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Final Report

Consumer Attitudes to Food Waste and Food Packaging

A qualitative and quantitative investigation into consumer attitudes to, and behaviour around, food waste and food packaging, which will inform action to help further reduce household food waste. In partnership with:

incpen

The Packaging Federation

Food and Drink Federation

Delivering Sustainable Growth

Kent Waste Partnership

BRITISH RETAIL CONSORTIUM

for successful and responsible retailing

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Research carried out by Icaro Consulting, report written by Alex Plumb & Phil Downing, Icaro Consulting and Andrew Parry, WRAP, with contributions from the Steering Group partners

Front cover photography: An example of pre-packed food

Executive summary

Approximately 60% of household food waste arises from products 'not used in time', with a value of around £6.7 billion. The majority of this is made up of perishable / short shelf life products, and includes 17 billion '5-a-day' portions of fresh produce (more than a fifth of purchases) bought but not eaten each year. Previous WRAP research suggested that behaviours around the use of packaging in home could be making a significant contribution to this. Examples include removing food from packaging after purchase but before storage (where the packaging is designed to keep the food fresher for longer), not making use of packaging functionality (such as reclosing packs to prevent dehydration in the fridge) and not looking at or following guidance on pack (when to consume by, how to store, whether the product can be frozen). In addition, previous research, and feedback from engagement with consumers, suggested that attitudes towards packaging might be a barrier to further reducing the amount of food thrown away. However, there was a lack of robust evidence in this area to inform a strategy partners could implement to help address consumer concerns, and enable them to take steps to prevent food going to waste.

The insights from this new piece of research will help in the development of more effective messages and products that will enable consumers to get more from the food they buy, and make savings through wasting less.

This summary sets out key findings from research undertaken by Icaro Consulting to explore consumers' attitudes to, and behaviours around, food waste and food packaging. The work was commissioned by a Steering Group comprising representatives from INCPEN, WRAP, The Packaging Federation, The Food & Drink Federation, Kent Waste Partnership and The British Retail Consortium.

The Steering Group wanted to explore a number of issues, including:

- How the use of packaging in home might influence the amount of food waste arising.
- What consumers might like to see in terms of packaging that could help them reduce food waste, and how aware they are of such innovations already on the market.
- How attitudes to packaging vary in different contexts (e.g. in store vs. in home), and how attitudes towards packaging might influence motivations to reduce food waste.How consumers respond to a variety of messages around packaging and food waste, and how this might influence attitudes and behaviour.

It should be noted that this research deals with packaging from a purely 'food' perspective and did not explore attitudes to packaging in the context of other products.

This research confirmed that a priority for consumers is how long food stays fresh for. Key insights from this new research, combined with previous research, show that currently consumers are not making best use of the information on pack, or the packaging itself to achieve this, nor are they aware of the benefits that packaging can offer to maximise in-home shelf-life.

However, there is a clear interest in packaging that can maintain food freshness, both before and after opening, and also in clearer on-pack messages about how to store food. Providing consumers with clear and consistent labelling on pack ('use by' / 'best before'; storage location; freezability etc.), communicating to them the benefits of utilising this information and providing improved packaging functionality (e.g. reclosability, materials to enhance life) could all help consumers waste less food in home.

Although much research has been carried out on food waste, and around food packaging, this new research has added significantly to our understanding, and our ability to help develop and deliver solutions to help consumers save money:

- For the first time attitudes to food and packaging have been explored together in a broad range of contexts, including shopping, food issues and the environment. This allows us to see how views on packaging compare to other factors, such as food freshness and food waste. This has highlighted the relative importance for consumers that their food stays fresher for longer, which gives confidence to be able to talk more positively about how packaging can deliver against this need.
- The research has also revealed which factors around packaging are considered most helpful (consistent with other research by WRAP, IGD and others) but also what consumers are aware of (which is new) – for example reclosable packs are most desired, but although there are many on the market consumers are less aware of this than they are of, for example, recyclability where levels of awareness and availability are similar. This shows that more can be done to highlight what is available now, including in terms of labelling, and also communicate to consumers more when innovations are launched. [Examples of what industry is already doing to optimise what is on the label, and through innovation to extend the life of food are included in a box at the end of this executive summary]
- The research confirms that there is an opportunity for consumers to make more use of labels and packaging, in terms of keeping food fresher for longer, but the larger sample size in this study provides much more detail on different socio-demographics groups. This will help organisations develop more effective solutions for a wider range of consumers.
- The assessment of responses to different statements and messages around food waste and food packaging, using a methodology not used previously in this area, shows the impact, both positive and negative, of different statements and combinations of statements which will inform the development of more effective communications.

Overall, this research shows that small changes in behaviour around packaging could deliver the benefits consumers are looking for – keeping food fresher for longer, saving money and reducing the impact of food on the environment.

Methodology

The research involved a combination of qualitative and quantitative methods, comprising (i) a review of previous consumer surveys on food waste and packaging; (ii) 18 accompanied food-shops and follow up in home depth interviews; and (iii) an online survey of 4,000 UK consumers (the largest to date on this subject in the UK).

Key findings
Below are distilled the main insights from the research:

Many consumers do not recognise that packaging protects food in the home. While there is recognition that packaging is important to keep the product safe *on its way to* and *in* the store, there is less recognition that it plays a role at home. In fact, the prevailing view is the opposite, i.e. that keeping products in the packaging leads them to spoil more quickly. This in turn leads many consumers to adopt unpacking strategies that potentially decrease the longevity of products (i.e. taking products out of their packaging or piercing the packaging to 'let it breathe').

These findings are consistent with previous WRAP research, both in terms of in-home behaviour and the potential reduction in product life resulting from this[1]. This finding is also important because, among the minority of consumers who do recognise that packaging can keep products fresher for longer, attitudes to packaging are significantly less negative.

- The top three benefits that consumers identify about packaging are that it 'keeps products safe and hygienic' (42% mentioning); that it 'provides important information on labels' (37%); and, that it 'protects the food (from the factory to the shop and on the way home)' (36%). In comparison, just 13% feel it has a role in protecting food in the home.
- However, when asked to identify their top three positive or negative associations with packaging, the two most frequent responses are negative: 'uses too much material' (52%) and 'bad for the environment' (50%). On balance, consumers give 1.4 positive answers out of three compared to 1.6 negative answers. They are far less likely to acknowledge that it 'extends the life of the product' (22%).
- Acknowledgement of this aspect, however, appears to engender more positive associations with packaging. For example, among those consumers who do acknowledge that packaging extends the life of the product, the balance of responses is notably different - 2.5 positive answers out of three (and just 0.5 negative answers). However, this group of consumers are currently in a minority and the prevailing view is actually the reverse - almost two in thee (62%) agree with the statement 'keeping fruit and vegetables in their packaging makes them sweat and go off quicker'.

Consumer confidence around storing food is high, but can be misplaced; the information on labels, and how they are used could both be more effective. The majority of consumers are confident in their way of storing food items with habits developed through trial and error or passed down from parents. However, a large proportion are actually storing items under less than ideal conditions, in terms of ensuring they last as long as possible (see also point above).
Despite this confidence, there is demand for better on-pack guidance about storage and the majority of consumers say that they would use this (although it is tempered by the fact that many do not look for such information once they are familiar and confident with a product).

WRAP research on date labelling and storage guidance similarly found that consumers find simple, specific guidance most useful, and are more likely to take advantage of such guidance[2].

- 90% of consumers say they are 'very' or 'fairly' confident they store their food in the best way to keep it fresh. However, nearly two-thirds unpack in a way that could reduce the

[1] *Food Storage and Packaging (WRAP, 2007; http://www.wrap.org.uk/content/food-storage-and-packaging); Helping Consumers Reduce Fruit and Vegetable Waste (WRAP, 2008; http://www.wrap.org.uk/content/helping-consumers-reduce-fruit-and-vegetable-waste)*

[2] *Consumer insight: date labels and storage guidance (WRAP, 2011; http://www.wrap.org.uk/content/consumer-insight-date-labels-and-storage-guidance)*

longevity of the product – for example, 64% take apples out of the pack or do something to the bag (e.g. pierce it).
- 84% say they would be 'very' or 'fairly' likely to use clearer and more prominent on pack storage advice if it was highlighted to them.

There is a noticeable gap between the amount of consumers who've seen particular packaging innovations and the number who say it would be a good idea. Re-closable packs, packaging that makes the product last longer and split packs are three of the innovations that consumers rated as being most useful to them. Re-closable packs are highlighted as being relatively prevalent in shops currently, but there seems to be far fewer people who've noticed 'a lot' of packaging that keeps food fresher or split packs.
- 34% have noticed 'a lot' of re-closable packs in-store, but only 13% have seen packs that 'keep food fresh for longer' or 'split packs' (12%).

There is recognition that food retailers and manufacturers have made progress in recent years to reduce the amount of packaging. Even those who consider packaging to be a major environmental problem acknowledge progress.
- Almost half of consumers (46%) say that manufacturers and supermarkets have made 'fair' or 'significant' progress on reducing the amount of packaging in the past few years, while a similar proportion (44%) say they have made 'a little progress'. Only one in twenty think that manufacturers and supermarkets have 'not made any progress'.

Attitudes to packaging shift according to the context and the mind-set that consumers are in. In store, in a shopping context, packaging is a low order priority and plays a supporting and practical role in product choice (aspects of packaging, such as re-closability can be factors influencing choice). When framed in the wider context of food issues, only a small minority identify packaging as one of their top concerns.
- In store, quality, freshness and the look/smell of the product are the most important factors with around two in three (65%) mentioning them unprompted. This compares to 53% who cite price, value for money or special offers, and just 6% who cite pack size or how the food is packaged.
- When asked to choose between two cheese products – one with re-closable packaging and the other without - one in five (20%) of the consumers who chose the re-closable pack specifically cited the re-closable function as the main reason for their choice.
- In the wider context of concerns about food, 'how it is packaged' is a low order issue – cited by only 16% of consumers. In contrast, 'the price of food' (64%) is the most frequent response, followed by 'how long fresh food lasts for' (48%). Furthermore, twice as many consumers identify 'food waste' as a concern (33%) compared with packaging.

However, when prompted consumers' attitudes to packaging are negative in the context of the environment. There is little doubt that once packaging is set within a framework of environmental concern, and this particular mind-set is triggered, then attitudes are negative.
- Close to four in five (81%) believe that it is a major environmental problem and 57% think it is wasteful and unnecessary.

Concern about packaging reduces in response to more information. There is evidence of 'shifting' in consumer attitudes when they are shown a series of positive, and factually correct, statements about packaging. However, when mixed in amongst an equal number of negative statements, attitudes to packaging changed little overall (shifting according to individual statements but with no overall net change).
- Consumers were shown five positive statements about packaging and asked to rate, on a scale of 0-100, how much of a problem they thought it was (with 0 = not a problem and 100 = a serious problem). From an average starting score of 73/100 (i.e. prior to seeing

the messages) concern about packaging fell by 21% to a score of 58/100. Two messages were particularly effective: 'Packaging allows food to stay fresher for longer – not just on shelves but in your home as well' and 'The vast majority of packaging can be recycled (85%) so the impact is less than you think'. A third message, 'Without packaging many of the food products that we enjoy would only be available for a few months of the year – rather than all year round as they are now', was particularly effective when it was the first message seen.

- However, when mixed in amongst an equal number of negative statements attitudes to packaging changed little overall. There were shifts in response to individual statements but the positive and negative statements largely cancelled each other out.

Concern about food waste increases in response to more information. The above style of question was also used with positive statements on food waste:

- Consumers were shown five positive (and factually correct) statements about food waste and asked to rate, on a scale of 0-100, how much of a problem they thought it was (with 0 = not a problem and 100 = a serious problem). From an average starting score of 71/100 (i.e. prior to seeing the messages) concern about food waste increased by 9% to a score of 80/100. Three messages were particularly effective: 'In the UK we throw away enough food, from our homes, to fill Wembley Stadium to the brim nine times over – every year'; 'Wasting food costs the average family £480 a year. For families with children the cost can be up to £690 a year' and 'Food waste gives off harmful gases like methane when it rots in landfill. Methane is 20x worse for the atmosphere than carbon dioxide'.
- In comparison to the similar question around packaging, a clear difference emerged: On average, concern for both the issue of food waste and packaging started around the 72 out of 100 mark After seeing a series of factually correct statements, concern for food waste had risen to around 80 whilst concern over packaging had fallen to around 58 out of 100.

Concern about packaging does not appear to be compromising action on food waste reduction. Unlike previous surveys that suggested packaging may be a far more pressing issue for consumers than food waste, this research finds that, when prompted, they consider both issues to be 'equally problematic' and do not have a fixed opinion as to which is 'worse'. However, consumers appear comfortable holding both views at the same time, and those most concerned about packaging are indeed *also* those most concerned about food waste.

- 70% of consumers think that food waste is bad for the environment (rising to 76% of consumers when the phrase 'wasting food' is used instead of 'food waste').
- When asked whether food waste or packaging is worse for the environment, consumers tend to agree with whichever of the two is presented first. For instance, 44% agree that 'food waste is a bigger environmental problem than packaging'. When the statement is reversed, 50% agree that packaging is worse than food waste. However, a significant proportion of consumers are uncertain and opt for 'I think they're both about the same'.
- Only a small, but significant, minority (14%) say they will 'do no more to reduce their food waste until more is done by manufacturers / supermarkets to reduce packaging'.

Attitudes to packaging are linked to the ability to recycle. There is a strong correlation between concerns about packaging materials and how easy it is to recycle them at home. The more difficult it is to recycle an item the more concern is expressed about it.

- Levels of consumer concern about different packaging materials are linked to how easily they can recycle them. For example, plastic pots, trays and tubs are a concern for almost half (49%) of consumers who say they cannot easily recycle these, compared to 26% of consumers who say they can recycle them easily.

- When asked what changes in packaging consumers would find most useful, 'recyclable – i.e. can be recycled' was quoted as the second (equal with packaging that helps the product last longer) highest.

Two sub-groups, in particular, show highly significant variation throughout:

- **Age**: older consumers are more likely to think that packaging is a serious environmental problem and prioritise its perceived problems and disadvantages over any positives (in particular, they are most likely to think that storing food in the original packaging causes it to sweat and spoil quicker). Younger consumers, by contrast, are more ambivalent and more likely to recognise the benefits of packaging - in particular, its role in keeping products fresher for longer.
- **Environmental disposition:** consumers who define themselves as 'very' environmentally friendly are more likely to consider packaging to be a major environmental problem. However, they are also receptive to positive messages about packaging and more likely to acknowledge the progress that retailers and brands have made. They are also more likely to recognise food waste as a concern.

Having been presented with the research, the steering group has identified several opportunities to help reduce food waste and also address concerns around packaging, for example:

- As consumers we can all make more use of the information provided on packaging, particularly as much of this is being updated, and the packaging itself, to ensure that the way we store food at home keeps it fresher for longer.
- Food and packaging organisations (retailers, food and packaging manufacturers and trade associations) should consider whether they can do more to inform consumers about the innovations they are making around food labelling and packaging, to raise awareness of the benefits and encourage consumers to make use of these, and encourage / undertake further innovation.
- Consumer campaigns, such as Love Food Hate Waste (www.lovefoodhatewaste.com), and other communications activities around food and food waste can do more to raise awareness of the benefits of reducing food waste, and the role that packaging can play in that. They can inform consumers about the innovations businesses are making around food labelling and food packaging, and give advice about, for example, buying the right pack size and looking more closely at labels. They could also offer updated guidance around the best way to buy food with the appropriate packaging to keep it fresher for longer, for example if it will be eaten straight away buying loose, if you want to keep it for longer buying packaged.
- Continued innovation in packaging recyclability along with increased provision of recycling services, and clear communication on how to use them, has the potential to reduce concerns around packaging, helping consumers deal with packaging at the end of its life.

Examples of packaging innovation to help reduce food waste[1]

- Many more packs are now reclosable, with a big increase in some areas such as cheese (WRAP,2011[1]). Keeping food sealed is particularly important in the fridge, to prevent drying out.
- There are a range of new types of packs in store to suit different needs, including smaller packs of bread, 'fridge packs' for baked beans (which last longer once opened), packs that are subdivided so that you can use some now and some later (e.g. salads, sliced meats, bakery products).
- Innovations to help keep food fresher for longer, which means there is more time to eat the food whilst it is still at its best. Examples include extra-filtered fresh milk, vacuum packed fresh meat, intelligent packs for fresh fruit & vegetables which helps stop them over-ripening.
- Food labels are undergoing a lot of change, to make them less confusing and more helpful for consumers:
  - Retailers and brands are removing 'display until' dates so that the 'best before' and most importantly 'use by' dates are easier to see, and there is only one date to look at.
  - More products have moved to a 'best before' date from a 'use by' date (for example most hard cheese and many pasteurised fruit juices), giving the flexibility to use the product after the date.
  - Most food packs have detailed storage advice, and many are highlighting on the front of pack where to store food to keep it at its best (for example most fresh fruit should be stored in the fridge – but not bananas; check the label to be sure).
  - Retailers and brands are now moving away from 'freeze on day of purchase' guidance to 'freeze before the date', which means if food isn't eaten when expected it can be frozen before the date to use at a later date.

[1] http://www.wrap.org.uk/content/helping-consumers-reduce-food-waste-retail-survey-2011

Contents

1.0 Introduction

This report presents the findings of a comprehensive programme of primary research that explored consumers' attitudes to, and behaviours around, packaging and food waste.

The work was commissioned by a Steering Group comprising representatives from INCPEN (Industry Council for Packaging & the Environment), WRAP (Waste & Resources Action Programme)[3], The Packaging Federation, The Food & Drink Federation, Kent Waste Partnership and The British Retail Consortium.

Previous research, and feedback from engagement with consumers, suggested that attitudes towards packaging, and behaviour around packaging in home, might be a barrier to further reducing the amount of food thrown away. However, there was a lack of robust evidence in this area to inform a strategy partners could implement to help address consumer concerns, and enable them to take steps to prevent food going to waste.

1.1 Objectives

The purpose of the research, therefore, was to explore consumers' perceptions of packaging, food waste and the inter-play between the two. The Steering Group also wanted to explore attitudes to packaging in store as well as in the home to investigate if consumers are aware of the different roles that packaging can play in protecting products and keeping them fresher for longer.

The research was also designed to test how consumers respond to a variety of messages around packaging and food waste, and whether or not attitudes are resistant, or open, to change. Below are some of the objectives, to determine:

- How the use of packaging in home might influence the amount of food waste arising.
- What consumers might like to see in terms of packaging that could help them reduce food waste, and how aware they are of such innovations already on the market.
- How attitudes to packaging vary in different contexts (e.g. in store vs. in home), and how attitudes towards packaging might influence motivations to reduce food waste.How consumers respond to a variety of messages around packaging and food waste, and how this might influence attitudes and behaviour.

It should be noted that this research deals with packaging from a purely 'food' perspective and did not explore attitudes to packaging in the context of other products.

[3] *WRAP co-funded the research, and had sign off on the research methodology and this report.*

2.0 Methodology

The research compromised three key phases:

2.1 A review of previous research

A rapid review of the existing evidence base on consumer attitudes to packaging and, where relevant, food waste was undertaken, both to assess the methodological and design approaches of previous surveys as well as identify potential benchmark questions to track attitudes over time.

2.2 18 accompanied shopping visits

The accompanied visits drew on a form of ethnographic research, a technique involving the observation of participants in as natural and 'real world' context as possible to allow them to 'forget about' the presence of the researcher and go about the activity as they normally would.

The visits lasted 2 – 2.5 hours and began at the participants' homes as they were about to do their main food shop. The researchers accompanied them to the supermarket and walked round the aisles with them, observing and asking occasional questions. They then accompanied them back home to observe how they unpacked the food and, finally, to conduct an in-home depth interview about the shop and their attitudes towards both food waste and packaging.

To ensure a range of consumers were captured a sample framework was developed with participants recruited according to their *life stage* (pre-children, family, empty nesters), their *main supermarket* (with representation of different retailers) and the *comprehensiveness of their recycling services* (with 'partially restricted recycling areas' defined as the absence of one or two key materials from the doorstep collection, e.g. plastics). There was an even split of social grades across these classifications (i.e. ABC1's and C2DE's).

Table 1 - Sample framework

	Pre-children (couples or singles)	Family	Empty-nesters
Comprehensive recycling area (e.g. Richmond, Slough)	3 accompanied shops (range of supermarket retailers)	3 accompanied shops (range of supermarket retailers)	3 accompanied shops (range of supermarket retailers)
Partially restricted recycling area (e.g. Reading, Ashford)	3 accompanied shops (range of supermarket retailers)	3 accompanied shops (range of supermarket retailers)	3 accompanied shops (range of supermarket retailers)

2.3 A survey of 4,000 UK consumers

The purpose of the quantitative phase was to test the key findings that had emerged from the accompanied visits and explore the extent to which they were reflected across the UK population as a whole.

A survey of 4,000 consumers was conducted (the largest to date in the UK), in order to ensure both a robust overall sample and to undertake detailed analyses across different groups of consumers (e.g. according to their age, gender or how environmentally friendly they consider themselves to be).

The survey was undertaken online, and quotas were set on age, gender, work status and geographic region to ensure that the sample was representative of the UK population. A filter

question was used to ensure that respondents had some level of responsibility in the home for shopping and/or storage, preparation and cooking.

The survey was 20 minutes in length to allow for detailed questioning and to explore packaging from a number of different angles. Indeed, and following the Phase I review of previous surveys, the questionnaire included a number of innovations, as follows:

2.3.1 Exploring the impact of different 'frames'

Unlike previous surveys, which have tended to begin their questioning about packaging directly and in a particular context (typically in relation to the environment which 'primes' the respondent to consider all subsequent questions in that context), the questionnaire explored packaging through a number of 'frames' and deliberately set the survey in the context of a 'typical shopping trip' (mimicking the accompanied visits).
So, for example, it was one of a series of possible point of sale considerations, or one of a series of concerns that consumers could express. No attempt was made to 'hide' packaging as a possible answer option (since that would be entirely counterproductive for a survey about packaging to do); but likewise no attempt was made to force the issue or specifically draw consumers' attention to it. It was only following these questions about shopping and in-home unpacking/storage that the survey then turned to direct questioning about packaging (including the relationship between packaging and the environment and food waste and packaging).

A key objective of the research was to determine whether the concerns reported in previous surveys are something that consumers perceive and 'feel' on a day-to-day basis (and impacting on other behaviours, such as food waste reduction) or whether it only becomes a 'live issue' in a very specific context when consumers are in a certain mind-set.

2.3.2 The use of split samples

At various points in the survey the sample was split into two halves (i.e. 2 x 2,000) or four quarters (e.g. 4 x 1,000). This was done to test the influence of language (e.g. describing something as '*packaging waste*' vs. '*packaging*', or '*food waste*' vs. '*wasted food*'), the influence of asking questions in a prompted and unprompted way and/or the influence of the question order (e.g. agree/disagree that '*packaging is a major environmental problem'* vs. agree/disagree that '*packaging is not an environmental problem')*.

2.3.3 Exploring the impact of different question answer scales

In previous surveys the agree/disagree statement *'packaging waste is a bigger environmental problem than food waste'* is asked with a five point answer scale from '*strongly agree'* through to *'strongly disagree'*, with '*neither agree nor disagree*' as the mid-point. Such a response scale consistently produces results where consumers largely agree that packaging is a bigger problem. However, there are concerns that the mid-point option is ambiguous and leaves the respondent unsure of what giving that answer means. Therefore, in this survey the statement was changed to 'I think they're both about the same' and a 'don't know' option was also introduced.

2.3.4 Testing the influences on attitudes towards food waste & packaging

In order to quantitatively test how deeply held, or open, consumers' attitudes to both issues are, the respondent was initially asked to rate, on a scale of 0-100, how much of a problem they consider packaging / food waste to be (with 0 = not a problem and 100 = a significant problem). They were then shown a series of messages and asked the extent to which each had changed (or not) their initial rating. In this way it was possible to test not only the relative effectiveness of individual statements but also the cumulative impact of the statements as a whole.

3.0 Attitudes to packaging in different contexts

This section of the report explores the impact of context and framing on consumers' attitudes to packaging. It sets out the initial findings from the accompanied shops (3.1) before going on to explore attitudes to packaging in five different frames: in store as a point of sale consideration (3.2); as a quality consumers value in their supermarket (3.3); as a concern among other food issues (3.4); as an environmental issue (3.5); and as an issue of 'over-packaging' (3.6).

3.1 Initial findings - accompanied shops

The accompanied shops highlighted that, in the context of the regular supermarket shop, packaging is rarely considered in a conscious way. None of the 18 participants spontaneously commented on packaging in store, whereas they did provide a narrative about why they liked a certain product or if they were buying something on offer.

That is not to say that packaging does not play a subconscious role in product decisions, since some participants were evidently choosing loose fruit and vegetables over pre-packed (and vice versa), while others were rejecting tinned cans with dents in them, for example. But none of these thought processes were mentioned to the researcher and, for the most part, these considerations appeared to have simply been internalised as an in-store habit.

The trend initially continued at home as participants packed their shopping away, with little comment on the packaging. However, when the unpacking process was complete, some did begin to make spontaneous comments about the packaging, for example when it was an item that was difficult to unpack or difficult to recycle:

> *"Why does it need this much cardboard? It's so thick…" F – Slough*

> *"It's just annoying as it takes up space in the bin" M – Ewell*

Furthermore, and when the subject was directly raised in conversation, participants' attitudes often shifted markedly with packaging becoming a more serious and problematic concern. This was not true of all participants and there were some notable exceptions, but it was the most common response. The ambivalence or neutrality of before was replaced with a default dislike of packaging closely tied into notions of the 'amount' of packaging, a general dislike of waste (and, in particular, landfill) and its perceived role as an environmental 'bad'.

This default setting appears to be due to a myriad of factors, including the prominence of the issue in e.g. the media and in conversations with friends; a perception that certain types of packaging do not biodegrade; and previous 'bad' experiences of over-packaged products (with Easter eggs and 'double packaged' fruit often cited). This latter issue in particular seemed to operate as a powerful heuristic for participants, so much so that even when they could not recall a specific example of over-packaging they nonetheless could fall back on a particular 'packaging archetype' that they had in mind:

> *"I'm sure there have been instances when things have been over-packaged. I just can't remember any right now." F – Reading*

> *"I think there are examples of over-packaging, I just haven't seen any for a while. [pauses] I suppose those examples where you have tomatoes in plastic trays and then they're wrapped in plastic." F – Slough*

The fact that packaging could play a neutral supporting role in store but also evoke strong reactions a short while later back at home suggests that context is a critical consideration.

