Front-of-Pack Food Labelling
Traffic light labelling gets the green light
Acknowledgements

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Suggested citation


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Scenario

As a busy mum, Sue Jones rushes to the supermarket on her way home from work to pick up some ingredients to feed her family for dinner. As she enters the supermarket she is faced with thousands of different food products, of varying nutritional quality. She doesn’t have time to look at the nutrition information panel on the back of food packages. What Sue really needs is nutrition information at-a-glance to help her to select healthier food products quickly.

The solution?

Traffic Light front-of-pack food labelling.

Key Findings and Recommendations

» Australian consumers report limited use of nutrition information currently presented on food packages, and indicate strong support for nutritional information to be placed on the front of food packages, particularly for nutrients that should be consumed in limited amounts, such as saturated fat, sugar, total fat and sodium.

» Consumer research, presented in this report, shows that Traffic Light front-of-pack food labelling, when compared with other front-of-pack labelling systems, is significantly more effective in assisting consumers to select healthier food products, leads to more accurate assessments of nutrient levels, and is easier and quicker to use.

» Results from this study indicate that Traffic Light food labelling:
  • Allows consumers to correctly identify healthier food products
  • Assists consumers to make comparisons between products easily
  • Allow consumers to make these comparisons at a glance

» To maximise the ease and accuracy with which consumers make healthy food choices, regulations should be introduced to mandate Traffic Light front-of-pack food labelling on all Australian food products.
Traffic light labelling gets the green light

Background

With the huge number of packaged food and beverages available in supermarkets, it is becoming increasingly difficult to make healthy food choices. Mandatory labelling requirements such as ingredients lists and nutrition information panels (NIPs), together with the proliferation of different labelling schemes, such as nutrition claims (e.g. “99% fat free”), labels showing percentage contribution to daily intakes, and endorsement programs, compete for consumers’ attention and valuable label space. This can make the task of identifying healthy foods confusing. Meanwhile, the need to select healthier foods is more important than ever, as Australians are getting fatter, and are at increased risk of developing heart disease, diabetes and some forms of cancer.

Currently in Australia, nutrition information in the form of a NIP is mandatory on food packages. While NIPs are an important tool for providing consumers with in-depth information on a product’s nutritional composition, research has shown that some consumers find this information confusing\(^1\)\(^-\)\(^3\) and difficult to interpret.\(^4\) An easier to understand system for labelling foods is therefore needed to support the NIP. One such alternative labelling system, which has been gathering support in both Australia and internationally, is the placement of nutrition information on the front of food packages, where it is immediately visible to consumers. This type of nutrition labelling is referred to as front-of-pack food labelling.

There are essentially two main front-of-pack food labelling systems that have been developed internationally and proposed for use in Australia. These include the:

i. **Traffic Light system;** where total fat, saturated fat, sugar and sodium are ranked and colour coded as either high (red), medium (amber) or low (green), based on nutrient cut-points, and the

ii. **Percentage Daily Intake (%DI) system;** which shows the contribution of energy, protein, total fat, saturated fat, total carbohydrate, sugar, fibre and sodium provided by a serve of a food as a percentage of daily requirements for each nutrient, based on the estimated nutrient requirements of a reference adult (a 70kg adult male).

Despite the voluntary introduction of a %DI front-of-pack food labelling scheme by Australian food manufacturers in 2006, the real question remains, which of these two systems is the best for helping Australian consumers to quickly and easily decipher healthier food products?

Previous consumer research conducted in the United Kingdom found that consumers’ ability to correctly use and interpret front-of-pack food labelling information to identify healthy food products was significantly better for the Traffic Light labelling system compared with other front-of-pack labelling systems.\(^5\) As nutrition labelling requirements for food products sold in Australia differ from those in the UK, it was important to determine how Australian consumers use and interpret various front-of-pack labelling systems to inform future decisions about the use of front-of-pack labelling in the Australian grocery market.
Study Aims

The major aim of this consumer research on front-of-pack labelling was to determine which labelling system would be most appropriate for adoption in Australia. This was achieved by:

» Identifying which front-of-pack food labelling system consumers prefer;

» Determining if consumers prefer one consistent labelling scheme to be used on all food products or multiple labelling schemes; and

» Testing how well each front-of-pack food labelling system performs, particularly if consumers could quickly and correctly identify healthier products.

