

Reforming Food Date Codes

Macquarie Law School PACE Program

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Background

What is PACE?

The professional and community engagement (PACE) program at Macquarie University requires all students to undertake at least one PACE unit. The units are designed to provide practical experience to explore economic, social and ethical challenges by seeing firsthand how contemporary organisations address them. Students are given the opportunity to contribute their knowledge, ideas and a fresh perspective to real world projects, which support the PACE partner organisation's mission and objectives.

In 2019 six tutorial-based teams of law students worked with Foodbank to produce reports on a legal or law reform issue of interest. Two of the teams addressed the issue of date labelling on food.

Scope of project

Current date labelling practices on food packaging cause confusion with "sell-by," "best-by," "use-by," and "best before" dates all being prevalent leading to most Australians often throwing out still-fresh food. According to overseas experience, confusion over the meaning of date labels is estimated to account for 20% of consumer waste of safe, edible food. We believe that 5% to 10% of this could be impacted by reforming the labelling legislation.

Based on evidence and/or experience in other jurisdictions, the teams were asked to make a case for changing the labelling regulations, noting all considerations, and make recommendations for what the changes could be to achieve the outcome.

This document contains the resulting two reports from the PACE teams.



A Simplified Labelling System

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Executive Summary

Consumer confusion regarding current date marking laws have led to greater premature food waste. We propose amending the current legislation to provide greater clarity in understanding date labels in the hope that this will help consumers make better choices in consuming food products. Firstly, we propose that the 'use by' label should be used solely as an indication of food safety. Secondly, we propose that 'best before' labels should be used solely as an indication of food quality. Thirdly, we recommend that 'packed on' labels should be removed altogether. Finally, we believe that 'baked on' and 'baked before' labels should be removed and instead be replaced with 'best before' labelling. We also considered other labelling options such as smart labelling, but ultimately decided that this would be too costly to implement. We also recommend the use of education campaigns through television, radio and social media to help increase consumer awareness regarding date labelling. It is hoped that these reforms can help simplify the current date labelling system and enable consumers to make better food choices and reduce premature food waste.

Introduction

Food wastage is a growing issue in Australia. Rising costs of living coupled with stagnant wage growth mean that many Australians are unable to purchase enough food for themselves and their families, whilst thousands of kilograms of food are being dumped every day.¹ This outlines a clear disproportion with the amount of food Australia is able to produce when compared with its population. We believe that simplifying the current date labelling system can enable consumers to make better food choices and reduce premature food waste.

The existing Australian date labelling system is mainly governed by the *Food Standards Australia New Zealand Act 1991* (Cth) (the FSANZ Act) and the *Australia New Zealand Food Standards Code – Standard 1.2.5* (Cth).² According to this legislation, most food products sold in Australia can be categorised under the umbrella terms of 'best before' or 'use by'.³ Food products exempt from this requirement include individual portions of ice cream and products where the 'best before' date is more than two years.⁴ For clarity, we have chosen to explore the issues behind these umbrella terms and other commonly used date labels in Australia such as 'packed on', 'baked on', and 'baked before'.

¹ Department of the Environment and Energy, Australian Government, *National Food Waste Strategy: Halving Australia's Food Waste by 2030* (Report, November 2017) 3; Charis Chang, 'The Reason Why You Feel the Cost of Living is Going Up', *News.com.au* (Web Page, 30 July 2019)

<https://www.news.com.au/finance/money/budgeting/the-reason-why-you-feel-the-cost-of-living-is-going-up/news-story/d59dd2162c0aa1eb76899efb924d1b5c> ('National Food Waste Strategy').

² *Food Standards Australia New Zealand Act 1991* (Cth); *Australia New Zealand Food Standards Code – Standard 1.2.5* 2016 (Cth).

³ *Australia New Zealand Food Standards Code – Standard 1.2.5* 2016 (Cth) cl 2.

⁴ *Australia New Zealand Food Standards Code – Standard 1.2.5* 2016 (Cth) cl 3.

Consumer confusion surrounding date labels is believed to be the main reason why consumers throw away safe, edible food.⁵ Studies have shown that consumers with a better occupational status were more likely to understand date marking limitations and have lower premature food waste.⁶ Studies have also found only a third of surveyed consumers could correctly define 'best before' and 'use by' date labels.⁷ Date marking practices were also found to be inconsistent amongst different brands for similar products, further clouding consumer understanding.⁸ It is hoped that a simplified labelling system can help clarify the safety and quality of food products and enable consumers to make better food choices, subsequently lowering premature food waste.

In developing our recommendations, we considered reforms in multiple foreign jurisdictions including the United Kingdom (UK), Europe and the United States (US). We also identified that there were other factors that influenced consumer food choices, such as risk perception of date labels around food products and the consideration of other signs of spoilage in addition to date labels when making these choices.⁹ However, for clarity, we have decided to focus on reforming the current date labelling system.

⁵ Newsome et al, 'Applications and Perceptions of Date Labeling of Food' (2014) 13(4) *Comprehensive Reviews in Food Science and Food Safety* 745, 746 ('*Applications and Perceptions of Date Labeling of Food*')

⁶ Toma et al, 'Impact of Consumers' Understanding of Date Labelling on Food Waste Behaviour' (2017) 1 *Operational Research* 1, 5 ('*Impact of Consumers' Understanding of Date Labelling*').

⁷ Ibid, 6.

⁸ Wilson et al., 'Food waste: The role of date labels, package size, and product category' (2017) 55 *Food Quality and Preference* 35-44, 38 ('*The role of date labels*'); Rosetta Newsome et al, 'Applications and Perceptions of Date Labeling of Food' (2014) 13(4) *Comprehensive Reviews in Food Science and Food Safety* 745, 746.

⁹ Nancy Holthuysen et al, *The Effect of Date Marking Terminology of Products with a Long Shelf Life on Food Discarding Behaviour of Consumers* (Report No 1709, 27 March 2017) 21.

Firstly, this report will examine the issues surrounding 'use by' labels, and will ultimately recommend they be used solely as an indication of food safety. Secondly, the issues surrounding 'best before' labels will be examined, and we will ultimately recommend that it should be used as an indication of food quality. Thirdly, we will examine the issues surrounding 'packed on' labels, and will ultimately recommend they should be removed altogether. Fourthly, we will examine the issues surrounding 'baked on' and 'baked before' labels used for baked goods, and will ultimately recommend they should be removed and replaced with 'best before' labelling. Fifthly, we will examine other alternative options such as smart labelling. Sixthly, we will examine the advantages and limitations of introducing a simplified labelling system. Finally, we will expand upon our recommendation of using education campaigns to increase consumer awareness regarding our simplified labelling system. It is hoped that these reforms will enable consumers to make better food choices and subsequently, reduce premature food waste.

Use By

'Use by' date refers to the date after which it is estimated that the food should not be consumed because of safety reason.¹⁰ In Australia, food manufacturers are responsible to decide what date label to use and how the date will be determined, which lead to 'use by' date being incorrectly applied to food products not for safety reason. Research has indicated that food manufacturers are more inclined to use 'use by' date for various reasons,¹¹ such as consumer preferences and brand protection which are arguably legitimate concerns related to food items.¹² However, a major incentive for manufacturers is adopt 'use by' date is to generate more profit. Accordingly, a date label that is most suggestive of a food safety concern would lead to the greatest value of food being wasted.¹³ A research found that consumers are more willing to discard food 50% more frequently for products with 'use by' date compared to other date labelling.¹⁴ Therefore, consumers are more likely to throw away food items with 'use by' date because of safety concerns.¹⁵ The end result is people would discard more food and would subsequently purchase more and food manufacturers can generate more profits as a result. The economic incentive to generate more profit therefore clouds the

¹⁰ *Australia New Zealand Food Standards Code – Standard 1.2.5 2016* (Cth) cl 2.

¹¹ National Resources Defense Council, *The Dating Game: How Confusing Food Date Labels Lead to Food Waste in America* (Report, September 2013) 7. ('*The Dating Game*').

¹² *Ibid* 18.

¹³ *The role of date labels* (n 8) 42.

¹⁴ *Ibid* 41.

¹⁵ National Resources Defense Council, *The Dating Game: How Confusing Food Date Labels Lead to Food Waste in America* (Report, September 2013) 19; Wilson et al., 'Food waste: The role of date labels, package size, and product category' (2017) 55 *Food Quality and Preference* 35, 42.

judgment of food manufacturers in applying 'use by' date on food products not for food safety reason, when end up leading to unnecessary consumer food waste.

Further complicating the issue lies on the divergence in terms of what 'use by' date means. Consumers perceive 'use by' date as the last date a product is safe to consume, while manufacturers conceptualized it as "the last date recommended for the use of the product while at peak quality."¹⁶ The difference in the perception of 'use-by' date is an example of consumer confusion regarding to 'use by' date and other date labels, which attributed to approximately 20% of household waste of food in UK.¹⁷ A study conducted by European Commission showed that consumer lacked understanding of what 'use by' date means, and there were 49% of participants in the study indicated it would be beneficial to have better and clearer information about 'use by' date.¹⁸

However, despite the confusion, consumers still heavily rely on checking the 'use by' date. Consumers' over-reliance on 'use by' date often associates with unnecessary food waste ¹⁹ because safety and quality concerns were the top two reasons consumers provided for discarding food.²⁰ Once the manufacturer applied 'use by' date on food

¹⁶ Ibid 7.

¹⁷ Waste and Resources Action Programme, *Consumer Insight: Date Labels and Storage Guidance* (Report, May 2011) 1.

¹⁸ European Commission, *Flash Eurobarometer 425: Food Waste and Date Marking* (Report, September 2015) 6.

¹⁹ Roni Neff et al, 'Misunderstood Food Date Labels and Reported Food Discards: A Survey of U.S. Consumer Attitudes and Behaviors' (2019) 82 *Waste Management* 123, 129 ('*Misunderstood Food Date Labels*')

²⁰ Roni Neff, Marie Spiker and Patricia Truant, 'Wasted Food: U.S. Consumers' Reported Awareness, Attitudes, and Behaviors' (2015) 10(6) *PLoS One* 1, 12.

products, consumers would perceive that the products would be unsafe to consume after the provided date. The incorrect application of 'use by' date on food products lead to sub-optimal food being wasted not because consumers incorrectly associate that product as unsafe to consume because of the 'use by' date.

To conclude, the overly use of 'use by' date, combined with consumers confusion to differentiate 'use by' date and other date labels, and consumer's trust in date labels are the major factors that contribute to unnecessary food waste.

