KEY FINDINGS REPORT

CITIZEN RESPONSES TO THE COVID-19 LOCKDOWN – FOOD PURCHASING, MANAGEMENT AND WASTE

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About WRAP

WRAP is not-for-profit, working with governments, businesses and citizens to create a world in which we use resources sustainably. Our experts generate the evidence-based solutions we need to protect the environment, build stronger economies and support more sustainable societies. Our impact spans the entire life-cycle of the food we eat, the clothes we wear and the products we buy, from production to consumption and beyond.

This document provides the supporting evidence and analysis for...

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Front cover photography: Food shopping imagery

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Executive summary

Producing food requires significant resources including land, energy and water, and whilst good progress in reducing food waste has been made in the UK, food waste from UK households is still around 6.6 million tonnes, 70% of which was intended to be eaten (30% being the ‘inedible parts). This had a value of over £14 billion a year and would be associated with more than 20 million tonnes of GHG emissions. The food that could have been eaten (4.5 million tonnes), but ends up as waste, would make the equivalent of around 10 billion meals.

Reducing food waste further is a financial and environmental imperative, and it is important to understand exactly how the Covid-19 pandemic is affecting citizens habits, behaviours and attitudes relating to food, and food waste.

The Covid-19 lockdown is having a profound effect on citizens’ daily lives, including several significant and wide-reaching impacts on food behaviours. WRAP undertook this research to understand the impact of the lockdown on citizens’ planning, purchase, storage and consumption behaviours; and explore implications for changes in levels of food waste. Insights from this research will allow WRAP to develop maintenance and mitigation strategies to support a continued reduction in household food waste1.

The research was undertaken online from 06-09 April 2020 (around two weeks after the UK went into “lockdown” on 23 March). 4,197 interviews were undertaken with a nationally representative sample of UK adults aged 18+ with responsibility for grocery shopping and/or food preparation.

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1 UK household food waste (excluding inedible parts) reduced by 30% per capita between 2007 and 2018; https://wrap.org.uk/content/uk-progress-against-courtauld-2025-targets-and-un-sustainable-development-goal-123
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Key Findings

Shopping patterns

The survey confirms that shopping patterns are in flux – on balance, frequency of shopping has decreased substantially whereas the amount of food purchased has increased (i.e. 59% report purchasing more items vs. 17% less). The proportion of citizens eating takeaway meals (e.g. via Deliveroo) has also fallen significantly which means that, along with the closure of restaurants, significantly more meals are being prepared and consumed in the home.

In keeping with the higher amounts of food purchased, a range of individual food items are being purchased more than pre-lockdown. This comprises a mix of fresh produce such as milk and bread (presenting a risk of food waste in the short term) and longer life products such as tinned vegetables, frozen vegetables and pasta/rice (which present a different, longer term challenge to ensure they are used up post Covid-19 lockdown). The only observable decreases in levels of purchase have been for salad packs, pre-cut packs of vegetables and ready meals (both frozen and fresh).

In home food management behaviours

UK citizens have responded to the challenge of the Covid-19 lockdown (and higher amounts of food and meals in the home) with a wide range of positive food management strategies. This includes more pre-shop planning (e.g. checking cupboards and the fridge pre-shop, making a list), better in-home food storage (e.g. fridge and freezer management, freezing more) and creative approaches to cooking/preparation (e.g. batch cooking and using up leftovers). By contrast, a smaller proportion have adopted strategies such as writing dates on products that have been opened or frozen, checking/changing the fridge temperature or doing more portion sizing than usual.

On average, UK citizens are undertaking 6 food management behaviours more often - although this represents a wide continuum from around one in five (22%) who have not undertaken any behaviours more often vs. around one in four (27%) who are undertaking 10+ behaviours more often. Those with the most to gain from adopting new food management behaviours (i.e. those purchasing more food than usual, or those who have higher levels of food waste on average) are doing so; whereas those who have good pre-existing food management behaviours report the least change.