How Was the Study Conducted?

Putting front-of-pack labelling systems to the test

The Labelling

Four different front-of-pack labelling systems were tested, which were based on variations of the two major systems, Traffic Light labelling and %DI labelling (Table 1). These included:

i. Traffic Light system ranking levels of total fat, saturated fat, sugar and sodium as either high, medium and low and assigned a red, amber or green traffic light colour respectively (see Table 2 for the criteria used).

ii. Traffic Light + Overall Rating system ranking levels of total fat, saturated fat, sugar and sodium as in the Traffic Light system PLUS an overall Traffic Light rating was assigned for the product based on proposed Food Standards Australia New Zealand (FSANZ) Nutrient Profiling Scoring Criteria.

iii. Monochrome %DI system indicating the percent dietary contribution of energy, protein, total fat, saturated fat, total carbohydrate, sugar, fibre and sodium, based on the estimated nutrient requirements of a 70kg adult male with an energy requirement of 8700kJ (see Table 3 for the criteria used).

iv. Colour-Coded %DI system indicating the percent dietary contribution of energy, protein, total fat, saturated fat, total carbohydrate, sugar, fibre and sodium PLUS the relevant Traffic Light colour was applied for total fat, saturated fat, sugar and sodium, based on nutrition criteria used in the Traffic Light system for assigning colours.
Traffic light labelling gets the green light

Table 1: Types of front-of-pack food labelling systems

<table>
<thead>
<tr>
<th>Traffic Light</th>
<th>Per 30 g serve</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Traffic Light</strong></td>
<td></td>
</tr>
<tr>
<td>MED FAT</td>
<td>2.5 g per serve</td>
</tr>
<tr>
<td>MED SATURATED FAT</td>
<td>1.0 g per serve</td>
</tr>
<tr>
<td>LOW SUGAR</td>
<td>0.3 g per serve</td>
</tr>
<tr>
<td>HIGH SODIUM</td>
<td>282 mg per serve</td>
</tr>
<tr>
<td><strong>Traffic Light + Overall Rating</strong></td>
<td></td>
</tr>
<tr>
<td>OVERALL</td>
<td>2.5 g per serve</td>
</tr>
<tr>
<td>MED FAT</td>
<td>1.0 g per serve</td>
</tr>
<tr>
<td>MED SATURATED FAT</td>
<td>0.3 g per serve</td>
</tr>
<tr>
<td>LOW SUGAR</td>
<td>282 mg per serve</td>
</tr>
</tbody>
</table>

Table 2: Nutrient criteria for Traffic Light food labelling

<table>
<thead>
<tr>
<th>Product type</th>
<th>Green (low) Grams per 100g/mL</th>
<th>Amber (medium) Grams per 100g/mL</th>
<th>Red (high) Grams per 100g/mL</th>
<th>Red (high) Grams per serve *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total fat</td>
<td>Solids &lt;3</td>
<td>&gt;3 to &lt; 20</td>
<td>&gt;20</td>
<td>&gt;21</td>
</tr>
<tr>
<td></td>
<td>Liquids &lt;1.5</td>
<td>&gt;1.5 to &lt; 10</td>
<td>&gt;10</td>
<td></td>
</tr>
<tr>
<td>Saturated fat</td>
<td>Solids &lt;1.5</td>
<td>&gt;1.5 to &lt; 5</td>
<td>&gt;5</td>
<td>&gt;6</td>
</tr>
<tr>
<td></td>
<td>Liquids &lt;0.75</td>
<td>&gt;0.75 to &lt;2.5</td>
<td>&gt;2.5</td>
<td></td>
</tr>
<tr>
<td>Total sugars</td>
<td>Solids &lt;5</td>
<td>&gt;5 to &lt;12.5</td>
<td>&gt;12.5</td>
<td>&gt;15</td>
</tr>
<tr>
<td></td>
<td>Liquids &lt;2.5</td>
<td>&gt;2.5 to &lt;7.5</td>
<td>&gt;7.5</td>
<td></td>
</tr>
<tr>
<td>Salt</td>
<td>Solids &lt;0.3</td>
<td>&gt;0.3 to &lt;1.5</td>
<td>&gt;1.5</td>
<td>&gt;2.4</td>
</tr>
<tr>
<td></td>
<td>Liquids &lt;0.3</td>
<td>&gt;0.3 to &lt;1.5</td>
<td>&gt;1.5</td>
<td></td>
</tr>
</tbody>
</table>

* Nutrient criteria per serve of food has recently been added to Traffic Light labelling criteria.