Recommendations

In order to address the issue of the ubiquitous use of 'use by' date by food manufacturers, 'use by' date therefore should only be limited to be used for highly perishable food products because it poses real threat to human health if being consumed after the 'use by' date.²¹ This is consistent with the approach proposed by research from US²², UK²³ and Europe.²⁴ To achieve that, the Food Safety Standard should specify on what basis it would constitute a safety reason to warrant the application of 'use by' date. The Food Information to Consumers Regulation in Europe stipulates that 'use by' date should only be used on food items that from a

²¹ *The role of date labels* (n 8) 41.

²² Jessica Aschemann-Witzel et al, 'Consumer-Related Food Waste: Causes and Potential for Action' (2015) 7 *Sustainability* 6457, 6469

²³ Waste and Resources Action Programme, *Labeling Guidance: Best Practice on Food Date Labelling and Storage Advice* (Report, November 2017) 18 ('*WRAP Labeling Guidance*').

²⁴ European Commission, *Market Study on Date Marking and other Information Provided on Food Labels and Food Waste Prevention* (Report, January 2018)

microbiological point of view, are highly perishable and are therefore likely to constitute an immediate danger to human health.²⁵ This is to ensure that 'use by' date accurately reflects the maximum amount of time to consume their purchases before the date expires, thereby empowering consumers to make an informed decision.²⁶

By adopting similar concepts based on the European legislation, and clarifying the basis in which 'use-by' date should be used, it can reduce the discretion food manufacturers have when determining which date label to use. Food manufacturers therefore would need to provide evidence to justify using 'use by' date from a food safety aspect. Not only it can address the issue of overly use of 'use by' date on products that do not warrant such use, but also provide a clear guidance for the food industry to consider so that 'use by' date is correctly applied to food items.

Furthermore, limiting the application of 'use by' date only on highly perishable products could reduce consumer confusion and create a more harmonized food labelling system.²⁷ When 'use by' date is correctly applied to food items, consumer would be able to clearly distinguish 'use-by' date from other date labels as it only applies to highly perishable food items for safety reason.

²⁵ *Regulation (EU) No 1169/2011 of the European Parliament and of the Council on the Provision of Food Information to Consumers* [2011] OJ L 304/18, art 24.

²⁶ Janis Baines, Scott Crerar and Tony Johnson, 'Evaluating the Effectiveness of the Joint Australia New Zealand Food Standards Code' (2003) 14 *Food Control* 439, 445.

²⁷ Aschemann-Witzel et al (n 24) 6465.

Risk/Benefit Analysis

As 'use by' date is an indication of food safety, limiting its usage involves a trade-off between maintaining food safety and reducing food waste. A research conducted by European Commission concluded that food waste linked to date labelling is likely to be reduced when it is used when there is a safety-based rationale for doing so.²⁸ Thus, limiting the usage of 'use by' date to reduce consumer confusion would appear to be a plausible option to reduce food waste.

However, there are concerns in relation to the effectiveness of limiting the usage of 'use by' date to reduce food waste without any consideration to the food supply chain. It has been suggested food products, especially highly perishable products, could be contaminated because of lack of control of the temperature during the process,²⁹ rendering any reform on 'use by' date futile. Lowering the storage temperature across the whole supply chain in order to extend the shelf life of food items appears to be a logical approach.³⁰ However, the cost involved and whether this measure would be effective in reducing food waste is unknown.³¹ Therefore, Government should evaluate the full economic and food waste implications before introducing any reform on 'use by' date as an attempt to reduce food waste.

²⁸ European Commission (n 26) 5.

²⁹ Newsom et al (n 5) 764-5.

³⁰ Mattias Eriksson, 'Food Waste Reduction in Supermarkets – Net Costs and Benefits of Reduced Storage Temperature' (2016) 107 *Resources, Conservation and Recycling* 73, 80.

³¹ Ibid 74.

Best Before

Often mistaken to be synonymous with an expiration date, the 'best before' date label is actually an indication of quality that guarantees certain product properties up until a certain date.³² Foods marked with a 'best before' date will still be safe for consumption after the date, albeit with a slight deterioration in texture, taste, and nutritional value.³³ Commonly applied to items such as biscuits, flour, dried goods, and frozen foods, if stored correctly, there is potential for such products to last weeks, months, or even years without a serious degradation in quality.³⁴ Consequently, the 'best before' date is merely a marker of optimal freshness - as long as the product looks and smells as expected, it should still be safe to consume.

However, as evinced in a 2015 European Commission report, while 58% of consumers make reference to date labels when shopping and preparing meals, less than 50% actually understand what they mean.³⁵ Despite having no safety connotations whatsoever, misperceptions about 'best before' have resulted in consumers incorrectly associating 'best before' with issues of safety.³⁶ This ultimately culminates in the

³² Food Standards Australia New Zealand, *Date Marking: User Guide to Standard 1.2.5 – Date Marking of Food* (December 2013) 3.

³³ Shire of Exmouth, *'Best Before' and 'Use by' Dates* (2008) < <https://www.exmouth.wa.gov.au/documents/351/best-before-and-used-by-dates>>.

³⁴ Ibid.

³⁵ European Union, *Flash Eurobarometer 425 on Food Waste and Date Labelling* (October 2015); European Commission, *Market Study on Date Marking and Other Information Provided on Food Labels and Food Waste Prevention* (Final Report, January 2018) 82.

³⁶ Roni Neff et al, 'Misunderstood Food Date Labels and Reported Food Discards: A Survey of U.S. Consumer Attitudes and Behaviors' (2019) 82 *Waste Management* 123, 124; Waste and Resources Action Programme, *Development of Best Practice on Food Date Labelling and Storage Advice* (November 2017) 15.

premature disposal of food. As it has been recommended in the above section that the use of ‘use by’ be solely restricted to foods that may pose a safety concern, this section will subsequently focus on recommendations aimed at better distinguishing ‘best before’ as an indication of quality.

Recommendations

1. Update Date-Label Terminology and Formatting

As recommended by the EU Platform on Food Losses and Food Waste, one way in which a clearer distinction can be achieved is through updating the current terminology in accordance with the 2018 revisions to CODEX’s *General Standard for the Labelling of Pre-packaged Goods* from ‘best before’ to ‘best *quality* before.’³⁷ Despite being no more than a cosmetic alteration, the term ‘best quality before’ leaves no doubt as to what it indicates. Further distinction can be achieved through altering the date format so as to make ‘best before’ more indeterminate.³⁸ As noted by the European Commission, as ‘best before’ is merely an indication of quality it need not be as definitive.³⁹ By shifting to the more open-ended format of MM/YY, the notion that ‘best quality before’ is *not* an expiration date is further reinforced.

³⁷ European Union Platform on Food Losses and Food Waste, *EU Action to Promote Better Understanding and Use of Date Marking* (20 April 2018) < https://ec.europa.eu/food/sites/food/files/safety/docs/fw_eu-platform_20180420_sub-dm_pres-01.pdf> (*EU Action*).

³⁸ *Ibid.*

³⁹ *Ibid.*

	<i>Existing</i>	<i>Revised</i>
Terminology	Best before	Best <i>quality</i> before
Formatting (Best Before)	DD/MM/YY	MM/YY

Table 1. Possible Formatting Options

In addition to the new terminology, it is further recommended that a complimentary education campaign be implemented. In particular, the campaign should have two purposes. Firstly, the campaign should raise consumer awareness as to what each date label means - namely, that 'best quality before' only pertains to quality. Secondly, information must be provided to consumers that it is safe to consume foods beyond the 'best before' date, thereby assuaging misplaced consumer misapprehensions about food safety and subsequently reducing food waste. In order to facilitate this, the campaign should also draw attention to the more stringent regulation of 'use by' as recommended earlier, reassuring consumers that only foods that pose a genuine safety concern will be marked with 'use by'.

Risk/Benefit Analysis

Revisions to the terminology and formatting of date labels are inexpensive to implement and are thus likely to be well received by FBOs. In addition, Australian regulations already have the groundwork set out - under FS 1.2.5 foods with a 'best before' date exceeding three months from the date of application can already be marked with the

[MM/YY] format.⁴⁰ While the awareness campaign may be costly (especially as it is a long-term dialogue), it is posited that this may be partially or fully subsidised by industry groups or supermarket chains as part of a corporate social responsibility initiative.

However, it is to be noted that due to its infancy, consumer behavior studies are still being undertaken to ascertain the effectiveness of the reforms.⁴¹ Nevertheless, due to its ease of implementation and lack of adverse consequences it remains a sound recommendation.

2. Mandatory Date-Mark Exemptions

Under FS 1.2.5, food with a shelf life exceeding two years are exempt from date labelling requirements.⁴² However, this is voluntary - producers may still nevertheless opt to apply a 'best before' date. In light of consumer confusion over date labelling, another recommendation that often arises is to make such exemptions legally mandatory.⁴³ By requiring consumers to rely on their senses (touch, taste, and smell) to assess quality, it is anticipated that food will be kept longer.⁴⁴ The omission of a date mark also has the added benefit of increasing the amount of food that can be donated as most food banks only accept products up until the 'best before' date - no longer

⁴⁰ *Australia New Zealand Food Standards Code – Standard 1.2.5 2016* (Cth) cl 5.

⁴¹ *EU Action* (n 37).

⁴² *Australia New Zealand Food Standards Code – Standard 1.2.5 2016* (Cth) cl 3.

⁴³ Nicole Sagener, 'Germany Plans 'Smart' Packaging to Cut Food Waste', *EuraActiv* (online, 30 March 2016) <<https://www.euractiv.com/section/agriculture-food/news/germany-plans-smart-packaging-to-cut-food-waste/>>.

⁴⁴ European Commission, *Milan BExpo 2015: A Behavioural Study on Food Choices and Eating Habits* (Final Report, 12 October 2015) 17 ('*Milan BExpo*').

caught by this restriction, such foods, if stored correctly, may instead be donated instead of arbitrarily disposed of.

Risk/Benefit Analysis

Studies pertaining to the removal of 'best before' have proven to be inconclusive about the effects of such a recommendation - namely, while the removal of 'best before' dates are beneficial *after* the date, it is also detrimental *prior* to the date.⁴⁵

This phenomenon was demonstrated in a 2015 European Commission report, where the removal of 'best before' dates resulted in a 20% reduction in the disposal of foods past their best-before date.⁴⁶ Food quality was also perceived to be higher than that of their date-marked counterparts after the best-before date was reached.⁴⁷ However, the study has also revealed that the removal of date marks has also *increased* the disposal of food prior to the 'best before' date, with perceived food quality of unmarked products lower than that of date-marked products.⁴⁸ As BEUC explains, due to the popular mantra of 'if in doubt throw it out', consumers may prematurely dispose of unmarked foods due to uncertainty.⁴⁹ This is especially the case for products which are wrongly perceived to have a shorter shelf life, such as hummus and yoghurt.⁵⁰ However, it is to

⁴⁵ Ibid 19-21.