The new behaviours are proving to be highly effective. In every case, and without exception, a majority of those undertaking the behaviour more often say that it has been useful in helping them to manage food. This is particularly true for freezing, batch cooking, making a shopping list and saving leftovers.
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The potential impact on levels of food waste

The increase in positive food management behaviours offset the potential for higher levels of food waste (e.g. through higher levels of purchase) and has led to a self-reported fall in food waste.

Just over one in three (36%) UK citizens say their household is throwing away less uneaten food in the past month, compared to one in 25 (4%) who say they are throwing away more. Furthermore, the groups most likely to report throwing away less food than usual are those undertaking 10+ food management behaviours more often (57% say they are throwing away less than usual), followed by those with children at home (44%), 35-44s (42%) and 18-34s (41%). There is also an association with food waste communications: for example, those who have seen/heard information about how to reduce their food waste are more likely to say they have thrown away less (42%), as have those who have seen the Love Food Hate Waste logo in the past year (41%).

The average level of reported waste across four key products (bread, milk, potatoes and chicken) stands at 13.7% now - a significant reduction (34%, or around a third) compared to the average across 2018-2019. Furthermore, and based on these estimates, around one in five UK citizens (20%) classify as having higher levels of food waste. This represents a significant reduction compared to the 2018-19 average (32%).

Attitudes and knowledge

There is a high level of recognition among UK citizens that food waste is an issue and, in turn, that they have a responsibility to take action to reduce it. Almost nine out of ten citizens ‘strongly’ or ‘tend to’ agree that Food waste is an important national issue (87%) and that Everyone, including me, has a responsibility to minimise the food they throw away (93%).

However, there are some pronounced gaps in storage knowledge – almost half of UK citizens don’t know that apples would last significantly longer if stored in the fridge, and almost 40% don’t know that food such as chicken breasts can be frozen up until the end of the ‘Use By’ date. These knowledge gaps are widespread, with no differences among sub-groups. They have also shown no change in response to the Covid-19 lockdown, compared to the results from 2018-2019.

Currently, it is not possible to measure actual levels of food waste from households. These results draw on self-reported levels of wasted food. The figures presented represent the level of food as a percentage of that purchased.
Food waste communications

Not unsurprisingly (given the focus on Brexit, the General Election pre-Christmas and Covid-19 since), there has been a marked decrease in citizens recalling food waste communications: just less than half (48%) say they have heard/seen something about the amount of food that is thrown away (down from 69% in May 2019); and close to one in four (23%) say they have heard/seen something about how to plan, buy, store or prepare food to help reduce the amount that gets thrown away (down from 49%).

However, recall of key logos has increased – notably the Love Food Hate Waste brand (to 31% - the highest level recorded by this annual survey), the ‘suitable for freezing’ snowflake (to 88%) and the ‘Little Blue Fridge’ logo (to 16%).

Overall, the survey demonstrates the following:

• The study confirms that under the Covid-19 lockdown shopping patterns are in flux – frequency of shopping is down (63% of UK citizens report they shopped less frequently in the past month) while the amount of food purchased is up (59% of citizens stating that they have bought more in the last month).

• There has been a small but significant change in attitudes towards food waste with a 23% increase since November 2019, in the number of citizens who ‘strongly agree that food waste is an important national issue’ and that ‘everyone, including me has a responsibility to minimise the food I throw away’.

• Citizens have in many ways responded positively to the Covid-19 lockdown, with several food management behaviours and strategies. On average citizens are undertaking six positive food management behaviours ‘more often’ in the past month. Behaviour including more pre-shop planning, better in-home food storage, freezing more and creative approaches to cooking and or food preparation.

• The vast majority (85% or more) of citizens undertaking more food management behaviours are finding them useful – especially freezing, batch cooking, saving leftovers, making a list and date labelling items for the freezer.