Table 3: Nutrient criteria for Percentage Daily Intake labelling as established from the Food Standards Code

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Daily Intake Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>8700kJ</td>
</tr>
<tr>
<td>Protein</td>
<td>50g</td>
</tr>
<tr>
<td>Fat</td>
<td>70g</td>
</tr>
<tr>
<td>Saturated Fat</td>
<td>24g</td>
</tr>
<tr>
<td>Carbohydrate</td>
<td>310g</td>
</tr>
<tr>
<td>Total Sugars</td>
<td>90g</td>
</tr>
<tr>
<td>Dietary Fibre</td>
<td>30g</td>
</tr>
<tr>
<td>Sodium</td>
<td>2300mg</td>
</tr>
</tbody>
</table>
The Products

Mock food packages were created for three different food product categories: breakfast cereals, crispbread and lasagna. Two food products within each food category were created: one healthier product and one less healthy product (Table 4).

Table 4: The food products tested

<table>
<thead>
<tr>
<th></th>
<th>Healthier</th>
<th>Less Healthy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast cereal</td>
<td><img src="image1.png" alt="Mock packaging" /></td>
<td><img src="image2.png" alt="Mock packaging" /></td>
</tr>
<tr>
<td>Crispbread</td>
<td><img src="image3.png" alt="Mock packaging" /></td>
<td><img src="image4.png" alt="Mock packaging" /></td>
</tr>
<tr>
<td>Lasagna</td>
<td><img src="image5.png" alt="Mock packaging" /></td>
<td><img src="image6.png" alt="Mock packaging" /></td>
</tr>
</tbody>
</table>
The Survey

In June 2008, 790 consumers aged 18 years and over living in NSW were surveyed. All participants were the main grocery buyer or shared the responsibility for grocery purchases in their household. These participants were recruited from four shopping centres across Sydney and Newcastle, with representation from high, medium and low socio-economic areas, and both metropolitan and regional areas. This meant it was possible to test each of these front-of-pack labelling systems on a broad range of consumers.

Recruiting consumers from shopping centres also helped to provide an interviewing environment that was similar to that in which consumers make food purchasing decisions, and allowed consumers to clearly and easily see the information provided on the front-of-pack labels.

Face-to-face interviews were conducted, asking each person about just one front-of-pack food labelling system in detail. This allowed each front-of-pack labelling system to be tested independently, minimising any confusion or bias that may have resulted if each person was shown a variety of different labelling systems. A face-to-face survey was chosen as this mode allows for better representation of the wider population and improves the generalisability of study results, as compared to Internet surveys.6

Around 200 consumers were asked about each of the four systems. This sample size was sufficiently large to detect statistically significant differences between front-of-pack labelling conditions. Each person was shown two sets of two different food products for comparison (four products in total). Survey questions related to consumers’ preference for the front-of-pack labelling systems and also objectively tested how well each system enabled consumers to identify healthier food products.

Pilot testing of the survey questions was also conducted to ensure the survey questions were relevant and understandable for Australian consumers, and that questions were presented in a non-leading and non-threatening way.
Key Results

One consistent front-of-pack food labelling system or multiple systems?

Consumers indicated an overwhelming preference for a single, consistent front-of-pack food labelling system to be used across all food products. This was seen as preferable to a situation where different products and brands could use different labelling systems. Overall, 90% of consumers felt that a consistent front-of-pack food labelling system on all food products would be the easiest to understand (Figure 1).

Which nutrients should be included on the front-of-pack label?

Most consumers reported that they wanted to see information about all nutrients included on the front of food packages. However, the nutrients that had the highest level of consumer support for inclusion on the front of food packages were saturated fat, sugar, total fat and sodium (Table 5).