This was explored in more detail through the survey and the use of five frames, which are the subject of the remainder of this section.

3.2 Frame I - Packaging in a shopping context

The survey asked consumers what they look out for when they are deciding which products to buy. The sample was split into two halves (i.e. 2 x 2,000) with one half asked the question with prompted answers and the other asked to write in their answers unprompted.

Each half of the sample was then split a further four ways (i.e. 500 in each) and asked about a specific food category that they purchase – either fruit & vegetables, meat & fish, bakery or dairy. This was to put the respondent in a more specific context, rather than being asked about the purchase motivations in general. The results presented here are those aggregated together across all four types of food (and the detail according to each product category is outlined in the topline in the appendix).

Both sets of results demonstrate that packaging is a low order priority for consumers when they are in a shopping mind-set (Figure 1). Only 17% in the prompted question cite '*how it is packaged'* as a point of sale consideration, compared to '*price*' (74%), '*value for money*' (69%), '*special offers*' (59%) and '*use by/best before dates*' (55%).

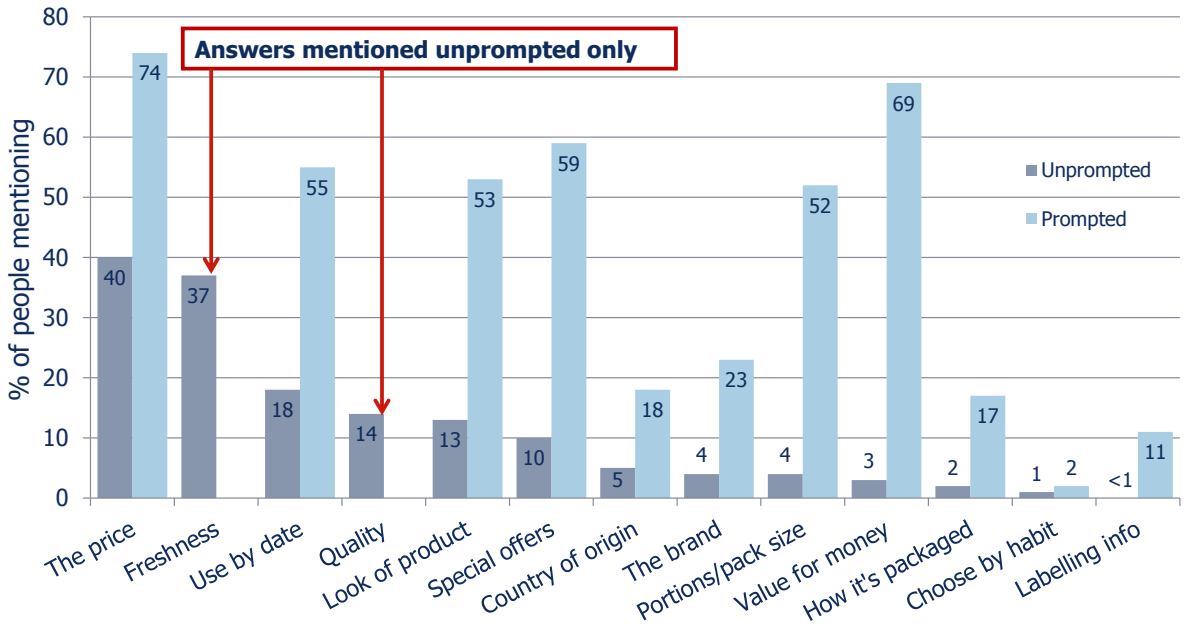
Furthermore, and in the unprompted version of the question, only 2% spontaneously cite packaging, compared to '*price*' (40%) and '*freshness*' (37%). If responses are clustered together for the unprompted side of the sample, it shows how different elements trade off against each other:

Quality / freshness / look or smell of product = 65% mentioning
Price / value for money / special offers = 53% mentioning
Use by date / ingredients / nutritional content / labels = 26% mentioning
Organic / fair trade / country of origin = 7% mentioning
How it is packaged / pack size = 6% mentioning
Brand / economy or quality range = 4% mentioning

For the most part, the answers provided as 'open' responses were coded using the same codes as the prompted question. It is instructive to look at the unprompted answers that did not fit into these codes to see how consumers' own articulations diverge from the pre-selected answer codes. For instance, two of the top answers are '*quality*' and '*freshness*', both of which appear key in terms of the design of messages.

Figure 1 – Point of sale influences

Question: *When you are choosing [fruit & veg / meat & fish / bakery / dairy], which of the following are the main things that you look out for / use to help you make your choice?*
Base: Prompted (2065), Unprompted (2011), Icaro survey Jul/Aug 2012



There is little variation by subgroup and, irrespective of factors like gender and age, consumers are equally as (un)likely to cite 'how it is packaged' as a point of sale influence – in comparison with a range of other factors that are identified as far greater concerns in this context.

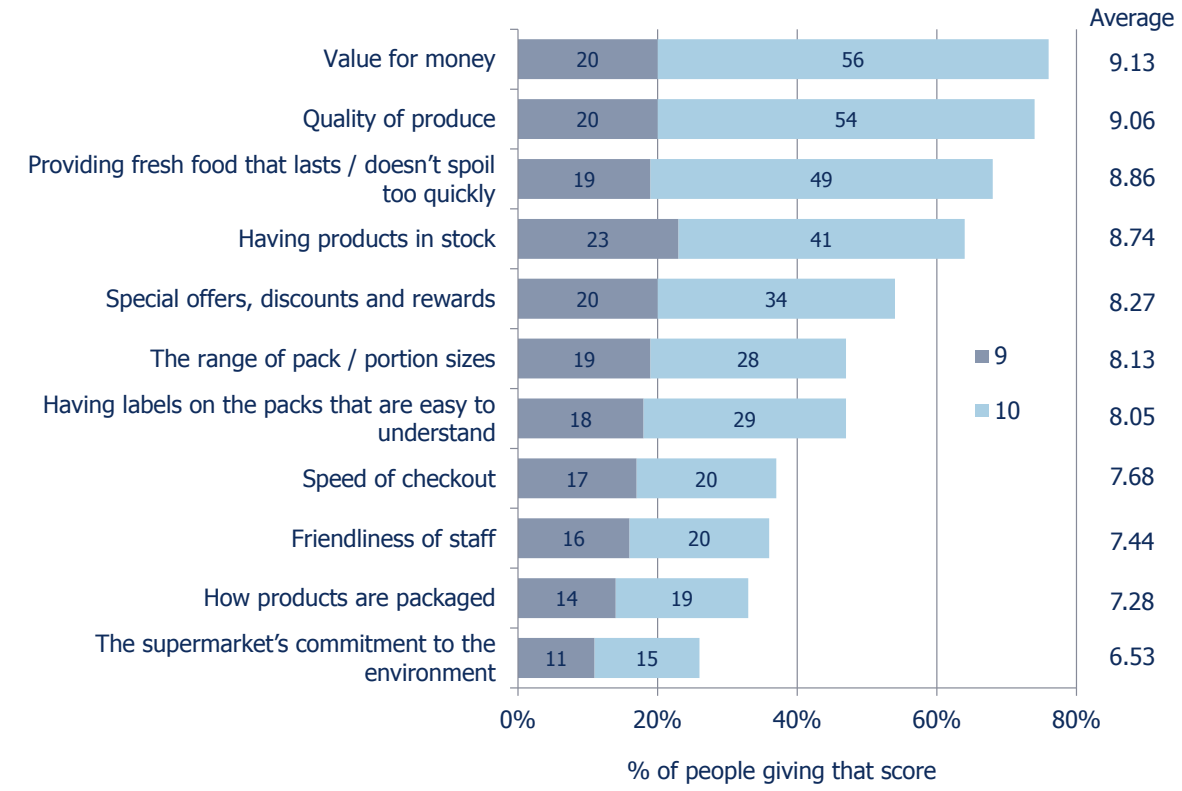
Environmental disposition, however, is one exception, with close to one in four (24%) consumers who describe themselves as 'very' environmentally friendly citing packaging in the prompted question (compared to 12% who say they are environmentally friendly in 'one or two things').

3.3 Frame II - Packaging in the context of qualities consumers value in the supermarket they choose

Consumers were asked to score, on a scale of 0-10 (where 0 = not at all important and 10 = very important), the importance to them of various 'qualities' that they look for in their supermarket. Both '*value for money*' and '*quality of produce*' are considered most important, scoring an average of 9.13 and 9.06 out of 10, respectively (Figure 2). By contrast, '*how products are packaged*' scored 7.28/10 on average, placing it relatively low in the list of priorities overall but still with a relatively high score in absolute terms.

Figure 2 – Qualities of supermarkets that consumers value

Question: *Thinking about the qualities that you value in the supermarket(s) that you choose to use; how important, or not, are each of the following to you? (Rating on a scale from 0-10 where 0 is 'not at all important' and 10 is 'extremely important'). i.e. 9 and 10 on the graph represent the two highest ratings in terms of importance of each factor.*
Base: All apart from those shopping online (4077), Icaro survey Jul/Aug 2012



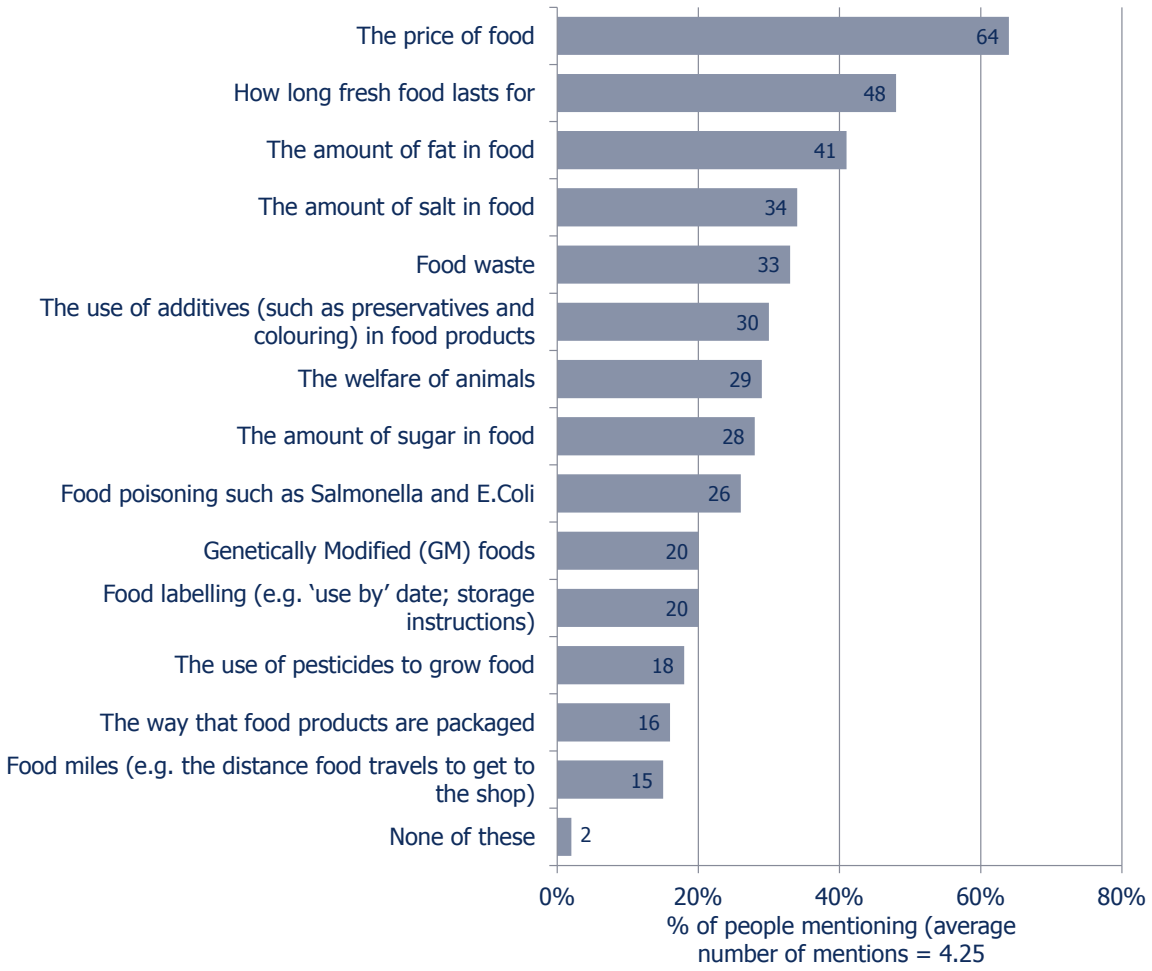
3.4 Frame III - Packaging in a 'food issues' context

The lower prominence of packaging as an issue is not only confined to a supermarket and point of sale context, but also extends to the concerns that consumers have about food more broadly. When asked to select up to five food-related issues that concern them most, only a small minority (16%) identify '*how food is packaged*' (Figure 3), compared to '*the price of food*' (64%), '*how long fresh food lasts*' (48%) and '*the amount of fat in food*' (41%). Furthermore, twice as many consumers cite '*food waste*' (33%) than they do packaging, which rank 5th and 13th respectively in the list of concerns overall. These results are in line with a Food Standards Agency survey (undertaken in May 2012[4]), which placed food waste as the 3rd most important issue (together with the amount of fat in food).

[4] *http://www.food.gov.uk/multimedia/pdfs/biannualpublicattitudestrack.pdf*

Figure 3 – Concerns about food issues

Question: *Which of these food issues, if any, most concern you? (respondents could select up to 5)*
Base: All (4102), Icaro survey Jul/Aug 2012



There are very few sub-group differences of note. However, the trend according to environmental disposition continues - 20% of those who say they are 'very' environmentally friendly cite packaging as a concern, compared to 12% of those who say they are environmentally friendly in 'one or two things'. There is also a significant, if smaller, difference between the concern that these two groups have over food waste: 36% of those who are very green mention this vs. 30% of those green in one or two things.

3.5 Frame IV - Packaging in an environmental context

The sample was split into four quarters (i.e. 4 x 1,000) and asked four variants of the same question – two with the agree/disagree statement '*packaging is a major environmental problem*' and two being asked the reverse (i.e. '*packaging is not a major environmental problem*').

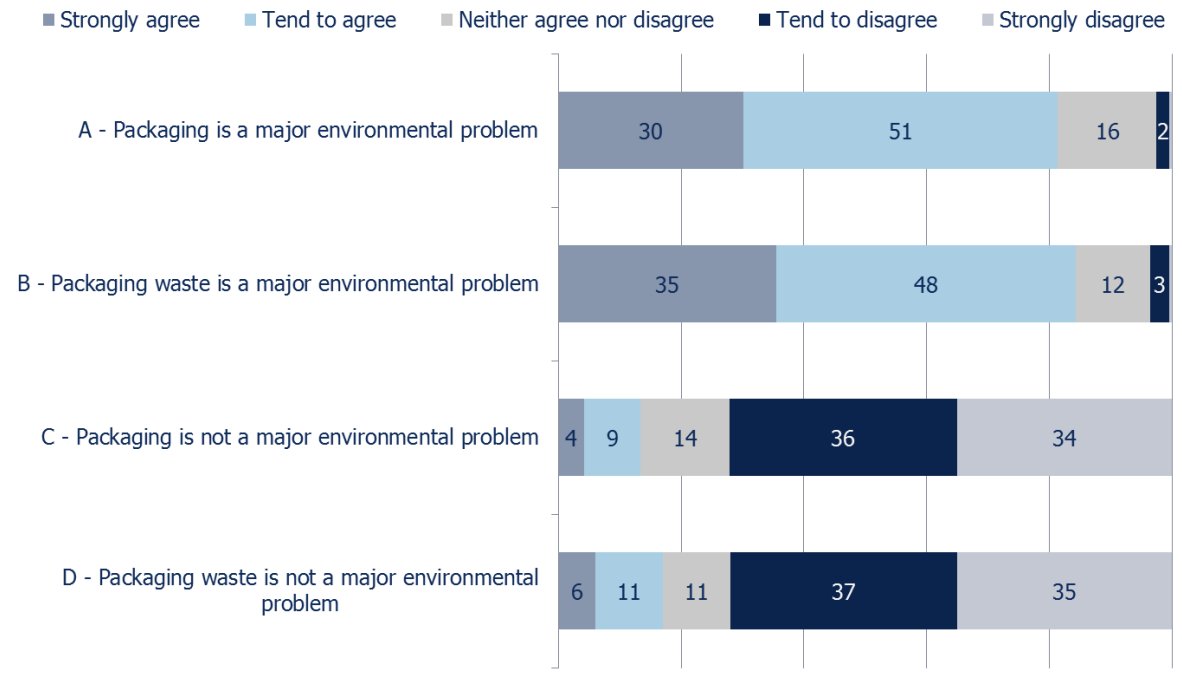
Within each of these pairs of questions, one of the set used the term '*packaging*' while the other used '*packaging waste*'. This was because we wanted to explore whether explicitly setting packaging up as an 'end of life' concern – by appending the word 'waste' – would have any material impact on consumers' views.

The results confirm that attitudes to packaging change markedly when framed in an environmental context (Figure 4). Just over four in five consumers (81%) agree that '*packaging is a major environmental problem*' (Statement A), while a similar proportion (83%) agree that '*packaging waste is a major environmental problem'* (Statement B). [This small difference in the results between Statement A and Statement B are inside the statistical margin of error and so, statistically speaking, there is no difference between the two. However, there is a statistically significant difference when looking at the proportions who 'strongly agree' with the two statements, which is higher with Statement B].

Some consumers are more likely to agree with this statement, particularly women (87% compared to 79% of men); older consumers aged 65+ (90%, compared to 75% of consumers aged 18-24); and those who say they are 'very' environmentally friendly (91%, compared to 50% who are 'not very'/'not at all' environmentally friendly).

Figure 4 – Attitudes to packaging as a major environmental problem

Question: *To what extent do you agree or disagree with the following statement?*
Base: A (1026), B (1014), C (1029), D (1033), Icaro survey Jul/Aug 2012



Two key findings emerge from switching the statements around (i.e. where consumers are asked to agree/disagree with the statement 'packaging is not a major environmental problem' (Statements C and D) :

- First, the prevailing trend is the same but in reverse – seven in ten (70%) disagree with Statement C and a similar proportion (72%) disagree with Statement D [once again the apparent small difference between the two statements is within the margin of error and not statistically significant].
- However, and secondly, there is a change in the proportion who agree with Statements C and D (13% and 17%, respectively) compared to those who disagreed with Statements A and B (3% and 4%, respectively). This suggests that the reversal of the question does have an impact on a minority of consumers who are prepared to agree that packaging is not a major environmental problem. The consumers most likely to do this are men (23%

vs. 11% of women); younger consumers aged 18-24 (34% vs. 10% of those aged 65+); and those who say they are 'very' environmentally friendly (21%). While this latter finding, at face value, seems to be a contradiction (since this group are also more likely to agree that it is a major environmental problem), it reflects a smaller subset of environmentally friendly consumers who appear more ambivalent to packaging than the wider majority.

3.6 Frame V - Packaging in the context of 'over-packaging'

The survey explored whether consumers think that food products are 'over-packaged' and that packaging is 'wasteful and unnecessary' (both common threads from previous research[5]). Two questions were used to explore these concepts and, in both cases, the sample was split in half (2 x 2,000) to test a subtle wording change to distinguish 'products' from 'food products' and 'packaging' from 'packaging on food'. This was done to give some indication as to whether people view food packaging in the same vein (or set apart from) packaging in general.

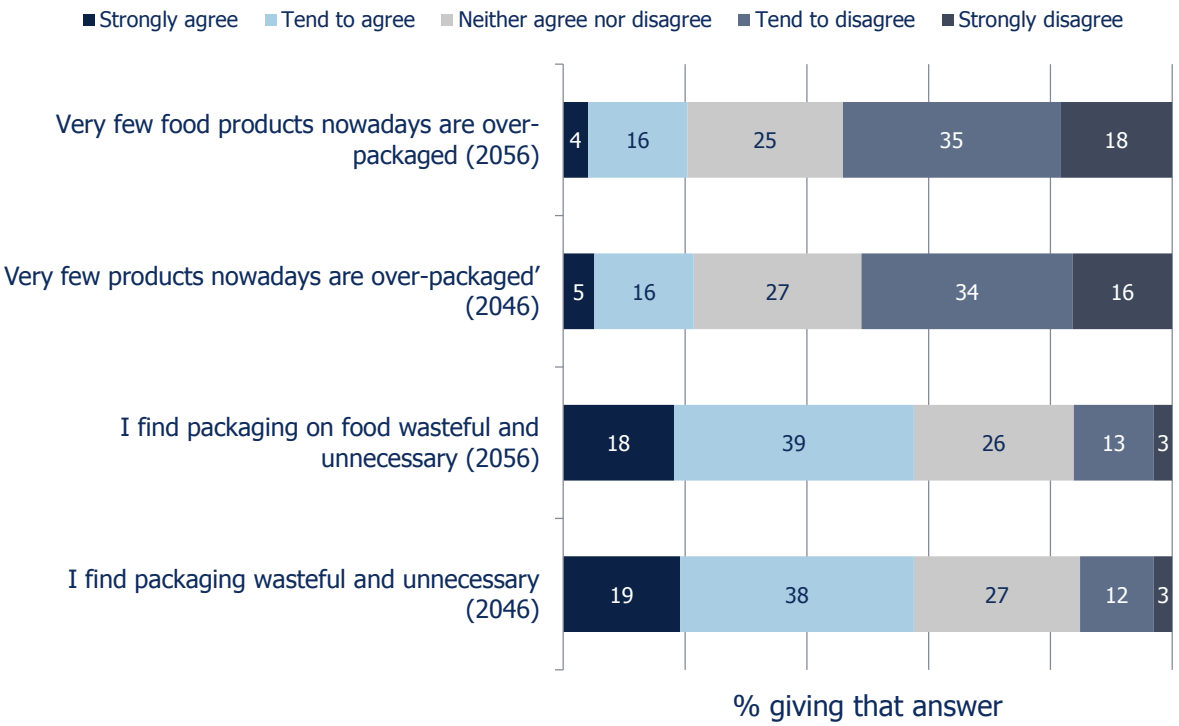
One in five (20%) agree that '*very few food products nowadays are over-packaged* (Statement 1), compared to just over half (53%) who disagree (Figure 5). The result is virtually identical with Statement 2 – showing that the wording distinction makes no apparent difference.

In turn, a similar proportion - just over half (57%) - agree with Statement 3 '*I find packaging on food products wasteful and unnecessary*', compared to 16% who disagree (and once again the result is virtually identical with Statement 4 showing the limited impact of subtly re-wording the question).

[5] *For example* http://incpen.org/docs/IpsosMORIPublicAtttoPack2008.pdf; http://www.incpen.org/resource/data/ipen1/docs/30%20September%202011a.pdf

Figure 5 – Consumer attitudes to over-packaging

Question: *Here are some statements. Please tell us how much you agree or disagree with each one.*
Base: All (4102), Icaro survey Jul/Aug 2012

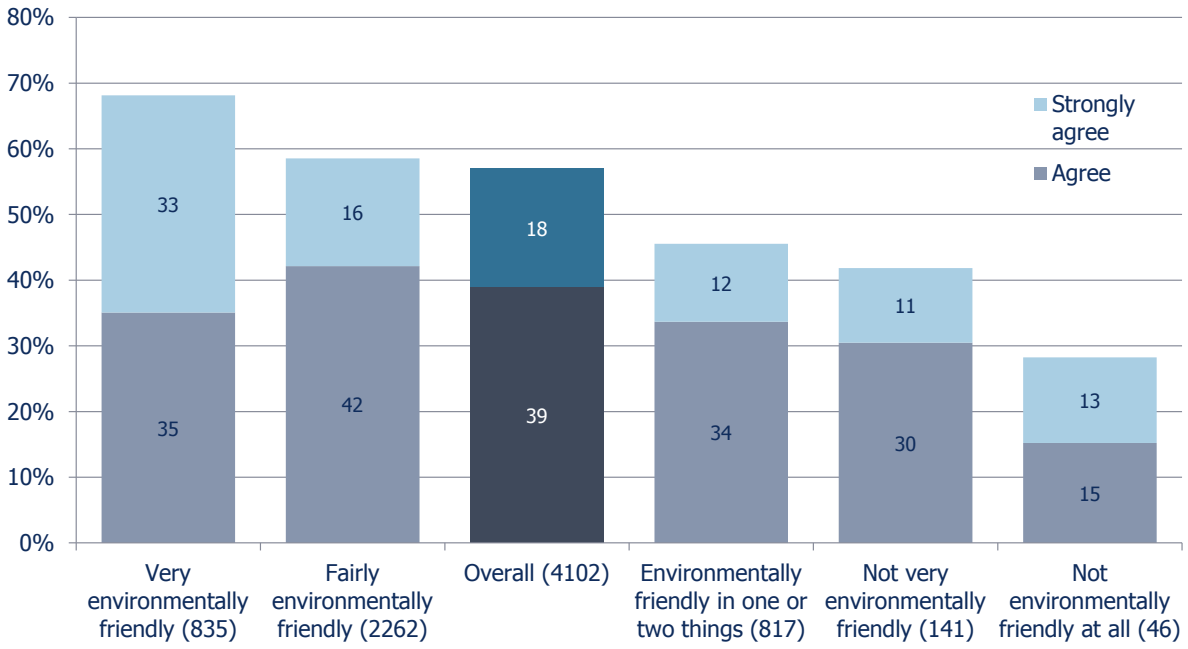


Variations are once again apparent according to age. Taking Statement 1, for example, over a third (35%) of consumers aged 25-34 agree that '*very few food products nowadays are over-packaged*' compared to just 11% of those aged 65+. Younger consumers are also more inclined to disagree with Statement 3 (i.e. '*I find packaging on food products wasteful and unnecessary*') - 24% compared to 10% of those aged 65+.

There is also a strong gradient in attitudes according to environmental disposition. Taking Statement 3 as an example, over two in three (68%) of those who say they are 'very' environmentally friendly agree that packaging is wasteful and unnecessary (Figure 6), compared with 28% of those who say they are not very or not at all environmentally friendly.

