

The 2014

FOOD and YOU

Survey

Methodological Report

The 2014



Methodological Report

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1. Executive summary

The Food and You survey, conducted biennially on behalf of the Food Standards Agency, collects information on reported behaviours, attitudes and knowledge in relation to food and food safety. The survey interviews a random-probability sample of approximately 3,000 individuals aged 16 years and older across the UK at each wave. Three waves have been completed so far, in 2010, 2012 and 2014.

During the fieldwork phase for Food and You Wave 3, an increase in the value of the incentive offered to respondents was implemented (from a £10 to a £25 high street gift card) in order to boost the size of the responding sample. This report explores how increasing the value of incentives may have contributed in shaping the profile of respondents, the survey response rate, the maximum expected bias within key demographic subclasses, and the survey estimates produced based on the Food and You Wave 3 survey data.

The report is based on comparative analysis between (a) the survey data that had been collected up to the point when the higher incentive was introduced and (b) the complete survey data that was collected at the end of the fieldwork phase comprising data from both the standard and the higher incentive phases of the fieldwork process.

Overall, the complete sample for all four countries (comprising both the standard and the higher incentive samples) fits better to the target population of individuals of 16 years of age or older in the UK than the standard incentive sample alone. The complete sample demographic profiles within England, Scotland and Northern Ireland are generally improved in comparison to the standard incentive sample demographic profiles. However, for Wales the standard incentive sample appears to fit better to the targeted population than the complete sample.

The analysis suggests a largely positive change in response rates following the increase in incentives, both overall and at the level of key demographic subclasses in the sample. Furthermore, the analysis finds that the overall maximum expected bias that could affect the proportion estimates derived from the survey data is lower within the complete sample than within the standard incentive sample. For England, Scotland and Northern Ireland individually, the maximum expected bias is generally improved within the complete sample, while for Wales it is lower for the standard incentive sample.

This report finally provides evidence which suggests that extremely limited change was introduced to the survey estimates following the addition of the higher incentive sample. Both absolute and standardised differences between the estimates from the complete and the standard incentive sample are extremely small and are not statistically significant.

Even though the analysis presented in this report cannot reveal what would have happened if the incentive value had not been increased during fieldwork, the evidence suggests insignificant changes in the survey estimates following the implemented increase in the value of incentives combined with broadly positive changes in relation to sample demographic profiles, response rates and the maximum expected bias.

2. Introduction

The Food and You survey is the Food Standards Agency's main source of consumer data on reported behaviours, attitudes and knowledge relating to food and food safety. It is a biennial, random-probability survey, with face-to-face interviews with approximately 3,000 people aged 16 years and older across the UK at each wave. Three waves of the Food and You survey have been conducted so far, in 2010, 2012 and 2014.

Using the small user¹ Postcode Address File (PAF) as a sample frame, the Food and You Wave 3 survey employed a multi-stage random-probability sample design which involved the stratification of the sample frame by region and key socio-economic variables, the random selection of postcode sectors as Primary Sampling Units (PSUs), the random selection of addresses within the selected PSUs, the random selection of dwelling units and households within the selected addresses (if necessary), and finally the random selection of one adult aged 16+ in each eligible household.²

The fieldwork for Food and You Wave 3 took place between 24th March and 24th August 2014. All samples were issued to interviewers at the start of fieldwork³ and interviewers were required to make at least six attempts over the fieldwork period to contact the residents at each sampled address to attempt an interview. These calls were made on different days of the week, and at different times of day. At least three calls were made on a weekday evening (after 6pm) or at a weekend to maximise the probability of contact with the household residents.

A £10 high street gift card incentive was initially offered to each respondent, as a thank you for taking part, on completion of their interview. This was mentioned in the advance letter sent out by interviewers a few days before they visited the address for the first time. Approximately six weeks before the end of fieldwork, in agreement with the Food Standards Agency, the value of the incentive was increased to a £25 high street gift card. All of those eligible for the £25 incentive had already been told in the advance letter that the incentive was £10 and interviewers were instructed to mention the increased incentive when next visiting the address.

The increase in incentive was designed to boost the size of the responding sample⁴ and was in line with empirical evidence behind the role of incentivisation in increasing response rates and improving sample quality, mainly by encouraging the participation of individuals who would not otherwise have participated in a survey.

¹ The small user PAF excludes large user postcodes which are postcodes assigned to one single address (non-residential addresses such as for a large businesses that would not be eligible for the survey).

² For further information, please refer to: Prior, G., Phillips, R., & O'Driscoll, C. (2014). The 2014 Food and You Survey Technical Report. Food Standards Agency, Social Science Research Unit, October 2014.

³ The only exception to this was 150 addresses from a reserve sample for Scotland which were issued to interviewers at the beginning of June, as response rates were running lower than expected.

⁴ The sample sizes and response rates to the survey before and after the implementation of the increased incentive are presented in sections 3.1 and 3.4 of this report, respectively.

However, as empirical evidence regarding the role of incentives is not conclusive,⁵ the Food Standards Agency asked TNS BMRB to conduct further analysis, focusing on the achieved sample profile, response rate and survey bias, and the survey estimates from Wave 3, before the change in incentives and at the end of fieldwork. This report summarises the key findings from this analysis.

⁵ For a review of empirical evidence from research on survey incentives see: Singer, E., & Ye, C. (2013). The use and effects of incentives in surveys. *The ANNALS of the American Academy of Political and Social Science*, 645, pp. 112-141.

3. Analysis

3.1 Background

This methodological report explores: (a) the profile of respondents, (b) the survey response rates and the maximum expected bias within key demographic subclasses and overall, and (c) key survey estimates before the change in respondent incentivisation took place during the fieldwork phase for Food and You Wave 3 and at the end of fieldwork. The analysis reveals how the interviews achieved during the higher-incentive fieldwork phase have contributed to shaping the final demographic profile of the achieved sample and the findings derived from the Food and You Wave 3 survey data. In this sense, the analysis provides an insight into the potential impact of incentive change in relation to sample composition, estimate bias and the substantive survey estimates (even though it cannot reveal what would have happened if the incentive value had remained the same throughout the fieldwork process).

Table 1 presents the sample sizes per country that were achieved during the standard incentive and the higher incentive phases of fieldwork as well as the complete sample counts. The sample counts presented in Table 1 exclude a total of 57 interviews achieved in Scotland following the release of an additional 150 addresses from a reserve sample. These interviews were excluded to better isolate and assess the potential effects of differential incentives in the areas of focus.⁶

Table 1 Sample size by country

Country	Interviews achieved during the standard incentive phase	Interviews achieved during the high incentive phase	Interviews achieved in total
England	1620	331	1951
Scotland	325	93	418
Wales	408	95	503
Northern Ireland	373	151	524
Total	2726	670	3396

3.2 Analytical approach and data preparation

This report concentrates on comparisons between the complete sample (n1=3,396) and the standard incentive sample (n2=2,726). Effectively, it compares the achieved sample profiles, response rates and survey estimates with those that would have been obtained if fieldwork had been terminated before higher incentives were introduced (but not with the sample profiles that would have been achieved, had the

⁶ The reserve sample had less time in field compared to the main sample and therefore had the potential to behave differently.

incentive value remained the same throughout the fieldwork process, as explained in section 3.1).

For this analysis, design weights were applied to the survey data. Design weights account for differential sampling probabilities of respondents in the sample and comprise information about:

- (a) the proportion of all addresses sampled in each region in relation to the total number of addresses;
- (b) the number of dwelling units at each sampled address; and
- (c) the number of eligible adults in a surveyed household.

For the analysis presented in this methodological report, survey data were not calibrated to population totals. This is because calibration would “mask” the profile specificities of the complete and standard incentive samples by aligning these to the distribution of the adult population in England, Scotland, Wales and Northern Ireland, potentially accounting for bias that may have been introduced by the increase in incentives.⁷

3.3 Sample profiles

This section investigates how the profiles of the complete sample and the standard incentive sample compare to the target population of adults in England, Scotland, Wales and Northern Ireland. Sample profiles are investigated in relation to the distribution of gender, age, gender interlocked with age, gender interlocked with work status, and region.⁸ We focus on these specific profiling variables as they are key descriptive parameters of the sample and are expected to be correlated with response patterns as well as with the findings of the survey.

