FOOD STANDARDS
Australia • New Zealand
Te Mana Kounga Kai - Ahitereiria me Aotearoa

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Supporting document 3

Performance of the Health Star Rating algorithm

Proposal P1067 – Health Star Rating System

Executive summary

This report considers how well the Health Star Rating (HSR) algorithm aligns with the Australian Dietary Guidelines (ADGs). The assessment was undertaken using data for over 21,000 packaged foods from the Australian Branded Food Database (BFD). Aspects of the algorithm were also assessed to support consideration of definitional, implementation and enforcement issues associated with this proposal.

The HSR algorithm includes components of food considered to increase the risk of chronic disease (energy, saturated fat, total sugars and sodium) and offsets these against components considered to decrease the risk of chronic disease (protein, dietary fibre and fruit, vegetable, nut and legume (FVNL) content) to calculate a final score that is converted to a star rating.

The modelling shows the HSR algorithm is generally well aligned with the ADGs at 79%. There is stronger alignment for core[1] foods (85%) than discretionary foods (73%) with a mean HSR of core and discretionary foods of 3.5 and 2 stars respectively. These results are broadly consistent with findings from the five-year review of the HSR system and indicate that the algorithm is largely functioning as intended.

Misaligned foods were spread across multiple foods categories. The most common categories for core food misalignment were cheese, fruit and/or vegetable juices, savoury biscuits, instant noodles, dried fruit, flavoured milks, dressings and plant-based milk alternatives. The most common categories for discretionary food misalignment were snack products such as potato/vegetable crisps/corn chips and snack bars, carbonated drinks, sauces and condiments, soups and stocks, canned vegetables/legumes, breakfast cereals and deli-style meats.

The results suggest misalignment is commonly driven by the nutritional composition of the food. Core foods with lower star ratings generally have higher energy, saturated fat, total sugars or sodium contents, while discretionary foods with higher star ratings are often lower in these risk components. Misaligned discretionary foods may also benefit from positive components such as dietary fibre, protein, or FVNL, or added intense sweeteners. The system used for categorising core and discretionary foods may also influence misalignment. However, in most cases misalignment occurs from a combination of these factors.

[1] Refer to foods described as Five Food Group foods in the Australian Dietary Guidelines that make up the central 'plate' in the Australian Guide to Healthy Eating

Positive components in the algorithm were found to play an important role in supporting the alignment for core foods, but they also contributed to higher star ratings for some discretionary foods. The impact of positive components on ratings differed by component and food category. However, the removal of positive points resulted in relatively small shifts in overall alignment with the ADGs, highlighting that no single element of the algorithm drives performance on its own.

An assessment of dairy foods and dairy alternatives indicates the algorithm continues to perform as expected for this product category. The results are consistent with current dietary guidance, with reduced-fat products generally scoring higher than full-fat equivalents, and plant-based alternatives scoring similar or lower to comparable dairy foods.

An assessment of the impact of changing the treatment of FVNL (to combine FVNL (non-concentrated) and concentrated FV) and an assessment to re-define dairy categories both indicated the proposed changes had little impact on star ratings and the overall alignment of ratings with the ADGs.

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1 Introduction

1.1 The HSR system

The Health Star Rating (HSR) system is a nutrient profiling[2] FoPL system that rates the overall nutritional profile of packaged food and assigns it a rating from 0.5 to 5 stars. It is intended to provide a quick, easy, standardised way for consumers to compare the nutritional value of similar packaged foods to help them make informed food choices aligned with dietary guidelines. The higher the star rating compared to similar foods, the healthier the choice.

It is a joint New Zealand, Australian and state and territory government initiative which was developed collaboratively by technical and nutrition experts from government, industry, public health and consumer organisations. It was endorsed in June 2014 by the then Australia and New Zealand Ministerial Forum on Food Regulation (now the Food Ministers' Meeting (FMM)) to be implemented on a voluntarily basis in Australia and New Zealand.

The system was reviewed after two and five years of implementation. No changes were introduced following the two-year review. However, a package of updates was introduced following the five-year review, including updates to the algorithm (mpconsulting 2019).

1.2 About the HSR algorithm

The HSR of a packaged food is determined using an algorithm. The original algorithm was developed by a Technical Design Working Group (TDWG), with support from Food Standards Australia New Zealand (FSANZ) and oversight from the FoPL Steering and Project Committees. The aim of the TDWG was to develop a system that:

- could be simple and widely understood by the intended target groups
- could be applied to a wide range of packaged foods with varied nutritional content
- minimised complexity noting the intended voluntary nature of the system and the desire for an easy-to-use system that supported maximum industry uptake
- provided alignment with the Australian and New Zealand Dietary Guidelines
- encouraged product reformulation.

Several models were reviewed before a modified version of the Nutrient Profiling Scoring Criterion (NPSC) developed by FSANZ to determine eligibility for health claims in Australia and New Zealand was agreed as the basis of the HSR algorithm. This ensured:

- the algorithm included both the risk-increasing nutrients and nutrients associated with health benefits highlighted in dietary guidelines with advice for consumers to reduce or increase their intake of respectively
- consistency between systems for the food industry, with both systems drawing on the same existing labelling components.

The NPSC was modified for HSR purposes to enable greater discrimination between similar foods. This was achieved by updating its scoring system, and through the introduction of dairy specific categories. Like many nutrient profiling models used for labelling, it assumes that foods cannot be simply defined as healthy and unhealthy, and places foods along a continuum (mpconsulting 2018a).

[2] Nutrient profiling is the science of classifying or ranking foods according to their nutritional composition for reasons related to preventing disease and promoting health (WHO 2021).

For further information on the development of the HSR algorithm refer to the History and development of the HSR algorithm paper from the five-year review[3].

A comprehensive review of the HSR algorithm was undertaken as part of the five-year review between 2017-19. This included investigating a broad range of stakeholder concerns such as which foods should use the algorithm, the appropriateness of the HSR categories and ratings, which components should and should not be part of the algorithm, and how these components should be treated within the algorithm. Despite many issues being investigated, only a small number of updates were implemented to better align HSRs with dietary guidelines, reflect emerging evidence, address stakeholder concerns and encourage positive reformulation. These included:

- allowing fresh, frozen and canned fruits and vegetables (with no added salt, sugar or fat) to receive an automatic HSR of 5
- more strongly penalising total sugars
- improving sodium sensitivity to reduce the HSR of products with sodium in excess of 900 mg/100 g
- refining and rescaling dairy categories to better differentiate and improve comparability between core foods and dairy dessert type products
- re-categorising water-based ice confections and jellies as non-dairy beverages
- changing the way the HSR is calculated for non-dairy beverages, based on adjusted sugars, energy and fruit, vegetable, nut and legume (FVNL) points, to better discern water (and drinks similar in nutritional profile to water) from high energy drinks.

For further information on the outcomes of the five-year review including the rationale for why some updates were recommended and not others, refer to the Health Star Rating 5 Year Review Report.[4]

1.3 How to calculate a HSR

The HSR calculator is used to determine the HSR of foods. It is currently available as an off-line excel-based calculator and an on-line web-based calculator.

In the calculator, foods are assigned to one of six HSR categories (1, 1D, 2, 2D, 3 and 3D[5]) based on the general food type and compositional requirements. The algorithm used to calculate a HSR includes components of food considered to increase the risk of chronic disease (energy, saturated fat, total sugars and sodium) and components considered to decrease the risk of chronic disease (protein, dietary fibre and FVNL). Baseline points are determined for the negative components, which are offset by modifying points determined for the positive components to determine a total score which is converted to a star rating. The combination of components that contribute to any single calculation differ by food.

The operation of the HSR algorithm is illustrated below in Figure 1. For further information on how to calculate a HSR refer to Appendix 1.

[3] History-and-development-of-the-HSR-algorithm.pdf
[4] Health Star Rating system reviews | Health Star Rating System
[5] 1 Non-dairy beverages, jellies and water-based ice-confection; 1D Milk and dairy beverages (and alternatives); 2 Foods (not in any other categories); 2D Dairy food (and alternatives); 3 Oils and oil-based spreads; 3D Cheese

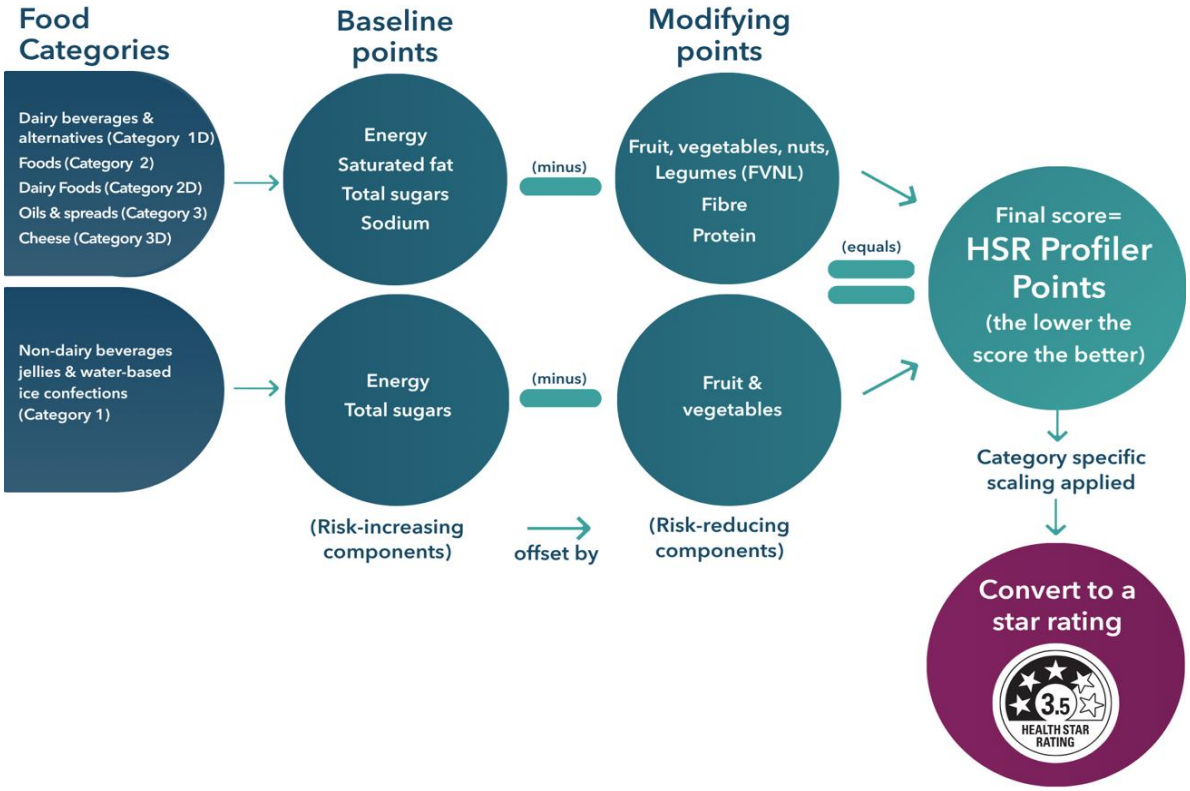

Figure 1. Determining a HSR

1.4 How can the algorithm be modified to change ratings

It is possible for the HSR algorithm to be modified to account for changes to the food supply, or to address specific concerns if required. The most common methods for altering the algorithm to change a foods HSR includes:

- changing how foods are categorised
- altering the components that contribute baseline and/or modifying points for a category
- increasing or decreasing the baseline or modifying points awarded for any given component
- extending the scales used for the application of points
- altering the points tables used for the conversion of a score to a rating.

1.5 Algorithm review

A full review of the algorithm was not undertaken as part of this proposal. Therefore, changes to the types of components used in the algorithm, the baseline, modifying and conversion points tables and scaling were not specifically considered. However, in the context of mandating the HSR system, FSANZ has considered the alignment of the HSR algorithm with the ADGs, and whether aspects of the system could be changed to more closely align and incorporate the HSR algorithm into the Code's statutory framework.

2 Modelling the alignment of the HSR algorithm with Australian Dietary Guidelines

2.1 Purpose

This analysis aims to assess the overall performance of the HSR algorithm against the 2013 Australian Dietary Guidelines (ADGs) (NHMRC 2013) and identify areas of misalignment.

2.2 Methodology

2.2.1 Data

The data used for this analysis was extracted from the Australian Branded Food Database (BFD) in May 2025 and included data for 21,675 products permitted and intended[6] to use the HSR system. This data was originally generated to monitor HSR uptake in Australia against interim target 2[7] and was sourced directly from brand owners and in-store collections conducted across Coles, Woolworths, and Aldi stores in the Australian Capital Territory (ACT) between October to mid-November 2024 by FSANZ. The BFD contains common on-pack information for each food such as its statement of ingredients and nutrition information panel (NIP). All foods are categorised according to one of 6 HSR categories and whether the product is intended to display a HSR as identified for HSR monitoring purposes (Department of Health, Disability & Ageing, FSANZ and NZ MPI, 2026).

The extracted BFD data was reviewed to identify gaps in the component data needed to calculate a HSR that may not be available on pack, such as a food's dietary fibre and FVNL content. These gaps were filled using established food composition techniques such as imputing values from similar foods or estimating values based on the food's ingoing ingredients (FSANZ 2026).

The categorisation of all foods was validated to ensure consistency in interpretation and application of the HSR system guidance. The NIP data in the BFD was also checked against product labels to ensure its accuracy and to identify any potential outliers. Some checks focused on individual foods, while others focussed on specific nutrients and food categories. Where issues were identified with the original data entry, the data was updated to reflect the NIP values on pack using product images. In some cases, where a foods label data was determined to be incorrect, such as if there was greater than 100 g of a component per 100 g of the food, the food was excluded from the analysis. However, this only occurred for a small number of foods.

Product data from the Australian BFD was used as a proxy for assessing the New Zealand food supply given the similarity of products across these countries. FSANZ acknowledges there will be some New Zealand specific foods not represented in the BFD and therefore missing from this analysis.

2.2.2 Classification systems

All foods were classified according to 3 classification systems to enable detailed analysis and reporting. The 3 classification systems were:

- HSR Modelling Category: a classification developed by FSANZ to group similar foods at a high level for analysis and reporting purposes. The food categories used in the five-

[6] Foods intended to display a HSR as part of the voluntary scheme
[7] 60% of intended foods displaying the HSR at 14 November 2024

year review (based on the Australian Guidelines for Healthy Eating) were used as the basis for this classification system which were further expanded resulting in 90 categories used in the analysis of results.

- Nutrient Classification: a food and nutrient classification system used in the National Nutrition and Physical Activity Study, 2023 (NNPAS) (ABS 2025), and applied at the 5-digit minor food group level to enable more detailed analysis of data.
- Core and Discretionary Classification: a flag that identifies a food as core or discretionary according to the ADGs using criteria developed for use in the NNPAS (ABS 2025). This classification system was assumed to be representative of recommendations made in the New Zealand Eating and Activity Guidelines (NZEAG). It is noted the NZEAG do not use the term 'discretionary' but rather provide advice to limit foods high in saturated fat, salt and sugars which could be considered similar to 'discretionary' foods.

2.3 Analysis

FSANZ calculated the HSR of all permitted and intended foods for this analysis regardless of whether a HSR was present on pack and available in the BFD, to ensure consistency in the application of the HSR system guidance.

Alignment of the HSR algorithm with the ADGs was determined using a foods Core and Discretionary Classification and HSR, which was compared to a threshold. The HSR algorithm was considered to align with dietary guidelines if a food classified as core had a HSR ≥3, and a food classified as discretionary had a HSR <3. These thresholds were selected for consistency with modelling undertaken for the five-year review. FSANZ acknowledges the core and discretionary classifications were not developed for this purpose and its use for determining HSR alignment with dietary guidelines may not be considered appropriate in all cases.

2.4 Results

Of the 21,675 permitted and intended foods in the BFD, 10,626 (49%) were classified as a core food and 11,049 (51%) were classified as a discretionary food.

2.4.1 Overall alignment

Overall alignment of the HSR algorithm with the ADGs is 79%, with 9,039 (85%) of core foods receiving a HSR ≥3, and 8,101 (73%) of discretionary foods receiving a HSR <3. The range of HSRs in both groups is 0.5 to 5 stars as shown in Figure 2, with a mean HSR for core and discretionary foods of 3.5 and 2 respectively.