Figure 6 – Consumer attitudes to over-packaging

Question: *I find packaging [on food] wasteful and unnecessary (for the 'overall' bar, grey = agree, blue = strongly agree):*
Base: All (4102), Icaro survey Jul/Aug 2012



4.0 The role of packaging in specific product choices

This section of the report explores the impact of packaging on product choices. Unlike Section 3.2 (which explored the same issue but in the context of general point of sale considerations) it looks at specific products. As the intention was not to draw specific attention to the packaging associated with these products, an example was included that was less relevant to the primary objectives of this research (juice with two types of promotion).

In particular, a series of product choice scenarios were used to test which product consumers would pick. This involved consumers being shown images of products (Figure 7), being asked which they would chose (or neither), and then being asked why they chose the way they did. Three of these choice sets – for leeks, cheese and ham - were primarily distinguished by a packaging consideration - with other key influences (e.g. price, quantity) held the same[6].

Figure 7 – Choosing items

The results for the product types differentiated by packaging are as follows:

Leeks – there is an even split between consumers who chose the pre-packed option (47%) compared to those who chose the product loose (49%). Younger consumers aged 18-34 are

[6] *It should be remembered that there are other differences – for example the packaging of the leeks means they can be washed and trimmed whilst there are no cheeses on the market that are identical bar the re-closability of the packaging.*

more likely to choose pre-packed (56% vs. 43% of those aged 65+), as were those consumers who think that packaging helps keep food fresh for longer (57%). The reasons for the choice are as follows:

- Of those who chose to buy loose, 30% said this was specifically because it had no packaging and 23% because they could choose their own;
- Of those who chose to buy pre-packed, 14% said it was because it was packed and a further 50% gave reasons that were related to it being packaged[7] (e.g. 29% said it was easier to prepare / already prepared / ready to cook; 11% said it meant there was less waste; 10% said because the appearance was better).

Cheese – the re-closable cheese was the more popular choice with two-thirds (67%) of consumers opting for it over the non-re-closable pack. The reasons for the choice are as follows:

- The top reason for choosing either option was a preference for how the packaging looked (18% mentioning this for the normal pack, 33% for the re-closable pack).
- Of those who chose the re-closable pack, 20% said they did so for exactly that reason (despite the fact the text was not enlarged in any way, i.e. they recognised or were looking for this functionality).

Ham – three choices were available (A- standard, B- portion pack and C- Deli). Over two in five (44%) opted for the deli ham and the primary reason behind this (cited by 37%) was because it was fresher. Just over one in five (21%) opted for the portions pack and, among these consumers, 14% said it was because they thought it would last longer and 11% because it had individual portions.

Bread – The larger loaf was the more popular choice (64% vs. 24% choosing the small one). However, the primary reason this choice was made was the same for both sizes: 'it's a better size / it's more suitable for our needs' (selected by nearly four in ten of both sides). Whilst the larger pack offers less packaging proportional to the amount of food this was not mentioned by consumers as a reason for choosing it.

Orange Juice – More than half (55%) chose the offer with 1/3rd off and, of these, a third said it was because they thought having three cartons of juice was 'too much / many'. Of the 28% selecting the 'buy 3 for 2' offer, nearly half of them (48%) did so because they thought it was 'a better deal'.

[7] It is important to note that these reasons are not functions of being packaged, simply pre-prepared. However, they are only available due to the packaging, as the food would not be sold in this way otherwise.

5.0 The perceived advantages and disadvantages of packaging

This section of the report looks at consumers' attitudes towards packaging in more detail. In particular it explores the perceived advantages and disadvantages of packaging (5.1), the role of packaging in the home (5.2) and the relationship between consumers' concern about packaging and the recycling services that they have available to them (5.3).

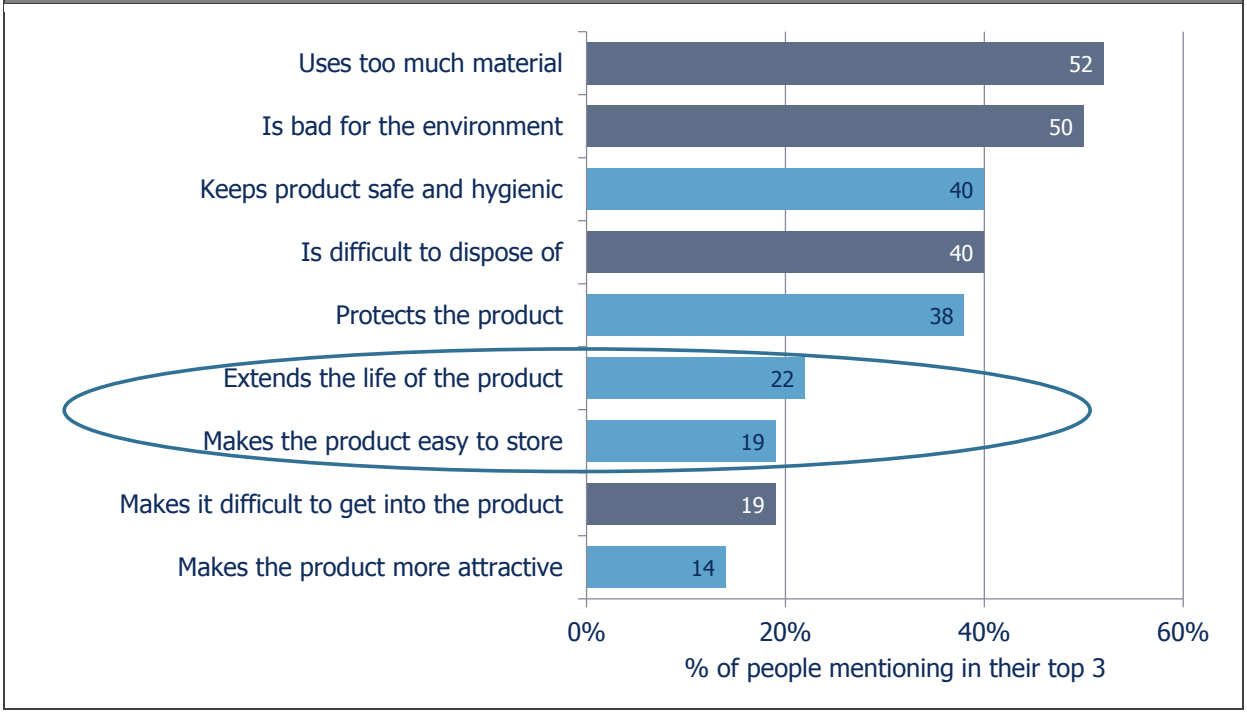
5.1 Positive and negative associations

The sample was split into two halves (i.e. 2 x 2,000) with each asked a slightly different question – one asking consumers to select up to three phrases about packaging from a list of both positive and negatives; the other asking them to identify the key benefits of packaging as they see them, again by selecting from a list.

Among the first half of the sample, negative sentiments about packaging feature prominently with '*uses too much material*' (52%) and '*bad for the environment*' (50%) most frequently cited (Figure 8). Turning to the positives, consumers acknowledge that packaging '*keeps the product safe and hygienic*' (40%) and '*protects the product*' (38%), but fewer consumers acknowledge that '*packaging extends the life of the product*' (22%).

Figure 8 – Positive and negative associations

Question: *From the following list, please choose the three phrases you think are most applicable to packaging?*
Base: All those routed to Q19a (2056), Icaro survey Jul/Aug 2012



There are some pronounced variations across different groups of consumers, particularly by age. For example, older consumers are twice as likely as their younger counterparts to cite '*uses too much material*' (62% of those aged 55+ vs. 32% of those aged 25-34). Furthermore, those that say they are 'very' environmentally friendly are significantly more likely to cite '*bad for the environment*' (57%).

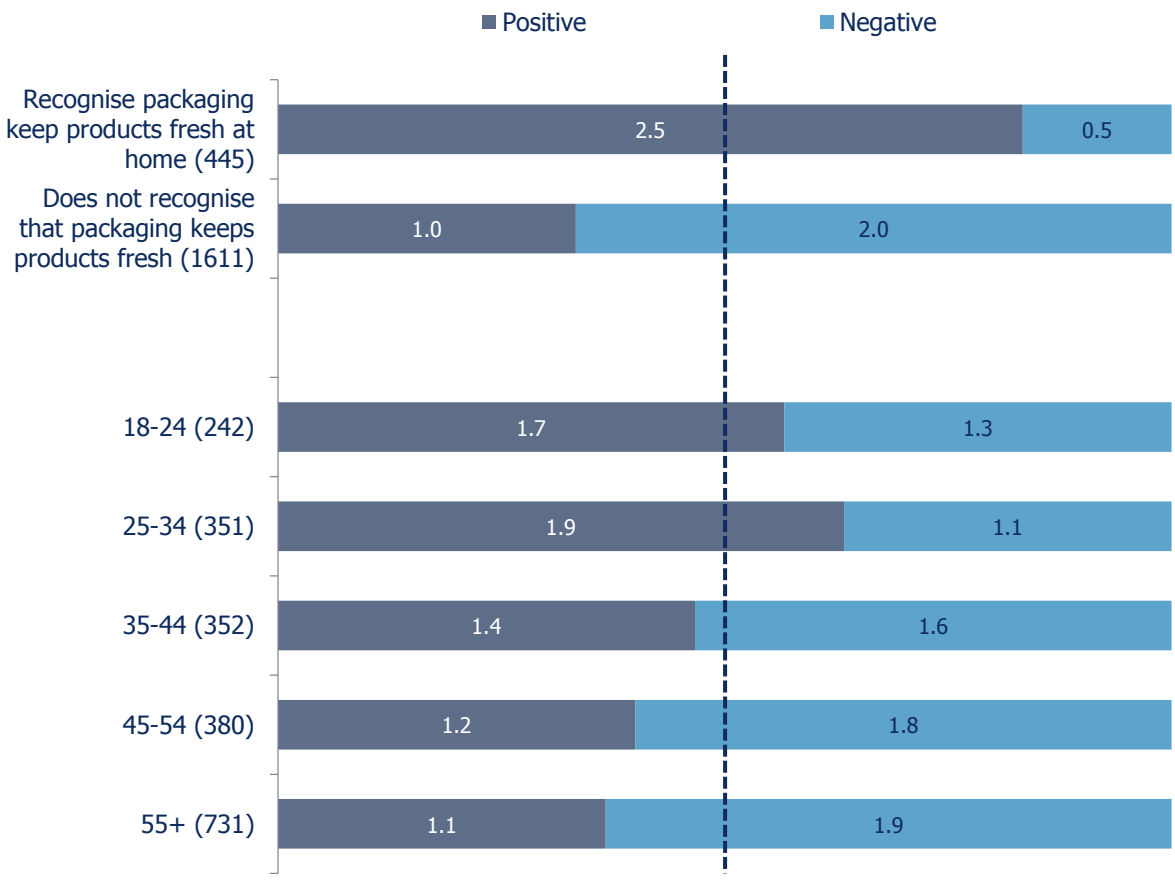
Looking at the overall balance between positive and negative statements (out of the three answers that they could pick), consumers give 1.4 positive answers out of three compared to

1.6 negative answers. Figure 9 outlines how this balance varies according to two factors: age and acknowledgement that packaging keeps products fresher for longer:
Taking age first, younger consumers are more likely to make positive associations with packaging, with those aged 25-34 giving 1.9 positive answers on average compared to 1.1 negative answers. Older consumers aged 65+, by contrast, give 1.1 positive answers on average compared to 1.9 negative answers.

The group of consumers who are most likely to select positive phrases are those who recognise packaging keeps products fresher in the home. This group of consumers, who make up just under a quarter of the sample at this question, give an average of **2.5 positive answers out of 3** (and by extension, just 0.5 negative answers). In contrast, a very different balance is evident among the majority of consumers who currently do not recognise this benefit (1 : 2, i.e. two negative answers to every positive one). In other words, when consumers recognise that packaging has a role in keeping the product fresh in the home they are more likely to recognise and prioritise the positives.

Figure 9 – The negative / positive balance

This shows the balance of negative and positive answers given out of the 3, as per the options at Figure 8
Base: All those routed to Q19a (2056), Icaro survey Jul/Aug 2012

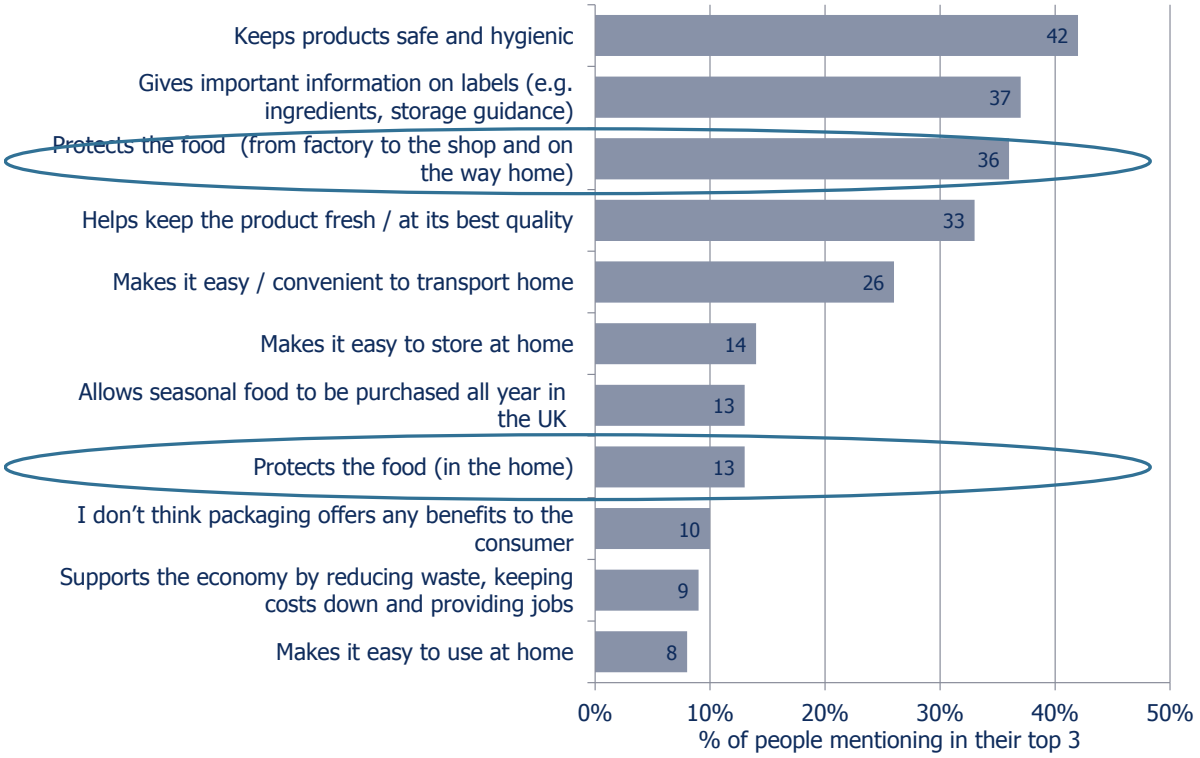


Turning to the other half of the sample, who were asked to identify up to three benefits of packaging, the most frequently cited benefits are '*keeps products safe and hygienic*' (42%), '*gives important information on labels*' (37%) and '*protects the food from factory to the shop*

and on the way home' (36%). In contrast, however, once again very few consumers (13%) choose '*protects the food in the home*' (Figure 10).

Figure 10 – Benefits of packaging

Question: *Thinking specifically about food packaging, which of the following, if any, do you consider to be the main benefits? (respondents could select up to 3)*
Base: All those answering 19b (2046), Icaro survey Jul/Aug 2012



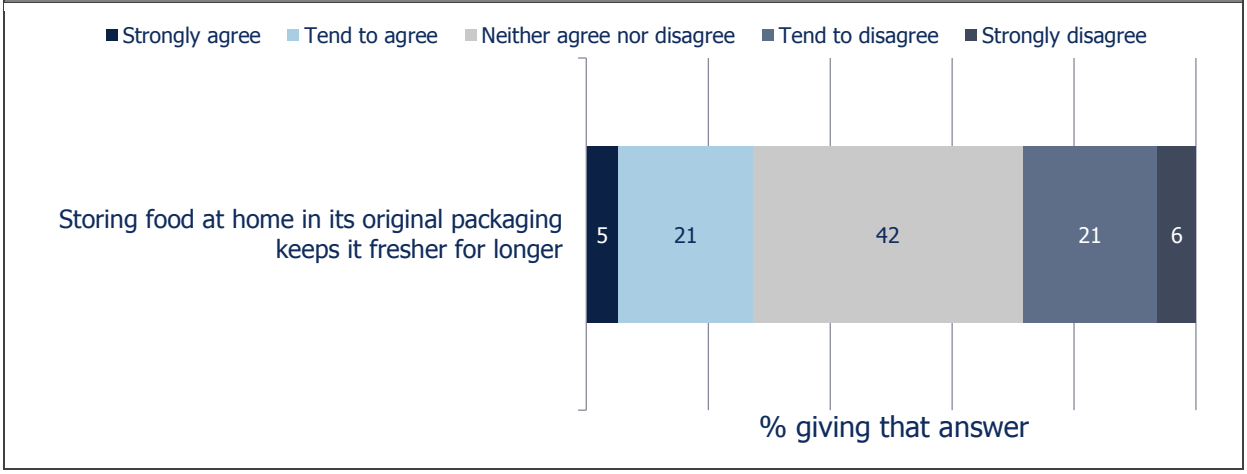
5.2 The role of packaging in home

While most consumers acknowledge and perceive value in packaging *in the supply chain* and *in store*, for many it appears to lose its perceived value as soon as it reaches the home. For example, only around one in four consumers (26%) agree with the statement '*storing food at home in its original packaging keeps it fresher for longer*', whereas a similar proportion disagree (27%) and a larger group (42%) neither agree nor disagree (Figure 11). The accompanied shops highlight that, for many, it is counter-intuitive to think that packaging helps in this way:

> *"I can't see how keeping something in a plastic bag would make it last for longer. The only thing I can think is that it wouldn't expose it to the air. But once you've opened the bag then surely it's exposed anyway?" F – Slough*

Figure 11 – the role of packaging in keeping food fresher for longer

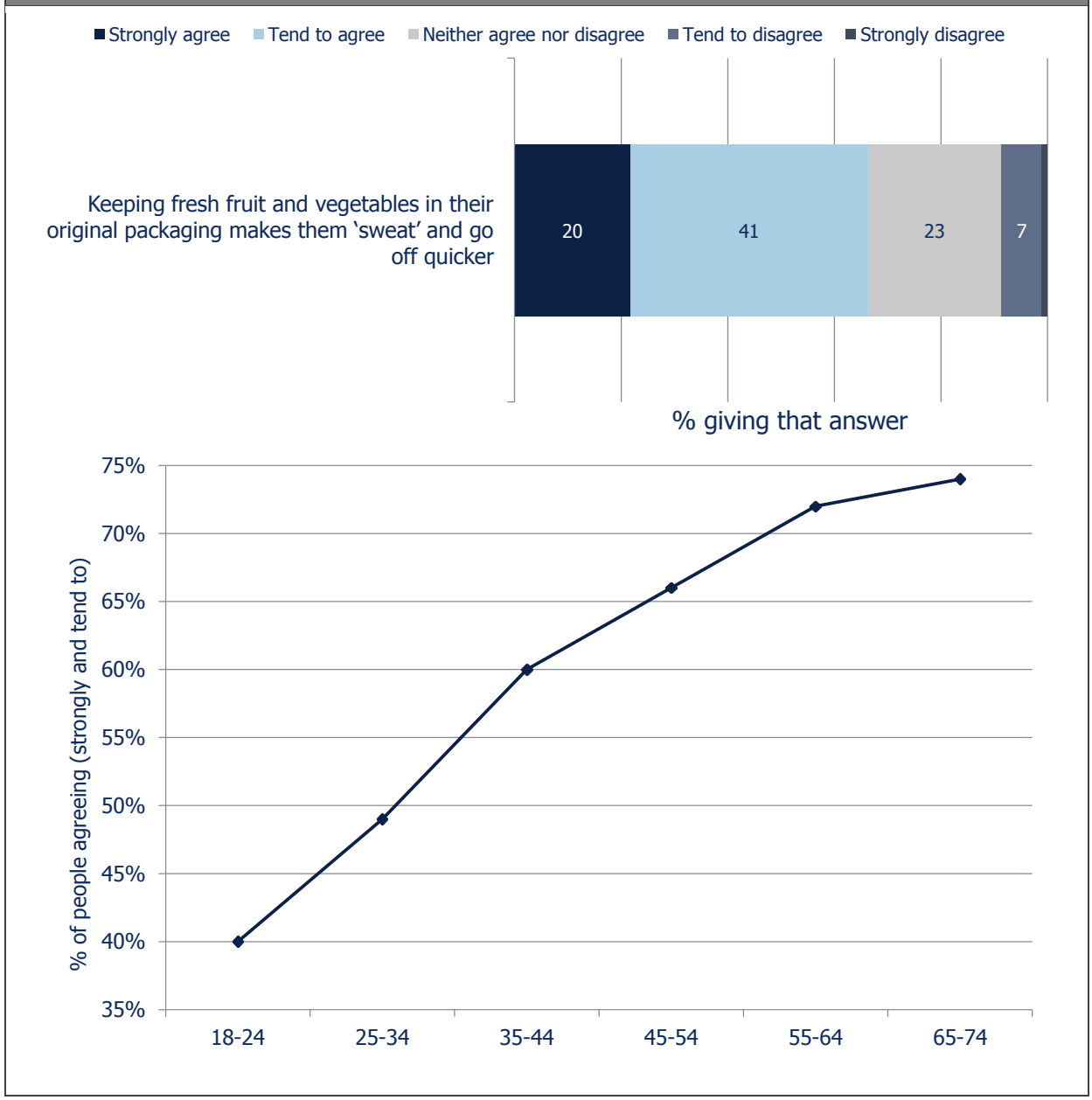
Question: *Here are some statements. Please tell us how much you agree or disagree with each one:*
Base: All (4102), Icaro survey Jul/Aug 2012



Furthermore, it appears that the reverse is actually the prevailing view at the current time, with approaching two in three (62%) in agreement with the statement '*keeping fresh fruit and vegetables in their packaging makes them sweat and go off quicker*' (Figure 12). The most pronounced sub-group difference is according to age, with older consumers much more likely to agree with this statement. Those who say they are 'very' environmentally friendly are also more likely to agree with this statement (70%).

Figure 12 – the role of packaging in keeping food fresher for longer

Question: *Here are some statements. Please tell us how much you agree or disagree with each one: (differences by age group shown on line graph below)*
Base: All (4102), Icaro survey Jul/Aug 2012



5.3 The link to recycling services

One of the key findings from the accompanied shops was that those participants with more comprehensive recycling services seemed to be less frustrated by packaging (i.e. they could dispose of it in an environmentally neutral way and could avoid 'throwing it away' or 'sending it to landfill').

"As long as it's not taking up space in my main bin then it's fine. Recycling is pretty good here and I know I can get rid of most stuff every Friday" F – Richmond

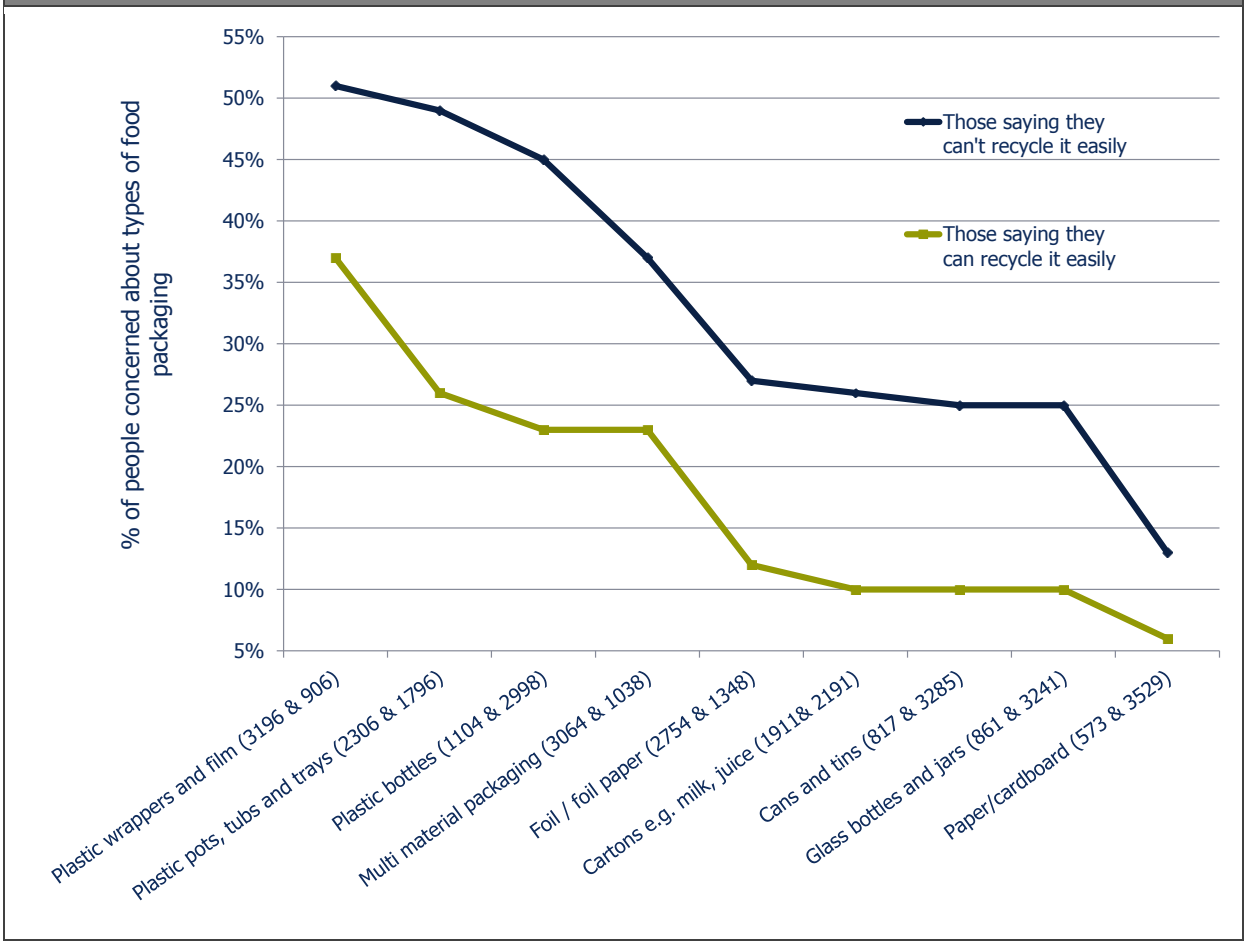
"I really don't mind packaging so long as it can be recycled" F – Reading

Therefore, and in the survey, two questions were asked: one about how easy or not consumers could recycle specific materials; and another asking about their level of concern about the same materials.