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ Ibid 23.

⁴⁹ Letter from the European Consumer Organisation to the European Commission, 3 June 2014, 2

<https://www.beuc.eu/publications/beuc-x-2014-040_cpe_date_labelling_and_food_waste.pdf> ('Letter').

⁵⁰ *Milan BExpo* (n 44) 17.

be noted such consumer behaviour may not arise due to the earlier recommendations. The attitude of 'better safe than sorry' stems from fears over food safety, thus the confinement of 'use-by' to only foods which pose a genuine safety concern, in conjunction with awareness campaigns emphasising such a fact may preemptively allay consumer misapprehensions.

Another issue that arises from the removal of date marks is its vulnerability to exploitation by manufacturers, who may mislead consumers by selling products of differing quality at the same time.⁵¹ While this may be remedied through the application of a production date, a Dutch study has found that this may further exacerbate rates of food disposal - due to a lack of understanding, consumers tend to underestimate the shelf-life of products.⁵²

From this it can be discerned that consumers desire certainty and clarity, that of which the removal of date labels does not offer.⁵³ However, it is questionable whether certainty and clarity as to food quality and safety can be adequately conveyed through a mere date label in the first place. Consequently, in addition to the aforementioned awareness campaign on date labels, it may be necessary to collaborate with industry groups (i.e dairy, drinks) to formulate complementary awareness campaigns educating

⁵¹ *EU Action* (n 37).

⁵² Holthuysen et al (n 9) 20-22.

⁵³ *Ibid.*

consumers on how to best gauge product quality, as well as general estimates for the shelf-life of products.⁵⁴

⁵⁴ Newsome et al (n 5) 765.

Packed On

Another label addressed by the Food Standards⁵⁵ is the 'Packed On' label which food manufacturers have included to indicate the freshness of their products. However, it is not a safety date and provides no relevant information to consumers on how long an item may be consumed safely. Although 'Packed On' labels may only be included in addition to 'Best-Before' or 'Use-By' labels and given it is not expressly prohibited by the Food Standards, 'Packed On' labels introduce inconsistencies in the Australian date labeling system which may induce greater consumer confusion with date labels.

Firstly, consumer confusion on what date labels actually represent is widely documented,⁵⁶ where labels are being used interchangeably by consumers.⁵⁷ Hence a valid assumption can be made that some consumers concerned about food safety may discard products past a 'Packed On' date despite being before the marked 'Use-By' date. Secondly, an American study by Wilson compounds this notion with evidence of consumers perceiving a wide range of meanings including safety, quality and other irrelevant assumptions from non-safety related date labels which provide less clear information than other labels.⁵⁸ Although the 'Packed On' label is not used in the USA a

⁵⁵ *Australia New Zealand Food Standards Code – Standard 1.2.5 2016* (Cth)

⁵⁶ Wilson et al., 'Food waste: The role of date labels, package size, and product category' (2017) 55 *Food Quality and Preference* 35-44; Richard Milne, 'Arbiters of waste: date labels, the consumer and knowing good, safe food' (2013) 60(2) *The Sociological Review* 84-101; Neff et al., 'Misunderstood food date labels and reported food discards: A survey of U.S consumer attitudes and behaviors' (2019) 86 *Waste Management* 123-132; Wilson et al., 'When In Doubt, Throw It Out! The Complicated Decision to Consume (or Waste) Food by Date Labels' (2019) 34(1) *Choices* 1-7.

⁵⁷ *The Dating Game* (n 11).

⁵⁸ *The role of date labels* (n 8) 41.

similar conclusion can be drawn where the lack of clarity is likely to induce greater consumer confusion and misinterpretations which may lead to premature food waste.

Recommendations

Remove ‘Packed On’ Date Labels from Final Products

An open date label displays a calendar date on products which convey information to the consumer regarding the quality or safety of food for consumption⁵⁹ while alternative labels are restricted.⁶⁰ Unlike the other predominant labels in ‘Best-Before’ or ‘Use-By’, ‘Packed On’ labels do not communicate to the consumer the expected shelf life of the product and thus removing the label in final products is likely to reduce consumer confusion caused by misinterpretation which may contribute to the reduction of food waste. Although clause 6 outlines that ‘Packed On’ labels can only be used in conjunction to ‘Best Before’ and ‘Use-By’, the WRAP report from the UK outlines the failures of a double dating system which is more likely to cause greater confusion in consumers rather than provide clarification between quality assurances and safety dates.⁶¹

Risk Benefit Analysis

Removing ‘Packed On’ labels from final products would be inexpensive to implement to future production cycles to reduce consumer burden on understanding date labels

⁵⁹ *Australia New Zealand Food Standards Code – Standard 1.2.5 2016 (Cth)*, cl 3.

⁶⁰ *Australia New Zealand Food Standards Code – Standard 1.2.5 2016 (Cth)*, cl 6.

⁶¹ *WRAP Labeling Guidance* (n 23) 12.

which may reduce premature food waste. However, it must be recognised that consumer confusion with date labels is unlikely to be solely resolved by removing 'Packed On' labels nor replacing it with another label but requires an increase in the understanding of date labels by consumers.

Baked-On / Baked-For

The Food Standards Code outlines exemptions to the requirement of a 'Use-By' or 'Best-Before' food label including certain bread products which may alternatively use 'Baked On' or 'Baked-For' label which outline their date of production.⁶² Food such as bread that is sold directly from premises have fewer labeling requirements as consumers may obtain additional information about a product at the time of purchase.⁶³ However, not all bread is sold directly through a bakery but may be packaged and sold through retailers. Unfortunately, bread is highly susceptible to mold growth and its quality drops deteriorates quickly.⁶⁴ Although consumers commonly perform sensory checks for signs of spoilage,⁶⁵ a food label that doesn't refer to the safety date is likely to contribute to consumer confusion on consumption safety leading to increased premature food waste.

Recommendations

According to current legislation, bread producers have the option of displaying either 'Best-Before' or one of the two baked-on/for labels on their products with a shelf life lower than 7 days. By eliminating the option and standardising 'Best-Before' on bread products, consumers are more accurately informed of the consumption quality and

⁶² *Australia New Zealand Food Standards Code – Standard 1.2.5 2016* (Cth) cl. 3.

⁶³ Queensland Health, '*Bread and Bakery Products*' (2018).

⁶⁴ Marcin Skrypiec, 'Does Bread Go Bad?' (Blog Post, 6 November 2019) <<https://www.doesitgobad.com/does-bread-go-bad/>>.

⁶⁵ Boxstael et al. 'Understanding and attitude regarding the shelf life labels and dates on pre-packed food products by Belgian consumers' (2014) 37 *Food Control* 88.

safety of bread which may lead to reduced food waste. A study by Wilson supports the move for harmonised date labels, where fewer and more effective labels are more likely to positively influence consumer behaviour and reduce food they intend to waste.⁶⁶

Although the Australian labelling system is comparatively simple in comparison to the USA where the study originates, the recommendation may still be applied to further optimize the Australian date labeling system.

Furthermore, it may not be possible for every customer to ask further details on bread items regarding their shelf-life or storage requirements. A date label that merely highlights the production date provides little safety information to the end consumer is discouraged similarly to 'Packed On' labels, where the confusion from the lack of clarity likely to result in greater food waste in households.⁶⁷ Given 'Best-Before' is already being used on packaged bread products, the consolidation of date labelling of bread into a single label would provide for a streamlined system with less confusion.

Additionally, when debating whether a production date or a safety should be present on any product, the legislation clearly outlines the priority on a safety date⁶⁸ hence 'baked-on/baked-for' labels create an inconsistency that should be amended.

⁶⁶. *The role of date labels* (n 8) 41-42.

⁶⁷ Ibid.

⁶⁸ *Australia New Zealand Food Standards Code – Standard 1.2.5 2016* (Cth) cl 6.

Risk/Benefit Analysis

Manufacturers of bread will need to phase out the use of 'baked-on/baked-for' labels in favour of 'Best-Before', which will have minimal impact on future production cycles.

Bakeries that are involved in direct sale of products to consumers are unlikely to be using any labels as they lack packaging, and since they're exempt from displaying a label, the change in bread labelling is likely to have minimal impact on local bakeries.

A Simplified Labelling System to Reduce Food Waste?

Research indicates that date labels have the potential to influence consumer behaviour and preferences regarding food waste.⁶⁹ Thus many recommendations suggested by this report advocate for a simplified labelling system with fewer labels that primarily uses 'Best-Before' and 'Use-By' in an effort to minimise confusion while maintaining modern food safety standards. Predominantly using 'Best-Before' labels in circumstances where safety concerns are minimal while reserving 'Use-By' to circumstances where microbial risk is present will enable future improvements to household waste management and ultimately reduce premature food waste. Despite this, analysis of global efforts to simplify date labeling systems and international studies reveal standardisation may have limited benefits which may not reduce consumer confusion and ultimately not reduce premature food waste.

Costs of Smart Labelling

Global efforts to simplify date labels with greater accuracy and intuitiveness have resulted in smart visual labels such as the Oli-Tec intelligent indicator label created in the UK. As a time and temperature sensitive label, the Oli-Tec label indicates to consumers the suitability of consumption with universally understood language; green

⁶⁹ NDRC, *The Dating Game: How Confusing Food Date Labels Lead to Food Waste in America* (Report, September 2013); WRAP, *Labeling Guidance: Best Practice on Food Date Labelling and Storage Advice* (Report, November 2017); Neff et al., 'Misunderstood food date labels and reported food discards: A survey of U.S. consumer attitudes and behaviors' (2019) 86 *Waste Management* 123-132.

for “Good”, amber for “Best-Before”, red for “Use-By”.⁷⁰ The accurate depiction of food safety will minimise confusion caused by date labels, improve consumer confidence in multiple use products which are often discarded prior to being fully consumed⁷¹ and provide an education element that emphasizes Best-Before as an indicator of quality while only ‘Use-By’ should suggest safety concerns. Ultimately, smart labels such as Oli-Tec can reduce food discarding at the commercial and consumer level prior to the ‘Use-By’ expiration date.

However, the adoption of a smart labeling system is likely to incur substantial costs from individualized indicator production and application on unique items. This is evident in Oli-Tec’s developmental timeline where in 2016 the company are working on redesigning the product despite a ‘substantial breakthrough’.⁷² Additionally, smart labels are still reliant on some assumptions of key dates and storage conditions set by the manufacturer, requiring additional steps of production creating further costs. A risk benefit analysis on the adoption of smart labels in Australia suggests the benefits consumers will experience cannot justify the increase in production costs which will ultimately be passed down to the consumers.