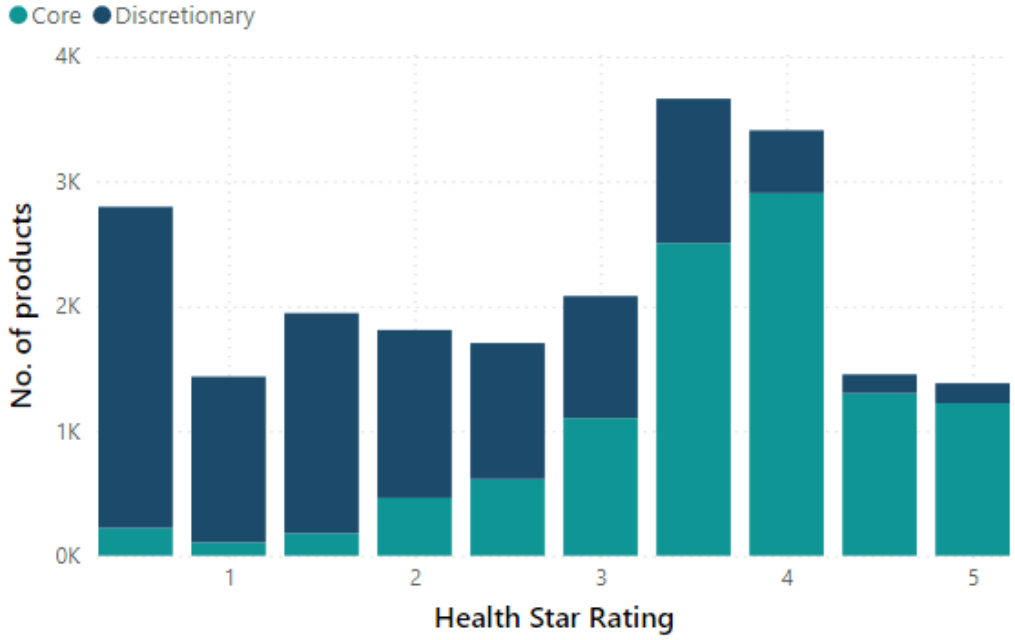

Figure 2. Number of products by HSR and core and discretionary classification

2.4.2 Misalignment

2.4.2.1 Core foods

There were 1,587 (15%) core foods with a HSR <3. These were spread across multiple food categories. The most common categories included cheese (391; 55%), fruit and/or vegetable juices (173; 45%), savoury biscuits (138; 42%), instant noodles (91; 47%), other mixed dishes (85; 11%), dried fruit (69; 35%), other dairy beverages (i.e. flavoured milks) (67; 34%), dressings (60; 92%), bread/wraps (51; 7%) and plant-based milk alternatives (47; 31%). The major food category contributors to core food misalignment are summarised in Table 1 along with the distribution of HSRs below 3 stars. Most misaligned core foods scored between 2 to 2.5 stars, except for instant noodles and plant-based milk alternatives which mostly scored between 0.5 to 1 star and 1 to 1.5 stars respectively. A complete breakdown of the core foods scoring a HSR <3 is included at Table 1 *Appendix 2* along with the mean algorithm components for these major food category contributors to core food misalignment at Table 2 *Appendix 2.*

Table 1. Major food category contributors to core food misalignment*

HSR modelling category	Total foods	Total core foods	Core foods with HSR <3 (%)	Distribution of core HSRs <3 n (% of misaligned foods)				
				0.5	1	1.5	2	2.5
Cheese	749	710	391 (55%)	109 (28%)	22 (6%)	52 (13%)	87 (22%)	121 (31%)
Fruit &/or vegetable juices	383	383	173 (45%)	2 (1%)	2 (1%)	6 (3%)	40 (23%)	123 (71%)
Savoury biscuits	456	325	138 (42%)	5 (4%)	13 (9%)	16 (12%)	47 (34%)	57 (41%)
Instant noodles	194	194	91 (47%)	47 (52%)	14 (15%)	5 (5%)	9 (10%)	16 (18%)
Other mixed food/dishes	882	748	85 (11%)	4 (5%)	2 (2%)	12 (14%)	40 (47%)	27 (32%)
Fruit – dried	197	196	69 (35%)		1 (1%)	3 (4%)	14 (20%)	51 (74%)
Other dairy beverages	227	195	67 (34%)	8 (12%)	6 (9%)	5 (7%)	5 (7%)	43 (64%)
Dressings	230	65	60 (92%)	8 (13%)	8 (13%)	11 (18%)	22 (37%)	11 (18%)
Breads/wraps	708	703	51 (7%)	1 (2%)		4 (8%)	30 (59%)	16 (31%)
Plant-based milk alternatives	155	153	47 (31%)	2 (4%)	15 (32%)	12 (26%)	9 (19%)	9 (19%)

*Represents 74% of misaligned core foods. For a complete list see Table 1, Appendix 2.

Misaligned core foods in the *Cheese*, *Savoury biscuits*, *Instant noodles* and *Breads/wraps* categories generally achieve lower HSRs due to higher saturated fat, energy and sodium contents compared with other core products in these categories. Misaligned *Savoury biscuits*, *Instant noodles* and *Breads/wraps* categories also have higher total sugars and *Breads/wraps* have lower dietary fibre contents compared with other core foods.

In the *Fruit &/or vegetable juice*, *Fruits – dried* and *Other dairy beverages* categories, core foods with <3 stars are, on average, higher in energy and total sugars compared with other core foods in these categories. Misaligned *Fruits – dried* and *Other dairy beverage* categories also have higher saturated fat compared with other core foods.

Misaligned core foods in the *Dressing*s category generally achieve lower star ratings due to higher saturated fat, total sugars and sodium contents and lower dietary fibre contents compared with other core foods. While misaligned foods in the *Other mixed food/dishes* category are, on average, significantly higher in energy and sodium than other core foods in this category.

Misaligned core *Plant-based milk alternatives* are classified as Category 1 foods rather than Category 1D foods as they do not meet the calcium criteria, resulting in lower star ratings.

2.4.2.2 Discretionary foods

There were 2,948 (27%) discretionary foods with a HSR ≥3. These were also spread across multiple food categories. The most common categories included *Sauces and condiments* (430; 41%), *Carbonated drinks* (398; 47%), *Snacks* such as potato/vegetable crisps/corn chips (347; 36%), *Fruit, nut, seed & cereal bars or balls* (342; 54%), *Soups and stocks* (201; 84%), *Vegetables & legumes - canned* (102; 58%), *Meat-processed* (85; 21%), *Sugar-based confectionary* (83; 17%), *Savoury pastries* (73; 29%) and *Breakfast cereals ready to eat* (62; 65%). The major food category contributors to discretionary food misalignment are summarised in Table 2 below along with the distribution of HSRs ≥3. Most misaligned discretionary foods scored between 3 to 3.5 stars. The *Sauces & condiments*, *Snacks*, *Fruit,*

nut, seed & cereal bars or balls, Sugar-based confectionary and *Breakfast cereals ready to eat* were the categories to most commonly score above 3.5 stars. A complete breakdown of the discretionary foods scoring a HSR ≥3 is included at Table 1 *Appendix 2,* along with the mean algorithm components for these major food category contributors to discretionary food misalignment at Table 3 *Appendix 2.*

Table 2. Major food category contributors to discretionary food misalignment*

HSR modelling category	Total foods	Discretionary foods	Discretionary foods with HSR ≥3 n (%)	Distribution of discretionary HSRs ≥3 n (% of misaligned foods) 3.0	3.5	4.0	4.5	5.0
Sauces & condiments	1113	1049	430 (41%)	180 (42%)	85 (20%)	147 (34%)	17 (4%)	1 (<1%)
Carbonated drinks	852	844	398 (47%)	45 (11%)	353 (89%)			
Snacks	1052	956	347 (36%)	91 (26%)	129 (37%)	71 (20%)	24 (7%)	32 (9%)
Fruit, nut, seed & cereal bars or balls	661	639	342 (54%)	86 (25%)	68 (20%)	88 (26%)	42 (12%)	58 (17%)
Soups & stocks	523	240	201 (84%)	83 (41%)	104 (52%)	13 (6%)	1 (<1%)	
Vegetables & legumes - canned	547	176	102 (58%)	41 (40%)	40 (39%)	17 (17%)	4 (4%)	
Meat - processed	417	400	85 (21%)	22 (26%)	53 (62%)	8 (9%)	2 (2%)	
Sugar based confectionery	477	477	83 (17%)	27 (33%)	32 (39%)	2 (2%)	5 (6%)	17 (20%)
Savoury pastries	401	252	73 (29%)	62 (85%)	10 (14%)	1 (1%)		
Breakfast cereals, ready to eat	433	96	62 (65%)	2 (3%)	9 (15%)	38 (61%)	13 (21%)	

*Represents 72% of misaligned discretionary foods. For a complete list see Table 1 Appendix 2.

Misaligned discretionary foods in the *Sauces & Condiments*, *Soups and Stocks*, and *Breakfast cereals ready to eat* categories generally achieve higher HSRs due to lower total sugars and sodium compared with other discretionary foods in these categories. In *Sauces & Condiments*, misaligned foods also have higher average FVNL content, while misaligned *Breakfast cereals ready to eat* typically contain more protein and dietary fibre than those with <3 stars and have a sufficiently low baseline score to be eligible for protein points.

In the *Snacks* and *Fruit, nut, seed & cereal bars or balls* categories, discretionary foods with ≥3 stars are, on average, lower in total sugars and saturated fat and higher in dietary fibre than those achieving <3 stars. Protein content is also higher in misaligned discretionary foods in the *Fruit, nut, seed & cereal bars or balls* category; however, only 213 of the 342 misaligned foods meet the eligibility criteria for protein points. Potato/vegetable crisps/corn chips contributed the most to misaligned foods in the Snack category with 211 of 347 (60.8%) products receiving ≥3 stars (see Figure 3).

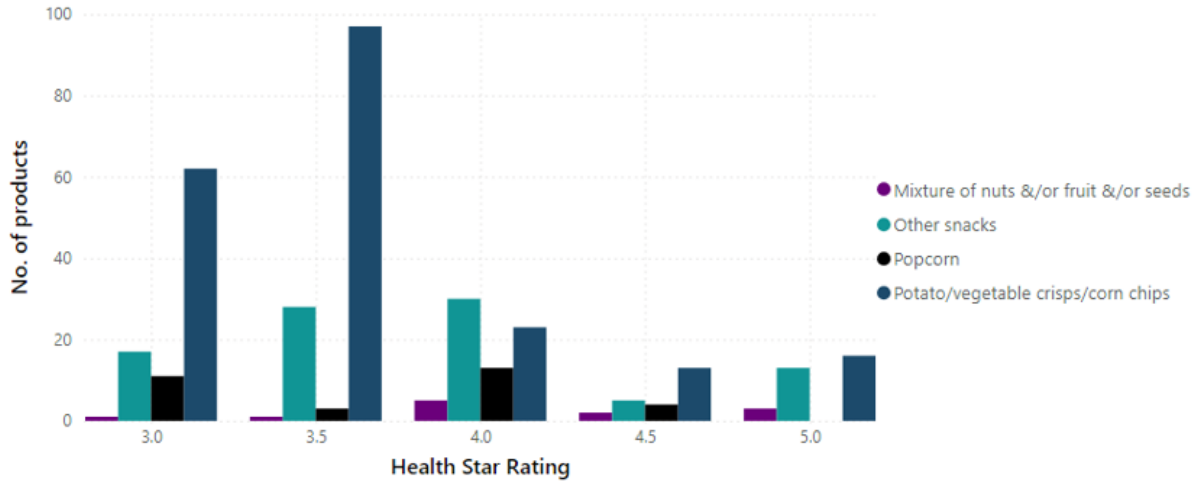

Figure 3. HSR distribution for misaligned discretionary snacks

Misaligned discretionary foods in the *Carbonated drinks and Sugar-based confectionery* categories receive higher HSRs due to very low total sugar and energy content, largely reflecting the use of added intense sweeteners to replace sugar. *Sugar-based confectionery* also contained a significantly higher average amount of dietary fibre. No discretionary foods in the *Carbonated drinks* category scored above 3.5 stars due to modifications made to the algorithm for Category 1 during the five-year review, which capped the rating of these foods. Foods in the *Sugar-based confectionery* category are misaligned by up to 2.5 stars, with some discretionary foods in this category receiving up to 5 stars.

Discretionary *Vegetables and legumes – canned* foods receiving ≥3 stars are, on average, much lower in sodium and have a slightly higher proportion of non-concentrated FVNL than those receiving <3 stars. Misaligned discretionary foods in the *Meat – processed* category have lower average saturated fat, sodium and energy, while misaligned *Savoury pastries* generally have lower levels of all components contributing to baseline points.

2.5 Key findings

Overall, the HSR algorithm appears to align reasonably well with the ADGs. Modelling shows there is better alignment between the algorithm and core foods than there is with discretionary foods.

Misalignment of the HSR with the ADGs occurs for several reasons. The most common reasons for misalignment of core foods are due to:

- some core foods having higher levels of the components considered to increase the risk of chronic disease such as energy, saturated fat, total sugars and sodium compared with similar core foods that are in alignment
- the use of the Core and Discretionary Classification system beyond its original intent, with some foods that could be considered to have an unhealthy nutrient profile being classified as core.

The most common reasons for misalignment of discretionary foods are due to:

- some discretionary foods having lower levels of components considered to increase the risk of chronic illness when compared with similar discretionary foods that are in alignment
- the impact of modifying points on some discretionary foods due to higher levels of positive components dietary fibre, protein and FVNL
- the use of added intense sweeteners to replace sugar in beverages and sugar-based confectionery
- the use of the Core and Discretionary Classification system beyond its original intent, with some foods that could be considered to have a healthy nutrient profile being classified as discretionary.

In many cases, the cause of misalignment cannot be attributed to a single reason, but a combination of the factors listed above. It is also important to note that the analysis mainly focussed on the most impacted food categories, therefore, it is possible other factors are also contributing to misalignment of HSRs with dietary guidelines.

The results for overall (79%) and core food (85%) alignment are similar to the five-year review results (72% and 84% respectively). However, discretionary food alignment was higher in this analysis (73%) than in the five-year review (61%) (mpconsulting 2018b). The cause of this difference is unclear and could be a result of multiple factors including the use of different datasets, updates made to the algorithm following the five-year review, slight differences in the Core and Discretionary Classification criteria and/or changes in the food supply since the five-year review.

3 Further assessments of the HSR algorithm

A full review of the algorithm was not undertaken as part of this assessment. However, FSANZ has reviewed aspects of the algorithm to better understand the above findings and to support broader technical assessments associated with this proposal.

3.1 Positive algorithm components

3.1.1 Impact of existing positive components

3.1.1.1 Purpose

This analysis determines the number of foods scoring points from positive components and assesses how these components influence a food's overall HSR to better understand the extent of its contribution to the misalignment of HSR with dietary guidelines.

3.1.1.2 Methodology

The number of foods scoring points from positive components dietary fibre, FVNL and protein, and the HSR of these foods were determined using the dataset developed for determining overall alignment of the HSR algorithm with the ADGs. The impact of each positive component on a food's HSR was then determined by comparing the original HSR with the rating the food would receive if it did not receive points from each positive component, without rescaling.

3.1.1.3 Results

A high-level summary of the number of foods scoring positive points and the impact on core and discretionary foods if positive points were removed are shown at Table 3. Further

analysis is described below by positive component. A complete list of food groups scoring positive points and the impact when each is removed is shown at Table 1 Appendix 3.

Table 3. Summary of foods receiving positive points and impact on foods when removed

Component	No. of foods scoring points	No. of foods impacted when the positive points are removed	No. (%) core foods impacted	No. (%) discretionary foods impacted
Dietary fibre	13,714	7,429	4,042 (54%)	3,387 (46%)
FVNL*	5,065	3,396	2,274 (67%)	1,122 (33%)
Protein	9,174	7,493	6,191 (83%)	1,302 (17%)

*Including non-concentrated FVNL and concentrated FV

3.1.1.3.1 Dietary fibre

There were 13,714 foods (63% of all foods) scoring dietary fibre points, of which 9,189 (67%) display dietary fibre in the NIP. The most common food categories scoring dietary fibre points include *Snacks*, *Other mixed foods/dishes*, *Sauces & condiments*, *Chocolate-based confectionery*, *Breads/wraps*, *Sweet biscuits* and *Fruit, nut, seed & cereal bars or balls*.

When dietary fibre points were removed, the rating of 7,429 foods (54% of foods scoring dietary fibre points) decreased by between 0.5 and 4 stars, leaving 6,285 (46%) foods unaffected due to their final profiling points still falling within the same range for conversion to a star rating, including 20% scoring 0.5 stars.

Of the impacted foods, 54% were core foods and 46% were discretionary foods, with the majority (90%) of HSRs decreasing by 0.5 to 1 star. The most impacted categories were *Snacks* (663; 63% of foods impacted in this category), *Fruit, nut, seed & cereal bars or balls* (601; 91%), *Breads/wraps* (521; 74%), *Nuts* (480; 89%), *Breakfast cereals ready to eat* (408; 94%), *Other mixed foods/dishes* (353; 40%) and *Savoury Biscuits* (327; 72%). The impact on these categories is shown in Table 4.