• These observed changes have contributed to a 34% reduction, when compared to the average across 2018-2019, in respondents self-reported level of food waste across four key products – bread, milk, potatoes and chicken.
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- Some key aspects of knowledge helpful in reducing food waste remain unchanged. This includes specific storage knowledge such as apples last significantly longer if stored in the fridge, and that food such as chicken breasts can be frozen up until the end of the ‘Use By’ date.

- Whilst recall of seeing or hearing messages related to food waste has fallen (expected considering the coverage of Covid-19), recognition of Love Food Hate Waste has increased significantly with almost 1 in 3 citizens now recognise it.

The survey has shown that during this difficult time, the UK population are enormously resilient and resourceful. By being ‘food smart’ people are making the most of the food they buy and reporting less food waste. The foundations for stronger food management behaviours have emerged from the necessity of lockdown.

WRAP will galvanise support from retailers, producers, manufactures, local authorities and community groups to support Love Food Hate Waste to ensure these positive food waste prevention behaviours become the ‘new normal’, reducing our impact on the planet and its resources.

Insights from this research will allow WRAP and Love Food Hate Waste to develop maintenance and mitigation strategies to support a further reduction in household food waste. Love Food Hate Waste campaigns will build on the knowledge from this research with engagement planned for 2020 and encourage its partners to support Love Food Hate Waste, help amplify messages, and reach more citizens more often.

This could be a watershed moment in the fight against food waste. There is a unique opportunity to embed these good habits into a ‘new normal’ – a culture which values food and reaps the maximum benefit from it. This makes good financial sense, at a time of economic uncertainty, but will also deliver significant benefits for the planet.
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**Introduction**

Producing food requires significant resources including land, energy and water (the global food system generates 25-30% of total greenhouse gas emissions (GHG), and agricultural supply chains use 70% of global freshwater resources). Good progress in reducing food waste has been made in the UK, but food waste from UK households is still around 6.6 million tonnes, 70% of which was intended to be eaten (30% being the ‘inedible parts). This had a value of over £14 billion a year and would be associated with more than 20 million tonnes of GHG emissions. The food that could have been eaten (4.5 million tonnes), but ends up as waste, would make the equivalent of around 10 billion meals. Reducing food waste further is a financial and environmental imperative, and it is important to understand how the Covid-19 pandemic is affecting citizens habits, behaviours and attitudes relating to food, and food waste.

The Covid-19 pandemic is having a profound effect on citizens' daily lives. In the UK, social distancing measures include leaving the house as little as possible and only for valid reasons such as:

- Exercise;
- Shopping for basic necessities;
- Any medical need, or providing care for a vulnerable person; and
- Travel to or from work, but only when you cannot work from home.

Unsurprisingly, this has had significant and wide-reaching impacts on food behaviours. For example, research by Kantar showed that March was the biggest ever month recorded for grocery shopping¹, and it is predicted that next we are likely to see the fewest ever shopping trips ever². As UK citizens prepared for an extended stay at home, grocery sales amounted to £10.8 billion in just four weeks; higher even than levels seen at Christmas, the busiest time of year under normal circumstances. Furthermore, Kantar highlights that under normal conditions 31% of meals are eaten out of home³, whereas now – with the current restrictions - there will be an estimated 503 million more in-home meals per week⁴.

**Objectives**

WRAP undertakes an annual citizen survey that tracks key aspects of knowledge attitudes and behaviours relevant to household food management and waste. This survey represents the latest insights and was undertaken to understand the impact of the Covid-19 lockdown on citizens’ planning, purchase, storage and consumption behaviours; and to explore the potential implications of any behavioural variations from the ‘norm’ on changes in levels of food waste.

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Insights from this research will enable WRAP to understand how citizen behaviours have changed since the lockdown began and develop maintenance and mitigation strategies to support a further reduction in household food waste\textsuperscript{6}.

**Methodology**

Fieldwork was undertaken online from 06-09 April 2020 (around two weeks after the UK went into “lockdown” on 23 March). A total of 4,197 interviews were undertaken with UK adults aged 18+ with responsibility in their home for grocery shopping and/or food preparation. The sample profile was controlled to be in line with the known population profile of the UK, with quota targets set on UK nation, English region, social grade, age and gender.