The results demonstrate a strong correlation between these two factors (Figure 13), with a significant and consistent gap between those consumers who can easily recycle the item (green line) and those who do not say they can easily recycle the item (red line). For example, plastic wrappers and film is a material of concern for 37% of consumers who can recycle this item easily and 51% of consumers who cannot recycle it easily. The gap is even more marked for plastic pots, tubs and trays (26% vs. 49%). Therefore, whilst concern about packaging materials cannot be completely removed simply by providing an easy means of recycling it, it does appear that it can be significantly reduced.

Figure 13 – The relationship between concern about packaging materials and ease of recycling them

Question: *Which of the following food packaging types, if any, most concern you? If so, which kinds? (Respondents could select all that applied)*
Base: Red line = 1st base figure in brackets; Green line = 2nd base figure in brackets, Icaro survey Jul/Aug 2012



The relationship between these two influences is also apparent in other parts of the survey. For example, and as Section 7 will show; recyclable packaging is joint second in terms of the improvements/developments that consumers would like to see in relation to packaging. Furthermore, and as this section has shown, one of the key perceived drawbacks of packaging for some consumers is that it is 'difficult to dispose of'.

6.0 Unpacking & storage strategies

This section turns to consumers' unpacking and storage of food in home, following on from their shop. This was done to build on past WRAP research[8] on in-home behaviours around packaged food – notably to identify the gap between 'optimal' and actual habits and how consumers interact with information provided by, and the functionality of, packaging.

It looks at the findings from the accompanied shops (6.1), consumers' confidence about their approach to storage (6.2); their storage approach for three specific products – apples, carrots and bananas (6.3); and the role of on-pack guidance (6.4).

6.1 Initial findings - accompanied shops

The accompanied shops highlighted a diversity of unpacking and storing strategies that consumers deploy. These are typically 'learnt' through a mixture of trial and error or from habits passed down / picked up, and some of these risk reducing the longevity of the product.

For example, one of the participants kept her vegetable oil in the fridge; another had a second freezer stocked with meals that she conceded often forgetting about and having to throw away; another admitting putting the new items on top of the older ones in the fridge; and another had a routine of piercing the packaging to 'let the food breathe'.
In other instances unpacking was a conscious and deliberate choice, for example to encourage healthy eating by using a fruit bowl to make it more visible and appealing to other family members. It appeared that, once habits had been formed, guidance on storage was rarely sought.

> *"I've never de-packaged. What I tend to do sometimes is open up a little air slot. My mum always did it as well, just so it doesn't mould up. I don't know really." F – Reading*

> *"I don't know [why I put veg oil in the fridge]. I suppose it was something my mother always used to do but I've not really thought about it. It does seem a bit silly now you mention it! " F – Ashford*

> *"I like to have the fruit bowl there so you can just walk up and get some fruit, to try to encourage healthy eating. So accessibility is important, and they look more appealing in a bowl than in the bag." F – Reading*

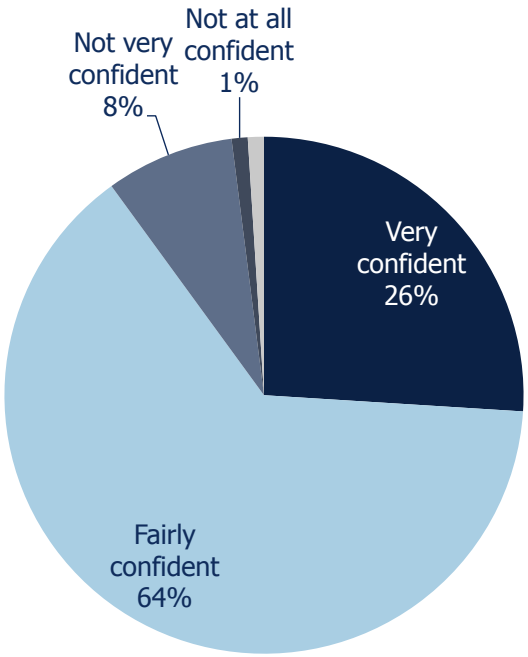
[8] http://www.wrap.org.uk/content/food-storage-and-packaging; http://www.wrap.org.uk/content/helping-consumers-reduce-fruit-and-vegetable-waste; http://www.wrap.org.uk/content/consumer-insight-date-labels-and-storage-guidance

6.2 Confidence

The vast majority (90%) of consumers say that they are 'very' or 'fairly' confident that they store their food in the best way to keep it fresh for as long as possible (Figure 14).

Figure 14 – Confidence in how to store food

Question: *Overall, how confident are you that the way in which you store your fresh fruit and vegetables is the best way to ensure that they stay fresh for as long as possible?*
Base: All (4102), Icaro survey Jul/Aug 2012



6.3 Storage strategies – three specific products

The survey explored how consumers unpack and store three specific products - apples, bananas and carrots. In this case 'optimal' is defined purely from the objective point of view of making the product last as long as possible i.e. leaving it in the packaging and un-opened until needed[9]. 'Sub-optimal' are any activities that compromise the life-span of the product such as piercing the bag or de-packaging altogether[10].

The results demonstrate that the majority of consumers have a sub-optimal approach and take both apples and bananas out of their original packaging and store them loose (58% and 63%, respectively - Figure 15). Only around one in six (15%) adopt an optimal approach and maintain some form of packaging. By contrast, carrots are the item out of the three that are most likely to be stored optimally – close to one in three consumers (32%) do this, compared to a similar proportion (34%) who take them out of the packaging and store loose.

[9] *http://www.wrap.org.uk/content/helping-consumers-reduce-fruit-and-vegetable-waste*

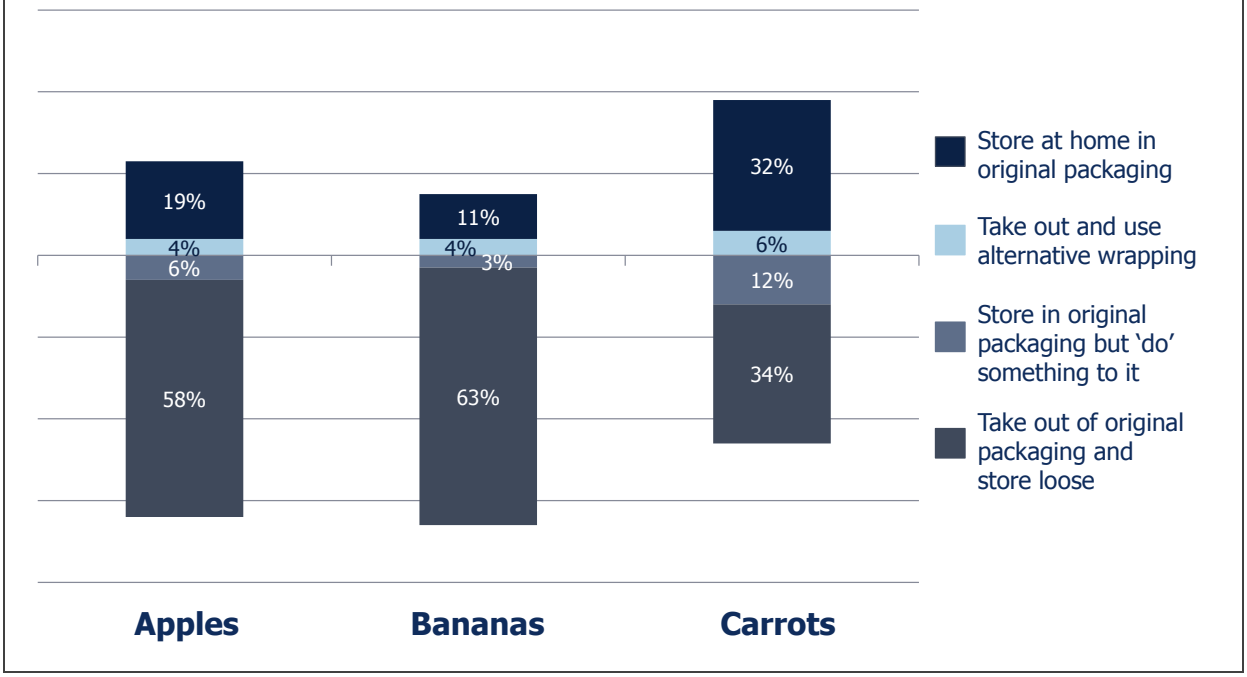
[10] *Different de-packaging strategies and their impacts will entirely depend on how quickly the food is used up – so whilst a family unpacking their bananas in this instance may be seen in a negative light they may well eat them up before they get near going off. This data is to show relative behaviours and the associated likelihood of various items being stored sub-optimally. De-packaging or keeping in the packaging is one aspect of optimal storage, storing in the correct location (e.g. the fridge for most fresh produce) is another.*

The survey finds that storage strategies vary by age, with close to one in three (34%) consumers aged 18-34 keeping their apples in the original packaging, compared to just 10% of those aged 55+.

Furthermore, those who are the *least confident* about whether they are storing their food in the best way are those *most likely* to be taking an optimal approach – taking apples as an example, 39% of those who are not confident leave them in the pack compared to 19% of those who say they are 'very' confident, showing that confidence does not necessarily equate to having an optimal approach.

Figure 15 – Home storage strategies

Question: *Thinking about the times when you have bought the following items in pre-packaged bags or trays; how do you store the items when you get home and you are putting the shopping away (i.e. before opening/using the product)?*
Base: All (4102), Icaro survey Jul/Aug 2012

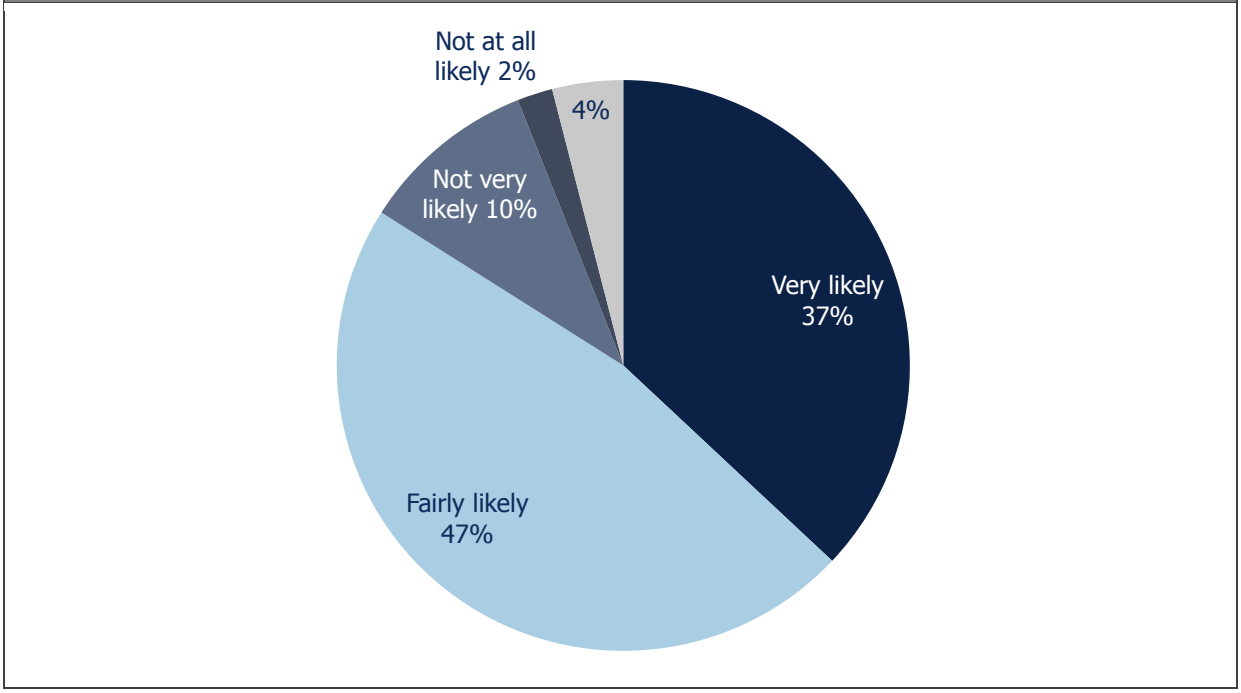


6.4 The role of on-pack guidance

The majority of consumers (84%) say that they are 'very' or 'fairly' likely to use on-pack storage advice if it was clearer and more prominent (Figure 16), compared to 12% who say they are unlikely to use such information.

Figure 16 – Likelihood of using advice

Question: *If there was clearer and more prominent information on the label about how to store the product in the most effective way/keep the item fresh for as long as possible, how likely would you be to use that information when you came to store food at home?*
Base: All (4102), Icaro survey Jul/Aug 2012

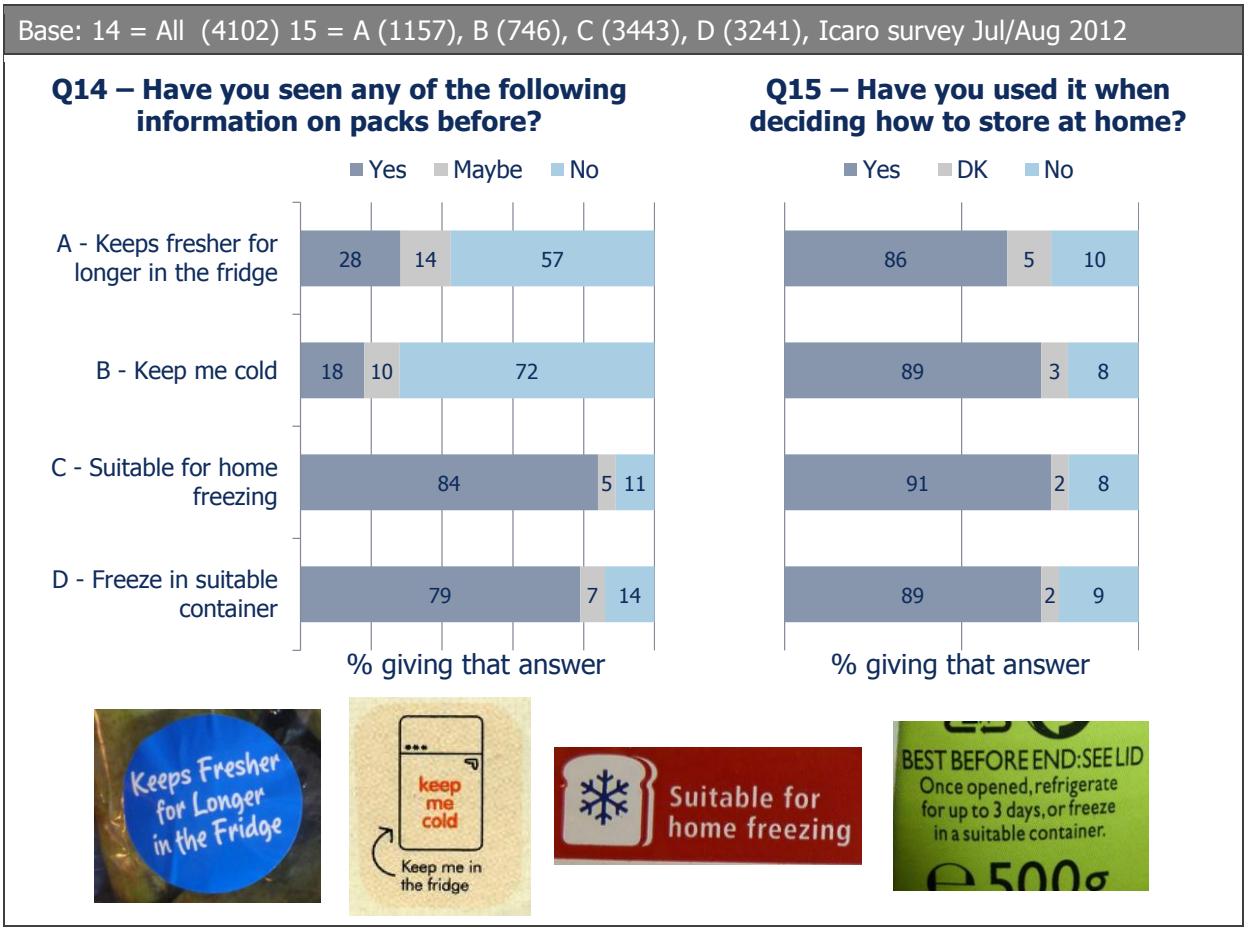


A demand for this kind of information was also evident in the accompanied visits:

> *"I'd be interested in how best to store my food. If there was a leaflet on how to, say, store bananas I'd be really interested. I don't want to go out, buy a pack of bananas, and then let half of them go off before I can eat them because I've stored them in the wrong way. If they said 'our packaging is designed to help your food last longer, and you should store it like this' then that would be really, really helpful." F - Reading*

Turning to existing on pack guidance about storage, the survey tested recognition of four pieces of information (the images used are shown in Figure 17[11]). The results demonstrate that large majorities of consumers have seen '*suitable for home freezing*' (84%) and '*freeze in a suitable container*' (79%). Far fewer, by contrast, have seen either '*keeps fresher for longer in the fridge*' (28%) or '*keep me cold*' (18%).

Figure 17 – Recognition, and use, of on-pack guidance about storage

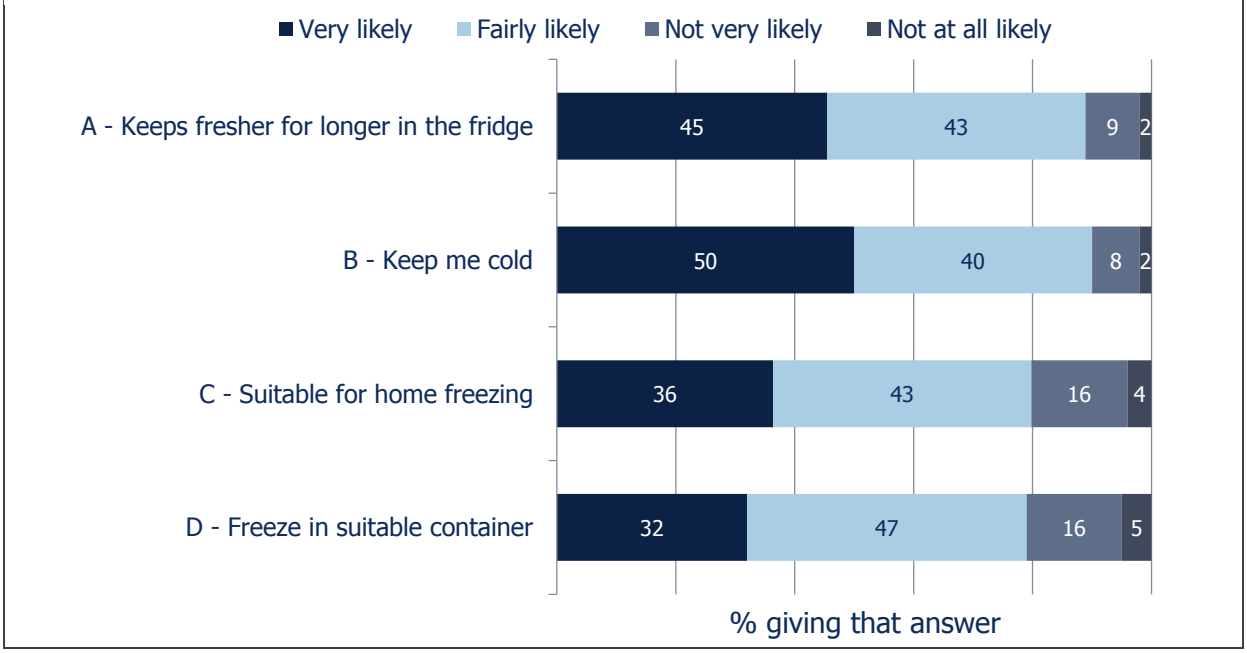


[11] *These were selected from a range of existing products to asses the impact of different types of storage guidance, presented in a variety of ways.*

Among those consumers who have seen this storage advice the vast majority say they have used this information when deciding how to store food at home - just over nine in ten (91%), for example, say they have used '*suitable for home freezing*'. Furthermore, those who have not seen the guidance are highly receptive to it – 90% say that they would likely use the guidance '*keep me cold*' and 88% '*keeps fresher for longer in the fridge*' (Figure 18).

Figure 18 – Propensity to use on-pack guidance about storage

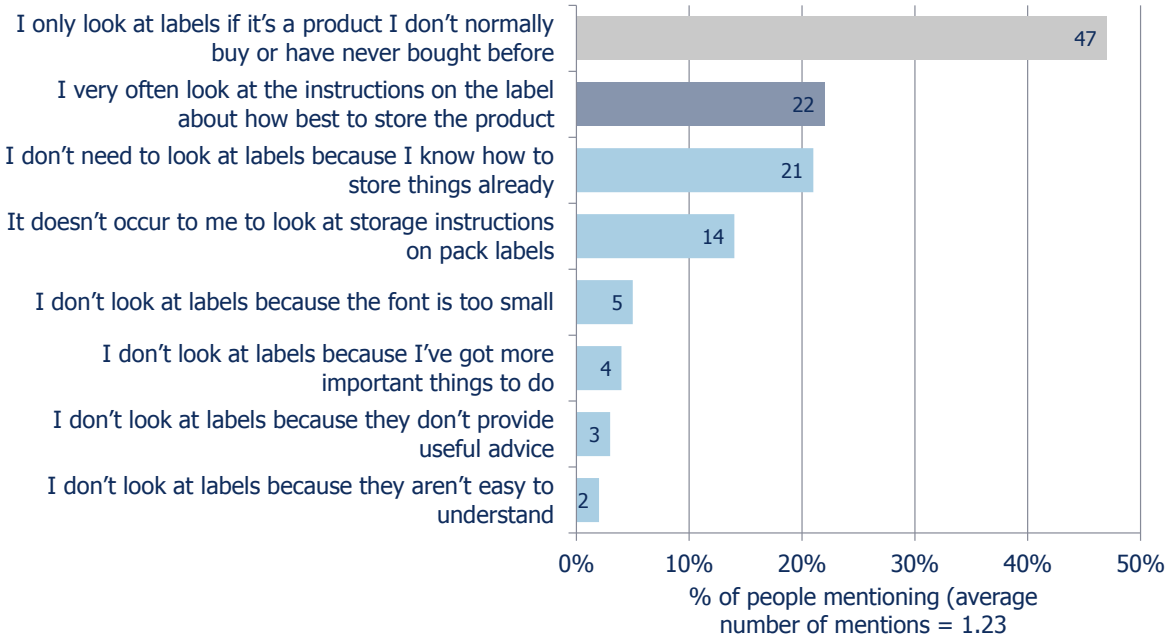
Question: *How likely is it, if you did see it, you would use this information when deciding how to store the product at home?*
Base: A (2945), B (3356), C (659), D (861), Icaro survey Jul/Aug 2012



Nonetheless, the results also demonstrate that consumers do not necessarily look regularly for information about storage. Indeed, only around one in five (22%) say that they 'very often' look at instructions on the label about how best to store the product (Figure 19). A much more common response, cited by 47%, is to seek on-pack information about storage *but only* for products that they haven't purchased before. A significant minority (21%) also say that they don't need to look for guidance because they know how to store things already.

Figure 19 – Propensity to look for on-pack information about storage

Question: *Which of these statements about storage instructions on packaging, if any, apply to you?*
Base: All (4102), Icaro survey Jul/Aug 2012



The accompanied shops also highlight the need for instructions to be fully understood by consumers and to avoid any level of ambiguity. For instance, the phrase 'keep cool' was criticised by some participants because it was unclear whether this meant refrigeration or not.

> *"Labels are usually quite cryptic – some specifically say the fridge and others say keep cool – what does this mean?! The fridge or not? "M – Epsom*

7.0 Recognition of, and demand for, developments in packaging

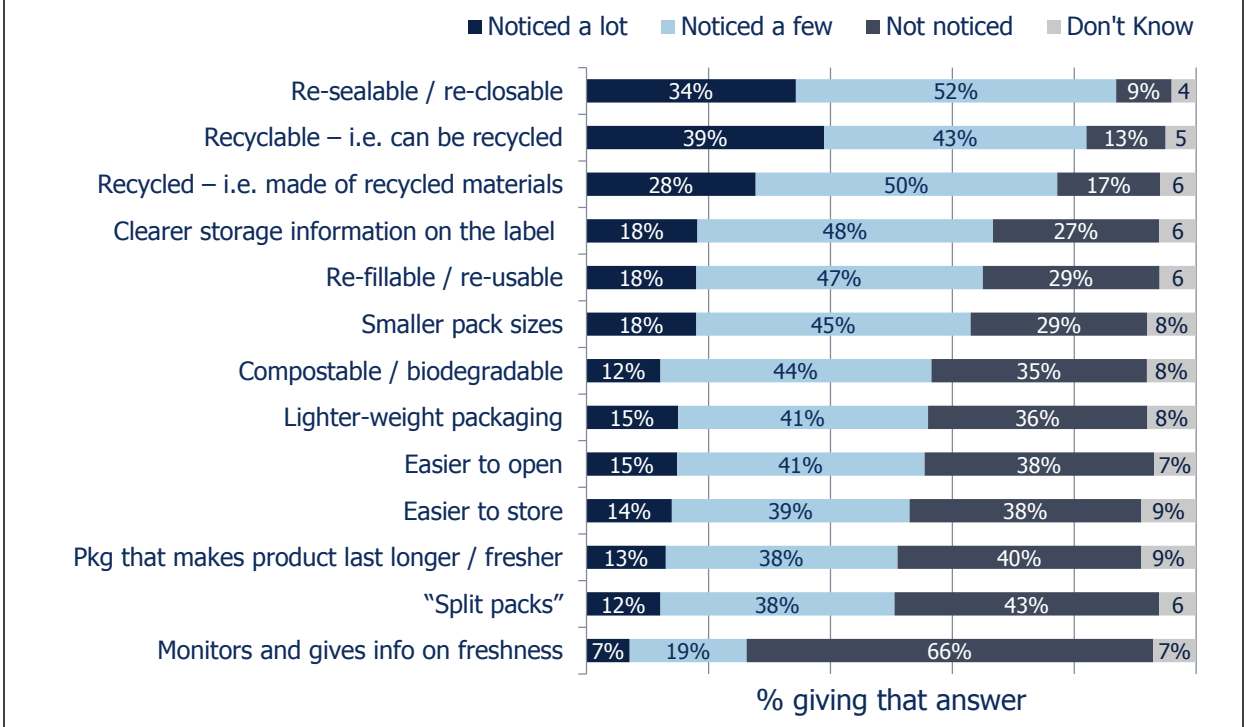
This section of the report explores consumers' recognition of developments in packaging (7.1) and which of these they consider to be the most useful (7.2). It also tests whether consumers recognise actions on the part of manufacturers and retailers to reduce the amount of packaging (7.3).