Table 4. Food categories most impacted by removing dietary fibre points

HSR modelling category	No. of foods in category	Foods impacted (% of category)	Decrease in star rating (No. of foods)			
			2	**1.5**	**1**	**0.5**
Snacks	1052	663 (63%)	6	64	202	391
Fruit, nut, seed & cereal bars or balls	661	601 (91%)	13	178	243	167
Breads/wraps	708	521 (74%)	6	40	132	343
Nuts	515	460 (89%)		34	269	157
Breakfast cereals, ready to eat	433	408 (94%)	5	102	218	83
Other mixed food/dishes	882	353 (40%)		4	24	325
Savoury biscuits	456	327 (72%)		23	85	219

The source of dietary fibre for these foods was variable. Analysis of the statement of ingredients indicated that 2,660 (36%) impacted foods contained refined sources of dietary fibre. Of these, 45% were core foods and 55% were discretionary foods. Refined fibre was most common in the *Fruit, nut, seed & cereal bars or balls* (404 or 15% of the impacted foods containing refined fibre), *Bread/wraps* (227; 9%), *Other mixed food/dishes* (179; 7%), *Breakfast cereal ready to eat* (161; 6%), *Cakes, muffins & pancakes* (126; 5%), *Plant-based*

meat, fish & seafood (117; 4%), *Snacks (110; 4%)* and *Sweet biscuit* (101; 4%) categories. In many cases the foods in these categories contained a mix of natural and refined fibres such as various plant fibres and extracts, psyllium, beta glucan, inulin or chicory, alginates, gums, waxes, cellulose, polydextrose, pectin and resistant starch.

Removing all dietary fibre points had a small impact in the overall alignment of the HSR algorithm with dietary guidelines, increasing from 79% to 80% (Table 2 *Appendix 3*). Core food alignment decreased from 85% to 82% with the *Fruits – dried, Savoury biscuits, Breakfast cereals ready to eat, Bread/wraps* and *Nuts* categories most impacted (Table 3 *Appendix 3*), while discretionary food alignment increased from 73% to 79%, with the *Fruit, nut, seed & cereal bars or balls* and *Snacks* categories most impacted. In most cases foods whose alignment was impacted had HSRs close to the alignment threshold at 3 to 3.5 stars, with the loss of dietary fibre points pushing core foods into misalignment and discretionary foods into alignment.

3.1.1.3.2 FVNL

There were 5,065 foods (23%) scoring V points for their non-concentrated FVNL and/or concentrated FV content, of which 2,334 (46%) either quantified the FVNL content in their ingredient statements or contained exclusively FVNL ingredients. The most common food categories scoring V points include *Sauces & condiments*, *Vegetables & legumes – canned*, *Snacks*, *Nuts*, *Fruit &/or Vegetable juices*, *Other mixed food/dishes* and *Fruit, nut, seed & cereal bars or balls*.

When V points were removed, the rating of 3,396 foods (67% of those scoring V points) decreased by between 0.5 and 3 stars, leaving 1,669 (33%) foods unaffected due to their final profiling points still falling within the same range for conversion to a star rating. Of the impacted foods, 67% were core and 33% discretionary. The most impacted food categories were *Nuts* (439; 85% of foods impacted in this category), *Fruit &/or vegetable juices* (380; 99%), *Sauces & Condiments* (364; 32%), *Vegetables & legumes – canned* (307; 56%), *Snacks* (273; 26%), *Other mixed food/dishes* (202; 23%) and *Fruit – dried* (191; 97%). For most of these categories the HSR decreased by 0.5 to 1 star, except for *Nuts* and *Fruit &/or vegetable juices* which mostly decreased by 1.5 to 2.5 stars. The impact on these categories is shown in Table 5.

Table 5. Food categories most impacted by removing V points

HSR modelling category	No. of foods in category	Foods impacted (% of category)	Decrease in star rating (No. of foods)					
			3	2.5	2	1.5	1	0.5
Nuts	515	439 (85%)		35	188	73	49	94
Fruit &/or vegetable juices	383	380 (99%)	8	158	136	54	16	8
Sauces & condiments	1133	364 (32%)					105	259
Vegetables & legumes - canned	547	307 (56%)					152	155
Snacks	1052	273 (26%)		2	22	22	12	215
Other mixed food/dishes	882	202 (23%)			4	8	29	161
Fruit - dried	197	191 (97%)			4	8	115	64

Removing V points resulted in a 2% decrease in the overall alignment of the HSR algorithm with dietary guidelines, decreasing from 79% to 77% (Table 2 *Appendix 3*). Core food alignment decreased from 85% to 80%, with the *Nuts* and *Fruit &/or vegetable juices* categories most impacted (Table 3 *Appendix 3*) due to their medium to high FVNL content, and their V points normally offsetting the higher sugar and energy content for *Fruit &/or vegetable juices* and saturated fat and energy contents for *Nuts*. Discretionary food

alignment increased from 73% to 75%, with *Snacks* and *Fruit, nut, seed & cereal bars or balls* categories most impacted, also due to the high FVNL content of many products within these categories. Most discretionary foods whose alignment was impacted also had HSRs close to the alignment threshold at 3 to 3.5 stars, with the loss of V points pushing them into alignment. This was not the case for core foods, with foods where alignment was impacted originally receiving a wider range of HSRs, mostly between 3 and 4.5 stars, but with the loss of V points significant enough to push these foods into misalignment.

3.1.1.3.3 Protein

There were 9,174 foods (42%) scoring protein points. The most common food categories scoring protein points included *Other mixed food/dishes, Breads/wraps, Ready meals, Yoghurt, Nuts, Breakfast cereals ready to eat, Snacks, Pasta & noodles* and *Fish & Seafood - canned*.

When protein points were removed, the rating of 7,493 (82%) foods decreased by between 0.5 and 2.5 stars, with 1,684 (18%) unaffected foods due to their final profiling points still falling within the same range for conversion to a star rating. Of the impacted foods, 83% were core foods and 17% were discretionary foods, with the majority of HSRs decreasing by 0.5 to 1 star. The most impacted food categories were *Breads/wraps* (612; 86% of foods impacted in this category)*, Ready meals* (506; 79%)*, Yoghurt* (447; 99%)*, Other mixed food/dishes* (438; 50%)*, Nuts* (436; 85%)*, Breakfast cereals ready to eat* (379; 88%)*, Fish & Seafood – canned* (370; 93%)*, Snacks* (349; 33%) *and Pasta & noodles* (334; 81%)*.* The impact on these categories is shown in Table 6.

Table 6. Food categories most impacted by removing protein points

HSR modelling category	No. foods in category	No. foods impacted (% of category)	Decrease in star rating (No. of foods)		
			1.5	**1**	**0.5**
Breads/wraps	708	612 (86%)	4	138	470
Ready meals	640	506 (79%)	1	83	422
Yoghurt	450	447 (99%)	11	157	279
Other mixed food/dishes	882	438 (50%)	2	98	338
Nuts	515	436 (85%)	89	230	117
Breakfast cereals, ready to eat	433	379 (88%)	16	137	226
Fish & seafood - canned	399	370 (93%)	117	229	24
Snacks	1052	349 (33%)	24	129	196
Pasta & noodles	410	334 (81%)		118	216

Removing protein points resulted in a 4% decrease in the overall alignment of the HSR algorithm with dietary guidelines, decreasing from 79% to 75% (Table 2 *Appendix 3*). Core food alignment decreased from 85% to 73% with *Other mixed food/dishes*, *Protein - fish & seafood – canned,* and *Yoghurt* most impacted (Table 3 *Appendix 3*). Discretionary food alignment increased from 73% to 77% with *Snacks* most impacted. Most foods whose alignment was impacted had HSRs closer to the alignment threshold at 3 to 3.5 stars, with the loss of points from protein pushing core foods into misalignment and discretionary foods into alignment.

3.1.1.4 Key findings

Overall, each positive component in the HSR algorithm contributes to its current alignment with dietary guidelines for core foods, however, they also contribute to the misalignment for discretionary foods.

The component with the largest number of foods scoring points is dietary fibre (13,714), followed by protein (9,174) and FVNL (5,065). The rating for a similar number of foods decreases when fibre (7,429) or protein (7,493) points are removed, with fewer foods impacted by removing V points (3,396) due to fewer foods earning them.

There are more core foods than discretionary foods benefitting from each positive component. Protein points mainly benefit core foods (83%), likely due to foods with ≥13 baseline points not being able to score protein points unless their V points are ≥5. In contrast, fibre points benefit the most discretionary foods, accounting for 46% of foods impacted by removing fibre points.

Removing fibre points is the only change that improved overall alignment with dietary guidelines (79% to 80%). It also improved alignment for discretionary foods (73% to 79%), though core food alignment dropped slightly. Removing V or protein points reduces alignment overall, with protein removal having the biggest impact on core food alignment. However, the removal of positive points for all components resulted in relatively small shifts in overall alignment with the ADGs, highlighting that no single element of the algorithm drives performance on its own.

3.1.2 Non-concentrated FVNL v Concentrated FV

3.1.2.1 Purpose

The HSR algorithm treats non-concentrated FVNL and concentrated fruit and vegetables (FV) differently across all HSR categories except Category 1[8]. However, determining whether FVNL content should be classified as non-concentrated or as concentrated FV is complex. To support consideration of definitional, implementation, and enforcement issues, and to address concerns raised by stakeholders during the HSR preparatory work, the impact of separating non-concentrated FVNL and concentrated FV on HSRs was reviewed. See section 3.4 of SD5 for further information.

3.1.2.2 Combined non-concentrated FVNL and concentrated FV

3.1.2.2.1 Methodology

All non-concentrated FVNL and concentrated FV for foods in HSR categories 1D, 2, 2D, 3 and 3D from the dataset developed to determine overall alignment of the HSR algorithm with the ADGs were combined to count equally towards V points using the points table currently used for non-concentrated FVNL. Under this scenario concentrated sources of fruit and vegetables no longer benefit from receiving higher V points.

The impact on a foods HSR was then determined by comparing the original HSR, with the rating the food would receive with the combined FVNL values.

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[8] [8] Where a product contains only concentrated sources of fruit and vegetables (and no nuts or legumes), V points are allocated for ≥25% content. Where a product contains only non-concentrated sources of fruit, vegetables, nuts and/or legumes, V points are allocated from a higher threshold (>40% content). Where a food contains a combination of concentrated FV and FVNL (non-concentrated) a calculation is applied to determine the total FVNL value used to allocate V points using the FVNL (non-concentrated) point thresholds. A maximum of 8 V points can be scored, regardless of whether the source(s) are concentrated FV or FVNL (non-concentrated).

3.1.2.2.2 Results

Of the 5,065 foods scoring V points, the rating of 134 foods (2.6% of those scoring V points or <1% of all foods) decreased by 0.5 to 1.5 stars when non-concentrated FVNL and concentrated FV were combined. All impacted foods were in HSR Category 2, with 38% classified as core foods and 62% classified as discretionary foods. The most impacted food categories were *Fruits – dried* (27; 14% of foods impacted in this category), *Fruit, nut*, *seed and cereal bars and balls* (20; 3%) and *Snacks* (14; 1%), although, the impact was minor as a proportion of the total number of foods in each category. The impact on these categories is shown in Table 7.

This change had minimal impact on alignment with dietary guidelines, with the overall percentage of alignment and by core and discretionary foods remaining unchanged (Table 2 *Appendix 3*).

Table 7. Food categories most impacted by combining concentrated FV with FVNL (non-concentrated)

HSR modelling category	No. foods in category	No. foods impacted (% of category)	Decrease in star rating (No. of foods)		
			1.5	1	0.5
Fruit – dried	197	27 (14%)			27
Fruit, nut, seed & cereal bars or balls	661	20 (3%)	1	3	16
Snacks	1052	14 (1%)		3	11

3.1.2.3 Removal of concentrated FV & some non-concentrated FVNL sources

3.1.2.3.1 Methodology

In this scenario:

- concentrated FV for foods in HSR categories 1D, 2, 2D, 3 and 3D from the dataset developed to determine overall alignment of the HSR algorithm with the ADGs were removed so concentrated sources of fruit and vegetables no longer benefited from V points. However, foods in the *Fruit – dried* or V*egetables – dried* categories continued to score V points using the non-concentrated FVNL points table if they were considered >95% fruit or vegetable, and
- non-concentrated FVNL values were removed for dried potato crisps and similar vegetable or legume type products, so they no longer scored V points.

The impact on a foods HSR was then determined by comparing the original HSR with the rating the food would receive under the above scenario.

3.1.2.3.2 Results

Of the 5,065 foods scoring V points, the rating of 580 foods (11% of those scoring V points or 3% of all foods) decreased, with most foods (417) decreasing by 0.5 stars. The remaining ratings decreased by between 1 to 2 stars. All impacted foods were in HSR Category 2, with 37% classified as core foods and 63% classified as discretionary foods. The categories most impacted were *Snacks* (190; 18% of foods impacted in this category), *Sauces & condiments* (76; 7%), *Fruit, nut*, *seed and cereal bars and balls* (71; 11%)*, Fruit – dried* (58; 29%)*, Fruit – canned* (35; 18%)*, Other mixed food/dishes* (22; 2%)*, Vegetables & legumes – other processed* (18; 12%) and *Salt and seasonings* (17; 13%). The impact on these categories is shown in Table 8.

This resulted in a small improvement on alignment with the ADGs. The percentage of overall alignment and by core foods remained the same, while the percentage of discretionary foods scoring <3 stars increased by 1% (from 73% to 74%; Table 2 *Appendix 3*)).

Table 8. Food categories most impacted by removing points for concentrated sources of fruits and vegetables

HSR modelling category	No. foods in category	No. foods impacted (% of category)	Decrease in star rating (No. of foods)			
			2	1.5	1	0.5
Snacks	1052	190 (18%)	1	9	11	169
Sauces & condiments	1133	76 (7%)			17	59
Fruit, nut, seed & cereal bars or balls	661	71 (11%)		22	25	24
Fruit - dried	197	58 (29%)			24	34
Fruit - canned	196	35 (18%)			15	20
Other mixed food/dishes	882	22 (2%)	1	10	4	7
Vegetables & legumes - other processed	152	18 (12%)		1	3	14
Salt & seasonings	130	17 (13%)		2	5	10

3.1.2.4 Key findings

The modelling for both scenarios had little impact on star ratings and the overall alignment of ratings with dietary guidelines.

Combining non-concentrated FVNL and concentrated FV and counting these equally towards V points impacted a small number of products (<1% of all products) and had very little impact on star ratings and alignment of ratings with dietary guidelines. A greater number of products (3% of all products) were impacted when V points for most sources of concentrated fruits and vegetables were removed, however the number of products impacted was still low as a proportion of all products, and the alignment of discretionary foods with dietary guidelines improved slightly.

3.2 Treatment of dairy and dairy alternatives products

3.2.1 Cheese

3.2.1.1 Purpose

The distribution of HSRs were reviewed for cheese to better understand the misalignment of HSRs with the ADGs for this product category, with modelling indicating 391 (55%) cheeses identified as core foods score a HSR <3. The number of core cheeses receiving a HSR <3 was also raised as an issue by industry stakeholders during the HSR preparatory work, who would like the treatment of:

- saturated fat in the algorithm reviewed to better align with recent evidence suggesting saturated fat content in dairy foods is not harmful to health
- protein in the algorithm reviewed as most cheeses do not currently receive protein points as they do not meet the eligibility criteria even though they are a good source of protein.

3.2.1.2 Methodology

The distribution of HSRs was reviewed by fat content and HSR category using the dataset developed for determining overall alignment of the HSR algorithm with the ADGs.

3.2.1.3 Results

The distribution of HSRs across the cheese category (n=749) ranged from 0.5 to 5 stars, with a mean HSR of 2.5. As shown in Figure 4, cheeses with lower fat contents generally receive a higher HSR, except for some low-fat fettas which have lower HSRs due to their higher sodium and lower protein contents. Cheeses with lower HSRs were found to contain higher saturated fat and sodium, than those with higher HSRs. How cheeses are categorised also impacts their HSR, with most cheeses receiving 0.5 stars (124 of 146) categorised in either Category 2D or 2 as they do not meet the calcium criteria for Category 3D as shown in Figure 5.