**Statistical significance**

Statistical tests have been performed to assess whether an apparent difference in the survey data (i.e. across years or between sub-groups) is statistically significant or not\textsuperscript{7}. These tests have been undertaken to the ‘99% confidence’ level (i.e. 99 times out of 100 the observed difference will be real, compared to 1 time out of 100 it will have happened by chance). This provides a greater level of surety in the findings than the more commonly used ‘95% confidence’ level.

Given that a sample of households has completed the survey (rather than a census), the results are subject to statistical margins of error. For the 2020 results as a whole, the maximum margin of error in the results is plus or minus 2.2% (i.e. if the survey gives a result of 50% then the real result, if all households in the country were interviewed, would be somewhere in the range 47.8% - 52.2%). When comparing results across time, for example the results in 2020 compared to 2019, the maximum margin of error is plus or minus 5% (i.e. an increase from 50% in 2019 to 55% now would be statistically significant, whereas a 2020 result of 54% would not be).

**Analysis by different audiences and groups within the population**

In addition to the results for the UK as a whole, analyses have also been undertaken according to a range of socio-demographic variables (e.g. age, gender, children in the household) and food value outlooks (e.g. enjoy cooking; feel under pressure in their day to day lives).

\textsuperscript{6} UK household food waste (excluding inedible parts) reduced by 30% per capita between 2007 and 2018; https://wrap.org.uk/content/uk-progress-against-courtauld-2025-targets-and-un-sustainable-development-goal-123

\textsuperscript{7} Statistical tests are only valid when the survey method has used random probability sampling. While the market research industry routinely applies the same logic to non-probability samples, this must be done with appropriate caveats. For example, if the data reported throughout this report was generated from a random probability sample then the confidence intervals discussed in the report would apply. However, as the data were generated from a quota sample, confidence intervals are – strictly speaking – not possible to calculate.
Structure of the report

The key findings outlined in this report are structured into five sections:

1. The impact of the Covid-19 lockdown on food shopping and management behaviours;
2. The potential impact on levels of food waste;
3. Food attitudes and knowledge;
4. Communications about food waste;
5. Final reflections.
1.0 The impact of the Covid-19 lockdown on food shopping and management behaviours

This section looks first at levels of concern among UK citizens about the impact of the Covid-19 lockdown on food supplies, followed by the impact of social distancing measures on two key sets of behaviours: food shopping (frequency and amount purchased), and in-home food management.

1.1 Levels of concern about the impact on food supplies

Over one in three (37%) UK citizens agree with the statement: I am concerned that the current situation with Coronavirus could lead to supermarkets running out of food (Figure 1). In contrast, a slightly larger proportion (43%) disagree with this statement. Agreement is highest among 18-24s (50% agree supermarkets could run out of food), those with children aged 0-4 at home (48%), social renters (45%) and 25-34s (44%).

Figure 1 – Concern about the impact of the Covid-19 lockdown on food supplies

Q. To what extent do you agree or disagree with the following statements: I am concerned that the current situation with Coronavirus could lead to supermarkets running out of food?
Base: 4,197 UK adults aged 18+ with responsibility for food shopping and/or preparation in the home. April 2020
1.2 Changes in shopping behaviours

To understand shopping patterns at the current time, the survey asked about shopping frequency and amount of food purchased in the two weeks prior to social distancing measures and the two weeks after these measures were introduced. On balance, frequency of shopping has decreased (i.e. 21% of UK citizens report shopping more often vs. 63% less often); whereas the amount of food purchased has increased (59% report purchasing more items vs. 17% less). On balance, younger groups report higher levels of food purchasing, as do those with children at home, those in London and those concerned that the Covid-19 lockdown could lead to shops running out of food.