### Table 5: Proportion of consumers who agreed that information about different nutrients should be included on front-of-pack labels

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>% Agreeing with inclusion on front-of-pack label</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saturated fat</td>
<td>85</td>
</tr>
<tr>
<td>Sugar</td>
<td>84</td>
</tr>
<tr>
<td>Total fat</td>
<td>83</td>
</tr>
<tr>
<td>Sodium</td>
<td>78</td>
</tr>
<tr>
<td>Fibre</td>
<td>73</td>
</tr>
<tr>
<td>Carbohydrate</td>
<td>73</td>
</tr>
<tr>
<td>Energy/kilojoules</td>
<td>69</td>
</tr>
<tr>
<td>Protein</td>
<td>69</td>
</tr>
<tr>
<td>Vitamins and minerals</td>
<td>68</td>
</tr>
</tbody>
</table>
Traffic light labelling gets the green light

Which front-of-pack labelling system did consumers think would be the easiest to use?
Consumers were shown each of the four front-of-pack food labelling systems and asked to select the system that they thought would be the easiest to use. The highest proportion of consumers thought the Colour-Coded %DI system would be the easiest to use of all the systems (Figure 2).

Which front-of-pack labelling system could consumers actually use?
Rating the healthiness of a single food product
Consumers were shown a food product that featured one of the four front-of-pack labelling systems, and were asked to rate the healthiness of that product. The food product that consumers were shown at this stage was the healthier version within each food category. Food products were considered to be healthy as they were eligible to make health claims according to the Nutrient Profile Modeling System used by FSANZ in the assessment of Nutrition, Health and Related Claims.7

Figure 2: The proportion of consumers reporting different front-of-pack labelling systems would be the easiest to use
Breakfast Cereal

When consumers were shown either the Monochrome %DI or the Colour-Coded %DI systems, they were more likely to correctly perceive the breakfast cereal to be healthy (88% and 81% of consumers perceived the product as healthy when it was labelled with these systems, respectively) (Figure 3). Fewer consumers correctly perceived the breakfast cereal to be healthy when they were shown the Traffic Light and Traffic Light + Overall Rating systems (69% and 62%). This difference between the two %DI systems (Monochrome %DI and Colour-Coded %DI) and the two Traffic Light systems (Traffic Light and Traffic Light + Overall Rating) was statistically significant (P <0.05).

These findings suggest that consumers use preconceived ideas and prior association with a food to judge the healthiness of a product, and this is especially the case when presented with the Monochrome %DI and Colour-Coded %DI labels.

Figure 3: Proportion of consumers who correctly identified the breakfast cereal as healthy
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» Crispbread
When asked to rate the healthiness of the crispbread, more consumers correctly identified the product as healthy using the Colour-Coded %DI label (84%), followed by both the Traffic Light and the Traffic Light + Overall Rating systems (75% for both). Only 69% of consumers correctly identified the crispbread as healthy using the Monochrome %DI system (Figure 4). This difference between labelling systems was not statistically significant.

Figure 4: Proportion of consumers who correctly identified the crispbread as healthy

Colour-Coded %DI 84%
Monochrome %DI 69%
Traffic Light + Overall 75%

» Lasagna
More consumers correctly identified the lasagna as healthy when it was labelled with the Traffic Light and Traffic Light + Overall Rating systems (47% and 46%). Only 19% of consumers who were shown the lasagna with the Monochrome %DI label, and 23% of consumers shown the Colour-Coded %DI system correctly rated the product as a healthy choice (Figure 5). This difference between labelling systems was highly statistically significant (P<0.001).

Figure 5: Proportion of consumers who correctly identified the lasagna as healthy

Colour-Coded %DI 23%
Monochrome %DI 19%
Traffic Light + Overall 46%
Traffic Light 47%
Assessing the level of nutrients in a single food product

Consumers were asked to rate the levels of total fat, saturated fat, sugar and sodium within that product as: a lot, a moderate amount or a small amount.