Tables 2 to 6 present the distribution of the investigated sample profiling variables within the complete and the standard incentive samples as well as their percentage point differences from the distribution of the adult population in England, Scotland, Wales and Northern Ireland. Averages of the absolute differences are included in the tables to provide a summarised measurement of how closely the complete sample and the standard incentive sample align to the population distribution. Smaller average absolute differences indicate a better fit of the sample to the actual population.

As shown in Table 2 (and indicated by the average absolute differences calculated for the complete and the standard incentive samples), the profile of the complete sample aligns more closely than the profile of the standard incentive sample to the actual adult population distribution. Findings for individual countries are expanded on in the following tables.

⁷ However, it should be noted that findings presented in the main Food and You Wave 3 reports are produced based on calibrated samples to ensure their representativeness.

⁸ Interlocking gender with age and with working status is explored as it provides a more granular insight into the structure of the sample.

Table 2 Distribution of countries in the population, the complete sample and the standard incentive sample

Country	% population	% complete sample	% standard incentive sample	% population - % complete sample	% population - % standard incentive sample
England	83.87%	84.50%	85.25%	-0.63%	-1.38%
Scotland	8.49%	6.89%	6.52%	1.60%	1.96%
Wales	4.87%	5.41%	5.39%	-0.55%	-0.53%
Northern Ireland	2.78%	3.20%	2.83%	-0.42%	-0.05%
Average absolute difference				0.80%	0.98%

For England (Table 3), the complete sample fits more closely than the standard incentive sample to the population for most demographic variables examined (i.e. for gender by age, gender by working status, and region). Exceptions include gender and age (even though the interlocked distribution of gender by age has improved).

Table 3 Distribution of key demographics in the population, the complete sample and the standard incentive sample for England

	% population	% complete sample	% standard incentive sample	% population - % complete sample	% population - % standard incentive sample
Gender					
Male	48.83%	45.13%	45.38%	3.70%	3.45%
Female	51.17%	54.87%	54.62%	-3.70%	-3.45%
Average absolute difference				3.70%	3.45%
Age					
16 to 24	14.33%	10.11%	10.24%	4.22%	4.09%
25 to 34	16.89%	13.95%	13.89%	2.93%	2.99%
35 to 49	25.35%	28.14%	27.57%	-2.80%	-2.23%
50 to 64	22.17%	25.23%	24.73%	-3.07%	-2.56%
65 or over	21.27%	22.56%	23.56%	-1.29%	-2.29%
Average absolute difference				2.86%	2.83%

Table 3 Distribution of key demographics in the population, the complete sample and the standard incentive sample for England (cont'd)

	% population	% complete sample	% standard incentive sample	% population - % complete sample	% population - % standard incentive sample
Gender by age					
16 - 24 Male	7.32%	4.66%	4.55%	2.66%	2.77%
25 - 34 Male	8.43%	6.19%	5.86%	2.23%	2.56%
35 - 49 Male	12.57%	12.12%	11.67%	0.45%	0.90%
50 - 64 Male	10.98%	10.97%	11.26%	0.01%	-0.28%
65+ Male	9.53%	11.18%	12.03%	-1.65%	-2.50%
16 - 24 Female	7.01%	5.45%	5.69%	1.56%	1.32%
25 - 34 Female	8.46%	7.76%	8.03%	0.70%	0.43%
35 - 49 Female	12.78%	16.02%	15.91%	-3.24%	-3.13%
50 - 64 Female	11.22%	14.26%	13.46%	-3.04%	-2.24%
65+ Female	11.71%	11.38%	11.53%	0.33%	0.18%
Average absolute difference				1.59%	1.63%
Gender by working status					
Male in work	31.25%	27.39%	26.10%	3.86%	5.15%
Male not in work	17.58%	17.73%	19.28%	-0.16%	-1.70%
Female in work	26.42%	29.64%	28.38%	-3.22%	-1.97%
Female not in work	24.76%	25.23%	26.24%	-0.48%	-1.48%
Average absolute difference				1.93%	2.58%
Region					
East Midlands	8.60%	9.48%	10.62%	-0.88%	-2.03%
East of England	11.05%	10.88%	11.72%	0.16%	-0.67%
London	15.33%	10.74%	10.44%	4.59%	4.88%
North East	4.94%	5.78%	5.32%	-0.85%	-0.38%
North West	13.26%	14.87%	13.14%	-1.61%	0.12%
South East	16.29%	17.08%	17.12%	-0.79%	-0.83%
South West	10.15%	10.51%	10.57%	-0.36%	-0.43%
West Midlands	10.46%	10.16%	10.03%	0.30%	0.43%
Yorkshire & Humber	9.94%	10.50%	11.04%	-0.56%	-1.10%
Average absolute difference				1.12%	1.21%

For Scotland (Table 4), demographic profiles are closer to the overall population in the complete sample for all variables apart from age; however, again the distribution of gender by age appears improved.

Table 4 Distribution of key demographics in the population, the complete sample and the standard incentive sample for Scotland

	% population	% complete sample	% standard incentive sample	% population - % complete sample	% population - % standard incentive sample
Gender					
Male	48.12%	45.34%	43.56%	2.78%	4.56%
Female	51.88%	54.66%	56.44%	-2.78%	-4.56%
Average absolute difference				2.78%	4.56%
Age					
16 to 24	14.29%	13.12%	12.72%	1.17%	1.57%
25 to 34	15.65%	11.43%	12.56%	4.22%	3.09%
35 to 49	24.83%	23.88%	24.25%	0.95%	0.58%
50 to 64	23.81%	27.69%	28.57%	-3.88%	-4.76%
65 or over	21.43%	23.88%	21.90%	-2.45%	-0.47%
Average absolute difference				2.53%	2.09%
Gender by age					
16 - 24 Male	5.46%	4.77%	4.63%	0.69%	0.83%
25 - 34 Male	7.51%	4.65%	4.63%	2.86%	2.88%
35 - 49 Male	12.97%	12.75%	12.56%	0.22%	0.41%
50 - 64 Male	11.26%	12.21%	12.24%	-0.94%	-0.98%
65+ Male	10.92%	11.00%	9.50%	-0.08%	1.42%
16 - 24 Female	8.87%	8.34%	8.08%	0.54%	0.79%
25 - 34 Female	8.19%	6.77%	7.93%	1.42%	0.26%
35 - 49 Female	11.60%	11.12%	11.70%	0.49%	-0.09%
50 - 64 Female	12.63%	15.53%	16.33%	-2.90%	-3.70%
65+ Female	10.58%	12.87%	12.40%	-2.29%	-1.82%
Average absolute difference				1.24%	1.32%
Gender by working status					
Male in work	27.99%	25.23%	23.94%	2.76%	4.05%
Male not in work	20.14%	20.15%	19.62%	-0.01%	0.51%
Female in work	26.96%	26.92%	27.71%	0.04%	-0.75%
Female not in work	24.91%	27.71%	28.73%	-2.79%	-3.81%
Average absolute difference				1.40%	2.28%

For Northern Ireland (Table 5), profiles are closer to the overall population for all demographic variables apart from gender, with gender by age still appearing improved.