While the dominant trend is one of change, a sizeable minority of UK citizens report the opposite – for example, one in four (25%) say they shop with the same frequency as before; while three in ten (30%) report no increase in the amount purchased. There is a moderate association with both age and gender, with men and those aged 55+ more likely to report no change in shopping habits.

Turning to shopping method, online grocery shopping has increased on balance - with 22% reporting more in the past month and 16% reporting less. This represents increased demand but also potential constraints on the capacity of online delivery services to meet demand. In keeping with the net balance of more food being purchased, a range of individual food items are being purchased more than before (Figure 2). This comprises a mix of fresh produce (notably fresh milk and bread) as well as longer life products (notably tinned vegetables, frozen vegetables, pasta and rice). For example, three in ten (30%) UK citizens purchased more bread in the past month and 7% purchased less, giving a ‘net’ score of +23%.

The only decreases in levels of purchase have been for salad packs, pre-cut packs of vegetables and ready meals (both frozen and fresh). The proportion of UK citizens eating takeaway meals (e.g. via Deliveroo) has also fallen significantly: one in ten (10%) say they are eating more takeaway meals vs. close to one in three (34%) less, giving a net score of -24%.
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1.3 In-home food management behaviours

UK citizens are undertaking more food management behaviours in the past month (Figure 3). This includes more pre-shop planning (e.g. checking cupboards and the fridge pre-shop, making a list), better in-home food storage (e.g. keeping on top of the fridge; freezing more) and creative approaches to cooking/preparation (e.g. batch cooking and using up leftovers). A smaller proportion have increased their use of strategies such as writing dates on products that have been opened or frozen, checking/changing the fridge temperature or portion sizing.
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UK citizens have adopted, on average, \textbf{5.9} more food management behaviours in the past month - although this figure represents a wide continuum from around one in five (22%) who have not undertaken any behaviours more often vs. around one in four (27%) who are undertaking 10+ behaviours more often. There are notably variations across different groups:

- \textbf{Shopping frequency and amount:} those shopping more frequently and those buying more items have adopted more food management behaviours in the past month (an average of 8.2 and 7.1, respectively), compared to those who report no change in shopping frequency and no change in the amount of food purchased (3.9 and 3.6, respectively).
- \textbf{Age:} younger groups aged 18-24 and 25-34 have adopted more food management behaviours in the past month (an average of 7.6 and 7.2, respectively) compared to those aged 55+ (4.8).
- \textbf{Young children at home:} those with children aged 0-10 in the home report adopting more food management behaviours in the past month (7.5) compared to those with no children at home (5.5).
- \textbf{Self-reported levels of food waste:} those who classify as having above average levels of self-reported food waste have adopted more food management behaviours in the past month (7.0 behaviours on average).

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure3.png}
\caption{In home food management behaviours}
\end{figure}

\textit{Q. In the past month would you say you are doing the following things \textbf{more often}, \textbf{less often} or \textbf{the same as always}? If you never do any of them, please select NA/don’t do}

Base: 4,197 UK adults aged 18+ with responsibility for food shopping and/or preparation in the home. April 2020
The food management behaviours are proving to be effective – in every case, a majority of those undertaking the behaviour more often in the past month say that it has been useful in helping them to manage food and avoid things going past their best (Figure 4). This is particularly true for freezing (55% say this has been ‘very useful’; 97% ‘very’ or ‘fairly’ useful); batch cooking (51%; 95%); making a shopping list (49%; 95%) and saving leftovers (43%; 96%).
2.0 Implications for levels of food waste

In this section, following on from the observed changes in shopping patterns and in-home food management, the potential impact of the lockdown on levels of food waste are explored. The approach looks at three main areas:

(1) An assessment, from those UK citizens who have purchased more food in the past month, of how difficult it has been to manage the extra quantity of food;
(2) Whether UK citizens say they have been throwing away more, less or the same amount of uneaten food in the past month as they usually would; and
(3) Estimating the level of self-reported household food waste and the proportion of citizens UK citizens that classify as having higher levels of food waste.