7.1 Recognition of developments in packaging

Some developments in packaging, such as re-closable packs, are already well recognised by consumers (Figure 20). The vast majority (86%) say they have noticed 'a lot' or 'a few' of these compared to 9% who say that they have not noticed any. Recognition is lower for packaging that makes products last longer/keep fresher (51%) and split packs (50%).

Figure 20 – Recognition of developments in packaging

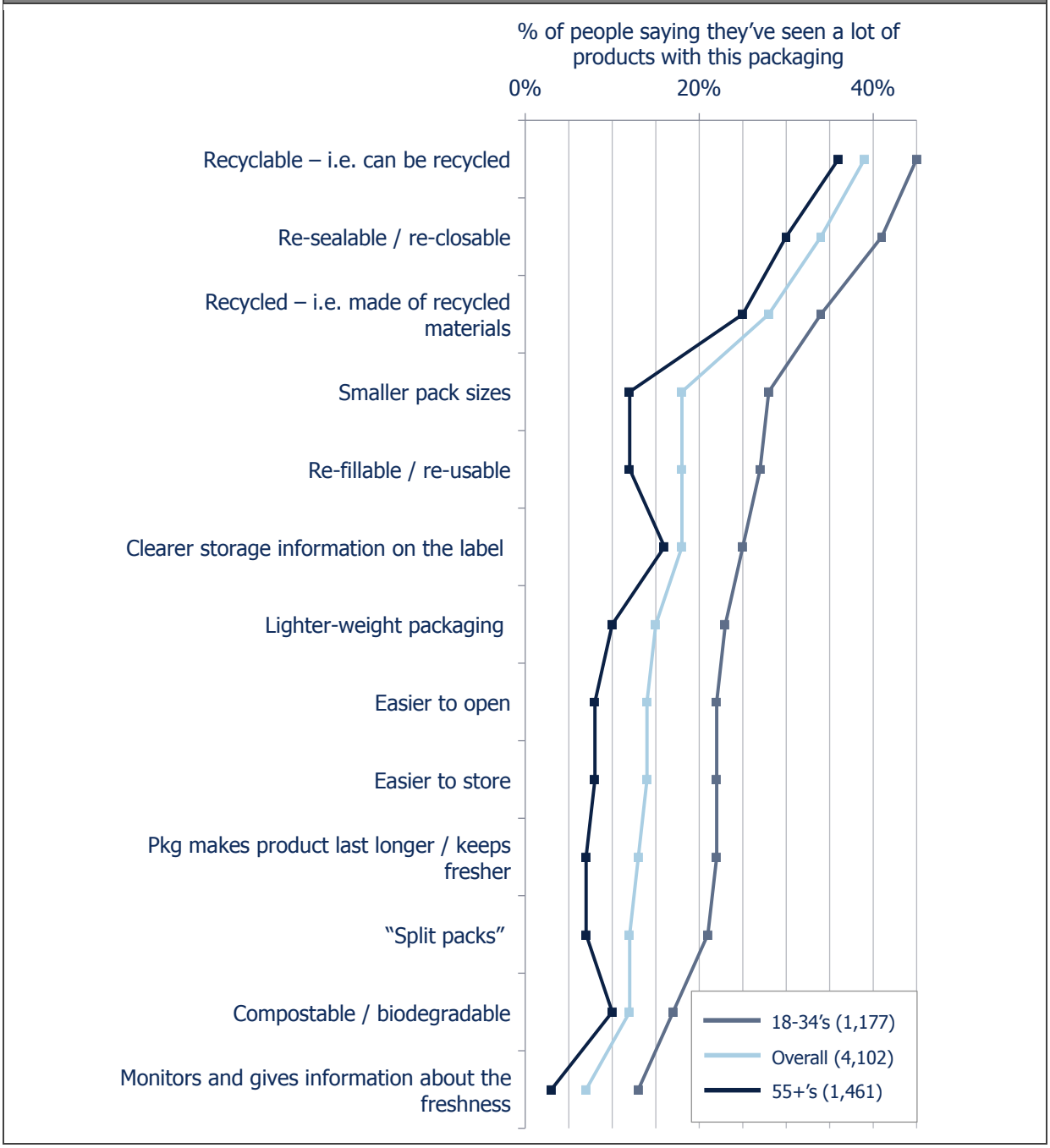
Question: *Here is a list of some of the recent changes to food packaging – as well as some possible additional changes in the future. To what extent, if at all, have you noticed these kinds of changes on packaging already?*
Base: All (4102), Icaro survey Jul/Aug 2012



The results demonstrate that those aged 18-34 are significantly more likely to say they have noticed 'a lot' of these developments in packaging. Figure 21 shows that for each type of packaging mentioned younger consumers are ahead of both over 55's and the overall score:

Figure 21 – Packaging innovations noticed 'a lot' according to age group

Question: *Here is a list of some of the recent changes to food packaging – as well as some possible additional changes in the future. To what extent, if at all, have you noticed these kinds of changes on packaging already?*
Base: As shown in legend, Icaro survey Jul/Aug 2012

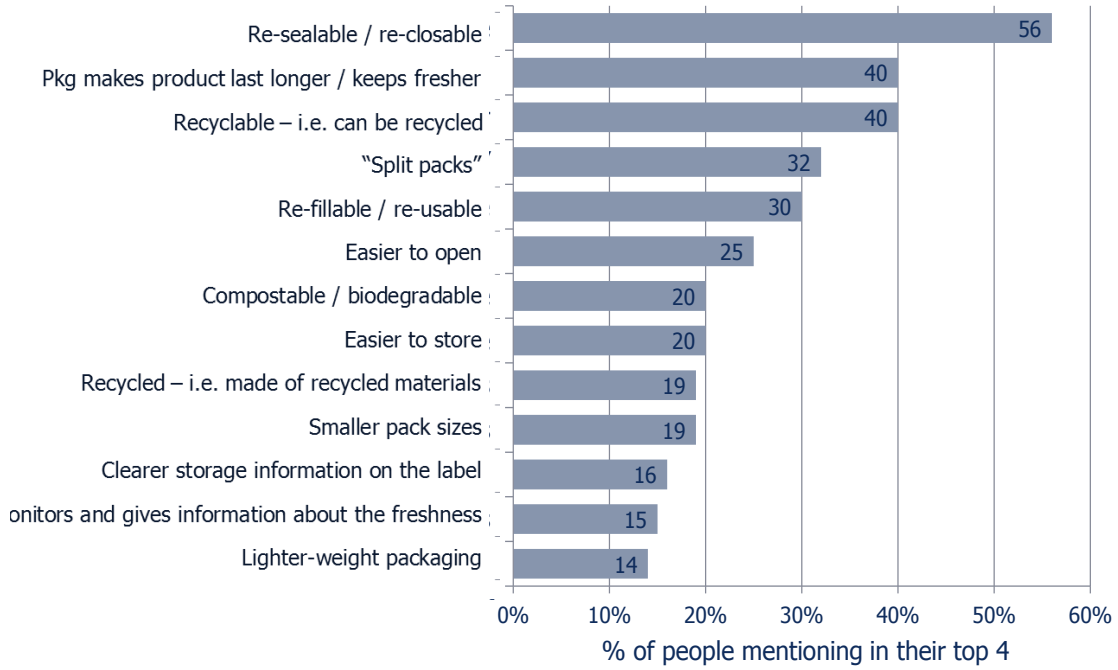


7.2 Demand for developments in packaging

When consumers are asked to select up to four of these developments in packaging that they find most useful (or would find most useful), re-closable packaging is the most frequently cited by some margin (56%) (Figure 22). It is followed by packaging that keeps the product fresher for longer (40%) and packaging that is recyclable (40%). Split packs (32%) and re-fillable/re-usable packaging (30%) are also both popular. In contrast, there is a lower demand for lighter-weight packaging (14%).

Figure 22 – Developments in packaging considered most useful by consumers

Question: *And which of these changes, if any, do you think are/would be most useful for you?*
Base: All (4102), Icaro survey Jul/Aug 2012



There are a number of notable differences by age-group, for example:

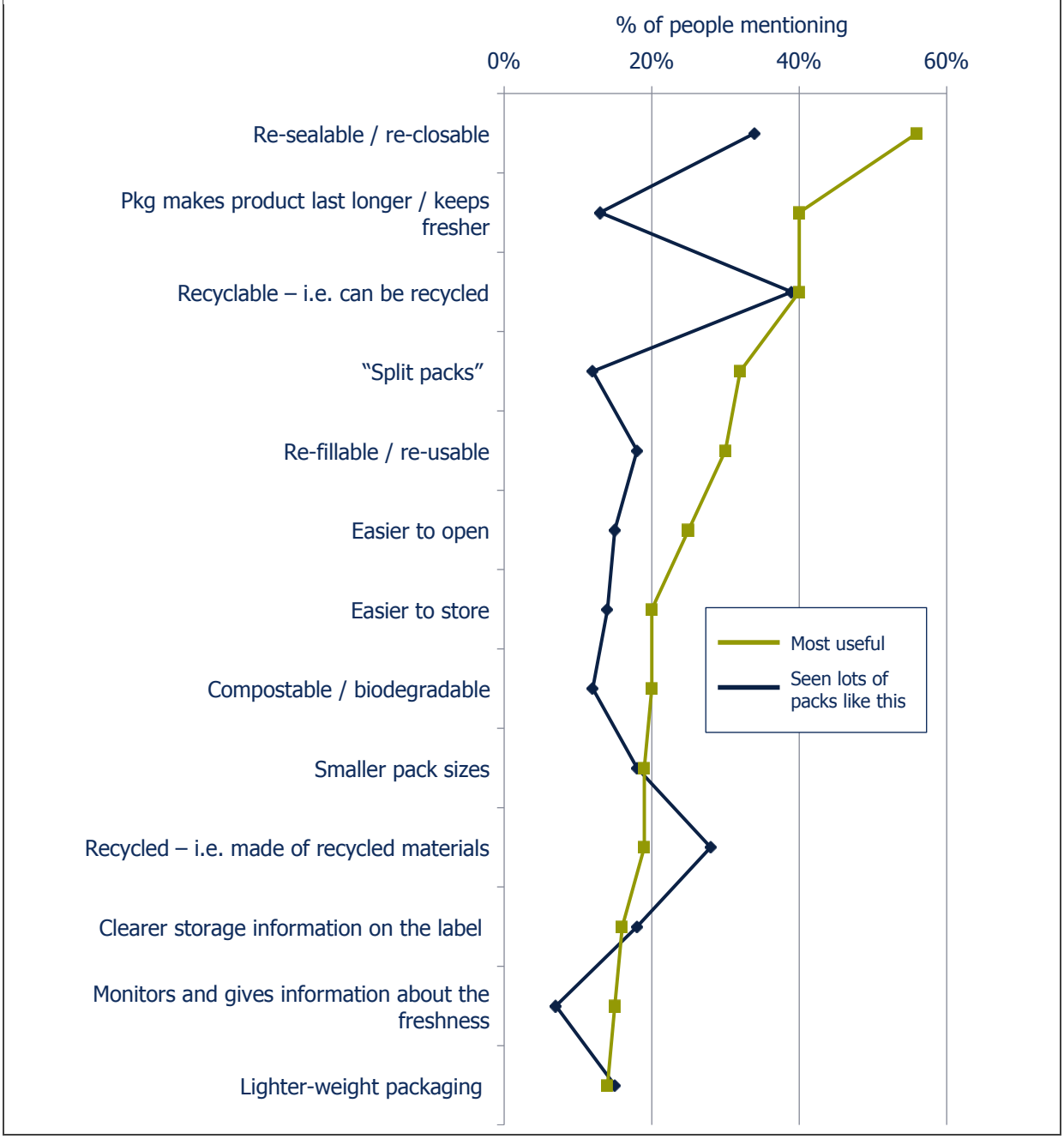
- Older consumers are more likely to cite:
  - Re-closable packaging: 57% of over 65's mentioning vs. 50% of 25-34's
  - Easier to open packs: 35% of over 65's vs. 22% of 18-34's
  - Smaller pack sizes: 26% of over 55's vs. 15% of 18-34's
  - Split packs: 35% of over 55's vs. 28% of 18-34's
  - Lighter weight packaging: 18% of over 55's vs. 10% of 18-34's

- Younger consumers, meanwhile, prioritise:
  - Packaging that makes the item last longer: 48% of 18-34's vs. 35% of over 55's
  - Packaging that is easier to store: 28% of 18-34's vs. 14% of over 55's

It is also instructive to plot what consumers say that they want from packaging against current levels of recognition in order to understand where there are potential gaps in awareness / availability (Figure 23). The blue line shows the percentage of consumers who have noticed 'a lot' of packaging like this while the green line shows the percentage who say that it is/would be most useful. This shows that there is still a large gap in awareness / availability for re-closable packaging, "split-packs" and packaging that keeps food fresher for longer. In other areas, such as providing packaging that can be recycled, 'supply' is currently well matched to 'demand'.

Figure 23 – Packaging innovations vs. what they want to see

Question: *What do they want vs. what have they already noticed*
Base: All (4102), Icaro survey Jul/Aug 2012

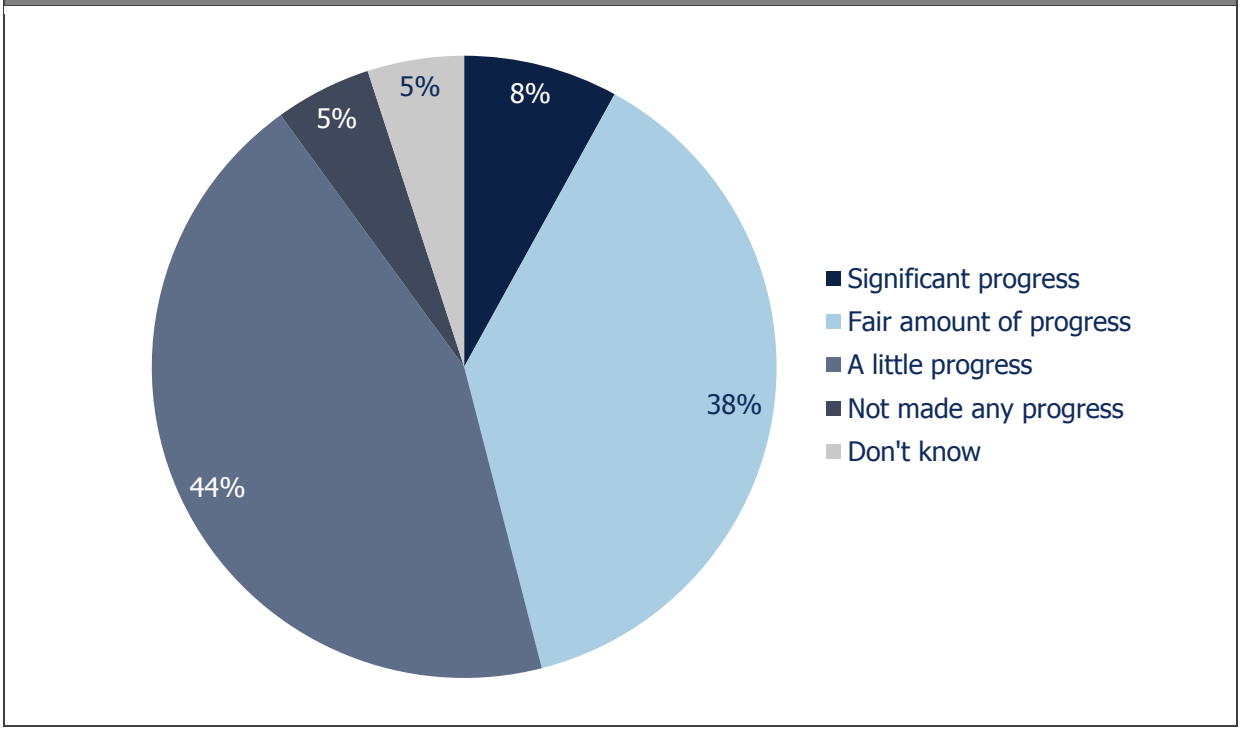


7.3 Recognition of progress by manufacturers and retailers

Nearly half of consumers (46%) say that food retailers and brands have either made 'significant' (8%) or a 'fair amount' (38%) of progress to reduce the amount of packaging in the past few years (Figure 24). A significant proportion (44%) say that retailers and brands have made 'a little progress', while only 5% say they have not made any progress.

Figure 24 – Progress

Question: *In terms of the progress that food retailers and brands have made on reducing the amount of packaging in the last couple of years, do you think that…?*
Base: All (4102), Icaro survey Jul/Aug 2012



Younger consumers aged 18-34 are much more likely to say the industry has made significant progress (16% compared to just 2% of those aged 55+). Furthermore, those who say they are 'very' environmentally friendly are also more likely to say that significant progress has been made (20% compared to just 3% who say they are 'not very' / 'not at all' environmentally friendly).

There was also some acknowledgment of progress in the accompanied shops:

> *"They don't have those extra sleeve things anymore, so it seems like there's a bit less packaging which is good." F – Barnes*

> *"I've noticed that the meat is now in a bag, not the plastic tray like before. I am assuming – and it is an assumption – that they've done that to reduce packaging. I like it." F – Reading*

8.0 How does information influence consumers' attitudes to food packaging?

This section explores how consumers respond to messages around packaging and, in particular, whether their attitudes appear resistant, or open, to change. The survey sample was split into two halves (i.e. 2 x 2,000), with half shown five positive and factually correct statements about packaging (8.1) and the other half shown six statements with an equal number of positive and negative statements (8.2).

A question and answer scale was developed to track the impact of each of the statements. Prior to seeing the statements, consumers were asked to place themselves on a scale of 0-100 with a slider bar in terms of how much of a problem they consider packaging to be (where 0 = not a problem and 100 = a major problem). Then, after each statement, they were asked to move the slider bar (if the message had changed their opinion) or leave it where it was (if their opinion had not changed). The statements were randomised to ensure that they appeared in different orders.

There are two benefits to this style of question; one is to determine to what extent new information can potentially affect consumer attitudes (which in turn may influence behaviour) and the other to investigate the potential relative impact of different types of messages received by consumers.

8.1 Impact of information I – five positive statements

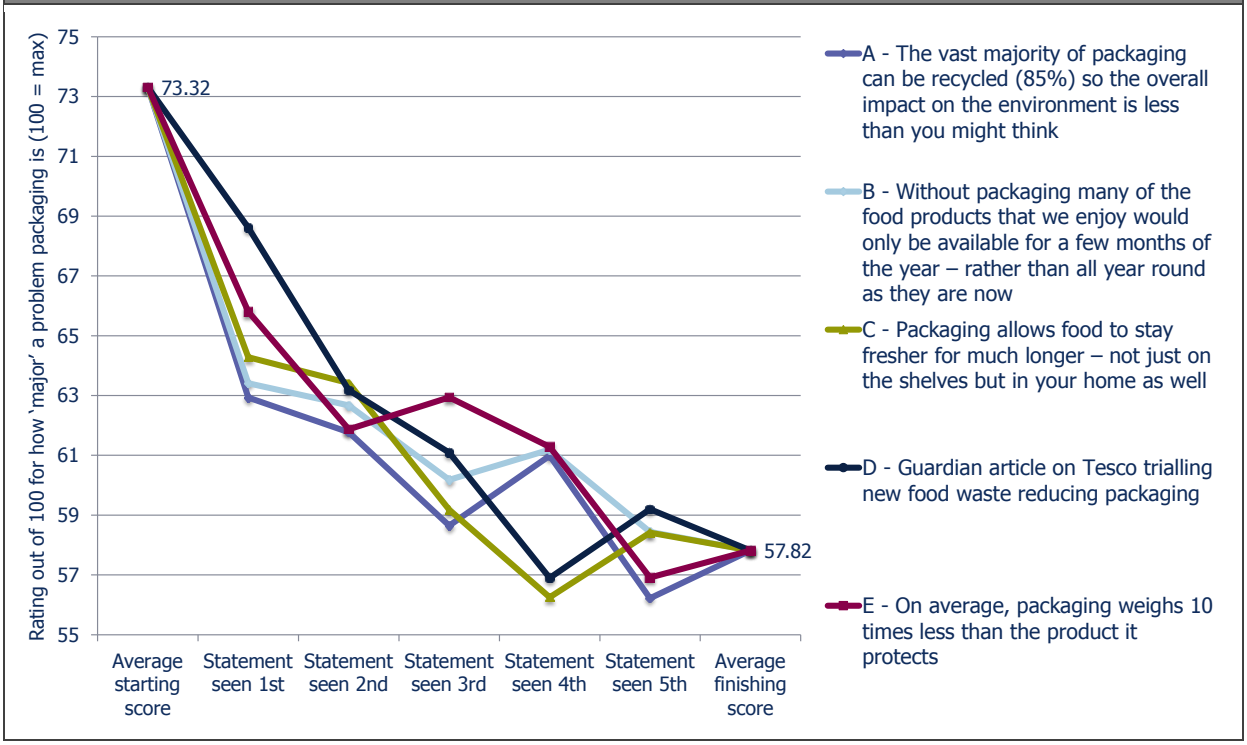
The half of the sample subject to the five positive statements initially gave packaging a 'problem score' of just over 73/100 (to put this into context, food waste scored 71/100 – see Section 10). This dropped 15.5 points following the five statements to just below 58/100, representing a 21% reduction (Figure 25).

Some groups are more likely to change attitudes than others – for example, women were influenced more by the statements (dropping an average of 18.3 points compared to 12.8 for men), while those who say they are 'very' environmentally friendly also moved more than those who are (albeit starting with a higher 'problem' score initially).

Furthermore, most of the change in score occurred after the first two messages, with those seen third, fourth or fifth only bringing about incremental changes. Statements A, B and C were most effective when they were shown early; whereas Statements D and E were less effective.

Figure 25 - Change in response to five positive statements about packaging

Question: *How much of a problem do you consider packaging to be? (sliding scale from 0 – it's not a problem to 100 – it's a major problem)*
Base: All those routed to Q27 (2053), Icaro survey Jul/Aug 2012



To gauge the relative effectiveness of each statement the **average movement** – irrespective of the order in which it appeared – is a useful measure (Figure 26). This demonstrates that Statements A and C were the most effective, on average, when presented in a set of five statements – causing a positive shift of 4.4 and 4.1 percentage points respectively.

Statement A deals with how recyclable packaging is while Statement C touches on packaging's role in keeping food fresher for longer which, as we have seen earlier in this report, is an under-appreciated benefit.

Statement B, by contrast, is effective when it is shown first but less so when it is shown later, resulting in an average shift in opinion of 3.1 percentage points. Figure 25 also reiterates how later messages (whichever they may be) cause few shifts in opinion and, around the 4th and 5th messages seen, no further shifts are apparent (and, with Statement E in particular, the results go in the opposite direction, i.e. concern about packaging actually increases).

Figure 26 – Change in response to five positive statements

Question: *How much of a problem do you consider packaging to be? (sliding scale from 0 – it's not a problem to 100 – it's a major problem)*
Base: All those routed to Q27 (2053), Icaro survey Jul/Aug 2012

Statement	Seen 1st	Seen 2nd	Seen 3rd	Seen 4th	Seen 5th	Overall movement
27a - The vast majority of packaging can be recycled (85%) so the overall impact on the environment is less than you might think.	-9.19	-3.57	-2.9	-2.82	-3.55	-4.44
27c - Packaging allows food to stay fresher for much longer – not just on the shelves but in your home as well. Most fresh fruit & vegetables, such as peppers, carrots and oranges, will last for at least a week longer if kept in the fridge, and two weeks longer if kept in their original packaging in the fridge.	-8.91	-4.04	-3.16	-2.01	-2.23	-4.04
27b - Without packaging many of the food products that we enjoy would only be available for a few months of the year – rather than all year round as they are now.	-9.75	-2.11	-2.89	0.29	-1.2	-3.11
27e - On average, packaging weighs 10 times less than the product it protects	-7.99	-2.17	-0.42	0.17	0.11	-2.06
27d – Guardian article on new Tesco packaging to reduce food waste	-5.74	-0.48	-1.54	-0.74	-0.65	-1.84

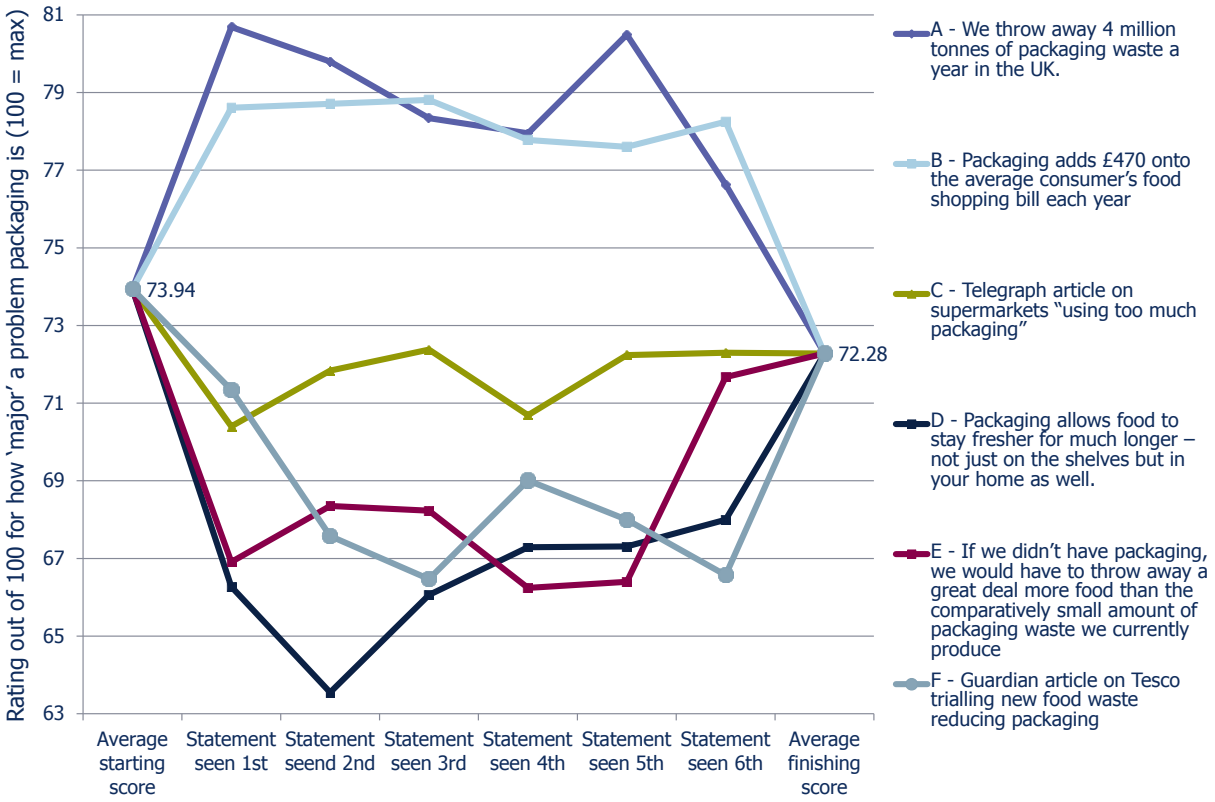
8.2 Impact of information II – three positive statements; three negative statements

The other half of the sample was subjected to a potentially more realistic scenario, i.e. a mix of competing positive and negative messages (Figure 27). These consumers initially gave packaging a 'problem score' of around 74/100 (virtually identical to their counterparts in the other half). The results demonstrate that both sets of messages – both positive and negative - have an impact on the scores. Once again, the early statements create most of the shift – with Statements A and B very effective at increasing concern about packaging; and Statements D and E likewise effective at decreasing concern about packaging.