A score was then calculated so that for every nutrient that the consumer answered correctly, they were given one point (so someone getting all four nutrients correct would get a score of four). Across all food products, the average score was significantly higher for the Traffic Light (Score = 1.7) and the Traffic Light + Overall Rating (Score = 1.8) systems, compared to the Monochrome %DI (Score = 1.3) and Colour-Coded %DI systems (Score = 1.3). This difference between labelling systems was highly statistically significant (P<0.001) (Figure 6).

![Figure 6: The average score for the number of nutrients correctly identified for all food products.](image)

***P<0.001
Comparing the healthiness of two food products

Consumers were asked to compare two food products in the same food category (both with the same front-of-pack labelling system) and indicate which they thought was the healthier product. This task was repeated with another pair of food products, again with the same labelling system, so that each person saw a total of four food products within two food categories.

The majority of consumers (81%) who used the Traffic Light system were able to correctly identify the healthier food products. This compared to 78% of consumers who were shown the Traffic Light + Overall Rating system, 70% for the Colour-Coded %DI system, and 64% for the Monochrome %DI system (Figure 7).

After controlling for consumer’s age, gender, education and household income, which were shown to affect how people interpreted food labels, consumers using the Traffic Light labelling system were five times more likely to correctly identify the healthier food products, compared to the Monochrome %DI system. This difference between labelling systems was highly statistically significant (P<0.001). Similarly, consumers using the Traffic Light labelling system were three times more likely to correctly select the healthier products compared to consumers using the Colour-Coded %DI system. This difference between these labelling systems was also statistically significant (P<0.05).

There were no significant differences in consumers’ ability to use the Traffic Light and the Traffic Light + Overall Rating systems.

The Monochrome %DI system was also less useful for consumers from lower socio-economic groups, with people from the lowest socio-economic group six times less likely to correctly identify the healthier food products using the Monochrome %DI labelling than people from the highest socio-economic group. This difference between socioeconomic groups was statistically significant (P<0.05). Across all socio-economic groups, consumers had a similar ability to use the Traffic Light systems to identify healthier foods.

Figure 7: The proportion of consumers who correctly identified the healthier products using different front-of-pack labelling systems
Perceived speed of comparing the healthiness of food products

Consumers were asked how quickly they felt they were able to compare the healthiness of the two food products. Those who were presented with the Traffic Light and the Traffic Light + Overall Rating systems were more likely to perceive that they could compare the healthiness of the products “at a glance” (39% and 30% of people who used these systems, respectively), compared to the Monochrome %DI and Colour-Coded %DI labelling systems (Figure 8). This difference between labelling systems was statistically significant (P<0.01).

While consumer preferences are important, the critical issue when considering the introduction of front-of-pack food labelling into the Australian grocery market is whether consumers can use the information on the label to make healthier food choices.

Figure 8: Speed in comparing the healthiness of food products using front-of-pack labels
Conclusions - What These Findings Mean

Consumers support the introduction of front-of-pack food labelling

This research indicates strong consumer support for nutrition information to be included on the front of food packages. The nutrients that were perceived by consumers to be most important for inclusion on front-of-pack food labels were saturated fat, sugar, total fat and sodium. These are also the nutrients that have the most public health significance and should be limited by consumers.

Consumers want a single consistent front-of-pack food labelling system

Consumers reported a strong preference for a single, consistent front-of-pack food labelling system across all food packages. Consumers felt that a consistent approach to front-of-pack food labelling would be easier to understand than if multiple and inconsistent labelling systems were permitted.

This preference for a consistent labelling approach suggests the need for mandatory labelling regulations, to ensure that all food manufacturers and retailers provide nutrition information in a consistent format, to help consumers to understand this information, and assist them to make healthier food choices.

Traffic Light labelling is the best system to help consumers make healthy food choices

While consumers thought the Colour-Coded %DI food labelling system would be easiest to use, their actual ability to use the nutrition information on both the Colour-Coded %DI and Monochrome %DI labels to compare between food products, and identify the healthier product, was significantly poorer than for the Traffic Light system.

Consumers using the Traffic Light system were five times more likely to correctly identify healthier food products compared to the Monochrome %DI system, and three times more likely to correctly identify the healthier products compared to the Colour-Coded %DI system. There were no significant differences in consumers’ ability to use the Traffic Light and the Traffic Light + Overall Rating systems, therefore including this additional overall rating information on front-of-pack labels may not be necessary.