2.1 Managing the extra food purchased

Section 1.2 demonstrated that close to three in five (59%) UK citizens have purchased more food than usual in the past month. Among this group, the majority (84%) say they have not found it any more difficult to manage the extra level of food in the home (with 24% saying it has been easier). By contrast, around one in seven (14%) of those buying more says it has been more difficult.

The key reasons given by those finding it no more difficult to manage their food include paying more attention to ‘Use By’ dates (and organising the fridge and meals according to dates); making a conscious effort to be more organised and plan meals; having more time at home for food management and cooking; and freezing more.

By contrast, the key reasons given by those finding it more difficult to manage their food include difficulty managing fresh produce, a lack of storage space in the fridge/freezer, and not using the ‘Use By’ dates to plan when to use different items.
2.2 Change in the level of uneaten food thrown away compared to “normal”

Just over one in three (36%) UK citizens say their household is throwing away less uneaten food in the past month, compared to one in 25 (4%) who say they are throwing away more (Figure 5). Close to one in three (34%) report no change in levels of uneaten food thrown away, while around one in four (27%) say they never throw uneaten food waste.

Several groups are more likely to report throwing away less uneaten food than usual, most notably those undertaking 10+ food management behaviours more often (57% say they are throwing away less than usual), followed by those with children at home (44%), 35-44s (42%), 18-34s (41%) and women (38%). There is also an association with food waste communications: for example, those who have seen/heard information about how to reduce their food waste are more likely to say they have thrown away less (42%), as have those who have seen the Love Food Hate Waste logo in the past year (41%).
2.3 Estimating the amount of food thrown away

The survey asked respondents to estimate – for the last time they purchased specific products (bread, chicken, milk and potatoes) – the percentage that was thrown away uneaten. The results (Figure 6) suggest that, on average, almost one in seven (15.2%) potatoes are thrown away uneaten, followed by similar proportions of bread (14.4%) and around 1 in 8 for chicken (12.6%) and milk (12.1%). The average for the four key products is 13.7%.

This represents a significant reduction (34.3%, or around a third) in the self-reported level of food thrown away uneaten compared to the average across 2018-2019.

WRAP research estimates that these four products are some of the most significant products in terms of household food waste. Currently, it is not possible to measure actual levels of food waste from households. These results draw on self-reported levels of wasted food. The figures presented represent the level of food thrown away as a percentage of that purchased.
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Furthermore, and based on these estimates, around one in five UK citizens (20%) classify as having higher levels of food waste. This represents a significant reduction of 36.6% (once again around a third) compared to the 2018-19 average (31.5% of citizens).

Table 1 sets out the groups who are more likely than average to report higher levels of food waste (left hand column) and those who are less likely (right hand column). It represents a range of variables – with age, the presence of children at home, and recent changes in shopping frequency and amount purchased all associated with above average levels of food waste.

So, for example, three in ten (30%) 18-24s report higher levels of food waste, compared to 11% of those aged 65+. It is important to be clear that this is not saying that all younger citizens have high levels of food waste while none of those aged 65+ do. There are older citizens (around one in ten) who report higher levels of food waste, and likewise younger citizens who do not report higher levels of food waste (around seven in ten). The results simply indicate that, on balance, older age groups are less likely to report high levels of food waste.
Table 1: Groups/audiences within the population who are more or less likely to have higher levels of food waste (UK average = 20%). NB. The data is presented in descending order, i.e. those at the top are those who are most or least likely (respectively) to have higher levels of food waste.