⁷⁰ Oli-Tec, *How it works* (Web Page) <<https://www.oli-tec.com/oli-tec/how-it-works/>>

⁷¹ Oli-Tec, *Consumer Benefits* (Web Page) <<https://www.oli-tec.com/oli-tec/consumer-benefits/>>

⁷² Oli-Tec, *The History of Oli-Tec* (Web Page) <<https://www.oli-tec.com/oli-tec/the-history-of-oli-tec/>>

Date Labelling Isn't the Only Contributing Factor to Premature Food Waste

In developed countries, it has been identified the greatest potential for the reduction of food waste lies with consumers,⁷³ as consumer behaviour is considered the primary cause for premature food waste.⁷⁴ Although the recommended simplified date labeling system has the potential to influence positive consumer behaviour towards reducing food waste, it isn't the only factor leading to premature food waste. Other elements preventing strategies to reduce premature food waste include cultural attitudes, poor planning of grocery shopping and the effect of income and price of food. A Chinese study identified the strong attitudes towards hospitality leads to over-preparation of food ultimately leading to food being wasted.⁷⁵ Similarly, many consumers do not plan their shopping resulting in over purchasing and overstocking of food, ultimately leading to some food not being consumed.⁷⁶ Although higher cost of food would inevitably result in lower food waste, it will negatively influence low-income households. Instead with food staying at accessible levels of cost, high-income households are purchasing a greater amount of food, producing higher levels of waste with a lower effort to reduce waste.⁷⁷

⁷³ Partfitt et al. 'Food waste within food supply chains: quantification and potential for change to 2050' (2010) 365 *Philosophical Transactions of the Royal Society B* 3065-3081.

⁷⁴ Marie Hebrok and Casper Boks, 'Household food waste: Drivers and potential intervention points for design – An extensive review' 151 *Journal of Cleaner Production* 380-392.

⁷⁵ Hui Zhang, 'Characterization of household food waste and strategies for its reduction: A Shenzhen City case study' (2019) 78 *Waste Management* 426-433, 431.

⁷⁶ Ibid.

⁷⁷ Ibid; Neff et al. 'Misunderstood food date labels and reported food discards: A survey of U.S. consumer attitudes and behaviors' (2019) 86 *Waste Management* 123-132.

Increasing Consumer Awareness

Whilst these recommendations may help consumers reduce premature food waste, it would not be as effective without an education campaign to increase consumer awareness.⁷⁸ Studies have shown that consumers would like to be more knowledgeable about food quality and safety.⁷⁹ An education campaign would not only improve consumer understanding about date labels, but would also help clarify other misperceptions that have been highlighted by this report towards date labelling.⁸⁰ These campaigns may be distributed through different forms of media most commonly used by the consumer, such as television, radio and social media. These campaigns should also include strategies on how to combat premature food waste, particularly what consumers should do with unwanted food products that are still safe to consume. We believe that by encouraging consumers to donate these unwanted food products to charities such as Foodbank Australia, we can help Foodbank succeed in their mission by not only reducing premature food waste, but also increasing the number of food donations.

However, we do understand that developing and distributing these education campaigns may be costly. The average Australian Government campaign costs about \$5 million from development to distribution across different media channels.⁸¹ But the amount of premature food waste costs the Australian economy about \$20 billion a

⁷⁸ *National Food Waste Strategy* (n 1), 27-28.

⁷⁹ *Impact of Consumers' Understanding of Date Labelling* (n 6) 18.

⁸⁰ *Applications and Perceptions of Date Labeling of Food* (n 5) 746; *National Food Waste Strategy* (n 1) 27.

⁸¹ Department of Finance, Australian Government, *Campaign Advertising by Australian Government Departments and Agencies* (Report, 2018) 10-12.

year.⁸² It is believed that an education campaign may be able to reduce these costs, saving the Australian economy millions of dollars.⁸³ Thus the benefit of developing an education campaign to increase consumer awareness about date labelling outweighs the cost if it ultimately reduces the amount of premature food waste.

⁸² *National Food Waste Strategy* (n 1) 3.

⁸³ *Ibid*, 27-28.

Conclusion

This report has highlighted how and why a simplified labelling system should be introduced in Australia to enable consumers to make better food choices and subsequently reduce premature food waste. We examined the issues surrounding 'use by' labels, and believe they would be more effective if they were used solely as an indication of food safety. Similarly, we examined the issues surrounding 'best before' labels and believe this labelling should be used solely as an indication of food quality. We also examined other commonly used date labels in Australia, and found that 'packed on' labels should be removed, as well replacing 'baked on' and 'baked before' labels on baked goods with 'best before' labelling. We also examined the advantages and limitations of introducing a simplified labelling system and found that fewer labels help reduce consumer confusion surrounding date labelling. Finally, we expanded upon our recommendation of using education campaigns to increase consumer awareness regarding our simplified labelling system. It is hoped that once these reforms are implemented, consumers will be able to make better food choices and subsequently, reduce premature food waste.

LAWS 499 PACE PROJECT: ‘The Dating Game’ – Reducing Australian Food Waste

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2. Executive Summary

2.1. Purpose, Overview and Scope of the Final Report

The purpose of this Research Report is to discuss the current food date label reforms being implemented, and their impact on reducing levels of food waste. The Report provides recommendations for reform which Australia should adopt to reduce its high levels of food waste.

Food waste is generally defined to include food that has been purchased, but does not get consumed, and is therefore thrown into the garbage.¹ Australia's food waste equates to over five million tonnes of food ending up in waste per year, resulting in Australia being one of the worst countries in the world for food waste production.² Research has indicated that food labels and the confusion they create for consumers play a direct role in producing food waste. Globally, there have been reforms actioned that have been effective in reducing food waste. These include abolishing the 'Best Before' date, clarifying 'Use By' and 'Best Before' dates and allowing food beyond its 'Best Before' date to be sold at a discounted price.

¹ Cristina Calvo-Porrá, Andres Faina Medin and Chema Losada-Lopez, 'Can Marketing Help in Tackling Food Waste?: Proposals in Developed Countries' (2016) 23(1) *Journal of Food Products Marketing* 42, 42–60.

² 'Food Waste Facts', *OzHarvest* (Web Page) <<https://www.ozharvest.org/what-we-do/environment-facts/>> ('Food Waste Facts').

3. Introduction

Outlined below are some important concepts that we will be discussing in detail later on. We will briefly discuss:

3.1. Why the Australian Population Needs to Work to Reduce Current Rates of Food Waste

Australia is one of the largest food wastage nations per capita in the world and these figures can be attributed to poor date marking practices and policies.³ Issues arise with the practices of date marking, given there are only general rules placed on the quality of food. Food waste costs the world's economy \$940 million per year, of which Australia contributes \$20 billion.⁴ One out of five bags of groceries are discarded by Australians, and this can be partly attributed to consumer knowledge of date labelling.⁵

There is significant consumer confusion surrounding the difference between 'Best Before' and 'Use By' dates, which contribute to household food wastage. On a higher level there are inconsistent practices within the supply chain in regards to acceptable levels of quality and how to apply the use of different dating systems for different foods. Therefore a necessity arises with

³ 'Food Waste Around the World', *Magnet* (Web Page, 27th February 2018) <https://www.magnet.co.uk/advice-inspiration/blog/2018/February/food-waste-around-the-world/?fbclid=IwAR1iyALbdT2_Fh2reNk5z75ga9WT3o1GKzdV_IPSIxQZKexCvDnNAviEgM> ('Food Waste Around the World').

⁴ Food Waste Facts (n 2).

⁵ Ibid.

regard to Australian consumers to change date marking practices to reduce the current rates of food wastage.

3.2. Identifying the Major Problems Surrounding Current Food Date Marking Practice

Current practices used in Australia distinguish between a ‘Use By’ date that focuses on the safety of food and a ‘Best Before’ date that focuses on the quality of food. The introduction of ‘Best Before’ dates essentially applied an implicit guarantee of food quality amongst different groceries,⁶ basing these assumptions on the taste perceptions of the consumer.⁷ Studies have concluded that ‘Best Before’ dates have an effect on the acceptability of food and therefore place less of an importance on the safety of the food and creating a negative perception on safety.

3.3. The Roles of Safety and Quality in Current Date Marking Practices

Consumers and manufacturers treat the current date marking differently. The current date marking system provides consumers with information about quality and safety when deciding to buy food and also when to discard it.⁸ Manufacturers look at ‘Best Before’ labels as a way to determine quality, but also as a mechanism to increase turnover rates in suppliers.⁹ The proposed reforms will attempt to make the practices focus on safety over quality to reduce food wastage.

⁶ Brian Wansink and Alan O Wright, “‘Best if Used By...’ How Freshness Dating Influences Food Acceptance’ (2006) 71(4) *Journal of Food Science* 354, 354.

⁷ Ibid.

⁸ Julie A Caswell, ‘Quality Assurance, Information Tracking, and Consumer Labelling’ (2006) 53(10) *Marine Pollution Bulletin* 650, 651–653.

⁹ Karli Verghese et al, ‘Packaging’s Role in Minimizing Food Loss and Waste Across the Supply Chain’ (2015) 28(7) *Packaging Technology and Science* 603, 613.

3.4. The Confusion that Current Date Marking Practices Create for Consumers

Date marking practices have created consumer confusion in distinguishing the differences between ‘Use By’ and ‘Best Before’ dates. Studies undertaken made in the European Union (EU) found that date marking was a reason behind avoidable food waste.¹⁰ These studies also found that consumers had an imperfect understanding of date marking practices and information displayed on food labels.¹¹ Around 35% of consumers have stated that they rely on date labels to make purchasing and wastage decisions.¹² Studies within Australia and New Zealand had similar results, however the studies also highlighted that out of all the date marking options, ‘Use By’ is the best understood by consumers.¹³

3.5. The Need for Clarity in Legislation

Overall, Australia’s food waste problem is alarming and not only is creating a large food insecurity problem in the country, but is a large economic burden as well. Over 4 million Australians have experienced food insecurity within the last twelve months and the Australian Government estimates that food waste costs the economy \$20 billion each year.¹⁴ Part of the

¹⁰ Anthesis et al, *Market Study on Date Marking and Other Information Provided on Food Labels and Food Waste Prevention* (Final Report No 10.2875/808514, 2nd July 2018) 61.

¹¹ Ibid.

¹² Karen Fisher et al, *Helping Consumers Reduce Food Waste Through Better Labelling and Product Changes* (Retail Survey No BCP003-002, November 2019) <http://www.wrap.org.uk/sites/files/wrap/Retail_Survey_2019_0.pdf>.

¹³ Robert Quigley, *The Impact of Food Safety Label Elements on Consumers* (Report, June 2014) 21.

