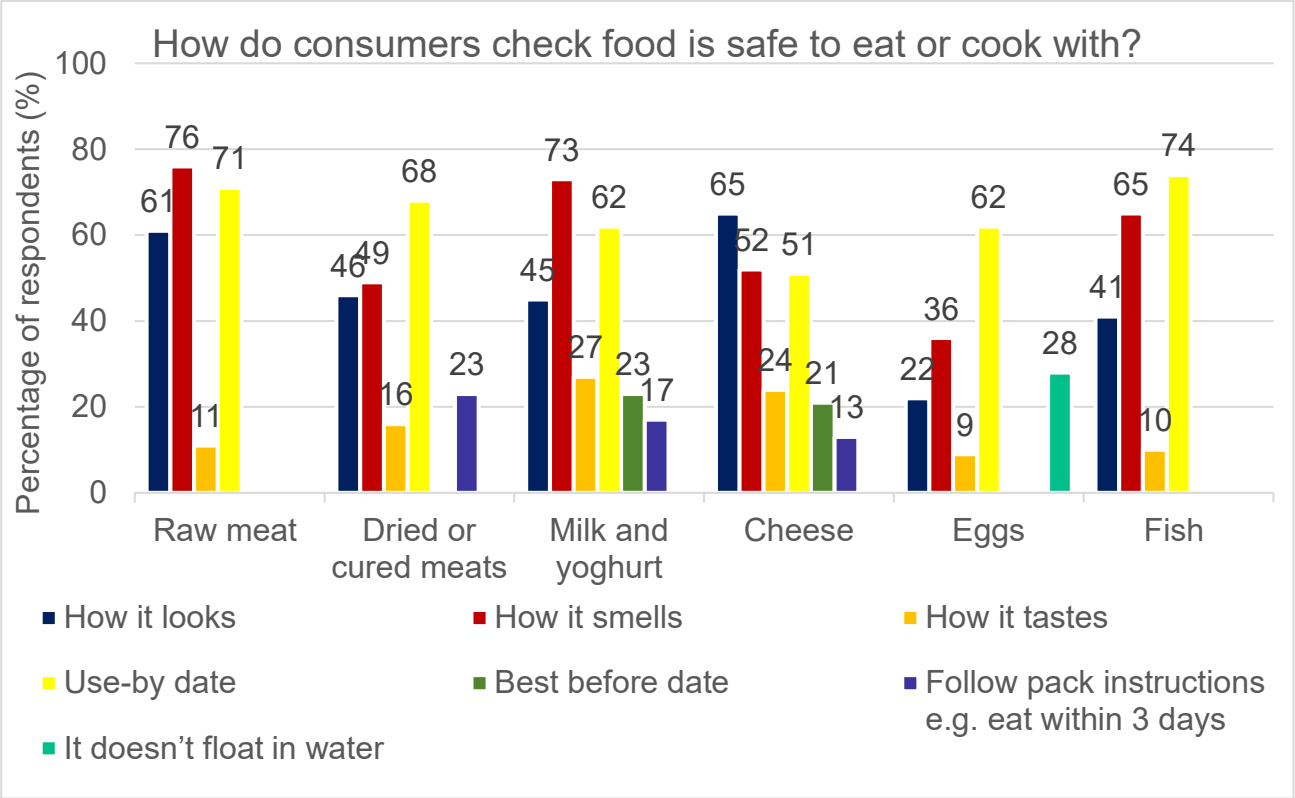
Adherence to the eat within information varied between different types of people in the following ways:

- Age group: younger adults were less likely to follow the eat within information than older adults. For example, 19% of respondents aged 25-34 years reported following the eat within information compared to 39% of those aged 75+ years.
- Household size: respondents living in 1-person households (34%) were more likely to report following the eat within information than those in 2 to 4-person households (e.g. 21% 3-person households).
- Annual household income: respondents with a lower income were more likely to report following the eat within information than those with a higher income. For example, 39% of those with an income of less than £19,000 reported that they follow eat within information, compared to 16% of those with an income of £32,000-£63,999.

[61] Question: When food you have bought is about to go past its use-by date, which of the following do you usually do? Responses (Additional differences): I eat it by the use-by date, I freeze it by the use-by date, I throw it away (after the use-by date), I keep it and eat it after the use-by date, It varies too much to say (14%), I don't check use-by dates (1%). Base=9319, all respondents.