Even though the individual statements bring about shifts in attitudes, the overall net impact is much smaller – with an overall decrease in concern of 2 percentage points to around 72/100. The analysis still demonstrates the scope to inform consumers' views towards packaging but that, alongside competing negative messages, this is more challenging.

Figure 27 – Change in response to three positive and three negative statements about packaging

Question: *How much of a problem do you consider packaging to be? (sliding scale from 0 – it's not a problem to 100 – it's a major problem)*
Base: All those routed to Q27N (2049), Icaro survey Jul/Aug 2012



The assessment of responses to different statements and messages around food packaging (this section) and food waste (section 9), using a methodology not used previously in this area, shows the impact, both positive and negative, of different statements and combinations of statements. This will inform the development of more effective communications to help consumers make better informed decisions about what products to buy, and how to ensure that less is wasted in the home.

9.0 Consumer attitudes to food waste

This section of the report outlines the key findings that relate directly to food waste. It looks at consumers' recognition of food waste as a problem (9.1); and the scope to influence attitudes (9.2).

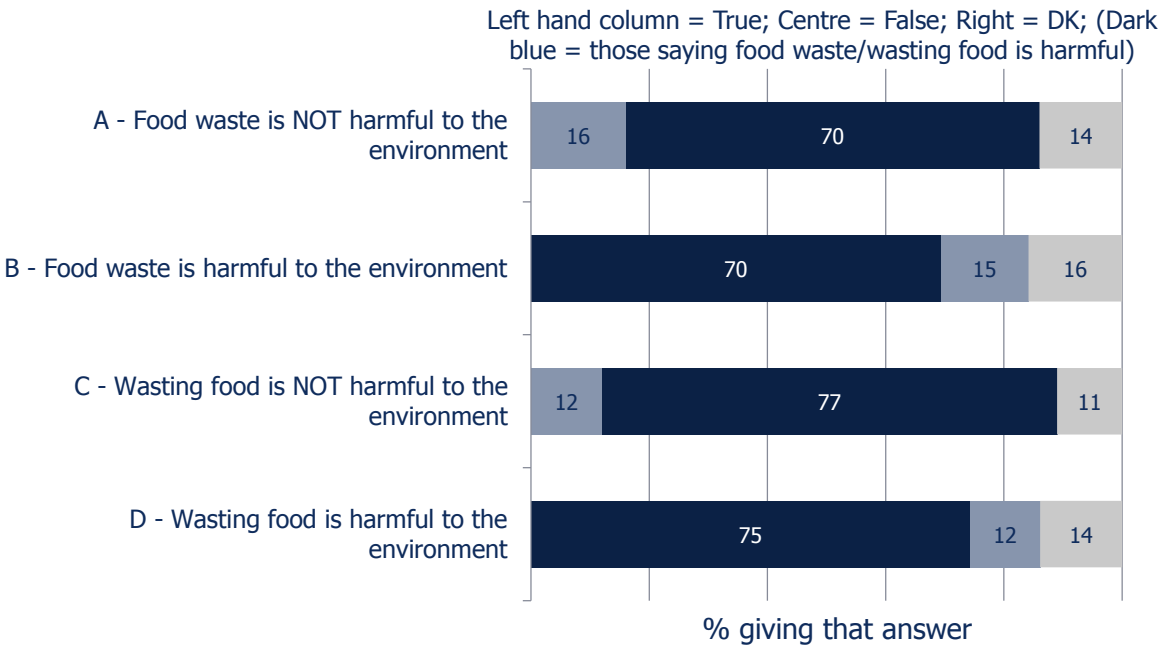
9.1 Recognition of food waste as a problem

The survey directly tested the extent to which consumers consider food waste to be an environmental problem. The sample was split into quarters (i.e. 4 x 1,000) to test the impact of asking the question in reverse and with different wording (specifically '*food waste*' vs. '*wasting food*'). The results demonstrate that, irrespective of question wording, consumers do think food waste has an environmental impact (Figure 28). For example, among the sample of consumers who were given the statement '*Food waste is harmful to the environment*' seven in ten (70%) said that this is true. Likewise, and among the sample of consumers who were shown the statement '*Food waste is not harmful to the environment*', the same proportion (70%) said that this is false.

This trend was repeated when the words 'wasting food' were substituted in for 'food waste'. In fact, with this small tweak in question wording, recognition of the issue as a problem increased - 76% said that the statement '*Wasting food is harmful to the environment*' is true.

Figure 28 – Food waste as an issue

Question: *Please tell us whether you think the following statements are true or false?*
Base: A (1026), B (1026), C (1025), D (1025), Icaro survey Jul/Aug 2012, DK = don't know



There are some variations across different groups of consumers. For example, and using the statement '*wasting food is harmful to the environment*' as an example, older consumers aged 65+ are more likely to say that this is true (83% vs. 69% of those aged 18-24), as are consumers who say that they are 'very' environmentally friendly (90% vs. 66% of those who are environmentally friendly in 'one or two things'). The same is also true of those who strongly agree that packaging is a major environmental problem (83% vs. 68% of those who disagree) – again suggesting that attitudes to packaging are not blocking food waste messages (and if anything the reverse is true, i.e. those *most* concerned about packaging are also *most* concerned about food waste).

Turning to the list of open ended reasons that consumers give as to why they think that food waste is bad for the environment (Figure 29), '*landfill*' was the top answer (14%), followed by '*causes gases*' (10%), '*causes over-production*' (9%) and '*waste of resources*' (9%).

Figure 29 – Why food waste is bad

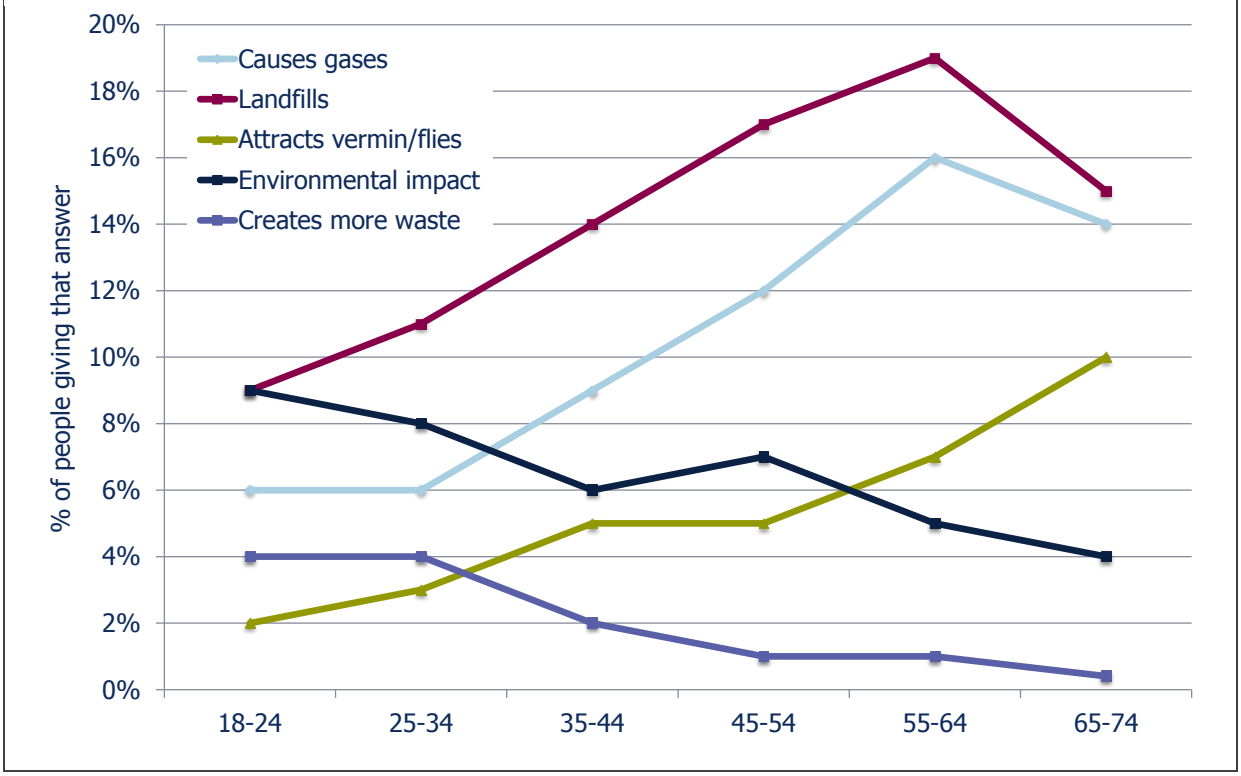
Question: *Your answer before last indicated that you think food waste is bad for the environment. Please tell us here the reason(s) why you think it is bad for the environment:*
Base: All those saying food waste is harmful at Q17 (2986), Icaro survey Jul/Aug 2012. N.B. *Cluster %'s add up to more than 100 overall as people could give multiple reasons.*

Overall category	Reason why food waste is bad for the env.	% mentioning	Cluster %
Disposal	Landfills	14%	**64%**
	Cause gases	10%	
	Has to be disposed of	8%	
	Environmental impact	7%	
	Attracts vermin/flies	6%	
	It rots	4%	
	Spreads disease/bacteria/health issues	3%	
	It smells	3%	
	Cost of disposal/recycling	2%	
	Creates more waste	2%	
	Pollution	2%	
	Takes a long time to decompose/isn't biodegradable	2%	
	More rubbish	1%	
Ethical	People are starving in the world/could go to people more needy	3%	**6%**
	Waste is bad	2%	
	Shouldn't waste food	1%	
Waste of resources	Causes over production	9%	**42%**
	Waste of resources	9%	
	Air miles/transport costs	8%	
	Energy consumed/wasted	6%	
	Cost of production	4%	
	Wastes money	3%	
	Increases carbon footprint	2%	
	Climate change/greenhouse effect/ozone layer	1%	

Looking at the responses according to age, older consumers are much more likely to give answers relating to '*landfill*' and '*causes gases*' (Figure 30). In contrast, younger consumers are more likely to give answers such as '*environmental impact*' or '*creates more waste*'.

Figure 30 – Why food waste is bad

Question: *Your answer before last indicated that you think food waste is bad for the environment. Please tell us here the reason(s) why you think it is bad for the environment:*
Base: All those saying food waste is harmful at Q17 (2986), Icaro survey Jul/Aug 2012



The accompanied shops also provided some more detailed insights. In particular, they suggest that recognition of food waste was not as resounding and unequivocal as the survey data might imply – for two different reasons.

- Firstly, there was a view among some participants that food waste is less of a problem because it is biodegradable. One of the messages tested in the visits[12], based around the release of methane, was particularly effective because some of the participants needed a scene setter to understand the underlying problem.

  "Is it really? I thought food degraded itself and didn't give off, like, these gases." F – Slough

- Secondly, there appears to be a subtle but significant difference between acknowledging an issue in general and acknowledging it in the context of your own home / personal behaviour. Indeed, the majority of participants in the accompanied shops didn't think that *their* household wasted food. While this may have been true in some cases for others it was apparent that they were wasting food and yet they still did not perceive themselves to be 'food wasters':

[12] *The test message read:* Food doesn't just rot away in landfill; it gives off methane which is 20 times worse for the environment than carbon dioxide

"I don't think I throw much away, just a bit of salad here and there maybe." F – Slough

It seemed that food waste was acceptable in some cases as long as there was no intention to waste it, or if there were some mitigating circumstance that pushed it outside their control (e.g. unexpectedly going out for a meal).

"I don't know if I waste food. Well, I do for some little things. But it's not intentional" M – Slough

"I bought those fish-cakes last week but then was out with my friends" F – Twickenham

9.2 How does information influence consumers' attitudes?

Following on from the packaging 'change in attitudes' question (see Section 8.0); a similar version was used to test a series of statements about food waste. Once again the sample was split into two halves (i.e. 2 x 2,000), this time with the aim of doubling the number of statements that could be tested). Consumers were asked, prior to seeing any statements, to rate how much of a problem they consider food waste to be (on a scale of 0-100 where 0 = not a problem and 100 = a significant problem). Then, following each of the statements, they were asked to adjust their ratings accordingly (or leave them the same).

The starting scores for each half of the sample (c.71/100) were very similar to those for packaging. After seeing the statements, both halves of the sample were around 9 percentage points more concerned about food waste (Figures 31 and 32).

In both instances much of the movement occurs with the first two statements, and in both cases there appear to be statements that are more and less effective. In Figure 31, A and C are particularly effective, in contrast to statement B. In Figure 32, and for the other half of the sample, statement B is particularly strong while D is weak.

Figure 31 – Change in response to statements about food waste

Question: *How much of a problem do you consider food waste to be? (sliding scale from 0 – it's not a problem to 100 – it's a major problem)*
Base: All those routed to Q18 (2058), Icaro survey Jul/Aug 2012

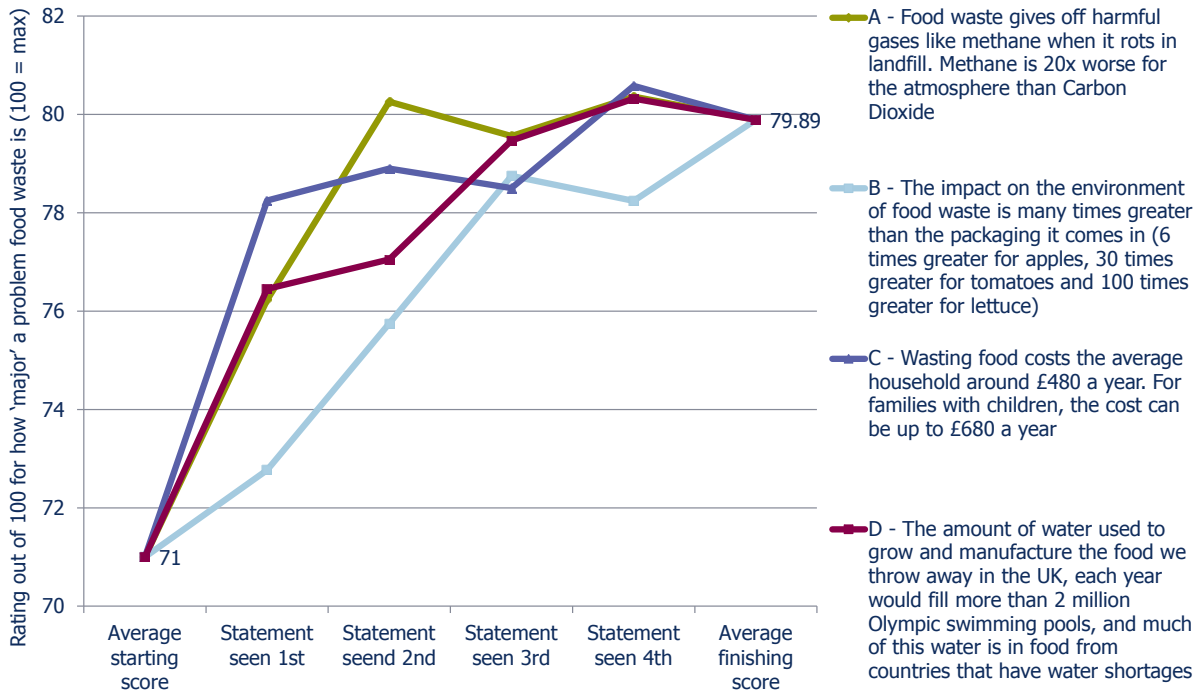
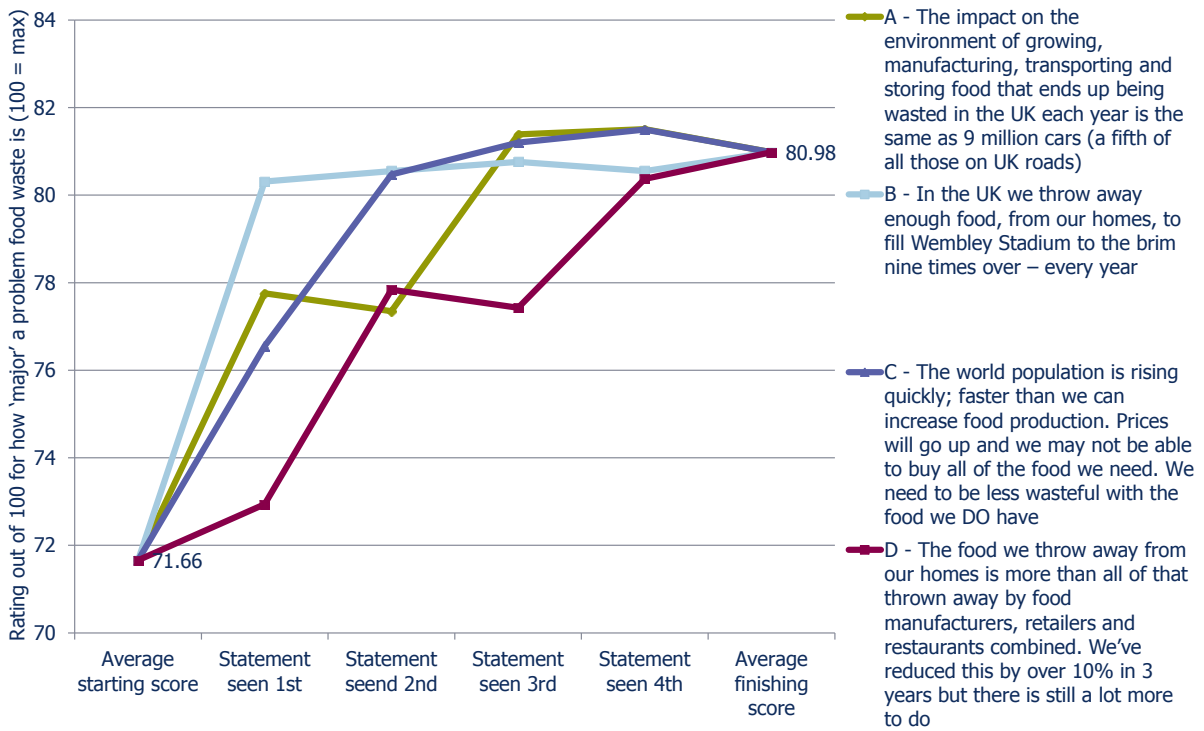


Figure 32 – Change in response to statements about food waste (alternate statements)

Question: *As above*
Base: All those routed to Q18N (2044), Icaro survey Jul/Aug 2012



Analysis of the results across different groups of consumers also demonstrates that some are more changable than others. For example:

- Women are more likely to shift their opinion (+10.4 percentage points on average, compared to men (+7.4);
- Housewives/househusbands are the most strongly influenced, with their 'seriousness rating' increasing by 11.2 points;
- There is a clear gradient of responses according to how environmentally friendly consumers say they are (Figure 33). Those who say they are 'very' environmentally friendly tend to shift least in response to the messages – but then again they already rated the issue seriously from the outset. Slightly larger shifts are evident for those who say they are 'not very' environmentally friendly, or environmentally friendly 'in one or two things'.

Figure 33 – Change according to environmental disposition

Question: *How much of a problem do you consider food waste to be?*
Base: All those routed to Q18 (2058), Icaro survey Jul/Aug 2012

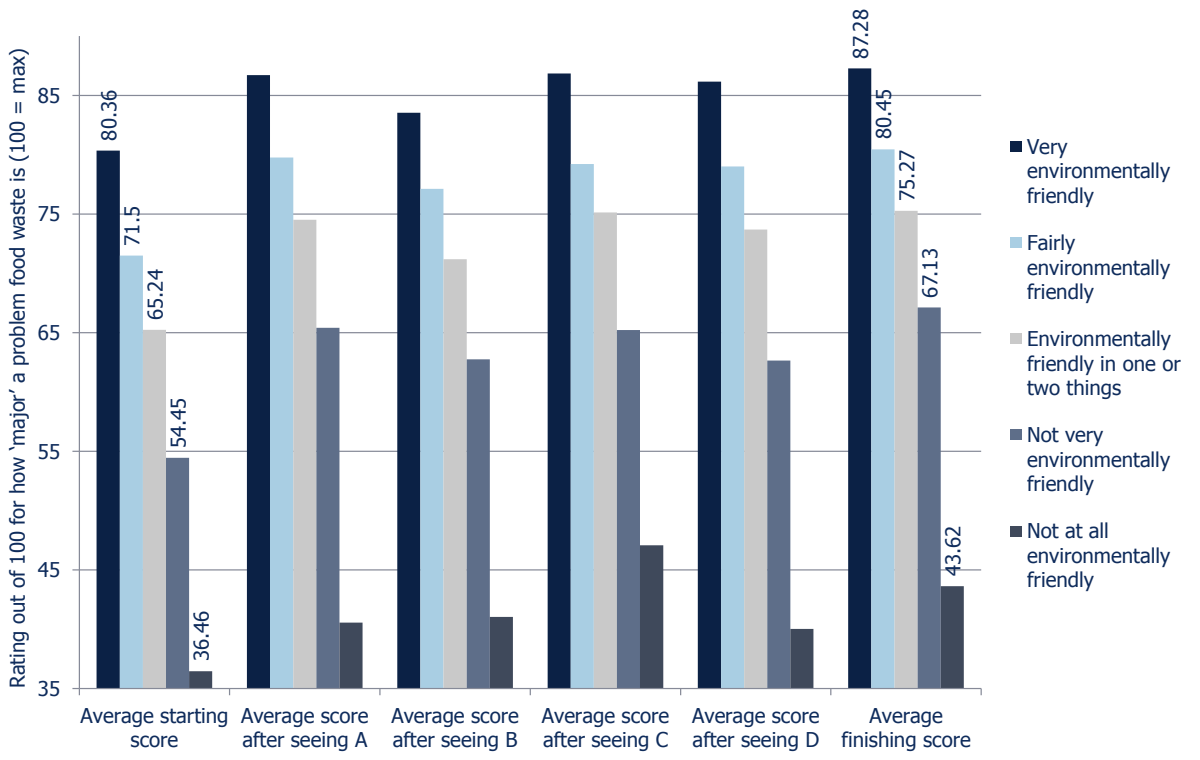


Figure 34 shows all eight statements and their relative performance depending on when they were shown. Note that a positive number means they have been persuaded to think the issue is more serious; whilst a negative number means the statement caused them to worry less about food waste.

The three most effective statements are also the three shortest in comparison with the others – each dealing with one key issue and putting it into context: relating the amount of food to a famous landmark, putting a monetary value on it and showing that it is not as harmless when degrading as consumers think.

Notably for this research the statement that compares food waste and packaging (18B) is one of the least effective messages which actually does more harm than good to overall opinions.

Figure 34 – Change in response to statements about food waste (combined)

Question: *How much of a problem do you consider food waste to be?*
Base: All those routed to Q18 (2058) & Q18N (2044), Icaro survey Jul/Aug 2012

Statement	Seen 1st	Seen 2nd	Seen 3rd	Seen 4th	Overall movement
18Nb - In the UK we throw away enough food, from our homes, to fill Wembley Stadium to the brim nine times over – every year	**8.22**	**4.53**	**2.9**	**2.12**	**4.39**
18C - Wasting food costs the average household around £480 a year. For families with children, the cost can be up to £680 a year	**7.09**	**4.12**	**1.7**	**1.35**	**3.57**
18A - Food waste gives off harmful gases like methane when it rots in landfill. Methane is 20x worse for the atmosphere than Carbon Dioxide	**5.83**	**3.74**	**2.52**	**1.81**	**3.44**
18Nc - The world population is rising quickly; faster than we can increase food production. Prices will go up and we may not be able to buy all of the food we need. We need to be less wasteful with the food we DO have	**4.72**	**3.09**	**2.1**	**2.07**	**2.98**
18Na - The impact on the environment of growing, manufacturing, transporting and storing food that ends up being wasted in the UK each year is the same as 9 million cars (a fifth of all those on UK roads)	**6.17**	**1.78**	**1.06**	**1.07**	**2.55**
18D - The amount of water used to grow and manufacture the food we throw away in the UK, each year would fill more than 2 million Olympic swimming pools, and much of this water is in food from countries that have water shortages	**5.32**	**1.95**	**0.84**	**0.46**	**2.12**
18B - The impact on the environment of food waste is many times greater than the packaging it comes in (6 times greater for apples, 30 times greater for tomatoes and 100 times greater for lettuce)	**1.49**	**-1.32**	**-0.84**	**-0.39**	**-0.25**
18Nd - The food we throw away from our homes is more than all of that thrown away by food manufacturers, retailers and restaurants combined. We've reduced this by over 10% in 3 years but there is still a lot more to do	**1.79**	**-0.53**	**-1.42**	**-2.4**	**-0.6**

As a final point in this section it is worth noting the overall change in scores from the questions relating to food waste and packaging. On average, concern for both the issue of food waste and packaging started around the 72 out of 100 mark. After seeing a series of factually correct statements, concern for food waste had risen to c.80 whilst concern over packaging had fallen to c.58 out of 100.