Table 5 Distribution of key demographics in the population, the complete sample and the standard incentive sample for Northern Ireland

	% population	% complete sample	% standard incentive sample	% population – % complete sample	% population – % standard incentive sample
Gender					
Male	48.96%	44.47%	45.85%	4.48%	3.11%
Female	51.04%	55.53%	54.15%	-4.48%	-3.11%
Average absolute difference				4.48%	3.11%
Age					
16 to 24	15.63%	13.02%	12.84%	2.60%	2.79%
25 to 34	16.67%	13.54%	12.30%	3.13%	4.37%
35 to 49	26.04%	26.17%	24.59%	-0.13%	1.45%
50 to 64	21.88%	24.87%	25.86%	-2.99%	-3.98%
65 or over	19.79%	22.40%	24.41%	-2.60%	-4.62%
Average absolute difference				2.29%	3.44%
Gender by age					
16 - 24 Male	7.22%	5.72%	6.50%	1.49%	0.72%
25 - 34 Male	10.31%	7.15%	7.58%	3.16%	2.73%
35 - 49 Male	11.34%	10.40%	8.66%	0.94%	2.68%
50 - 64 Male	10.31%	10.66%	11.01%	-0.35%	-0.70%
65+ Male	9.28%	10.53%	11.91%	-1.25%	-2.64%
16 - 24 Female	8.25%	7.41%	6.50%	0.84%	1.75%
25 - 34 Female	7.22%	6.37%	4.69%	0.84%	2.52%
35 - 49 Female	14.43%	15.73%	15.88%	-1.30%	-1.45%
50 - 64 Female	12.37%	14.17%	14.80%	-1.80%	-2.43%
65+ Female	9.28%	11.83%	12.45%	-2.56%	-3.18%
Average absolute difference				1.45%	2.08%
Gender by working status					
Male in work	28.13%	22.63%	22.38%	5.50%	5.74%
Male not in work	20.83%	21.85%	23.47%	-1.01%	-2.63%
Female in work	26.04%	25.75%	22.02%	0.29%	4.02%
Female not in work	25.00%	29.78%	32.13%	-4.78%	-7.13%
Average absolute difference				2.90%	4.88%

Finally for Wales (Table 6), the demographic profile of the standard incentive sample fits more closely to the population distribution compared to the complete sample for all variables.

Table 6 Distribution of key demographics in the population, the complete sample and the standard incentive sample for Wales

	% population	% complete sample	% standard incentive sample	% population - % complete sample	% population - % standard incentive sample
Gender					
Male	48.81%	42.19%	44.59%	6.62%	4.22%
Female	51.19%	57.81%	55.41%	-6.62%	-4.22%
Average absolute difference				6.62%	4.22%
Age					
16 to 24	14.88%	9.94%	10.07%	4.94%	4.81%
25 to 34	14.88%	14.71%	14.25%	0.17%	0.64%
35 to 49	23.21%	19.65%	20.23%	3.57%	2.99%
50 to 64	23.21%	30.89%	29.53%	-7.68%	-6.32%
65 or over	23.81%	24.81%	25.93%	-1.00%	-2.12%
Average absolute difference				3.47%	3.37%
Gender by age					
16 - 24 Male	8.33%	5.08%	5.60%	3.25%	2.73%
25 - 34 Male	5.95%	5.39%	5.32%	0.56%	0.63%
35 - 49 Male	10.12%	7.55%	8.07%	2.57%	2.05%
50 - 64 Male	11.90%	13.48%	13.49%	-1.58%	-1.58%
65+ Male	12.50%	10.71%	12.06%	1.79%	0.44%
16 - 24 Female	6.55%	4.85%	4.46%	1.69%	2.08%
25 - 34 Female	8.93%	9.32%	8.93%	-0.39%	0.00%
35 - 49 Female	13.10%	12.10%	12.16%	1.00%	0.94%
50 - 64 Female	11.31%	17.41%	16.05%	-6.10%	-4.74%
65+ Female	11.31%	14.10%	13.87%	-2.79%	-2.56%
Average absolute difference				2.17%	1.78%
Gender by working status					
Male in work	25.15%	23.09%	24.69%	2.06%	0.46%
Male not in work	23.35%	19.09%	19.85%	4.26%	3.51%
Female in work	25.75%	27.17%	26.02%	-1.43%	-0.27%
Female not in work	25.75%	30.64%	29.44%	-4.89%	-3.69%
Average absolute difference				3.16%	1.98%

These findings suggest that for England, Scotland and Northern Ireland, sample profiles improved following the higher incentive phase of fieldwork, even though exceptions can be identified for some demographic subclasses. For Wales, the standard incentive sample fits more closely to the overall population than the complete sample in relation to all demographic subclasses examined.

3.4 Response rates and bias

At the end of the Food and You Wave 3 fieldwork phase, a UK response rate of 52.6% was achieved. The response rate at the end of the standard incentive phase was estimated at 47.1%.⁹

Tables 7 to 11 present country-level response rates and subclass-specific response rates for several key demographic variables across England, Scotland, Wales and Northern Ireland.¹⁰ Comparisons between the country-level and subclass response rates for the complete and standard incentive samples further suggest a positive impact of increased response rates at both country and subclass level for all countries following the increase in incentives.

Tables 7 to 11 also include an estimate of the maximum expected bias¹¹ affecting any proportion estimates (a) if no weighting was applied to align the sample profile to the population profile, and (b) if the only systematic variation in response probability was between the subclasses of the demographic variable in question. The maximum bias statistic for the complete and the standard incentive samples presented in Table 7 reveals that the maximum bias that could be expected across the four countries appears decreased in the complete sample.

Table 7 Country-level response rates and maximum bias for the complete and the standard incentive sample

Country	Response rate for complete sample	Response rate for standard incentive sample
England	52.99%	47.88%
Scotland	42.71%	36.21%
Wales	58.50%	52.22%
Northern Ireland	60.59%	47.97%
Weighted average	52.60%	47.10%
Maximum bias	3.28%	3.66%

For England, Scotland, and Northern Ireland individually (Tables 8, 9 and 10, respectively) decreases in the maximum expected bias in relation to most demographic variables were observed; exceptions include age and gender for England, age for Scotland, and gender for Northern Ireland. Maximum expected bias for Wales is discussed further below.

⁹ The response rate at the end of the fieldwork phase and the response rate at the end of the standard incentive phase reported here does not include the 150 addresses of reserve sample issued in Scotland. The rationale for excluding these from the scope of this analysis is explained in the section 3.1.

¹⁰ These subclass-specific response rates take into account the proportion of a subclass in the complete and the standard incentive samples in relation to its proportion in the actual adult population.

¹¹ Maximum expected bias for a demographic variable has been estimated given the dispersion of the weighted subclass response rates within the demographic variable and assuming (a) a maximum correlation between response rate and a population estimate (equal to 1); and (b) a maximum variance of a population estimate (equal to 50%).

Table 8 Weighted subclass response rates and maximum bias for the complete and the standard incentive sample in relation to key demographic variables for England

	Weighted subclass response rate for complete sample	Weighted subclass response rate for standard incentive sample
Gender		
Male	48.98%	44.49%
Female	56.82%	51.10%
Average	52.99%	47.88%
Maximum bias	3.70%	3.45%
Age		
16 to 24	37.38%	34.22%
25 to 34	43.79%	39.40%
35 to 49	58.84%	52.08%
50 to 64	60.32%	53.40%
65 or over	56.21%	53.03%
Average	52.99%	47.88%
Maximum bias	8.01%	7.80%
Gender by age		
16 - 24 Male	33.73%	29.77%
25 - 34 Male	38.95%	33.30%
35 - 49 Male	51.12%	44.44%
50 - 64 Male	52.94%	49.11%
65+ Male	62.18%	60.45%
16 - 24 Female	41.23%	38.88%
25 - 34 Female	48.58%	45.47%
35 - 49 Female	66.44%	59.61%
50 - 64 Female	67.36%	57.43%
65+ Female	51.52%	47.15%
Average	52.99%	47.88%
Maximum bias	9.90%	10.05%
Gender by working status		
Male in work	46.45%	39.98%
Male not in work	53.47%	52.52%
Female in work	59.46%	51.44%
Female not in work	54.01%	50.74%
Average	52.99%	47.88%
Maximum bias	4.69%	5.59%

Table 8 Weighted subclass response rates and maximum bias for the complete and the standard incentive sample in relation to key demographic variables for England (cont'd)