While consumer preferences are important, the critical issue when considering the introduction of front-of-pack food labelling into the Australian grocery market, is whether consumers can use the information on the label to make healthier food choices.

Consumers make healthy food choices at a glance with Traffic Light labelling

Consumers reported that they could compare the healthiness of food products the fastest when using the Traffic Light and the Traffic Light + Overall Rating labelling systems, with significantly more consumers reporting they could make product comparisons using these systems at a glance, compared to consumers using the Monochrome %DI and Colour-Coded %DI systems. A non-significant trend also indicated that consumers using the Traffic Light system more frequently perceived that they could compare the healthiness of the products “at a glance” compared to the Traffic Light + Overall Rating system.
Consumers in lower socio-economic groups are less likely to correctly interpret the Monochrome %DI labelling system

Consumers’ ability to correctly identify healthier food products using the Monochrome %DI system was significantly linked to their socio-economic status. People from the lowest socio-economic groups were six times less likely to identify healthier food products using the Monochrome %DI labelling system than people from high socio-economic groups. Socio-economic status was not associated with consumers’ ability to use any of the other front-of-pack labelling systems.

Front-of-pack labelling is just one factor that influences consumers’ perceptions of the healthiness of food products

Consumers’ ability to correctly judge the healthiness of a single food product varied depending on the type of product that was shown. When given the healthy breakfast cereal, more consumers correctly identified the product as healthy using the Monochrome %DI and Colour-Coded %DI systems. Whereas, for the lasagna consumers were significantly more likely to correctly judge the product as healthy when shown the Traffic Light and Traffic Light + Overall Rating systems.

These findings suggest that consumers use preconceived ideas and prior association with a food to judge the healthiness of a product, and this is especially the case when presented with the Monochrome %DI and Colour-Coded %DI labels. Using these labelling systems, it is likely that some consumers have difficulty understanding the information presented on the front-of-pack label and rely on other cues such as preconceived beliefs about the healthiness of particular types of foods, instead of or in addition to the front-of-pack information. Thus, more consumers rated the breakfast cereal as healthy using the Monochrome %DI and Colour-Coded %DI labels, as consumers might generally consider breakfast cereals to be relatively healthy. In contrast, lasagna might be generally thought of as unhealthy.

However, consumers using the Traffic Light and Traffic Light + Overall Rating front-of-pack labelling systems more consistently identified the food product as healthy across all food categories, suggesting that the nutrition information presented on these labels was more helpful.

Additionally, consumers may have been better able to interpret the %DI labelling systems when these were presented on breakfast cereals, as the use of this labelling is currently in place on many breakfast cereal products.
Call to Action

Front-of-pack food labelling is needed to support nutrition information provided in NIPs on the back and sides of food packages. This study clearly indicates that Traffic Light labelling is the most effective front-of-pack food labelling system, as it allows Australian consumers to quickly and accurately make healthier food choices when grocery shopping.

On the basis of this consumer research, the Cancer Council, CHOICE, the Obesity Policy Coalition, the Public Health Advocacy Institute and the Institute of Obesity, Nutrition and Exercise at the University of Sydney recommend this labelling system be introduced on all packaged food products in Australia.

To maximise the public health benefits of implementing a front-of-pack food labelling system in Australia, this labelling must include the following elements:

- Traffic Light symbols and coloured schema should be used to provide at-a-glance interpretation of nutrient information.
- Nutrition information should focus on saturated fat, sugar, total fat and sodium as these were of greatest interest to consumers and are also the nutrients of greatest public health significance.
- Two separate sets of nutrition criteria should be used, one for solid foods and one for beverages, however modifications may be made to criteria for some food groups (e.g., to differentiate between added sugar and fruit sugar in breakfast cereals).
- The absolute number of grams of fat, saturated fat, sugars and sodium should be included on the front-of-pack label.
- Factual information about the levels of key nutrients should be based on 100g or 100mL of the food or beverage product.
- The system should be mandatory in nature.
- One consistent front-of-pack labelling system should be introduced rather than a range of systems permitted.