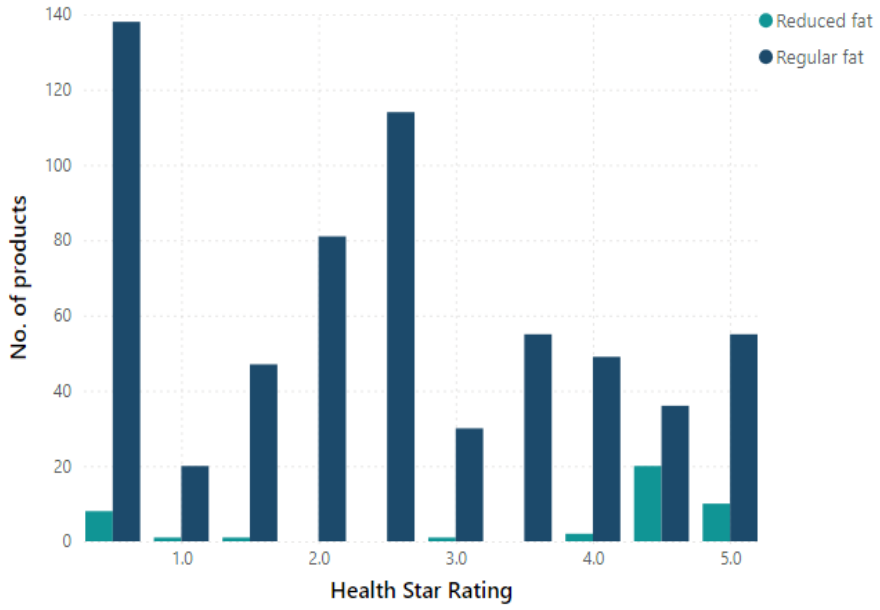

Figure 4. Distribution of dairy cheese ratings for regular fat and reduced fat cheese

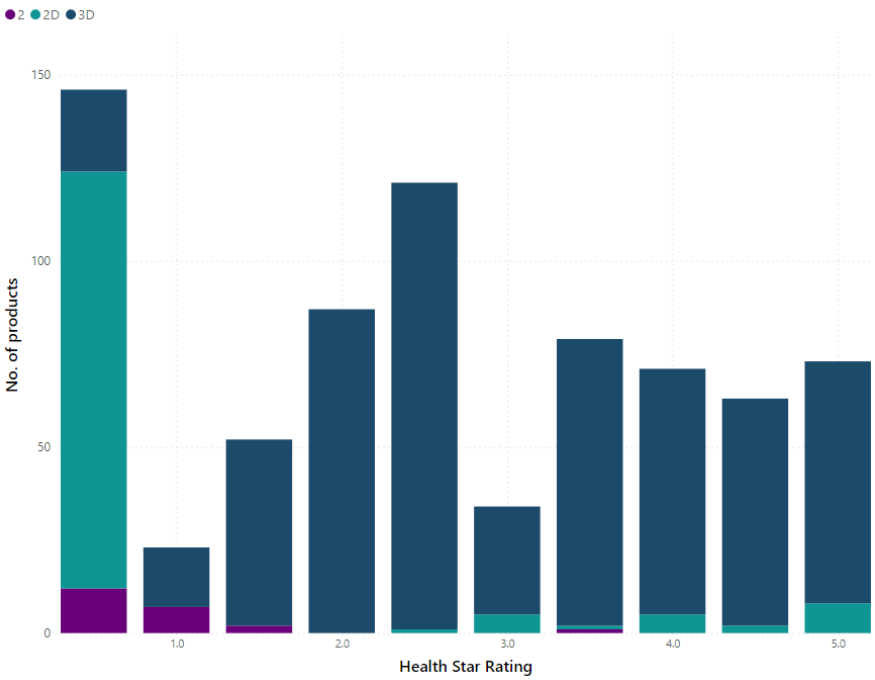

Figure 5. Distribution of dairy cheese ratings by HSR Category

3.2.1.4 Key findings

The number of cheeses receiving <3 stars has been considered previously as part of both an anomaly process and the five-year review. While the five-year review resulted in updates to the definitions of categories 2D and 3D to improve star ratings, no changes were made to the treatment of saturated fat or protein for cheeses within the algorithm. This was because the algorithm was found to align with current dietary guidance by appropriately distinguishing between low- and high-fat products. A further review of the cheese category was recommended following completion of the ADG review.

Our results indicate that the algorithm continues to perform as expected for this product category and remains consistent with current dietary guidance, with cheeses lower in fat achieving higher ratings. Assessing the health impacts of specific food components such as saturated fat in cheese falls outside the scope of this proposal. This work is currently being undertaken by agencies in Australia and New Zealand responsible for developing dietary guidelines. FSANZ recommends awaiting the outcomes of the revised ADGs to determine whether there is sufficient evidence to support any changes to the algorithm for cheese.

3.2.2 Comparison of ratings for dairy and dairy alternatives

3.2.2.1 Purpose

The HSRs for the dairy and dairy alternative categories were reviewed to better understand the spread of HSRs for these product categories and to determine where the HSRs of dairy alternatives sit in relation to their dairy equivalent.

In addition to dairy cheeses identified as core foods, as noted above, the analysis of the alignment of the HSR algorithm with the ADGs showed some plant-based milk alternatives identified as core foods score <3. Some industry stakeholders also raised concerns regarding the inclusion of plant-based milk alternatives in the dairy categories during the HSR preparatory work, due to their differing composition, such as inherently lower saturated fat and sugars content which may result in a more favourable star rating.

3.2.2.2 Methodology & Results

3.2.2.2.1 Dairy milk and plant-based milk alternative comparison

FSANZ reviewed the HSRs for the 204 unflavoured dairy milks and 155 unflavoured plant-based milk alternatives in the BFD to determine the distribution of ratings.

As shown in Figure 6, the HSR of unflavoured dairy milks had a narrow-spread varying between 3 to 5 stars, while the HSR of unflavoured plant-based milk alternatives had a wider spread varying between 0.5 and 5 stars.

Most products in both categories receive a HSR ≥4, with reduced fat dairy products receiving higher star ratings compared with full fat products as shown in Figure 7.

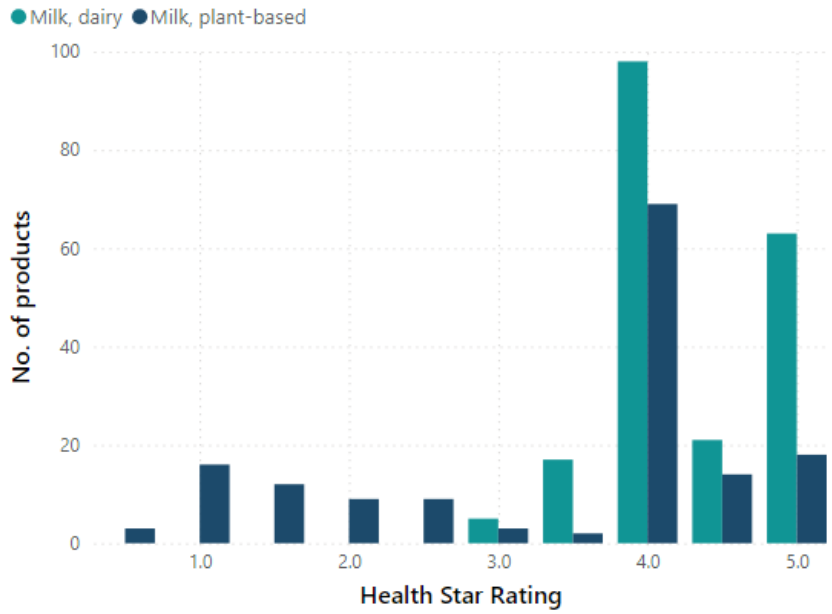

Figure 6. Distribution of milk and plant-based milk alternative ratings

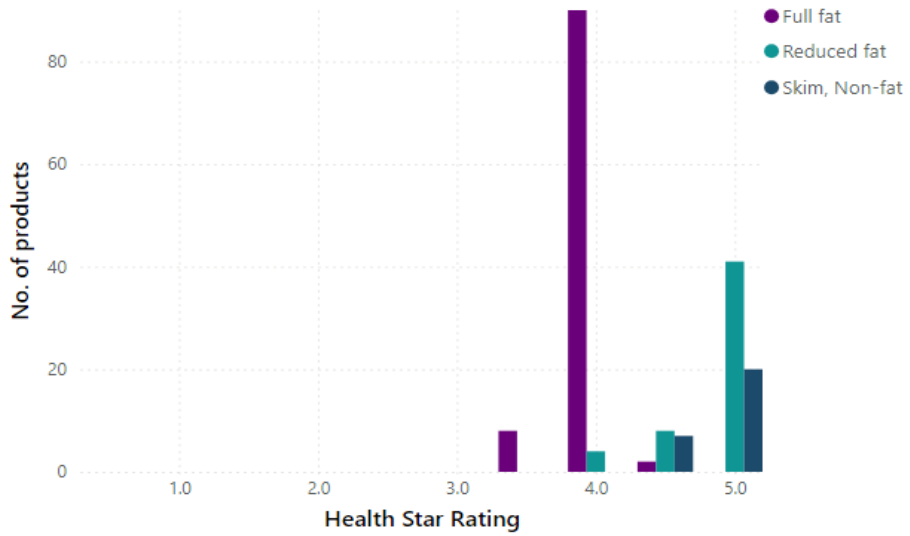

Figure 7. Distribution of dairy milk ratings for regular, reduced fat and skim milk products

There are more plant-based milk alternatives receiving lower HSRs as they do not meet the calcium criteria for Category 1D and are therefore classified as Category 1. This categorisation results in lower HSRs as shown in Figure 8, despite their average component profile being similar.

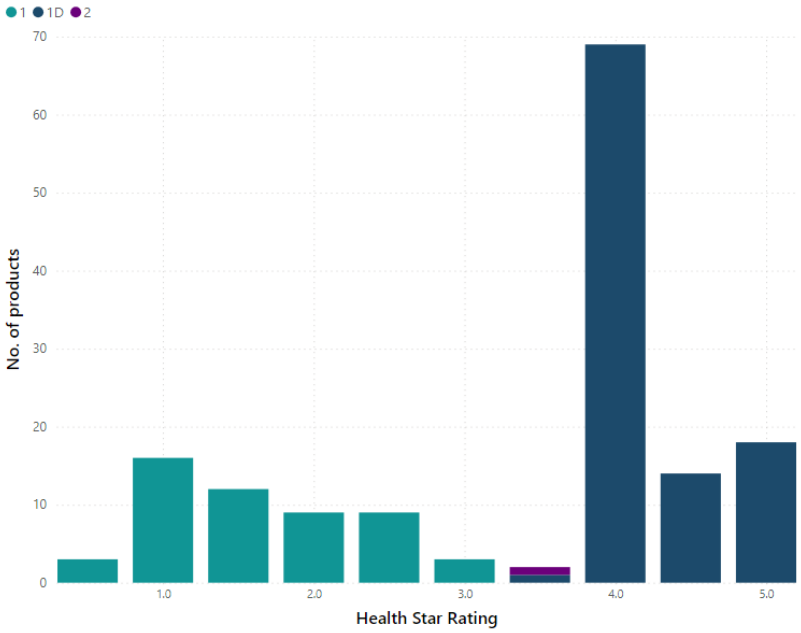

Figure 8. Distribution of HSRs for plant-based milk alternatives by HSR Category

3.2.2.2.2 Dairy yoghurt and plant-based yoghurt alternatives comparison

FSANZ reviewed the HSRs for the 450 dairy yoghurts and 66 plant-based yoghurt alternatives to determine the distribution of ratings. The HSRs for dairy yoghurts varied between 2.5 to 5 stars. The HSRs for plant-based yoghurt alternatives varied between 2 and 5 stars, with most products scoring between 2 and 2.5 stars as shown in Figure 9. Reduced fat products received higher star ratings compared with full fat products, generally due to lower saturated fat and total sugars contents as shown in Figure 10.

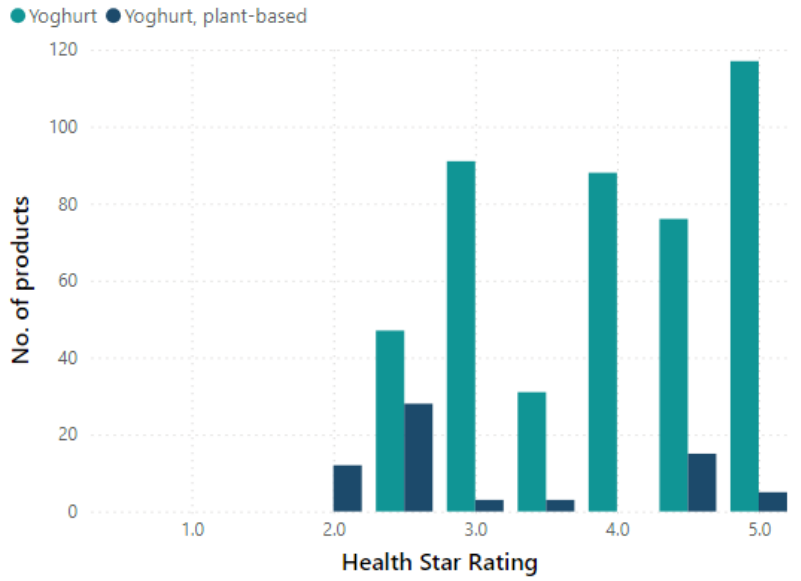

Figure 9. Distribution of yoghurt and plant-based yoghurt alternatives ratings

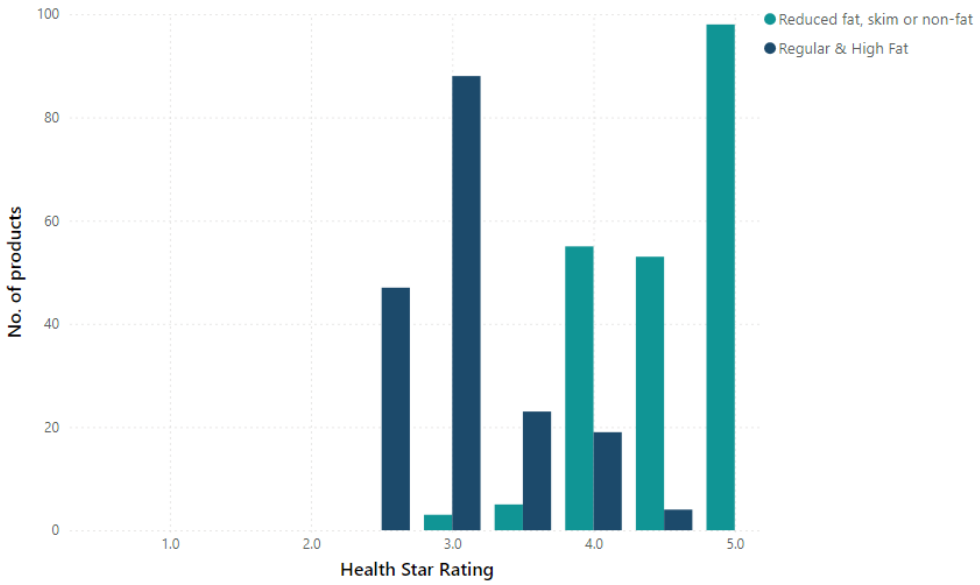

Figure 10. Distribution of dairy yoghurts for regular and reduced fat

3.2.2.2.3 Dairy cheese and plant-based cheese alternative comparison

FSANZ reviewed the HSRs for the 749 dairy cheeses and 116 plant-based cheese alternatives to determine the distribution of ratings. As shown in Figure 11, the HSRs for both categories varied between 0.5 to 5 stars. However, most plant-based cheese alternatives scored between 0.5 and 1.5 stars (85%) as they do not meet the calcium or protein criteria for Category 3D and/or are not made from legumes (cheese alternatives that are not legume based are not included in Category 3D).

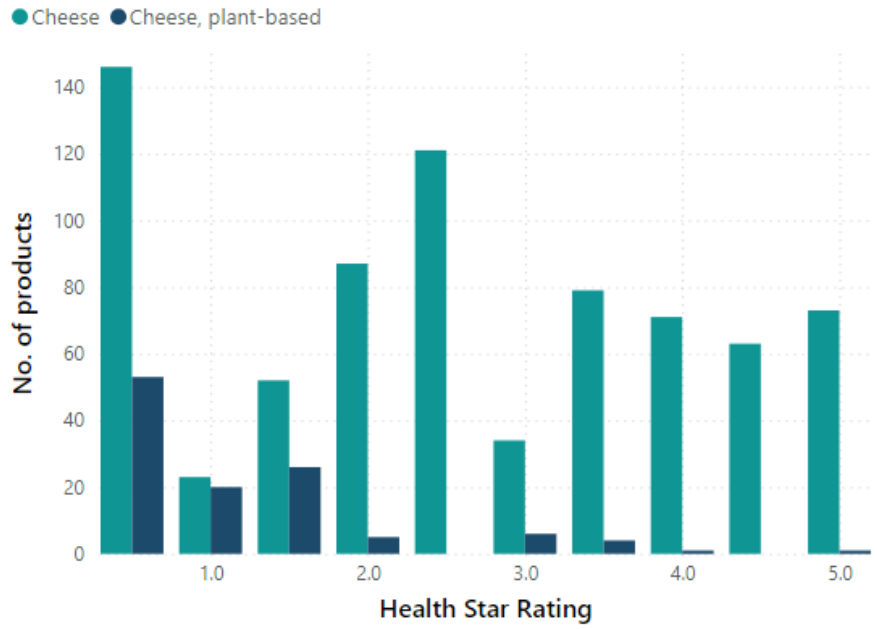

Figure 11. Distribution of cheese and plant-based cheese alternative ratings

3.2.2.3 Key findings

The modelling results indicate there is good alignment between most dairy foods and the ADGs, with dairy foods with lower saturated fat, sugar and sodium contents generally scoring higher star ratings.

The modelling also shows that dairy foods generally score either the same or better than their equivalent plant-based dairy alternatives.

3.2.3 Impact of re-defining dairy categories

3.2.3.1 Purpose

Determining whether a food meets the current dairy criteria can be difficult. Therefore, the impact of redefining the existing dairy categories 1D, 2D and 3D was reviewed to support consideration of definitional, implementation and enforcement issues. See section 3.1 of SD5 for further information.