	Weighted subclass response rate for complete sample	Weighted subclass response rate for standard incentive sample
Region		
East Midlands	58.42%	59.17%
East of England	52.20%	50.80%
London	37.13%	32.62%
North East	62.09%	51.60%
North West	59.45%	47.45%
South East	55.56%	50.30%
South West	54.89%	49.88%
West Midlands	51.46%	45.90%
Yorkshire & Humber	55.98%	53.15%
Average	52.99%	47.88%
Maximum bias	6.89%	7.59%

Table 9 Weighted subclass response rates and maximum bias for the complete and the standard incentive sample in relation to key demographic variables for Scotland

	Weighted subclass response rate for complete sample	Weighted subclass response rate for standard incentive sample
Gender		
Male	40.24%	32.78%
Female	44.99%	39.39%
Average	42.71%	36.21%
Maximum bias	2.78%	4.56%
Age		
16 to 24	39.22%	32.23%
25 to 34	31.19%	29.06%
35 to 49	41.07%	35.37%
50 to 64	49.67%	43.45%
65 or over	47.59%	37.00%
Average	42.71%	36.21%
Maximum bias	7.39%	6.63%

Table 9 Weighted subclass response rates and maximum bias for the complete and the standard incentive sample in relation to key demographic variables for Scotland (cont'd)

	Weighted subclass response rate for complete sample	Weighted subclass response rate for standard incentive sample
Gender by age		
16 - 24 Male	37.33%	30.70%
25 - 34 Male	26.46%	22.33%
35 - 49 Male	41.98%	35.06%
50 - 64 Male	46.28%	39.36%
65+ Male	43.00%	31.49%
16 - 24 Female	40.13%	32.99%
25 - 34 Female	35.28%	35.04%
35 - 49 Female	40.92%	36.49%
50 - 64 Female	52.52%	46.81%
65+ Female	51.95%	42.44%
Average	42.71%	36.21%
Maximum bias	8.24%	8.64%
Gender by working status		
Male in work	38.50%	30.97%
Male not in work	42.72%	35.28%
Female in work	42.64%	37.21%
Female not in work	47.49%	41.75%
Average	42.71%	36.21%
Maximum bias	3.82%	5.48%

Table 10 Weighted subclass response rates and maximum bias for the complete and the standard incentive sample in relation to key demographic variables for Northern Ireland

	Weighted subclass response rate for complete sample	Weighted subclass response rate for standard incentive sample
Gender		
Male	55.04%	44.92%
Female	65.92%	50.89%
Average	60.59%	47.97%
Maximum bias	4.49%	3.11%

Table 10 Weighted subclass response rates and maximum bias for the complete and the standard incentive sample in relation to key demographic variables for Northern Ireland (cont'd)

	Weighted subclass response rate for complete sample	Weighted subclass response rate for standard incentive sample
Age		
16 to 24	50.49%	39.42%
25 to 34	49.23%	35.39%
35 to 49	60.90%	45.30%
50 to 64	68.89%	56.71%
65 or over	68.57%	59.17%
Average	60.59%	47.97%
Maximum bias	6.66%	9.39%
Gender by age		
16 - 24 Male	48.04%	43.19%
25 - 34 Male	42.04%	35.28%
35 - 49 Male	55.59%	36.65%
50 - 64 Male	62.67%	51.23%
65+ Male	68.79%	61.59%
16 - 24 Female	54.46%	37.80%
25 - 34 Female	53.50%	31.20%
35 - 49 Female	66.06%	52.79%
50 - 64 Female	69.42%	57.39%
65+ Female	77.28%	64.39%
Average	60.59%	47.97%
Maximum bias	8.37%	11.39%
Gender by working status		
Male in work	48.75%	38.18%
Male not in work	63.54%	54.03%
Female in work	59.91%	40.56%
Female not in work	72.18%	61.65%
Average	60.59%	47.97%
Maximum bias	7.14%	10.20%

For Wales (Table 11), an increase in the expected bias is reported in relation to all examined demographic variables. This indicates that for Wales, the demographic profile of the standard incentive sample fits closer to the population distribution compared to the complete sample for all examined demographic variables.

Table 11 Weighted subclass response rates and maximum bias for the complete and the standard incentive sample in relation to key demographic variables for Wales

	Weighted subclass response rate for complete sample	Weighted subclass response rate for standard incentive sample
Gender		
Male	50.56%	47.70%
Female	66.07%	56.52%
Average	58.50%	52.22%
Maximum bias	6.63%	4.22%
Age		
16 to 24	39.07%	35.32%
25 to 34	57.85%	49.98%
35 to 49	49.51%	45.50%
50 to 64	77.86%	66.43%
65 or over	60.95%	56.86%
Average	58.50%	52.22%
Maximum bias	10.93%	9.85%
Gender by age		
16 - 24 Male	35.70%	35.11%
25 - 34 Male	53.00%	46.65%
35 - 49 Male	43.65%	41.65%
50 - 64 Male	66.25%	59.15%
65+ Male	50.12%	50.38%
16 - 24 Female	43.37%	35.60%
25 - 34 Female	61.08%	52.21%
35 - 49 Female	54.04%	48.47%
50 - 64 Female	90.07%	74.10%
65+ Female	72.93%	64.02%
Average	58.50%	52.22%
Maximum bias	13.18%	11.06%
Gender by working status		
Male in work	53.72%	51.26%
Male not in work	47.83%	44.38%
Female in work	61.74%	52.77%
Female not in work	69.61%	59.70%
Average	58.50%	52.22%
Maximum bias	6.99%	5.16%

3.5 Population estimates

Population estimates for a total of 269 variables derived from the standard incentive sample were compared against the final estimates derived from the complete sample. The variables analysed are presented in Appendix 1 and cover a total of 40 questions around a wide range of the topics.¹²

Table 12 presents the frequency distribution of the absolute differences between the final estimates and the estimates from the standard incentive sample, as calculated after the application of design weights. Overall, the vast majority of differences (97.3%) are below one percentage point.

Table 12 Distribution of the absolute % point differences between survey estimates from the complete and the standard incentive sample

Absolute % point difference between survey estimates from the complete and the standard incentive sample	% of examined variables
Up to 0.09%	38.34%
0.10% to 0.49%	46.22%
0.50% to 0.99%	12.74%
1.00% or over	2.70%

Table 13 presents the absolute differences in percentiles and further emphasises that the higher incentive seems to have had a relatively small impact on the values of population estimates derived from the survey data, with 95% of absolute differences being below 0.80%.

Table 13 Percentiles of the absolute % point differences between survey estimates from the complete and the standard incentive sample

Percentile	Absolute % point difference
Minimum	0.00%
10 th	0.02%
20 th	0.04%
30 th	0.07%
40 th	0.11%
50 th	0.17%
60 th	0.23%
70 th	0.31%
80 th	0.42%
90 th	0.60%
95 th	0.80%
99 th	1.22%
Maximum	1.79%

¹² Variables with high proportions of missing values due to survey routing were not included in this analysis.

Absolute percentage point differences are informative; however, the effect that they represent depends on the prevalence of a variable in the population. If the prevalence is very small, then a small absolute difference may be relatively substantial. To ensure that the analysis will not discount any potentially meaningful differences between the final population estimates and the estimates from the standard incentive sample, the differences have been standardised, taking into account the baseline proportions estimated from the complete sample.¹³ Percentiles of the standardised differences (or effect sizes) are presented in Table 14. Indicating that 70% of standardised differences are below 1.17 effect size points, Table 14 reinforces the previous conclusion: that the addition of the higher incentive sample introduces miniscule levels of change in the population estimates derived from the Food and You Wave 3 survey data. Considering standardised differences of less than 2.5 effect size points as extremely small,¹⁴ it can be seen that only four per cent of differences exceed this threshold.

Table 14 Percentiles of the differences between survey estimates from the complete and the standard incentive sample expressed as % of one standard deviation

Percentiles of effect size between complete and the standard incentive sample	Difference expressed as % of one standard deviation (1% = one effect size point)
Minimum	0.00%
10 th	0.17%
20 th	0.31%
30 th	0.41%
40 th	0.57%
50 th	0.77%
60 th	0.96%
70 th	1.17%
80 th	1.49%
90 th	1.85%
95 th	2.32%
99 th	3.13%
Maximum	4.02%

Exploring variables which have the largest standardised differences between the final estimate and the estimate from the standard incentive sample is interesting, since it would be expected that bigger differences could be linked to variables potentially more sensitive to the effects of increased incentives.