10.0 The relationship between food waste and packaging

The final section of this report addresses one of the core concerns that was central to this research, i.e. that packaging is over-shadowing food waste as an issue in consumers' minds and blocking food waste reduction behaviours. As noted in the introduction, previous surveys[13] have consistently reported that, when asked a question about which of the two issues is 'worse', packaging is identified by the majority of consumers.

The survey analysis reported elsewhere in this report has already suggested that this finding might be overly simplistic. For example, in Section 3.4 the results demonstrated that twice as many consumers cite 'food waste' as a concern. Furthermore, and as the 'concern' scores for both packaging and food waste demonstrate (Sections 8 and 9, respectively), both issues receive very similar 'problem scores' (i.e. around 70/100).

Replicating the 'packaging waste or food waste question'[14] head on, the survey split the sample into four quarters (i.e. 4 x 1,000) to test the impact of asking the question both ways around (i.e. agree/disagree that '*food waste is a bigger problem than food waste'*, and vice versa) as well as test the impact of a change of wording between '*packaging*' and '*packaging waste*'. A benchmark to a previous survey (by Ipsos MORI in 2011[15]) was also used to test the impact of varying the mid-point statement so that, rather than having the standard 'neither agree nor disagree' statement, a new mid-point statement was adopted - '*I think they are both about the same*' - alongside a 'don't know' answer.

The results, set out in Figure 35, demonstrate a number of things:

- Consumers are strongly influenced by the question phrasing and have a tendency to agree with whichever issue is presented as the bigger problem. For example, 37% agree that 'food waste is a bigger environmental problem than packaging waste', compared to 16% who disagree (Statement A). However, and when asked in reverse, over half of consumers (52%) agree that 'packaging waste is a bigger environmental problem than food waste', compared to just 9% who disagree (Statement B).
- The mid-point statement also has a significant bearing on the results. With the traditional 'neither agree nor disagree' option, 69% agree that packaging waste is a bigger environmental problem than food waste while 19% neither agree nor disagree. However, when the mid-point is changed the level of agreement with the same statement drops to 52% and the proportion of consumers choosing the new mid-point of 'I think they are both about the same' almost doubles to 36%.

The impact of describing '*packaging*' or '*packaging waste*' appears to have little impact. In summary, the analysis suggests that there is a lot of uncertainty among consumers as to which is the bigger problem and that, at present, they tend to consider them equally problematic issues. When designing surveys to further investigate consumer attitudes to packaging and food waste, or to monitor change in attitudes, it will be important to bear in mind the above findings.

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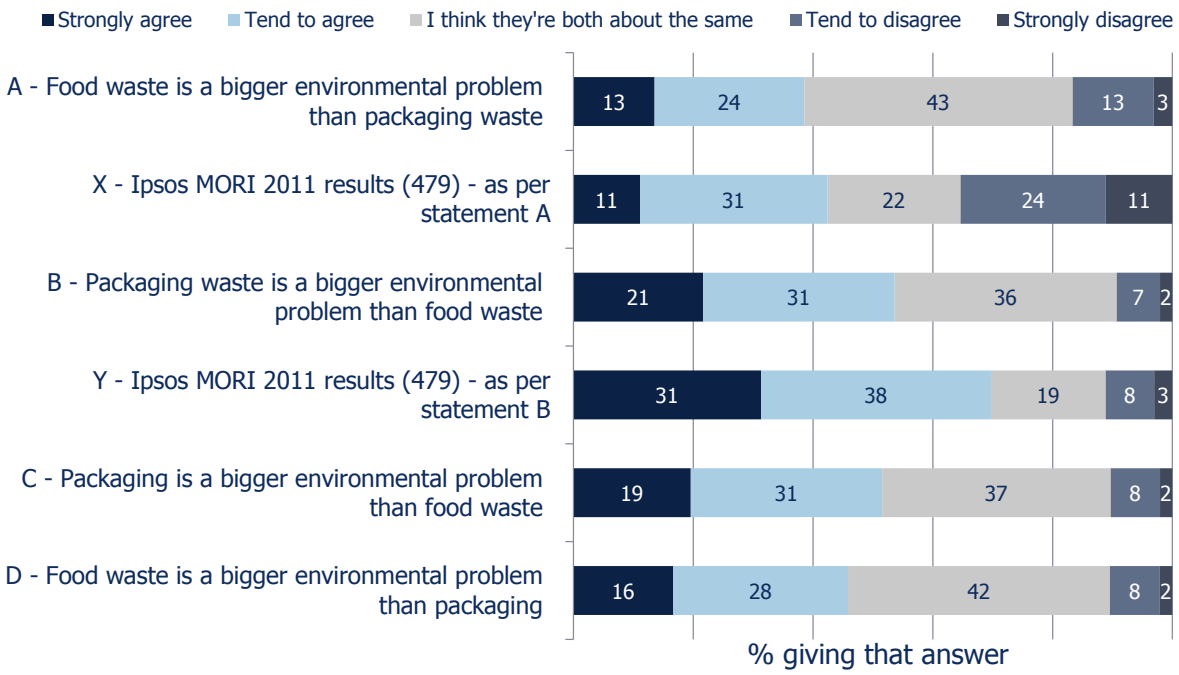
[13] http://www.incpen.org/resource/data/ipen1/docs/30%20September%202011a.pdf; *WRAPs six-monthly consumer food waste tracker survey*

[14] *WRAPs six-monthly consumer food waste tracker survey*

[15] http://www.incpen.org/resource/data/ipen1/docs/30%20September%202011a.pdf

Figure 35 – Packaging vs. food waste

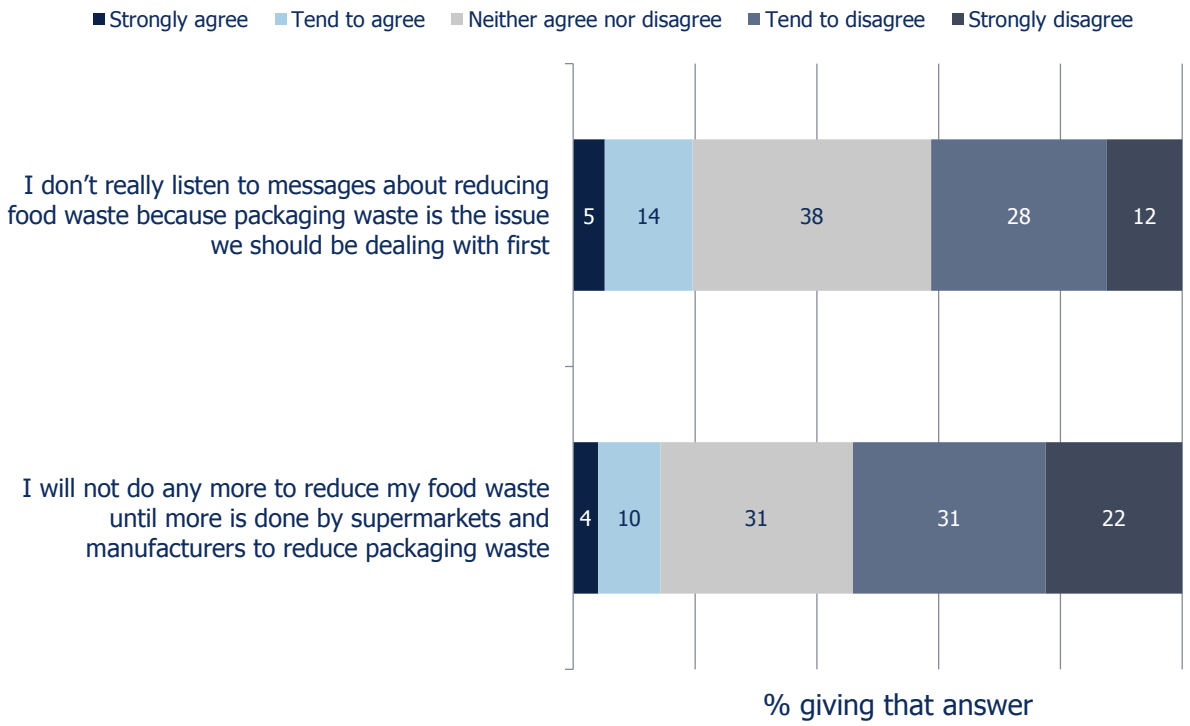
Question: *To what extent do you agree or disagree with the following statement?*
Base: A (1031), B (1023), C (1023), D (1025), Icaro survey Jul/Aug 2012



The survey also tested the potential blocking action of packaging directly by asking two agree/disagree statements. The results suggest that any such impact is relatively minor and applies only to a small minority of consumers (Figure 36). For example, only 14% agree with the statement: '*I will not do any more to reduce my food waste until more is done by supermarkets and manufacturers to reduce packaging waste*'. In addition, only slightly more (19%) agree with the statement '*I don't really listen to messages about reducing my food waste because packaging waste is the issue we should be dealing with first*'. This appears to be a general sentiment with relatively few variations across different groups of consumers, although younger consumers are slightly more likely to agree with the statement.

Figure 36 – Packaging blocking action on food waste?

Question: *Here are some statements. Please tell us how much you agree or disagree with each one:*
Base: All (4102), Icaro survey Jul/Aug 2012



11.0 Summary and Conclusions

11.1 Key findings

Below are distilled the main insights from the research:

Many consumers do not recognise that packaging protects food in the home. While there is recognition that packaging is important to keep the product safe *on its way to* and *in* the store, there is less recognition that it plays a role at home. In fact, the prevailing view is the opposite, i.e. that keeping products in the packaging leads them to spoil more quickly. This in turn leads many consumers to adopt unpacking strategies that potentially decrease the longevity of products (i.e. taking products out of their packaging or piercing the packaging to 'let it breathe').

These findings are consistent with previous WRAP research, both in terms of in-home behaviour and the potential reduction in product life resulting from this[16]. This finding is also important because, among the minority of consumers who do recognise that packaging can keep products fresher for longer, attitudes to packaging are significantly less negative.

- The top three benefits that consumers identify about packaging are that it 'keeps products safe and hygienic' (42% mentioning); that it 'provides important information on labels' (37%); and, that it 'protects the food (from the factory to the shop and on the way home)' (36%). In comparison, just 13% feel it has a role in protecting food in the home.
- However, when asked to identify their top three positive or negative associations with packaging, the two most frequent responses are negative: 'uses too much material' (52%) and 'bad for the environment' (50%). On balance, consumers give 1.4 positive answers out of three compared to 1.6 negative answers. They are far less likely to acknowledge that it 'extends the life of the product' (22%).
- Acknowledgement of this aspect, however, appears to engender more positive associations with packaging. For example, among those consumers who do acknowledge that packaging extends the life of the product, the balance of responses is notably different - 2.5 positive answers out of three (and just 0.5 negative answers). However, this group of consumers are currently in a minority and the prevailing view is actually the reverse - almost two in thee (62%) agree with the statement 'keeping fruit and vegetables in their packaging makes them sweat and go off quicker'.

Consumer confidence around storing food is high, but can be misplaced; the information on labels, and how they are used could both be more effective.. The majority of consumers are confident in their way of storing food items with habits developed through trial and error or passed down from parents. However, a large proportion are actually storing items under less than ideal conditions, in terms of ensuring they last as long as possible (see also point above).

Despite this confidence, there is demand for better on-pack guidance about storage and the majority of consumers say that they would use this (although it is tempered by the fact that many do not look for such information once they are familiar and confident with a product).

WRAP research on date labelling and storage guidance similarly found that consumers find simple, specific guidance most useful, and are more likely to take advantage of such guidance[17].

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[16] *Food Storage and Packaging (WRAP, 2007; http://www.wrap.org.uk/content/food-storage-and-packaging); Helping Consumers Reduce Fruit and Vegetable Waste (WRAP, 2008; http://www.wrap.org.uk/content/helping-consumers-reduce-fruit-and-vegetable-waste)*

[17] *Consumer insight: date labels and storage guidance (WRAP, 2011; http://www.wrap.org.uk/content/consumer-insight-date-labels-and-storage-guidance)*

- 90% of consumers say they are 'very' or 'fairly' confident they store their food in the best way to keep it fresh. However, nearly two-thirds unpack in a way that could reduce the longevity of the product – for example, 64% take apples out of the pack or do something to the bag (e.g. pierce it).
- 84% say they would be 'very' or 'fairly' likely to use clearer and more prominent on pack storage advice if it was highlighted to them.

There is a noticeable gap between the amount of consumers who've seen particular packaging innovations and the number who say it would be a good idea. Re-closable packs, packaging that makes the product last longer and split packs are three of the innovations that consumers rated as being most useful to them. Re-closable packs are highlighted as being relatively prevalent in shops currently, but there seems to be far fewer people who've noticed 'a lot' of packaging that keeps food fresher or split packs.

- 34% have noticed 'a lot' of re-closable packs in-store, but only 13% have seen packs that 'keep food fresh for longer' or 'split packs' (12%).

There is recognition that food retailers and manufacturers have made progress in recent years to reduce the amount of packaging. Even those who consider packaging to be a major environmental problem acknowledge progress.

- Almost half of consumers (46%) say that manufacturers and supermarkets have made 'fair' or 'significant' progress on reducing the amount of packaging in the past few years, while a similar proportion (44%) say they have made 'a little progress'. Only one in twenty think that manufacturers and supermarkets have 'not made any progress'.

Attitudes to packaging shift according to the context and the mind-set that consumers are in. In store, in a shopping context, packaging is a low order priority and plays a supporting and practical role in product choice (aspects of packaging, such as re-closability can be factors influencing choice). When framed in the wider context of food issues, only a small minority identify packaging as one of their top concerns.

- In store, quality, freshness and the look/smell of the product are the most important factors with around two in three (65%) mentioning them unprompted. This compares to 53% who cite price, value for money or special offers, and just 6% who cite pack size or how the food is packaged.
- When asked to choose between two cheese products – one with re-closable packaging and the other without - one in five (20%) of the consumers who chose the re-closable pack specifically cited the re-closable function as the main reason for their choice.
- In the wider context of concerns about food, 'how it is packaged' is a low order issue – cited by only 16% of consumers. In contrast, 'the price of food' (64%) is the most frequent response, followed by 'how long fresh food lasts for' (48%). Furthermore, twice as many consumers identify 'food waste' as a concern (33%) compared with packaging.

However, when prompted consumers' attitudes to packaging are negative in the context of the environment. There is little doubt that once packaging is set within a framework of environmental concern, and this particular mind-set is triggered, then attitudes are negative.

- Close to four in five (81%) believe that it is a major environmental problem and 57% think it is wasteful and unnecessary.

Concern about packaging reduces in response to more information. There is evidence of 'shifting' in consumer attitudes when they are shown a series of positive statements about packaging. However, when mixed in amongst an equal number of negative statements, attitudes to packaging changed little overall (shifting according to individual statements but with no overall net change).

- Consumers were shown five positive (and factually correct) statements about packaging and asked to rate, on a scale of 0-100, how much of a problem they thought it was (with 0 = not a problem and 100 = a serious problem). From an average starting score of 73/100 (i.e. prior to seeing the messages) concern about packaging fell by 21% to a score of 58/100. Two messages were particularly effective: 'Packaging allows food to stay fresher for longer – not just on shelves but in your home as well' and 'The vast majority of packaging can be recycled (85%) so the impact is less than you think'. A third message, 'Without packaging many of the food products that we enjoy would only be available for a few months of the year – rather than all year round as they are now', was particularly effective when it was the first message seen.
- However, when mixed in amongst an equal number of negative statements attitudes to packaging changed little overall. There were shifts in response to individual statements but the positive and negative statements largely cancelled each other out.

Concern about food waste increases in response to more information. The above style of question was also used with positive statements on food waste:

- Consumers were shown five positive (and factually correct) statements about food waste and asked to rate, on a scale of 0-100, how much of a problem they thought it was (with 0 = not a problem and 100 = a serious problem). From an average starting score of 71/100 (i.e. prior to seeing the messages) concern about food waste increased by 9% to a score of 80/100. Three messages were particularly effective: 'In the UK we throw away enough food, from our homes, to fill Wembley Stadium to the brim nine times over – every year'; 'Wasting food costs the average family £480 a year. For families with children the cost can be up to £690 a year' and 'Food waste gives off harmful gases like methane when it rots in landfill. Methane is 20x worse for the atmosphere than carbon dioxide'.
- In comparison to the similar question around packaging, a clear difference emerged: On average, concern for both the issue of food waste and packaging started around the 72 out of 100 mark After seeing a series of factually correct statements, concern for food waste had risen to around 80 whilst concern over packaging had fallen to around 58 out of 100.

Concern about packaging does not appear to be compromising action on food waste reduction. Unlike previous surveys that suggested packaging may be a far more pressing issue for consumers than food waste, this research finds that, when prompted, they consider both issues to be 'equally problematic' and do not have a fixed opinion as to which is 'worse'. However, consumers appear comfortable holding both views at the same time, and those most concerned about packaging are indeed *also* those most concerned about food waste.

- 70% of consumers think that food waste is bad for the environment (rising to 76% of consumers when the phrase 'wasting food' is used instead of 'food waste').
- When asked whether food waste or packaging is worse for the environment, consumers tend to agree with whichever of the two is presented first. For instance, 44% agree that 'food waste is a bigger environmental problem than packaging'. When the statement is reversed, 50% agree that packaging is worse than food waste. However, a significant proportion of consumers are uncertain and opt for 'I think they're both about the same'.
- Only a small but significant minority (14%) say they will 'do no more to reduce their food waste until more is done by manufacturers / supermarkets to reduce packaging'.

Attitudes to packaging are linked to the ability to recycle. There is a strong correlation between concerns about packaging materials and how easy it is to recycle them at home. The more difficult it is to recycle an item the more concern is expressed about it.

- Levels of consumer concern about different packaging materials are linked to how easily they can recycle them. For example, plastic pots, trays and tubs are a concern for almost

half (49%) of consumers who say they cannot easily recycle these, compared to 26% of consumers who say they can recycle them easily.
- When asked what changes in packaging consumers would find most useful, 'recyclable – i.e. can be recycled' was quoted as the second (equal with packaging that helps the product last longer) highest.

Two sub-groups, in particular, show highly significant variation throughout:
- **Age**: older consumers are more likely to think that packaging is a serious environmental problem and prioritise its perceived problems and disadvantages over any positives (in particular, they are most likely to think that storing food in the original packaging causes it to sweat and spoil quicker). Younger consumers, by contrast, are more ambivalent and more likely to recognise the benefits of packaging - in particular, its role in keeping products fresher for longer.
- **Environmental disposition:** consumers who define themselves as 'very' environmentally friendly are more likely to consider packaging to be a major environmental problem. However, they are also receptive to positive messages about packaging and more likely to acknowledge the progress that retailers and brands have made. They are also more likely to recognise food waste as a concern.

11.2 Conclusions

This research confirmed that a priority for consumers is how long food stays fresh for. Key insights from this new research, combined with previous research, show that currently consumers are not making best use of the information on pack, or the packaging itself to achieve this, nor are they aware of the benefits that packaging can offer to maximise in home shelf-life.

However, there is a clear interest in packaging that can maintain food freshness, both before and after opening, and also in clearer on-pack messages about how to store food. Providing consumers with clear and consistent labelling on pack ('use by' / 'best before'; storage location; freezability etc.), communicating to them the benefits of utilising this information and providing improved packaging functionality (e.g. reclosability, materials to enhance life) could could result in dual benefits – both of consumers wasting less food in home and also having a greater appreciation of the packaging that facilitates this. Additional benefits can be gained through extending the shelf-life given to consumers, which includes via packaging innovation.

Approximately 60% of household food waste arises from products 'not used in time', with a value of around £6.7 billion. The majority of this is made up of perishable / short shelf life products, and includes 17 billion '5-a-day' portions of fresh produce (more than a fifth of purchases) bought but not eaten each year. Industry is already doing a lot to optimise what is on the label, and through innovation to extend the life of food. It seems that small changes in behaviour could make use of these to deliver the benefits consumers state they are looking for – keeping food fresher for longer, saving money and reducing the impact of food on the environment.

Having been presented with the research, the steering group has identified several opportunities to help reduce food waste and also address concerns around packaging,for example:
- As consumers we can all make more use of the information provided on packaging, particularly as much of this is being updated, and the packaging itself, to ensure that the way we store food at home keeps it fresher for longer.
- Food and packaging organisations (retailers, food and packaging manufacturers and trade associations) should consider whether they can do more to inform consumers about the

innovations they are making around food labelling and packaging, to raise awareness of the benefits and encourage consumers to make use of these, and encourage / undertake further innovation.

- Consumer campaigns, such as Love Food Hate Waste (www.lovefoodhatewaste.com), and other communications activities around food and food waste can do more to raise awareness of the benefits of reducing food waste, and the role that packaging can play in that. They can inform consumers about the innovations businesses are making around food labelling and food packaging, and give advice about, for example, buying the right pack size and looking more closely at labels. They could also offer updated guidance around the best way to buy food with the appropriate packaging to keep it fresher for longer, for example if it will be eaten straight away buying loose, if you want to keep it for longer buying packaged.
- Continued innovation in packaging recyclability along with increased provision of recycling services, and clear communication on how to use them, has the potential to reduce concerns around packaging, helping consumers deal with packaging at the end of its life.

Appendix 1 Consumer survey results

N.B. Where %'s don't add up to 100 this is due to rounding.

S1a	**How responsible are you for food shopping in your home?** *Base: 4272*		
S1b	**How responsible are you for the storage, preparation and/or cooking of food in your home?**		
		A	B
	I have responsibility for all or most of it	73%	66%
	I have responsibility for about half of it	22%	21%
	I have responsibility for less than half of it	3%	19%
	I'm not responsible for any of it	1%	4%
	Don't know	<1%	<1%

S2a	**Where do you do the majority of your food shopping?** *Base: 4102*		
S2b	**And in which others stores, if any, do you shop on a regular basis (e.g. for different products or for a 'top up' shop)? By 'regular' we mean at least once a month.**		
		A	B
	Asda	25%	28%
	Aldi	3%	20%
	Budgens	<1%	2%
	Co-op	2%	26%
	Iceland	1%	23%
	Lidl	2%	21%
	M&S	1%	20%
	Morrisons	12%	26%
	Sainsbury's	17%	31%
	Tesco	35%	35%
	Waitrose	2%	11%
	Somewhere else – specify……	1%	6%
	I don't shop anywhere else for food	-	6%
	Average number of other shops used in addition to main one =		***2.65***

S3	**Do you do the majority of your food shopping in store or online?** *Base: 4153*	
	Do all of my food shopping in store	67%
	Do most of my food shopping in store	19%
	Use in-store and online shopping equally	8%
	Do most of my food shopping online	5%
	Do all of my food shopping online	1%

IN-STORE

Q1	**Which of the following food products do you buy on a regular basis? By regular, we mean in most of the food shopping trips that you do.** *Base: 4164 (those that screened out here obviously had their answers excluded from S2 hence the lower base there)*	
	Fresh fruit and vegetables	95%
	Fresh meat and/or fish	77%
	Bakery (e.g. bread, cakes)	87%
	Dairy (e.g. yoghurt, milk, cheese)	94%

Q2a/ b	**When you are choosing…, which of the following are the <u>main things</u> that you look out for/use to help you make your choice?** *(This question was asked prompted and unprompted. All those answers in bold are the prompted responses and those below in normal type are additional ones given by unprompted respondents which didn't fit into the original codes. They could tick/type in as many as they wanted)*										
		2a – Un prompted	**2b - prompted**	U	P	U	P	U	P	U	P
		Overall (2011)	**Overall (2065)**	Fruit / veg (498)	Fruit / veg (517)	Meat / fish (510)	Meat / fish (511)	Bakery (500)	Bakery (521)	Dairy (503)	Dairy (516)
	The price	**40%**	**74%**	39%	74%	48%	79%	29%	68%	44%	76%
	Special offers	**10%**	**59%**	6%	59%	9%	63%	10%	53%	16%	60%
	Value for money	**3%**	**69%**	3%	72%	4%	72%	3%	61%	4%	69%
	The use by/best before date (how long it will last)	**18%**	**55%**	13%	54%	18%	59%	17%	52%	24%	55%
	The look of the product / 'visual check'	**13%**	**53%**	24%	70%	21%	64%	7%	46%	2%	31%
	The smell of the product / 'smell check'	**2%**	**17%**	2%	23%	3%	22%	4%	15%	-	8%
	Organic / fair trade / free range	**2%**	**15%**	3%	15%	2%	19%	1%	10%	2%	14%
	How it is packaged	**2%**	**17%**	3%	19%	1%	19%	1%	13%	1%	15%
	The country where the product has come from	**5%**	**18%**	8%	23%	9%	24%	<1%	9%	3%	18%
	The supermarket's 'premium' range	**-**	**15%**	-	12%	-	18%	-	17%	-	12%
	The supermarket's 'economy' range	**<1%**	**15%**	-	18%	-	15%	<1%	13%	-	16%
	The brand	**4%**	**23%**	<1%	12%	1%	19%	3%	31%	13%	30%
	The ingredients	**1%**	**22%**	%	16%	%	24%	%	24%	%	22%
	The nutritional content of the product (e.g. calories)	**7%**	**18%**	-	14%	<1%	20%	2%	18%	2%	20%
	Size of portions / pack size	**4%**	**52%**	3%	50%	9%	65%	2%	42%	3%	50%
	Labelling info on how to prepare / cook and store the product	**<1%**	**11%**	<1%	10%	<1%	16%	-	8%	<1%	8%
Open answers that did not fit in pre existing codes	Quality	**14%**	**-**	19%	-	23%	-	7%	-	7%	-
	Freshness	**37%**	**-**	56%	-	38%	-	47%	-	9%	-
	Flavours/taste	**5%**	**-**	1%	-	1%	-	6%	-	11%	-
	Choice	**4%**	**-**	5%	-	2%	-	5%	-	3%	-
	The cut	**1%**	**-**	-	-	4%	-	-	-	-	-
	Cleanliness of store/nice display	**1%**	**-**	1%	-	1%	-	1%	-	1%	-
	Seasonal	**1%**	**-**	3%	-	-	-	-	-	-	-
	Nothing/Don't know	**3%**	**-**	2%	-	1%	-	4%	-	3%	-
	None of these – I often just choose by habit	**1%**	**2%**	-	1%	<1%	1%	2%	3%	2%	2%
	Something else – write in……	**6%**	**2%**	4%	2%	3%	1%	8%	3%	7%	3%
	Average number of answers given =	***1.84***	***5.41***	***1.97***	***5.46***	***2.09***	***6.04***	***1.60***	***4.99***	***1.69***	***5.17***