3.2.3.2 Removing the 75% rule and applying definitions for dairy products

3.2.3.2.1 Methodology

Foods were defined as Category 1D, 2D and 3D based on the definitions in the Australia New Zealand Food Standards Code (the Code) for dairy products, using the existing calcium and protein criteria but without applying the existing 75% rule (i.e. a food must contain at least 75% dairy/dairy alternative ingredients to be able to be calculated within Category 1D, 2D or 3D). The HSRs were determined for all foods using the revised categorisation and HSRs were compared with the original ratings to identify differences.

3.2.3.2.2 Results

Using the definitions in the Code and not applying the 75% rule for dairy products resulted in the recategorisation of 422 foods, with the HSR of 395 foods impacted (93.6% of recategorised foods or 2% of all foods). The rating of 293 foods decreased by between 0.5-4.5 stars. Of these 94% were core foods and 6% discretionary foods. The most impacted categories where the rating decreased were *Other dairy beverages* (168; 74% of foods impacted in this category), *Formulated supplementary foods* (53; 62%) and *Custards & dairy desserts* (37; 25%).

The rating of 102 foods increased by up to 1.5 stars, with 86% of these discretionary foods and 14% core foods. The most impacted categories where the rating increased were *Cream* (66; 94% of foods in this category), *Dips* (15; 5%) and *Custards & dairy desserts* (12; 8%). The impact on these categories is shown in Table 9.

Overall alignment with dietary guidelines decreased from 79% to 78%, with core food alignment decreasing from 85% to 83%, and no significant change to discretionary food alignment.

Table 9. Food categories impacted by removing the 75% rule

HSR modelling category	No. foods in category	No. foods impacted (% of category)	Decrease in star rating (No. of foods)									Increase in star rating (No. of foods)		
			4.5	4	3.5	3	2.5	2	1.5	1	0.5	0 . 5	1	1 . 5
Other dairy beverages	227	168 (74%)	22	13	47	18	22	43	2	1				
Cream	70	66 (94%)										40	9	17
Formulated supplementary food	86	53 (62%)	19	28	5	1								
Custard & dairy desserts	150	49 (33%)								3	34	4	1	7
Other plant-based beverages	36	22 (61%)	1		4	10	6	1						
Dips	275	18 (7%)									3	3	12	
Formulated meal replacement	16	8 (50%)								5	1	1		1
Yoghurt	450	5 (1%)									1	4		
Tea & coffees	108	3 (3%)					2	1						
Snacks	1052	2 (<1%)										2		
Other plant-based dairy alternatives	23	1 (4%)											1	
Total		**395**	**42**	**41**	**56**	**29**	**30**	**45**	**2**	**9**	**39**	**54**	**23**	**25**

3.2.3.3 Modified calcium criteria and categorisation of fermented milk beverages

3.2.3.3.1 Methodology

Foods were categorised as Category 1D, 2D or 3D based on definitions in the Code for dairy products, using the existing protein requirements and most of the existing calcium requirements and with the existing 75% rule applied. Modifications were made to:

- the existing calcium criteria for dairy milks, changing the calcium level from ≥80 mg per serving to ≥100 mg/100 mL
- recategorise fermented milk beverages such as kefir and yoghurt beverages as Category 2D rather than Category 1D.

The impact on a foods HSR was then determined by comparing the original HSR with the rating the food would receive with the revised categorisation.

3.2.3.3.2 Results

Using the modified classifications resulted in the recategorisation of 22 foods, with the HSR of 21 foods impacted (95% of recategorised foods or <1% of all products). All impacted foods were core foods. The rating of 12 foods decreased by between 2 and 4.5 stars, with the *Formulated supplementary food* category most impacted decreasing by between 4 to 4.5 stars. The HSR of 9 foods increased by between 0.5 and 1 star with the *Other dairy beverages* category most impacted. The impact on these categories is shown in Table 10.

This change had minimal impact on alignment with dietary guidelines, with the overall percentage of alignment and by core and discretionary foods remaining unchanged on a percent basis.

Table 10. Food categories impacted by the modified calcium criteria and categorisation of fermented milk beverages

HSR modelling category	No. foods in category	No. foods impacted (% of category)	Decrease in star rating (No. of foods)				Increase in star rating (No. of foods)	
			4.5	4	3.5	2	0.5	1
Other dairy beverages	195	13 (7%)			5		6	2
Formulated supplementary food	64	6 (9%)	4	2				
Tea & coffees	8	1 (13%)				1		
Yoghurt	450	1 (<1%)					1	
Total		**21**	**4**	**2**	**5**	**1**	**7**	**2**

3.2.3.4 Key findings

Of the two approaches modelled, the second approach impacted the HSR of fewer foods (21 core foods) and had minimal impact on the overall alignment with dietary guidelines. Decreases in HSR were due to the revised calcium criteria for dairy milks, while the increases in HSR were due to changes to the categorisation of fermented milk beverages.

The removal of the 75% rule impacted the ratings of 395 products, with core foods accounting for most of the products with decreased ratings and discretionary foods accounting for most of the products with increased ratings. It also resulted in decrease in overall and core food alignment with dietary guidelines.

4 Conclusion

The HSR algorithm is generally well aligned with the ADGs, with most core foods receiving higher star ratings and most discretionary foods receiving lower star ratings.

Misalignment can occur due to the nutritional composition of the food, with core foods with lower ratings having higher energy, saturated fat, sugars or sodium contents. Discretionary foods with higher ratings are often lower in these components and/or may benefit from the presence of positive components such as fibre, protein or FVNL or added intense sweeteners to replace sugar. In many cases, misalignment reflects foods that sit close to the star rating thresholds rather than clear inconsistencies.

Positive components play an important role in supporting alignment for core foods but can also contribute to higher ratings for some discretionary foods. Removing or changing these components generally results in small changes to overall alignment, highlighting that no single element of the algorithm drives performance on its own.

An assessment of the impact of changing the treatment of FVNL and an assessment to re-define dairy categories both indicated the proposed changes had little impact on star ratings and the overall alignment of ratings with dietary guidelines.

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APPENDIX 1 How the HSR calculator works

There are several steps that must be completed to calculate a foods HSR. This includes:

1. Determining whether the food is eligible for an automatic HSR
2. Determining the form of the food for the HSR
3. Determining the HSR category of the food
4. Calculating baseline points
5. Calculating modifying points
6. Calculating the final HSR score
7. Converting the final HSR score into a star rating

Step 1. Determining whether the product is eligible for an automatic HSR

The following foods are currently eligible for an automatic HSR without the use of the calculator:

- Plain water – 5-star rating
- Unsweetened flavoured water – 4.5-star rating
  - Packaged beverages similar in nutritional profile to water that may only contain:
    - carbon dioxide, whether added or naturally occurring
    - permitted flavouring substances (as defined by Standard 1.1.2-2 of the Code)
    - mineral salts at Good Manufacturing Practice (GMP) (Schedule 16 of the Code)
    - additives that provide a specific safety or stability function at GMP (Schedule 16 of the Code)

    and must not contain:
    - added sugars, sweeteners, colours, sodium, caffeine, quinine, or any other ingredient that contains energy and is not expressly permitted above (e.g. protein).
- Fresh and minimally processed fruit and vegetables – 5-star rating
  - All whole fresh fruit (except coconut) and vegetables, fungi and legumes (except peanuts) as sold with no processing, plus these same products that have only been peeled, cut and/or surface treated and/or blanched and/or frozen (not dried), or canned without the addition of fat, sugars/sweeteners or salt.

Step 2. Determining the form of the food for the HSR

In most cases the HSR should be calculated and displayed based on the form of the product as it appears on the shelf. A foods HSR can be calculated as prepared if it is rehydrated, diluted, or mixed with water; or drained of water or brine before it is consumed and the label clearly specifies these directions for that preparation.

Step 3: Determining the HSR category of food

Each food needs to be categorised as one of the following six categories.

Table 1. HSR categories

HSR category	Category summary
1	**Non-dairy beverages, jellies and water-based ice confections** All beverages that do not quality for category 1D or an automatic HSR, cordials, jelly and ice confections.
1D	**Milk** Milk (defined in Standard 2.5.1 of the Code), dairy beverages and dairy alternative beverages that meet the below criteria: • Dairy beverages that contain: - ≥ 80 mg calcium per serving; AND - ≥75% dairy or permitted dairy ingredients. • Legume-based dairy alternatives that contain: - no less than 3%m/m protein from legumes, AND - ≥100 mg calcium per 100 mL, AND - ≥75% permitted dairy alternative ingredients • Dairy alternatives derived from seeds, nuts and/or cereals that contain: - no less than 0.3%m/m protein from those sources, AND - ≥100 mg calcium per 100 mL, AND - ≥75% permitted alternative ingredients.
2	**Foods** All foods not included in Category 1, 1D, 2D, 3 or 3D. Such as rice, pasta, breakfast cereals, muesli bars, ready to eat meals, biscuits, chips, confectionery, stocks, jams and ice cream.
2D	**Other dairy foods** Non-frozen dairy foods not included in HSR Categories 1D or 3D, provided they contain ≥75% dairy or permitted dairy ingredients. E.g. yoghurts, cream cheese, ricotta, cream and other chilled dairy products with >75% dairy ingredients. Also includes the following dairy alternatives: – Legume-derived cheese alternatives that contain no less than 15% m/m protein derived from legumes and contain ≤320 mg/100 g calcium. – Legume-derived yoghurt/dairy dessert alternatives that contain no less than 3.1% m/m protein derived from legumes.
3	**Oils and oil-based spreads** Edible oils, edible oil spreads, margarine and butter.
3D	**Cheeses** Cheese (including surface ripened cheeses) and processed cheese, as defined in Standard 2.5.4 of the Code, with a calcium content >320 mg/100 g. Must consist of ≥75% dairy ingredients. Cheese alternatives derived from legumes that contain no less than 15% m/m protein derived from legumes AND have a calcium content >320 mg/100 g AND contain >75% permitted dairy-alternative ingredients.

Step 4: Calculating HSR baseline points

HSR baseline points are calculated for the average quantity of the following risk-associated components per 100 g or 100 mL of the food:

Energy (Categories 1**,** 1D, 2, 2D, 3 and 3D)
- up to a maximum of 11 points for more than 3685 kJ per 100 g/mL of a food for categories 1D, 2, 2D, 3 and 3D
- up to a maximum of 10 points for more than 271 kJ per 100 mL for Category 1.

Saturated fat (Categories 1D, 2, 2D, 3 and 3D)
- up to a maximum of 30 points for more than 90% saturated fat in a food for categories 1D, 2 and 2D
- up to a maximum of 30 points for more than 30% saturated fat in a food for categories 3 and 3D.

Total sugars (Categories 1**,** 1D, 2, 2D, 3 and 3D)
- up to a maximum of 25 points for more than 99% total sugars in a food for Category 1D, 2 and 2D
- up to a maximum of 10 points for more than 13.6% total sugars in a food for Category 1
- up to a maximum of 10 points for more than 45% total sugars in a food for Category 3 and 3D.

Sodium (Categories 1D, 2, 2D, 3 and 3D)
- up to a maximum of 30 points for more than 2.7% sodium in a food for all categories excluding Category 1.

Baseline points are calculated based on the points tables which can be found in the HSR Implementation Guide (Department of Health, Disability & Ageing 2025).

Step 5: Calculating HSR modifying points

HSR modifying points may be scored for the positive components in a product:

FVNL (Categories 1**,** 1D, 2, 2D, 3 and 3D)
- V points can be scored for FVNL (non-concentrated) and/or concentrated FV in a food from 1 point (for >40% FVNL or ≥25% concentrated FV) to a maximum of 8 points (for 100% FVNL/concentrated FV) for categories 1D, 2, 2D, 3, 3D.
- V points can be scored for FVNL in a food from 1 point (for ≥25% FVNL content) to a maximum of 10 points (for ≥96% FVNL) for Category 1.

Protein (Categories 1D, 2, 2D, 3 and 3D)
- P points can be scored for protein if a food scores less than 13 baseline points, or scores ≥13 baseline points and 5 or more V points – from 1 up to a maximum of 15 points for more than 50% protein for Categories 1D, 2, 2D, 3, 3D.

Fibre (Categories 2, 2D, 3 and 3D)
- F points can be scored for dietary fibre for foods in Category 2, 2D, 3 and 3D – from 1 up to a maximum of 15 points for more than 20% fibre.

Modifying points are calculated based on the points tables which can be found in the Guide for Industry.

Step 6: Calculating the final HSR score

The final HSR Score is calculated by subtracting the modifying points (V, P and/or F points) if eligible from the HSR baseline points, using the below formula:

Final HSR Score = baseline points – (V points) – (P points) – (F points)

Step 7: Converting the final HSR score into a star rating

The final HSR points are converted to a star rating using the conversions found in the Guide for Industry.

APPENDIX 2 Alignment with Dietary Guidelines: Tables and Figures

Table 1. Distribution of HSRs and core and discretionary food misalignment

		Health Star Rating										Core food misalignment		Discretionary food misalignment	
HSR modelling category	**Total no. foods**	**0.5 No. (%)**	**1.0 No. (%)**	**1.5 No. (%)**	**2.0 No. (%)**	**2.5 No. (%)**	**3.0 No. (%)**	**3.5 No. (%)**	**4.0 No. (%)**	**4.5 No. (%)**	**5.0 No. (%)**	**No. of foods**	**No. HSR <3 (%)**	**No. of foods**	**No. HSR ≥3 (%)**
Non-alcoholic beverages															
Tea & coffees	**108**	26 (24%)	21 (19%)	22 (20%)	13 (12%)	14 (13%)	5 (5%)	5 (5%)	2 (2%)			8	0 (0%)	100	4 (4%)
Flavoured waters	**109**	8 (7%)	2 (2%)	1 (1%)	4 (4%)	7 (6%)	1 (1%)	2 (2%)		84 (77%)		86	0 (0%)	23	1 (4%)
Fruit &/or vegetable juices	**383**	2 (1%)	2 (1%)	6 (2%)	40 (10%)	123 (32%)	120 (31%)	19 (5%)	55 (14%)	16 (4%)		383	173 (45%)		
Fruit &/or vegetable drinks	**170**	92 (54%)	16 (9%)	12 (7%)	15 (9%)	16 (9%)	13 (8%)	4 (2%)	2 (1%)					170	19 (11%)
Cordials	**104**	21 (20%)	18 (17%)	11 (11%)	8 (8%)	6 (6%)	7 (7%)	22 (21%)	11 (11%)					104	40 (38%)
Electrolyte drinks	**88**		1 (1%)	52 (59%)	4 (5%)		4 (5%)	27 (31%)						88	31 (35%)
Carbonated drink	**852**	227 (27%)	103 (12%)	30 (4%)	62 (7%)	24 (3%)	45 (5%)	361 (42%)				8	0 (0%)	844	398 (47%)
Dry beverage bases	**41**	6 (15%)	7 (17%)	4 (10%)		5 (12%)		3 (7%)		3 (7%)	13 (32%)	2	0 (0%)	39	17 (44%)
Cereal & cereal products															
Flours	**128**	2 (2%)			2 (2%)	10 (8%)	23 (18%)	12 (9%)	48 (38%)	5 (4%)	26 (20%)	128	14 (11%)		
Grains	**225**						4 (2%)	99 (44%)	77 (34%)	13 (6%)	32 (14%)	225	0 (0%)		
Pasta & noodles	**410**	1 (<1%)		5 (1%)	3 (1%)	7 (2%)	17 (4%)	89 (22%)	186 (45%)	74 (18%)	28 (7%)	404	10 (2%)	6	0 (0%)
Instant noodles	**194**	47 (24%)	14 (7%)	5 (3%)	9 (5%)	16 (8%)	77 (40%)	26 (13%)				194	91 (47%)		
Breads/wraps	**708**	2 (<1%)		6 (1%)	30 (4%)	16 (2%)	61 (9%)	232 (33%)	233 (33%)	83 (12%)	45 (6%)	705	51 (7%)	3	0 (0%)
Savoury breads	**90**	1 (1%)	2 (2%)	5 (6%)	16 (18%)	11 (12%)	23 (26%)	29 (32%)	3 (3%)			8	0 (0%)	82	47 (57%)
Sweet breads	**78**		4 (5%)	15 (19%)	13 (17%)	3 (4%)	19 (24%)	20 (26%)	3 (4%)	1 (1%)		30	1 (3%)	48	14 (29%)
Breakfast cereals, ready to eat	**433**			1 (0.2%)	24 (6%)	15 (3%)	18 (4%)	51 (12%)	176 (41%)	97 (22%)	51 (12%)	337	6 (2%)	96	62 (65%)