¹³ Standardised differences (also called effect sizes) are expressed in standard deviation units. Absolute differences are divided by the best estimate of the population standard deviation; that is, the standard deviation of the complete sample. One effect size point equals one per cent of one population standard deviation.

¹⁴ A standardised difference (effect size) between -2.5% and +2.5% signifies that the difference is smaller than 0.025 standard deviations (<2.5 effect size points).

For interest, Table 15 shows the ten variables where the largest standardised differences were detected between the complete and the standard incentive samples.¹⁵ The largest absolute standardised differences range from 3.02 to 4.02 effect size points (i.e. 3.02% to 4.02% of one population standard deviation). Absolute (non-standardised) differences range between 0.38 and 1.79 percentage points. None of these differences would be flagged as statistically significant based on an appropriate statistical test.¹⁶ This further emphasises the point that differences between estimates based on the complete sample and the estimates based on the standard incentive sample are not substantial.

Table 15 Details for ten variables with largest standardised differences

Variable	Value	Population estimate from complete sample	Population estimate from standard incentive sample	Signed difference	Signed standardised difference (effect size); 1% = 1 effect size point	Lower bound of effect size	Upper bound of effect size	Whether difference is statistically significant	Probability of effect size being "very small"*
Q4_1 Thinking about when you are storing, preparing and cooking food in the kitchen do you eat red meat (e.g. beef or lamb, steak or roast meat, but not mince) if it is pink or has pink or red juices?	Most of the time	11.22%	9.95%	-1.27%	-4.02%	-10.25%	2.21%	no	29.61%
Q4_1C And which method do you generally use to defrost frozen meat or fish?	Leaving the meat or fish at room temperature	53.05%	54.84%	1.79%	3.59%	-2.93%	10.11%	no	33.80%

¹⁵ The largest differences may in fact reflect sample variance more than sample bias. Therefore, Table 15 should not be treated as a definitive list of the most problematic items.

¹⁶ A t-Test which accounts for the extent of the overlap between the cases recruited under the standard incentive protocol and all interviewed cases.

Table 15 Details for ten variables with largest standardised differences (cont'd)

Variable	Value	Population estimate from complete sample	Population estimate from standard incentive sample	Signed difference	Signed standardised difference (effect size); 1% = 1 effect size point	Lower bound of effect size	Upper bound of effect size	Whether difference is statistically significant	Probability of effect size being "very small"*
Q2_14 How often do you eat pre-packed sandwiches?	Less than once a month	16.10%	14.83%	-1.27%	-3.45%	-9.66%	2.75%	no	35.16%
Q2_14 How often do you eat pre-packed sandwiches?	Never	52.44%	54.12%	1.69%	3.38%	-2.90%	9.67%	no	35.84%
Q4_1B / Q4_1C Which methods do you generally use to defrost frozen meat or fish?	Leaving the meat or fish at room temperature	48.20%	49.84%	1.65%	3.29%	-2.95%	9.54%	no	36.72%
Q4_8A Do you have the use of a kitchen, that is, a separate room in which you cook?	Yes	91.85%	90.96%	-0.89%	-3.23%	-10.07%	3.60%	no	36.65%
Q2_7B Number of times eaten lunch at home in the last seven days?	Zero	14.55%	13.43%	-1.12%	-3.18%	-9.48%	3.12%	no	37.77%
Q4_18 How can you tell whether milk and yoghurt is safe to eat or use in cooking? - Date unspecified	Date unspecified	4.91%	4.23%	-0.68%	-3.14%	-9.36%	3.08%	no	38.24%

Table 15 Details for ten variables with largest standardised differences (cont'd)

Variable	Value	Population estimate from complete sample	Population estimate from standard incentive sample	Signed difference	Signed standardised difference (effect size); 1% = 1 effect size point	Lower bound of effect size	Upper bound of effect size	Whether difference is statistically significant	Probability of effect size being "very small"*
Q3_12 Thinking about food prices generally over the last 12 months, would you say they have stayed the same, increased or decreased?	Decreased a little	1.48%	1.11%	-0.38%	-3.11%	-8.49%	2.26%	no	39.13%
Q4_1C And which method do you generally use to defrost frozen meat or fish?	Placing the meat or fish in water	4.30%	3.69%	-0.61%	-3.02%	-9.76%	3.72%	no	38.58%

Appendix 1 – Variables included in the analysis

Q11_6 What is the maximum time after the best before end date that you would eat bread? (Spontaneous)

Q11_6 What is the maximum time after the best before end date that you would eat eggs? (Spontaneous)

Q11_6 What is the maximum time after the use by date that you would dairy foods like cheese and yoghurts? (Spontaneous)

Q11_6 What is the maximum time after the use by date that you would eat cooked meat? (Spontaneous)

Q11_6 What is the maximum time after the use by date that you would use raw meat (i.e. cook then eat)? (Spontaneous)

Q11_8B Do you get information about how to prepare and cook food safely at home from any of these sources? - Books

Q11_8B Do you get information about how to prepare and cook food safely at home from any of these sources? - Common sense/personal experience

Q11_8B Do you get information about how to prepare and cook food safely at home from any of these sources? - Doctor / GP

Q11_8B Do you get information about how to prepare and cook food safely at home from any of these sources? - Family and friends

Q11_8B Do you get information about how to prepare and cook food safely at home from any of these sources? - Food magazines

Q11_8B Do you get information about how to prepare and cook food safely at home from any of these sources? - Food TV shows / cooking programmes

Q11_8B Do you get information about how to prepare and cook food safely at home from any of these sources? - Food websites

Q11_8B Do you get information about how to prepare and cook food safely at home from any of these sources? - I don't look for information on food safety

Q11_8B Do you get information about how to prepare and cook food safely at home from any of these sources? - Internet search engine

Q11_8B Do you get information about how to prepare and cook food safely at home from any of these sources? - News websites

Q11_8B Do you get information about how to prepare and cook food safely at home from any of these sources? - Newspapers

Q11_8B Do you get information about how to prepare and cook food safely at home from any of these sources? - Other (specify)

Q11_8B Do you get information about how to prepare and cook food safely at home from any of these sources? - Product packaging

Q11_8B Do you get information about how to prepare and cook food safely at home from any of these sources? - Retailers (e.g. supermarkets)

Q11_8B Do you get information about how to prepare and cook food safely at home from any of these sources? - School / college / a course

Q11_8B Do you get information about how to prepare and cook food safely at home from any of these sources? - TV / radio campaigns

Q11_8B Do you get information about how to prepare and cook food safely at home from any of these sources? - Work

Q11_8C In the future if you decided to look for more information about how to prepare and cook food safely at home, where - Books

Q11_8C In the future if you decided to look for more information about how to prepare and cook food safely at home, where - Doctor / GP

Q11_8C In the future if you decided to look for more information about how to prepare and cook food safely at home, where - Don't know

Q11_8C In the future if you decided to look for more information about how to prepare and cook food safely at home, where - Family and friends

Q11_8C In the future if you decided to look for more information about how to prepare and cook food safely at home, where - Food magazines

Q11_8C In the future if you decided to look for more information about how to prepare and cook food safely at home, where - Food TV shows / cooking programmes

Q11_8C In the future if you decided to look for more information about how to prepare and cook food safely at home, where - Food websites

Q11_8C In the future if you decided to look for more information about how to prepare and cook food safely at home, where - Internet search engine

Q11_8C In the future if you decided to look for more information about how to prepare and cook food safely at home, where - Library

Q11_8C In the future if you decided to look for more information about how to prepare and cook food safely at home, where - News websites

Q11_8C In the future if you decided to look for more information about how to prepare and cook food safely at home, where - Newspapers

Q11_8C In the future if you decided to look for more information about how to prepare and cook food safely at home, where - None/wouldn't

Q11_8C In the future if you decided to look for more information about how to prepare and cook food safely at home, where - Other (specify)

Q11_8C In the future if you decided to look for more information about how to prepare and cook food safely at home, where - Product packaging

Q11_8C In the future if you decided to look for more information about how to prepare and cook food safely at home, where - Retailers (e.g. supermarkets)

Q11_8C In the future if you decided to look for more information about how to prepare and cook food safely at home, where - School / college / a course

Q11_8C In the future if you decided to look for more information about how to prepare and cook food safely at home, where - TV / radio campaigns

Q11_8C In the future if you decided to look for more information about how to prepare and cook food safely at home, where - Work

Q12_3 In the last 12 months, have you used a food hygiene rating scheme to check an establishment's hygiene standards before deciding to visit?