[62] Question: Some foods have an instruction to eat the food within a few days of opening on the label (e.g. `consume within 3 days of opening'). How often, if at all, do you follow instructions on food packaging which tell you how long food should be stored once opened? Responses (Additional differences): Always, Most of the time (40%), About half of the time (14%), Occasionally (14%), Never (5%), Don’t know*. Base=8922, all online respondents who ever do some food preparation or cooking for their household, and all those who completed the postal questionnaire.

Figure 19. The methods used to check if food is safe to eat or cook with varied by type of food.



Source: Food & You 2: Wave 1

Respondents were asked to indicate how they tell whether different foods are safe to eat or cook with. The method which respondents used to assess whether food is safe to eat or cook varied by food type. Smell was most often used to assess raw meat (76%) and milk and yogurt (73%). Respondents relied on the use-by date to assess fish (74%), eggs (62%) and dried or cured meats (68%) most often. Cheese was most often assessed visually (65%) (Figure 19)[63]. Across all foods asked about, the use-by date was the most consistently used method for assessing whether food was safe to eat or cook.

[63] Question: How do you tell whether it is safe to eat or cook with...? A) Raw meat like beef, lamb, pork or poultry, B) Milk and yoghurt, C) Cheese, D) Eggs, E) Fish (not shellfish), F) Dried or cured meats. (Select all that apply). Responses: How it looks; how it smells; how it tastes; use-by date; best before date; B/C/F - follow pack instructions e.g. with within 3 days of opening; D - It doesn't float in water. Base A=6911, B=7351, C= 7282, D=7212, E=6048, F=2957. A/F= all online respondents who are not vegan, vegetarian or pescatarian and all those who completed the food safety postal questionnaire, excluding those who don't eat/cook… A) Raw meat like beef, lamb or poultry, F) Dried or cured meats. B/C/D=all online respondents who are not vegan and all those who completed the food safety postal questionnaire, excluding those who don't eat or cook… B) Milk or yoghurt, C) Cheese, D) Eggs. E) Fish (excluding those who don't eat/cook fish that are not shellfish), F) Dried/cured meat.

Annex A: Food and You 2: Wave 1

Background

In 2018 the Advisory Committee for Social Science (ACSS) established a new Food and You Working Group to review the methodology, scope and focus of the Food and You survey. The Food and You Working Group provided a series of recommendations on the future direction of the Food and You survey to the FSA and ACSS in April 2019. Food and You 2 was developed from the recommendations.

The Food and You 2 survey has replaced the biennial Food and You survey (2010-2018), biannual Public Attitudes Tracker (2010-2019) and annual Food Hygiene Rating Scheme (FHRS) Consumer Attitudes Tracker (2014-2019). The Food and You survey has been an Official Statistic since 2014.

Methodology

The Food and You 2 survey is commissioned by the Food Standards Agency (FSA). The fieldwork is conducted by Ipsos MORI. Food and You 2 is a biannual survey. Fieldwork for Wave 1 was conducted from 29 July 2020 to 6 October 2020.

Food and You 2 is a sequential mixed-mode 'push-to-web' survey. A random sample of addresses (selected from the Royal Mail's Postcode Address File) received a letter inviting up to two adults (aged 16 or over) in the household to complete the online survey. A first reminder letter was sent to households that had not responded to the initial invitation. A postal version of the survey accompanied the second reminder letter for those who did not have access to the internet or preferred to complete a postal version of the survey. This helps to reduce the response bias that otherwise occurs with online-only surveys. This method is accepted for government surveys and national statistics. A third and final reminder was sent to households if the online survey had not been completed. Respondents were given a gift voucher for completing the survey. Further details about the methodology are available in the Technical Report. Due to the difference in methodology between the Public Attitudes Tracker, FHRS Consumer Attitudes Tracker and Food and You survey (2010-2018) it is not possible to compare the data collected in Food and You 2 (2020 onward) with these earlier data.

Defra is the UK government department which is responsible for supporting the food and farming industry and sustaining a thriving economy. Defra plays a major role in the foods which people eat. Defra only works in England but works closely with administrations in Wales and Northern Ireland amongst others. Defra co-funded a series of questions in the Food and You 2: Wave 1 survey which address provenance, sustainability, and animal welfare.