		Health Star Rating										Core food misalignment		Discretionary food misalignment	
HSR modelling category	**Total no. foods**	**0.5 No. (%)**	**1.0 No. (%)**	**1.5 No. (%)**	**2.0 No. (%)**	**2.5 No. (%)**	**3.0 No. (%)**	**3.5 No. (%)**	**4.0 No. (%)**	**4.5 No. (%)**	**5.0 No. (%)**	**No. of foods**	**No. HSR <3 (%)**	**No. of foods**	**No. HSR ≥3 (%)**
Breakfast cereals, porridge	**139**							3 (2%)	44 (32%)	27 (19%)	65 (47%)	129	0 (0%)	10	10 (100%)
Savoury biscuits	**456**	15 (3%)	19 (4%)	68 (15%)	90 (20%)	74 (16%)	61 (13%)	51 (11%)	42 (9%)	22 (5%)	14 (3%)	325	138 (42%)	131	3 (2%)
Sweet biscuits	**680**	308 (45%)	161 (24%)	101 (15%)	40 (6%)	26 (4%)	4 (1%)	29 (4%)	7 (1%)	4 (1%)				680	44 (6%)
Cakes, muffins & pancakes	**408**	36 (9%)	59 (14%)	113 (28%)	110 (27%)	45 (11%)	26 (6%)	10 (2%)	3 (1%)	3 (1%)	3 (1%)	5	5 (100%)	403	45 (11%)
Cakes, muffins & pancakes - dry mixes	**102**	15 (15%)	36 (35%)	13 (13%)	14 (14%)	11 (11%)	6 (6%)	5 (5%)	1 (1%)		1 (1%)	3	3 (100%)	99	13 (13%)
Savoury pastries	**401**		8 (2%)	39 (10%)	92 (23%)	42 (10%)	132 (33%)	77 (19%)	10 (2%)	1 (<1%)		149	2 (1%)	252	73 (29%)
Sweet pastries	**99**	8 (8%)	21 (21%)	34 (34%)	20 (20%)	8 (8%)	7 (7%)	1 (1%)						99	8 (8%)
Fats & oils															
Butter & dairy blends	**101**	53 (53%)	37 (37%)	4 (4%)	2 (2%)	1 (1%)	4 (4%)							101	4 (4%)
Margarine & table spreads	**60**	1 (2%)			4 (7%)		30 (50%)	11 (18%)	12 (20%)	2 (3%)		59	4 (7%)	1	0 (0%)
Oils	**244**		14 (6%)		5 (2%)	10 (4%)	34 (14%)	110 (45%)	32 (13%)	36 (15%)	3 (1%)	230	15 (7%)	14	0 (0%)
Other fats	**15**		15 (100%)											15	0 (0%)
Fish & seafood															
Fish & seafood - unprocessed	**94**						1 (1%)	23 (24%)	60 (64%)	10 (11%)		94	0 (0%)		
Fish & seafood - marinated/rub	**57**			1 (2%)	4 (7%)	2 (4%)	1 (2%)	18 (32%)	28 (49%)	3 (5%)		56	6 (11%)	1	0 (0%)
Fish & seafood - coated/crumbed	**147**			1 (1%)	5 (3%)	1 (1%)	22 (15%)	51 (35%)	67 (46%)			144	4 (3%)	3	0 (0%)
Fish & seafood - canned	**399**	12 (3%)	1 (<1%)	6 (2%)	10 (3%)	1 (<1%)	14 (4%)	60 (15%)	239 (60%)	56 (14%)		399	30 (8%)		
Fish & seafood - processed	**52**	1 (2%)		2 (4%)	31 (60%)	1 (<1%)	7 (13%)	11 (21%)				50	33 (66%)	2	1 (50%)
Fruit & fruit products															
Fruit - frozen	**3**				1 (33%)				2 (67%)			2	0 (0%)	1	0 (0%)
Fruit - canned	**196**	2 (1%)					9 (5%)	41 (21%)	93 (47%)	48 (24%)	3 (2%)	196	2 (1%)		
Fruit - dried	**197**		1 (1%)	3 (2%)	14 (7%)	51 (26%)	40 (20%)	22 (11%)	41 (21%)	20 (10%)	5 (3%)	196	69 (35%)	1	1 (100%)
Eggs	**7**							3 (43%)	4 (57%)			7	0 (0%)		
Meat & poultry															
Meat - meatballs & sausages	**162**		1 (1%)	51 (31%)	46 (28%)	2 (1%)	11 (7%)	36 (22%)	15 (9%)			84	31 (37%)	78	9 (12%)

		Health Star Rating										Core food misalignment		Discretionary food misalignment	
HSR modelling category	**Total no. foods**	**0.5 No. (%)**	**1.0 No. (%)**	**1.5 No. (%)**	**2.0 No. (%)**	**2.5 No. (%)**	**3.0 No. (%)**	**3.5 No. (%)**	**4.0 No. (%)**	**4.5 No. (%)**	**5.0 No. (%)**	**No. of foods**	**No. HSR <3 (%)**	**No. of foods**	**No. HSR ≥3 (%)**
Meat - marinated/rub	**229**			5 (2%)	18 (8%)	1 (<1%)	7 (3%)	77 (34%)	106 (46%)	15 (7%)		229	24 (10%)		
Meat - coated/crumbed	**236**				8 (3%)	1 (<1%)	23 (10%)	117 (50%)	74 (31%)	13 (6%)		222	7 (3%)	14	12 (86%)
Meat - canned	**57**	2 (4%)	4 (7%)	11 (19%)	17 (30%)	1 (2%)	1 (2%)	10 (18%)	11 (19%)					57	22 (39%)
Meat - processed	**417**	115 (28%)	45 (11%)	75 (18%)	93 (22%)		24 (6%)	55 (13%)	8 (2%)	2 (<1%)		17	13 (76%)	400	85 (21%)
Milk & milk products															
Dairy milk	**204**						5 (2%)	17 (8%)	98 (48%)	21 (10%)	63 (31%)	204	0 (0%)		
Other dairy beverages	**227**	29 (13%)	8 (4%)	6 (3%)	10 (4%)	46 (20%)	18 (8%)	26 (11%)	41 (18%)	16 (7%)	27 (12%)	195	67 (34%)	32	0 (0%)
Cheese	**749**	146 (20%)	23 (3%)	52 (7%)	87 (12%)	121 (16%)	34 (5%)	79 (11%)	71 (9%)	63 (8%)	73 (10%)	710	391 (55%)	39	1 (3%)
Yoghurt	**450**					47 (10%)	91 (20%)	31 (7%)	88 (20%)	76 (17%)	117 (26%)	450	47 (10%)		
Cream	**70**	66 (94%)	1 (1%)	2 (3%)	1 (1%)									70	0 (0%)
Custard & dairy desserts	**150**	13 (9%)	16 (11%)	31 (21%)	9 (6%)	7 (5%)	15 (10%)	21 (14%)	30 (20%)	4 (3%)	4 (3%)	43	1 (2%)	107	32 (30%)
Frozen dairy milk products	**474**	20 (4%)	95 (20%)	135 (28%)	92 (19%)	84 (18%)	22 (5%)	6 (1%)	11 (2%)	9 (2%)				474	48 (10%)
Other dairy products	**9**		6 (67%)	2 (22%)		1 (11%)								9	0 (0%)
Plant-based alternatives															
Plant-based milk alternative	**155**	3 (2%)	16 (10%)	12 (8%)	9 (6%)	9 (6%)	3 (2%)	2 (1%)	69 (45%)	14 (9%)	18 (12%)	153	47 (31%)	2	0 (0%)
Other plant-based beverage alternatives	**36**	6 (17%)	2 (6%)	2 (6%)	2 (6%)	1 (3%)	3 (8%)	11 (31%)	8 (22%)		1 (3%)	17	5 (29%)	19	11 (58%)
Plant-based cheese alternative	**116**	53 (46%)	20 (17%)	26 (22%)	5 (4%)		6 (5%)	4 (3%)	1 (1%)		1 (1%)	15	14 (93%)	101	11 (11%)
Plant-based yoghurt alterative	**66**				12 (18%)	28 (42%)	3 (5%)	3 (5%)		15 (23%)	5 (8%)	15	0 (0%)	51	11 (22%)
Frozen plant-based alternatives	**49**		5 (10%)	20 (41%)	18 (37%)	3 (6%)	3 (6%)							49	3 (6%)
Other plant-based dairy alternatives	**23**	1 (4%)		4 (17%)	4 (17%)	2 (9%)	5 (22%)	6 (26%)	1 (4%)			2	1 (50%)	21	11 (52%)
Plant-based meat, fish & seafood alternative	**267**	1 (<1%)	1 (<1%)	5 (2%)	10 (4%)	9 (3%)	1 (<1%)	32 (12%)	124 (46%)	45 (17%)	39 (15%)	236	13 (6%)	31	18 (58%)
Soups & stocks	**523**	31 (6%)	1 (<1%)	3 (1%)		4 (1%)	100 (19%)	316 (60%)	62 (12%)	6 (1%)		283	0 (0%)	240	201 (84%)
Nuts & seeds															
Nuts	**515**	3 (1%)	6 (1%)	25 (5%)	29 (6%)	22 (4%)	23 (4%)	31 (6%)	68 (13%)	95 (18%)	213 (41%)	465	43 (9%)	50	8 (16%)

		Health Star Rating										Core food misalignment		Discretionary food misalignment	
HSR modelling category	**Total no. foods**	**0.5 No. (%)**	**1.0 No. (%)**	**1.5 No. (%)**	**2.0 No. (%)**	**2.5 No. (%)**	**3.0 No. (%)**	**3.5 No. (%)**	**4.0 No. (%)**	**4.5 No. (%)**	**5.0 No. (%)**	**No. of foods**	**No. HSR <3 (%)**	**No. of foods**	**No. HSR ≥3 (%)**
Seeds	**99**	4 (4%)		1 (1%)	2 (2%)			1 (1%)	4 (4%)	9 (9%)	78 (79%)	99	7 (7%)		
Savoury sauce & condiments															
Dressings	**230**	18 (8%)	20 (9%)	112 (49%)	55 (24%)	19 (8%)	6 (3%)					65	60 (92%)	165	1 (1%)
Recipe bases	**349**	161 (46%)	35 (10%)	41 (12%)	31 (9%)	47 (13%)	19 (5%)	13 (4%)	2 (1%)			5	0 (0%)	344	29 (8%)
Sauces & condiments	**1133**	172 (16%)	62 (5%)	103 (9%)	120 (11%)	173 (15%)	181 (16%)	86 (8%)	174 (15%)	55 (5%)	7 (1%)	84	11 (13%)	1049	430 (41%)
Yeast and/or meat extracts	**15**	3 (20%)	10 (67%)		2 (13%)									15	0 (0%)
Dips	**275**	13 (5%)	6 (2%)	34 (12%)	31 (11%)	23 (8%)	28 (10%)	65 (24%)	65 (24%)	4 (1%)	6 (2%)	182	16 (9%)	93	2 (2%)
Vegetable & legume products															
Vegetables & legumes - frozen	**136**							9 (7%)	67 (49%)	49 (36%)	11 (8%)	136	0 (0%)		
Vegetables & legumes - canned	**547**	3 (1%)	1 (<1%)	7 (1%)	25 (5%)	40 (7%)	45 (8%)	73 (13%)	98 (18%)	145 (27%)	110 (20%)	371	2 (1%)	176	102 (58%)
Vegetables & legumes - dried	**98**						2 (2%)	1 (1%)	1 (1%)	1 (1%)	93 (95%)	98	0 (0%)		
Vegetables & legumes - other processed	**152**	2 (1%)	8 (5%)	18 (12%)	20 (13%)	40 (26%)	15 (10%)	15 (10%)	15 (10%)	13 (9%)	6 (4%)	52	10 (19%)	100	22 (22%)
Snack foods															
Fruit, nut, seed & cereal bars or balls	**661**	13 (2%)	39 (6%)	75 (11%)	68 (10%)	106 (16%)	86 (13%)	76 (11%)	95 (14%)	44 (7%)	59 (9%)	22	4 (18%)	639	342 (54%)
Chocolate based confectionery	**839**	630 (75%)	76 (9%)	60 (7%)	19 (2%)	32 (4%)	13 (2%)	6 (1%)	3 (<1%)					839	22 (3%)
Sugar based confectionery	**477**	101 (21%)	72 (15%)	151 (32%)	57 (12%)	13 (3%)	27 (6%)	32 (7%)	2 (<1%)	5 (1%)	17 (4%)			477	83 (17%)
Snacks	**1052**	141 (13%)	112 (11%)	130 (12%)	91 (9%)	150 (14%)	108 (10%)	146 (14%)	92 (9%)	37 (4%)	45 (4%)	96	15 (16%)	956	347 (36%)
Sugar based products															
Sugar, honey, syrups & sweeteners	**196**	14 (7%)	125 (64)	22 (11%)	13 (7%)	11 (6%)	3 (2%)	7 (4%)			1 (1%)			196	11 (6%)
Sweet spreads	**143**	12 (8%)	11 (8%)	70 (49%)	18 (13%)	14 (10%)	16 (11%)			1 (1%)	1 (1%)			143	18 (13%)
Jelly	**52**	33 (63%)					9 (17%)	10 (19%)						52	19 (37%)
Other sugar based desserts	**53**	17 (32%)	6 (11%)	12 (23%)	7 (13%)	6 (11%)	4 (8%)				1 (2%)	1	0 (0%)	52	4 (8%)
Water-based ice confectionery	**62**	36 (58%)		2 (3%)	1 (2%)	2 (3%)	13 (21%)	3 (5%)	5 (8%)					62	21 (34%)
Other foods															

		Health Star Rating										Core food misalignment		Discretionary food misalignment	
HSR modelling category	**Total no. foods**	**0.5 No. (%)**	**1.0 No. (%)**	**1.5 No. (%)**	**2.0 No. (%)**	**2.5 No. (%)**	**3.0 No. (%)**	**3.5 No. (%)**	**4.0 No. (%)**	**4.5 No. (%)**	**5.0 No. (%)**	**No. of foods**	**No. HSR <3 (%)**	**No. of foods**	**No. HSR ≥3 (%)**
Herbs & spices	**25**			7 (28%)	3 (12%)	2 (8%)		1 (4%)		3 (12%)	9 (36%)	9	0 (0%)	16	4 (25%)
Salt & Seasonings	**130**	27 (20%)	21 (16%)	39 (30%)	13 (10%)	10 (8%)	9 (7%)	5 (4%)	3 (2%)		3 (2%)			130	20 (15%)
Ready meals	**640**		1 (<1%)		1 (0.2%)	5 (1%)	66 (10%)	339 (53%)	209 (33%)	18 (3%)	1 (<1%)	621	4 (1%)	19	16 (84%)
Other mixed food/dishes	**882**	14 (2%)	7 (1%)	22 (2%)	66 (7%)	52 (6%)	177 (20%)	336 (38%)	172 (20%)	28 (3%)	8 (1%)	748	85 (11%)	134	58 (43%)
Miscellaneous	**63**	7 (11%)	4 (6%)	3 (5%)	2 (3%)	8 (13%)	3 (5%)	4 (6%)	1 (2%)	8 (13%)	23 (37%)	18	3 (17%)	45	24 (53%)
Special purpose foods															
Formulated supplementary food	**86**		3 (3%)	8 (9%)	7 (8%)	3 (3%)	1 (1%)	2 (2%)	4 (5%)	23 (27%)	35 (41%)	64	6 (9%)	22	7 (32%)
Formulated meal replacement	**16**		1 (6%)		1 (6%)	3 (19%)			1 (6%)	2 (13%)	8 (50%)	14	3 (21%)	2	0 (0%)
Toddler foods															
Toddler cereal based snack foods	**58**		3 (5%)			10 (17%)	11 (19%)	8 (14%)	11 (19%)	5 (9%)	10 (17%)	2	0 (0%)	56	43 (77%)
Toddler custards or yoghurts	**2**						2 (100%)					2	0 (0%)		
Toddler fruit based snacks	**18**				1 (6%)	1 (6%)	4 (22%)	6 (33%)	6 (33%)			11	0 (0%)	7	5 (71%)
Toddler mixed breakfast meals	**4**							2 (50%)	1 (25%)	1 (25%)		4	0 (0%)		
Toddler savoury dishes, with meat	**12**							4 (33%)	8 (67%)			12	0 (0%)		
Toddler savoury dishes, with vegetables only	**8**							5 (63%)	3 (38%)			8	0 (0%)		
Total	**21,675**											**10,626**	**1,587 (15%)**	**11,049**	**2,948 (27%)**

Table 2. Misaligned Core Foods: HSR & Component Summary*

HSR Modelling Category	HSR	HSR n=	HSR Mean	Mean HSR Component Values							
				Energy	Saturated Fat	Total Sugars	Sodium	Protein	Fibre	FVNL	Conc. FV
Cheese	<3	391	1.5	1555	20.7	1.4	821	20.9	0.2	0	0
	≥3	319	4.0	1322	16.2	1.1	595	22.9	0.1	0	0
Fruit &/or vegetable juices	<3	173	2.5	209	0.2	10.5	7	0.5	0.6	98	0
	≥3	210	3.5	151	0.3	6.9	21	0.6	0.6	99	0
Savoury biscuits	<3	138	2.0	1925	5.4	9.0	592	8.8	3.8	1	1
	≥3	187	3.5	1745	1.7	2.6	400	10.3	5.8	6	0
Instant noodles	<3	91	1.0	1537	6.4	3.4	1530	7.5	3.0	0	0
	≥3	103	3.0	373	1.7	1.1	334	1.9	1.1	0	1
Other mixed food/dishes	<3	85	2.0	1182	2.7	5.4	948	8.6	2.4	3	0
	≥3	663	3.5	679	1.7	4.1	321	5.9	2.4	32	2
Fruit - dried	<3	69	2.5	1436	2.1	62.8	65	1.8	4.1	0	84
	≥3	127	3.5	1183	0.5	49.0	47	3.2	9.1	0	97
Other dairy beverages	<3	67	2.0	314	2.0	8.7	45	2.9	0.0	0	0
	≥3	128	4.0	271	1.4	7.0	46	3.7	0.6	0	0
Dressings	<3	60	1.5	976	2.0	21.3	874	1.2	0.8	1	0
	≥3	5	3.0	843	1.4	18.8	71	0.8	1.6	12	0
Breads/wraps	<3	51	2.0	1323	4.3	5.8	759	8.3	3.1	0	0
	≥3	654	4.0	1101	1.1	3.1	382	9.3	5.6	1	0
Plant-based milk alternative	<3	47	1.5	177	0.5	2.0	47	1.3	0.7	4	0
	≥3	106	4.0	197	0.4	2.0	49	1.5	0.6	4	0

*Represents 74% of misaligned core products.