Q2_14 How often do you eat beef, lamb or pork?

Q2_14 How often do you eat cooked vegetables?

Q2_14 How often do you eat eggs?

Q2_14 How often do you eat fish, excluding shellfish?

Q2_14 How often do you eat milk and dairy foods like cheese and yoghurt?

Q2_14 How often do you eat poultry?

Q2_14 How often do you eat pre-cooked meats, like ham?

Q2_14 How often do you eat pre-packed sandwiches?

Q2_14 How often do you eat raw fruit?

Q2_14 How often do you eat raw vegetables, including salad?

Q2_14 How often do you eat shellfish (includes crab, prawns and lobster)?

Q2_16 Please tell me how much you agree or disagree with statement - Good health is just a matter of good luck

Q2_16 Please tell me how much you agree or disagree with statement - I don't have time to spend preparing and cooking food

Q2_16 Please tell me how much you agree or disagree with statement - I enjoy cooking and preparing food

Q2_16 Please tell me how much you agree or disagree with statement - The experts contradict each other over what foods are good or bad for you

Q2_16 Please tell me how much you agree or disagree with statement - The price of food doesn't really matter as long as I know that the quality is good

Q2_16 Please tell me how much you agree or disagree with statement - What you eat makes a big difference to how healthy you are

Q2_16 Please tell me how much you agree or disagree with statement - When preparing food for myself I could be more careful about hygiene

Q2_3 How often do you cook or prepare food for yourself?

Q2_33 Have you done any of the following things in the last 7 days? - Bought food or drink from a café, coffee shop or sandwich bar to take away

Q2_33 Have you done any of the following things in the last 7 days? - Eaten food from a cinema, bowling alley, theme park or other leisure facility

Q2_33 Have you done any of the following things in the last 7 days? - Eaten food from a work canteen

Q2_33 Have you done any of the following things in the last 7 days? - Eaten in a café or coffee shop

Q2_33 Have you done any of the following things in the last 7 days? - Eaten in a pub

Q2_33 Have you done any of the following things in the last 7 days? - Eaten in a restaurant

Q2_33 Have you done any of the following things in the last 7 days? - Eaten takeaway food (e.g. Indian/Chinese/Pizza/Fish and chips)

Q2_33 Have you done any of the following things in the last 7 days? - None of these

Q2_35 Generally, when you're deciding where to eat out, which of the following are important to you? - A good hygiene rating/score

Q2_35 Generally, when you're deciding where to eat out, which of the following are important to you? - Choice/menu

Q2_35 Generally, when you're deciding where to eat out, which of the following are important to you? - Cleanliness and hygiene

Q2_35 Generally, when you're deciding where to eat out, which of the following are important to you? - Food for restricted diets such as Vegetarian, Halal, Kosher etc.

Q2_35 Generally, when you're deciding where to eat out, which of the following are important to you? - Good service

Q2_35 Generally, when you're deciding where to eat out, which of the following are important to you? - Good/quality food (include homemade)

Q2_35 Generally, when you're deciding where to eat out, which of the following are important to you? - Healthy foods/choices

Q2_35 Generally, when you're deciding where to eat out, which of the following are important to you? - I never eat out at all

Q2_35 Generally, when you're deciding where to eat out, which of the following are important to you? - Location/convenience

Q2_35 Generally, when you're deciding where to eat out, which of the following are important to you? - None of these

Q2_35 Generally, when you're deciding where to eat out, which of the following are important to you? - Nutritional information of the food is provided

Q2_35 Generally, when you're deciding where to eat out, which of the following are important to you? - Price

Q2_35 Generally, when you're deciding where to eat out, which of the following are important to you? - Recommendations or invitation from someone you know/good reviews

Q2_35 Generally, when you're deciding where to eat out, which of the following are important to you? - Something else SPECIFY

Q2_35 Generally, when you're deciding where to eat out, which of the following are important to you? - Suitable for children

Q2_37 When you eat out, how aware would you say you generally are about standards of hygiene?

Q2_38 How do you know about the hygiene standards of the places you eat out at or buy food from? - (Don't know)

Q2_38 How do you know about the hygiene standards of the places you eat out at or buy food from? - Appearance of staff

Q2_38 How do you know about the hygiene standards of the places you eat out at or buy food from? - General appearance of premises

Q2_38 How do you know about the hygiene standards of the places you eat out at or buy food from? - Hygiene certificate

Q2_38 How do you know about the hygiene standards of the places you eat out at or buy food from? - Hygiene sticker

Q2_38 How do you know about the hygiene standards of the places you eat out at or buy food from? - Kitchen/Prep areas clean

Q2_38 How do you know about the hygiene standards of the places you eat out at or buy food from? - Looking at the cleanliness of the washroom/toilets

Q2_38 How do you know about the hygiene standards of the places you eat out at or buy food from? - Other (specify)

Q2_38 How do you know about the hygiene standards of the places you eat out at or buy food from? - Personal knowledge

Q2_38 How do you know about the hygiene standards of the places you eat out at or buy food from? - Reputation

Q2_38 How do you know about the hygiene standards of the places you eat out at or buy food from? - Websites

Q2_38 How do you know about the hygiene standards of the places you eat out at or buy food from? - Word of mouth

Q2_4 How often do you cook or prepare food for others?

Q2_7A Number of times eaten breakfast at home in the last seven days?

Q2_7B Number of times eaten lunch at home in the last seven days?

Q2_7C Number of times eaten main evening meal at home in the last seven days?

Q3_1 Thinking about food/ grocery shopping, which of these best describes the level of responsibility you have for the shopping in your household?

Q3_12 Thinking about food prices generally over the last 12 months, would you say they have stayed the same, increased or decreased?

Q3_13 Have you made any of these changes in the last 6 months for financial reasons? - Bought items that were on special offer more

Q3_13 Have you made any of these changes in the last 6 months for financial reasons? - Cooked at home more

Q3_13 Have you made any of these changes in the last 6 months for financial reasons? - Eaten at home more

Q3_13 Have you made any of these changes in the last 6 months for financial reasons? - Eaten fewer takeaways

Q3_13 Have you made any of these changes in the last 6 months for financial reasons? - Eaten food past its use-by-date more

Q3_13 Have you made any of these changes in the last 6 months for financial reasons? - Eaten out less

Q3_13 Have you made any of these changes in the last 6 months for financial reasons? - Kept leftovers for longer before eating

Q3_13 Have you made any of these changes in the last 6 months for financial reasons? - Made packed lunches more

Q3_13 Have you made any of these changes in the last 6 months for financial reasons? - None of these

Q3_13 Have you made any of these changes in the last 6 months for financial reasons? - Prepared food that could be kept as leftovers more

Q3_3/Q3_4 Where do you/ does your household mainly shop for food? (derived)

Q3_7 How often do you (or someone else) do a main shop for your household food shopping?

Q4_1 Thinking about when you are storing, preparing and cooking food in the kitchen do you cook food until it is steaming hot throughout?

Q4_1 Thinking about when you are storing, preparing and cooking food in the kitchen do you eat burgers or sausages if the meat is pink or has pink or red juices?

Q4_1 Thinking about when you are storing, preparing and cooking food in the kitchen do you eat chicken or turkey if the meat is pink or has pink or red juices?