The sample of main and reserve addresses was stratified by region (with Wales and Northern Ireland being treated as separate regions), and within region (or country) by

local authority (district in Northern Ireland) to ensure that the issued sample was spread proportionately across the local authorities. National deprivation scores were used as the final level of stratification within the local authorities - in England the Index of Multiple Deprivation (IMD), in Wales the Welsh Index of Multiple Deprivation (WIMD) and in Northern Ireland, the Northern Ireland Multiple Deprivation Measure (NIMDM).

Due to limited space and complexity of the survey design it was not possible to include all the questions asked in the online survey in the postal version of the survey. Two versions of the postal survey were created to increase the coverage of the questions. Food and You 2 is a modular survey, with some modules being asked every wave and others on a less frequent basis.

All data collected by Food and You 2 are self-reported. The data are the respondents own reported attitudes, knowledge and behaviour relating to food safety and food issues. As a social research survey, Food and You 2 cannot report observed behaviours. Observed behaviour in kitchens has been reported in Kitchen Life, an ethnographic study which used a combination of observation, video observation and interviews to gain insight into domestic kitchen practices. This study will be updated through Kitchen Life 2, which is in progress now and due to report in 2023.

The minimum target sample size for the survey is 4,000 households (2,000 in England, 1,000 in Wales, 1,000 in Northern Ireland), with up to two adults in each household invited to take part as mentioned above. For Wave 1 a total of 9,319 adults from 6,408 households across England (5,140 adults), Northern Ireland (2,079 adults), and Wales (2,100 adults), completed the survey. An overall response rate of 30% was achieved (England 33%, Wales 30%, Northern Ireland 26%). Sixty-four per cent of respondents completed the survey online and 36% completed the postal version of the survey. The postal responses from 47 respondents were removed from the data set as the respondent had completed both the online and postal survey. Further details about the response rates are available in the Technical Report.

Weighting was applied to ensure the data are as close as possible to being representative of the socio-demographic and sub-groups in the population, as is usual practice in government surveys. The weighting applied to the Food and You 2 data helps to compensate for variations in within-household individual selection, for response bias, and for the fact that some questions were only asked in one of the postal surveys. Further details about weighting approach used and the weights applied to the Food and You 2 data are available in the Technical Report.

The data have been checked and verified by six members of Ipsos MORI and two members of the FSA Statistics branch. Descriptive analysis and statistical tests have been performed by Ipsos MORI. Quantum (statistical software) was used by Ipsos MORI to calculate the descriptive analysis and statistical tests (t-tests). Exact results may vary by statistical method and analysis package used.

The p-values that test for statistical significance are based on t-tests comparing the weighted proportions for a given response within that socio-demographic and sub-group

breakdown. An adjustment has been made for the effective sample size after weighting, but no correction is made for multiple comparisons.

Reported differences between socio-demographic and sub-groups typically have a minimum difference of 10 percentage points between groups and are statistically significant at the 5% level ($p<0.05$). However, some differences between respondent groups are included where the difference is less than 10 percentage points when the finding is notable or of interest. Percentage calculations are based only on respondents who provided a response. Reported values and calculations are based on weighted totals.

Technical terms and definitions

1. As mentioned above, statistical significance is indicated at the 5% level ($p<0.05$). This means that where a significant difference is reported, there is reasonable confidence that the reported difference is reflective of a real difference at the population level. Statistical significance refers to the probability of obtaining the observed result or more extreme, assuming the null hypothesis is true, i.e. the smaller the p-value, the greater the statistical evidence is to reject the null hypothesis of no difference (e.g. between two groups). Not all significant differences observed in the data are stated in this report.

2. Food security means that all people always have access to enough food for a healthy and active lifestyle (World Food Summit, 1996). The United States Department of Agriculture (USDA) has created a series of questions which indicate a respondent's level of food security. Food and You 2 incorporates the 10 item U.S. Adult Food Security Survey Module and uses a 12 month time reference period. Respondents are classified as having high food security, marginal food security, low food security and very low food security.

3. NS-SEC (The National Statistics Socio-economic classification) is a classification system which provides an indication of socio-economic position based on occupation and employment status.

4. Index of Multiple Deprivation (IMD) is the official measure of relative deprivation of a geographical area. IMD classification is assigned by postcode or place name. IMD is a multidimensional calculation which is intended to represent the living conditions in the area, including income, employment, health, education, access to services, housing, community safety and physical environment. Small areas are ranked by IMD; this is done separately for England, Wales and Northern Ireland.

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