Table 3. Discretionary Foods: HSR & Component Summary*

HSR Modelling Category	HSR	HSR n=	Mean	Mean HSR Component Values							
				Energy	Saturated Fat	Total Sugars	Sodium	Protein	Fibre	FVNL	Conc. FV
Sauces & condiments	<3	619	1.5	741	1.6	18.5	1828	2.6	1.8	18	2
	≥3	430	3.5	315	0.9	5.4	377	1.8	1.6	47	4
Snacks	<3	609	1.5	1944	8.8	6.3	790	12.9	3.5	21	2
	≥3	347	3.5	1944	2.7	4.4	421	10.7	7.3	43	2
Fruit, nut, seed & cereal bars or balls	<3	297	2.0	1897	9.7	27.0	198	12.8	6.6	18	5
	≥3	342	4.0	1680	5.2	15.5	131	17.5	11.8	17	7
Carbonated drink	<3	446	1.0	152	0.1	8.6	15	0.1	0.0	1	0
	≥3	398	3.5	10	0.2	0.1	15	0.3	0.2	1	0
Soups & stocks	<3	39	1.0	1065	2.8	7.7	5506	18.1	3.2	5	0
	≥3	201	3.5	137	0.6	1.5	329	1.5	0.9	20	1
Vegetables & legumes - canned	<3	74	2.0	336	0.9	7.6	1392	1.1	2.1	60	0
	≥3	102	3.5	188	0.4	5.7	507	1.1	1.6	75	0
Meat - processed	<3	315	1.0	1041	7.2	1.1	1222	18.6	0.7	0	0
	≥3	85	3.5	483	1.3	1.5	845	17.4	1.0	0	0
Sugar based confectionery	<3	394	1.5	1561	2.0	62.2	117	2.7	0.5	1	1
	≥3	83	3.5	988	0.3	4.7	30	1.5	7.6	1	2
Savoury pastries	<3	179	2.0	1268	8.9	2.8	440	7.7	2.5	1	0
	≥3	73	3.0	992	5.2	1.9	368	8.0	2.2	2	0
Breakfast cereals, ready to eat	<3	34	2.0	1710	1.4	31.4	318	6.5	3.2	1	1
	≥3	62	4.0	1609	1.0	24.0	191	12.4	9.1	1	5

*Represents 72% of misaligned discretionary products.

APPENDIX 3 Positive Algorithm Components

Table 1. Summary of positive algorithm components and their impact

HSR modelling category	Fibre Points			V Points			Protein Points		
	No. of food scoring points	No. of foods impacted when removed	Decrease in star ratings	No. of foods scoring points	No. of foods impacted when removed	Decrease in star ratings	No. of foods scoring points	No. of foods impacted when removed	Decrease in star ratings
Non-alcoholic beverages									
Tea & coffees				1	1	-0.5 - -0.5	1*	1	- 0.5 - -0.5
Flavoured waters									
Fruit &/or vegetable juices	7**			380	380	-0.5 - -3			
Fruit &/or vegetable drinks	1^	1	-1 - -1	88	37	-0.5 - -2	1^		
Cordials				38	27	-0.5 - -1			
Electrolyte drinks				2					
Carbonated drink				8	6	-0.5 - -2			
Dry beverage bases	37	25	- 0.5 - -2				18	17	- 0.5 - -2
Cereal & cereal products									
Flours	114	70	- 0.5 - -2	15	9	-0.5 - -2	100	85	- 0.5 - -1
Grains	191	116	- 0.5 - -1.5	2			222	176	- 0.5 - -1
Pasta & noodles	403	211	- 0.5 - -1	37	23	-0.5 - -1	375	334	- 0.5 - -1
Instant noodles	162	39	- 0.5 - -0.5				82	16	- 0.5 - -0.5
Breads/wraps	707	521	- 0.5 - -2	3	2	-0.5 - -0.5	647	612	- 0.5 - -1.5
Savoury breads	88	46	- 0.5 - -1.5				57	54	- 0.5 - -1
Sweet breads	78	45	- 0.5 - -1.5	9	2	-0.5 - -0.5	42	38	- 0.5 - -1
Breakfast cereals, ready to eat	431	408	- 0.5 - -2	48	35	-0.5 - -2	382	379	- 0.5 - -1.5
Breakfast cereals, porridge	139	136	- 0.5 - -2	3	2	-2 - -2	139	135	- 0.5 - -1.5
Savoury biscuits	441	327	- 0.5 - -1.5	16	10	-0.5 - -2	194	183	- 0.5 - -1.5
Sweet biscuits	661	270	- 0.5 - -2	8	2	-0.5 - -0.5	38	33	- 0.5 - -1
Cakes, muffins & pancakes	380	170	- 0.5 - -2	33	14	-0.5 - -1	56	38	- 0.5 - -1
Cakes, muffins & pancakes - dry mixes	93	46	- 0.5 - -2	1	1	-0.5 - -0.5	14	12	- 0.5 - -1
Savoury pastries	385	179	- 0.5 - -1.5	30	9	-0.5 - -0.5	229	201	- 0.5 - -1
Sweet pastries	92	51	- 0.5 - -1	11	3	-0.5 - -1	12	4	- 0.5 - -0.5
Fats & oils									
Butter & dairy blends	7	1	- 0.5 - -0.5						
Margarine & table spreads	4								
Oils	7								
Other fats									
Fish & seafood									
Fish & seafood - unprocessed	10	1	- 0.5 - -0.5				94	94	- 0.5 - -1.5
Fish & seafood - marinated/rub	16	2	- 0.5 - -0.5				51	51	- 0.5 - -1.5
Fish & seafood - coated/crumbed	75	21	- 0.5 - -1				140	139	- 0.5 - -1.5
Fish & seafood - canned	47	6	- 0.5 - -0.5	2			370	370	- 0.5 - -1.5

HSR modelling category	Fibre Points			V Points			Protein Points		
	No. of food scoring points	No. of foods impacted when removed	Decrease in star ratings	No. of foods scoring points	No. of foods impacted when removed	Decrease in star ratings	No. of foods scoring points	No. of foods impacted when removed	Decrease in star ratings
Fish & seafood - processed	7	3	- 0.5 - -0.5				18	17	- 0.5 - -1.5
Fruit & fruit products									
Fruit - frozen	3	1	- 0.5 - -0.5	3	3	-0.5 - -1			
Fruit - canned	137	59	- 0.5 - -1	192	153	-0.5 - -1	2	1	- 0.5 - -0.5
Fruit - dried	195	177	- 0.5 - -2	197	191	-0.5 - -2	157	53	- 0.5 - -1
Eggs							7	7	- 0.5 - -1
Meat & poultry									
Meat - meatballs & sausages	110	32	- 0.5 - -0.5				62	62	- 0.5 - -1.5
Meat - marinated/rub	99	21	- 0.5 - -0.5				205	205	- 0.5 - -1.5
Meat - coated/crumbed	189	74	- 0.5 - -0.5				227	227	- 0.5 - -1.5
Meat - canned	18	8	- 0.5 - -0.5	6	3	-0.5 - -0.5	23	21	- 0.5 - -1
Meat - processed	177	50	- 0.5 - -0.5				89	89	- 0.5 - -1.5
Milk & milk products									
Dairy milk							204	204	- 0.5 - -1.5
Other dairy beverages	1			1			169	169	- 0.5 - -2.5
Cheese	80	29	- 0.5 - -0.5				25	22	- 0.5 - -2
Yoghurt	44	16	- 0.5 - -1				448	447	- 0.5 - -1.5
Cream	11	2	- 0.5 - -1				1	1	- 0.5 - -0.5
Custard & dairy desserts	78	40	- 0.5 - -1				78	65	- 0.5 - -1.5
Frozen dairy milk products	118	35	- 0.5 - -1				108	52	- 0.5 - -1
Other dairy products							1	1	- 0.5 - -0.5
Plant-based alternatives									
Plant-based milk alternative							33	33	- 0.5 - -1
Other plant-based beverage alternatives				3	3	-1 - -1.5	2	2	- 0.5 - -1
Plant-based cheese alternative	109	19	- 0.5 - -0.5	37	14	-0.5 - -1	11	11	- 0.5 - -1
Plant-based yoghurt alternative	49	3	- 0.5 - -0.5				26	24	- 0.5 - -1
Frozen plant-based alternative	34	8	- 0.5 - -0.5	1			3	1	- 0.5 - -0.5
Other plant-based dairy alternatives	9	6	- 0.5 - -0.5	1			4	4	- 0.5 - -0.5
Plant-based meat, fish & seafood alternative	254	190	- 0.5 - -1	40	26	-0.5 - -1	238	218	- 0.5 - -1.5
Soups & stocks	262	75	- 0.5 - -1	178	59	-0.5 - -1	181	72	- 0.5 - -0.5
Nuts & seeds									
Nuts	474	460	- 0.5 - -1.5	462	439	-0.5 - -2.5	443	436	- 0.5 - -1.5
Seeds	98	79	- 0.5 - -1.5	91	52	-0.5 - -2.5	94	56	- 0.5 - -1.5
Savoury sauce & condiments									
Dressings	78	17	- 0.5 - -1	1	1	-0.5 - -0.5	1		
Recipe bases	304	104	- 0.5 - -1.5	103	47	-0.5 - -1.5	39	17	- 0.5 - -1
Sauces & condiments	785	275	- 0.5 - -1.5	511	364	-0.5 - -1	221	71	- 0.5 - -0.5
Yeast and/or meat extracts	15	12	- 0.5 - -1						
Dips	245	136	- 0.5 - -1	149	111	-0.5 - -1	140	87	- 0.5 - -1.5
Vegetable & legume products									
Vegetables & legumes - frozen	132	61	- 0.5 - -0.5	134	131	-0.5 - -1	127	37	- 0.5 - -0.5

HSR modelling category	Fibre Points			V Points			Protein Points		
	No. of food scoring points	No. of foods impacted when removed	Decrease in star ratings	No. of foods scoring points	No. of foods impacted when removed	Decrease in star ratings	No. of foods scoring points	No. of foods impacted when removed	Decrease in star ratings
Vegetables & legumes - canned	459	251	- 0.5 - -2	490	307	-0.5 - -1	226	98	- 0.5 - -1
Vegetables & legumes - dried	98	28	- 0.5 - -1.5	97	17	-0.5 - -1.5	94	14	- 0.5 - -1
Vegetables & legumes - other processed	148	92	- 0.5 - -2	148	117	-0.5 - -1.5	44	18	- 0.5 - -1
Snack foods									
Fruit, nut, seed & cereal bars or balls	638	601	- 0.5 - -2	236	129	-0.5 - -2	225	212	- 0.5 - -2
Chocolate based confectionery	757	179	- 0.5 - -2	20	11	-0.5 - -1.5	4	3	- 1 - -1.5
Sugar based confectionery	115	64	- 0.5 - -2	17	6	-0.5 - -1	21	12	- 0.5 - -1
Snacks	951	663	- 0.5 - -2	478	273	-0.5 - -2.5	379	349	- 0.5 - -1.5
Sugar based products									
Sugar, honey, syrups & sweeteners	25	8	- 0.5 - -1.5	1	1	-0.5 - -0.5			
Sweet spreads	103	35	- 0.5 - -1	76	28	-0.5 - -1	2	2	- 0.5 - -0.5
Jelly	7	4	- 0.5 - -0.5	3					
Other sugar based desserts	22	6	- 0.5 - -1	1			5	3	- 0.5 - -0.5
Water-based ice confectionery	9	2	- 0.5 - -0.5	18	10	-0.5 - -0.5			
Other foods									
Herbs & spices	25	21	- 0.5 - -1.5	23	13	-0.5 - -1.5	23	12	- 0.5 - -1
Salt & Seasonings	124	103	- 0.5 - -2	62	30	-0.5 - -1.5	10	8	- 0.5 - -1
Ready meals	569	191	- 0.5 - -0.5	168	54	-0.5 - -1	635	506	- 0.5 - -1.5
Other mixed food/dishes	792	353	- 0.5 - -1.5	313	202	-0.5 - -2	691	438	- 0.5 - -1.5
Miscellaneous	51	38	- 0.5 - -2	15	6	-0.5 - -1.5	28	19	- 0.5 - -2
Special purpose foods									
Formulated supplementary food	20	14	- 0.5 - -1.5				64	63	- 0.5 - -2
Formulated meal replacement	16	16	- 0.5 - -4				9	9	- 0.5 - -2
Toddler foods									
Toddler cereal based snack foods	56	54	- 0.5 - -1.5	24	11	-0.5 - -1	39	34	- 0.5 - -1
Toddler custards or yoghurts	2						2		
Toddler fruit based snacks	16	15	- 0.5 - -2	18	15	-0.5 - -1.5	5	3	- 0.5 - -0.5
Toddler mixed breakfast meals	4	2	- 0.5 - -0.5	2	2	-0.5 - -1			
Toddler savoury dishes, with meat	10	4	- 0.5 - -0.5	6	2	-0.5 - -0.5	12	5	- 0.5 - -0.5
Toddler savoury dishes, with vegetables only	6	1	- 0.5 - -0.5	4	2	-0.5 - -0.5	5	1	- 0.5 - -0.5
Total	**13, 714**	**7493**	**- 0.5 - -4**	**5065**	**3396**	**-0.5 - -3**	**9174**	**7493**	**- 0.5 - -2.5**

*This product scores protein points as it meets the criteria for Category 1D.
**The products scoring fibre points in this HSR modelling category are lemon and lime juices used as condiments and categorised as Category 2 for this analysis.
^The product scoring fibre and protein points in this HSR modelling category is in the form of a dry beverage base and categorised as Category 2 for this analysis.