Q4_1 Thinking about when you are storing, preparing and cooking food in the kitchen do you eat red meat (e.g. beef or lamb, steak or roast meat, but not mince) if it is pink or has pink or red juices?

Q4_1 Thinking about when you are storing, preparing and cooking food in the kitchen do you store open tins in the fridge?

Q4_1 Thinking about when you are storing, preparing and cooking food in the kitchen do you use different chopping boards for different foods?

Q4_1 Thinking about when you are storing, preparing and cooking food in the kitchen do you wash fruit which is going to be cooked?

Q4_1 Thinking about when you are storing, preparing and cooking food in the kitchen do you wash fruit which is going to be eaten raw?

Q4_1 Thinking about when you are storing, preparing and cooking food in the kitchen do you wash hands before starting to prepare or cook food?

Q4_1 Thinking about when you are storing, preparing and cooking food in the kitchen do you wash hands immediately after handling raw meat, poultry or fish?

Q4_1 Thinking about when you are storing, preparing and cooking food in the kitchen do you wash raw fish or seafood?

Q4_1 Thinking about when you are storing, preparing and cooking food in the kitchen do you wash vegetables (including salad) which are going to be eaten raw?

Q4_1 Thinking about when you are storing, preparing and cooking food in the kitchen do you wash vegetables which are going to be cooked?

Q4_18 How can you tell whether an egg is safe to eat or use in cooking? - Best before date

Q4_18 How can you tell whether an egg is safe to eat or use in cooking? - Crack them

Q4_18 How can you tell whether an egg is safe to eat or use in cooking? - Date unspecified

Q4_18 How can you tell whether an egg is safe to eat or use in cooking? - Don't eat/buy

Q4_18 How can you tell whether an egg is safe to eat or use in cooking? - Don't know

Q4_18 How can you tell whether an egg is safe to eat or use in cooking? - Expanding packaging/damaged packaging

Q4_18 How can you tell whether an egg is safe to eat or use in cooking? - How it looks (e.g. mould)

Q4_18 How can you tell whether an egg is safe to eat or use in cooking? - How it smells

Q4_18 How can you tell whether an egg is safe to eat or use in cooking? - How it tastes

Q4_18 How can you tell whether an egg is safe to eat or use in cooking? - If it doesn't float in water

Q4_18 How can you tell whether an egg is safe to eat or use in cooking? - Not applicable

Q4_18 How can you tell whether an egg is safe to eat or use in cooking? - Other SPECIFY

Q4_18 How can you tell whether an egg is safe to eat or use in cooking? - Sell by or display until date

Q4_18 How can you tell whether an egg is safe to eat or use in cooking? - The colour of it

Q4_18 How can you tell whether an egg is safe to eat or use in cooking? - Use by date

Q4_18 How can you tell whether an egg is safe to eat or use in cooking? - Use on the day it's bought/buy fresh

Q4_18 How can you tell whether an egg is safe to eat or use in cooking? - What it feels like / the texture

Q4_18 How can you tell whether an egg is safe to eat or use in cooking? - Whether it has been stored correctly

Q4_18 How can you tell whether cheese is safe to eat or use in cooking? - Best before date

Q4_18 How can you tell whether cheese is safe to eat or use in cooking? - Date unspecified

Q4_18 How can you tell whether cheese is safe to eat or use in cooking? - Don't eat/buy

Q4_18 How can you tell whether cheese is safe to eat or use in cooking? - Don't know

Q4_18 How can you tell whether cheese is safe to eat or use in cooking? - How it looks (e.g. mould)

Q4_18 How can you tell whether cheese is safe to eat or use in cooking? - How it smells

Q4_18 How can you tell whether cheese is safe to eat or use in cooking? - How it tastes

Q4_18 How can you tell whether cheese is safe to eat or use in cooking? - Not applicable

Q4_18 How can you tell whether cheese is safe to eat or use in cooking? - Other SPECIFY

Q4_18 How can you tell whether cheese is safe to eat or use in cooking? - Sell by or display until date

Q4_18 How can you tell whether cheese is safe to eat or use in cooking? - The colour of it

Q4_18 How can you tell whether cheese is safe to eat or use in cooking? - Use by date

Q4_18 How can you tell whether cheese is safe to eat or use in cooking? - Use on the day it's bought/buy fresh

Q4_18 How can you tell whether cheese is safe to eat or use in cooking? - What it feels like / the texture

Q4_18 How can you tell whether cheese is safe to eat or use in cooking? - Whether it has been stored correctly

Q4_18 How can you tell whether fish excluding shellfish is safe to eat or use in cooking? - Best before date

Q4_18 How can you tell whether fish excluding shellfish is safe to eat or use in cooking? - Date unspecified

Q4_18 How can you tell whether fish excluding shellfish is safe to eat or use in cooking? - Don't eat/buy

Q4_18 How can you tell whether fish excluding shellfish is safe to eat or use in cooking? - Don't know

Q4_18 How can you tell whether fish excluding shellfish is safe to eat or use in cooking? - How it looks (e.g. mould)

Q4_18 How can you tell whether fish excluding shellfish is safe to eat or use in cooking? - How it smells

Q4_18 How can you tell whether fish excluding shellfish is safe to eat or use in cooking? - How it tastes

Q4_18 How can you tell whether fish excluding shellfish is safe to eat or use in cooking? - Not applicable

Q4_18 How can you tell whether fish excluding shellfish is safe to eat or use in cooking? - Other SPECIFY

Q4_18 How can you tell whether fish excluding shellfish is safe to eat or use in cooking? - Sell by or display until date

Q4_18 How can you tell whether fish excluding shellfish is safe to eat or use in cooking? - The colour of it

Q4_18 How can you tell whether fish excluding shellfish is safe to eat or use in cooking? - Use by date

Q4_18 How can you tell whether fish excluding shellfish is safe to eat or use in cooking? - Use on the day it's bought/buy fresh

Q4_18 How can you tell whether fish excluding shellfish is safe to eat or use in cooking? - What it feels like / the texture

Q4_18 How can you tell whether fish excluding shellfish is safe to eat or use in cooking? - Whether it has been stored correctly

Q4_18 How can you tell whether milk and yoghurt is safe to eat or use in cooking? - Best before date

Q4_18 How can you tell whether milk and yoghurt is safe to eat or use in cooking? - Date unspecified

Q4_18 How can you tell whether milk and yoghurt is safe to eat or use in cooking? - Don't eat/buy

Q4_18 How can you tell whether milk and yoghurt is safe to eat or use in cooking? - Don't know

Q4_18 How can you tell whether milk and yoghurt is safe to eat or use in cooking? - Expanding packaging/damaged packaging

Q4_18 How can you tell whether milk and yoghurt is safe to eat or use in cooking? - How it looks (e.g. mould)

Q4_18 How can you tell whether milk and yoghurt is safe to eat or use in cooking? - How it smells

Q4_18 How can you tell whether milk and yoghurt is safe to eat or use in cooking? - How it tastes

Q4_18 How can you tell whether milk and yoghurt is safe to eat or use in cooking? - Not applicable

Q4_18 How can you tell whether milk and yoghurt is safe to eat or use in cooking? - Other SPECIFY

Q4_18 How can you tell whether milk and yoghurt is safe to eat or use in cooking? -
Sell by or display until date

Q4_18 How can you tell whether milk and yoghurt is safe to eat or use in cooking? -
The colour of it

Q4_18 How can you tell whether milk and yoghurt is safe to eat or use in cooking? -
Use by date

Q4_18 How can you tell whether milk and yoghurt is safe to eat or use in cooking? -
Use on the day it's bought/buy fresh

Q4_18 How can you tell whether milk and yoghurt is safe to eat or use in cooking? -
What it feels like / the texture

Q4_18 How can you tell whether milk and yoghurt is safe to eat or use in cooking? -
Whether it has been stored correctly

Q4_18 How can you tell whether raw meat like beef, lamb, pork or poultry is safe to
eat or use in cooking? - Best before date

Q4_18 How can you tell whether raw meat like beef, lamb, pork or poultry is safe to
eat or use in cooking? - Date unspecified