¹⁴ ‘Hunger in Australia’, *FoodBank* (Web Page) <<https://www.foodbank.org.au/hunger-in-australia/the-facts/?state=nsw-act?>>; Department of Environment and Energy (Cth), *National Food Waste Strategy: Halving Australia’s food waste by 2030* (Report, 2017) 1

proposals to reduce these numbers will rely on reforming the current legislation and strategies surrounding date marking. The proposed reforms will attempt to outline possible solutions in clearing the confusion that surrounds the terms ‘Best Before’ and ‘Use By’ in an effort to reduce food waste.

4. Potential Reforms

4.1. Bin the ‘Best Before’ Date

4.1.1. ‘Best Before’ Dates Refer Only to the Quality of Food

‘Best before’ date labels refer only to the quality of food; they are an estimation by manufacturers and retailers of when the food will no longer retain its specific properties or be at peak quality. However, research suggests that consumers have poor understanding of the difference between ‘Best Before’ dates - which refer to food quality and ‘Use By’ dates - which refer to safety.¹⁵

<https://www.environment.gov.au/system/files/resources/4683826b-5d9f-4e65-9344-a900060915b1/files/national-food-waste-strategy.pdf>.

¹⁵ Helen Williams et al, ‘Reasons for Household Food Waste with Special Attention to Packaging’ (2012) 24 *Journal of Cleaner Production* 141, 141–148; Tristram Stuart, *Waste: Uncovering the Global Food Scandal* (Penguin Books, 2009).

4.1.2. Removing 'Best Before' Date Marking as an Option will Reduce Consumer Confusion

Best before dates should be removed as a date marking option (see Appendix A for the proposed amendments). The confusion that consumers experience would be reduced through simple policy changes that would see 'Best Before' dates removed as a date marking option for manufacturers and retailers. The result of abolishing quality-related date labelling is that the date labels visible to the consumer would relate to food safety.¹⁶

4.1.3. Removing 'Best Before' Date Marking as an Option will Reduce Australia's Food Waste

Consumer confusion over the meaning of 'Best Before' results in perfectly edible and safe food being thrown out. By removing the 'Best Before' date marking as an option for manufacturers and retailers, consumers would no longer be discarding food that is safe to eat and food waste overall would be reduced.¹⁷ A recent study conducted by the Waste and Resources Action Programme (WRAP) determined that retailers should reduce their application of 'Best Before'

¹⁶ Ibid.

¹⁷ Alina Adam, 'Drivers of Food Waste and Policy Responses to the Issue – The Role of Retailers in Food Supply Chains' (Working Paper No 59/2015, Institute for International Political Economy Berlin, 2015) 27.

date labels to produce, as it will reduce food waste at home.¹⁸ WRAP have estimated that this would save the UK £4 billion in food waste per year.¹⁹

4.1.4. Eliminating a Key Stock Management Tool

Despite the limited requirements provided by the Food Standards Code, manufacturers and retailers are increasingly applying 'Best Before' dates to a much wider range of products than required.²⁰ This has been attributed to the fact that manufacturers and retailers utilize 'Best Before' dates to ensure consistent stock turnover rates. Eliminating this key stock management tool is likely to upset manufacturers and retailers. Although the 'Best Before' date relates to quality, it does provide consumers with information that can be used in purchasing decisions.²¹ Without information as to the potential quality of the product, consumers may eat food that is not at peak quality and may be dissatisfied.²² This may have negative effects on manufacturers and retailers' reputations.

¹⁸ Ian Palmer, 'New Report Reveals Progress in Store to Help Cut Household Food Waste, but More to be Done', *Wrap* (Web Page, 5th November 2019) <<http://www.wrap.org.uk/content/new-report-reveals-progress-store-help-cut-household-food-waste-more-be-done>>.

¹⁹ Sajid Shaikh, 'Supermarkets Should Remove 'Best Before' Dates to Tackle £4bn Food Waste', *Yahoo! News* (online, 5 November 2019) <<https://news.yahoo.com/uk-supermarkets-should-remove-best-before-dates-to-tackle-4-bn-food-waste-000110867.html>>.

²⁰ Verghese et al (n 9) 617.

²¹ Caswell (n 8) 653.

²² Ibid 654.

4.1.5. Financial Penalties Could Encourage Manufacturers/Retailers to Change

Manufacturers and retailers have no incentive to change their current practices themselves.²³ The proposed legislative changes should be accompanied by a penalty in the form of a fine. France has introduced multiple successful food waste reforms, the most notable being fines for supermarkets that do not donate food that would otherwise be thrown away.²⁴ Each infraction could cost \$4,500. Research has shown this to be incredibly successful, and a similar model should be adopted whereby manufacturers and retailers be fined \$4,500 per product that has either had a 'Best Before' date applied or not had their 'Best Before' date removed from the date reforms are in force.

4.1.6. Case Study – Tesco

In an attempt to reduce food waste, British supermarket chain Tesco made the decision to remove confusing 'Best Before' dates from 70 of its products - mostly fresh produce. The decision came in light of research that suggested less than 50% of respondents actually understood the meaning of date labels, particularly 'Best Before' dates.²⁵ The company stated that the rationale for removing 'Best Before' date labels was that consumers would be empowered to make their own decisions regarding the freshness of produce. The decision was

²³ 'Standardised Date Labelling', *ReFED* (Web Page) <<https://www.refed.com/solutions/standardized-date-labeling/>>.

²⁴ Food Waste Around the World (n 3).

²⁵ BBC News, 'Tesco Removes 'Best Before' Dates on Some Fruit and Veg', *BBC News* (online, 22 May 2018) <<https://www.bbc.com/news/business-44207480>>.

said to be a success, with 53% of their customers noting that they believed the removal of ‘Best Before’ dates had helped them retain food for longer and reduce their food waste.²⁶ Tesco then went on to remove ‘Best Before’ dates from a further 116 products.

4.1.7. Case Study – France

Similar to the decision by Tesco, the French Senate made the decision to abolish the use of ‘Best Before’ labels on non-perishable foods in 2015.²⁷ A comparison of French food waste statistics prior to and after this decision suggests that it has been successful in reducing food waste. In 2014, France had an estimated 9.67 million tonnes of food waste and in 2019 their food waste is 7.12 million tonnes per year - this secures them a place as one of the world leaders in reducing food waste.²⁸ Due to the success of the reform, there have been calls for ‘Best Before’ dates to be removed from fresh foods as well.²⁹ These case studies highlight that abolishing the ‘Best Before’ date has real potential to reduce food waste.

²⁶ Ian Quinn, ‘Tesco to Remove Best Before Dates from 100-Plus Fresh Lines’, *The Grocer* (Web Page, 8 October 2018) <<https://www.thegrocer.co.uk/food-waste/tesco-to-remove-best-before-dates-from-100-plus-fresh-fruit-and-veg-lines/572428.article>>.

²⁷ Marta Zaraska, ‘Tomorrow’s Menu’ (2017) 233(3118) *New Scientist* 32, 32–35.

²⁸ Food Waste Around the World (n 3).

²⁹ Simone Baglioni, *Foodsaving in Europe: at the Crossroad of Social Innovation* (Springer Publishing, 1st ed, 2017) 1–9.

4.2. Clarification of Terms

4.2.1. Amendments to Standards that Clarify that ‘Use By’ Dates Refer to Safety, while ‘Best Before’ Dates Refer to Quality

Date labels influence consumer perception of food, as they make implicit references to the safety or quality of the product.³⁰ ‘Use By’ dates are measures of food safety - when food beyond the date on the packaging is deemed to be unsafe for consumption. While ‘Best Before’ dates simply refer to the quality of food - when food beyond the date on the packaging will not retain its specific properties.³¹ Research has demonstrated that consumers misunderstand the meaning of food date labels, and often believe date labels are all indicators of safety.³² Simple changes to the wording used could clarify what each label speaks to in reference to safety or quality.

³⁰ Norbert L W Wilson et al, ‘Food Waste: The Role of Date Labels, Package Size and Product Category’ (2017) 55 *Food Quality and Preference* 35, 41.

³¹ Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the Provision of Food Information to Consumers, Amending Regulations (EC) No 1924/2006 and (EC) No 1925/2006 of the European Parliament and of the Council, and Repealing Commission Directive 87/250/EEC, Council Directive 90/496/EEC, Commission Directive 1999/10/EC, Directive 2000/13/EC of the European Parliament and of the Council, Commission Directives 2002/67/EC and 2008/5/EC and Commission Regulation (EC) No 608/2004 [2011] OJ L 304/18, 26.

³² Food Date Labeling Act, *ReFED* (Web Page, 11th January 2019) <<https://www.refed.com/tools/food-waste-policy-finder/federal-policy/food-date-labeling-act>>.

4.2.2. Improve the Differentiation between ‘Use By’ Date and ‘Best Before’

Studies have indicated that consumers frequently confuse the terms ‘Use By’ and ‘Best Before’ and make no differentiation between the two terms.³³ Ninety-two percent (92%) of Australian consumers read and apply ‘Use By’ dates, however just under 50% of consumers do not understand what it means.³⁴ Research conducted by the Harvard Food Law and Policy Clinic, National Consumers League and John Hopkins Centre for a Livable Future suggests that the safety label least likely to be misperceived as a quality label by consumers is ‘Expires On’. The research also suggests that the quality label least likely to be misperceived as a safety label is ‘Best If Used By’.³⁵ To improve the differentiation of these terms, it is suggested that current ‘Use By’ and ‘Best Before’ date labels are replaced with ‘Expires On’ and ‘Best If Used By’.

4.2.3. Reserve the Use of ‘Use By’ Dates for Foodstuffs that are Highly Perishable and Pose a Risk to Human Health if Consumed

Manufacturers have prioritized their reputation and wanting to avoid product recalls and as such have acted in risk averse ways by applying ‘Use By’ dates to foods that are of low microbiological risk and therefore do not pose a serious risk to human health and safety.³⁶ Foods that are not highly perishable, may deteriorate in quality however they are still safe to consume.

³³ Quigley (n 13) 10.

³⁴ Ibid 21.

³⁵ Emily B Leib et al, *Consumer Perceptions of Date Labels: National Survey* (Report, May 2016) 4.

³⁶ Rosetta Newsome et al, ‘Applications and Perceptions of Date Labeling of Food’ (2014) 13(4) *Comprehensive Reviews in Food Science and Food Safety* 745, 757.

Deteriorative processes that occur in foodstuffs can have harmful effects on human health and where there is a threat to human health, it is imperative to provide consumers with information to aid their purchasing decisions.³⁷ The use of ‘Use By’ dates should be reserved for foodstuffs that, from a microbiological point of view, are highly perishable and therefore likely, after a short period to constitute an immediate danger to human health.³⁸

Appendix B contains the proposed amendments.