Table 2. Impact of positive component scenarios on alignment with dietary guidelines

Scenario	Alignment with ADGs *n (% of all foods)*	Core foods scoring ≥3 stars *n (% of core foods)*	Discretionary foods scoring <3 stars *n (% of discretionary foods)*
Current State	17,140 (79%)	9,039 (85%)	8,101 (73%)
No Fibre Points	17, 380 (80%)	8,689 (82%)	8,691 (79%)
No V Points	16,791 (77%)	8,461 (80%)	8,330 (75%)
No Protein Points	16,304 (75%)	7,779 (73%)	8,525 (77%)
Combined FVNL	17,145 (79%)	9,032 (85%)	8,113 (73%)
No V points for concentrated FV	17,180 (79%)	9,000 (85%)	8,180 (74%)

Table 3. Impact of positive component scenarios on alignment with dietary guidelines by HSR modelling category

HSR modelling category	Core/Discretionary Classification	No. of foods in category	No. of products aligned with ADGs					
			Current state	No fibre points	No V points	No protein points	Combined FVNL	No V points for concentrated FV
Non-alcoholic beverages								
Tea & coffees	**Total**	**108**	**104**	**104**	**104**	**104**	**104**	**104**
	Core	8	8	8	8	8	8	8
	Discretionary	100	96	96	96	96	96	96
Flavoured waters	**Total**	**109**	**108**	**108**	**108**	**108**	**108**	**108**
	Core	86	86	86	86	86	86	86
	Discretionary	23	22	22	22	22	22	22
Fruit &/or vegetable juices	**Total**	**383**	**210**	**210**	**17**	**210**	**210**	**210**
	Core	383	210	210	17	210	210	210
Fruit &/or vegetable drinks	**Total**	**170**	**151**	**151**	**156**	**151**	**151**	**151**
	Discretionary	170	151	151	156	151	151	151
Cordials	**Total**	**104**	**64**	**64**	**66**	**64**	**64**	**64**
	Discretionary	104	64	64	66	64	64	64
Electrolyte drinks	**Total**	**88**	**57**	**57**	**57**	**57**	**57**	**57**
	Discretionary	88	57	57	57	57	57	57
Carbonated drink	**Total**	**852**	**454**	**454**	**457**	**454**	**454**	**454**
	Core	8	8	8	8	8	8	8
	Discretionary	844	446	446	449	446	446	446
Dry beverage bases	**Total**	**41**	**24**	**25**	**24**	**25**	**24**	**24**
	Core	2	2	2	2	2	2	2
	Discretionary	39	22	23	22	23	22	22
Cereal & cereal products								
Flours	**Total**	**128**	**114**	**106**	**113**	**105**	**114**	**114**
	Core	128	114	106	113	105	114	114

HSR modelling category	Core/Discretionary Classification	No. of foods in category	No. of products aligned with ADGs					
			Current state	No fibre points	No V points	No protein points	Combined FVNL	No V points for concentrated FV
Grains	**Total**	**225**	**225**	**224**	**225**	**224**	**225**	**225**
	Core	225	225	224	225	224	225	225
Pasta & noodles	**Total**	**410**	**400**	**400**	**400**	**372**	**400**	**400**
	Core	404	394	394	394	366	394	394
	Discretionary	6	6	6	6	6	6	6
Instant noodles	**Total**	**194**	**103**	**96**	**103**	**95**	**103**	**103**
	Core	194	103	96	103	95	103	103
Breads/wraps	**Total**	**708**	**657**	**624**	**657**	**583**	**657**	**657**
	Core	705	654	621	654	580	654	654
	Discretionary	3	3	3	3	3	3	3
Savoury breads	**Total**	**90**	**43**	**48**	**43**	**69**	**43**	**43**
	Core	8	8	6	8	5	8	8
	Discretionary	82	35	42	35	64	35	35
Sweet breads	**Total**	**78**	**63**	**66**	**63**	**63**	**63**	**63**
	Core	30	29	26	29	20	29	29
	Discretionary	48	34	40	34	43	34	34
Breakfast cereals, ready to eat	**Total**	**433**	**365**	**341**	**348**	**359**	**365**	**365**
	Core	337	331	296	314	313	331	331
	Discretionary	96	34	45	34	46	34	34
Breakfast cereals, porridge	**Total**	**139**	**129**	**128**	**128**	**129**	**129**	**129**
	Core	129	129	128	128	129	129	129
	Discretionary	10	0	0	0	0	0	0
Savoury biscuits	**Total**	**456**	**315**	**269**	**315**	**248**	**315**	**315**
	Core	325	187	139	187	118	187	187
	Discretionary	131	128	130	128	130	128	128
Sweet biscuits	**Total**	**680**	**636**	**657**	**636**	**640**	**636**	**636**

HSR modelling category	Core/Discretionary Classification	No. of foods in category	No. of products aligned with ADGs					
			Current state	No fibre points	No V points	No protein points	Combined FVNL	No V points for concentrated FV
	Discretionary	680	636	657	636	640	636	636
Cakes, muffins & pancakes	**Total**	**408**	**358**	**382**	**361**	**378**	**361**	**361**
	Core	5	0	0	0	0	0	0
	Discretionary	403	358	382	361	378	361	361
Cakes, muffins & pancakes - dry mixes	**Total**	**102**	**86**	**88**	**86**	**93**	**86**	**86**
	Core	3	0	0	0	0	0	0
	Discretionary	99	86	88	86	93	86	86
Savoury pastries	**Total**	**401**	**326**	**338**	**321**	**321**	**326**	**326**
	Core	149	147	127	142	79	147	147
	Discretionary	252	179	211	179	242	179	179
Sweet pastries	**Total**	**99**	**91**	**98**	**92**	**94**	**91**	**92**
	Discretionary	99	91	98	92	94	91	92
Fats & oils								
Butter & dairy blends	**Total**	**101**	**97**	**97**	**97**	**97**	**97**	**97**
	Discretionary	101	97	97	97	97	97	97
Margarine & table spreads	**Total**	**60**	**56**	**56**	**56**	**56**	**56**	**56**
	Core	59	55	55	55	55	55	55
	Discretionary	1	1	1	1	1	1	1
Oils	**Total**	**244**	**229**	**229**	**229**	**229**	**229**	**229**
	Core	230	215	215	215	215	215	215
	Discretionary	14	14	14	14	14	14	14
Other fats	**Total**	**15**	**15**	**15**	**15**	**15**	**15**	**15**
	Discretionary	15	15	15	15	15	15	15
Fish & seafood								
Fish & seafood - unprocessed	**Total**	**94**	**94**	**94**	**94**	**72**	**94**	**94**
	Core	94	94	94	94	72	94	94

HSR modelling category	Core/Discretionary Classification	No. of foods in category	No. of products aligned with ADGs					
			Current state	No fibre points	No V points	No protein points	Combined FVNL	No V points for concentrated FV
Fish & seafood - marinated/rub	**Total**	**57**	**51**	**51**	**51**	**30**	**51**	**51**
	Core	56	50	50	50	29	50	50
	Discretionary	1	1	1	1	1	1	1
Fish & seafood - coated/crumbed	**Total**	**147**	**143**	**139**	**143**	**99**	**143**	**143**
	Core	144	140	136	140	96	140	140
	Discretionary	3	3	3	3	3	3	3
Fish & seafood - canned	**Total**	**399**	**369**	**369**	**369**	**238**	**369**	**369**
	Core	399	369	369	369	238	369	369
Fish & seafood - processed	**Total**	**52**	**18**	**18**	**18**	**3**	**18**	**18**
	Core	50	17	17	17	2	17	17
	Discretionary	2	1	1	1	1	1	1
Fruit & fruit products								
Fruit - frozen	**Total**	**3**	**3**	**3**	**3**	**3**	**3**	**3**
	Core	2	2	2	2	2	2	2
	Discretionary	1	1	1	1	1	1	1
Fruit - canned	**Total**	**196**	**194**	**194**	**194**	**194**	**194**	**194**
	Core	196	194	194	194	194	194	194
Fruit - dried	**Total**	**197**	**127**	**62**	**61**	**110**	**123**	**113**
	Core	196	127	61	60	110	123	112
	Discretionary	1		1	1			1
Eggs	**Total**	**7**	**7**	**7**	**7**	**6**	**7**	**7**
	Core	7	7	7	7	6	7	7
Meat & poultry								
Meat - meatballs & sausages	**Total**	**162**	**122**	**122**	**122**	**93**	**122**	**122**
	Core	84	53	53	53	15	53	53
	Discretionary	78	69	69	69	78	69	69

HSR modelling category	Core/Discretionary Classification	No. of foods in category	No. of products aligned with ADGs					
			Current state	No fibre points	No V points	No protein points	Combined FVNL	No V points for concentrated FV
Meat - marinated/rub	**Total**	**229**	**205**	**205**	**205**	**103**	**205**	**205**
	Core	229	205	205	205	103	205	205
Meat - coated/crumbed	**Total**	**236**	**217**	**217**	**217**	**127**	**217**	**217**
	Core	222	215	215	215	113	215	215
	Discretionary	14	2	2	2	14	2	2
Meat - canned	**Total**	**57**	**35**	**35**	**35**	**39**	**35**	**35**
	Discretionary	57	35	35	35	39	35	35
Meat - processed	**Total**	**417**	**319**	**319**	**319**	**396**	**319**	**319**
	Core	17	4	4	4		4	4
	Discretionary	400	315	315	315	396	315	315
Milk & milk products								
Dairy milk	**Total**	**204**	**204**	**204**	**204**	**188**	**204**	**204**
	Core	204	204	204	204	188	204	204
Other dairy beverages	**Total**	**227**	**160**	**160**	**160**	**122**	**160**	**160**
	Core	195	128	128	128	90	128	128
	Discretionary	32	32	32	32	32	32	32
Cheese	**Total**	**749**	**357**	**354**	**357**	**347**	**357**	**357**
	Core	710	319	315	319	308	319	319
	Discretionary	39	38	39	38	39	38	38
Yoghurt	**Total**	**450**	**403**	**403**	**403**	**300**	**403**	**403**
	Core	450	403	403	403	300	403	403
Cream	**Total**	**70**	**70**	**70**	**70**	**70**	**70**	**70**
	Discretionary	70	70	70	70	70	70	70
Custard & dairy desserts	**Total**	**150**	**117**	**117**	**117**	**118**	**117**	**117**
	Core	43	42	40	42	38	42	42
	Discretionary	107	75	77	75	80	75	75

HSR modelling category	Core/Discretionary Classification	No. of foods in category	No. of products aligned with ADGs					
			Current state	No fibre points	No V points	No protein points	Combined FVNL	No V points for concentrated FV
Frozen dairy milk products	**Total**	**474**	**426**	**428**	**426**	**440**	**426**	**426**
	Discretionary	474	426	428	426	440	426	426
Other dairy products	**Total**	**9**	**9**	**9**	**9**	**9**	**9**	**9**
	Discretionary	9	9	9	9	9	9	9
Plant-based alternatives								
Plant-based milk alternative	**Total**	**155**	**108**	**108**	**108**	**108**	**108**	**108**
	Core	153	106	106	106	106	106	106
	Discretionary	2	2	2	2	2	2	2
Other plant-based beverage alternatives	**Total**	**36**	**20**	**20**	**20**	**20**	**20**	**20**
	Core	17	12	12	12	12	12	12
	Discretionary	19	8	8	8	8	8	8
Plant-based cheese alternative	**Total**	**116**	**91**	**91**	**91**	**98**	**91**	**91**
	Core	15	1	1	1	1	1	1
	Discretionary	101	90	90	90	97	90	90
Plant-based yoghurt alternative	**Total**	**66**	**55**	**55**	**55**	**58**	**55**	**55**
	Core	15	15	15	15	15	15	15
	Discretionary	51	40	40	40	43	40	40
Frozen plant-based alternative	**Total**	**49**	**46**	**46**	**46**	**46**	**46**	**46**
	Discretionary	49	46	46	46	46	46	46
Other plant-based dairy alternatives	**Total**	**23**	**11**	**12**	**11**	**11**	**11**	**11**
	Core	2	1	1	1	1	1	1
	Discretionary	21	10	11	10	10	10	10
Plant-based meat, fish & seafood alternative	**Total**	**267**	**236**	**235**	**236**	**209**	**236**	**236**
	Core	236	223	222	223	192	223	223
	Discretionary	31	13	13	13	17	13	13
Soups & stocks	**Total**	**523**	**322**	**322**	**322**	**323**	**322**	**322**

HSR modelling category	Core/Discretionary Classification	No. of foods in category	No. of products aligned with ADGs					
			Current state	No fibre points	No V points	No protein points	Combined FVNL	No V points for concentrated FV
	Core	283	283	283	283	283	283	283
	Discretionary	240	39	39	39	40	39	39
Nuts & seeds								
Nuts	**Total**	**515**	**464**	**432**	**243**	**409**	**464**	**464**
	Core	465	422	390	201	367	422	422
	Discretionary	50	42	42	42	42	42	42
Seeds	**Total**	**99**	**92**	**92**	**71**	**90**	**92**	**92**
	Core	99	92	92	71	90	92	92
Savoury sauce & condiments								
Dressings	**Total**	**230**	**169**	**167**	**168**	**169**	**168**	**168**
	Core	65	5	3	4	5	4	4
	Discretionary	165	164	164	164	164	164	164
Recipe bases	**Total**	**349**	**320**	**329**	**331**	**324**	**320**	**320**
	Core	5	5	5	5	5	5	5
	Discretionary	344	315	324	326	319	315	315
Sauces & condiments	**Total**	**1133**	**692**	**723**	**715**	**701**	**693**	**693**
	Core	84	73	72	73	73	73	73
	Discretionary	1049	619	651	642	628	620	620
Yeast and/or meat extracts	**Total**	**15**	**15**	**15**	**15**	**15**	**15**	**15**
	Discretionary	15	15	15	15	15	15	15
Dips	**Total**	**275**	**257**	**247**	**253**	**247**	**257**	**257**
	Core	182	166	155	162	154	166	166
	Discretionary	93	91	92	91	93	91	91
Vegetable & legume products								
Vegetables & legumes - frozen	**Total**	**136**	**136**	**136**	**136**	**136**	**136**	**136**

HSR modelling category	Core/Discretionary Classification	No. of foods in category	No. of products aligned with ADGs					
			Current state	No fibre points	No V points	No protein points	Combined FVNL	No V points for concentrated FV
	Core	136	136	136	136	136	136	136
Vegetables & legumes - canned	**Total**	**547**	**443**	**444**	**466**	**443**	**443**	**443**
	Core	371	369	364	368	369	369	369
	Discretionary	176	74	80	98	74	74	74
Vegetables & legumes - dried	**Total**	**98**	**98**	**95**	**97**	**96**	**98**	**98**
	Core	98	98	95	97	96	98	98
Vegetables & legumes - other processed	**Total**	**152**	**120**	**128**	**138**	**122**	**120**	**120**
	Core	52	42	37	41	41	41	41
	Discretionary	100	78	91	97	81	79	79
Snack foods								
Fruit, nut, seed & cereal bars or balls	**Total**	**661**	**315**	**498**	**351**	**328**	**318**	**332**
	Core	22	18	10	8	18	18	11
	Discretionary	639	297	488	343	310	300	321
Chocolate based confectionery	**Total**	**839**	**817**	**837**	**821**	**819**	**817**	**819**
	Discretionary	839	817	837	821	819	817	819
Sugar based confectionery	**Total**	**477**	**394**	**399**	**395**	**395**	**394**	**395**
	Discretionary	477	394	399	395	395	394	395
Snacks	**Total**	**1052**	**690**	**815**	**730**	**721**	**690**	**720**
	Core	96	81	72	65	59	80	75
	Discretionary	956	609	743	665	662	610	645
Sugar based products								
Sugar, honey, syrups & sweeteners	**Total**	**196**	**185**	**185**	**185**	**185**	**185**	**185**
	Discretionary	196	185	185	185	185	185	185
Sweet spreads	**Total**	**143**	**125**	**128**	**140**	**127**	**125**	**125**
	Discretionary	143	125	128	140	127	125	125
Jelly	**Total**	**52**	**33**	**33**	**33**	**33**	**33**	**33**

HSR modelling category	Core/Discretionary Classification	No. of foods in category	No. of products aligned with ADGs					
			Current state	No fibre points	No V points	No protein points	Combined FVNL	No V points for concentrated FV
	Discretionary	52	33	33	33	33	33	33
Other sugar based desserts	**Total**	**53**	**49**	**49**	**49**	**49**	**49**	**49**
	Core	1	1	1	1	1	1	1
	Discretionary	52	48	48	48	48	48	48
Water-based ice confectionery	**Total**	**62**	**41**	**42**	**44**	**41**	**41**	**41**
	Discretionary	62	41	42	44	41	41	41
Other foods								
Herbs & spices	**Total**	**25**	**21**	**21**	**21**	**21**	**21**	**21**
	Core	9	9	9	9	9	9	9
	Discretionary	16	12	12	12	12	12	12
Salt & Seasonings	**Total**	**130**	**110**	**127**	**113**	**110**	**110**	**112**
	Discretionary	130	110	127	113	110	110	112
Ready meals	**Total**	**640**	**620**	**620**	**620**	**584**	**620**	**620**
	Core	621	617	615	617	575	617	617
	Discretionary	19	3	5	3	9	3	3
Other mixed food/dishes	**Total**	**882**	**739**	**725**	**728**	**641**	**739**	**732**
	Core	748	663	634	648	530	663	654
	Discretionary	134	76	91	80	111	76	78
Miscellaneous	**Total**	**63**	**36**	**38**	**36**	**37**	**36**	**36**
	Core	18	15	15	15	15	15	15
	Discretionary	45	21	23	21	22	21	21
Special purpose foods								
Formulated supplementary food	**Total**	**86**	**73**	**74**	**73**	**70**	**73**	**73**
	Core	64	58	58	58	55	58	58
	Discretionary	22	15	16	15	15	15	15
Formulated meal replacement	**Total**	**16**	**13**	**11**	**13**	**12**	**13**	**13**

HSR modelling category	Core/Discretionary Classification	No. of foods in category	No. of products aligned with ADGs					
			Current state	No fibre points	No V points	No protein points	Combined FVNL	No V points for concentrated FV
	Core	14	11	9	11	10	11	11
	Discretionary	2	2	2	2	2	2	2
Toddler foods								
Toddler cereal based snack foods	**Total**	**58**	**15**	**28**	**16**	**17**	**15**	**16**
	Core	2	2	2	2	2	2	2
	Discretionary	56	13	26	14	15	13	14
Toddler custards or yoghurts	**Total**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
	Core	2	2	2	2	2	2	2
Toddler fruit based snacks	**Total**	**18**	**13**	**12**	**14**	**13**	**16**	**17**
	Core	11	11	5	8	11	11	11
	Discretionary	7	2	7	6	2	5	6
Toddler mixed breakfast meals	**Total**	**4**	**4**	**4**	**4**	**4**	**4**	**4**
	Core	4	4	4	4	4	4	4
Toddler savoury dishes, with meat	**Total**	**12**	**12**	**12**	**12**	**12**	**12**	**12**
	Core	12	12	12	12	12	12	12
Toddler savoury dishes, with vegetables only	**Total**	**8**	**8**	**8**	**8**	**8**	**8**	**8**
	Core	8	8	8	8	8	8	8