Q3-8 Base: all apart from those doing all shopping online = 4077

Q3a	**Which of the following two products would you choose?**			
		A (OJ 1/3rd off)	55%	
		B (OJ 3 for 2)	28%	
		I don't buy fresh juices	17%	

Q3b	**Why would you choose that one over the other? TOP 5 ANSWERS**			
	Those choosing A		**Those choosing B**	
	Three is too many/don't want three/too much	33%	Better price/value/sounds better	48%
	Better price/value/sounds better	15%	Drink a lot of juice	13%
	Only want/need one	14%	No difference in price/same offer	8%
	No difference in price/same offer	12%	Other	7%
	Don't drink that much juice	7%	I usually buy this amount	6%

Q4a	**Which of the following two products would you choose?**			
		A (Loose leeks)	49%	
		B (Pre-packed leeks)	47%	
		I don't buy fresh vegetables	4%	

Q4b	**Why would you choose that one over the other? TOP 5 ANSWERS**			
	Those choosing A		**Those choosing B**	
	Less/no packaging	30%	Easier to prepare/already prepared/ready to cook/ready trimmed	29%
	Can choose my own	23%	It's wrapped/packaged	14%
	Fresh/fresher	17%	Less waste	11%
	Better value/price	8%	Appearance/better presented	10%
	Can choose quantity	5%	Shows date of expiry	7%

Q5a	**Which of the following two products would you choose?**			
		A (Cheese)	26%	
		B (Re-closable cheese)	67%	
		I don't buy cheese	7%	

Q5b	**Why would you choose that one over the other? TOP 5 ANSWERS**			
	Those choosing A		**Those choosing B**	
	Packaging better/nice packaging/looks better	18%	Packaging better/nice packaging/looks better/nicer	33%
	British	14%	Re-sealable/keeps fresh/lasts longer	20%
	Other	10%	Tells you the origin/region it's from	9%
	Could have chosen either/had to choose one	9%	Better quality	7%
	No reason	8%	Better flavour/taste	5%

Q6a	**Which of the following two products would you choose?**			
		A (Ham – standard)	23%	
		B (Ham – portions)	21%	
		C (Ham – deli)	44%	
		I don't buy cooked meats	12%	

Q6b	**Why would you choose that one over the other? TOP 5 ANSWERS**					
	Those choosing A		**Those choosing B**		**Those choosing C**	
	Looks better/nicer/better	13%	Better value/cheaper	21%	Fresher	37%
	Better quality	9%	Bigger pack	20%	Able to choose/more/better choice	21%
	Packaging	8%	Lasts longer	14%	Less packaging/don't like packaging	12%
	Convenience	7%	Individual portions	11%	Can see the product better	8%
	Lasts longer	7%	Packaging	7%	Better quality	8%

Q7a	**Which of the following two products would you choose?**			
		A (Bread – small)	24%	
		B Bread – large)	64%	
		I don't buy sliced bread	12%	

Q7b	**Why would you choose that one over the other? TOP 5 ANSWERS**			
	Those choosing A		**Those choosing B**	
	Better size/more suitable for our needs/smaller loaf	38%	Better size/more suitable for our needs/bigger loaf	39%
	Less waste/other would go stale	24%	Better value/price	30%
	Don't eat a lot of bread	15%	Eat a lot of bread	9%
	Better value/price	14%	Can freeze it	6%
	I live alone/only I eat it	9%	Lasts longer	6%

Q8	**Thinking about the qualities that you value in the supermarket(s) that you choose to use; how important, or not, are each of the following to you? (DK = Don't know)**													
		0 – Not at all important	1	2	3	4	5	6	7	8	9	10 – extremely important	DK	***Average score***
A	Value for money	<1%	<1 %	<1 %	<1 %	<1 %	2%	2%	5%	13 %	20 %	56%	1 %	***9.13***
B	Special offers, discounts and rewards	1%	<1 %	1%	1%	1%	5%	5%	11 %	19 %	20 %	34%	1 %	***8.27***
C	Quality of produce	<1%	<1 %	<1 %	<1 %	<1 %	2%	2%	6%	14 %	20 %	54%	1 %	***9.06***
D	Friendliness of staff	1%	1%	1%	2%	3%	10 %	11 %	15 %	19 %	16 %	20%	1 %	***7.44***
E	Speed of checkout	1%	<1 %	1%	1%	2%	8%	10 %	18 %	22 %	17 %	20%	1 %	***7.68***
F	How products are packaged	2%	1%	1%	2%	3%	10 %	10 %	16 %	20 %	14 %	19%	1 %	***7.28***
G	The supermarket's commitment to the environment	5%	1%	3%	4%	5%	14 %	11 %	14 %	16 %	11 %	15%	2 %	***6.53***
H	Having labels on the packs that are easy to understand	1%	<1 %	1%	1%	2%	7%	7%	13 %	20 %	18 %	29%	1 %	***8.05***
I	Having products in stock	<1%	<1 %	<1 %	<1 %	1%	3%	4%	8%	19 %	23 %	41%	1 %	***8.74***
J	The range of pack / portion sizes	1%	<1 %	1%	1%	1%	6%	7%	14 %	23 %	19 %	28%	1 %	***8.13***
K	Providing fresh food that lasts / doesn't spoil too quickly	<1%	<1 %	<1 %	<1 %	1%	3%	3%	7%	16 %	19 %	49%	1 %	***8.86***

Q9	**Which of these food issues, if any, most concern you?** *(Respondents could select up to 5 from this list) Base: 4102*		
	The price of food	64%	
	The amount of salt in food	34%	
	The amount of fat in food	41%	
	How long fresh food lasts for	48%	
	The use of pesticides to grow food	18%	
	Food labelling (e.g. 'use by' date; storage instructions)	20%	
	The amount of sugar in food	28%	
	The way that food products are packaged	16%	
	The welfare of animals	29%	

	Food waste	33%	
	Food miles (e.g. the distance food travels to get to the shop)	15%	
	Food poisoning such as Salmonella and E.Coli	26%	
	Genetically Modified (GM) foods	20%	
	The use of additives (such as preservatives and colouring) in food products	30%	
	None of these	2%	
	Average number of answers given =	***4.25***	

BACK AT HOME

Q10	**Thinking about times when you have bought the following items in pre-packaged bags or trays, How do you store the items when you get home and you are putting the shopping away (i.e. before opening/using the product?** *Base: 4102*							
		Store at home in the original packaging	Take out of packaging and store loose	Take out of original packaging and use alternative wrapping / container	Store in the original packaging but 'do something' to it (e.g. open a bit, pierce the packaging)	Other (specify)	Only buy loose	Don't buy this
	Apples	19%	58%	4%	6%	1%	9%	4%
	Bananas	11%	63%	4%	3%	1%	14%	5%
	Carrots	32%	34%	6%	12%	2%	11%	3%

Q11	**Overall, how confident are you that the way in which you store your fresh fruit and vegetables is the best way to ensure that they stay fresh for as long as possible?** *Base: 4102*	
	Very confident	26%
	Fairly confident	64%
	Not very confident	8%
	Not at all confident	1%
	I never buy fresh fruit and vegetables	1%

Q12	**Which of these statements about <u>storage instructions</u> on packaging, if any, apply to you?** *(Respondents could select as many as they wanted) Base: 4102*	
	I very often look at the instructions on the label about how best to store the product	22%
	I only look at labels if it's a product I don't normally buy or have never bought before	47%
	I don't need to look at labels because I know how to store things already	21%
	I don't look at labels because they aren't easy to understand	2%
	I don't look at labels because they don't provide useful advice	3%
	I don't look at labels because the font is too small	5%
	It doesn't occur to me to look at storage instructions on pack labels	14%
	I don't look at labels because I've got more important things to do	4%
	Other	1%
	None of the above	3%
	Average number of answers given =	***1.23***

Q13	**If there was clearer and more prominent information on the label about how to store the product in the most effective way/keep the item fresh for as long as possible, how likely would you be to use that information when you came to store food at home?** *Base: 4102*	
	Very likely	37%
	Fairly likely	47%
	Not very likely	10%
	Not at all likely	2%
	Don't know	4%

Q14	**Have you seen any of the following information/guidance on packages before?** *Base: 4102*			
		Yes	No	Maybe
	A - "Keeps Fresher For Longer in the Fridge"	28%	57%	14%
	B - "Keep me Cold"	18%	72%	10%
	C - Suitable for home freezing"	84%	11%	5%
	D - "Freeze in suitable container"	79%	14%	7%

Q15	**Have you used the information/guidance when deciding how to store the product at home?**			
Base:	*All those who've seen the labels*	Yes	No	Don't know
1157	A - "Keeps Fresher For Longer in the Fridge"	86%	10%	5%
746	B - "Keep me Cold"	89%	8%	3%
3443	C - Suitable for home freezing"	91%	8%	2%
3241	D - "Freeze in suitable container"	89%	9%	2%

Q16	**How likely is it that – if you did see it - you would use this information when deciding how to store the product at home?**				
Base:	*All those who haven't seen the labels or aren't sure*	Very likely	Fairly likely	Not very likely	Not at all likely
2945	A - "Keeps Fresher For Longer in the Fridge"	45%	43%	9%	2%
3356	B - "Keep me Cold"	50%	40%	8%	2%
659	C - Suitable for home freezing"	36%	43%	16%	4%
861	D - "Freeze in suitable container"	32%	47%	16%	5%

FOOD WASTE

Q17a	**Please tell us whether you think the following statements are true or false?**			
Base:	*Split sample*	True	False	Don't know
1026	Food waste is not harmful to the environment	16%	70%	14%
	It is better to prevent food going to waste than to recycle it	85%	7%	8%
Q17b	**Please tell us whether you think the following statements are true or false?**			
1026	Food waste is harmful to the environment	70%	15%	16%
	It is better to recycle food waste than to prevent it becoming waste in the first place	65%	26%	8%
Q17c	**Please tell us whether you think the following statements are true or false?**			
1025	Wasting food is not harmful to the environment	12%	77%	11%
	It is better to not waste food than to recycle it	82%	9%	9%
Q17d	**Please tell us whether you think the following statements are true or false?**			
1025	Wasting food is harmful to the environment	75%	12%	14%
	It is better to recycle wasted food than to prevent it becoming waste in the first place	62%	29%	9%

Q17e	**Your answer before last indicated that you think food waste (wasted food) is bad for the environment. Please tell us here the reason(s) why you think it is bad for the environment:** *Base: all those suggesting they think food waste IS harmful to the environment at Q17a-d (statement 1) = 2986 (N.B. There are more answers lower than these)*	
	Landfills	14%
	Cause gases	10%
	Causes over production	9%
	Waste of resources	9%
	Air miles/transport costs	8%
	Has to be disposed of	8%
	Environmental impact	7%
	Other	7%
	Attracts vermin/flies	6%
	Energy consumed/wasted	6%
	Cost of production	4%
	It rots	4%

	Spreads disease/bacteria/health issues	3%
	It smells	3%
	People are starving in the world/could go to people more needy	3%
	Wastes money	3%

Q18	**First of all, please slide the pointer along the bar to indicate how much of a problem you consider food waste to be.** Use slider bar and then move on. Scale is continuous 100-point bar from 0 = "It's not a problem at all" to 100 = "It's a major problem". *Base: Split sample with 18N = 2058. N.B. A positive movement indicates the statement has made the issue worse in their head while a negative score has made the issue seem less bad than before.*			
	Average starting score			**71**
Q18a	***Food waste gives off harmful gases like methane when it rots in landfill. Methane is 20x worse for the atmosphere than Carbon Dioxide.***			
	Average score after seeing	79.15	Average movement + or -	+3.44
Q18b	***The impact on the environment of food waste is many times greater than the packaging it comes in (6 times greater for apples, 30 times greater for tomatoes and 100 times greater for lettuce)***			
	Average score after seeing	76.3	Average movement + or -	-0.25
Q18c	***Wasting food costs the average household around £480 a year. For families with children, the cost can be up to £680 a year.***			
	Average score after seeing	79.06	Average movement + or -	+3.57
Q18d	***The amount of water used to grow and manufacture the food we throw away in the UK, each year would fill more than 2 million Olympic swimming pools, and much of this water is in food from countries that have water shortages.***			
	Average score after seeing	78.35	Average movement + or -	+2.12
	Average final score	79.89	Average movement + or -	+8.89

Q18N	**First of all, please slide the pointer along the bar to indicate how much of a problem you consider food waste to be.** Use slider bar and then move on. Scale is continuous 100-point bar from 0 = "It's not a problem at all" to 100 = "It's a major problem". *Base: Split sample with 18 = 2044. N.B. A positive movement indicates the statement has made the issue worse in their head while a negative score has made the issue seem less bad than before.*			
	Average starting score			**71.66**
Q18Na	***The impact on the environment of growing, manufacturing, transporting and storing food that ends up being wasted in the UK each year is the same as 9 million cars (a fifth of all those on UK roads).***			
	Average score after seeing	79.49	Average movement + or -	+2.55
Q18Nb	***In the UK we throw away enough food, from our homes, to fill Wembley Stadium to the brim nine times over – every year.***			
	Average score after seeing	80.54	Average movement + or -	+4.39
Q18Nc	***The world population is rising quickly; faster than we can increase food production. Prices will go up and we may not be able to buy all of the food we need. We need to be less wasteful with the food we DO have.***			
	Average score after seeing	79.97	Average movement + or -	+2.98
Q18Nd	***The food we throw away from our homes is more than all of that thrown away by food manufacturers, retailers and restaurants combined. We've reduced this by over 10% in 3 years but there is still a lot more to do.***			
	Average score after seeing	77.09	Average movement + or -	-0.6
	Average final score	80.98	Average movement + or -	+9.32

PACKAGING

Q19a	**From the following list, please choose the three phrases you think are most applicable to packaging?** *(Each respondent had to select 3 answers) Base: Split sample with 19b = 2056*		
	Uses too much material	52%	
	Protects the product	38%	
	Is difficult to dispose of	40%	
	Is bad for the environment	50%	
	Keeps product safe and hygienic	40%	
	Makes it difficult to get into the product	19%	
	Makes the product more attractive	14%	
	Extends the life of the product	22%	
	Makes the product easy to store	19%	
	Don't know	2%	

RANDOMISE ORDER

Q19 b	**Thinking specifically about food packaging, which of the following, if any, do you consider to be the main benefits?** *(Respondents could select up to 3) Base: Split sample with 19a = 2046*	
	Protects the food (from factory to the shop and on the way home)	36%
	Protects the food (in the home)	13%
	Helps keep the product fresh / at its best quality	33%
	Keeps products safe and hygienic	42%
	Makes it easy / convenient to transport home	26%
	Makes it easy to store at home	14%
	Makes it easy to use at home	8%
	Gives important information on labels (e.g. ingredients, storage guidance)	37%
	Allows seasonal food to be purchased all year in the UK	13%
	Supports the economy by reducing waste, keeping costs down and providing jobs	9%
	Other (please specify)	<1%
	I don't think packaging offers any benefits to the consumer	10%
	Don't know	2%
	Average number of answers given =	***2.45***

Q20	**Here is a list of some of the recent changes to food packaging - as well as some possible additional changes in the future. To what extent, if at all, have you noticed these kinds of changes on packaging already?** *Base: 4102* **(DK = Don't know)**				
		Noticed a lot of products with this packaging	Noticed a few products with this packaging	Have not noticed products with this packaging	DK
A	Packaging that makes the product last longer / keeps the product fresher for longer	13%	38%	40%	9%
B	Re-sealable / re-closable	34%	52%	9%	4%
C	Re-fillable / re-usable	18%	47%	29%	6%
D	Easier to store	14%	39%	38%	9%
E	Easier to open	15%	41%	38%	7%
F	Smaller pack sizes	18%	45%	29%	8%
G	"Split packs" (e.g. 2 portions of chicken which are packaged separately so that you can open the pack to use one portion whilst still keeping the other portion sealed/in its original packaging)	12%	38%	43%	6%
H	Monitors and gives information about the freshness of the product (e.g. by changing colour on an indicator tab)	7%	19%	66%	7%
I	Recyclable – i.e. can be recycled	39%	43%	13%	5%
J	Clearer storage information on the label about e.g.	18%	48%	27%	6%

	freezability, and how to store the product to keep it fresher for longer				
K	Recycled – i.e. made of recycled materials	28%	50%	17%	6%
L	Compostable / biodegradable	12%	44%	35%	8%
M	Lighter-weight packaging that uses less packaging material (e.g. glass bottles are lighter because less glass has been used in the packaging)	15%	41%	36%	8%

Q21	**And which of the changes, if any, do you think are/would be most useful for you?** *(Respondents could select up to 4) Base: 4102*	
	Packaging that makes the product last longer / keeps the product fresher for longer	40%
	Re-sealable / re-closable	56%
	Re-fillable / re-usable	30%
	Easier to store	20%
	Easier to open	25%
	Smaller pack sizes	19%
	"Split packs" (e.g. 2 portions of chicken which are packaged separately so that you can open the pack to use one portion whilst still keeping the other portion sealed/in its original packaging)	32%
	Monitors and gives information about the freshness of the product (e.g. by changing colour on an indicator tab)	15%
	Recyclable – i.e. can be recycled	40%
	Clearer storage information on the label about e.g. freezability, and how to store the product to keep it fresher for longer	16%
	Recycled – i.e. made of recycled materials	19%
	Compostable / biodegradable	20%
	Lighter-weight packaging that uses less packaging material (e.g. glass bottles are lighter because less glass has been used in the packaging)	14%
	None	3%
	Average number of answers given =	***3.57***

Q22	**To what extent do you agree or disagree with the following statement:** a) **Food waste is a bigger environmental problem than packaging waste** b) **Packaging waste is a bigger environmental problem than food waste** c) **Packaging is a bigger environmental problem than food waste** d) **Food waste is a bigger environmental problem than packaging**						
	Base: Split sample	A (1031)	*2011 Ipsos (479) – as per statement A*	B (1023)	*2011 Ipsos (479) – as per statement B*	C (1023)	D (1025)
	Strongly agree	13%	*11%*	21%	*31%*	19%	16%
	Tend to agree	24%	*31%*	31%	*38%*	31%	28%
	I think they're both about the same	43%	*22%**	36%	*19%**	37%	42%
	Tend to disagree	13%	*24%*	7%	*8%*	8%	8%
	Strongly disagree	3%	*11%*	2%	*3%*	2%	2%
	I don't know	4%	*1%*	4%	*1%*	3%	4%

*This middle option was "Neither agree nor disagree" in the Ipsos survey

Q23	**Here are some statements. Please tell us how much you agree or disagree with each one:** *Base: 4102 (unless otherwise stated)* **(DK = Don't know)**						
		Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	DK
A1	I find packaging on food wasteful and unnecessary (2056)	18%	39%	26%	13%	3%	1%
A2	I find packaging wasteful and unnecessary (2046)	19%	38%	27%	12%	3%	2%
B	Because I can recycle most types of packaging now, I don't really worry about it	6%	25%	33%	27%	8%	2%
C	Keeping fresh fruit and vegetables in their original packaging makes them 'sweat' and go off quicker	20%	41%	23%	7%	1%	7%
D	Packaging is just there to make us buy a product	10%	31%	34%	19%	5%	2%
E	Storing food at home in its original packaging keeps it fresher for longer	5%	21%	42%	21%	6%	6%
F1	Very few food products nowadays are over-packaged (2056)	4%	16%	25%	35%	18%	2%
F2	Very few products nowadays are over-packaged' (2046)	5%	16%	27%	34%	16%	2%
G	I don't really listen to messages about reducing food waste because packaging waste is the issue we should be dealing with first	5%	14%	38%	28%	12%	3%
H	I will not do any more to reduce my food waste until more is done by supermarkets and manufacturers to reduce packaging waste	4%	10%	31%	31%	22%	2%
I	Packaging helps to reduce food waste	5%	19%	35%	26%	11%	4%

Q24	**To what extent do you agree or disagree with the following statement:** a) **Packaging is a major environmental problem** b) **Packaging waste is a major environmental problem** c) **Packaging is not a major environmental problem** d) **Packaging waste is not a major environmental problem**				
	Base: Split sample	A (1026)	B (1014)	C (1029)	D (1033)
	Strongly agree	30%	35%	4%	6%
	Tend to agree	51%	48%	9%	11%
	Neither agree nor disagree	16%	12%	14%	11%
	Tend to disagree	2%	3%	36%	37%
	Strongly disagree	<1%	<1%	34%	35%
	I don't know	1%	1%	1%	1%

Q25	**Which of the following food packaging types, if any, <u>most</u> concern you? If so, which kinds?** *(Respondents could select any that applied) Base: 4102*		
	Plastic bottles	29%	
	Plastic wrappers and film	48%	
	Plastic pots, tubs and trays	39%	
	Cans and tins	13%	
	Paper/cardboard	8%	
	Foil / foil paper	22%	
	Glass bottles and jars	13%	
	Cartons (e.g. milk, juice)	18%	
	Mixed packaging (e.g. cardboard box and plastic film)	33%	
	Other	1%	
	I'm concerned about food packaging in general – not specific types	23%	
	I'm not concerned about food packaging	6%	
	Average number of answers given =	***2.62***	

Q26	**In terms of the progress that food retailers and brands have made on reducing the amount of packaging in the past couple of years, do you think that…?** *Base: 4102*		
	They have made significant progress	8%	
	They have made a fair amount of progress	38%	
	They have made a little progress	44%	
	They have not made any progress	5%	
	Don't know	5%	

Q27	**First of all, please slide the pointer along the bar to indicate how much of a problem you consider packaging to be.** Use slider bar and then move on. Scale is continuous 100-point bar from 0 = "It's not a problem at all" to 100 = "It's a major problem". *Base: Split sample with 27N = 2053. N.B. A positive movement indicates the statement has made the issue worse in their head while a negative score has made the issue seem less bad than before.*			
			Average starting score	**73.32**
Q27a	***The vast majority of packaging can be recycled (85%) so the overall impact on the environment is less than you might think.***			
	Average score after seeing	60.11	Average movement + or -	-4.44
Q27b	***Without packaging many of the food products that we enjoy would only be available for a few months of the year – rather than all year round as they are now.***			
	Average score after seeing	61.17	Average movement + or -	-3.11
Q27c	***Packaging allows food to stay fresher for much longer – not just on the shelves but in your home as well. Most fresh fruit & vegetables, such as peppers, carrots and oranges, will last for at least a week longer if kept in the fridge, and two weeks longer if kept in their original packaging in the fridge.***			
	Average score after seeing	60.26	Average movement + or -	-4.04
Q27d	***Guardian article on Tesco trialling new food waste reducing packaging***			
	Average score after seeing	61.83	Average movement + or -	-1.84
Q27e	***On average, packaging weighs 10 times less than the product it protects***			
	Average score after seeing	61.76	Average movement + or -	-2.06
	Average final score	57.82	Average movement + or -	-15.5

Q27N	**First of all, please slide the pointer along the bar to indicate how much of a problem you consider packaging to be.** Use slider bar and then move on. Scale is continuous 100-point bar from 0 = "It's not a problem at all" to 100 = "It's a major problem". *Base: Split sample with 27N = 2049. N.B. A positive movement indicates the statement has made the issue worse in their head while a negative score has made the issue seem less bad than before.*			
			Average starting score	**73.94**
Q27Na	***We throw away 4 million tonnes of packaging waste a year in the UK.***			
	Average score after seeing	78.94	Average movement + or -	+9.13
Q27Nb	***Packaging adds £470 onto the average consumer's food shopping bill each year.***			
	Average score after seeing	78.3	Average movement + or -	+7.86
Q27Nc	***Telegraph article on supermarkets "using too much packaging"***			
	Average score after seeing	71.66	Average movement + or -	-0.19
Q27Nd	***Packaging allows food to stay fresher for much longer – not just on the shelves but in your home as well. Most fresh fruit & vegetables, such as peppers, carrots and oranges, will last for at least a week longer if kept in the fridge, and two weeks longer if kept in their original packaging in the fridge.***			
	Average score after seeing	66.42	Average movement + or -	-7.48
Q27Ne	***If we didn't have packaging, we would have to throw away a great deal more food than the comparatively small amount of packaging waste we currently produce.***			
	Average score after seeing	67.99	Average movement + or -	-6.1
Q27Nf	***Guardian article on Tesco trialling new food waste reducing packaging***			
	Average score after seeing	68.18	Average movement + or -	-4.88
	Average final score	72.28	Average movement + or -	-1.66

WASTE AND RECYCLING COLLECTIONS

Q28	**Which of the following materials, if any, are easy for you to recycle?** *(Respondents could select any that applied) Base: 4102*		
	Plastic bottles	73%	
	Plastic pots, tubs and trays	44%	
	Plastic wrappers and film	22%	
	Paper	86%	
	Magazines	80%	
	Cans and tins	80%	
	Foil / foil paper	33%	
	Cardboard	82%	
	Glass bottles and jars	79%	
	Cartons (e.g. milk, juice)	53%	
	Multi-material packaging (e.g. cardboard box and plastic film)	25%	
	I don't/can't recycle	3%	
	Average number of answers given =	***6.76***	

Waste & Resources Action Programme

The Old Academy
21 Horse Fair
Banbury, Oxon
OX16 0AH

Tel: 01295 819 900
Fax: 01295 819 911
E-mail: info@wrap.org.uk

Helpline freephone
0808 100 2040

www.wrap.org.uk/food

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