**Base:** 4,197 UK adults aged 18+ with responsibility for food shopping and/or preparation in the home. April 2020

<table>
<thead>
<tr>
<th>More likely to have higher levels of food waste</th>
<th>Less likely to have higher levels of food waste</th>
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<tbody>
<tr>
<td>• Increased the frequency of their shops in response to the Covid-19 lockdown (41% report higher levels of food waste)</td>
<td>• 65+ (11% report higher levels of food waste)</td>
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<tr>
<td>• 18-24s (30%)</td>
<td>• 55-64 (14%)</td>
</tr>
<tr>
<td>• 25-34s (28%)</td>
<td>• Rural (15%)</td>
</tr>
<tr>
<td>• Increased the amount of food purchased in response to the Covid-19 lockdown (27%)</td>
<td>• Undertaking zero food management behaviours more often in the past month (16%)</td>
</tr>
<tr>
<td>• Had a vegetable/fruit box delivered in the past month (27%)</td>
<td>• No children living at home (17%)</td>
</tr>
<tr>
<td>• Children aged 0-15 living at home (27%)</td>
<td>• Undertaking 1-4 food management behaviours more often in the past month (17%)</td>
</tr>
<tr>
<td>• London (27%)</td>
<td>• Owner occupier (17%)</td>
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<tr>
<td>• Renting their home (26%)</td>
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3.0 Personal responsibility

There is a high level of recognition among UK citizens that food waste is an issue and, likewise, that they have a responsibility to act (Figure 7). Almost nine in ten ‘strongly’ or ‘tend to’ agree that *Food waste is an important national issue* (87%) and even more agree that *Everyone, including me, has a responsibility to minimise the food they throw away* (93%).

One of WRAP’s key metrics is the proportion who ‘strongly agree’ with both statements (and therefore have a high degree of ‘buy in’ to the issue and the need for action). This represents almost two in five citizens (37%), significantly higher than in 2019 (30%).

Several groups are less likely to strongly agree with both statements – including 18-34s, men and those who have not adopted any food management behaviours in the past month.

3.1 Food storage knowledge

There are some pronounced gaps in storage knowledge among UK citizens (Figure 8). For example, almost half (49%) incorrectly believe that apples last for longest if they are stored at room temperature out of the original packaging (as opposed to in the fridge in the original packaging); and half (50%) say that the optimum fridge temperature is between 4-7 degrees (the correct temperature is below 5 degrees). These knowledge gaps are widespread, with no differences among sub-groups. They also show no change compared to the results from 2018-2019.
Figure 8 – Storage knowledge

Q. Please choose one of the two answers shown for each of the following statements to complete the sentence correctly - to the best of your knowledge

Base: 4,197 UK adults aged 18+ with responsibility for food shopping and/or preparation in the home. April 2020

<table>
<thead>
<tr>
<th>Statement</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apples last for longest of they are stored... (a) out of their original packaging at room temperature; (b) in the fridge</td>
<td>49%</td>
<td>51%</td>
</tr>
<tr>
<td>To keep food at its best your fridge should be set to a temperature... (a) below 5 degrees; (b) between 4 and 7 degrees</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Food such as chicken breasts... (a) can be frozen up until the end of the use by date; (b) can only be frozen on the day it was purchased</td>
<td>61%</td>
<td>39%</td>
</tr>
<tr>
<td>Food that has gone past the best before date on packaging... (a) is safe to eat; (b) is not safe to eat</td>
<td>83%</td>
<td>17%</td>
</tr>
<tr>
<td>Potatoes that have bad bits or grown shoots... (a) can be eaten if you remove the bad bits or shoots; (b) can’t be eaten</td>
<td>89%</td>
<td>11%</td>
</tr>
<tr>
<td>Cooked poultry (chicken, turkey etc.)... (a) can be reheated and eaten safely; (b) can’t be reheated and should not be eaten cold or thrown...</td>
<td>62%</td>
<td>38%</td>
</tr>
</tbody>
</table>
4.0 Food waste communications

Just over half (51%) of UK citizens have seen or heard information about food waste in the past year – either more generally about the amount of food that is thrown away/wasted (48%) or more specifically about how to plan, buy, store or prepare food to help reduce the amount that gets thrown away (23%).