4.2.4. Standardising Date Marking Practices

The practices of manufacturers prioritizing their reputation and avoidance of product recall by overusing ‘Use By’ dates has left consumers confused as to which label refers to quality and which refers to safety.³⁹ Despite the lack of understanding on date labels, research suggests that consumers use date labels to assist in decision making regarding discarding food, with one third of consumers throwing away food that is close to the date on the label.⁴⁰ The current regulations allows discretion as to what constitutes a risk to human health and safety. By further differentiating the different date labels, as well as placing limitations on the use of expiration labels, this will reduce consumer confusion and thus reduce the amount of edible food that is thrown away from a lack of understanding.

³⁷ Urszula Samotyja, ‘Influence of Shelf Life Labelling on the Sensory Acceptability of Potato Snacks’ (2015) 117(1) 222, 224–230.

³⁸ Athanasios Raikos and Anne-Laure Gassin, ‘EU Action to Promote Better Understanding and Use of Date Marking’, *European Commission* (Web Page, 20 April 2018) <https://ec.europa.eu/food/sites/food/files/safety/docs/fw_eu-platform_20180420_sub-dm_pres-01.pdf?fbclid=IwAR27sD5Jvn4fw1ARpKLPi3_HdzmkXLz2SYnKhBM7a1anrsMrf40-r4rZBUl>.

³⁹ Newsome et al (n 36) 757.

⁴⁰ Leib et al (n 35) 4.

4.2.5. An Ad Campaign Alerting Consumers to These Changes Would be Effective in Ensuring Success

Reforms to date labelling legislation are necessary but would be insufficient without measures taken to educate consumers.⁴¹ Following changes to their date labelling process British supermarket, Tesco, created a video explaining the changes that played at all of their checkouts to ensure that customers were aware of the changes.

4.2.6. Case Study – *Europe*

Overall, European countries have some of the lowest food waste per capita. So we must analyze the comparative differences between Australian policy and practice with those adopted by our European counterparts. Studies conducted by the European Union (EU) determined that the use of the term ‘Use By’ should be reserved for foodstuffs which, from a microbiological point of view, is highly perishable and therefore after a short period is likely to constitute an immediate danger to human health if consumed.⁴² Manufacturers are responsible for conducting

⁴¹ Samotyja (n 37) 231.

⁴² Raikos and Gassin (n 33); Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the Provision of Food Information to Consumers, Amending Regulations (EC) No 1924/2006 and (EC) No 1925/2006 of the European Parliament and of the Council, and Repealing Commission Directive 87/250/EEC, Council Directive 90/496/EEC, Commission Directive 1999/10/EC, Directive 2000/13/EC of the European Parliament and of the Council, Commission Directives 2002/67/EC and 2008/5/EC and Commission Regulation (EC) No 608/2004 [2011] OJ L 304/18, 26.

microbiological testing to determine the durability of products and assigning a Use By date that is consistent with prioritizing human health.

4.3. Separation of Safe Food, beyond its 'Best Before' Date

4.3.1. Food that is Beyond its 'Best Before' date, but Not its Expiry Date, Should be Separated from Other Foodstuffs, Clearly Labelled and Sold at a Discounted Price

As noted by Theotokis, Pramataris and Tsiros, 'Expiration Date-Based Pricing' (EDBP) involves grocery retailers reducing the price of a perishable product according to its remaining shelf life.⁴³ This practice, however, has complications when concerning consumer perceptions of reduced foodstuffs. It is clear 'price-reduced' sub-optimal foods have a perceived relationship between price and quality.⁴⁴ Where consumers are potentially impacted by the risk of 'suboptimal' food, it is feared to be 'outright unsafe'.⁴⁵ Thus, where 'price-reduced suboptimal food' is sold, the risk associated with food safety, and the trust placed within retailers to sell this food, may 'allow consumers to take the leap of faith and believe that the suboptimal food offered is still good enough'.⁴⁶ Indeed, as Theotokis et al note, price discounts 'may lead to negative consumer evaluations in terms of perceived brand quality...and future purchase intentions'.⁴⁷

⁴³ Aristeidis Theotokis, Katerina Pramataris and Michael Tsiros, 'Effects of Expiration Date-Based Pricing on Brand Image Perceptions' (2012) 88(1) *Journal of Retailing* 72, 72.

⁴⁴ Jessica Aschemann-Witzel et al, 'Consumer Behaviour Towards Price-Reduced Suboptimal Foods in the Supermarket and the Relation to Food Waste in Households' (2017) 116 *Appetite* 246, 248.

⁴⁵ Ibid.

⁴⁶ Ibid 249.

⁴⁷ Theotokis, Pramataris and Tsiros (n 43) 73.

However, ‘empirical evidence shows that the short-and long-run effectiveness of price promotions is greater for perishable goods than for other categories’.⁴⁸ This is because as consumers become more familiar with EDBP, its ‘negative effects’ are reduced. Indeed, despite conventional wisdom suggesting that discounting perishables can potentially destroy brand image, ‘under specific conditions it can provide a successful waste reduction and revenue management practice with no negative effects on brand image’.⁴⁹ This is where EDBP is targeted towards either consumer segments or product categories.⁵⁰ EDBP only has a negative effect on brand image concerning loyal customers to specific goods, or if they are unfamiliar with the practice of EDBP. This practice is, however, notably successful for ‘categories of high expiration date risk, which are the same categories that generate the most waste for retailers, because consumers tend to avoid purchasing products near their expiration date’.⁵¹

4.3.2. Will Separating Food and Selling at a Discounted Rate Reduce Australia’s Food Waste?

International practice, particularly in Denmark, has inferred that separation of food, and selling it close to or at suboptimal appearance, is an effective strategy in reducing food waste rates.⁵² As noted by Kulikovskaja and Aschemann-Witzel, ‘Danish food retailers and their supermarket chains have generated a total of 22 food waste avoidance initiatives in Danish food retail’.⁵³

⁴⁸ Ibid 74.

⁴⁹ Ibid 84.

⁵⁰ Ibid 84.

⁵¹ Ibid.

⁵²Aschemann-Witzel et al (n 44) 247.

⁵³ Viktorija Kulikovskaja and Jessica Aschemann-Witzel, *Food Waste Initiatives in Danish Food Retail* (Report, August 2016) 55.

Research in Denmark involved extensive communication ‘outside the point of sale through [company] websites, brochures...to communicate the topic of food waste avoidance or to advertise promotions and suboptimal food products’.⁵⁴ Moreover, as part of Denmark’s initiative to reduce food wastage, the app ‘Too good to go’ provides means to which users can reach food stores who offer surplus food at a ‘favourable price’.⁵⁵ A direct result of the combination of these initiatives has therefore led to ‘food waste being reduced by 8% per Danish citizen over the last six years’.⁵⁶ It is therefore clear that correlation exists between separation of food, their subsequent discount, and increased sales for retail outlets overall.⁵⁷ Thus, separating food and selling it at a discounted rate is highly likely to reduce Australia’s food waste.

4.3.3. Insufficient Control Mechanisms May Tempt Retailers to Offer Unsafe Foodstuffs for Sale.

Insufficient control mechanisms on behalf of the ‘retailer’ may open the ambit of both product liability and negligence,⁵⁸ particularly concerning the ‘intermediary period’ between when an item is ‘Best Before’, and when it must be ‘Use By’. As previously noted, foods that have a ‘Best Before’ date can legally be sold after that date provided the food is fit for human

⁵⁴ Ibid 58.

⁵⁵ Gundula Kjaer, ‘Introducing a New Danish Think Tank Against Food Waste’ (2018) 13(6) *European Food and Feed Law Review* 558, 559.

⁵⁶ Ibid.

⁵⁷ Sandra Lebersorger and Felicitas Schneider, ‘Food Loss Rates at the Food Retail, Influencing Factors and Reasons as a Basis for Waste Prevention Measures’ (2014) 34 *Waste Management* 1911, 1918.

⁵⁸ Pelma Jacinth Rajapakse, ‘Contamination of Food and Drinks: Product Liability in Australia’ (2016) 21(1) *Deakin Law Review* 45, 45–46.

consumption’.⁵⁹ As noted by Newsome et al, ‘one of the main grievances expressed...by retailers [was] that business have with used by dates, in attrition to the waste generated, is the criminal punishment that can result from non-compliance’.⁶⁰

Indeed, within Australia, the question of whether a duty of care has been breached includes the test of whether a risk of harm was ‘foreseeable’, ‘was not insignificant’ and ‘in the circumstances, a reasonable person in the position of the person would have taken the precautions’.⁶¹ To counter risk on behalf of retailers, specified control mechanisms must be put in place to ensure items sold beyond their ‘Best Before’ do not pose a threat from a legal standpoint.

4.3.4. Shifting Liability to Retailers – Introducing Fines for Retailers doing the Wrong Thing May Minimise Risks Involved.

Inherently, providing foods beyond their ‘Best Before’ dates carries risk in the attempt to reduce food waste. To thus minimise this risk, clear guidance within the *Australia New Zealand Food Standards Code* must be inserted, specifically s 1.2.5—5, is required to shift liability to retailers (see Appendix C for proposed amendments). As an example, Woolworths were fined \$250,000 as a result of offering food beyond its ‘Use By’ date.⁶² Clear provisions must be inserted such that liability can be distinctly attributed.

⁵⁹ ‘Use By and Best Before Dates’, *Food Standards Australia New Zealand* (Web Page, December 2015) <<https://www.foodstandards.gov.au/consumer/labelling/dates/Pages/default.aspx>>.

⁶⁰ Newsome et al (n 36) 762.

⁶¹ *Civil Liability Act 2002* (Cth) s 9(1), discussed in Rajapakse (n 58) 57.

⁶² ‘Woolworths Caught Selling Out of Date Food in Adelaide’, *Australian Institute of Food Safety* (Web Page) <<https://www.foodsafety.com.au/news/woolworths-caught-selling-out-of-date-food-in-adelaide>>.

Romania, as an example, has introduced law (Law 217/2016) (the ‘Law’) which inserts ‘low priced sale measures for products close to expiry’.⁶³ There have been, however, two problems associated with this measure, namely the need for clear procedures, as well as the possibility of ‘parallel trade’ caused by obligations imposed upon regulators.⁶⁴ Concerning the need for clear procedures, it is not clear under the Romanian Law, however, which entities must comply with the law, given the law stipulates that ‘operators in the agri-food sector’ must comply, without further elaboration.⁶⁵ Moreover, the Law alternatively does not provide a definition for products which are close to their expiry date. As noted by Constantinescu and Barbarasa, ‘this is important since a clear distinction needs to be made between highly perishable products [that] can only stay a few days before becoming unsafe and products with a longer validity’.⁶⁶ In any case, where shifting liability to retailers under an Australian system, transparent obligations and procedure are required, so as to mitigate any risk involved whilst reducing food wastage.