An extensive public education campaign must accompany the implementation of any front-of-pack food labelling system. In order for this labelling scheme to be effective in informing food choices, consumers must understand how to interpret the new labelling system and use it to make healthy choices in the context of other government healthy eating guidelines such as the Australian Guide to Healthy Eating.
Arguments For and Against Traffic Light Food Labelling

In both Australia and internationally, Traffic Light labelling systems have been criticised, primarily by members of the food industry as being overly simplistic and judgemental and possibly providing an inaccurate reflection of the nutritional benefits, or otherwise, of certain foods. This criticism may be based on concerns that consumers might change their food buying habits and avoid products that carry red lights.5

Criticism
Traffic Light labelling provides inconsistent differentiation between ‘healthier’ and ‘less healthy’ products within certain categories. e.g., This system does not provide any distinction between breakfast cereals that are high in added sugar and those that have a high sugar content from the presence of dried fruit.

Response
In the UK, nutrition criteria for Traffic Light labelling on breakfast cereals have been modified to better differentiate between breakfast cereals that have a high sugar content from added sugars as compared to that contributed by fruit.8 Additional on-pack information can also be provided to further reduce consumer confusion, such as statements indicating naturally occurring sugars as a result of fruit content. Similar modifications could be considered if Traffic Light labelling were to be introduced into Australia.

Criticism
The Traffic Light system labels some core foods, which are good sources of important nutrients, with red traffic lights. This may potentially contribute to a reduction in the intake of these core food items, e.g. cheese.

Response
Consumers should still seek food products with lower levels of fat, saturated fat, sugar and sodium, even for products that are classified as core foods. Therefore, while cheese is part of the dairy and dairy alternatives core food group and provides essential nutrients such as protein and calcium, cheese can be high in total fat, saturated fat and sodium, and the quantity consumed should be limited.

Criticisms
The information provided on Traffic Light labelling is overly simplistic.

Response
Traffic Light labelling provides at-a-glance information about the healthiness of food products. It is not designed to replace the NIP, but rather to summarise the level of critical nutrients contained within the product. Those consumers wanting further information can supplement the Traffic Light labelling with information from the NIP.

Total fat, saturated fat, sugar and sodium are of greatest interest to consumers and are also the nutrients of greatest public health significance. Information about other nutrients on the front of food packages, such as energy, protein, carbohydrate, vitamins and minerals is unnecessary and may only serve to confuse consumers.

At-a-glance nutritional information is vital as consumers spend limited time deciding what to buy in the supermarket environment.9 Lack of time at the point-of-purchase has been identified as a major barrier in the use of nutrition information on food packages.2 Traffic light labelling would assist in overcoming this barrier, as consumers are more quickly able to interpret this labelling.
Consumers with lower education levels are least likely to use and understand nutrition information. As lower education levels and socioeconomic status are associated with the greatest burden of overweight and obesity (and other diet-related diseases) these population groups would benefit most from easy to use and simple front-of-pack labelling, such as the Traffic Light system. Importantly, this study indicates that consumers in lower socio-economic groups were less able to interpret the information presented on the %DI labels. %DI involves numeracy skills not held by the whole population.

**Criticisms**
Traffic Light labelling does not provide consumers with information on how the food product should be incorporated as part of their overall diet.

**Response**
While Traffic Light labelling does not prescribe the quantity of food products that people should consume, it does allow consumers to select healthier food products both within the same food category, and between different food categories. Alternatively, %DI labelling displays the proportion of daily nutrient requirements that a (suggested) serve of the product will provide, however, this is based on the estimated requirements for a ‘typical’ 70kg adult male. Therefore projections of daily nutrient contributions for other population groups may be inaccurate. In the case of products targeted towards children, %DI labels would overestimate nutrient requirements and may promote over consumption. Further, strategies to direct consumers to websites to interpret the information presented on these labels are not practical.

**Criticisms**
Traffic light labelling is judgemental. There are no unhealthy foods, only unhealthy diets.

**Response**
This rhetoric is often used by members of the food industry to counter the classification of foods as categorically ‘healthy’ or ‘unhealthy’; to trivialise concerns about the sale and promotion of unhealthy food; and to legitimise the consumption of unhealthy foods. It also places the onus on individuals by implying that it is how this food is consumed, rather than what is consumed.