Q4_18 How can you tell whether raw meat like beef, lamb, pork or poultry is safe to
eat or use in cooking? - Don't eat/buy

Q4_18 How can you tell whether raw meat like beef, lamb, pork or poultry is safe to
eat or use in cooking? - Don't know

Q4_18 How can you tell whether raw meat like beef, lamb, pork or poultry is safe to
eat or use in cooking? - Expanding packaging/damaged packaging

Q4_18 How can you tell whether raw meat like beef, lamb, pork or poultry is safe to
eat or use in cooking? - How it looks (e.g. mould)

Q4_18 How can you tell whether raw meat like beef, lamb, pork or poultry is safe to
eat or use in cooking? - How it smells

Q4_18 How can you tell whether raw meat like beef, lamb, pork or poultry is safe to
eat or use in cooking? - How it tastes

Q4_18 How can you tell whether raw meat like beef, lamb, pork or poultry is safe to
eat or use in cooking? - Not applicable

Q4_18 How can you tell whether raw meat like beef, lamb, pork or poultry is safe to
eat or use in cooking? - Other SPECIFY

Q4_18 How can you tell whether raw meat like beef, lamb, pork or poultry is safe to
eat or use in cooking? - Sell by or display until date

Q4_18 How can you tell whether raw meat like beef, lamb, pork or poultry is safe to
eat or use in cooking? - The colour of it

Q4_18 How can you tell whether raw meat like beef, lamb, pork or poultry is safe to eat or use in cooking? - Use by date

Q4_18 How can you tell whether raw meat like beef, lamb, pork or poultry is safe to eat or use in cooking? - Use on the day it's bought/buy fresh

Q4_18 How can you tell whether raw meat like beef, lamb, pork or poultry is safe to eat or use in cooking? - What it feels like / the texture

Q4_18 How can you tell whether raw meat like beef, lamb, pork or poultry is safe to eat or use in cooking? - Whether it has been stored correctly

Q4_19B Which of these is the best indicator of whether food is safe to eat?

Q4_1B/ Q4_1C Which method does you generally use to defrost frozen meat or fish? (derived)

Q4_1C And which method do you generally use to defrost frozen meat or fish?

Q4_21 Do you check use-by dates when you are buying food?

Q4_22 Do you check use-by dates when you are about to cook or prepare food?

Q4_23A Maximum number of days you would keep a packet of fresh dip e.g. sour cream and chive or hummus in the fridge once opened before deciding you would definitely not eat or drink it? (Spontaneous)

Q4_23A Maximum number of days you would keep a packet of meat, fish or seafood? In the fridge once opened before deciding you would definitely not eat or drink it? (Spontaneous)

Q4_23A Maximum number of days you would keep a packet of sliced cooked or cured meat e.g. ham in the fridge once opened before deciding you would definitely not eat or drink it? (Spontaneous)

Q4_23A Maximum number of days you would keep a packet of smoked fish e.g. smoked mackerel or smoked salmon in the fridge once opened before deciding you would definitely not eat or drink it? (Spontaneous)

Q4_23A Maximum number of days you would keep a packet of soft or cream cheese in the fridge once opened before deciding you would definitely not eat or drink it? (Spontaneous)

Q4_24 If you made a meal on Sunday, what is the last day that you would consider eating the leftovers? (Spontaneous)

Q4_25 How many times would you consider re-heating food after it was cooked for the first time? (Spontaneous)

Q4_27 Agreement/ Disagreement with statement - A little bit of dirt won't do you any harm

Q4_27 Agreement/ Disagreement with statement - I always avoid throwing food away

Q4_27 Agreement/ Disagreement with statement - I am unlikely to get food poisoning from food prepared in my own home

Q4_27 Agreement/ Disagreement with statement - I often worry about whether the food I have is safe to eat

Q4_27 Agreement/ Disagreement with statement - If you eat out a lot you are more likely to get food poisoning

Q4_27 Agreement/ Disagreement with statement - It's just bad luck if you get food poisoning

Q4_27 Agreement/ Disagreement with statement - People worry too much about getting food poisoning

Q4_27 Agreement/ Disagreement with statement - Restaurants and catering establishments should pay more attention to food safety and hygiene

Q4_3 After using a chopping board to prepare raw meat, poultry or fish people might wash the board before using it again - As it looks dirty

Q4_3 After using a chopping board to prepare raw meat, poultry or fish people might wash the board before using it again - Don't know why

Q4_3 After using a chopping board to prepare raw meat, poultry or fish people might wash the board before using it again - It can be dangerous if you don't

Q4_3 After using a chopping board to prepare raw meat, poultry or fish people might wash the board before using it again - It's a habit

Q4_3 After using a chopping board to prepare raw meat, poultry or fish people might wash the board before using it again - It's just what people do / are told to do

Q4_3 After using a chopping board to prepare raw meat, poultry or fish people might wash the board before using it again - Not applicable

Q4_3 After using a chopping board to prepare raw meat, poultry or fish people might wash the board before using it again - Other (specify)

Q4_3 After using a chopping board to prepare raw meat, poultry or fish people might wash the board before using it again - To get rid of the mess

Q4_3 After using a chopping board to prepare raw meat, poultry or fish people might wash the board before using it again - To prevent food poisoning

Q4_3 After using a chopping board to prepare raw meat, poultry or fish people might wash the board before using it again - To stop remains of it getting onto the next food

Q4_3 After using a chopping board to prepare raw meat, poultry or fish people might wash the board before using it again - To stop the flavour/ taste transferring to other foods

Q4_3 After using a chopping board to prepare raw meat, poultry or fish people might wash the board before using it again - To stop/prevent contamination/cross contamination

Q4_3 After using a chopping board to prepare raw meat, poultry or fish people might wash the board before using it again - To wash away germs/bacteria

Q4_8A Do you have the use of a kitchen, that is, a separate room in which you cook?

Q4_8C Which of the following appliances do you have in your household? - Combined fridge and freezer

Q4_8C Which of the following appliances do you have in your household? - Dishwasher

Q4_8C Which of the following appliances do you have in your household? - Don't know

Q4_8C Which of the following appliances do you have in your household? - Grill

Q4_8C Which of the following appliances do you have in your household? - Hob

Q4_8C Which of the following appliances do you have in your household? - Kettle

Q4_8C Which of the following appliances do you have in your household? - Microwave

Q4_8C Which of the following appliances do you have in your household? - None of these

Q4_8C Which of the following appliances do you have in your household? - Oven

Q4_8C Which of the following appliances do you have in your household? - Separate freezer

Q4_8C Which of the following appliances do you have in your household? - Separate fridge

Q6_1 How is your health in general?

Q6_2 Do you have any physical or mental health conditions or illnesses lasting or expected to last for 12 months or more?

Q6_4 How easy do you find it to read the labelling on food products in terms of the size of the print?

Q7.1 Which, if any, of the following applies to you? - Allergic to certain food

Q7.1 Which, if any, of the following applies to you? - Avoid certain food for religious or cultural reasons

Q7.1 Which, if any, of the following applies to you? - Completely vegetarian

Q7.1 Which, if any, of the following applies to you? - On a diet trying to lose weight

Q7.1 Which, if any, of the following applies to you? - Partly vegetarian

Q7.1 Which, if any, of the following applies to you? - Trying to eat healthily/have healthy lifestyle

Q7.1 Which, if any, of the following applies to you? - Vegan

Q9_2 To what extent are you concerned or unconcerned by the overall safety of food imported from outside the UK?

Q9_2 To what extent are you concerned or unconcerned by the overall safety of food produced in the UK?

Q9_2 To what extent are you concerned or unconcerned by the safety of fruit and vegetables imported from outside the UK?

Q9_2 To what extent are you concerned or unconcerned by the safety of fruit and vegetables produced in the UK?

Q9_2 To what extent are you concerned or unconcerned by the safety of meat imported from outside the UK?

Q9_2 To what extent are you concerned or unconcerned by the safety of meat produced in the UK?