Furthermore, the Law gives food operators the opportunity to offer nearly expired products to associations, foundations and social enterprises for a minimum of 3% of the purchase price, and a maximum of 25% of the purchase price. Again, as Constantinescu and Barbarasa note, such a measure may trigger a ‘so-called parallel trade caused by the obligations imposed on operators’.⁶⁷ This is a result of attributing a maximum value for discounted foods, thus creating the risk that ‘price may raise competition issues by becoming fixed, thus affecting operators on a free

⁶³ Oana Constantinescu and Toma Barbarasa, ‘Romania Fights Food Waste by Wasting Legislation’ (2017) 12(4) *European Food and Feed Law Review* 352, 352–353.

⁶⁴ *Ibid.*

⁶⁵ *Ibid.*

⁶⁶ *Ibid.* 352.

market'.⁶⁷ Therefore, this factor must be considered, with measures put in place to prevent a 'secondary market' from occurring, so as to ensure risk mitigation.

4.3.5. Case Study – Greece

Greece, as a case study, provides insight as to the possible educational and financial incentives that can be introduced to reduce food wastage. Instigated as an Austerity measure,⁶⁸ the Greek Government proposed retailers 'discount non-perishable food that's past its sell-by date'.⁶⁹ However, such measures only apply to that of 'shelf-stable foods like pasta, spices and canned tomato sauces'.⁷⁰ Indeed, this practice has been followed by 'much of the U.S. and E.U., and it's been legal in Greece since 1989'.⁷¹ This practice has involved placing items on a separate shelf and marking down at a much lower price such that they are easy to identify. However, it has been acknowledged that educating the differences between 'Best Before' and 'Used By' remains a significant challenge. It has been acknowledged that in studies by Abeliotis, Lasaridi and Chroni, 58% of Greek respondents replied correctly about the definition of 'Best Before' label, with 66.7% replying correctly to the definition of 'expiration label'.⁷² As a result, 'the higher the educational level, the better the reported behaviour towards food waste prevention, was a straightforward outcome of the correct comprehension of food labels'.⁷³ At a minimum, it is

⁶⁷ Ibid 353.

⁶⁸ Serri Gratile, 'Buying Food Past Its Sell-By Date Tough to Swallow for Greeks', *NPR* (online, 23rd October 2012) <<https://www.npr.org/sections/thesalt/2012/10/23/163469018/buying-food-past-its-sell-by-date-tough-to-swallow-for-greeks>>.

⁶⁹ Ibid.

⁷⁰ Ibid.

⁷¹ Ibid.

⁷² Konstadinos Abeliotis, Katia Lasaridi and Christina Chroni, 'Food Waste Prevention in Athens, Greece: The Effect of Family Characteristics' (2016) 34(12) *Waste Management & Research* 1210, 1214.

⁷³ Ibid.

clear from this example that ‘in order to prevent the generation of food waste, the knowledge on the ‘Expiration Date’ and ‘Best Used Before’ food labels must be improved to facilitate effective waste reductions.⁷⁴

⁷⁴ Ibid 1215.

5. Recommendations

This section aims to provide recommendations to reduce consumer food waste in Australia.

5.1 It is recommended:

- That Australia take immediate action to reduce the production of food waste.
- Australia should abolish the 'Best Before' date; that 'Use By' dates should be the only indicator visible to consumers; that the Australian government adopt a fining system to ensure compliance.

5.2 If this is not acceptable (e.g. due to retailer resistance), it is recommended that:

- Australia take immediate action to reduce the production of food waste.
- Australia improve the differentiation between date label terms; that 'Use By' be replaced with 'Expires On'; and that 'Best Before' be replaced with 'Best If Used By'.
- Australian legislation reforms are actioned to reserve the use of 'Expires On' date labels for foodstuffs that are highly perishable, and from a microbiological point of view, is likely to constitute an immediate danger to human health and safety if consumed.
- These changes to legislation be accompanied by an advertising campaign to alert consumers to the reforms and the effect of the changes.

- Food beyond its 'Best If Used By' date, but not its expiry date should be separated from other foodstuffs, clearly labelled and sold at a discounted price; that the Australian Government adopt a fining system to deter retailers from doing the wrong thing.

6. Conclusion

6.1. The Proposed Model would be Effective in Reducing Consumer Food Waste in Australia.

Each case study shows that there is a possibility to decrease food wastage by removing confusing obstacles that surround 'Best Before' date labelling. Specifically, this concerns the difference between quality and safety. For the British supermarket chain Tesco, removal of this labelling was prompted by confused customers and through survey found that a majority of customers believed they reduced wastage.⁷⁵ Also, successful removal of 'Best Before' date labelling on non-perishable foods in France showed successful decreases in food wastage.⁷⁶ The recommendation is to remove 'Best Before' labelling, although it was found that this could be difficult due to the purpose of turnover that food companies require to operate.⁷⁷ However offering an alternative such as a clarification of terms may still be effective. Recommendations provided suggest that reserving the term 'Use By' for foodstuffs that are highly perishable would place a larger focus on safety. Also, in regard to clarification of terms, clearer terms such as 'Expires On' and 'Best If Used By' could help consumers differentiate between the labels, reduce confusion,⁷⁸ and improve safety which would result in less wastage. Another suggested strategy is providing incentive to buy discounted, lower quality food and separating it from fresh

⁷⁵ Quinn (n 26).

⁷⁶ Food Waste Around the World (n 3).

⁷⁷ Verghese et al (n 9) 613.

⁷⁸ Leib et al (n 35) 1.

produce. Greece, as a case study, provides a safe example by only applying this method to non-perishable foods.⁷⁹ By separating the lower quality food to separate shelves, consumer confusion was reduced and also increased the knowledge surrounding the labelling of 'Best Before'.⁸⁰ The proposed model looks to combine these methods and apply them in an Australian context to not only educate consumers about the difference in safety and quality, but also reduce food wastage as a by-product of that change.

6.2. Manufacturer and Retailer Pushback

There are risks associated with applying the proposed methods, mainly from manufacturers and retailers who rely on the current system to run their businesses. However, this Report suggests alternatives and possible solutions that would help these businesses transition to methods that would reduce food wastage. The best way to provide positive and negative incentive would be through legislative change. Penalties related to food wasted over food donated has been seen to work in France and could be applied here in a stricter form.⁸¹ This would lead to either funds going towards reducing food wastage or an increase in food donations. The proposed model looks to remove the 'Best Before' labelling, however this could be difficult. Therefore, penalties applied to food wastage may be a more favourable option. Other legislative change proposed looks to improve the clarity of this labelling by either changing the wording or a separation of lower quality foods. This would also affect manufacturers and their ability to turnover product.

⁷⁹ Grasile (n 68).

⁸⁰ Ibid.

⁸¹ Food Waste Around the World (n 3).

Financial incentives could be applied, however, to manufacturers who chose to make their labelling clearer or decide to choose 'Use By' date labelling over quality types of labelling.

One of the main concerns addressed is that manufacturers don't want to risk their reputation over recalls. It has been shown that manufacturers that opt for 'Use By' dates on low microbiological risk foods have succeeded in reducing food waste and recalls, thereby maintaining their reputation as a food manufacturer. Overall, an increased focus on safety for consumers can provide both positive and negative incentives to manufacturers to reduce food wastage.

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APPENDIX A

Standard 1.2.5**Information Requirements – Date Marking of Food for Sale**

Note 1 This instrument is a standard under the *Food Standards Australia New Zealand Act 1991* (Cth). The standards together make up the *Australia New Zealand Food Standards Code*. See also section 1.1.1—3.

Note 2 The provisions of the Code that apply in New Zealand are incorporated in, or adopted under, the *Food Act 2014*(NZ). See also section 1.1.1—3.

1.2.5—1 Name

This Standard is *Australia New Zealand Food Standards Code – Standard 1.2.5 – Information requirements – date marking of food for sale*.

Note Commencement:

This Standard commences on 1 March 2016, being the date specified as the commencement date in notices in the *Gazette* and the *New Zealand Gazette* under section 92 of the *Food Standards Australia New Zealand Act 1991* (Cth). See also section 93 of that Act.

1.2.5—2 Definitions

Note In this Code (see section 1.1.2—2):

baked-for date, in relation to bread, means:

- (a) if the time at which the bread was baked is before midday—the baked-on date;
- (b) if the time at which the bread was baked is after midday—the day after the baked-on date.

Note For example, bread that is baked after midday on one day may have a ‘baked-for date’ of the following day.

baked-on date, in relation to bread, means the date on which the bread was baked.

best-before date, for a food for sale, means the date up to which the food for sale will remain fully marketable and will retain any specific qualities for which express or implied claims have been made, if the food for sale:

- (a) remains in an intact package during its storage; and
- (b) is stored in accordance with any storage conditions applicable under Standard 1.2.6.

use-by date, for a food for sale, means the date after which it is estimated that the food for sale should not be consumed because of health or safety reasons, if the food for sale:

- (a) remains in an intact package during its storage; and
- (b) is stored in accordance with any storage conditions applicable under Standard 1.2.6.

1.2.5—3 Food for sale must be date marked on labels

- (1) For the labelling provisions, the date marking information is:
- (a) if there is a *use-by date for the food—that date; or
 - (b) otherwise—any of:
 - (i) before date of the food; or
 - (ii) for bread that has a shelf life of less than 7 days:
 - (A) the best-before date; or
 - (B) the *baked-for date; or
 - (C) the *baked-on date.
- (2) Unless the food is an infant formula product, the date marking information is not required if:
- (a) the *best-before date of the food is 2 years or more after the date it is determined; or
 - (b) the food is an individual portion of ice cream or ice confection.
- (3) Despite subsection (1), if the food is in a small package, the only date-marking information required is the *use-by date (if any).

Note The labelling provisions are set out in Standard 1.2.1.

1.2.5—4 Prohibition on sale of food after its use-by date

A food must not be sold after its *use-by date.

1.2.5—5 Required wording and form for dates for labels

(1) The date marking information may only be expressed in accordance with this section.

(2) A *best before date, or a *use-by date, a *baked-for date and a *baked-on date must:

- (a) be expressed using the following wording:
 - (i) for a best-before date—the words ‘Best Before’;
 - (ii) for a use-by date—the words ‘Use By’;
 - (iii) for a baked-for date—the words ‘Baked For’ or ‘Bkd For’;
 - (iv) for a baked-on date—the words ‘Baked On’ or ‘Bkd On’; and
- (b) be accompanied by:
 - (i) the relevant date; or
 - (ii) a reference to where the date is located on the

label.

(3) In a *best-before date or a *use-by date:

- (a) the day must be expressed in numerical

form; and

- (b) the month may be expressed in:
 - (i) numerical form; or
 - (ii) upper or lower case letters; and
- (c) the year must be expressed in numerical form and may be expressed using the full year or only the last 2 digits of the year.