While foods high in fat, sugar and sodium can be consumed in moderation; there is most certainly a distinction between individual foods that are more or less healthy. National food selection guides such as the Australian Guide to Healthy Eating, distinguish between these healthy and unhealthy food choices. Traffic Light food labelling helps consumers to decipher which foods fall into each of these categories, helping them to make healthier food choices.

Traffic Light labelling does not tell consumers to stop buying products with red Traffic Lights. Rather it draws attention to unhealthy properties that may lead consumers to reconsider the products they buy, how often they buy them and the quantities they consume.

**Criticisms**
Traffic Light labelling causes ‘amber confusion’, whereby consumers find it difficult to distinguish between food products with multiple amber traffic lights, or a combination of different traffic light colours. e.g., One product with two greens, one amber and one red; and one product with one green and three reds.

**Response**
To avoid this potential consumer confusion, the absolute number of grams of fat, saturated fat, sugar and sodium should be included on the front-of-pack label.
Criticisms
Front-of-pack labelling should be based on the nutrient content per serve of a food or beverage, as this is the way in which consumers consume foods.

Response
The %DI system is based on the level of nutrients per serve of the product. This poses a potentially significant limitation of the %DI system, considering the absence of standard serving sizes in Australia. Without standard serving sizes, consumers’ ability to compare nutrition criteria between products with different serving sizes may be severely hindered. This phenomenon is already evident on food products in the Australian grocery market. For example, some breakfast cereals labelled with %DI are based on a serving size of 30g, and some use a serving size of 45g, thereby further complicating nutrient comparisons between these products.

It is also likely that serving sizes proposed by food manufacturers are not consistent with the quantities that consumers actually consume.

 Alternatively, nutrient classification for Traffic Light front-of-pack labelling is based on the level of each nutrient per 100g or 100mL of a product, thereby reducing the possibility of manipulation of serving size by food manufacturers in order to portray a food product as having a more advantageous nutrient profile.

In the UK, the Food Standards Agency recently amended their Traffic Light labelling criteria to include nutrient cut points for a serve of food. These cut points exist alongside the criteria for nutrients per 100g or 100mL of a product, and specify that where a product contributes more than 30% of the recommended upper intake for total fat, saturated fat and total sugars, and 40% of the recommended upper limit for sodium per serve, these products are automatically labelled as red for that nutrient. While these criteria were not incorporated into the current study, they may be useful in classifying the nutritional composition of food and beverage products that are sold and consumed in larger portions, such as frozen meals.

Criticisms
Traffic Light food labelling on its own will not solve population nutrition and obesity problems.

Response
Traffic Light food labelling is only one part of a comprehensive approach needed to address population nutrition and obesity issues. However, Traffic Light food labelling makes an important contribution to ensuring a better-informed community. On the basis of available evidence Traffic Light food labelling is the most effective front-of-pack labelling system available and represents the best labelling system to inform Australian consumers.
Can You Pick the Healthier Food Choice?

Use the different front-of-pack labelling systems to identify the healthier lasagna choice, remembering that in a supermarket environment consumers must make these decisions at a glance. Refer to Table 4 to confirm which is the healthier product.

Table 6

Traffic Light System

<table>
<thead>
<tr>
<th>Per 400 g serve</th>
<th>Monochrome %DI</th>
<th>Colour-Coded %DI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ENERGY (kJ)</td>
<td>PROTEIN (g)</td>
</tr>
<tr>
<td></td>
<td>2178</td>
<td>20.3</td>
</tr>
</tbody>
</table>

### Italiano Beef Lasagna

<table>
<thead>
<tr>
<th>Per 400 g serve</th>
<th>Overall Rating %DI</th>
<th>OVERALL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ENERGY (kJ)</td>
<td>PROTEIN (g)</td>
</tr>
<tr>
<td></td>
<td>2178</td>
<td>20.3</td>
</tr>
</tbody>
</table>

### Mama’s Kitchen Beef Lasagna

### Traffic Light + Overall Rating

### Reference