Recall of both types of information has fallen in 2020 compared to 2018-19, although it remains higher than the average across the period 2011-2016 (Figure 9). For example, recall of information about the amount of food thrown away/wasted has declined from 69% in May 2019 (the highest level recorded by the survey) to 48% now; and recall of specific food waste avoidance strategies has likewise declined from 49% in May 2019 (the highest level recorded) to 28% now. The observed declines in recall have taken place across a period that included the UK leaving the European Union, a General Election and now, of course, the Covid-19 pandemic.

While overall recall of food waste information has fallen, recognition of specific logos and campaigns has increased (Figure 10). For example, almost one in three (31%) recall the Love Food Hate Waste logo, which is almost double the level seen across the period 2014-2018 (when recall was in the range 13%-16%) and significantly above May 2019 (when recognition had increased to 22% - at that point the highest recorded). Fewer have seen the specific Love Food Hate Waste
Citizen responses to the Covid-19 lockdown – food purchasing, management and waste

campaigns\textsuperscript{10} ‘Make Toast Not Waste’\textsuperscript{11} (10%), ‘Chill the Fridge Out’\textsuperscript{12} (4%) or ‘Compleating’\textsuperscript{13} (3%) – although in each case the 2020 results represent statistically significant increases compared to previous years.

There has also been a significant increase in levels of recognition of the “suitable for home freezing” snowflake logo (from 62% in November 2019 to 88% now) and the “fridge temperature below 5 degrees” Little Blue Fridge logo (from 9% to 16% now).

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure10.png}
\caption{Recognition of Love Food Hate Waste campaign assets}
\end{figure}

Q. Have you seen any of these in the past year?
Base: 4,197 UK adults aged 18+ with responsibility for food shopping and/or preparation in the home. April 2020

\begin{itemize}
\item Love Food Hate Waste aims to raise awareness of the need to reduce food waste and help us take action: https://lovefoodhatewaste.com/?_ga=2.201994838.697528228.1570518935-1961497390.1495713026
\item Toast bread straight from the freezer: https://lovefoodhatewaste.com/toast
\item Set your fridge to the right temperature so that your milk and other food items can last longer: https://www.lovefoodhatewaste.com/article/chill-fridge-out?_ga=2.265961032.697528228.1570518935-1961497390.1495713026
\item Compleating is about eating the whole ingredient or food and letting no edible parts go to waste: https://www.lovefoodhatewaste.com/compleating
\end{itemize}
5.0 Key reflections

The survey demonstrates the following:

- Shopping patterns under the lockdown are in flux – with a substantial decrease in shopping frequency and an increase in the size of shop and the amount purchased.

- UK citizens are buying more fresh produce and long-life products but fewer ready meals and fewer takeaway meals.

- UK citizens have risen to the challenge of lockdown by managing their food better, including more pre-shop planning (e.g. checking cupboards and the fridge pre-shop, making a list), better in-home food storage (e.g. keeping on top of the fridge; freezing more) and creative approaches to cooking/preparation (e.g. batch cooking and using up leftovers). Those with the most to gain from adopting these behaviours (e.g. those buying more food or shopping more frequently) are doing so.

- The vast majority (85% or more) of those undertaking these food management behaviours are finding them useful – especially freezing, batch cooking, saving leftovers, making a list and date labelling items put in the freezer.

- There has been a marked decrease in self-reported levels of food waste – particularly among those who have adopted the most food management behaviours in the past month.

- There are opportunities for WRAP and its partners to support citizens to manage their food and further reduce levels of food waste. For example, gaps in storage knowledge remain around the optimum fridge temperature and how best to store items to keep them fresher for longer (which have not changed in response to the Covid-19 lockdown). There are a range of new behaviours that may require some level of support post-lockdown (particularly when citizens once again are more time-pressured), and also stocks of longer life food, and frozen items, that may require support to be remembered and used up.
WRAP’s vision is a world in which resources are used sustainably.

Our mission is to accelerate the move to a sustainable resource-efficient economy through re-inventing how we design, produce and sell products; re-thinking how we use and consume products; and re-defining what is possible through re-use and recycling.

Find out more at www.wrap.org.uk