(4) A *best-before date and a *use-by date must at least consist of:

- (a) if the best-before date or use-by date is not more than 3 months from the date it is applied:
 - (i) the day and month, in that order; or
 - (ii) if the month is expressed in letters—the day and the month, in any order; or
- (b) if the best-before date or a use-by date is more than 3 months from the date it is applied—the month and the year, in that order.

Example For subparagraph (a)(i)—‘23 Dec’ or ‘23 12’ or ‘23 12 2015’ or ‘23 Dec 2015’.

For subparagraph (a)(ii)—‘23 Dec’ or ‘Dec 23’ or ‘23 Dec 2015’ or ‘Dec 23 2015’.

For paragraph (b)—‘Dec 2015’ or ‘12 2015’ or ‘23 12 2015’ or ‘23 Dec 2015’.

(5) The day, month and year must be expressed so that it is apparent which number is the day, the month or the year.

1.2.5—6 Packed-on dates and manufacturer's or packer's codes

To avoid doubt, section 1.2.5—5 does not prevent the addition of a packed-on date or a manufacturer's or a packer's code on the label on a package of food.

APPENDIX B

Standard 1.2.5

Information Requirements – Date Marking of Food for Sale

Note 1 This instrument is a standard under the *Food Standards Australia New Zealand Act 1991* (Cth). The standards together make up the *Australia New Zealand Food Standards Code*. See also section 1.1.1—3.

Note 2 The provisions of the Code that apply in New Zealand are incorporated in, or adopted under, the *Food Act 2014*(NZ). See also section 1.1.1—3.

1.2.5—1 Name

This Standard is *Australia New Zealand Food Standards Code – Standard 1.2.5 – Information requirements – date marking of food for sale*.

Note Commencement:

This Standard commences on 1 March 2016, being the date specified as the commencement date in notices in the *Gazette* and the New Zealand Gazette under section 92 of the *Food Standards Australia New Zealand Act 1991* (Cth). See also section 93 of that Act.

1.2.5—2 Definitions

Note In this Code (see section 1.1.2—2):

baked-for date, in relation to bread, means:

- (a) if the time at which the bread was baked is before midday—the baked-on date;
- (b) if the time at which the bread was baked is after midday—the day after the baked-on date.

Note For example, bread that is baked after midday on one day may have a ‘baked-for date’ of the following day.

baked-on date, in relation to bread, means the date on which the bread was baked.

best-before date ***best if used before date***, for a food for sale, means the date up to which the food for sale will remain fully marketable and will retain any specific qualities for which express or implied claims have been made, if the food for sale:

(a) remains in an intact package during its storage; and

(b) is stored in accordance with any storage conditions applicable under Standard 1.2.6.

Expires on, for a food for sale, means the date after which it is estimated that the food for sale should not be consumed because of health or safety reasons, if the food for sale: **for a food for sale, means the date after which it is estimated, that from a microbiological point of view, is likely to constitute an immediate danger to human health and safety if consumed, if the food for sale:**

(a) remains in an intact package during its storage; and

(b) is stored in accordance with any storage conditions applicable under Standard 1.2.6.

1.2.5—3 Food for sale must be date marked on labels

(1) For the labelling provisions, the date marking information is:

(a) if there is a *expires on date for the food—that date; or

(b) otherwise—any of:

(i) **(b)** the *best **if used** before date of the food; or

(2) Food for sale must be date marked with either an *expires on , or a *best if used before date, but not both.

(ii) for bread that has a shelf life of less than 7 days:

(A) the best-before date;

or

(B) the *baked-for date;

or

(C) the *baked-on date.

(2) Unless the food is an infant formula product, the date marking information is not required if:

(a) the *best-before date of the food is 2 years or more after the date it is determined; or

(b) the food is an individual portion of ice cream or ice confection.

(3) Despite subsection (1), if the food is in a small package, the only date-marking information required is the *use-by date (if any).

Note The labelling provisions are set out in Standard 1.2.1.

1.2.5—4 Prohibition on sale of food after its use-by date

A food must not be sold after its *use-by date.

1.2.5—5 Required wording and form for dates for labels

(1) The date marking information may only be expressed in accordance with this section.

(2) A *best **if used** before date, or a *use-by date, a *baked-for date and a *baked-on date must:

(a) be expressed using the following wording:

(i) for a best-before date—the words

‘Best **If Used** Before **End Of**’;

(ii) for a use-by date—the words

‘**Expires On**’;

(iii) for a baked-for date—the words

‘Baked For’ or ‘Bkd For’;

(iv) for a baked-on date—the words

‘Baked On’ or ‘Bkd On’; and

(b) be accompanied by:

(i) the relevant date; or

(ii) a reference to where the date is

located on the label.

(3) In a *best-before date or a *expires on date:

(a) the day must be expressed in numerical form; and

(b) the month may be expressed in:

(i) numerical form; or

(ii) upper or lower case letters; and

(c) the year must be expressed in numerical form and may be expressed using the full year or only the last 2 digits of the year.

(4) A *best-before date and a *expires on date must at least consist of:

(a) if the best-before date or expires on date is not more than 3 months from the date it is applied:

(i) the day and month, in that order; or

(ii) if the month is expressed in letters—the day and the month, in any order; or

(b) if the best-before date or a expires on date is more than 3 months from the date it is applied—the month and the year, in that order.

Example For subparagraph

(a)(i)—‘23 Dec’ or ‘23 12’ or ‘23 12 2015’ or ‘23 Dec 2015’.

For

subparagraph (a)(ii)—‘23 Dec’ or ‘Dec 23’ or ‘23 Dec 2015’ or ‘Dec 23 2015’.

For

paragraph (b)—‘Dec 2015’ or ‘12 2015’ or ‘23 12 2015’ or ‘23 Dec 2015’.

(5) The day, month and year must be expressed so that it is apparent which number is the day, the month or the year.

1.2.5—6 Packed-on dates and manufacturer’s or packer’s codes

To avoid doubt, section 1.2.5—5 does not prevent the addition of a packed-on date or a manufacturer’s or a packer’s code on the label on a package of food.

APPENDIX C

Standard 1.2.5**Information requirements – date marking of food for sale**

Note 1 This instrument is a standard under the *Food Standards Australia New Zealand Act 1991* (Cth). The standards together make up the *Australia New Zealand Food Standards Code*. See also section 1.1.1—3.

Note 2 The provisions of the Code that apply in New Zealand are incorporated in, or adopted under, the *Food Act 2014*(NZ). See also section 1.1.1—3.

1.2.5—1 Name

This Standard is *Australia New Zealand Food Standards Code – Standard 1.2.5 – Information requirements – date marking of food for sale*.

Note Commencement:

This Standard commences on 1 March 2016, being the date specified as the commencement date in notices in the *Gazette* and the *New Zealand Gazette* under section 92 of the *Food Standards Australia New Zealand Act 1991* (Cth). See also section 93 of that Act.

1.2.5—2 Definitions

Note In this Code (see section 1.1.2—2):

baked-for date, in relation to bread, means:

(a) if the time at which the bread was baked is before midday—the baked-on date;

(b) if the time at which the bread was baked is after midday—the day after the baked-on date.

Note For example, bread that is baked after midday on one day may have a ‘baked-for date’ of the following day.

baked-on date, in relation to bread, means the date on which the bread was baked.

best-before date, for a food for sale, means the date up to which the food for sale will remain fully marketable and will retain any specific qualities for which express or implied claims have been made, if the food for sale:

(a) remains in an intact package during its storage; and

(b) is stored in accordance with any storage conditions applicable under Standard 1.2.6.

use-by date, for a food for sale, means the date after which it is estimated that the food for sale should not be consumed because of health or safety reasons, if the food for sale:

(a) remains in an intact package during its storage; and

(b) is stored in accordance with any storage conditions applicable under Standard 1.2.6.

1.2.5—3 Food for sale must be date marked on labels

(1) For the labelling provisions, the date marking information is:

(a) if there is a *use-by date for the food—that date; or

(b) otherwise—any of:

(i) the *best before date of the food; or

(ii) for bread that has a shelf life of less than 7 days:

(A) the best-before date;

or

(B) the *baked-for date;

or

(C) the *baked-on date.

(2) Unless the food is an infant formula product, the date marking information is not required if:

(a) the *best-before date of the food is 2 years or more after the date it is determined; or

(b) the food is an individual portion of ice cream or ice confection.

(3) Despite subsection (1), if the food is in a small package, the only date-marking information required is the *use-by date (if any).

Note The labelling provisions are set out in Standard 1.2.1.

1.2.5—4 Prohibition on sale of food after its use-by date

A food must not be sold after its *use-by date.

1.2.5—5 Sale of food after its best-before date

(1) Food passed its best-before date, but not its use-by date should be separated from other food.

(2) The food should be clearly labelled as being passed its best-before date.

(3) The food should be sold at 75% of its original retail price.

1.2.5—5 Required wording and form for dates for labels

(1) The date marking information may only be expressed in accordance with this section.

(2) A *best before date, or a *use-by date, a *baked-for date and a *baked-on date must:

- (a) be expressed using the following wording:
 - (i) for a best-before date—the words ‘Best Before’;
 - (ii) for a use-by date—the words ‘Use By’;
 - (iii) for a baked-for date—the words ‘Baked For’ or ‘Bkd For’;
 - (iv) for a baked-on date—the words ‘Baked On’ or ‘Bkd On’; and

- (b) be accompanied by:
 - (i) the relevant date; or
 - (ii) a reference to where the date is located on the label.

(3) In a *best-before date or a *use-by date:

- (a) the day must be expressed in numerical form; and
- (b) the month may be expressed in:
 - (i) numerical form; or
 - (ii) upper or lower case letters; and

(c) the year must be expressed in numerical form and may be expressed using the full year or only the last 2 digits of the year.

(4) A *best-before date and a *use-by date must at least consist of:

(a) if the best-before date or use-by date is not more than 3 months from the date it is applied:

(i) the day and month, in that order; or

(ii) if the month is expressed in letters—the day and the month, in any order; or

(b) if the best-before date or a use-by date is more than 3 months from the date it is applied—the month and the year, in that order.

Example For subparagraph

(a)(i)—‘23 Dec’ or ‘23 12’ or ‘23 12 2015’ or ‘23 Dec 2015’.

For

subparagraph (a)(ii)—‘23 Dec’ or ‘Dec 23’ or ‘23 Dec 2015’ or ‘Dec 23 2015’.

For

paragraph (b)—‘Dec 2015’ or ‘12 2015’ or ‘23 12 2015’ or ‘23 Dec 2015’.

(5) The day, month and year must be expressed so that it is apparent which number is the day, the month or the year.
